DESIGN AND PERFORMANCE VERSATILITY WITH UNMATCHED FABRICATION FLEXIBILITY

TRIFAB® VERSAGLAZE® 450, 451 & 451T (THERMAL) FRAMING SYSTEMS & TRIFAB® 451UT (ULTRA THERMAL) FRAMING SYSTEM

Trifab® VersaGlaze® is built on the proven and successful Trifab® platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner,architect and installer. The 4.5" depth Trifab® VersaGlaze® Framing System family is available with non-thermal, thermal and ultra-thermal performance levels.
The ultra-thermal Trifab® 451UT Framing System, is designed for the most demanding thermal performance and employs adual Isolock® thermal break.

KAWNEER

Building Legacies

AESTHETICS

Trifab® VersaGlaze® Framing Systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone glazing (SSG) and weatherseal glazing options further expand designers' choice, allowing for a greater range of possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth; Trifab® VersaGlaze® 450 has 1-3/4" sightlines, while Trifab® VersaGlaze® 451/451T and Trifab® 451UT have 2" sightlines.

With seamless incorporation of Kawneer entrances or windows, including GLASSvent® visually frameless ventilators, Trifab® framing can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single-source supplier.

ECONOMY

Trifab® VersaGlaze® 450/451/451T/451UT Framing Systems offer a variety of fabrication choices to suit your project:

- **Screw Spline** – for economical continuous runs utilizing two-piece vertical members that provide the option to pre-assemble units for efficient handling and installation. (available for all Trifab systems)
- **Shear Block** – for punched openings or continuous runs using tubular verticals with shear blocks to connect horizontal members. (available for 450/451/451T systems)
- **Stick** – for fast, easy field fabrication. Continuous sill and head receptors are installed with horizontals connected to tubular verticals with shear blocks. (available for 450/451/451T systems)
- **Pre-glazed** – The combination of screw spline construction with pre-glazing in the shop accelerates installation and reduces field labor time while minimizing disruption to the surrounding area or existing tenants. Making it an exceptional choice for new or retrofit applications, particularly in urban areas or where space is limited. (available for 451/451T/451UT framing)


Photography: © Ben Gancsos

All systems can be flush glazed from either the inside or outside. The weatherseal option provides an alternative to SSG vertical mullions for Trifab® VersaGlaze® 450/451/451T. This ABS/ASA rigid polymer extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, high-performance flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum and painted finishes influoropolymer (AAMA 2605) and solvent-free powder coatings (AAMA 2604) offer a variety of color choices.

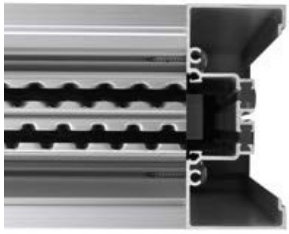
KAWNEER

PERFORMANCE

Kawneer's Isolock® thermal break technology creates a composite section, prevents dry shrinkage and is available on Trifab® VersaGlaze® 451T. For even greater thermal performance, a dual Isolock® thermal break is used on Trifab® 451UT.

U-factor, CRF values and STC ratings for Trifab® framing systems vary depending upon the glass plane application. Project-specific U-factors can be determined for each individual project.

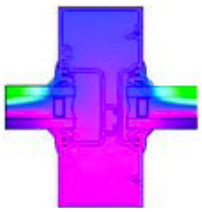
(See the Kawneer Architectural Manual or Kawneer.com for additional information.)



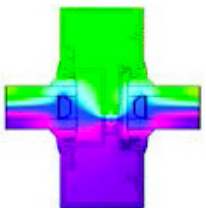
Trifab® 451UT uses a dual Isolock® thermal break (right) and features a new high performance sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

PERFORMANCE TEST STANDARDS	
Air Infiltration	ASTM E283
Water	AAMA 501, ASTM E331
Structural	ASTM E330
Thermal	AAMA 1503
Thermal Break	AAMA 505, AAMA TIR-A8
Acoustical	AAMA 1801, ASTM E1425

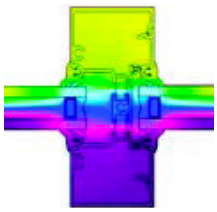
Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.



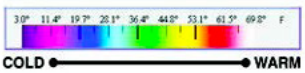
Trifab® VersaGlaze® 451

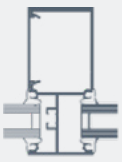


Trifab® VersaGlaze® 451T

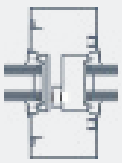


Trifab® 451UT

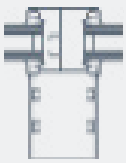




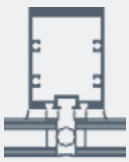
Front



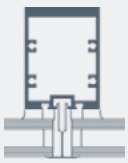
Center



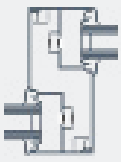
Back



SSG



Weatherseal



Multi-Plane

Form Number 17-2241.B

KAWNEER

Technology Park/Atlanta
555 Guthridge Court
Norcross, GA 30092

KAWNEER

Building Legacies

KAWNEER ANODIZED FINISHES

Kawneer gives you a wide variety of anodized finishes with attractive alternatives. The benefit of a durable, anodized finish is married to the beauty of some very dynamic and exciting colors.

At the start of every design, there's a choice of how you want to finish. Contact your Kawneer sales rep for the information on these and other finishes available from Kawneer.

	KAWNEER FINISH NO.	COLOR	ALUMINUM ASSOCATION SPECIFICATION	OTHER COMMENTS
	#14	CLEAR	AA-M10C21A41	Architectural Class I (0.7 mils minimum)
	#17	CLEAR	AA-M10C21A31	Architectural Class II (0.4 mils minimum)
	#40	DARK BRONZE	AA-M10C21A44	Architectural Class I (0.7 mils minimum)
	#29	BLACK	AA-M10C21A44	Architectural Class I (0.7 mils minimum)

Form No. 22-2354

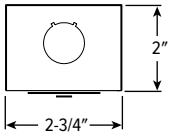
Technology Park/Atlanta
555 Guthridge Court
Norcross, GA 30092

770.449.5555 TEL

www.kawneer.com

75 LED Narrow Strip

Williams



75 Shown

CATALOG #:

TYPE:

PROJECT:

FEATURES

- Small fixture profile allows inconspicuous placement in coves or confined spaces
- Round and square lensed fixtures provide a clean look for architectural environments
- Row applications produce continuous light with minimal interruption between fixtures
- Diffuse acrylic lens on 75R and 75S enhances uniformity and minimizes glare
- Variety of mounting accessories for surface and suspended applications
- Special reflectors are available to provide precise light distribution (75 only)
- Maximize energy savings with efficacies as high as 171 lm/W
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – 22-gauge die-formed C.R.S.
- FINISH – 92% minimum average reflective white polyester powder coat bonded to phosphate-free, multi-stage pretreated metal. All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- ELECTRICAL – High quality mid-power LED board. Rated for 50,000 hours at 70% lumen maintenance (L70). 25°C maximum ambient operating temperature.
- MOUNTING – Surface (ceiling or wall) or suspended (hanging hardware required).
- LISTINGS –
  - cETLus conforms to UL STD 1598. Certified to CAN/CSA STD C22.2 No. 250.0. Suitable for damp locations
  - DesignLights Consortium Premium qualified product. Not all versions of this product may be DLC Premium qualified, see the DLC Qualified Products List at designlights.org/QPL
- WARRANTY – 5-year limited warranty, see hew.com/warranty.

DLC QPL LISTED PREMIUM

ORDERING EXAMPLE: 75 - 4 - L85/835 - OPTIONS - DIM - UNV

ORDERING INFO

SERIES	LENGTH [1]	LUMENS [2]	CRI	CCT
75	**2** 2′	2′	**8** 80	**27** 2700K
75R	**3** 3′	**L15** 1,500lm	**9** 90 [7]	**30** 3000K
75S	**4** 4′	**L20** 2,000lm		**35** 3500K
	8 8′	**L30** 3,000lm		**40** 4000K
		L40 4,000lm [4]		**50** 5000K
		3′		
		L40 4,000lm		
		4′		
		L30 3,000lm		
		L50 5,000lm		
		L65 6,500lm		
		L85 8,500lm [5]		
		8′		
		L60 6,000lm		
		L100 10,000lm		
		L130 13,000lm		
		L170 17,000lm [6]		

OPTIONS [3]

EM/7WRM	Remote mount 7-watt emergency battery [8]
EM/10WLP	Low-profile 10-watt emergency battery [9]
EM/10WRM	Remote mount 10-watt emergency battery [10]
C2__	Two-circuit quick-connect wiring harness. [11]
WG-75	11-gauge white powder coat wireguard
315	1-1/2″ ceiling spacer
VBY	(2) Y-hangers
VBY-2	(2) Y-hangers and (2) 2′ chains
RA-75	Row aligner [12]
45AMB	(2) 45° adjustable mounting brackets [13]
(L__)	Additional lower lumen packages available.[14] Example: 7,000 nominal lumens = 75-4-L85/835-**(L70)**-DIM-UNV

OCCUPANCY SENSOR

OCCWS FSP-211-L2-120/277	Digital high/low passive infrared with L2 lens, end mount, 120V or 277V [15]
FSIR-100	Remote controller for occupancy sensor [16]

MOUNTING (EXAMPLE: AC/D48) [17]

Prefix	Type	Length
AC/	**D** 1″ grid & hardpan	**24** 24″
	N 9/16″ grid	**48** 48″
	S Slot grid	**96** 96″

CONTROL [18]

DIM	Dimming driver
DRV	Non-dimming driver
VDO/DSR	Lutron Vive integral fixture control, RF with daylight and occupancy sensor (DFCSJ-OEM-OCC) and sensor-ready driver
VRF/DSR	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF) and sensor-ready driver

VOLTAGE

120	120V
277	277V
UNV	120-277V
347	347V [19]

QUICKSHIP

4′	8′
75S-4-L50/835-QS-DIM-UNV	75S-8-L100/835-QS-DIM-UNV
75S-4-L50/840-QS-DIM-UNV	75S-8-L100/840-QS-DIM-UNV

NOTES

1 For actual length, see page 4 for FIXTURE DETAILS
2 Lumen output based on 3500 CCT. Actual lumens may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
3 See page 5 for FINISH OPTIONS. See page 4 for MOUNTING DETAILS. See page 5 for SPECIAL REFLECTORS.
4 Available with 75 only.
5 Available with 75 only.
6 Available with 75 only.
7 Extended lead times may apply. Consult factory for availability.
8 120-277V only
9 4′ and 8′ only; must specify 120V or 277V
10 2′ and 3′ only; must specify 120V or 277V
11 See page 4 for QUICK CONNECT OPTIONS.
12 Required when row mounting with aircraft cables
13 Cord recommended, ordered separately. See page 4 for MOUNTING DETAILS. Field-adjustable up and down in 7-1/2° increments.
14 Specify in increments of 100 nominal lumens. Option must be specified with next higher lumen package.
15 Optional FSIR-100 remote controller available, ordered separately, see Options. See page 5 for OCCUPANCY SENSOR DETAILS.
16 Please specify quantity required per project, ships separately.
17 Required with suspended mount fixtures. Units specified with aircraft cable require cord. See page 4 for MOUNTING DETAILS. Requires RA-75 row aligner. See page 4 for MOUNTING ACCESSORIES DETAILS.
18 See page 3 for ADDITIONAL CONTROL OPTIONS.
19 Not available with EM drivers

75 LED Narrow Strip

FIXTURE PERFORMANCE DATA

			75 (NO LENS)		75R & 75S	
	LED PACKAGE	WATTAGE	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
2'	L15	10.8	1592	147.4	1496	138.6
	L20	14.5	2102	145.0	1976	136.3
	L30	21.3	3092	145.2	2906	136.5
	L40	25.2	3832	152.1	–	–
3'	L40	26.9	3929	146.1	3693	137.3
4'	L30	19.6	3011	153.6	2830	144.4
	L50	31.2	5360	171.8	5038	161.5
	L65	42.3	6313	149.2	5934	140.3
	L85	59.6	8384	140.7	–	–
8'	L60	35.5	5814	163.8	5465	153.9
	L100	63.5	10038	158.1	9436	148.6
	L130	85.5	13069	152.9	12285	143.7
	L170	119.2	17268	144.9	–	–

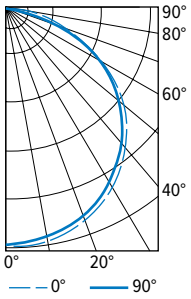
MULTIPLIER TABLE

	COLOR TEMPERATURE	
	CCT	CONVERSION FACTOR
80 CRI	2700K	0.97
	3000K	0.99
	3500K	1.00
	4000K	1.03
	5000K	1.06
90 CRI	2700K	0.80
	3000K	0.82
	3500K	0.83
	4000K	0.86
	5000K	0.89

- Photometrics tested in accordance with IESNA LM-79. Results shown are based on 25°C ambient temperature.
- Wattage shown is average for 120V through 277V input.
- Results based on 3500K, 80 CRI, actual lumens may vary +/-5%
- Use multiplier table to calculate additional options.

PHOTOMETRY

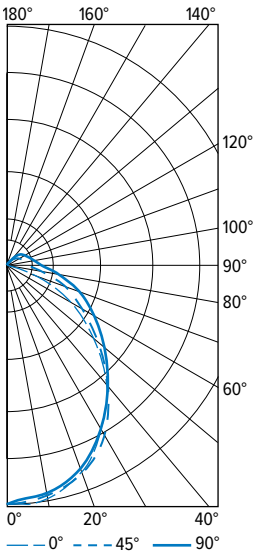
75-4-L85/835-DIM Total Luminaire Output: 8384 lumens; 59.6 Watts | Efficacy: 140.7 lm/W | 80 CRI; 3500K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	2846	2846	2846	
	5	2867	2838	2827	270
	15	2788	2751	2743	778
	25	2618	2579	2565	1192
	35	2374	2326	2298	1458
	45	2030	1972	1956	1526
	55	1606	1553	1533	1391
	65	1104	1051	1030	1052
	75	571	534	522	572
	85	102	114	99	142
	90	9	14	9	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	2240	27
	0 - 40	3699	44
	0 - 60	6615	79
	0 - 90	8381	100
	0 - 180	8383	100

75R-4-L65/835 Total Luminaire Output: 5934 lumens; 42.3 Watts | Efficacy: 140.3 lm/W | 80 CRI; 3500K CCT

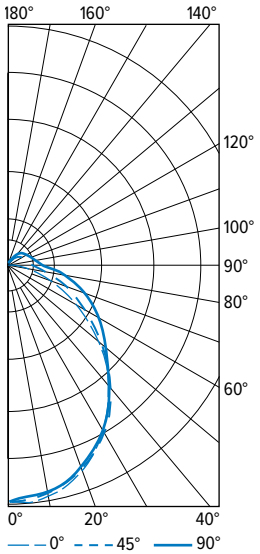


CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	1901	1901	1901	
	5	1921	1894	1871	180
	15	1834	1830	1817	515
	25	1653	1690	1703	776
	35	1403	1496	1547	926
	45	1085	1226	1336	939
	55	735	950	1090	832
	65	455	690	818	653
	75	196	462	568	449
	85	46	294	367	277
	90	6	228	298	
	95	1	182	241	165
	105	0	110	161	99
	115	0	69	109	61
	125	0	39	74	34
	135	0	21	46	17
	145	0	9	25	7
	155	0	5	12	2
	165	0	0	3	0
	175	0	0	0	0
	180	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	1471	25
	0 - 40	2398	40
	0 - 60	4168	70
	0 - 90	5547	94
	90 - 120	325	6
	90 - 150	384	7
	90 - 180	386	7
	0 - 180	5934	100

75 LED Narrow Strip

75S-4-L65/835 Total Luminaire Output: 5934 lumens; 42.3 Watts | Efficacy: 140.3 lm/ W | 80 CRI; 3500K CCT



CANDLEPOWER DISTRIBUTION

VERTICAL ANGLE	HORIZONTAL ANGLE 0°	45°	90°	ZONAL LUMENS
0	2002	2002	2002	
5	2019	1993	1965	189
15	1930	1913	1890	538
25	1723	1731	1702	794
35	1443	1473	1440	913
45	1111	1138	1160	886
55	771	850	946	770
65	453	615	749	605
75	198	397	546	412
85	34	237	360	243
90	0	180	286	
95	0	169	252	164
105	0	147	213	135
115	0	125	188	109
125	0	102	159	81
135	0	71	121	52
145	0	43	82	28
155	0	26	46	12
165	0	13	23	3
175	0	0	0	0
180	0	0	0	

LUMEN SUMMARY

ZONE	LUMENS	% FIXTURE
0 - 30	1520	26
0 - 40	2434	41
0 - 60	4090	69
0 - 90	5350	90
90 - 120	408	7
90 - 150	569	10
90 - 180	584	10
0 - 180	5934	100

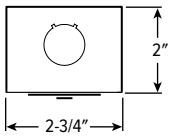
ADDITIONAL CONTROL OPTIONS

Note: Lumen restrictions apply, consult product builder at hew.com/product-builder.

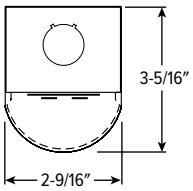
CATALOG NUMBER	DESCRIPTION
DRV	Driver prewired for non-dimming applications
DIM	Dimming driver prewired for 0-10V low voltage applications
DIM1	1% dimming driver prewired for 0-10V low voltage applications
DIM LINE	Line voltage dimming driver (Must specify 120V or 277V only)
DSR	Sensor-ready driver
SD40	40% step-dimming driver
SD50	50% step-dimming driver
DALI	DALI dimming driver
LTE LINE	Lutron Hi-lume 1% 2-wire dimming driver forward phase line voltage controls (120V only)
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver
LDE5	Lutron 5-Series 5% EcoSystem dimming LED driver
VDO/DSR	Lutron Vive integral fixture control, RF with daylight and occupancy sensor (DFCSJ-OEM-OCC) and sensor-ready driver
VRF/DSR	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF) and sensor-ready driver
VDO/DBI/LDE1	Lutron Vive integral fixture control, RF with daylight and occupancy sensor (DFCSJ-OEM-OCC), Lutron Hi-lume 1% EcoSystem dimming LED driver, and digital link interface
VDO/DBI/LDE5	Lutron Vive integral fixture control, RF with daylight and occupancy sensor (DFCSJ-OEM-OCC), Lutron 5-Series 5% EcoSystem dimming LED driver, and digital link interface
VRF/DBI/LDE1	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron Hi-lume 1% EcoSystem dimming LED driver, and digital link interface
VRF/DBI/LDE5	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF), Lutron 5-Series 5% EcoSystem dimming LED driver, and digital link interface
ELDO SOLOB	EldoLED Solodrive, 0.1% dimming driver for 0-10V controls
ELDO SOLOB DALI	EldoLED Solodrive, 0.1% dimming driver for DALI controls
ELDO ECO1	EldoLED Ecodrive, 1% dimming driver for 0-10V controls
ELDO ECO1 DALI	EldoLED Ecodrive, 1% dimming driver for DALI controls

CROSS SECTIONS

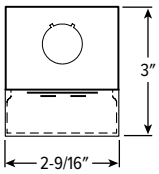
75



75R



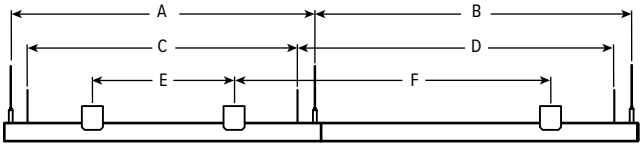
75S



75 LED Narrow Strip

MOUNTING DETAILS

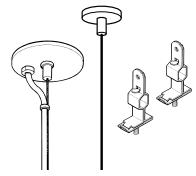
STAND ALONE SUBSEQUENT



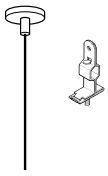
MOUNTING LENGTH

	AIRCRAFT CABLE		VBY HANGER		315 SPACER	
	A	B	C	D	E	F
2′	21-1/2″	22-1/2″	19″	22-1/2″	10″	22-1/2″
3′	32-1/2″	33-9/16″	30-1/16″	33-9/16″	21″	33-9/16″
4′	43-5/8″	44-5/8″	41-1/4″	44-5/8″	32″	44-5/8″
8′	88-3/16″	89-1/4″	85″	89-1/4″	77″	89-1/4″

STANDARD HARDWARE FOR SUSPENDED PRODUCT (Grid and Hardpan)



Feeder/Stand-Alone



Joiner

Notes:

- Fixtures are provided with adjustable length aircraft cables and mounting hardware, must specify.
- Electrical supply is brought into the feeder fixture, either as part of a row or as a stand-alone unit. Joiner fixtures complete the row.
- The feeder kits are standard with a 5″ canopy to cover the junction box and a 2″ canopy at the non-feed point. No J-box is required at non-feed points.

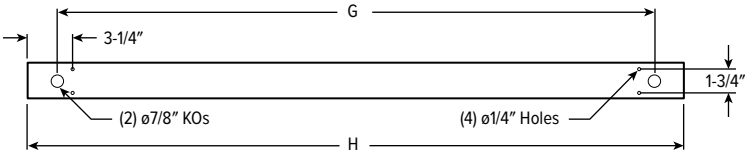
CORD FOR SUSPENDED PRODUCT

Units specified with aircraft cable require cord. Please specify cord type using ordering information below.

EXAMPLE: S2438/W				
CORD TYPE	LENGTH	# OF COND.	WIRE SIZE	COLOR
S	**24** 24″ **48** 48″ **96** 96″	**3** **4** **5**	**8**	**/W** White **/B** Black

FIXTURE DETAILS

BACKVIEW

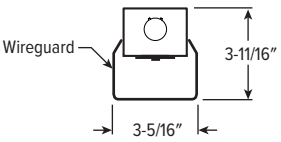


	7/8″ KOs (G)	ACTUAL FIXTURE LENGTH (H)
2′	18-3/8″	22-1/2″
3′	29-1/2″	33-9/16″
4′	40-1/2″	44-5/8″
8′	85-1/8″	89-1/4″

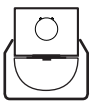
MOUNTING ACCESSORIES DETAILS

WG-75

75

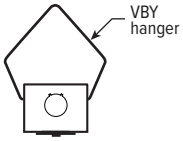


75R

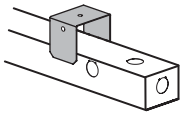


75S

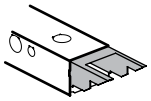
VBY



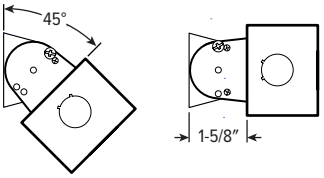
315



RA-75



45AMB



QUICK CONNECT OPTIONS

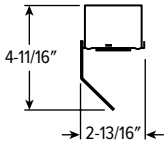
Note: Quick connect wiring required for row mounting. Length restrictions may apply, consult product builder at hew.com/product-builder.

DESIGNATION	NUMBER OF WIRES (EXCLUDING GROUND)	WIRE COLORS	WIRE COLOR/POWER SUPPLY FACTORY CONNECTIONS	TYPICAL USE
C2B	3	White, Black, Red	White, Black	Alternating Circuits
C2BR	3	White, Black, Red	White, Black, Red	ON/OFF Switching (DRV) or Line Voltage dimming (DIM LINE) when equipped w/EM Power Supply (EM/10W)
C2R	3	White, Black, Red	White, Red	Alternating Circuits
C2BW/RY	5	White, Black, Red, Gray, Green	White, Black/Red, Gray	0-10V 4-wire Low Voltage Dimming (DIM)

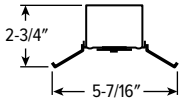
75 LED Narrow Strip

SPECIAL REFLECTORS

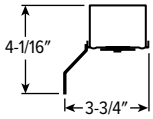
R1015



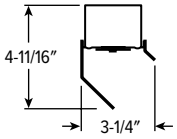
R1172



R1324



R1684



Reflectors are ordered separately, only available with 75, cannot be used with wireguard accessories.

Example: R1172-4-75LED REFL

FINISH OPTIONS

WHITE | BLACK | BRONZE | NICKEL | SILVER | ALUMINUM

For custom color, please specify RAL code or a manufacturer code with description. All custom colors other than RAL require two sample swatches, minimum 1″ square.

OCCUPANCY SENSOR DETAILS

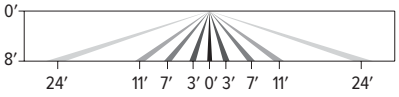
ORDERING EXAMPLE: OCCWS FSP-211-L2-120/277

FEATURES

- Fully adjustable high and low dimmed light levels.
- Designed for LED fixtures; rated for up to 200,000 on/off cycles.
- Hold-off setpoint with automatic calibration option for convenience and added energy savings.
- Adjustable via handheld wireless configuration tool.
- Adjustable time delay and cutoff delay.
- Factory set to 10% dimming at 5 minutes, cutoff at 1 hour.

LENS COVERAGE PATTERNS

L2 Coverage at 8′ mounting height: ø48′



REMOTE CONTROLLER

FSIR-100 Remote controller for occupancy sensor

Initial setup and subsequent sensor adjustments are made using a handheld configuration tool (FSIR-100). The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors. Please specify quantity required per project.

Visit www.wattstopper.com for more information.

FINELITE®
Better Lighting

TYPE R1

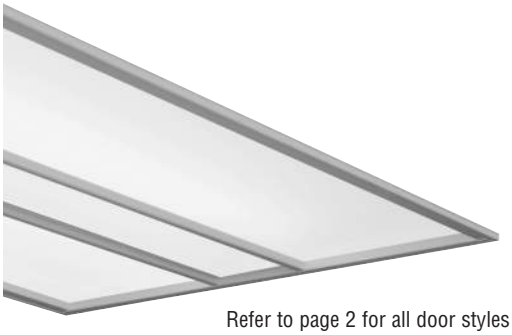
High Performance Recessed (HPR-LED) 2x4

Date

Project

Type

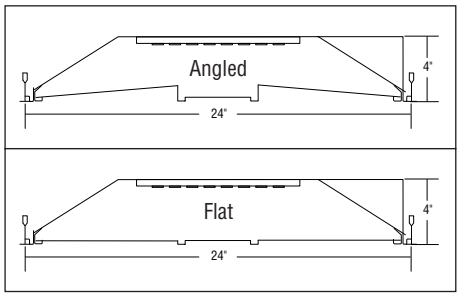
Comments



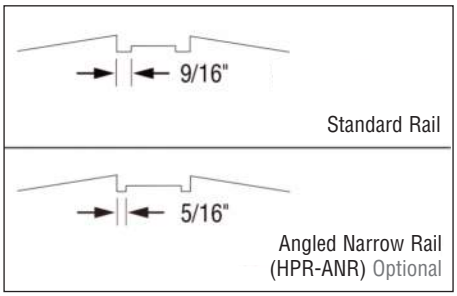
Refer to page 2 for all door styles

DESCRIPTION

HPR LED is a highly efficient recessed luminaire delivering excellent visual comfort and outstanding performance. Advanced optical design makes HPR LED a powerful solution for low-ceiling applications and eliminates the shadows common to other LED recessed products. This Product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Declared** status.



DIMENSIONS



NARROW RAIL OPTION

Available in angled door style with the same center optic choices. The optional narrow rails are approximately 5/16" wide. The standard rails are approximately 9/16" wide.

100% SERVICEABLE FROM BELOW

The replaceable light engine and driver are easy to access from below the ceiling.

ORDERING GUIDE

Sample Number: HPR LED - A - 2x4 - DCO - S - 835 - 277V - SC - C1 - OBO - RLA

HPR LED

Finelite **Series HPR LED**
Door Styles (**A** - Angled, **ANR** - Angled Narrow Rail, **F** - Flat,
CS - Curved Slotted[1], **DD** - Double Diffuse[1,2], **WAV** - Wave[1])
Size (**2x4**)
Center Optic (**DCO** - Diffuse Center, **SCO** - Slotted Center, **RCO** - Round Center)[3]
Light Output (**S** - Standard, **B** - Boosted Standard, **H** - High, **V** - Very High)
LED CRI/CCT (**830** - 80 CRI min, 3000K, **835** - 80 CRI min, 3500K,
840 - 80 CRI min, 4000K, **930** - 90 CRI min, 3000K,
935 - 90 CRI min, 3500K, **940** - 90 CRI min, 4000K
Voltage (**120V**, **277V**)
Circuiting (**SC** - Single Circuit)
Ceiling Type (**C1** - 1" T-Bar, **C2** - 9/16" T-Bar, **C3** - screw slot, **DW** - Drywall Kit)[4]
Integrated Sensors (**OBD** - Daylight, **OBO** - Occupancy, **W601** - Wattstopper Wireless Sensor[5], **OBB** - Both,
VOCC - Lutron Vive Wireless Sensor (VDO)[6], **VRF** - Lutron Vive Radio Only[6])
Special Options (**RLA** - Red List Approved, **RLD** - Declared Label)

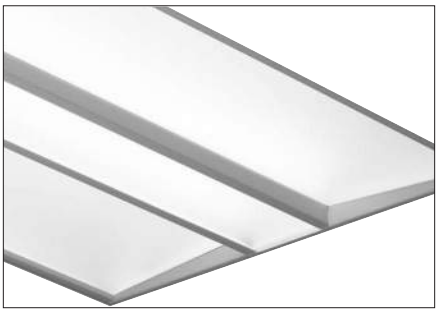
[1] Curved Slotted, Double Diffuse and Wave door not available with Center Optic options
[2] Double Diffuse not available with senors
[3] Only available with Angled (A), Angled Narrow Rail (ANR) and Flat (F) door options
[4] Surface Mount available
[5] LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 6 drivers may be connected. LMFS-601 w/ Dali driver, only 1 driver can be connected.
[6] Lutron Vive Ingrated Sensors require a DALI driver

A brand of legrand

Finelite, Inc. • 30500 Whipple Road • Union City, CA 94587-1530 • (510) 441-1100 • Fax: (510) 441-1510 • www.finelite.com

High Performance Recessed (HPR-LED) 2x4

DOOR STYLES

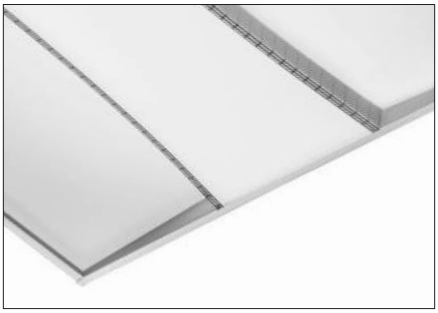


A - Angled
ANR - Angled Narrow Rail

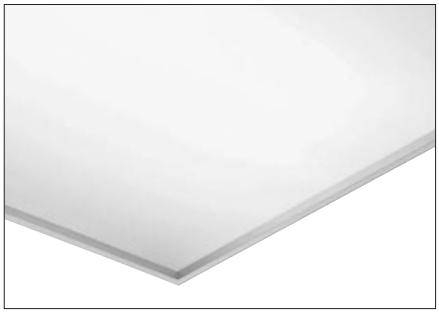
F - Flat

WAV - Wave

DOOR STYLES



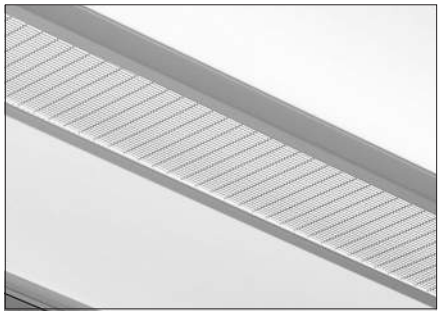
CS - Curved Slotted



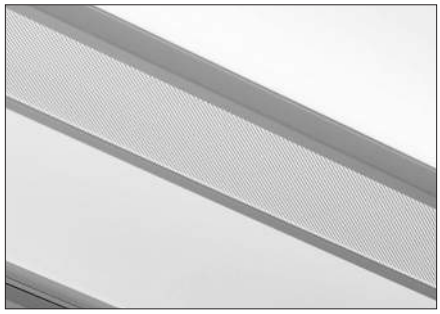
DD - Double Diffuse

CENTER OPTICS

DCO - Diffuse Center



SCO - Slotted Center



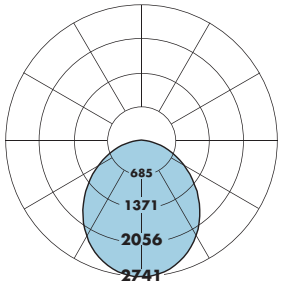
RCO - Round Center

DCO, SCO, and RCO are only available on Angled (A), Angled Narrow Rail (ANR), and Flat (F) doors.

High Performance Recessed (HPR-LED) 2x4

PHOTOMETRY

HPR LED-A-2x4-DCO-V
Very High Output - Angled Rail
Efficacy: 127 lumens per watt
Total luminaire output: 6979 Lumens
55.1 Watts
Peak Candela Value: 2741 @ 0˚
CCT: 3500K
ITL LM79 Report 85145



CANDLEPOWER SUMMARY

	0.0	22.5	45	67.5	ACROSS	Flux
0	2741	2741	2741	2741	2741	
5	2730	2728	2728	2727	2727	259
102685	2684	2683	2682	2678		
152613	2607	2609	2605	2602	735	
202511	2506	2502	2498	2498		
252380	2374	2371	2366	2367	1091	
302223	2216	2213	2209	2211		
352043	2036	2033	2030	2033	1271	
401845	1838	1836	1834	1837		
451635	1628	1627	1626	1630	1256	
501417	1412	1412	1410	1413		
551200	1195	1196	1195	1187	1069	
60986	984	984	978	974		
65780	778	774	766	761	766	
70582	583	576	569	565		
75401	400	393	388	389	420	
80239	236	232	229	229		
85103	100	97	91	89	111	
900	0	0	0	0		

Angled (A) and Flat (F) Total Light Output, 3500K, 80 CRI (Lumens)			
S*	**B***	**H***	**V****
3772	4742	5416	6979
Power, 3500K, 80 CRI (Watts)			
S*	**B***	**H***	**V****
27.0	35.2	40.6	55.1
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S*	**B***	**H***	**V****
140	135	135	127

* Family Correlation based on 3500K Very High Output (**V**) test - 120V.
** Based on source ITL report: 85145

Angled Narrow Rail (ANR) Total Light Output, 3500K, 80 CRI (Lumens)			
S*	**B***	**H***	**V¥**
3680	4626	5283	6808
Power (Watts)			
S*	**B***	**H***	**V¥**
26.9	35.1	40.5	55.0
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S*	**B***	**H***	**V¥**
137	132	130	124

* Family Correlation based on 3500K Very High Output (**V**) test - 120V.
** Based on source ITL report: 85151

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

Lumen Adjustment Factors - 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors - 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

Apply a lumen adjustment factor to calculate lumens for the desired CCT and CRI.

SAMPLE LUMEN ADJUSTMENT CALCULATION

High Output (H) Angled (A) & Flat (F)
4000K, 90 CRI

Lumen Adjustment Factor = 0.789

Total Light Output =
5416 lm x 0.789 = 4273 lm

$$\textit{Efficacy} = \frac{4273\ \textit{lm}}{40.6\ \textit{W}} = 105\ \text{lm/W}$$

** Correlation based on ITL report: 85145

 Form CTK0054. V9. EFFECTIVE DATE: 08/22

High Performance Recessed (HPR-LED) 2x4

Wave (WAV) Total Light Output, 3500K, 80 CRI (Lumens)			
S*	**B***	**H***	**V†**
3821	4804	5486	7069
Power, 3500K, 80 CRI (Watts)			
S*	**B***	**H***	**V†**
27.0	35.2	40.6	55.1
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S*	**B***	**H***	**V†**
142	136	135	128

* Family Correlation based on 3500K Very High Output (**V**) test - 120V.
† Based on source ITL report: 85837

Curve Slotted (CS) Total Light Output, 3500K, 80 CRI (Lumens)			
S*	**B***	**H***	**V‡**
3569	4486	5124	6602
Power, 3500K, 80 CRI (Watts)			
S*	**B***	**H***	**V‡**
27.0	35.2	40.6	55.1
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S*	**B***	**H***	**V‡**
132	127	126	120

* Family Correlation based on 3500K Very High Output (**V**) test - 120V.
† Based on source ITL report: 86020

Double Diffuse (DD) Total Light Output, 3500K, 80 CRI (Lumens)			
S*	**B***	**H***	**V±**
3076	3867	4417	5691
Power, 3500K, 80 CRI (Watts)			
S*	**B***	**H***	**V±**
27.0	35.2	40.6	55.1
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S*	**B***	**H***	**V±**
114	110	109	103

* Family Correlation based on 3500K Very High Output (**V**) test - 120V.
± Based on source ITL report: 85156

S - Standard Output, B - Boosted Standard Output,
H - High Output, V - Very High Output

Lumen Adjustment Factors - 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors - 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

Apply a lumen adjustment factor to calculate lumens for the desired CCT and CRI.

High Performance Recessed (HPR-LED) 2x4

SPECIFICATIONS

CONSTRUCTION: Die-formed 20-gauge cold-rolled steel housing. All components are hard-tooled to tolerances of +/- 0.010". UV stabilized weather-strip pile gasket with polypropylene backing. Hinged door frame assembly provides easy access to light arrays and driver compartment for servicing from below. Seismic brackets are integrated into the luminaire assembly. Additional wire entrances are positioned on the ends of the housing to allow easy wiring access for the installer.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors are finished in 96LG high reflectance matte white powder coat paint.

AIR RETURN: Refer to 2x4 Air Return Tech Sheet for more information.

OPTICAL SYSTEM: Components include diffuser panels and a central optic element held in place with a frame constructed from die-formed cold-rolled steel. The diffusers are UV-stabilized and impact-resistant frosted virgin acrylic, 0.120" thick. They are either angled toward the central optic or parallel to the ceiling plane. The standard center rails are approximately 9/16" wide. Optional narrows rails are approximately 5/16" wide. Optional wave door includes frosted acrylic panel that undulates from side to side.

DOUBLE DIFFUSE: Visible diffuser: UV-stabilized and impact-resistant frosted virgin acrylic, 0.120" thick. Inner diffuser: 0.120" thick with 60% round perforations white/white.

DOOR STYLE: Curved Slotted (CS) includes perforated rails that slope inward and a diffuse frosted acrylic center optic.

CENTER OPTIC OPTIONS: Only available with Angled (A), Angled Narrow Rail (ANR), and Flat (F) door styles.

Diffuse Center Optic (DCO): UV-stabilized and impact-resistant frosted virgin acrylic.

Slotted Center Optic (SCO): Die-formed cold-rolled steel panel with a 1/16" x 1/2" rectangular hole pattern. Virgin acrylic overlay.

Round Center Optic (RCO): Die-formed cold-rolled steel panel with precision-punched 3/32" round hole pattern arranged in staggered formation. Virgin acrylic overlay.

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). A separate chart summarizes lumen distribution and wattage. Light engines are replaceable.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

DRIVER: Replaceable 120V/277V Constant Current Reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100%. Dimming to 1% available, consult factory. Driver is fully accessible from below the ceiling. Power Factor: 0.9. Total Harmonic Distortion (THD): <20%. Expected driver lifetime: 100,000 hours.

LUTRON DRIVER OPTIONS: LUTES1 (Hi-lume 1% EcoSystem with Soft-On, Fade to Black dimming (LDE1 series)); **LUT2W** (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series)); Contact factory for availability of discontinued Lutron drivers, L3DA-3-wire and L3DA EcoSystem.

ELECTRICAL: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery. Chicago Plenum option. Factory-choice low-profile backup battery available. Bodine BSL722 battery pack also available. Backup batteries deliver 2305 lumens. One quarter of the 2x4 will be illuminated in emergency mode.

Daylight Sensor Occupancy Sensor

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) Occupancy (OBO) or Daylight Sensors (OBD) available with Flush and Bottom Glow downlight diffusers. PIR sensors not recommended for stairwell applications. Refer to Occupancy Sensor & Daylight Sensor tech sheet and the Embedded Intelligence landing page for more information and additional sensor options.

MOUNTING: Standard flange design works with most lay-in ceiling types. Integral pry-out tabs secure the luminaire to the ceiling grid from above. Tie-in locations for tie-wire on all corners. Consult local code for appropriate tie-wire recommendations. Drywall Kit available. Surface mount and air return versions available; refer to separate tech sheets.

FINISH: Housing and door assembly painted with 96 LG high reflectance matte white powder coat paint. Optional adder: Anti-microbial paint. Contact factory.

FEED: Optional whips (with flex connectors) supplied in a maximum of 11' lengths. Lead Wires

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 916, 1598, 8750, 924 in the U.S.A. and CAN/CSA C22.2 No. 205, 250, and 141 in Canada. In accordance with NEC Code 410.73 (G), this luminaire contains an internal driver disconnect. Damp Location. IC-rated. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2011/65/EU. Simply add - **RLF** (Red List Free) or - **RLD** (Declared) to your part number.

WEIGHT: 33 lbs maximum.

DLC QUALIFIED: Contact factory

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

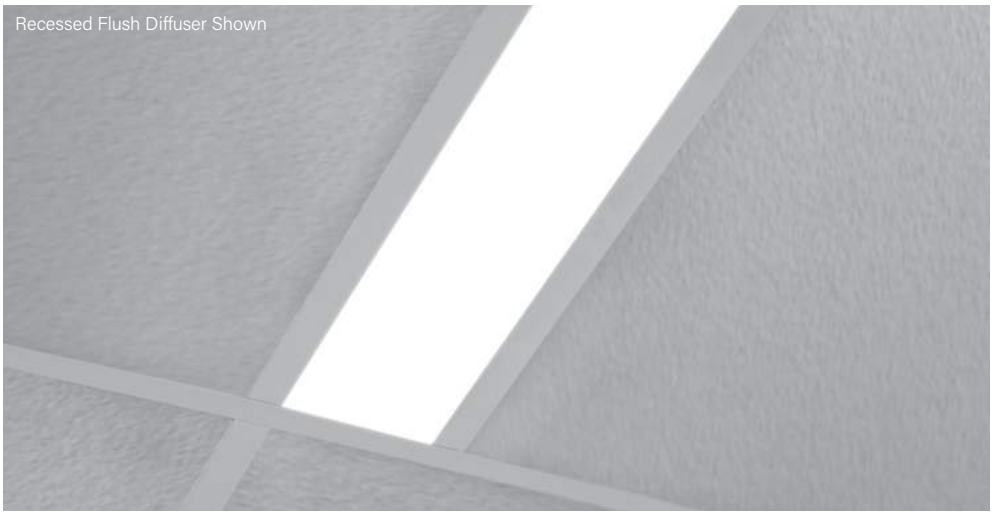
* LutVDO & LutVRF can be provided with 1% DALI Sensor Ready Driver (Osram Dexal), 5% DALI Sensor Ready Driver (Philips SR DALI) or any Lutron EcoSystem 1% or 5% LED driver. Customer to specify driver required.

Type R2

Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed



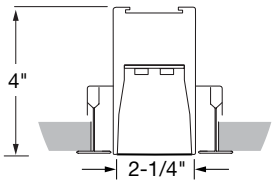
High Performance 2" Aperture is a patented, linear LED luminaire family. HP-2 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Red List Declared** status.

Note: see page 6 for all aesthetic options

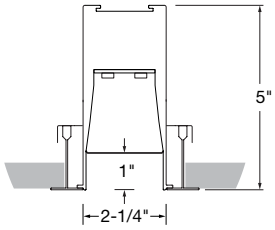
CROSS SECTIONS

Recessed



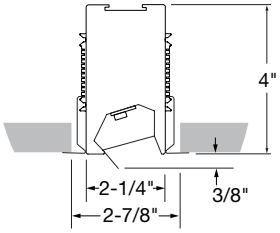
Flush Downlight Diffuser (standard)

Regressed



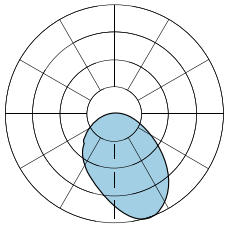
Flat Diffuser with 1" Regressed

Wall Wash Recessed

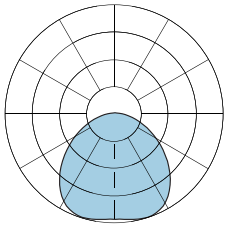


Kicker (standard)

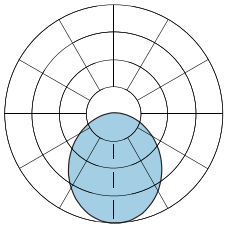
OPTIC OPTIONS



Downlight Asymmetric Optic (**DAO**)



Downlight Spread Optic (**DSO**)



Standard Downlight Flush Optic (**F**)

ALSO AVAILABLE IN

Pendant (**D, ID, I**)

Wall Mount (**WM**)

Surface Mount (**SM**)

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Clear Form

Ordering Guide Example: HP - 2 - R - D - 36' - S - 835 - F - 96LG - 120 - SC - FC-10% - FA50 - C1 - FE - SW - LGD18W - OBO - CP

BODY TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run
◉ **HP** - High Performance	◉ **2**	◯ **R** - Recessed ◯ **R RG** - Recessed Regressed (Wall Wash not available)	◯ **D** - Direct ◯ **WW-D** - Wall Wash Direct	_____ Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.

OUTPUT AND LED TYPE

Downlight Output (Flush)	LED CRI/CCT
◯ **S** - Standard (336 lm/ft) ◯ **B** - Boosted (423 lm/ft) ◯ **H** - High (639 lm/ft) ◯ **V** - Very High (822 lm/ft) ◯ **TL** - Tailored:_____lm/ft* Lumen provided above are for Flush lens only, see pg. 12 for WW lumens * Specify Tailored lm/ft of outputs between Standard (**S**) and Very High (**V**). Consult factory for tailored lumen output outside of this range.	◯ **830** - 80 CRI, 3000K ◯ **835** - 80 CRI, 3500K ◯ **840** - 80 CRI, 4000K ◯ **930** - 90 CRI, 3000K ◯ **935** - 90 CRI, 3500K ◯ **940** - 90 CRI, 4000K ◯ **8TW** - 80 CRI, Tunable White ◯ **9TW** - 90 CRI, Tunable White

MECHANICAL/OPTICAL OPTIONS

Downlight

◯ **F** - Flush (standard) [8, 9]
◯ **DL** - 1" Drop Down Lens [8]
◯ **RG-D** - Flat Diffuser with 1" Regress [1, 8]
◯ **RG-WCB** - White Cross Blade Baffle [1, 8]
◯ **RG-LHE** - Hollowed Ellipse Louver [1, 8]
◯ **RG-LHC** - Hex Louver [1, 8]
◯ **DAO-L** - Downlight Asymmetric Left [4, 8]
◯ **DAO-R** - Downlight Asymmetric Right [4, 8]
◯ **DSO** - Downlight Spread Optic [4, 8]
◯ **K** - Kicker for Wall Wash only (standard) [5]
◯ **FO** - Fully Open for Wall Wash only

Reflector System

◯ **96LG** - 96 Low Gloss White
◯ **SW** - Signal White for Wall Wash only

ELECTRICAL OPTIONS

Voltage

◯ **120** - 120 Voltage
◯ **277** - 277 Voltage
◯ **347** - 347 Voltage (OTi only)

Circuiting [2]

◯ **SC** - Single Circuit*
One single circuit in a run
◯ **MC** - Multi-Circuit*
More than one switch leg or zone. Factory shop drawings required
* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

Driver Selection

0-10V Driver Options
◯ **FC-10%** - 0-10V 10% (standard)
◯ **FC-1%** - 0-10V 1%
◯ **OTi-10%** - EldoLED OTi, 0-10V 10% [3]
◯ **OTi-1%** - EldoLED OTi, 0-10V 1% [3]
◯ **ELD-10V-0%** - EldoLED SOLOdrive, 0-10V 0.1%
◯ **10V-TW-10%** - EldoLED OTi, 0-10V 10% *(Tunable White)* [3]

DALI Driver Options
◯ **FC-DALI-1%** - DALI 1%
◯ **DXL-DALI-1%** - EldoLED Dexal, 1%
◯ **ELD-DALI-0%** - EldoLED SOLOdrive, 0.1%
◯ **ELD-DALI-TW** - EldoLED DUALdrive LightShape, 0.1% *(Tunable White)*

DMX Driver Options
◯ **ELD-DMX** - EldoLED POWERdrive, 0.1%
◯ **ELD-DMX-TW** - EldoLED POWERdrive, 0.1% (Tunable White)

Lutron Driver Options
◯ **LUT-ES1** - Lutron, Ecosystem 1%
◯ **LUT-TW** - Lutron LD2 Dali-2 1% *(Tunable White)*

See Page 3 for additional driver options and details

MOUNTING OPTIONS

Ceiling Hardware Type

◯ **C1** - 15/16" T-Bar
◯ **C1T** - 15/16" Tegular
◯ **C2** - 9/16" T-Bar
◯ **C2T** - 9/16" Tegular
◯ **C3** - Screw Slot
◯ **C3F** - Flush Screw Slot
◯ **SF** - Spackle Flange
◯ **VF** - Visible Flange
◯ **TZ4** - Tech Zone 4" _____ (C1, C2, C2T, C3, C3F)

OTHER OPTIONS

Endcap Style

◉ **FE** - Flat Endcap (standard)

Finish

◯ **SW** - Signal White (standard)
◯ **FB** - Finelite Black
◯ **SA** - Satin Aluminum
◯ **####** - RAL Color Code [7] _____

OTHER OPTIONS

Emergency Style (Optional)

See page 5 Backup Battery table — Clear Selection

◯ **LGD18W** - Legrand 18W Brand Battery Back-up
◯ **LGD10W** - Legrand 10W Brand Battery Back-up
◯ **EM/GEN** - Emergency to Generator
◯ **NL** - Night Light
◯ **BSL310LP** - Bodine Battery Back up Low Profile
◯ **GTD** - Generator Transfer Device
◯ **ALCR** - Automatic Load Control Relay

Integrated Sensor (Optional) [8] — Clear Selection

◯ **OBO** - Occupancy [9]
◯ **OBD** - Daylight [9]
◯ **W601** - Wattstopper Wireless Sensor [10]
◯ **OBE** - Enlighted [11]
◯ **REE** - Remote Enlighted [12]
◯ **CLM** - Encelium RF
◯ **SLM** - Encelium Sensor
◯ **AOCC-W** - Lutron Athena Sensor (Device Color White) [13]
◯ **AOCC-B** - Lutron Athena Sensor (Device Color Black) [13]
◯ **ARF-W** - Lutron Athena RF (Device Color White) [13]
◯ **ARF-B** - Lutron Athena RF (Device Color Black) [13]
◯ **VOCC** - Lutron Vive Wireless Sensor (VDO) [14]
◯ **VRF** - Lutron Vive Radio Only [14]

Special Options (Optional) — Clear Selection

◯ **CP** - Chicago Plenum [15]
◯ **FLX** - Flex Whip
◯ **RLA** - Red List Approved
◯ **RLD** - Red List Declared

[1] Recessed Regressed straight run only
[2] Contact factory for switching options
[3] Add DTO to gain "Dim to Off" functionality (FC-10% - DTO, FC-1% - DTO)
[4] Not available with Regressed or Curves
[5] Kicker standard in Signal White. Customer Custom color kickers have a surcharge
[6] B & V outputs only
[7] 20 business days lead time for color
[8] Minimum fixture length with a sensor is 3ft.
[9] Not available with Wall Wash
[10] LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 6 drivers may be connected. LMFS-601 w/ Dali driver, only 1 driver can be connected.
[11] Enlighted components installed by Finelite, provided by others
[12] Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor.
[13] 0-10V Drivers - **AOCC** up to 10 drivers may be connected; **ARF** up to 40 drivers may be connected DALI Drivers - **AOCC** & **ARF** up to 4 drivers can be connected.
[14] Lutron Vive Ingrated Sensors require a DALI driver
[15] Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox

Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

SUPPLEMENTARY DRIVER PAGE

0-10V Driver Options	
FC-10%	Factory Choice, 0-10V 10% Dimming (Linear)
FC-10%-DTO	Factory Choice, 0-10V 10% Dimming, Dim-to-Off (Linear)
FC-1%	Factory Choice, 0-10V 1% Dimming (Linear)
FC-1%-DTO	Factory Choice, 0-10V 1% Dimming, Dim-to-Off (Linear)
ELD-10V-0%	EldoLED SOLOdrive, 0-10V 0.1% Dimming (Linear)
ELD-10V-1%	EldoLED ECOdrive, 0-10V 1% Dimming (Linear)
10V-TW-10%	EldoLED OTi, 0-10V 10% Dimming, *Tunable White* (Linear)
10V-TW-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off, *Tunable White* (Linear)
OTi-10%	EldoLED OTi, 0-10V 10% Dimming (Linear)
OTi-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off (Linear)
OTi-1%	EldoLED OTi, 0-10V 1% Dimming (Linear)
OTi-1%-DTO	EldoLED OTi, 0-10V 1% Dimming, Dim-to-Off (Linear)

DALI Driver Options	
FC-DALI-1%	Factory Choice, DALI 1% Dimming (Logarithmic)
DXL-DALI-1%	EldoLED Dexal, DALI 1% Dimming (Logarithmic)
ELD-DALI-0%	EldoLED SOLOdrive, DALI 0.1% Dimming (Logarithmic)
ELD-DALI-1%	EldoLED ECOdrive, DALI 1% Dimming (Logarithmic)
ELD-DALI-TW	EldoLED DUALdrive Light Shape, DALI 0.1% Dimming, *Tunable White* (Logarithmic Dimming, Linear CCT Control)

DMX Driver Options	
ELD-DMX	EldoLED POWERdrive, DMX 0.1% Dimming (8 Bit, 1CH) (Linear)
ELD-DMX-16	EldoLED POWERdrive, DMX 0.1% Dimming (16 Bit, 2CH) (Linear)
ELD-DMX-TW	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (8 Bit, 2CH - CH1 Warm / CH2 Cool) (Linear)
ELD-DMX-TW16	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (16 Bit, 4CH - CH1, 2 Warm / CH3, 4 Cool) (Linear)

Lutron Driver Options	
LUT-ES1	Lutron, Ecosystem 1% Dimming
LUT-TW	Lutron LD2 Dali-2 1%, *Tunable White*

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
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High Performance 2" Aperture (HP-2) Recessed

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6063-T6 extruded aluminum body. Internal joiner system and plug-together wiring are standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16th" (±1/32"). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS [1] : Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, Regressed Diffuser, or White Cross Blade Baffle [2]. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**) or 1" Drop Down Lens. Contact factory for Double miters using the White Cross Blade Baffle. Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

DOWNLIGHT OPTION: 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 73% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow **(BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**) [3,4], Ellipse Louver (**LHE**) [3], Hex Louver (**LHC**) [3], Downlight Asymmetric Optic (**DAO**) [5], Downlight Spread Optic (**DSO**) [5], and Regressed downlight diffusers (**RG**) [3]. 1" Drop Down Lens made of highly efficient acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread & Downlight Asymmetric Optics are extruded lenses with a subtle ribbed appearance providing a batwing or asymmetric distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed wire controlling uplight and downlight together (power and dimming). Specify dual feed wires for independent control of uplight and downlight. 14-gauge feed wire used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when luminaire current exceeds 5 amps. DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

0-10V:
- One 18-guage / 3-conductor power
- One 18-gauge / 4-conductor for dimming and controls

Dali:
- One 18-gauge / 5-conductor power and controls

DMX:
- One 18-gauge / 3-conductor power
- One DMX feed

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V constant current reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.
- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:
LUT-ES1 - Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V and 277V.
- **Power factor:** ≥0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime:** 100,000 hours

LUTRON TUNABLE WHITE DRIVER OPTION:
LUT-TW - Lutron LD2 Dali-2 1%, Tunable White.

[1] Not available with Wall Wash
[2] White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only
[3] Recessed Regressed straight run only
[4] White Cross Blade Baffle (WCB) currently not advisable for drywall
[5] Not available with Regressed or Curves

Continued

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

SPECIFICATIONS

MOUNTING OPTIONS

HANGING HARDWARE:

- **Recessed T-Bar**: Standard bracket design works with most lay-in ceiling types. Brackets secure luminaire to the ceiling grid from above. Tie-in T-Bar brackets connect the luminaire to the T-Bar for securing to structure. Consult local codes for tie-wire recommendations.
- **Recessed Spackle Flange:** Drywall surfaces (walls or ceilings): 1/4" - 20 stud and nut (provided by others). Mounted with three equidistant suspension points.

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are prewired with plug-and-play interconnected cables to support easy plug-together joining of fixture runs. DMX to RJ45 adapters and an RJ45 terminator for every 32 DMX drivers are included.

OTHER OPTIONS

ENDCAPS: Flat endcaps (**FE**) at each end of run add 1/16" to each end of luminaire. Drop Down Lens Illuminated Endcap (**DE**) includes diffuse element to continue luminance of drop lens.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery		
	Legrand 18W	**Legrand 10W / Bodine BSL310LP**
HP2-R-D		
Min. Housing Length	8'*	4'**
EM Lumen Output	1608	956
EM Section Illuminated	2'	2' or 4'
HP2-R-WW-D		
Min. Housing Length	8'*	4'*
EM Lumen Output	1500	891
EM Section Illuminated	4'	4'

* Minimum fixture housing length for battery pack approved without sensor. ** Exception: 5' not available, 6'+ okay.
The lumens are based on 835. For other CCT/CRI, refer to the Lumen Adjustment Factor table on page 11.

Bodine GTD and Legrand ALCR Min. Length	
Configuration	**Min Length**
Generator	6'
Generator + OCC	8'
Daylight	6'
Generator + Daylight	8'

TUNABLE WHITE ELECTRICAL OPTIONS [6]:

TW Driver Options

- **0-10V:** EM/GEN, GTD or Battery BackUup
- **DMX:** Battery Back Up
- **DALI:** EM/GEN, GTD or Battery Back Up
- **LUTRON:** EM/GEN, GTD or Battery Back Up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) Occupancy (**OBO**) or Daylight Sensors (**OBD**) available with Flush and Bottom Glow downlight diffusers. PIR sensors not recommended for stairwell applications. Refer to Occupancy Sensor & Daylight Sensor tech sheet and the Embedded Intelligence landing page for more information and additional sensor options. Minimum fixture length with a sensor is 3ft. The default location for the Connected Lighting Module (**CLM**) will be on the topside of the fixture for all mounting types except for Surface Mount (**SM**). In SM fixtures the CLM will be located on the direct side of fixture housed in a bracket that is flush with the direct lens.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**), and Satin Aluminum (**SA**) are standard. Optional Adder: 179 RAL colors [7] are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. IC Rated. HP-2 can be used to comply with 2016 Title 24, Part 6 (JA8); high efficacy LED light source requirements. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Red List Declared) to your part number.

WEIGHT [8]: R - 2.3 lb/ft; WW-R - 2.9 lb/ft

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

[6] Consult Finelite for Generator Transfer Device and Battery Backup fit
[7] 20 business days lead time for color
[8] Excludes Battery Backup and Generator Transfer Device weight

Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE®
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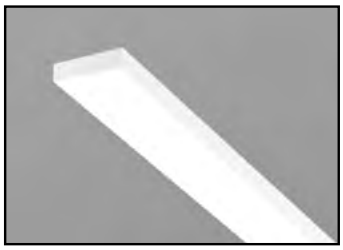
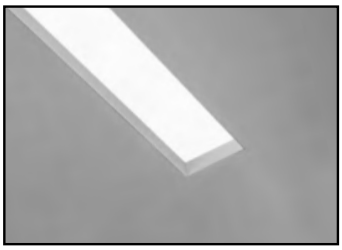
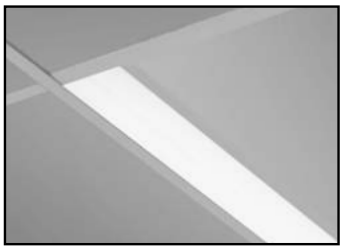
High Performance 2" Aperture (HP-2) Recessed

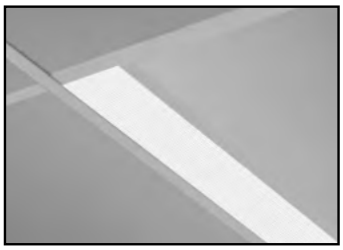
AESTHETIC OPTIONS

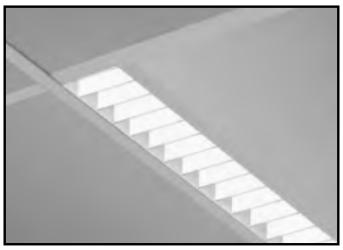

Flush Diffuser (**F**)

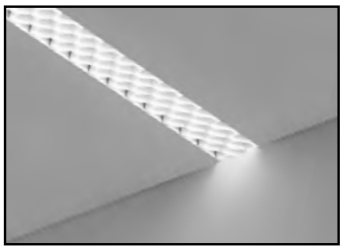

1" Drop Down Lens (**DL**)

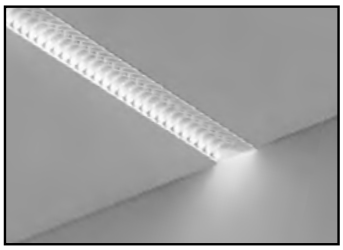

Flat Diffuser with 1" Regressed (**RG-D**)

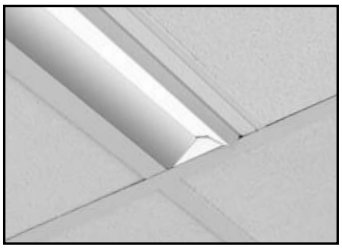

Downlight Asymmetric Optic (**DAO**) [1]
Externally flush


Downlight Spread Optic (**DSO**) [1]
Externally flush


White Cross Blade Baffle [2] (**RG-WCB**)


Hex Louver [2] (**RG-LHC**)


Hollowed Ellipse Louver [2] (**RG-LHE**)


Kicker (**K**) - Wall Wash only

[1] With a subtle ribbed appearance providing specialized distribution
[2] Regressed only. Not available with Wall Wash

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

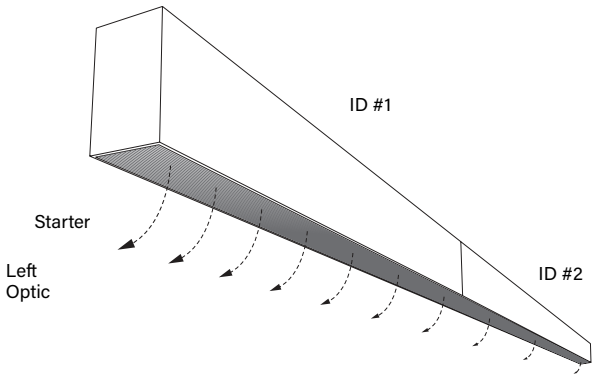
FINELITE® Better Lighting

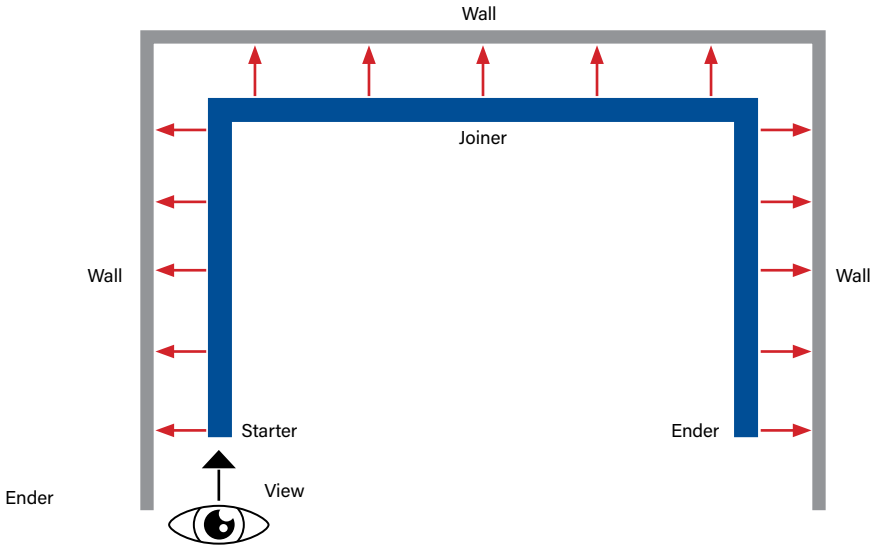
High Performance 2" Aperture (HP-2) Recessed

DOWNLIGHT ASYMMETRIC OPTIONS

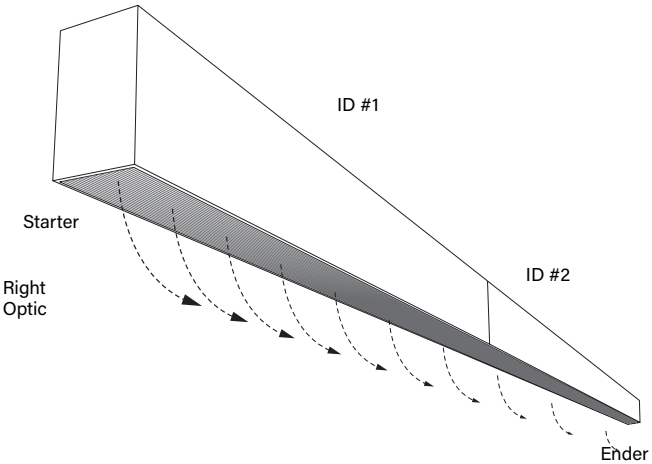
The diagrams below show a linear run from power feed to ender. Specifing DAO-L distributes light to the left or DAO-R distributes light to the right. For proper orientation: view luminaire from starter end when specifying the direction of the Downlight Asymmetric optic.

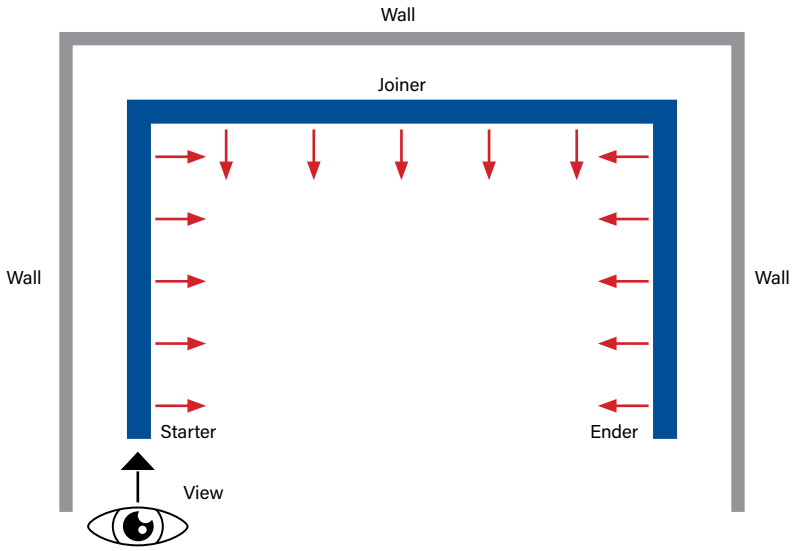
Downlight Asymmetric Optic Left (DAO-L)





Downlight Asymmetric Optic Right (DAO-R)





PREINSTALLED LABEL

For DAO, Preinstalled label on diffuser shows direction of light. Remove after installation.

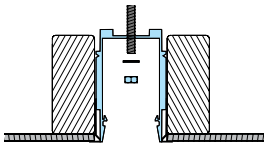
Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

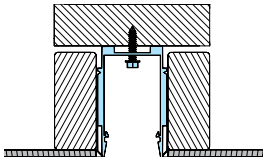
High Performance 2" Aperture (HP-2) Recessed

HARD CEILING MOUNTING OPTIONS

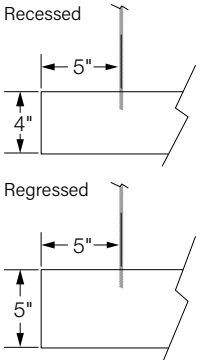
Threaded Rod Option



Screw Mount Option

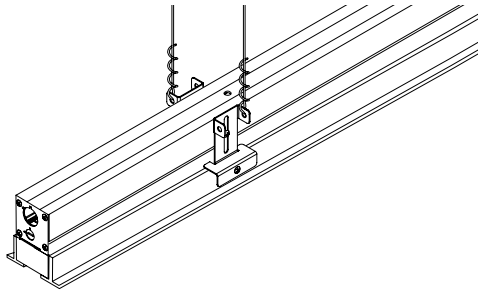


Mounting Location for Securing to Structure



Two mounting options: threaded rod and screw mounting options. Mounting locations are located on each end of the luminaire. Mounting location is 5" away from each end of luminaire.

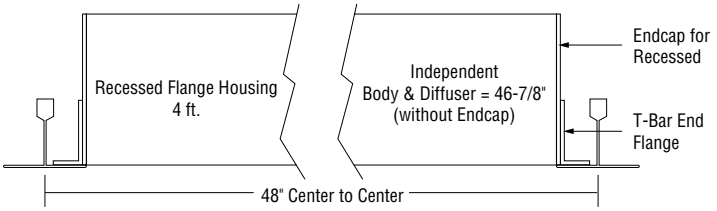
T-BAR INSTALLATION



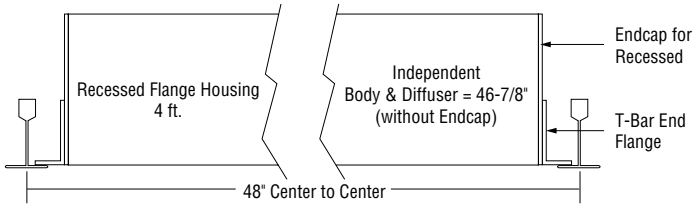
HP-2 R for T-Bar installations comes standard with a splice plate at the end of the luminaire. Mounting brackets (supplied) secure the luminaire to T-Bar and provide support to structure location. All even foot length (2, 4, 6, ...) luminaire runs are reduced in length by an appropriate amount to fit within typical 2x2 and 2x4 T-Bar grid systems. For uncommon T-Bar systems please consult factory.

GRID LENGTH DETAIL - 4' EXAMPLE

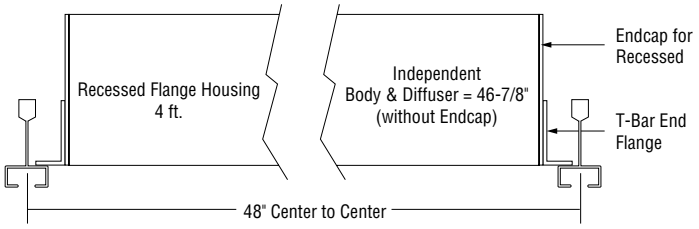
15/16" T-Bar



9/16" T-Bar

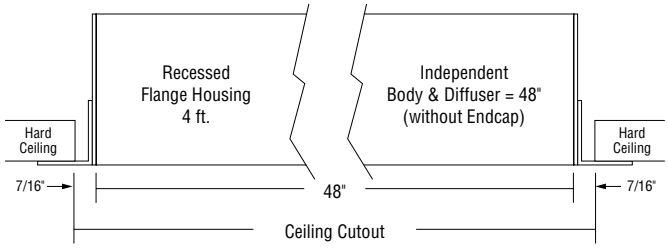


9/16" Screw Slot

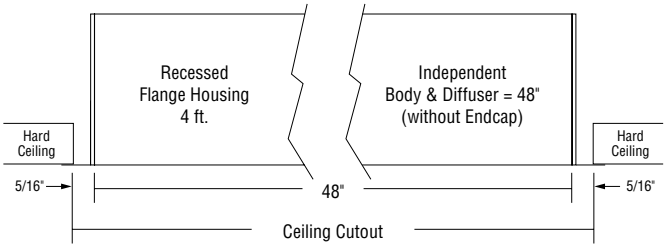


HARD CEILING LENGTH DETAIL - 4' EXAMPLE

Spackle Flange



Visible Flange



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

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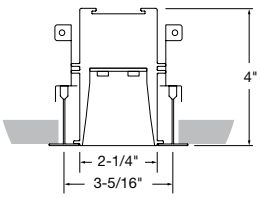
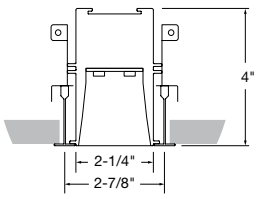
High Performance 2" Aperture (HP-2) Recessed

RECESSED MOUNTING TYPES - T-BAR

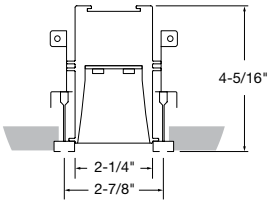
Rough-In Dimensions



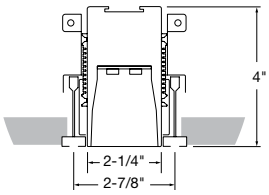
15/16" T-Bar (C1)



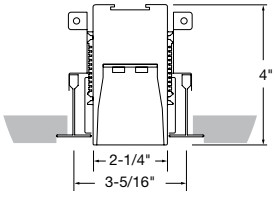
9/16" T-Bar (C2)



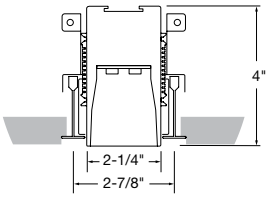
Standard Screw Slot (C3)



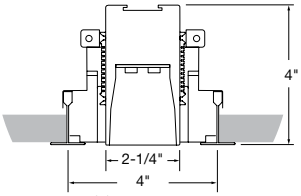
Flush Screw Slot (C3F)



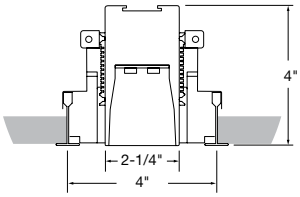
15/16" Tegular (C1T)



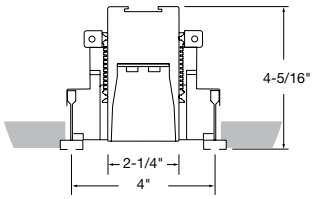
9/16" Tegular (C2T)



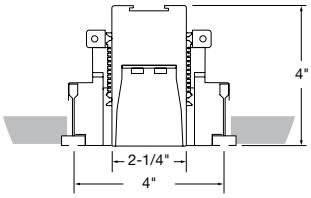
Tech Zone 4" (TZ4)
15/16" T-Bar (C1)



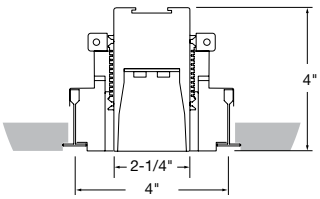
Tech Zone 4" (TZ4)
9/16" T-Bar (C2)



Tech Zone 4" (TZ4)
Standard Screw Slot (C3)

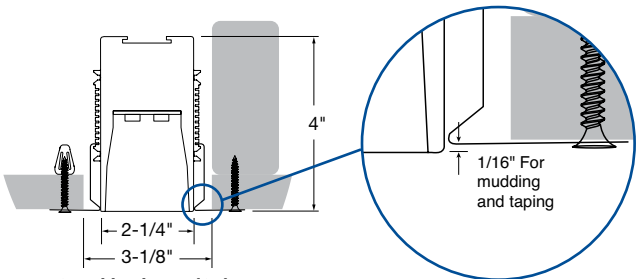


Tech Zone 4" (TZ4)
Flush Screw Slot (C3F)

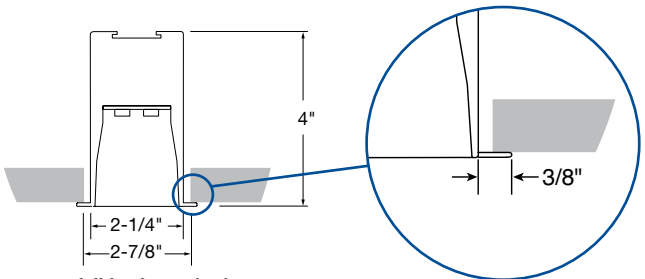


Tech Zone 4" (TZ4)
9/16" Tegular (C2T)

RECESSED MOUNTING TYPES - CUTOUT DIMENSIONS



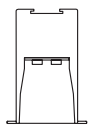
Spackle Flange (SF)



Visible Flange (VF)

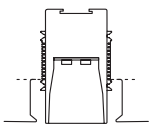
HOUSING

Version 1



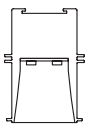
Ceiling Option VF

Version 2



Ceiling Options
C1T, C2T, C3F, SF, TZ4

Version 3



Ceiling Options
C1, C2, C3

Note: +/- 1/16"

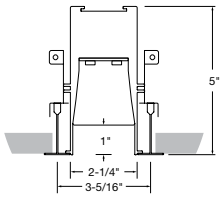
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

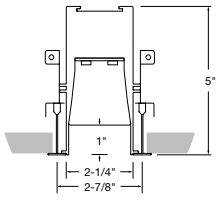
High Performance 2" Aperture (HP-2) Recessed

REGRESSED MOUNTING TYPES - T-BAR

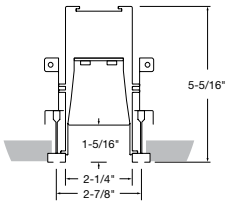
Rough-In Dimensions



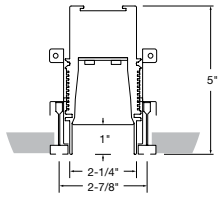
15/16" T-Bar (C1)



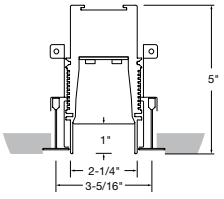
9/16" T-Bar (C2)



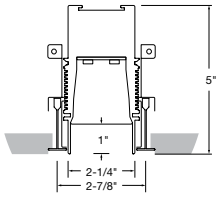
Standard Screw Slot (C3)



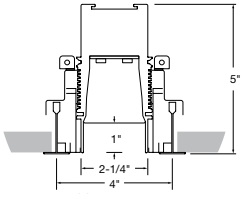
Flush Screw Slot (C3F)



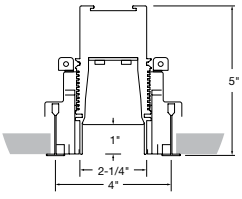
15/16" Tegular (C1T)



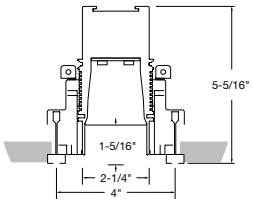
9/16" Tegular (C2T)



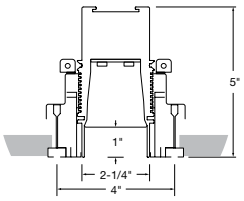
Tech Zone 4" (TZ4)
15/16" T-Bar (C1)



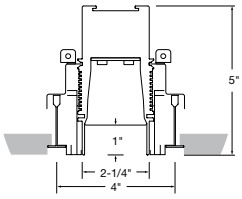
Tech Zone 4" (TZ4)
9/16" T-Bar (C2)



Tech Zone 4" (TZ4)
Standard Screw Slot (C3)

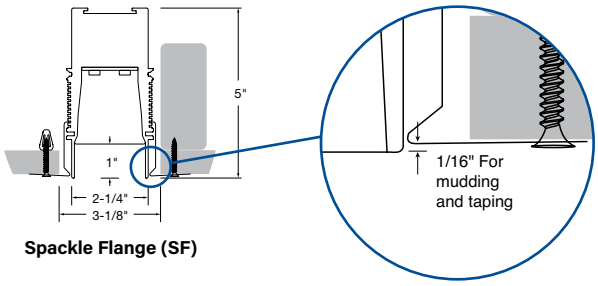


Tech Zone 4" (TZ4)
Flush Screw Slot (C3F)

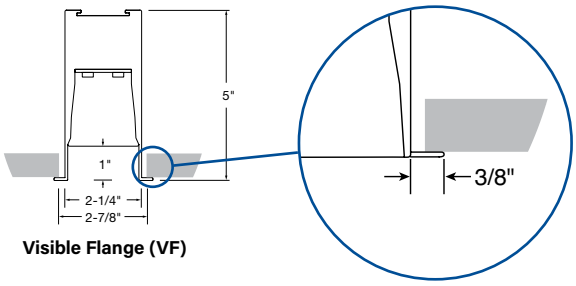


Tech Zone 4" (TZ4)
9/16" Tegular (C2T)

REGRESSED MOUNTING TYPES - CUTOUT DIMENSIONS



Spackle Flange (SF)

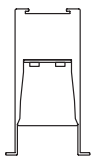


Visible Flange (VF)

Regressed Lens: Regressed lens version is 5" tall with a lens that is regressed 1" from ceiling line.

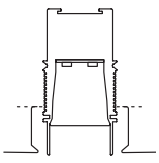
HOUSING

Version 1



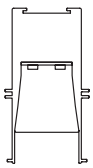
Ceiling Option VF

Version 2



Ceiling Options
C1T, C2T, C3F, SF, TZ4

Version 3



Ceiling Options
C1, C2, C3

Note: +/- 1/16"

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

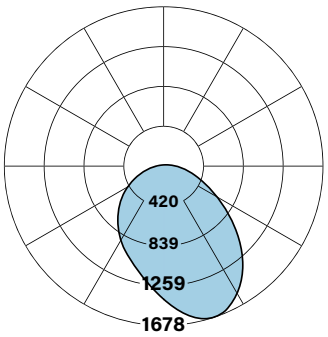
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Recessed Photometry - 4' Luminaire 3500K

HP2-R-D-4'-V-835-DAO
Downlight: Downlight Asymmetric Optic - Right

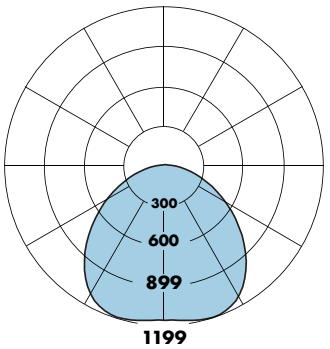
Efficacy: 105 lm/W
Total luminaire output: 3741 lumens (935 lm/ft)
35.5 watts (8.9 W/ft)
Peak Candela Value: 1670 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report REP-051921-01



Complete LM79 LED Photometry

HP2-R-D-4'-V-835-DSO
Downlight: Downlight Spread Optic

Efficacy: 92 lm/W
Total luminaire output: 3273 lumens (818 lm/ft)
35.7 watts (8.9 W/ft)
Peak Candela Value: 1197 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 94139



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1531	1925	2910	3741

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
383	481	727	935

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
110	109	107	105

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: REP-051921-01

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1340	1684	2546	3273

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
335	421	636	818

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
96	95	93	92

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 94139

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2910 lm x 0.789 = 2296 lm
Total Light Output per Foot: 707 lm/ft x 0.789 = 574 lm/ft.
watts/foot: 6.8 W/ft.

$$\textbf{Efficacy} = \frac{574\ \frac{\text{lm}}{\text{ft.}}}{6.8\ \frac{\text{W}}{\text{ft.}}} = 84\ \text{lm/W}$$

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

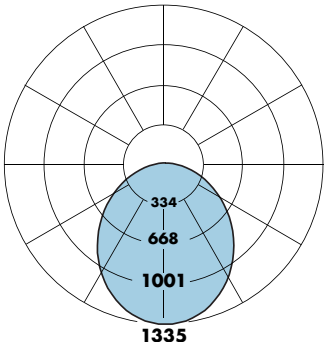
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Recessed Photometry - 4' Luminaire 3500K

HP2-R-D-4'-V-835
Downlight: Flush Diffuser

Efficacy: 89 lm/W
Total luminaire output: 3287 lumens (822 lm/ft)
36.9 watts (9.2 W/ft)
Peak Candela Value: 1335 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85135



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1346	1692	2557	3287

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
336	423	639	822

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.1	9.2

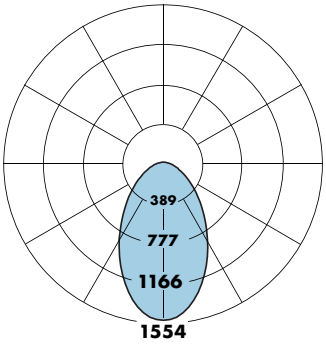
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
93	92	90	89

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85135

HP2-R RG-D-4'-V-835
Downlight: Regressed Diffuser

Efficacy: 79 lm/W
Total luminaire output: 2907 lumens (727 lm/ft)
37 watts (9.3 W/ft)
Peak Candela Value: 1554 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 90351



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1190	1496	2261	2907

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
298	374	565	727

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.1	9.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
82	81	80	79

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 90351

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2557 lm x 0.789 = 2017 lm
Total Light Output per Foot: 639 lm/ft x 0.789 = 504 lm/ft.
watts/foot: 7.1 W/ft.

$$\textbf{Efficacy} = \frac{504\ \frac{\text{lm}}{\text{ft.}}}{7.1\ \frac{\text{W}}{\text{ft.}}} = 71\ \text{lm/W}$$

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

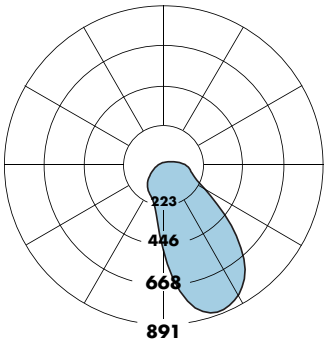
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Wall Wash Recessed - 4' Luminaire 3500K

HP2-R-WW-D-K-4'-V-835
Downlight: With Kicker

Efficacy: 76 lm/W
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
Peak Candela Value: 882 @ 25°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85137



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B** [1]	**H** [1]	**V** [2]
614	772	1167	1500

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
154	193	292	375

Power, 3500K (Watts Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
2.0	2.5	3.8	4.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B** [1]	**H** [1]	**V** [2]
76	77	77	77

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85137

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 1167 lm x 0.789 = 921 lm
Total Light Output per Foot: 292 lm/ft x 0.789 = 230 lm/ft.
watts/foot: 3.8 W/ft.

$$\textbf{Efficacy} = \frac{292\ \frac{\text{lm}}{\text{ft.}}}{3.8\ \frac{\text{W}}{\text{ft.}}} = 61\ \text{lm/W}$$

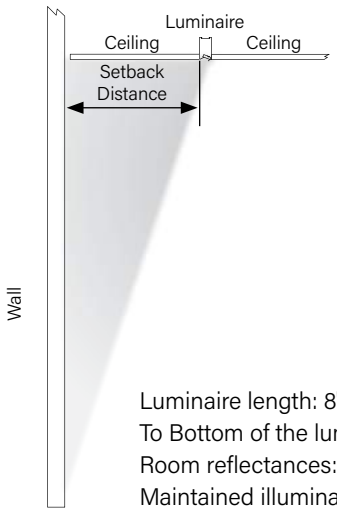
Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

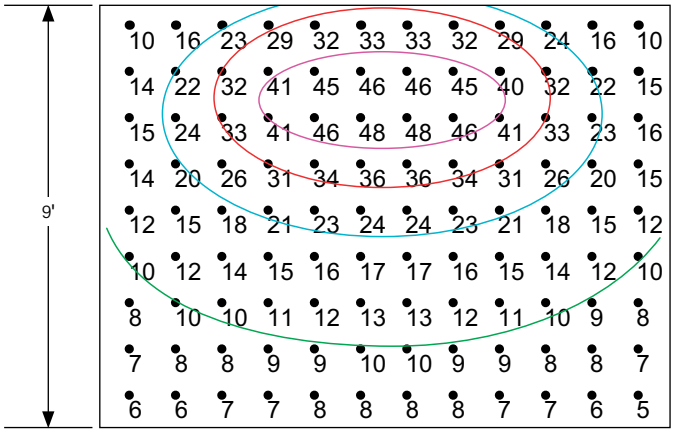
WALL WASH RECESSED - SETBACK INFO AND APPLICATION DATA

HP2-R-WW-D-K-4'-V-835
Downlight: With Kicker
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
CRI: 80 / CCT: 3500K



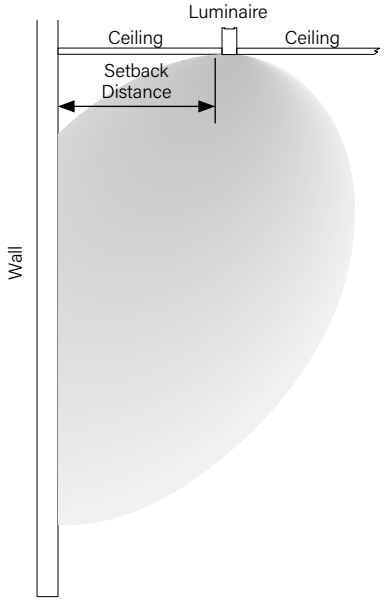
Luminaire length: 8'
To Bottom of the luminaire: 9'-0"
Room reflectances: 80-50-20
Maintained illuminance levels: LLF 0.86"

Setback Distance - 2'

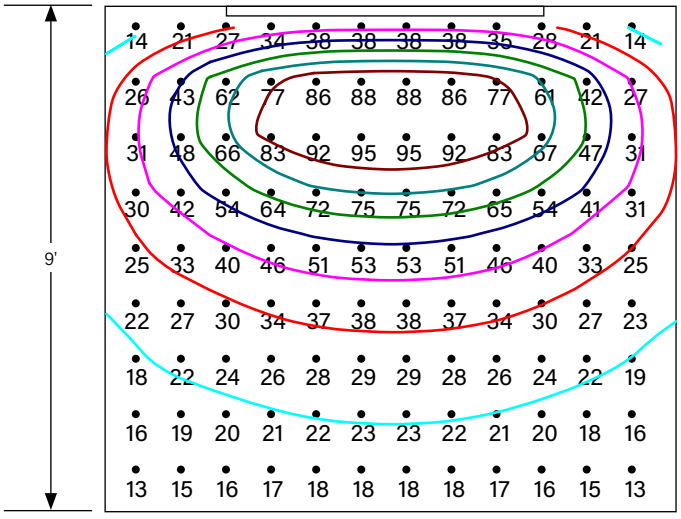


DOWNLIGHT ASYMMETRIC OPTIC - SETBACK INFO AND APPLICATION DATA

HP2-R-D-4ft-V-835-DAO
Downlight: DAO
Total luminaire output: 3742 lumens (936 lm/ft)
35.6 watts (8.9 W/ft)
CRI: 80 / CCT: 3500K



Setback Distance - 2'



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

0-10V Tunable White

Finelite's contractor friendly Tunable White luminaires are available at low cost, with powerful and simple 0-10V tuning and intensity controls.

TUNABLE WHITE FEATURES

- CCT range: 2700K - 6500K
- Dimming Range: 100% to 10%
- CRI Options: 80 CRI or 90 CRI

Note:
Dim to Off options available.

LUMINAIRE FAMILY MODIFICATIONS/RESTRICTIONS

	Section Lengths										
Recessed Direct	**2'**	**3'**	**4'**	**5'**	**6'**	**7'**	**8'**	**9'**	**10'**	**11'**	**12'**
Output S,B,H,V Single Circuit	Rows can be comprised of 2'-12' sections. Tailored lengths available.										
Integral Battery Backup (BSL310LP)							✓		✓		✓

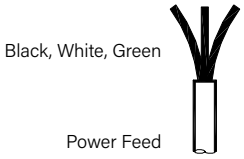
PHOTOMETRY

Apply a power adjustment factor to calculate wattage usage

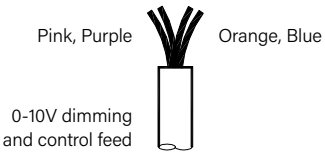
POWER	CONVERSION FACTOR
	1.1X

(Example: a 50 watt luminaire in static white would draw 55 watts using 0-10V Tunable White)

DUAL FEED DETAIL



WIRING LEGEND		
Black	Hot	Line Voltage
White	Neutral	Line Voltage
Green	Ground	



WIRING LEGEND		
Pink	Dimming	0-10V DC
Purple	Dimming	0-10V DC
Orange	TW	0-10V DC
Blue	TW	0-10V DC

Tunable White LUMINAIRES

A brand of legrand®

Type R3

ID+ 3.5"

OVERLAP & TRIMLESS LED WALL WASH

Quickship RED

FOCAL POINT®

clear diffuse

warm diffuse

Optional painted flanges

black painted

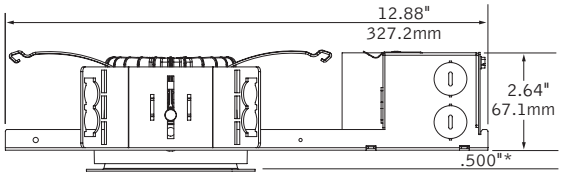
white painted

Downlight companion

Adjustable Accent companion

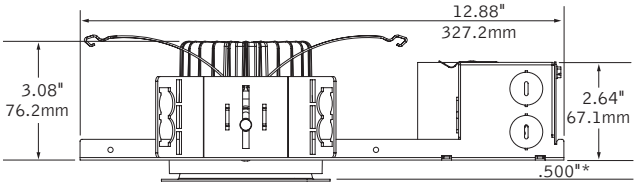
DIMENSIONAL DATA

60˚ cut-off reflector

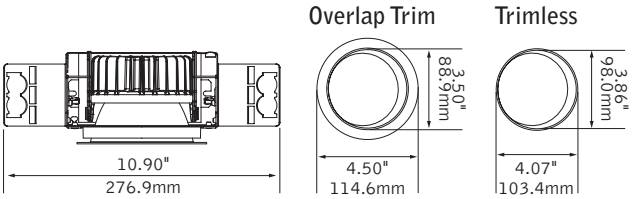


Housing height with DALI, Lutron & LZ1 drivers is 3.0"

50˚ cut-off reflector



*Field adjustability of ceiling thickness from 0.5" - 1.5".



FEATURES

Less than 2.64" low profile housing available.

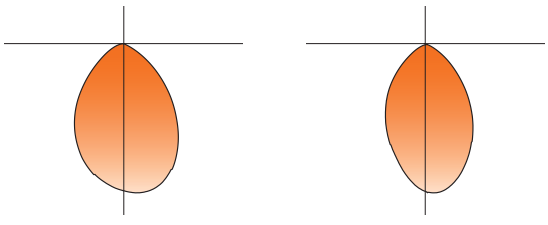
50˚ cut-off and 60˚ cut-off reflector options available.

Tunable White: Supports human activity, well-being, and preferences with a light quality that evolves throughout the day.

Warm Dim: Lighting that enhances spaces with a warm glow, reminiscent of incandescent or halogen light sources.

PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

DISTRIBUTIONS



Overlap, Short 60˚, Wall Wash

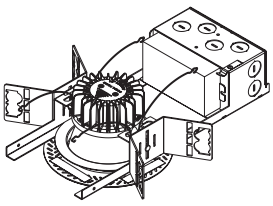
Trimless, Short 60˚, Wall Wash

Photometric performance is measured in accordance with IESNA LM-79. Visit focalpointlights.com for complete photometric data. Visit energystar.gov for model specifics.

ENERGY STAR

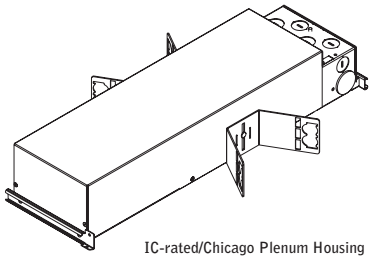
fixture: project:

STANDARD WHITE HOUSING DETAILS



T-Rated Housing
60˚ & 75˚ - L x W x H
12.88" x 10.90" x 2.64"
DALI, Lutron & LZ1 height = 3.0"

50˚ - L x W x H
12.88" x 10.90" x 3.09"



IC-rated/Chicago Plenum Housing
60˚, 50˚ & 75˚ - L x W x H
20.19" x 10.9" x 3.53"

3.5" ROUND WALL WASH PERFORMANCE TABLES

Based on Overlap, Tall Cone, Clear Diffuse. Delivered lumen output may vary +/- 5%. Actual wattage may vary +/- 5%

STANDARD WHITE				
CCT	Lumen Output	Delivered Lumens	System Watts	LPW
3500K, 80CRI	700L	726	8	87
	900L	907	10	89
	1100L	1102	14	77
	1300L	1311	17	79
	1500L	1516	19	81
	1700L	1712	21	81
	1900L	1903	23	82
	2100L	2130	26	82

QS QS Options in **red** and **orange** qualify for **2-day** and **5-day** Quickship respectively, up to 100 pieces. If **red** and **orange** options make an ordering string, **5-day Quickship** applies. See Quickship Guide for more details.

STANDARD WHITE HOUSING ORDERING

FLC3W

Housing Series
ID+ 3.5" Round — FLC3W

Trim Type
Round Overlap — RO
Round Trimless — RT

Color Options
Standard White, 80 & 90 CRI — SW
High 97 CRI — HC

Lumen Output
700 Lumen — 700L
(Not available with Lutron or LFP)
900 Lumen — 900L
(Not available with LFP)
1100 Lumen — 1100L
1300 Lumen — 1300L
1500 Lumen — 1500L
1700 Lumen — 1700L
1900 Lumen — 1900L
2100 Lumen — 2100L

Voltage
120/277 Volt — UNV
(IC-rated housing: SW - 1700lm max., HC - 1500lm max.
T-rated & TW housings: SW - 1100lm max., HC - 900lm max.)
120V — 120
277V — 277
Low Voltage — LV
(IC-rated housing: SW - 1700lm max., HC - 1500lm max.
T-rated & TW housings: SW - 1100lm max., HC - 900lm max.)

Control System & Dimming Level
0-10V <1% Dimming — LZ1
0-10V - 1% Dimming — L11
0-10V - 10% Dimming — LD1
Low Voltage, PoE Compatible — LVN
(No driver. LV voltage only.)
Forward Phase (120V only) — LFP
Lutron Hi-Lume EcoSystem (LDE1) - 1% Dimming — LH1
Lutron Hi-Lume - Forward Phase (120V only) - 1% Dimming — LTE
DALI <1% Dimming — DZ1
DALI - 1% Dimming — D11

Housing Type
IC-Rated / Airtight — IC
(SW - 1700lm max., HC - 1500lm max. Not available with LTE.)
Thermally Protected, Non-IC — T
Thermally Protected, Non-IC Wood — TW
(Trimless only. Wood kit required)

Factory Options
Bar Hangers — BH
Chicago Plenum — CP
Outdoor Rated — OD
(LD1 driver and T-rated housing only. Not available with CP.
See dimming performance table on page 5.)

TRIM & LED MODULE

Aperture
3.5" Round Reflector — LC3
3.5" Round Airtight Reflector — LC3AT

Trim Type
Round Overlap — RO
Round Trimless — RT

Color Options
(Trim & housing must match)
Standard White, 80 & 90 CRI — SW
High 97 CRI — HC

Lumen Output
(Trim & housing output must match.)
700 Lumen — 700L
900 Lumen — 900L
1100 Lumen — 1100L
1300 Lumen — 1300L
1500 Lumen — 1500L
1700 Lumen — 1700L
1900 Lumen — 1900L
2100 Lumen — 2100L

Color Temperature
(Add 9 for 90 CRI or H for 97 CRI. Leave blank for 80 CRI.
Examples: 2700K, 97 CRI = H27K. 2700K, 80 CRI = 27K.)
2700K, 80/90/97+ CRI — _27K
3000K, 80/90/97+ CRI — _30K
3500K, 80/90/97+ CRI — _35K 935K
4000K, 80/90/97+ CRI — _40K

Optic
Tall Cone with 50˚ cut-off — WWT
Short Cone with 60˚ cut-off — WWS

Finish
Clear Diffuse — CD
Warm Diffuse — WD
Black — BK
White — WH

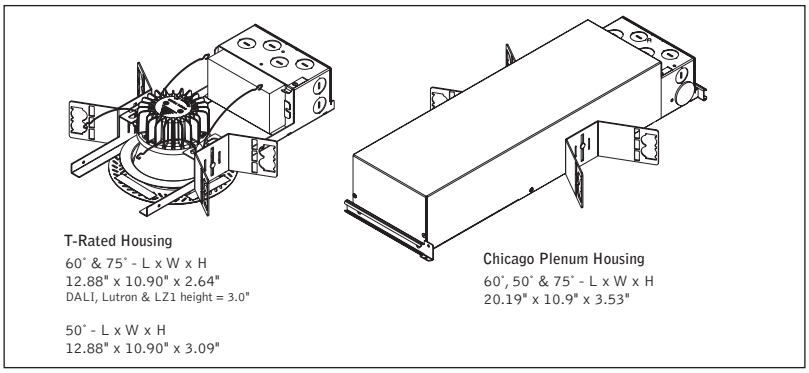
Optional Flange Finish
(Overlap CD & WD finish only. For matching finishes leave blank.)
Black Painted — BP
White Painted — WP

ACCESSORIES

Trimless Wood Ceiling Installation Kit — LC3-WOOD-KIT
(One kit recommended per 10 downlights.)

fixture: project:

WARM DIM HOUSING DETAILS

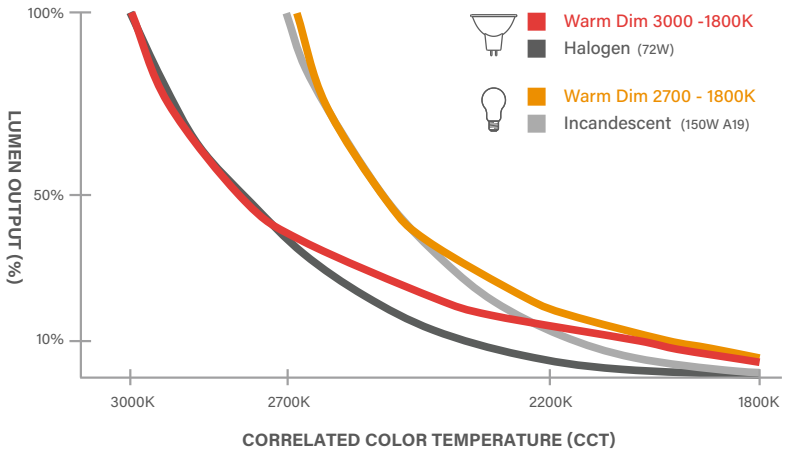


3.5" ROUND WALL WASH PERFORMANCE TABLE

Based on Overlap, Tall Cone, Clear Diffuse. Delivered lumen output may vary +/- 5%. Actual wattage may vary +/- 5%

WARM DIM				
CCT Range	**Lumen Output**	**Delivered Lumens**	**System Watts**	**LPW**
2700 - 1800K	1500L	1367	25	55
3000 - 1800K	1500L	1395	25	56

The 3000K to 1800K and 2700K to 1800K ranges mimic the black body curves of halogen and incandescent light sources, respectively.



WARM DIM

HOUSING ORDERING

Housing Series		**FLC3W**
ID+ 3.5" Round	FLC3W	
Trim Type		
Round Overlap	RO	
Round Trimless	RT	
Color Options		**WDM**
Warm Dim	WDM	
Lumen Output		**1500L**
1500 Lumen	1500L	
Voltage		
120V	120	
277V	277	
Control System & Dimming Level		
0-10V <1% Dimming	LZ1	
0-10V - 1% Dimming	L11	
0-10V - 10% Dimming	LD1	
Forward Phase (120V only)	LFP	
Lutron Hi-Lume EcoSystem (LDE1) - 1% Dimming	LH1	
Lutron Hi-Lume - Forward Phase (120V only) - 1% Dimming	LTE	
DALI <1% Dimming	DZ1	
DALI - 1% Dimming	D11	
Housing Type		
IC-Rated / Airtight	IC	
Thermally Protected, Non-IC	T	
Thermally Protected, Non-IC Wood (Trimless only. Wood kit required)	TW	
Factory Options		
Bar Hangers	BH	
Chicago Plenum	CP	
Outdoor Rated (LD1 driver and T-rated housing only. Not available with CP. See dimming performance table on page 5.)	OD	

TRIM & LED MODULE

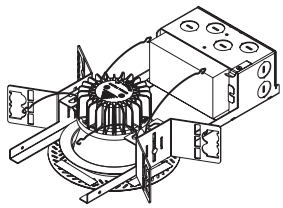
Aperture		
3.5" Round Reflector	LC3	
3.5" Round Airtight Reflector	LC3AT	
Trim Type		
Round Overlap	RO	
Round Trimless	RT	
Color Options		**WDM**
Warm Dim)	WDM	
Lumen Output		**WDM**
1500 Lumen	1500L	
Color Temperature		
Warm Dim: 2700-1800K, 90+ CRI	92718W	
Warm Dim: 3000-1800K, 90+ CRI	93018W	
Optic		
Tall Cone with 50˚ cut-off	WWT	
Short Cone with 60˚ cut-off	WWS	
Finish		
Clear Diffuse	CD	
Warm Diffuse	WD	
Black	BK	
White	WH	
Optional Flange Finish (Overlap CD & WD finish only) (For matching finishes leave blank)		
Black Painted	BP	
White Painted	WP	

ACCESSORIES

Trimless Wood Ceiling Installation Kit (One kit recommended per 10 downlights)	LC3-WOOD-KIT	

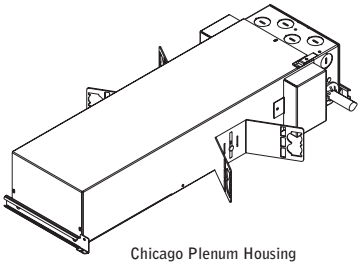
fixture: project:

TUNABLE WHITE HOUSING DETAILS



T-Rated Housing
L x W x H
12.88" x 10.90" x 3.60"

DZ1 = 12.88" x 10.90" x 3.00"



Chicago Plenum Housing
L x W x H
20.19" x 10.9" x 3.53"

3.5" ROUND WALL WASH PERFORMANCE TABLES

Based on Overlap, Tall Cone, Clear Diffuse. Delivered lumen output may vary +/- 5%. Actual wattage may vary +/- 5%

TUNABLE WHITE				
CCT	**Lumen Output**	**Delivered Lumens**	**System Watts**	**LPW**
2700K (2700-5000K & 2700-6500K)	700L	710	15	47
	900L	899	19	47
	1100L	1116	24	46
1800K (1800-4000K)	700L	711	22	32

The Comfort (1800K-4000K), Preference (2700K-5000K), and Activity (2700K-6500K) ranges give specifiers the tools to ehnance spaces, mood, and alertness.

DAYLIGHT RANGE

Sunrise/Sunset | Mid Morning/Afternoon | Noon

1800K 6500K

TUNABLE WHITE

HOUSING ORDERING

		FLC3W
Housing Series		
ID+ 3.5" Round	FLC3W	
Trim Type		
Round Overlap	RO	
Round Trimless	RT	
Color Options		
Tunable White: 1800-4000K (700L only)	1840T	
Tunable White: 2700-5000K	2750T	
Tunable White: 2700-6500K	2765T	
Lumen Output		
700 Lumen	700L	
900 Lumen	900L	
1100 Lumen	1100L	
Voltage		
120V	120	
277V	277	
Control System & Dimming Level		
0-10V <1% Dimming	LZ1	
Lutron T-Series <1% Dimming	LTZ	
DALI <1% Dimming (Requires 2 addresses, one for light intensity & one for color tuning)	DZ1	
Housing Type		
Thermally Protected, Non-IC	T	
Thermally Protected, Non-IC Wood (Trimless only. Wood kit required)	TW	
Factory Options		
Bar Hangers	BH	
Chicago Plenum (900L max. 2750T & 2765T only.)	CP	

TRIM & LED MODULE

Aperture		
3.5" Round Reflector	LC3	
3.5" Round Airtight Reflector	LC3AT	
Trim Type		
Round Overlap	RO	
Round Trimless	RT	
Color Options (Trim & housing must match)		
Tunable White: 1800-4000K	1840T	
Tunable White: 2700-5000K	2750T	
Tunable White: 2700-6500K	2765T	
Lumen Output (Trim & housing must match)		
700 Lumen	700L	
900 Lumen	900L	
1100 Lumen	1100L	
Color Temperature		
Tunable White: 1800-4000K, 90+ CRI	91840T	
Tunable White: 2700-5000K, 90+ CRI	92750T	
Tunable White: 2700-6500K, 90+ CRI	92765T	
Optic		
Tall Cone with 50˚ cut-off	WWT	
Short Cone with 60˚ cut-off	WWS	
Finish		
Clear Diffuse	CD	
Warm Diffuse	WD	
Black	BK	
White	WH	
Optional Flange Finish (Overlap CD & WD finish only) (For matching finishes leave blank)		
Black Painted	BP	
White Painted	WP	

ACCESSORIES

Trimless Wood Ceiling Installation Kit (One kit recommended per 10 downlights)	LC3-WOOD-KIT	

HOUSING SPECIFICATIONS

Construction

Thermally protected housing for new construction applications. Insulation to be kept 3" away from housing. Type IC inherently protected, suitable for direct contact with insulation. Restrictive airflow per ASTM-E283. Butterfly brackets allow mounting to ½" emt. Order bar hangers as an accessory. Die–cast aluminum heat sink designed for maximum thermal dissipation. Die-formed housing and integral junction box with (7) ½" pry outs. Accommodates ceiling thicknesses up to 0.5" standard, field adjustable up to 1.5" thickness. For thicker ceiling consult factory. Fixture will not exceed 5 lb. Trim is inherently airtight and may be used to obtain airtight rating when used with IC-rated or thermally protected, non-IC (T) housings.

Electrical

Choice of constant current dimming drivers. Power factor > .9 typical. PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

Emergency

Above ceilng access required. Overlap trim only. Emergency output - 7W for 90 minutes. Maximum mounting height — Clear Diffuse & White: 22.5ft. Black & Warm Diffuse: 15.3ft.

Labels

UL and cUL Listed. Suitable for Dry, Damp or Wet Locations, indoor use only. Specify Outdoor rated (OD) for outdoor recessed ceiling applications.

Outdoor Rated (OD) Driver Dimming Performance table

Lumen Output	Minimum Dimming Level
700L	20%
900L	16%
1100L	13%
1300L	10%
1500L	10%
1700L	10%
1900L	10%
2100L	10%

Lumen Maintenance

Reported: L70 at >55,000 hours
L90 at >55,000 hours

Calculated: L70 at 204,000 hours
L90 at 59,000 hours

Derived from EPA TM-21 calculator. Based on typical conditions, consult factory for additional data.

Reliability

At Focal Point, our products are designed to stand the test of time. Each luminaire is engineered using superior components, manufactured with the utmost care and rigorously tested. Contact us for reliability data.

Warranty

LED System rated for operation in ambient environments up to 25°C. 5-year limited warranty. Fixture with Outdoor rated option must be installed in a covered ceiling and is warrantied for operation in ambient environments between -20˚C to +40˚C.

TRIM & LED SPECIFICATIONS

LED System

Proprietary array incorporates premium LEDs on a robust platform. May be specified in 2700K, 3000K, 3500K or 4000K, Warm Dimming (2700K-1800K and 3000K-1800K), or Tunable White (1800K-4000K, 2700K-5000K and 2700K-6500K), CRI>80, >90 or 97. Color accuracy within 2 SDCM (Warm Dimming from 3-5 SDCM). 3500K and 4000K with CRI>90 have a cyanosis observation index (COI) of 3.3 or less. Aluminum heat sink provides appropriate thermal management.

Aesthetics

Parabolic reflector cone ensures glare free optics. DNT & DNS reflector is .050 spun aluminum. DSS reflector is die-cast aluminum.Trims are self-flanged. Non-painted trim matches reflector finish. Painted flange may also be specified.

Optics

50-degree or 60-degree cut–off to light source and its image. Wall wash features acrylic diffuser to provide smooth illumination down the wall.

Color Lumen Multipliers

CRI	STANDARD WHITE CCT				WARM DIM CCT RANGES		TUNABLE WHITE CCT RANGES		
	2700	3000	3500	4000	2700-1800K	3000-1800K	1800-4000K	2700-5000K	2700-6500K
80+	0.92	0.98	1.00	1.01	-	-	-	-	-
90+	0.79	0.83	0.82	0.84	0.91	0.93	1.00	1.00	1.00
97	0.67	0.72	0.73	0.76	-	-	-	-	-

Distribution Lumen Multipliers

Trim Type	Optic	Distribution	Multiplier
Round Trimless [RT]	Tall Cone with 50˚ cut-off [WWT]	Wall Wash	1.03
	Short Cone with 60˚ cut-off [WWS]	Wall Wash	1.10
Round Overlap [RO]	Tall Cone with 50˚ cut-off [WWT]	Wall Wash	1.01
	Short Cone with 60˚ cut-off [WWS]	Wall Wash	1.10

Color Lumen Multipliers

Trim Type	Optic	Color	Multiplier
ALL	Tall Cone with 50˚ cut-off [WWT]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.91
		White [WH]	1.08
		Black [BK]	0.46
	Short Cone with 60˚ cut-off [WWS]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.93
		White [WH]	1.11
		Black [BK]	0.56

How To Use Lumen Multipliers

Formula:
(Lumen Output Value) x (Color Temperature & CRI) x (Distribution) x (Color)

Example:
LC3-RO-SW-1100L-935K-WWS-WH
(1100) x (0.81) x (1.10) x (1.11) ≈ 1088lm (estimated delivered lumens)

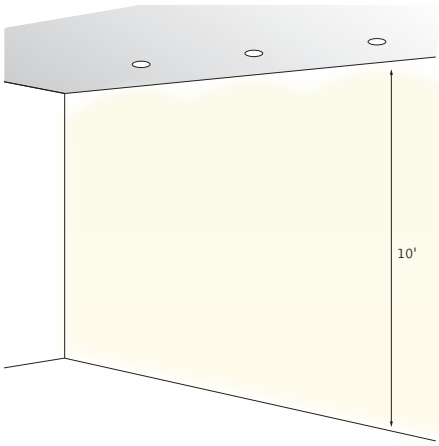
Multiplier charts are provided to aid with estimation of lumen levels across options. Apply multipliers against ordered Lumen Output to estimate Delivered Lumens. An estimation should make use of all tables through consecutive applicationof three multipliers. Refer to IES files for most accurate photometric information.

ID+ 3.5"

LED WALL WASH

WALL WASH DESIGN GUIDE - 1500 LUMEN, SHORT CONE (WWS) EXAMPLE

Calculation Point Distance from Ceiling		Footcandles																					
		Fixtures 3' from Wall									Fixtures 3.5' from Wall									Fixtures 4' from Wall								
		3' OC			3.5' OC			4' OC			3' OC			3.5' OC			4' OC			3' OC			3.5' OC			4' OC		
0 - 1'	3"	5	4	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	4	4
	6"	7	7	7	8	7	7	8	7	8	5	6	5	6	6	6	6	6	6	4	5	4	5	5	5	5	5	5
	9"	11	11	11	11	11	11	11	11	11	8	9	8	8	8	8	8	8	8	6	7	6	7	7	6	7	7	7
	12"	13	14	13	13	14	13	13	13	13	10	11	10	10	11	10	10	10	10	8	9	8	8	9	8	8	9	8
2'		15	16	15	15	15	15	15	15	15	12	13	12	11	12	11	11	12	11	9	10	9	9	10	9	9	10	9
3'		17	19	18	17	18	17	17	17	17	14	15	14	14	14	14	13	14	13	11	13	11	11	12	11	11	12	11
4'		19	22	19	19	20	19	18	19	18	16	17	16	15	16	15	14	15	14	13	14	13	12	13	12	11	13	11
5'		18	21	18	17	20	17	16	18	16	16	19	16	15	17	15	14	16	14	14	16	14	13	15	13	12	14	12
6'		16	19	16	15	17	15	14	16	14	15	17	15	14	16	14	13	15	13	14	16	14	13	15	13	12	14	12
7'		14	16	14	13	15	13	12	14	12	14	15	14	13	15	13	12	14	12	13	15	13	12	14	12	11	13	11
8'		12	13	12	11	13	11	11	12	11	12	13	12	11	13	11	11	12	11	12	13	12	11	12	11	10	12	10
9'		10	11	10	10	11	10	9	10	9	11	12	11	10	11	10	9	11	9	10	11	10	10	11	10	9	11	9
10'		7	7	7	6	7	6	6	7	6	7	8	7	7	7	7	6	7	6	7	8	7	7	8	7	6	7	6



IES File: FLC3W-RO-SW-1500L-RO-SW-1500L-35K-WWS-CD. Parameters: 80/50/20 reflectances, LLF=.09

WALL WASH DESIGN GUIDE - 1500 LUMEN, TALL CONE (WWT) EXAMPLE

Calculation Point Distance from Ceiling		Footcandles																					
		Fixtures 3' from Wall									Fixtures 3.5' from Wall									Fixtures 4' from Wall								
		3' OC			3.5' OC			4' OC			3' OC			3.5' OC			4' OC			3' OC			3.5' OC			4' OC		
0 - 1'	3"	6	6	6	7	6	7	7	6	7	5	5	5	5	5	5	5	5	6	4	4	4	4	4	4	5	5	5
	6"	9	9	9	9	9	9	10	9	10	7	7	7	7	7	7	8	7	7	6	6	6	6	6	6	6	7	6
	9"	13	14	13	13	13	13	13	13	13	10	11	10	10	10	10	10	10	10	8	9	8	8	9	8	8	9	8
	12"	16	17	16	16	16	16	16	16	16	12	13	12	12	13	12	12	13	12	10	11	10	10	10	10	10	11	10
2'		17	19	17	18	18	18	18	17	18	14	15	14	14	14	14	13	14	13	11	12	11	11	12	11	11	12	11
3'		21	23	21	20	21	20	20	20	20	17	18	17	16	17	16	16	17	16	13	15	14	13	14	13	13	14	13
4'		22	24	22	21	23	21	20	21	20	18	20	18	17	19	17	16	18	16	15	17	15	14	16	14	14	15	14
5'		22	25	22	20	23	21	19	21	19	18	21	18	17	19	17	16	18	16	16	17	16	15	16	15	14	16	14
6'		20	23	20	19	21	19	18	20	18	18	20	18	17	19	17	16	18	16	16	18	16	15	17	15	14	16	14
7'		18	20	18	16	19	16	15	17	15	17	19	17	16	18	16	15	17	15	15	17	15	14	16	14	14	15	14
8'		15	17	15	14	16	14	13	15	13	15	17	15	14	16	14	13	15	13	14	16	14	14	15	14	13	15	13
9'		13	15	13	13	14	13	12	13	12	13	15	13	13	14	13	12	14	12	13	14	13	12	14	12	12	13	12
10'		9	9	9	8	9	8	8	9	8	9	10	9	9	10	9	8	9	8	9	10	9	9	10	9	8	9	8

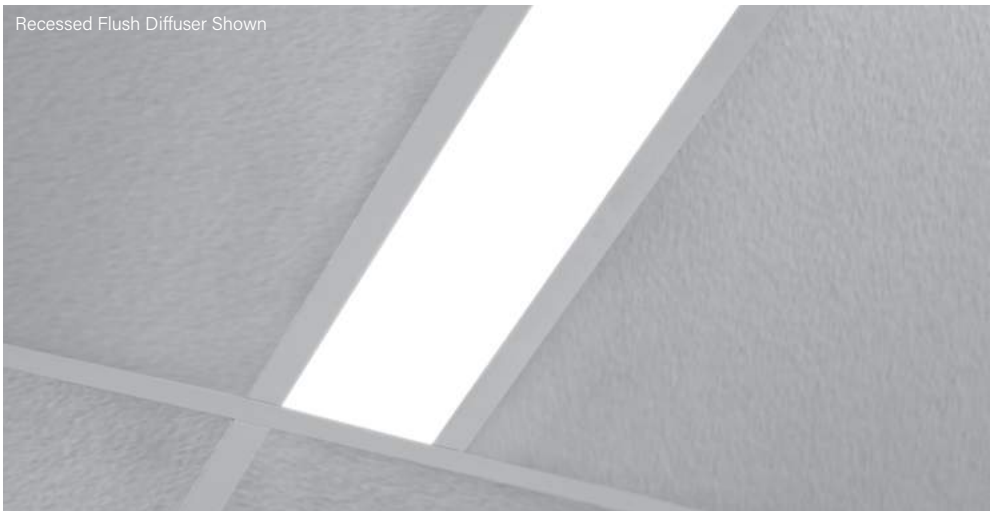
IES File: FLC3W-RO-SW-1500L-RO-SW-1500L-35K-WWT-CD. Parameters: 80/50/20 reflectances, LLF=.09.

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

High Performance 2" Aperture (HP-2) Recessed

TYPE R4



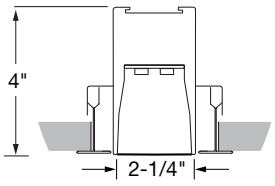
High Performance 2" Aperture is a patented, linear LED luminaire family. HP-2 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Red List Declared** status.

Note: see page 6 for all aesthetic options

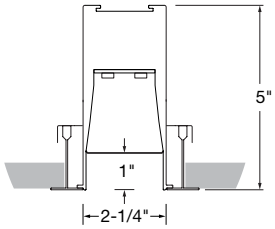
CROSS SECTIONS

Recessed



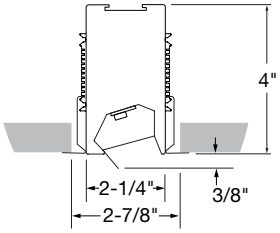
Flush Downlight Diffuser (standard)

Regressed



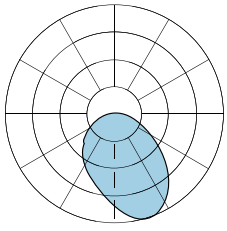
Flat Diffuser with 1" Regressed

Wall Wash Recessed

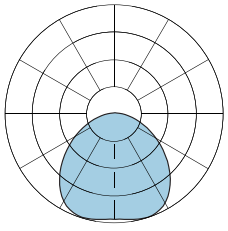


Kicker (standard)

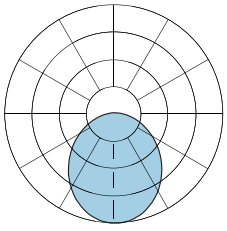
OPTIC OPTIONS



Downlight Asymmetric Optic (**DAO**)



Downlight Spread Optic (**DSO**)



Standard Downlight Flush Optic (**F**)

ALSO AVAILABLE IN

Pendant (**D, ID, I**)

Wall Mount (**WM**)

Surface Mount (**SM**)

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Clear Form

Ordering Guide Example: HP - 2 - R - D - 36' - S - 835 - F - 96LG - 120 - SC - FC-10% - FA50 - C1 - FE - SW - LGD18W - OBO - CP

BODY TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run
◉ **HP** - High Performance	◉ **2**	◯ **R** - Recessed ◯ **R RG** - Recessed Regressed (Wall Wash not available)	◯ **D** - Direct ◯ **WW-D** - Wall Wash Direct	_____ Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.

OUTPUT AND LED TYPE

Downlight Output (Flush)	LED CRI/CCT
◯ **S** - Standard (336 lm/ft) ◯ **B** - Boosted (423 lm/ft) ◯ **H** - High (639 lm/ft) ◯ **V** - Very High (822 lm/ft) ◯ **TL** - Tailored:_____lm/ft* Lumen provided above are for Flush lens only, see pg. 12 for WW lumens * Specify Tailored lm/ft of outputs between Standard (**S**) and Very High (**V**). Consult factory for tailored lumen output outside of this range.	◯ **830** - 80 CRI, 3000K ◯ **835** - 80 CRI, 3500K ◯ **840** - 80 CRI, 4000K ◯ **930** - 90 CRI, 3000K ◯ **935** - 90 CRI, 3500K ◯ **940** - 90 CRI, 4000K ◯ **8TW** - 80 CRI, Tunable White ◯ **9TW** - 90 CRI, Tunable White

MECHANICAL/OPTICAL OPTIONS

Downlight

◯ **F** - Flush (standard) [8, 9]
◯ **DL** - 1" Drop Down Lens [8]
◯ **RG-D** - Flat Diffuser with 1" Regress [1, 8]
◯ **RG-WCB** - White Cross Blade Baffle [1, 8]
◯ **RG-LHE** - Hollowed Ellipse Louver [1, 8]
◯ **RG-LHC** - Hex Louver [1, 8]
◯ **DAO-L** - Downlight Asymmetric Left [4, 8]
◯ **DAO-R** - Downlight Asymmetric Right [4, 8]
◯ **DSO** - Downlight Spread Optic [4, 8]
◯ **K** - Kicker for Wall Wash only (standard) [5]
◯ **FO** - Fully Open for Wall Wash only

Reflector System

◯ **96LG** - 96 Low Gloss White
◯ **SW** - Signal White for Wall Wash only

ELECTRICAL OPTIONS

Voltage

◯ **120** - 120 Voltage
◯ **277** - 277 Voltage
◯ **347** - 347 Voltage (OTi only)

Circuiting [2]

◯ **SC** - Single Circuit*
One single circuit in a run
◯ **MC** - Multi-Circuit*
More than one switch leg or zone. Factory shop drawings required
* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

Driver Selection

0-10V Driver Options
◯ **FC-10%** - 0-10V 10% (standard)
◯ **FC-1%** - 0-10V 1%
◯ **OTi-10%** - EldoLED OTi, 0-10V 10% [3]
◯ **OTi-1%** - EldoLED OTi, 0-10V 1% [3]
◯ **ELD-10V-0%** - EldoLED SOLOdrive, 0-10V 0.1%
◯ **10V-TW-10%** - EldoLED OTi, 0-10V 10% *(Tunable White)* [3]

DALI Driver Options
◯ **FC-DALI-1%** - DALI 1%
◯ **DXL-DALI-1%** - EldoLED Dexal, 1%
◯ **ELD-DALI-0%** - EldoLED SOLOdrive, 0.1%
◯ **ELD-DALI-TW** - EldoLED DUALdrive LightShape, 0.1% *(Tunable White)*

DMX Driver Options
◯ **ELD-DMX** - EldoLED POWERdrive, 0.1%
◯ **ELD-DMX-TW** - EldoLED POWERdrive, 0.1% (Tunable White)

Lutron Driver Options
◯ **LUT-ES1** - Lutron, Ecosystem 1%
◯ **LUT-TW** - Lutron LD2 Dali-2 1% *(Tunable White)*

See Page 3 for additional driver options and details

MOUNTING OPTIONS

Ceiling Hardware Type

◯ **C1** - 15/16" T-Bar
◯ **C1T** - 15/16" Tegular
◯ **C2** - 9/16" T-Bar
◯ **C2T** - 9/16" Tegular
◯ **C3** - Screw Slot
◯ **C3F** - Flush Screw Slot
◯ **SF** - Spackle Flange
◯ **VF** - Visible Flange
◯ **TZ4** - Tech Zone 4" _____ (C1, C2, C2T, C3, C3F)

OTHER OPTIONS

Endcap Style

◉ **FE** - Flat Endcap (standard)

Finish

◯ **SW** - Signal White (standard)
◯ **FB** - Finelite Black
◯ **SA** - Satin Aluminum
◯ **####** - RAL Color Code [7] _____

OTHER OPTIONS

Emergency Style (Optional)

See page 5 Backup Battery table — Clear Selection

◯ **LGD18W** - Legrand 18W Brand Battery Back-up
◯ **LGD10W** - Legrand 10W Brand Battery Back-up
◯ **EM/GEN** - Emergency to Generator
◯ **NL** - Night Light
◯ **BSL310LP** - Bodine Battery Back up Low Profile
◯ **GTD** - Generator Transfer Device
◯ **ALCR** - Automatic Load Control Relay

Integrated Sensor (Optional) [8] — Clear Selection

◯ **OBO** - Occupancy [9]
◯ **OBD** - Daylight [9]
◯ **W601** - Wattstopper Wireless Sensor [10]
◯ **OBE** - Enlighted [11]
◯ **REE** - Remote Enlighted [12]
◯ **CLM** - Encelium RF
◯ **SLM** - Encelium Sensor
◯ **AOCC-W** - Lutron Athena Sensor (Device Color White) [13]
◯ **AOCC-B** - Lutron Athena Sensor (Device Color Black) [13]
◯ **ARF-W** - Lutron Athena RF (Device Color White) [13]
◯ **ARF-B** - Lutron Athena RF (Device Color Black) [13]
◯ **VOCC** - Lutron Vive Wireless Sensor (VDO) [14]
◯ **VRF** - Lutron Vive Radio Only [14]

Special Options (Optional) — Clear Selection

◯ **CP** - Chicago Plenum [15]
◯ **FLX** - Flex Whip
◯ **RLA** - Red List Approved
◯ **RLD** - Red List Declared

[1] Recessed Regressed straight run only
[2] Contact factory for switching options
[3] Add DTO to gain "Dim to Off" functionality (FC-10% - DTO, FC-1% - DTO)
[4] Not available with Regressed or Curves
[5] Kicker standard in Signal White. Customer Custom color kickers have a surcharge
[6] B & V outputs only
[7] 20 business days lead time for color
[8] Minimum fixture length with a sensor is 3ft.
[9] Not available with Wall Wash
[10] LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 6 drivers may be connected. LMFS-601 w/ Dali driver, only 1 driver can be connected.
[11] Enlighted components installed by Finelite, provided by others
[12] Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor.
[13] 0-10V Drivers - **AOCC** up to 10 drivers may be connected; **ARF** up to 40 drivers may be connected DALI Drivers - **AOCC** & **ARF** up to 4 drivers can be connected.
[14] Lutron Vive Ingrated Sensors require a DALI driver
[15] Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox

Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

SUPPLEMENTARY DRIVER PAGE

0-10V Driver Options	
FC-10%	Factory Choice, 0-10V 10% Dimming (Linear)
FC-10%-DTO	Factory Choice, 0-10V 10% Dimming, Dim-to-Off (Linear)
FC-1%	Factory Choice, 0-10V 1% Dimming (Linear)
FC-1%-DTO	Factory Choice, 0-10V 1% Dimming, Dim-to-Off (Linear)
ELD-10V-0%	EldoLED SOLOdrive, 0-10V 0.1% Dimming (Linear)
ELD-10V-1%	EldoLED ECOdrive, 0-10V 1% Dimming (Linear)
10V-TW-10%	EldoLED OTi, 0-10V 10% Dimming, *Tunable White* (Linear)
10V-TW-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off, *Tunable White* (Linear)
OTi-10%	EldoLED OTi, 0-10V 10% Dimming (Linear)
OTi-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off (Linear)
OTi-1%	EldoLED OTi, 0-10V 1% Dimming (Linear)
OTi-1%-DTO	EldoLED OTi, 0-10V 1% Dimming, Dim-to-Off (Linear)

DALI Driver Options	
FC-DALI-1%	Factory Choice, DALI 1% Dimming (Logarithmic)
DXL-DALI-1%	EldoLED Dexal, DALI 1% Dimming (Logarithmic)
ELD-DALI-0%	EldoLED SOLOdrive, DALI 0.1% Dimming (Logarithmic)
ELD-DALI-1%	EldoLED ECOdrive, DALI 1% Dimming (Logarithmic)
ELD-DALI-TW	EldoLED DUALdrive Light Shape, DALI 0.1% Dimming, *Tunable White* (Logarithmic Dimming, Linear CCT Control)

DMX Driver Options	
ELD-DMX	EldoLED POWERdrive, DMX 0.1% Dimming (8 Bit, 1CH) (Linear)
ELD-DMX-16	EldoLED POWERdrive, DMX 0.1% Dimming (16 Bit, 2CH) (Linear)
ELD-DMX-TW	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (8 Bit, 2CH - CH1 Warm / CH2 Cool) (Linear)
ELD-DMX-TW16	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (16 Bit, 4CH - CH1, 2 Warm / CH3, 4 Cool) (Linear)

Lutron Driver Options	
LUT-ES1	Lutron, Ecosystem 1% Dimming
LUT-TW	Lutron LD2 Dali-2 1%, *Tunable White*

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

High Performance 2" Aperture (HP-2) Recessed

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6063-T6 extruded aluminum body. Internal joiner system and plug-together wiring are standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16th" (±1/32"). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS [1] : Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, Regressed Diffuser, or White Cross Blade Baffle [2]. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**) or 1" Drop Down Lens. Contact factory for Double miters using the White Cross Blade Baffle. Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

DOWNLIGHT OPTION: 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 73% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow **(BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**) [3,4], Ellipse Louver (**LHE**) [3], Hex Louver (**LHC**) [3], Downlight Asymmetric Optic (**DAO**) [5], Downlight Spread Optic (**DSO**) [5], and Regressed downlight diffusers (**RG**) [3]. 1" Drop Down Lens made of highly efficient acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread & Downlight Asymmetric Optics are extruded lenses with a subtle ribbed appearance providing a batwing or asymmetric distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed wire controlling uplight and downlight together (power and dimming). Specify dual feed wires for independent control of uplight and downlight. 14-gauge feed wire used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when luminaire current exceeds 5 amps. DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

0-10V:
- One 18-guage / 3-conductor power
- One 18-gauge / 4-conductor for dimming and controls

Dali:
- One 18-gauge / 5-conductor power and controls

DMX:
- One 18-gauge / 3-conductor power
- One DMX feed

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V constant current reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.
- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:
LUT-ES1 - Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V and 277V.
- **Power factor:** ≥0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime:** 100,000 hours

LUTRON TUNABLE WHITE DRIVER OPTION:
LUT-TW - Lutron LD2 Dali-2 1%, Tunable White.

[1] Not available with Wall Wash
[2] White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only
[3] Recessed Regressed straight run only
[4] White Cross Blade Baffle (WCB) currently not advisable for drywall
[5] Not available with Regressed or Curves

Continued

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FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

SPECIFICATIONS

MOUNTING OPTIONS

HANGING HARDWARE:

- **Recessed T-Bar**: Standard bracket design works with most lay-in ceiling types. Brackets secure luminaire to the ceiling grid from above. Tie-in T-Bar brackets connect the luminaire to the T-Bar for securing to structure. Consult local codes for tie-wire recommendations.
- **Recessed Spackle Flange:** Drywall surfaces (walls or ceilings): 1/4" - 20 stud and nut (provided by others). Mounted with three equidistant suspension points.

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are prewired with plug-and-play interconnected cables to support easy plug-together joining of fixture runs. DMX to RJ45 adapters and an RJ45 terminator for every 32 DMX drivers are included.

OTHER OPTIONS

ENDCAPS: Flat endcaps (**FE**) at each end of run add 1/16" to each end of luminaire. Drop Down Lens Illuminated Endcap (**DE**) includes diffuse element to continue luminance of drop lens.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery		
	Legrand 18W	**Legrand 10W / Bodine BSL310LP**
HP2-R-D		
Min. Housing Length	8'*	4'**
EM Lumen Output	1608	956
EM Section Illuminated	2'	2' or 4'
HP2-R-WW-D		
Min. Housing Length	8'*	4'*
EM Lumen Output	1500	891
EM Section Illuminated	4'	4'

* Minimum fixture housing length for battery pack approved without sensor. ** Exception: 5' not available, 6'+ okay.
The lumens are based on 835. For other CCT/CRI, refer to the Lumen Adjustment Factor table on page 11.

Bodine GTD and Legrand ALCR Min. Length	
Configuration	**Min Length**
Generator	6'
Generator + OCC	8'
Daylight	6'
Generator + Daylight	8'

TUNABLE WHITE ELECTRICAL OPTIONS [6]:

TW Driver Options

- **0-10V:** EM/GEN, GTD or Battery BackUup
- **DMX:** Battery Back Up
- **DALI:** EM/GEN, GTD or Battery Back Up
- **LUTRON:** EM/GEN, GTD or Battery Back Up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) Occupancy (**OBO**) or Daylight Sensors (**OBD**) available with Flush and Bottom Glow downlight diffusers. PIR sensors not recommended for stairwell applications. Refer to Occupancy Sensor & Daylight Sensor tech sheet and the Embedded Intelligence landing page for more information and additional sensor options. Minimum fixture length with a sensor is 3ft. The default location for the Connected Lighting Module (**CLM**) will be on the topside of the fixture for all mounting types except for Surface Mount (**SM**). In SM fixtures the CLM will be located on the direct side of fixture housed in a bracket that is flush with the direct lens.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**), and Satin Aluminum (**SA**) are standard. Optional Adder: 179 RAL colors [7] are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. IC Rated. HP-2 can be used to comply with 2016 Title 24, Part 6 (JA8); high efficacy LED light source requirements. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Red List Declared) to your part number.

WEIGHT [8]: R - 2.3 lb/ft; WW-R - 2.9 lb/ft

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

[6] Consult Finelite for Generator Transfer Device and Battery Backup fit
[7] 20 business days lead time for color
[8] Excludes Battery Backup and Generator Transfer Device weight

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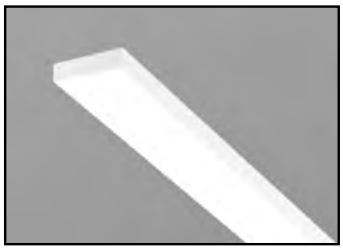
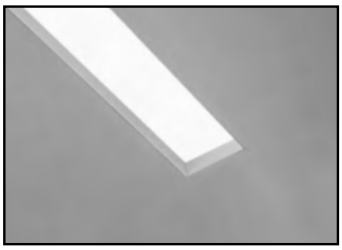
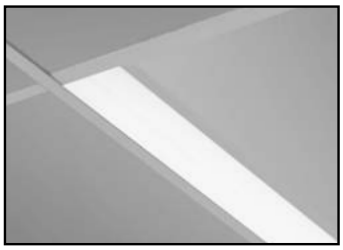
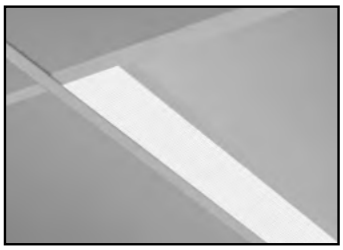
AESTHETIC OPTIONS

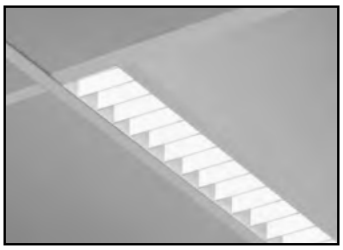

Flush Diffuser (**F**)

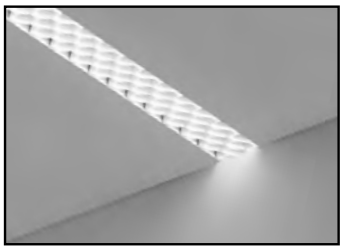

1" Drop Down Lens (**DL**)

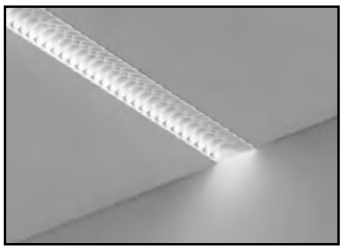

Flat Diffuser with 1" Regressed (**RG-D**)

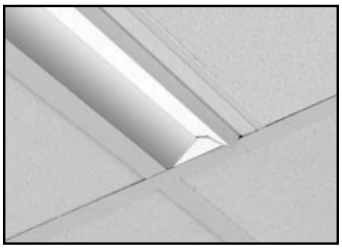

Downlight Asymmetric Optic (**DAO**) [1]
Externally flush


Downlight Spread Optic (**DSO**) [1]
Externally flush


White Cross Blade Baffle [2] (**RG-WCB**)


Hex Louver [2] (**RG-LHC**)


Hollowed Ellipse Louver [2] (**RG-LHE**)


Kicker (**K**) - Wall Wash only

[1] With a subtle ribbed appearance providing specialized distribution
[2] Regressed only. Not available with Wall Wash

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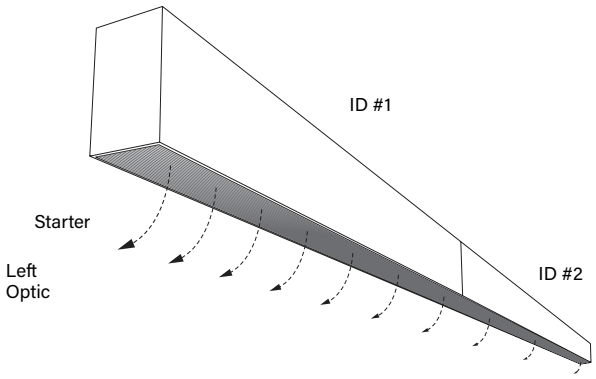
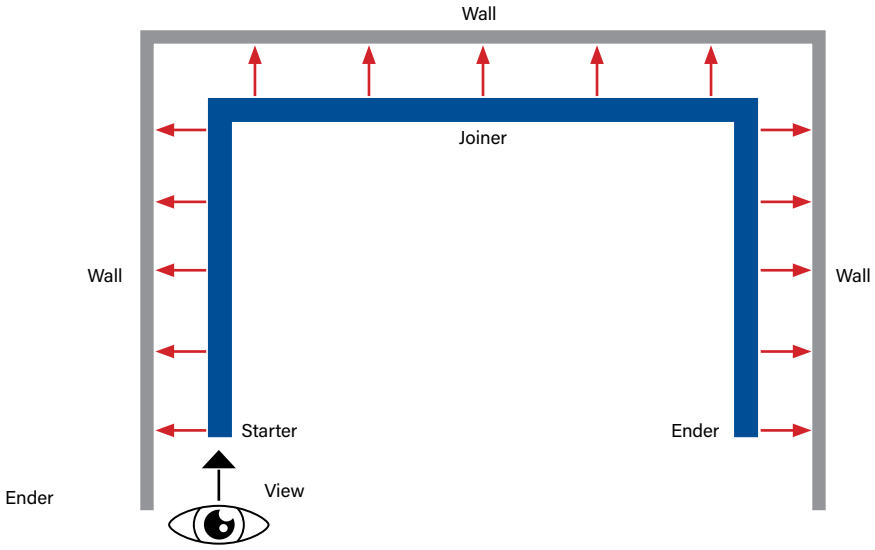
DOWNLIGHT ASYMMETRIC OPTIONS

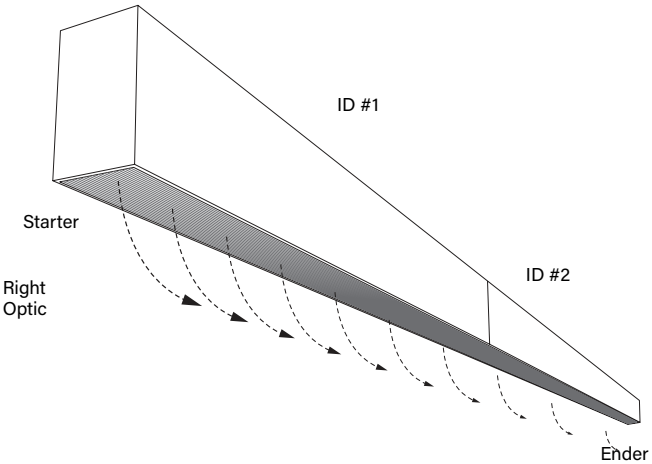
The diagrams below show a linear run from power feed to ender. Specifing DAO-L distributes light to the left or DAO-R distributes light to the right. For proper orientation: view luminaire from starter end when specifying the direction of the Downlight Asymmetric optic.

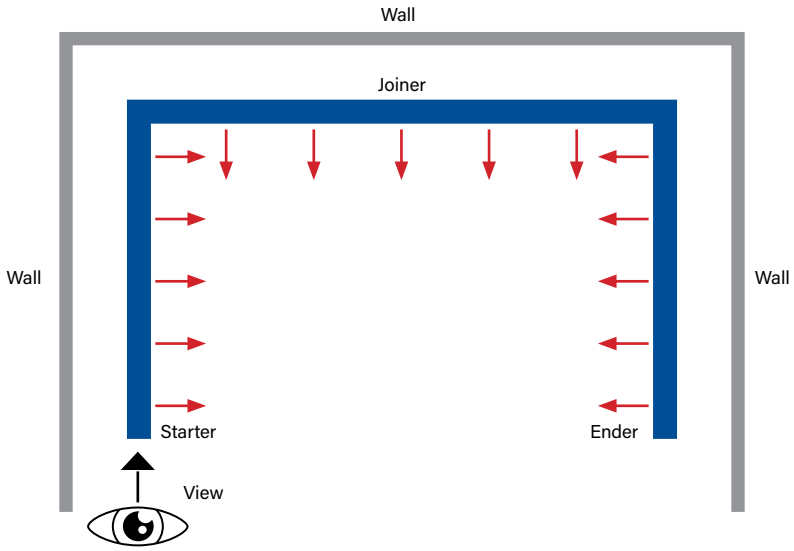
Downlight Asymmetric Optic Left (DAO-L)





Downlight Asymmetric Optic Right (DAO-R)





PREINSTALLED LABEL

For DAO, Preinstalled label on diffuser shows direction of light. Remove after installation.

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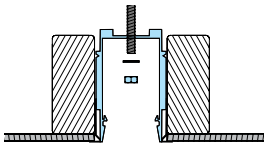
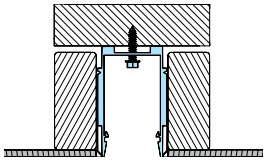
HARD CEILING MOUNTING OPTIONS

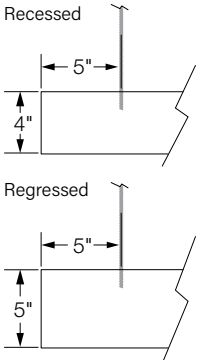
Threaded Rod Option



Screw Mount Option

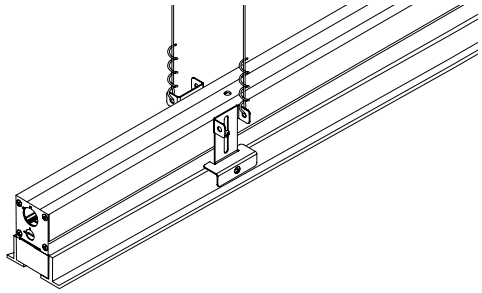


Mounting Location for Securing to Structure



Two mounting options: threaded rod and screw mounting options. Mounting locations are located on each end of the luminaire. Mounting location is 5" away from each end of luminaire.

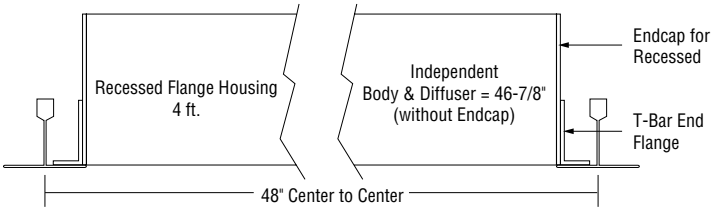
T-BAR INSTALLATION



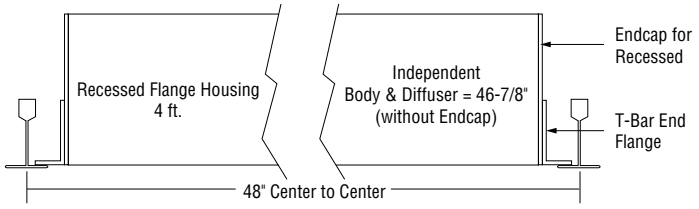
HP-2 R for T-Bar installations comes standard with a splice plate at the end of the luminaire. Mounting brackets (supplied) secure the luminaire to T-Bar and provide support to structure location. All even foot length (2, 4, 6, ...) luminaire runs are reduced in length by an appropriate amount to fit within typical 2x2 and 2x4 T-Bar grid systems. For uncommon T-Bar systems please consult factory.

GRID LENGTH DETAIL - 4' EXAMPLE

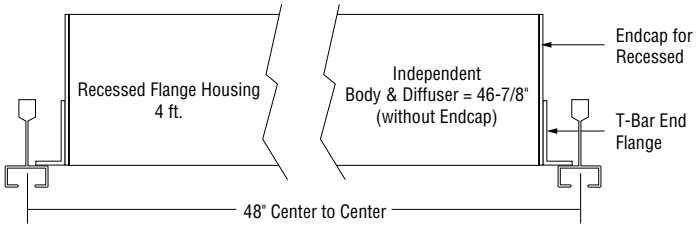
15/16" T-Bar



9/16" T-Bar

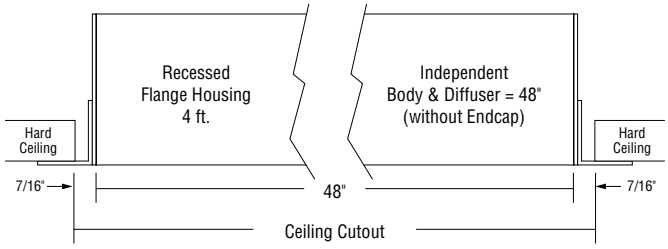


9/16" Screw Slot

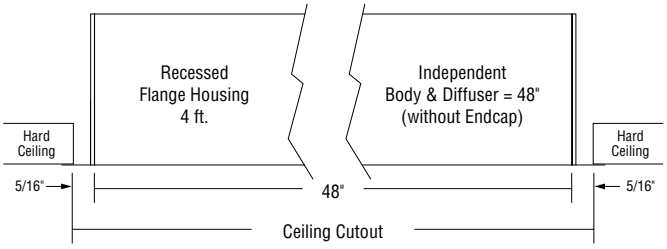


HARD CEILING LENGTH DETAIL - 4' EXAMPLE

Spackle Flange



Visible Flange



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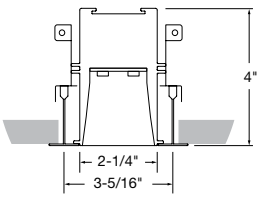
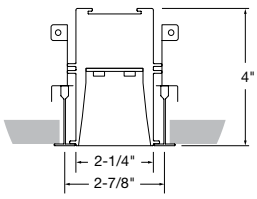
RECESSED MOUNTING TYPES - T-BAR

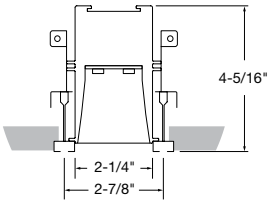
Rough-In Dimensions



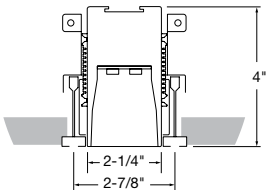
15/16" T-Bar (C1)



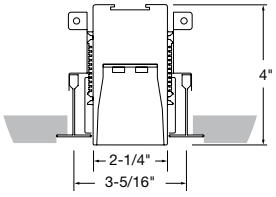
9/16" T-Bar (C2)



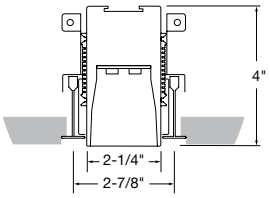
Standard Screw Slot (C3)



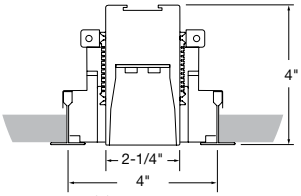
Flush Screw Slot (C3F)



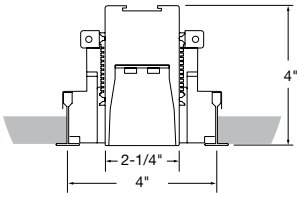
15/16" Tegular (C1T)



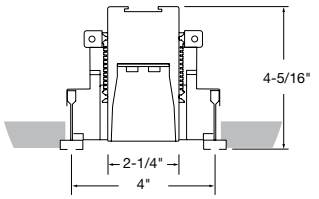
9/16" Tegular (C2T)



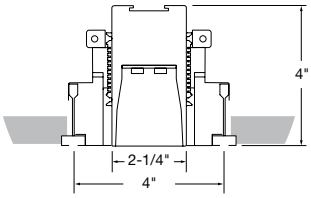
Tech Zone 4" (TZ4)
15/16" T-Bar (C1)



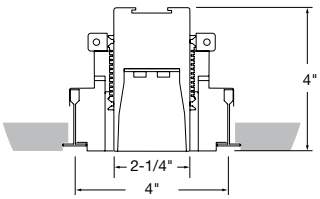
Tech Zone 4" (TZ4)
9/16" T-Bar (C2)



Tech Zone 4" (TZ4)
Standard Screw Slot (C3)

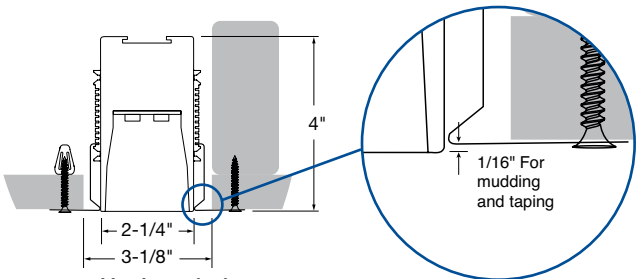


Tech Zone 4" (TZ4)
Flush Screw Slot (C3F)

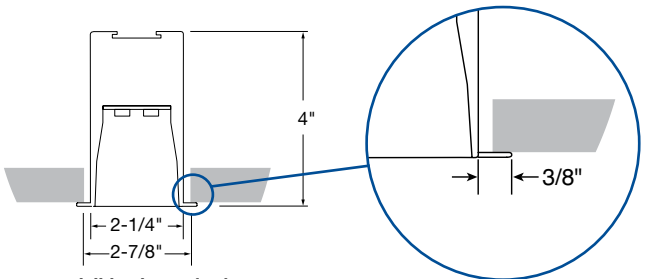


Tech Zone 4" (TZ4)
9/16" Tegular (C2T)

RECESSED MOUNTING TYPES - CUTOUT DIMENSIONS



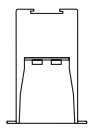
Spackle Flange (SF)



Visible Flange (VF)

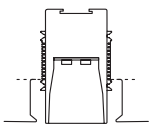
HOUSING

Version 1



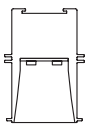
Ceiling Option VF

Version 2



Ceiling Options
C1T, C2T, C3F, SF, TZ4

Version 3



Ceiling Options
C1, C2, C3

Note: +/- 1/16"

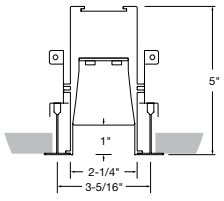
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

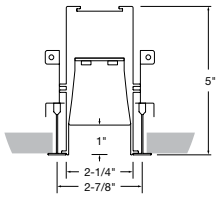
High Performance 2" Aperture (HP-2) Recessed

REGRESSED MOUNTING TYPES - T-BAR

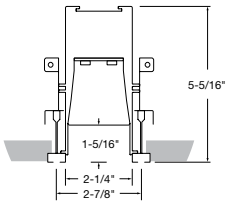
Rough-In Dimensions



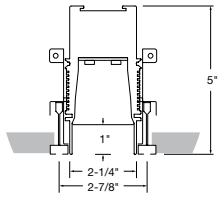
15/16" T-Bar (C1)



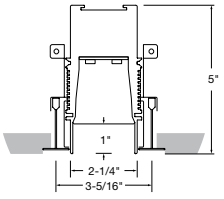
9/16" T-Bar (C2)



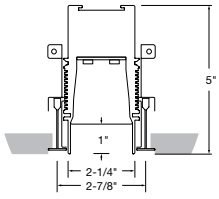
Standard Screw Slot (C3)



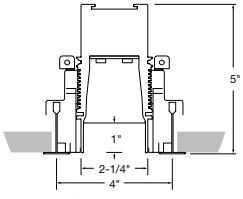
Flush Screw Slot (C3F)



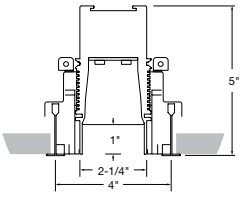
15/16" Tegular (C1T)



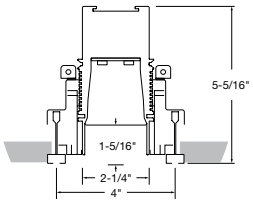
9/16" Tegular (C2T)



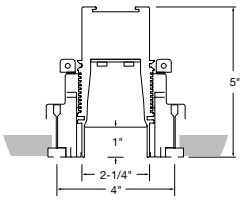
Tech Zone 4" (TZ4)
15/16" T-Bar (C1)



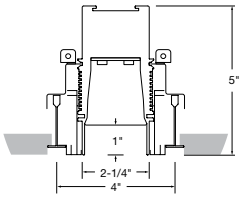
Tech Zone 4" (TZ4)
9/16" T-Bar (C2)



Tech Zone 4" (TZ4)
Standard Screw Slot (C3)

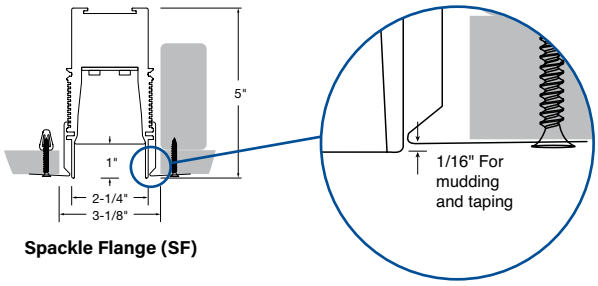


Tech Zone 4" (TZ4)
Flush Screw Slot (C3F)

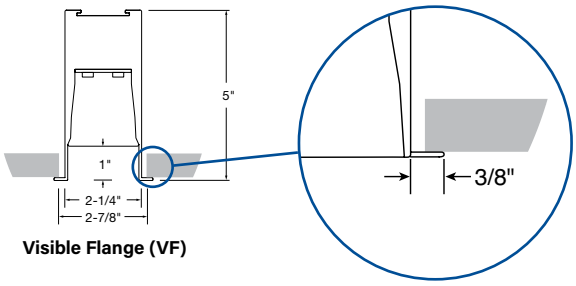


Tech Zone 4" (TZ4)
9/16" Tegular (C2T)

REGRESSED MOUNTING TYPES - CUTOUT DIMENSIONS



Spackle Flange (SF)

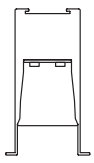


Visible Flange (VF)

Regressed Lens: Regressed lens version is 5" tall with a lens that is regressed 1" from ceiling line.

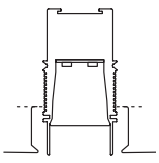
HOUSING

Version 1



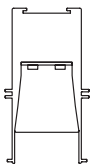
Ceiling Option VF

Version 2



Ceiling Options
C1T, C2T, C3F, SF, TZ4

Version 3



Ceiling Options
C1, C2, C3

Note: +/- 1/16"

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

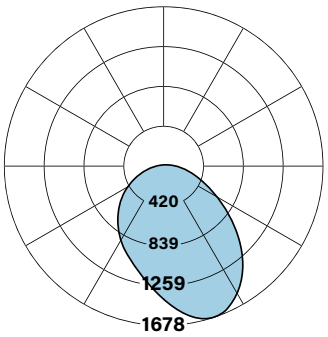
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Recessed Photometry - 4' Luminaire 3500K

HP2-R-D-4'-V-835-DAO
Downlight: Downlight Asymmetric Optic - Right

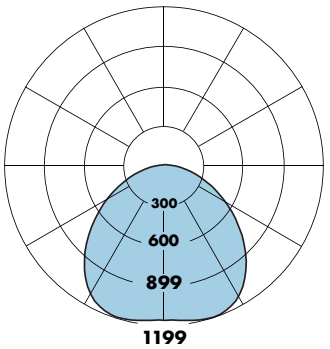
Efficacy: 105 lm/W
Total luminaire output: 3741 lumens (935 lm/ft)
35.5 watts (8.9 W/ft)
Peak Candela Value: 1670 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report REP-051921-01



Complete LM79 LED Photometry

HP2-R-D-4'-V-835-DSO
Downlight: Downlight Spread Optic

Efficacy: 92 lm/W
Total luminaire output: 3273 lumens (818 lm/ft)
35.7 watts (8.9 W/ft)
Peak Candela Value: 1197 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 94139



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1531	1925	2910	3741

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
383	481	727	935

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
110	109	107	105

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: REP-051921-01

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1340	1684	2546	3273

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
335	421	636	818

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
96	95	93	92

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 94139

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2910 lm x 0.789 = 2296 lm
Total Light Output per Foot: 707 lm/ft x 0.789 = 574 lm/ft.
watts/foot: 6.8 W/ft.

$$\textbf{Efficacy} = \frac{574\ \frac{\text{lm}}{\text{ft.}}}{6.8\ \frac{\text{W}}{\text{ft.}}} = 84\ \text{lm/W}$$

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

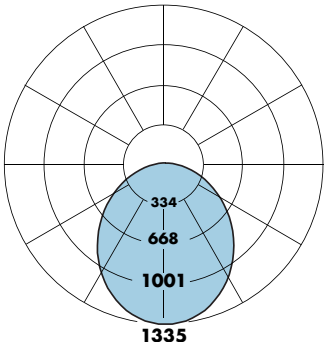
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Recessed Photometry - 4' Luminaire 3500K

HP2-R-D-4'-V-835
Downlight: Flush Diffuser

Efficacy: 89 lm/W
Total luminaire output: 3287 lumens (822 lm/ft)
36.9 watts (9.2 W/ft)
Peak Candela Value: 1335 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85135



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1346	1692	2557	3287

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
336	423	639	822

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.1	9.2

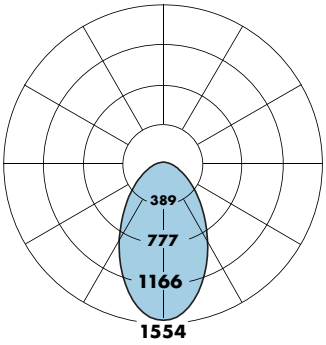
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
93	92	90	89

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85135

HP2-R RG-D-4'-V-835
Downlight: Regressed Diffuser

Efficacy: 79 lm/W
Total luminaire output: 2907 lumens (727 lm/ft)
37 watts (9.3 W/ft)
Peak Candela Value: 1554 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 90351



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1190	1496	2261	2907

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
298	374	565	727

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.1	9.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
82	81	80	79

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 90351

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2557 lm x 0.789 = 2017 lm
Total Light Output per Foot: 639 lm/ft x 0.789 = 504 lm/ft.
watts/foot: 7.1 W/ft.

$$\textbf{Efficacy} = \frac{504\ \frac{\text{lm}}{\text{ft.}}}{7.1\ \frac{\text{W}}{\text{ft.}}} = 71\ \text{lm/W}$$

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

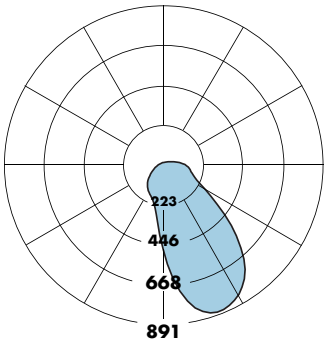
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

Wall Wash Recessed - 4' Luminaire 3500K

HP2-R-WW-D-K-4'-V-835
Downlight: With Kicker

Efficacy: 76 lm/W
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
Peak Candela Value: 882 @ 25°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85137



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B** [1]	**H** [1]	**V** [2]
614	772	1167	1500

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
154	193	292	375

Power, 3500K (Watts Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
2.0	2.5	3.8	4.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B** [1]	**H** [1]	**V** [2]
76	77	77	77

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85137

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 1167 lm x 0.789 = 921 lm
Total Light Output per Foot: 292 lm/ft x 0.789 = 230 lm/ft.
watts/foot: 3.8 W/ft.

$$\textbf{Efficacy} = \frac{292\ \frac{\text{lm}}{\text{ft.}}}{3.8\ \frac{\text{W}}{\text{ft.}}} = 61\ \text{lm/W}$$

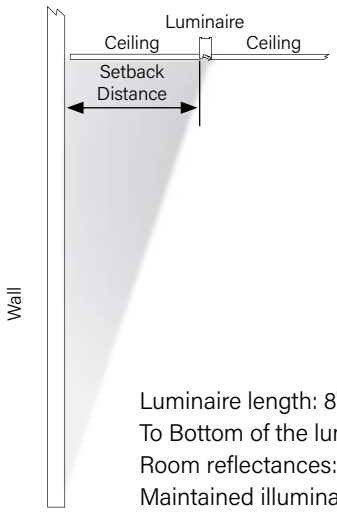
Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Recessed

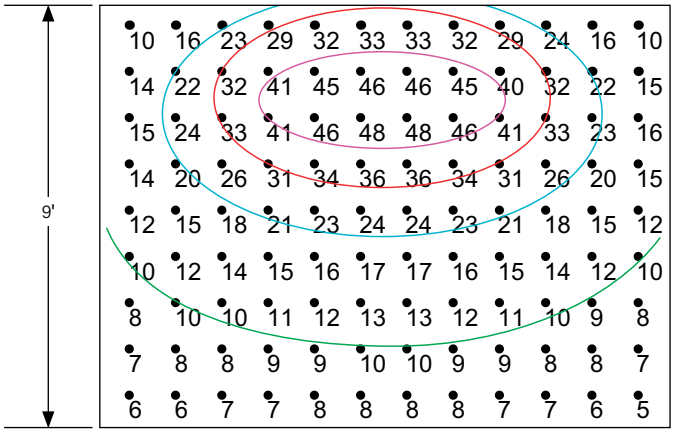
WALL WASH RECESSED - SETBACK INFO AND APPLICATION DATA

HP2-R-WW-D-K-4'-V-835
Downlight: With Kicker
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
CRI: 80 / CCT: 3500K



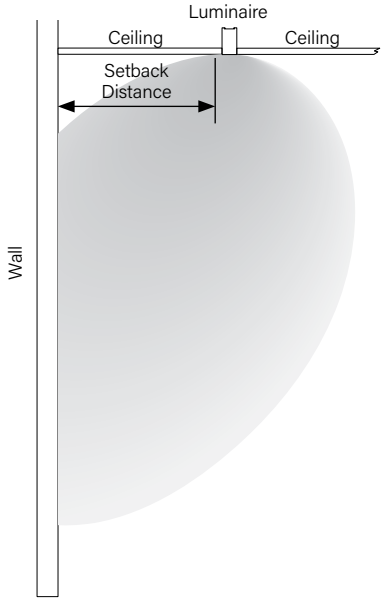
Luminaire length: 8'
To Bottom of the luminaire: 9'-0"
Room reflectances: 80-50-20
Maintained illuminance levels: LLF 0.86"

Setback Distance - 2'

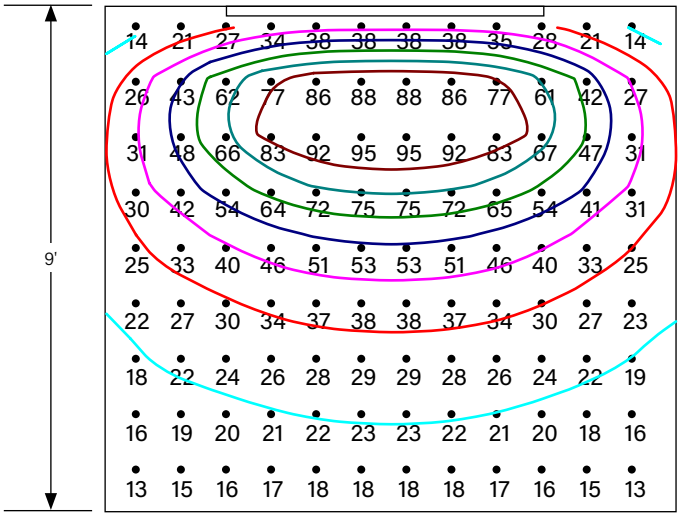


DOWNLIGHT ASYMMETRIC OPTIC - SETBACK INFO AND APPLICATION DATA

HP2-R-D-4ft-V-835-DAO
Downlight: DAO
Total luminaire output: 3742 lumens (936 lm/ft)
35.6 watts (8.9 W/ft)
CRI: 80 / CCT: 3500K



Setback Distance - 2'



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

0-10V Tunable White

Finelite's contractor friendly Tunable White luminaires are available at low cost, with powerful and simple 0-10V tuning and intensity controls.

TUNABLE WHITE FEATURES

- CCT range: 2700K - 6500K
- Dimming Range: 100% to 10%
- CRI Options: 80 CRI or 90 CRI

Note:
Dim to Off options available.

LUMINAIRE FAMILY MODIFICATIONS/RESTRICTIONS

	Section Lengths										
Recessed Direct	**2'**	**3'**	**4'**	**5'**	**6'**	**7'**	**8'**	**9'**	**10'**	**11'**	**12'**
Output S,B,H,V Single Circuit	Rows can be comprised of 2'-12' sections. Tailored lengths available.										
Integral Battery Backup (BSL310LP)							✓		✓		✓

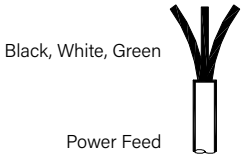
PHOTOMETRY

Apply a power adjustment factor to calculate wattage usage

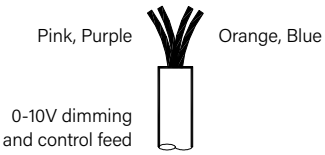
POWER	CONVERSION FACTOR
	1.1X

(Example: a 50 watt luminaire in static white would draw 55 watts using 0-10V Tunable White)

DUAL FEED DETAIL



WIRING LEGEND		
Black	Hot	Line Voltage
White	Neutral	Line Voltage
Green	Ground	



WIRING LEGEND		
Pink	Dimming	0-10V DC
Purple	Dimming	0-10V DC
Orange	TW	0-10V DC
Blue	TW	0-10V DC

Tunable White LUMINAIRES

A brand of legrand®

Submitted by:	Date:
Type:	Project:
Ordering Info:	

Type S1

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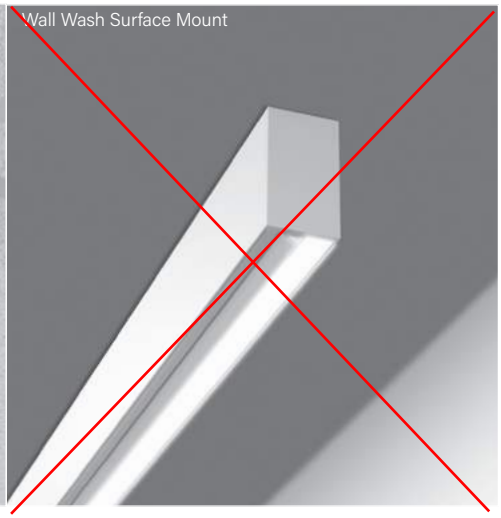


Signal White is standard finish

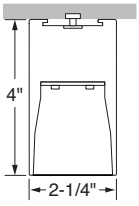
Note: see page 6 for all aesthetic options

High Performance 2" Aperture is a patented, linear LED luminaire family. HP-2 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Red List Declared** status.

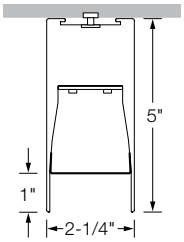
CROSS SECTIONS

Surface Mount



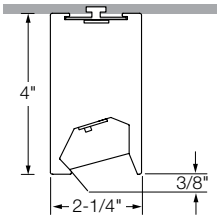
Flush Downlight Diffuser (standard)

Surface Mount Regressed



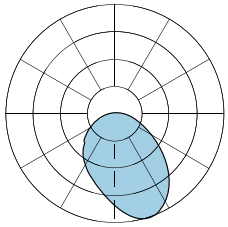
Flat Diffuser with 1" Regressed (RG)

Wall Wash Surface Mount

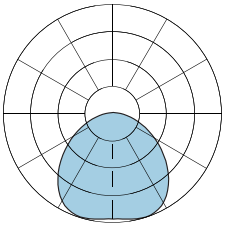


Kicker (standard)

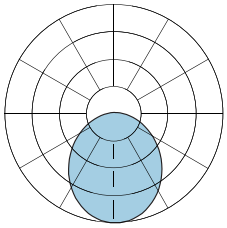
OPTIC OPTIONS



Downlight Asymmetric Optic (**DAO**)



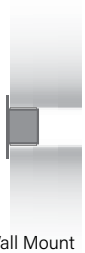
Downlight Spread Optic (**DSO**)



Standard Downlight Flush Optic (**F**)

ALSO AVAILABLE IN

Pendant (**D, ID, I**)



Wall Mount (**WM**)

Recessed (**R**)

Submitted by:	Date:
Type:	Project:
Ordering Info:	

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Ordering Guide Example: HP - 2 - SM - D - 36' - S - 835 - F - 96LG - 120 - SC - FC-10% - FA50 - C1 - FE - SW - LGD18W - OBO - CP

Clear Form

BODY TYPE

Platform
- ◉ **HP** - High Performance

Series Name
- ◉ **2**

Luminaire Type
- ◯ **SM** - Surface Mount
- ◯ **SM RG** - Direct Regressed (Wall Wash not available)

Luminaire Distribution
- ◯ **D** - Direct
- ◯ **WW-D** - Wall Wash Direct

Total Length of Run
_____

Minimum 2'section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.

OUTPUT AND LED TYPE

Downlight Output (Flush)
- ◯ **S** - Standard (329 lm/ft)
- ◯ **B** - Boosted (414 lm/ft)
- ◯ **H** - High (625 lm/ft)
- ◯ **V** - Very High (804 lm/ft)
- ◯ **TL** - Tailored:_____ m/ft*

Lumen provide are for Flush lens only, see pg. 9 for WW lumens

* Specify Tailored lm/ft of outputs between Standard (**S**) and Very High (**V**). Consult factory for tailored lumen output outside of this range.

OUTPUT AND LED TYPE

LED CRI/CCT
- ◯ **830** - 80 CRI, 3000K
- ◯ **835** - 80 CRI, 3500K
- ◯ **840** - 80 CRI, 4000K
- ◯ **930** - 90 CRI, 3000K
- ◯ **935** - 90 CRI, 3500K
- ◯ **940** - 90 CRI, 4000K
- ◯ **8TW** - 80 CRI, Tunable White
- ◯ **9TW** - 90 CRI, Tunable White

MECHANICAL/OPTICAL OPTIONS

Downlight
- ◯ **F** - Flush (standard) [1]
- ◯ **BG** - Bottom Glow [1]
- ◯ **DL** - 1" Drop Down Lens [1]
- ◯ **RG-D** - Flat Diffuser with 1" Regress [2]
- ◯ **RG-WCB** - White Cross Blade Baffle [2]
- ◯ **RG-LHE** - Hollowed Ellipse Louver [2]
- ◯ **RG-LHC** - Hex Louver [2]
- ◯ **DAO-L** - Downlight Asymmetric Optic Left [1, 5]
- ◯ **DAO-R** - Downlight Asymmetric Optic Right [1, 5]
- ◯ **DSO** - Downlight Spread Optic [1, 5]
- ◯ **K** - Kicker for Wall Wash only (standard) [6]
- ◯ **FO** - Fully Open for Wall Wash only

Reflector System
- ◯ **96LG** - 96 Low Gloss White
- ◯ **SW** - Signal White for Wall Wash only

ELECTRICAL OPTIONS

Voltage
- ◯ **120** - 120 Voltage
- ◯ **277** - 277 Voltage
- ◯ **347** - 347 Voltage (OTi only)

Circuiting [3]
- ◯ **SC** - Single Circuit* One single circuit in a run
- ◯ **MC** - Multi-Circuit* More than one switch leg or zone. Factory shop drawings required

* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

Driver Selection

0-10V Driver Options
- ◯ **FC-10%** - 0-10V 10% (standard)
- ◯ **FC-1%** - 0-10V 1%
- ◯ **OTi-10%** - EldoLED OTi, 0-10V 10% [4]
- ◯ **OTi-1%** - EldoLED OTi, 0-10V 1% [4]
- ◯ **ELD-10V-0%** - EldoLED SOLOdrive, 0-10V 0.1%
- ◯ **10V-TW-10%** - EldoLED OTi, 0-10V 10% *(Tunable White)* [4]

DALI Driver Options
- ◯ **FC-DALI-1%** - DALI 1%
- ◯ **DXL-DALI-1%** - EldoLED Dexal, 1%
- ◯ **ELD-DALI-0%** - EldoLED SOLOdrive, 0.1%
- ◯ **ELD-DALI-TW** - EldoLED DUALdrive LightShape, 0.1% *(Tunable White)*

DMX Driver Options
- ◯ **ELD-DMX** - EldoLED POWERdrive, 0.1%
- ◯ **ELD-DMX-TW** - EldoLED POWERdrive, 0.1% (Tunable White)

Lutron Driver Options
- ◯ **LUT-ES1** - Lutron, Ecosystem 1%
- ◯ **LUT-TW** - Lutron LD2 Dali-2 1% *(Tunable White)*

See Page 3 for additional driver options and details

MOUNTING OPTIONS

Ceiling Hardware Type
- ◯ **C1** - 15/16" T-Bar
- ◯ **C2** - 9/16" T-Bar
- ◯ **C3** - Screw Slot
- ◯ **C4** - Hard Ceiling

OTHER OPTIONS

Endcap Style
- ◯ **FE** - Flat Endcap (standard)
- ◯ **DE** - 1" Drop Endcap [8]
- ◯ **OE** - Open Endcap [9]

Finish
- ◯ **SW** - Signal White (standard)
- ◯ **FB** - Finelite Black
- ◯ **SA** - Satin Aluminum
- ◯ **####** - RAL Color Code [10] _____

Emergency Style (Optional)
See page 5 Backup Battery table — Clear Selection
- ◯ **LGD18W** - Legrand 18W Brand Battery Back-up
- ◯ **LGD10W** - Legrand 10W Brand Battery Back-up
- ◯ **EM/GN** - Emergency to Generator
- ◯ **NL** - Night Light
- ◯ **BSL310LP** - Bodine Battery Back up Low Profile
- ◯ **BSL10T3** - Bodine Battery Back up Low Profile Compact
- ◯ **GTD** - Generator Transfer Device
- ◯ **ALCR** - Automatic Load Control Relay

Integrated Sensor (Optional) [11]
Clear Selection
- ◯ **OBO** - Occupancy [12]
- ◯ **OBD** - Daylight [12]
- ◯ **W601** - Wattstopper Wireless Sensor [13]
- ◯ **OBE** - Enlighted [14]
- ◯ **REE** - Remote Enlighted [15]
- ◯ **CLM** - Encelium RF
- ◯ **SLM** - Encelium Sensor
- ◯ **AOCC-W** - Lutron Athena Sensor (Device Color White) [16]
- ◯ **AOCC-B** - Lutron Athena Sensor (Device Color Black) [16]
- ◯ **ARF-W** - Lutron Athena RF (Device Color White) [16]
- ◯ **ARF-B** - Lutron Athena RF (Device Color Black) [16]
- ◯ **VOCC** - Lutron Vive Wireless Sensor (VDO) [17]
- ◯ **VRF** - Lutron Vive Radio Only [17]

Special Options (Optional)
Clear Selection
- ◯ **CP** - Chicago Plenum [18]
- ◯ **RLA** - Red List Approved
- ◯ **RLD** - Red List Declared

[1] Not available with Wall Wash
[2] Regressed only
[3] Contact factory for switching options
[4] Add DTO to gain "Dim to Off" functionality (FC-10% - DTO, FC-1% - DTO)
[5] Not available with Regressed or Curves
[6] Kicker standard in Signal White. Customer Custom color kickers have a surcharge
[7] B & V outputs only
[8] 1" Drop Down Lens downlight only
[9] Available with Hollowed Ellipse Louver (**LHE**) only
[10] 20 business days lead time for color
[11] Minimum fixture length with a sensor is 3ft.
[12] Not available with Wall Wash
[13] LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 6 drivers may be connected. LMFS-601 w/ Dali driver, only 1 driver can be connected.
[14] Enlighted components installed by Finelite, provided by others
[15] Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor.
[16] 0-10V Drivers - **AOCC** up to 10 drivers may be connected; **ARF** up to 40 drivers may be connected DALI Drivers - **AOCC** & **ARF** up to 4 drivers can be connected.
[17] Lutron Vive Ingrated Sensors require a DALI driver
[18] Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox

Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

SUPPLEMENTARY DRIVER PAGE

0-10V Driver Options	
FC-10%	Factory Choice, 0-10V 10% Dimming (Linear)
FC-10%-DTO	Factory Choice, 0-10V 10% Dimming, Dim-to-Off (Linear)
FC-1%	Factory Choice, 0-10V 1% Dimming (Linear)
FC-1%-DTO	Factory Choice, 0-10V 1% Dimming, Dim-to-Off (Linear)
ELD-10V-0%	EldoLED SOLOdrive, 0-10V 0.1% Dimming (Linear)
ELD-10V-1%	EldoLED ECOdrive, 0-10V 1% Dimming (Linear)
10V-TW-10%	EldoLED OTi, 0-10V 10% Dimming, *Tunable White* (Linear)
10V-TW-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off, *Tunable White* (Linear)
OTi-10%	EldoLED OTi, 0-10V 10% Dimming (Linear)
OTi-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off (Linear)
OTi-1%	EldoLED OTi, 0-10V 1% Dimming (Linear)
OTi-1%-DTO	EldoLED OTi, 0-10V 1% Dimming, Dim-to-Off (Linear)

DALI Driver Options	
FC-DALI-1%	Factory Choice, DALI 1% Dimming (Logarithmic)
DXL-DALI-1%	EldoLED Dexal, DALI 1% Dimming (Logarithmic)
ELD-DALI-0%	EldoLED SOLOdrive, DALI 0.1% Dimming (Logarithmic)
ELD-DALI-1%	EldoLED ECOdrive, DALI 1% Dimming (Logarithmic)
ELD-DALI-TW	EldoLED DUALdrive Light Shape, DALI 0.1% Dimming, *Tunable White* (Logarithmic Dimming, Linear CCT Control)

DMX Driver Options	
ELD-DMX	EldoLED POWERdrive, DMX 0.1% Dimming (8 Bit, 1CH) (Linear)
ELD-DMX-16	EldoLED POWERdrive, DMX 0.1% Dimming (16 Bit, 2CH) (Linear)
ELD-DMX-TW	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (8 Bit, 2CH - CH1 Warm / CH2 Cool) (Linear)
ELD-DMX-TW16	EldoLED POWERdrive, DMX 0.1% Dimming, Tunable White (16 Bit, 4CH - CH1, 2 Warm / CH3, 4 Cool) (Linear)

Lutron Driver Options	
LUT-ES1	Lutron, Ecosystem 1% Dimming
LUT-TW	Lutron LD2 Dali-2 1%, *Tunable White*

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
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High Performance 2" Aperture (HP-2) Surface Mount

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6063-T6 extruded aluminum body. Internal joiner system and plug-together wiring are standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16th" (±1/32"). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS[1]: Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, Regressed Diffuser, or White Cross Blade Baffle[2]. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**) or 1" Drop Down Lens. Contact factory for Double miters using the White Cross Blade Baffle. Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

DOWNLIGHT OPTION : 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 73% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow (**BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**)[3], Ellipse Louver (**LHE**)[3], Hex Louver (**LHC**)[3], Downlight Asymmetric Optic (**DAO**)[4], Downlight Spread Optic (**DSO**)[4], and Regressed downlight diffusers (**RG**). 1" Drop Down Lens made of highly efficient acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread & Downlight Asymmetric Optics are extruded lenses with a subtle ribbed appearance providing a batwing or asymmetric distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed controlling uplight and downlight together (power and dimming). Specify dual feeds for independent control of uplight and downlight. 14-gauge feed used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when fixture current exceeds 5 amps. DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

0-10V:
- One 18-guage / 3-conductor power
- One 18-gauge / 4-conductor for dimming and controls

Dali:
- One 18-gauge / 5-conductor power and controls

DMX:
- One 18-gauge / 3-conductor power
- One DMX feed

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V Constant Current Reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.
- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:
LUT-ES1 - Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V and 277V.
- **Power factor:** ≥0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime.:** 100,000 hours

LUTRON TUNABLE WHITE DRIVER OPTION:
LUT-TW - Lutron LD2 Dali-2 1%, Tunable White.

MOUNTING OPTIONS

HANGING HARDWARE: Lay-in ceiling types: caddy clip with 1/4" - 20 stud and nut. Drywall or concrete surfaces (walls or ceilings): 1/4" - 20 stud and nut (provided by others). Mounted with three equidistant suspension points.

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

[1] Not available with Wall Wash
[2] White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only
[3] Regressed only
[4] Not available with Regressed or Curves

Continued

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

SPECIFICATIONS

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are prewired with plug-and-play interconnected cables to support easy plug-together joining of fixture runs. DMX to RJ45 adapters and an RJ45 terminator for every 32 DMX drivers are included.

OTHER FEATURES

ENDCAPS: Flat diecast aluminum endcaps (**FE**) add 1/4" to each end of luminaire. 1" Drop Down Lens Endcap (**DE**) includes diffuse element to continue luminance of drop lens. Open Endcap (**OE**) is for use with the Hollowed Ellipse Louver (**LHE**)[5]; following the curve of the louver.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery

	Legrand 18W	Legrand 10W/ Bodine BSL310LP
HP2-SM-D		
Min. Housing Length	8'*	6'*
EM Lumen Output	1608	956
EM Section Illuminated	2'	2' or 4'
HP2-SM-WW-D		
Min. Housing Length	8'*	4'*
EM Lumen Output	1500	891
EM Section Illuminated	4'	4'

* Minimum fixture housing length for battery pack approved without sensor.
The lumens are based on 835. For other CCT/CRI, refer to the Lumen Adjustment Factor table on page 8

Bodine GTD and Legrand ALCR Min. Length

Configuration	Min Length
Generator	6'
Generator + OCC	8'
Daylight	6'
Generator + Daylight	8'

Tunable White ELECTRICAL OPTIONS[6]:

TW Driver Options

- **0-10V:** EM/GEN, GTD or Battery Back Up
- **DMX:** Battery Back Up
- **DALI:** EM/GEN, GTD or Battery Back Up
- **LUTRON:** EM/GEN, GTD or Battery Back Up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) Occupancy (**OBO**) or Daylight Sensors (**OBD**) available with Flush and Bottom Glow downlight diffusers. PIR sensors not recommended for stairwell applications. Refer to Occupancy Sensor & Daylight Sensor tech sheet and the Embedded Intelligence landing page for more information and additional sensor options. Minimum fixture length: Direct and Indiret with a sensor is 3ft. The default location for the Connected Lighting Module (**CLM**) will be on the topside of the fixture for all mounting types except for Surface Mount (**SM**). In SM fixtures the CLM will be located on the direct side of fixture housed in a bracket that is flush with the direct lens.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**), and Satin Aluminum (**SA**) are standard. Optional Adder: 179 RAL colors[7] are available.

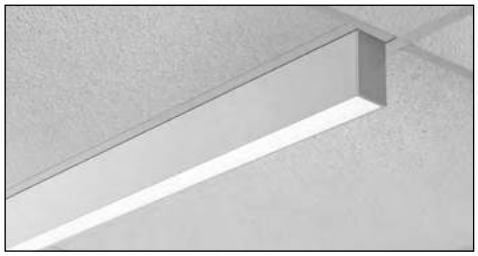
LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. HP-2 can be used to comply with 2016 Title 24, Part 6 (JA8); high efficacy LED light source requirements. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Red List Declared) to your part number.

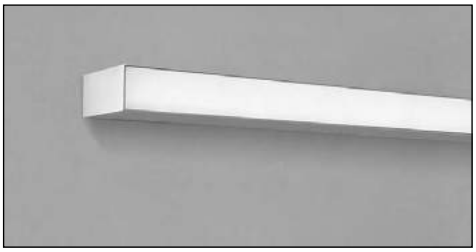
WEIGHT[8]: SM - 2.3 lb/ft; WW - 2.9 lb/ft

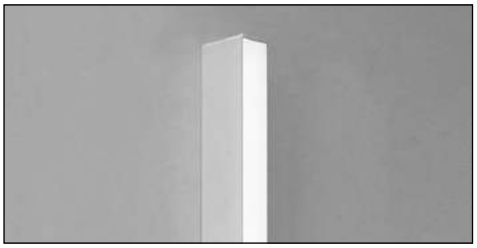
WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

[5] Regressed only
[6] Consult Finelite for Generator Transfer Device and Battery Back up fit
[7] 20 business days lead time for color
[8] Excludes Battery Back up and Generator Transfer Device weight

SURFACE MOUNT OPTIONS


Ceiling Surface Mount


Horizontal Surface Mount


Vertical Surface Mount

Submitted by:	Date:
Type:	Project:
Ordering Info:	

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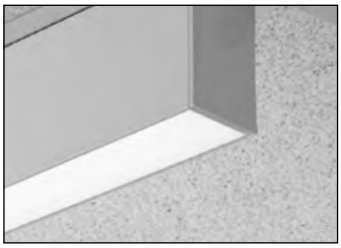
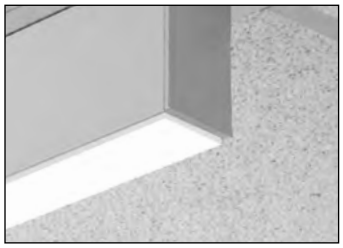
High Performance 2" Aperture (HP-2) Surface Mount

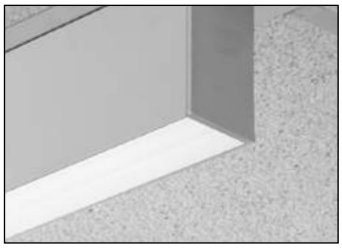
AESTHETIC OPTIONS

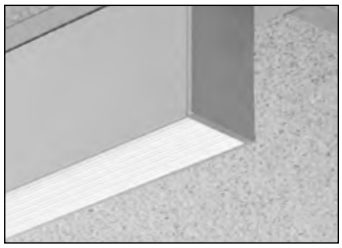

Flush Diffuser (**F**)

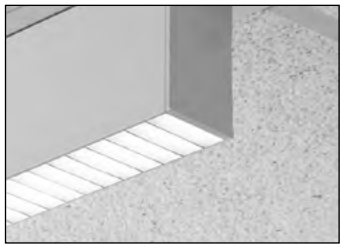

Bottom Glow Diffuser (**BG**)


1" Drop Down Lens (**DL**)


Flat Diffuser with 1" Regressed (**RG-D**)

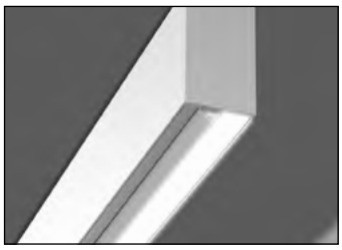

Downlight Asymmetric Optic (**DAO**) [1]
Externally flush


Downlight Spread Optic (**DSO**) [1]
Externally flush


White Cross Blade Baffle [2] (**RG-WCB**)


Hex Louver [2] (**RG-LHC**)


Hollowed Ellipse Louver [2] (**RG-LHE**)


Kicker (**K**) - Wall Wash only

[1] With a subtle ribbed appearance providing specialized distribution
[2] Regressed only. Not available with Wall Wash

Submitted by:	Date:
Type:	Project:
Ordering Info:	

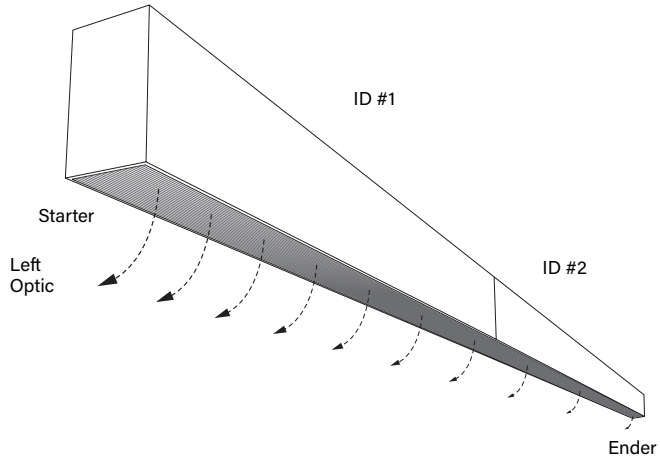
FINELITE®
Better Lighting

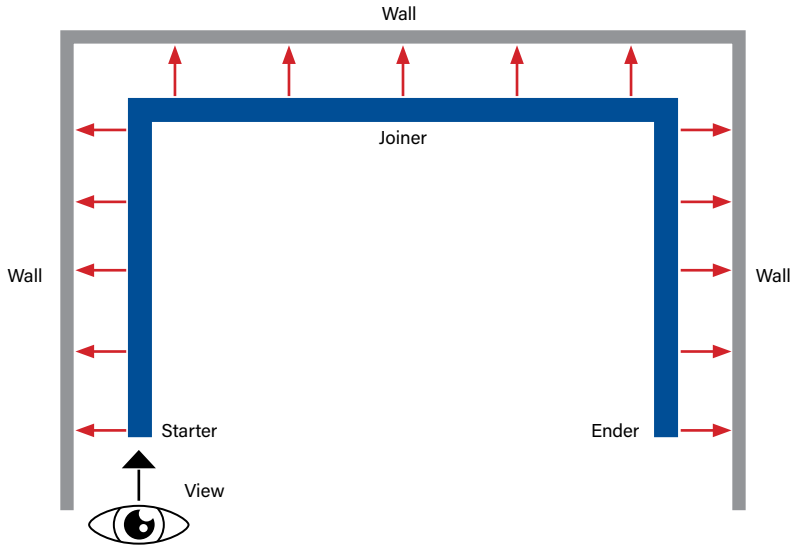
High Performance 2" Aperture (HP-2) Surface Mount

DOWNLIGHT ASYMMETRIC OPTIONS

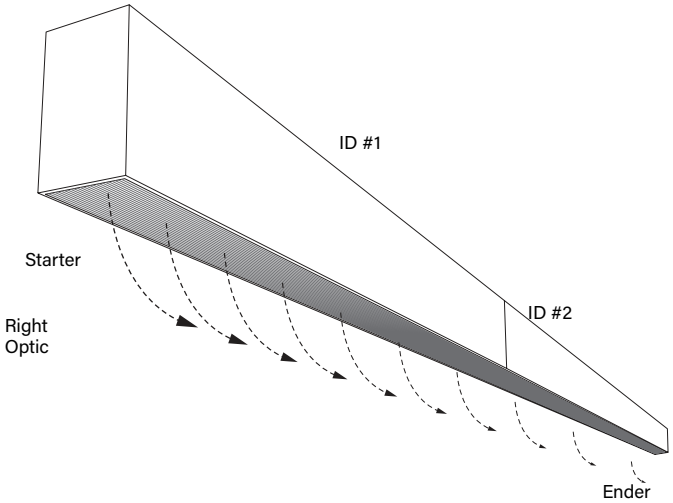
The diagrams below show a linear run from power feed to ender. Specifing DAO-L distributes light to the left or DAO-R distributes light to the right. For proper orientation: view luminaire from starter end when specifying the direction of the Downlight Asymmetric optic.

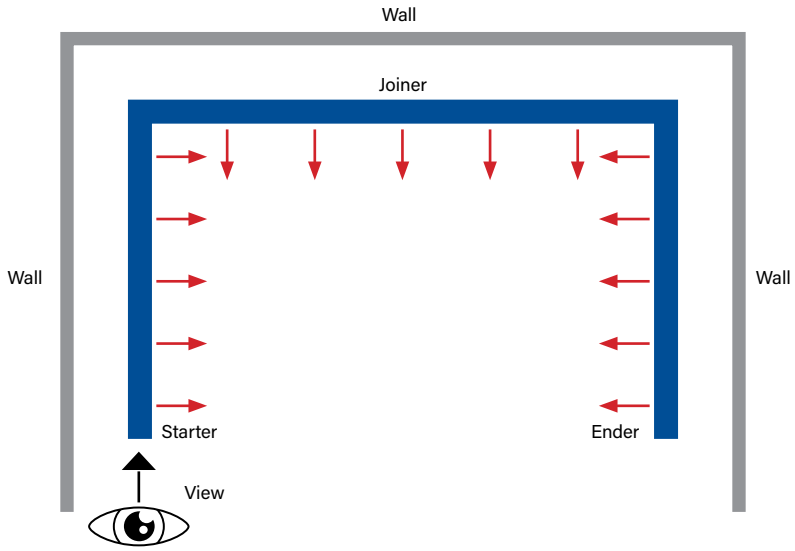
Downlight Asymmetric Optic Left (DAO-L)





Downlight Asymmetric Optic Right (DAO-R)





PREINSTALLED LABEL

For DAO, Preinstalled label on diffuser shows direction of light. Remove after installation.

Submitted by:	Date:
Type:	Project:
Ordering Info:	

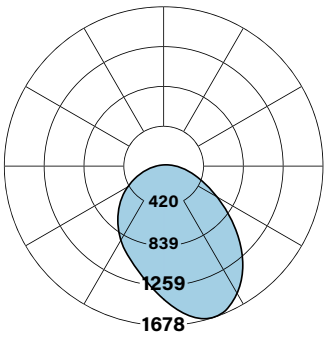
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

Recessed Photometry - 4' Luminaire 3500K

HP2-SM-D-4'-V-835-DAO
Downlight: Downlight Asymmetric Optic - Right

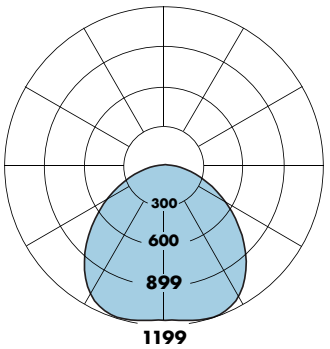
Efficacy: 105 lm/W
Total luminaire output: 3741 lumens (935 lm/ft)
35.5 watts (8.9 W/ft)
Peak Candela Value: 1670 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report REP-051921-01



Complete LM79 LED Photometry

HP2-SM-D-4'-V-835-DSO
Downlight: Downlight Spread Optic

Efficacy: 92 lm/W
Total luminaire output: 3273 lumens (818 lm/ft)
35.7 watts (8.9 W/ft)
Peak Candela Value: 1197 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 94139



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1531	1925	2910	3741

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
383	481	727	935

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
110	109	107	105

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: REP-051921-01

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1340	1684	2546	3273

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
335	421	636	818

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.5	4.4	6.8	8.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
96	95	93	92

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 94139

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2910 lm x 0.789 = 2296 lm
Total Light Output per Foot: 707 lm/ft x 0.789 = 574 lm/ft.
watts/foot: 6.8 W/ft.

$$\textbf{Efficacy} = \frac{574 \ \frac{\text{lm}}{\text{ft.}}}{6.8 \ \frac{\text{W}}{\text{ft.}}} = 84 \text{ lm/W}$$

Submitted by:	Date:
Type:	Project:
Ordering Info:	

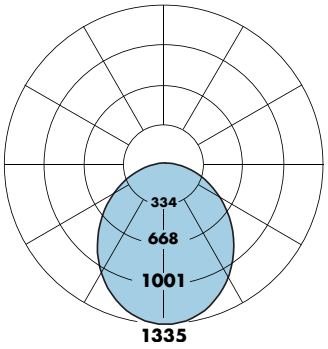
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

Recessed Photometry - 4' Luminaire 3500K

HP2-SM-D-4'-V-835
Downlight: Flush Diffuser

Efficacy: 89 lm/W
Total luminaire output: 3287 lumens (822 lm/ft)
36.9 watts (9.2 W/ft)
Peak Candela Value: 1335 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85135



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1346	1692	2557	3287

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
336	423	639	822

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.1	9.2

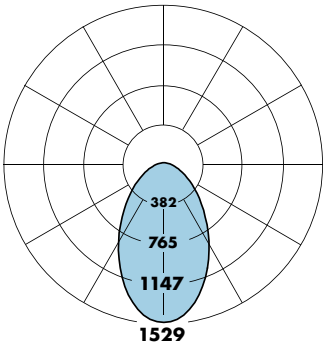
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
93	92	90	89

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85135

HP2-SM RG-D-4'-V-835
Downlight: Regressed Diffuser

Efficacy: 79 lm/W
Total luminaire output: 2887 lumens (722 lm/ft)
36.7 watts (9.2 W/ft)
Peak Candela Value: 1529 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 90350



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B [1]**	**H [1]**	**V [2]**
1182	1486	2245	2887

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
295	371	561	722

Power, 3500K (Watts Per Foot)			
S [1]	**B [1]**	**H [1]**	**V [2]**
3.6	4.6	7.0	9.2

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B [1]**	**H [1]**	**V [2]**
82	81	80	79

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 90350

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 2557 lm x 0.789 = 2017 lm
Total Light Output per Foot: 639 lm/ft x 0.789 = 504 lm/ft.
watts/foot: 7.1 W/ft.

$$\textbf{Efficacy} = \frac{504\ \frac{\text{lm}}{\text{ft.}}}{7.1\ \frac{\text{W}}{\text{ft.}}} = 71\ \text{lm/W}$$

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

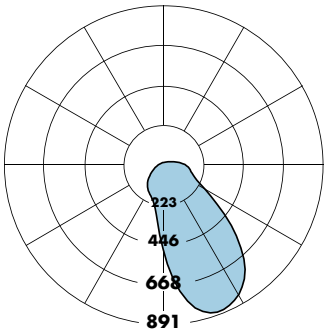
FINELITE® Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

Wall Wash Recessed - 4' Luminaire 3500K

HP2-SM-WW-D-K-4'-V-835
Downlight: With Kicker

Efficacy: 76 lm/W
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
Peak Candela Value: 882 @ 25°
CRI: 80 / CCT: 3500K
ITL LM79 Report 85137



Complete LM79 LED Photometry

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire			
S [1]	**B** [1]	**H** [1]	**V** [2]
614	772	1167	1500

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
154	193	292	375

Power, 3500K (Watts Per Foot)			
S [1]	**B** [1]	**H** [1]	**V** [2]
2.0	2.5	3.8	4.9

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S [1]	**B** [1]	**H** [1]	**V** [2]
76	77	77	77

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

[1] Family Correlation based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 85137

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI	
3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI	
3000K	0.746
3500K	0.760
4000K	0.789

High Output (**H**) / 4000K, 90 CRI
Lumen Adjustment Factor: 0.789
Total Light Output: 1167 lm x 0.789 = 921 lm
Total Light Output per Foot: 292 lm/ft x 0.789 = 230 lm/ft.
watts/foot: 3.8 W/ft.

$$\textbf{Efficacy} = \frac{292\ \frac{\text{lm}}{\text{ft.}}}{3.8\ \frac{\text{W}}{\text{ft.}}} = 61\ \text{lm/W}$$

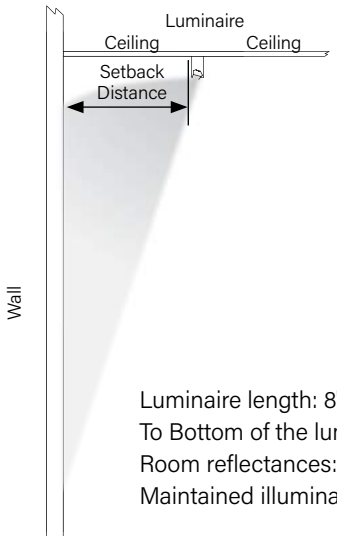
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE®
Better Lighting

High Performance 2" Aperture (HP-2) Surface Mount

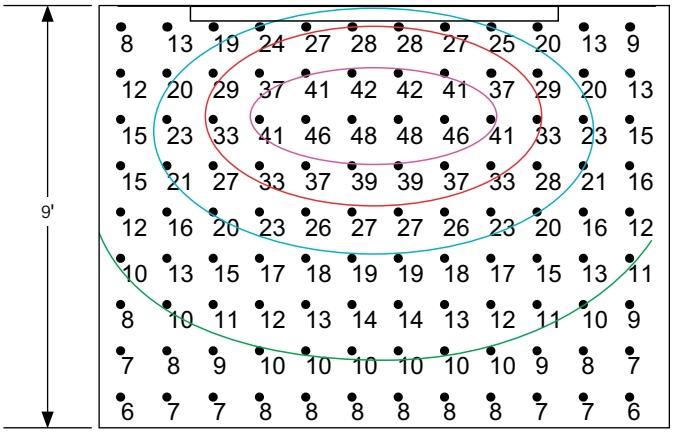
WALL WASH RECESSED - SETBACK INFO AND APPLICATION DATA

HP2-SM-WW-D-K-4'-V-835
Downlight: With Kicker
Total luminaire output: 1500 lumens (375 lm/ft)
19.6 watts (4.9 W/ft)
CRI: 80 / CCT: 3500K



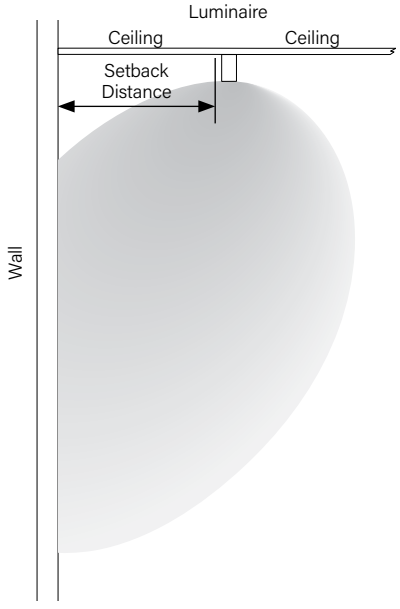
Luminaire length: 8'
To Bottom of the luminaire: 9'-0"
Room reflectances: 80-50-20
Maintained illuminance levels: LLF 0.86"

Setback Distance - 2'

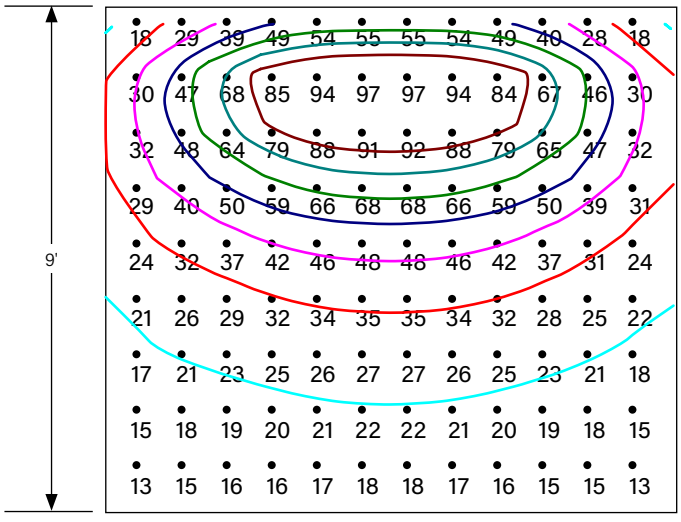


DOWNLIGHT ASYMMETRIC OPTIC - SETBACK INFO AND APPLICATION DATA

HP2-SM-D-4ft-V-835-DAO
Downlight: DAO
Total luminaire output: 3742 lumens (936 lm/ft)
35.6 watts (8.9 W/ft)
CRI: 80 / CCT: 3500K



Setback Distance - 2'



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

0-10V Tunable White

Finelite's contractor friendly Tunable White luminaires are available at low cost, with powerful and simple 0-10V tuning and intensity controls.

TUNABLE WHITE FEATURES

- CCT range: 2700K - 6500K
- Dimming Range: 100% to 10%
- CRI Options: 80 CRI or 90 CRI

Note:
Dim to Off options available.

LUMINAIRE FAMILY MODIFICATIONS/RESTRICTIONS

	Section Lengths										
Surface Mount Direct	**2'**	**3'**	**4'**	**5'**	**6'**	**7'**	**8'**	**9'**	**10'**	**11'**	**12'**
Output S,B,H,V Single Circuit	Rows can be comprised of 3'-12' sections. Tailored lengths available.										
Integral Battery Backup (BSL310LP)							✓		✓		✓

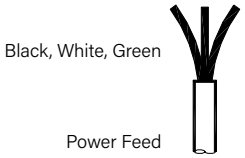
PHOTOMETRY

Apply a power adjustment factor to calculate wattage usage

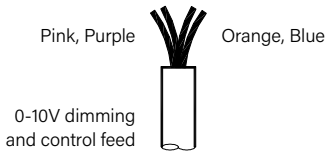
POWER	CONVERSION FACTOR
	1.1X

(Example: a 50 watt luminaire in static white would draw 55 watts using 0-10V Tunable White)

DUAL FEED DETAIL



WIRING LEGEND		
Black	Hot	Line Voltage
White	Neutral	Line Voltage
Green	Ground	



WIRING LEGEND		
Pink	Dimming	0-10V DC
Purple	Dimming	0-10V DC
Orange	TW	0-10V DC
Blue	TW	0-10V DC

Tunable White LUMINAIRES

Day-Brite

CFI

by signify

Industrial

VTC Sealed strip

4ft, 3600 lumens

Type W1

Day-Brite/CFI VTC Sealed strip is a durable wet location rated product designed for use in both indoor and outdoor environments. This luminaire offers rugged reliability and the efficiency your successful business requires.

Project:

Location:

Cat.No:

Type:

Lumens: Qty:

Notes:

Ordering guide

Example: VTC436L840-UNV

Series	Length (nominal)	Lumens[1] (nominal)	Color temp. (K)	Voltage
VTC	4	36L	840 –	UNV
VTC Sealed strip LED	**4** 4' length	**36L** 3600 lumens	**840** 80 CRI, 4000K	**UNV** Universal voltage 120-277V (non-dimmable)

1. Nominal delivered lumens at 25°C ambient.

All options are factory installed.

Many luminaire components, such as reflectors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

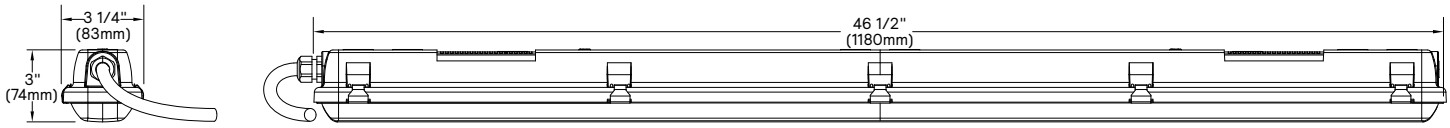
Features

- Grey one piece, molded polycarbonate body. No rusting, no oxidation, and no corrosion.
- Standard lens is frosted.
- Gasket provides tight seal between plastic lens and housing.
- Stainless steel latches are standard.
- Hanging V hooks included (set of 2).
- Wrap around mounting brackets included (set of 2).
- IP65 rated
- cULus listed to meet UL 1598 standards for -10C to 40C ambient. Suitable for wet locations.
- 5 Year Limited Warranty

VTC Sealed strip LED

4ft, 3600 lumens

Dimensions



Photometry

4' VTC Sealed strip LED, 3600 nominal delivered lumens

Catalog No.	VTC436L840-UNV
Test No.	6046530.50P
S/MH	1.3
Lamp Type	LED
Lumens	3644
Input Watts	35
LPW	104

Comparative yearly lighting energy cost per 1000 lumens – **$2.31** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross	Back-45
0	1054	1054	1054	1054
5	1053	1047	1046	1048
15	1014	999	1000	1001
25	938	918	924	926
35	830	813	830	820
45	697	691	725	699
55	544	559	608	567
65	376	420	479	428
75	202	285	349	290
85	50	160	226	163
95	13	98	154	98
105	8	59	110	59
115	2	21	65	21
125	2	3	22	3
135	2	2	3	2
145	2	2	2	2
155	3	3	3	3
165	3	3	3	3
175	4	4	3	3

Light Distribution

Degrees	Lumens	% Luminaire
0-30	821	22.5
0-40	1351	37.1
0-60	2449	67.2
0-90	3416	93.7
0-180	3644	100.0
90-180	228	6.3

Average Luminance

Angle	End	45°	Cross
45	1008	822	811
55	961	757	759
65	889	684	702
75	756	605	642
85	483	510	581

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

pcc	80			70			50	
pw	70	50	30	70	50	30	50	30
RCR								
0	118	118	118	114	114	114	108	108
1	105	100	95	102	97	92	91	88
2	95	86	79	92	84	77	79	73
3	86	75	66	83	73	65	69	62
4	79	66	57	76	64	56	61	54
5	72	59	49	70	57	49	54	47
6	67	53	44	64	52	43	49	41
7	62	48	39	60	47	38	45	37
8	57	44	35	55	43	34	41	33
9	54	40	31	52	39	31	37	30
10	50	37	29	49	36	28	35	28

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

www.day-brite.com

Day-Brite

CFI

by signify

Industrial

VTC Sealed strip

4ft, 3600 lumens

Type ZS1

Day-Brite/CFI VTC Sealed strip is a durable wet location rated product designed for use in both indoor and outdoor environments. This luminaire offers rugged reliability and the efficiency your successful business requires.

Project:

Location:

Cat.No:

Type:

Lumens: Qty:

Notes:

Ordering guide

Example: VTC436L840-UNV

Series	Length (nominal)	Lumens[1] (nominal)	Color temp. (K)	Voltage
VTC	4	36L	840 –	UNV
VTC Sealed strip LED	**4** 4' length	**36L** 3600 lumens	**840** 80 CRI, 4000K	**UNV** Universal voltage 120-277V (non-dimmable)

1. Nominal delivered lumens at 25°C ambient.

All options are factory installed.

Many luminaire components, such as reflectors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

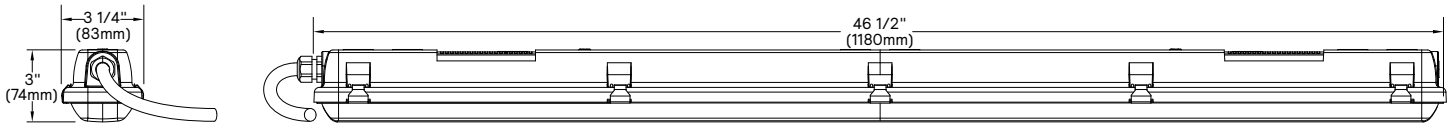
Features

- Grey one piece, molded polycarbonate body. No rusting, no oxidation, and no corrosion.
- Standard lens is frosted.
- Gasket provides tight seal between plastic lens and housing.
- Stainless steel latches are standard.
- Hanging V hooks included (set of 2).
- Wrap around mounting brackets included (set of 2).
- IP65 rated
- cULus listed to meet UL 1598 standards for -10C to 40C ambient. Suitable for wet locations.
- 5 Year Limited Warranty

VTC Sealed strip LED

4ft, 3600 lumens

Dimensions



Photometry

4' VTC Sealed strip LED, 3600 nominal delivered lumens

Catalog No.	VTC436L840-UNV
Test No.	6046530.50P
S/MH	1.3
Lamp Type	LED
Lumens	3644
Input Watts	35
LPW	104

Comparative yearly lighting energy cost per 1000 lumens – **$2.31** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross	Back-45
0	1054	1054	1054	1054
5	1053	1047	1046	1048
15	1014	999	1000	1001
25	938	918	924	926
35	830	813	830	820
45	697	691	725	699
55	544	559	608	567
65	376	420	479	428
75	202	285	349	290
85	50	160	226	163
95	13	98	154	98
105	8	59	110	59
115	2	21	65	21
125	2	3	22	3
135	2	2	3	2
145	2	2	2	2
155	3	3	3	3
165	3	3	3	3
175	4	4	3	3

Light Distribution

Degrees	Lumens	% Luminaire
0-30	821	22.5
0-40	1351	37.1
0-60	2449	67.2
0-90	3416	93.7
0-180	3644	100.0
90-180	228	6.3

Average Luminance

Angle	End	45°	Cross
45	1008	822	811
55	961	757	759
65	889	684	702
75	756	605	642
85	483	510	581

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

pcc	80			70			50	
pw	70	50	30	70	50	30	50	30
RCR								
0	118	118	118	114	114	114	108	108
1	105	100	95	102	97	92	91	88
2	95	86	79	92	84	77	79	73
3	86	75	66	83	73	65	69	62
4	79	66	57	76	64	56	61	54
5	72	59	49	70	57	49	54	47
6	67	53	44	64	52	43	49	41
7	62	48	39	60	47	38	45	37
8	57	44	35	55	43	34	41	33
9	54	40	31	52	39	31	37	30
10	50	37	29	49	36	28	35	28

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www.day-brite.com

PATHWAY POLE LIGHTING WITH 15FT POLE HEIGHT

Control Number: ARCHITECTURAL-PRE-2-M-SL-06_15_2022

TYPE ZYA1
TYPE ZYB1
TYPE ZYE1

PRE-2-M Serenity Lens LED Specifications

Project Name:

Catalog Number:

Type:

Contemporary design meets the new generation of LED green technology in this stunning luminaire, the **PRE-2-M Serenity Lens**. The PRE-2-M Serenity Lens Array series provides up to fifty percent energy savings over traditional HID light sources; and offers excellent beam control and LED life beyond 100,000 hours. The PRE-2-M Array is offered in five optical distributions.

The PRE-2-M Serenity Lens Arrays fully-sealed housing features an exceptionally well-designed thermal management system that provides superior heat dissipation.

The PRE-2-M Serenity Lens fixture is built with a cast aluminum housing, extruded aluminum arms and a spun aluminum, removable top.

The popular **PRE-2-M Serenity Lens** is the perfect compliment to any university campus, business park, or walkway project where contemporary, architectural design is desired.

Ordering Information

MODEL	OPTICS	LUMENS	KELVIN	VOLTAGE	MOUNTING	FINISH	SERENITY LENS	OPTIONS	OPTIONS
PRE-2-M	**T1** **T2** **T3L** **T4L** **T5LS**	**2L** **4L** **6L** **8L**	**3K** 3000K **4K** 4000K **5K** 5000K	**UNV** 120-277V **8** 347V **5** 480V	**PT** Post Top *Slips over 3" OD tenon X 4.5" tall as standard	**BZ** Bronze **BK** Black **SBK** Smooth Black **WH** White **SWH** Smooth White **GP** Graphite **GY** Grey **SL** Silver Metallic **CC** Custom Color	**LDL** Lightly Diffused Lens **HDL** Highly Diffused Lens	**PC-120** **PC-208** **PC-240** **PC-277** Button Type Photocell **WSC-8** Motion Sensor 8' Mounting Height **WSC-20** Motion Sensor 9-20' Mounting Height **WSC-40** Motion Sensor 21-40' Mounting Height the WSC option will require (1) FSIR 100 remote for programing	**DIM** 0-10v Dimming Driver **VWC** Visionaire Wireless Controls *Consult Factory **IR-(R, B, G** Illuminated Rings (Red, Blue, Green) **PER** 3, 5, or 7 Pin Photo Receptacle w/shorting cap

Features & Specifications

PRE-2-M Serenity Lens

Housing
The PRE-2-M Serenity Lens' housing is constructed from durable, corrosion-resistant, cast aluminum. The spun aluminum top cap is .080 gauge, and easily removable for service. Silicone gasketing is provided for complete weather and insect protection.

Thermal Management
The PRE-2-M Serenity Lens provides excellent overall thermal management by maximizing the efficiency of the heat sink in the fixture. This enables the PRE-2-M Serenity Lens to withstand higher ambient temperatures and higher drive currents without degrading LED life.

Optical System
· The hightest lumen output LEDs are utilized. High-performance acrylic optics feature industry leading Type 1, 2, 3L, 4L, and 5LS optical distributions. Acrylic optics are impact-resistant and rated to 94 percent translucence.
· L70 life of our LEDs is rated over 100,000 hours (for 350 mA), The optical system qualifies as IES full cutoff to restrict light trespass, glare and light pollution for neighborhood-friendly lighting.
CRI values are 70.

Quali-Guard® Finish
Fixture components are chemically pretreated through a multiple-stage washer, and finished with an electrostatically-applied, thermoset polyester powder coat textured paint with a 3 to 5 mils thickness.
· Finish is oven-baked at 400 ºF for maximum adherence and finish hardness.
· Available in standard and custom colors.
· Finish is guaranteed for five (5) years.

Post Top Mount
The PRE-2-M Serenity Lens contractor-friendly mounting hardware slips over 3" OD tenon X 4.5" tall as standard utilizing stainless steel hardware.

Electrical Assembly
· The PRE-2-M Serenity Lens is supplied with a high-performance driver available in 350, 530 or 700. The driver is integrally-located in the housing, and is operational from 120 V through 480 V, 50 Hz to 60 Hz input.
· Power factor is 90%.
· Rated for -40o to 50° C operation.
· 10 kV surge protector supplied as standard.

Warranty
Five (5) year Limited Warranty on entire system, including finish. For full warranty information, please visit www.visionairelighting.com.

Options
· Button type photocell
· 0-10v Dimming Driver
· WattStopper FSP-211
· Motion Sensor
· Wireless Control
· Illuminated Rings
· Photo Receptacle
Please consult factory for detailed custom options.

Listings
· PRE-2-M Serenity Lens is cUL listed
· DLC Listed
· IDA Certification
· IP66 Rated
· LM79 and LM80
· Powder Coated ToughTM

POWDER COATED TOUGH™ · c UL us LISTED · IP66 RATED · IDA

DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. http://www.designlights.org/
3000K must be selected for IDA certification.

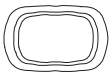
PRE-2-M Serenity Lens - Electrical Load (A)							
Ordering Nomenclature	System Watts	120V	208V	240V	277V	347V	480V
PRE-2-M-T5LS-2L	22	0.18	0.11	0.09	0.08	0.06	0.05
PRE-2-M-T5LS-4L	43	0.36	0.21	0.18	0.16	0.12	0.09
PRE-2-M-T5LS-6L	70	0.58	0.34	0.29	0.25	0.20	0.15
PRE-2-M-T5LS-8L	97	0.81	0.47	0.40	0.35	0.28	0.20

19645 Rancho Way · Rancho Dominguez, CA 90220 · Phone: 310 512 6480 Fax 310 512 6486
www.visionairelighting.com

PRE-2-M Serenity Lens LED Specifications

Photometric Optical Summary

T1
Type 1



T2
Type 2

T3L
Type 3 Long

T4L
Type 4
Long

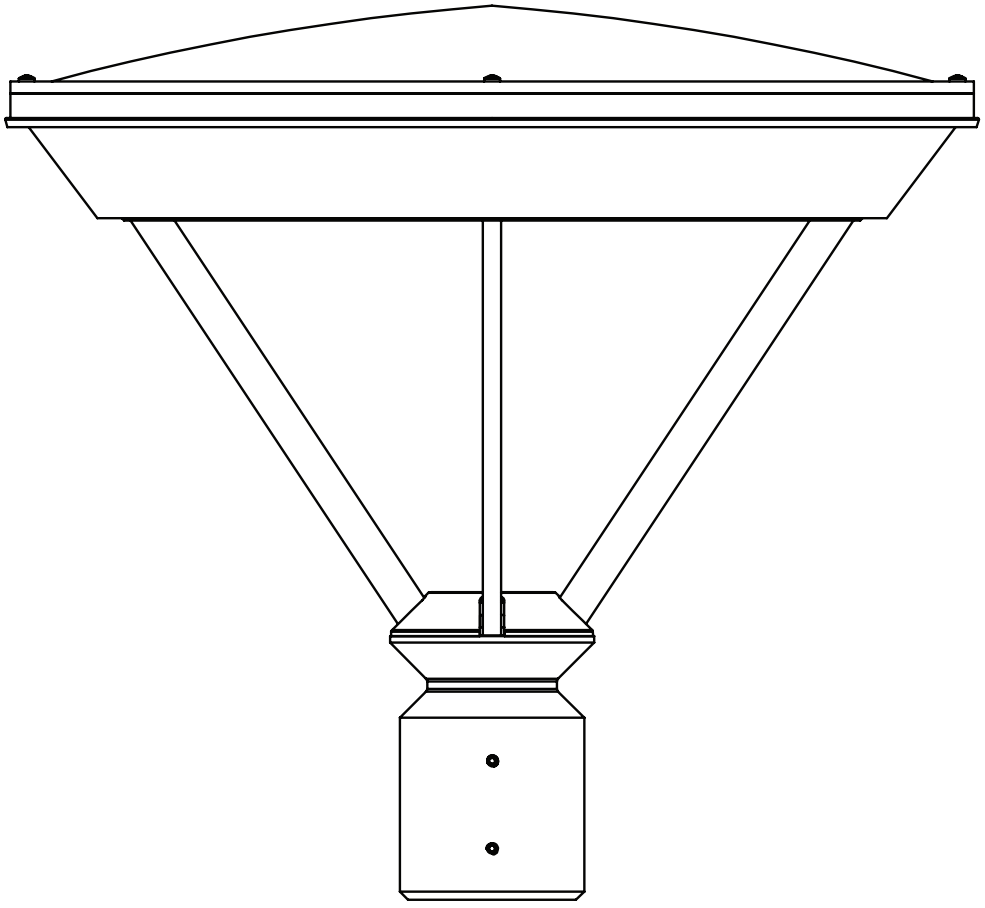
T5LS
Type 5
Long
Square

EPA Data

.88

Dimensions

Width:	PRE-2-M 20”
Height:	PRE-2-M 18.4”
Weight:	37 LBS



Motion Sensor Default Setting									
Type	**High Mode**	**Low Mode**	**Time Delay**	**Cut off Delay**	**Sensitivity**	**Hold Off Set Point**	**Photocell On/Off**	**Ramp up Time**	**Fade Down Time**
WSC- Default	10V	1V	5 Min	1 Hour	Max	Disabled	Disabled	Disabled	Disabled
WSC Range	0 -10V	0 - 9.8V	5 - 30 Min	1 - 5 Hours	Low, Med, Max	1 - 250FC	1 - 250FC	1 - 60 Dec	1-60 Dec

VISIONAIRE LIGHTING

LED Specifications **PRE-2-M Serenity Lens**

Premier-2-M Serenity Lens - LDL 3K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	2012	2041	1849	1758	1655	22
300	4L	4024	4081	3698	3516	3310	43
500	6L	6611	6704	6075	5776	5437	70
700	8L	9051	9179	8318	7909	7444	97

Premier-2-M Serenity Lens - LDL 4K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	2169	2200	1993	1895	1784	22
300	4L	4338	4399	3986	3790	3568	43
500	6L	7126	7227	6548	6227	5861	70
700	8L	9757	9895	8966	8525	8025	97

Premier-2-M Serenity Lens - LDL 5K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	2057	2086	1891	1798	1692	22
300	4L	4115	4173	3781	3595	3384	43
500	6L	6759	6855	6211	5906	5559	70
700	8L	9255	9385	8505	8087	7612	97

Premier-2-M Serenity Lens - LDL 3K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	91	93	84	80	75	22
300	4L	94	95	86	82	77	43
500	6L	95	96	87	83	78	70
700	8L	93	95	86	82	77	97

Premier-2-M Serenity Lens - LDL 4K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	99	100	91	86	81	22
300	4L	101	102	93	88	83	43
500	6L	102	104	94	89	84	70
700	8L	101	102	93	88	83	97

Premier-2-M Serenity Lens - LDL 5K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	94	95	86	82	77	22
300	4L	96	97	88	84	79	43
500	6L	97	98	89	85	80	70
700	8L	96	97	88	83	79	97

Premier-2-M Serenity Lens - LDL 3K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	2	0	1	1	0	1	1	0	1	1	0	1	1	0	1	43
500	6L	2	0	2	2	0	2	2	0	1	2	0	1	2	0	1	70
700	8L	3	0	3	2	0	2	2	0	2	2	0	2	2	0	1	97

Premier-2-M Serenity Lens - LDL 4K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	2	0	1	1	0	1	1	0	1	1	0	1	1	0	1	43
500	6L	2	0	2	2	0	2	2	0	2	2	0	2	2	0	1	70
700	8L	3	0	3	2	0	2	2	0	2	2	0	2	3	0	1	97

Premier-2-M Serenity Lens - LDL 5K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	2	0	1	1	0	1	1	0	1	1	0	1	1	0	1	43
500	6L	2	0	2	2	0	2	2	0	2	2	0	1	2	0	1	70
700	8L	3	0	3	2	0	2	2	0	2	2	0	2	3	0	1	97

Premier-2-M Serenity Lens - HDL 3K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	1805	1848	1676	1678	1779	22
300	4L	3611	3696	3352	3356	3558	43
500	6L	5932	6072	5506	5514	5845	70
700	8L	8122	8313	7539	7549	8003	97

Premier-2-M Serenity Lens - HDL 4K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	1946	1992	1806	1809	1918	22
300	4L	3892	3984	3613	3618	3835	43
500	6L	6394	6545	5935	5943	6301	70
700	8L	8755	8961	8126	8138	8627	97

Premier-2-M Serenity Lens - HDL 5K Lumen Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	1846	1890	1714	1716	1819	22
300	4L	3692	3779	3427	3432	3638	43
500	6L	6065	6208	5630	5638	5976	70
700	8L	8304	8500	7708	7719	8183	97

Premier-2-M Serenity Lens - HDL 3K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	82	84	76	76	81	22
300	4L	84	86	78	78	83	43
500	6L	85	87	79	79	84	70
700	8L	84	86	78	78	83	97

Premier-2-M Serenity Lens - HDL 4K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	88	91	82	82	87	22
300	4L	91	93	84	84	89	43
500	6L	92	94	85	85	91	70
700	8L	90	92	84	84	89	97

Premier-2-M Serenity Lens - HDL 5K Lumen Per Watt Data							
Current	Lumens	T1	T2	T3L	T4L	T5LS	Watts
150	2L	84	86	78	78	83	22
300	4L	86	88	80	80	85	43
500	6L	87	89	81	81	86	70
700	8L	86	88	80	80	84	97

Premier-2-M Serenity Lens - HDL 3K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	43
500	6L	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	70
700	8L	2	0	1	2	0	2	2	0	2	2	0	2	2	0	1	97

Premier-2-M Serenity Lens - HDL 4K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	2	0	1	1	0	1	1	0	1	1	0	1	2	0	1	43
500	6L	2	0	1	2	0	2	2	0	1	2	0	1	2	0	1	70
700	8L	3	0	1	3	0	2	2	0	2	2	0	2	2	0	1	97

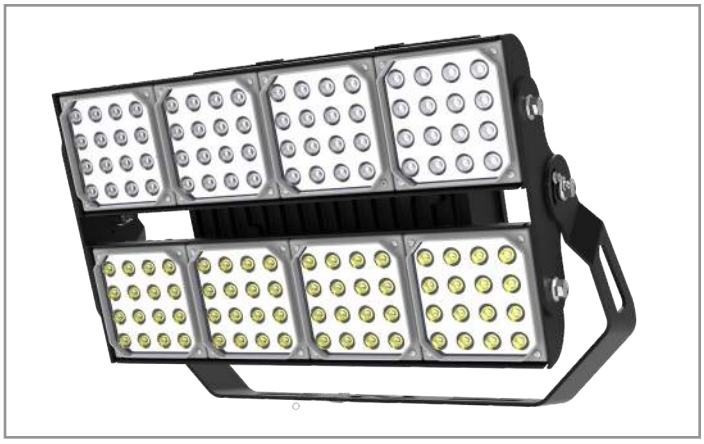
Premier-2-M Serenity Lens - HDL 5K BUG Data																		
Current	Lumens	T1			T2			T3L			T4L			T5LS			Watts
		B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
150	2L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	22
300	4L	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	43
500	6L	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	70
700	8L	3	0	1	2	0	2	2	0	2	2	0	2	2	0	1	97

19645 Rancho Way • Rancho Dominguez, CA 90220 • Phone: 310 512 6480 Fax 310 512 6486
www.visionairelighting.com

SWIMMING POOL LIGHTING

TYPE ZY2

Project		Catalog #		Type	
Prepared by		Notes		Date	



Ephesus

LUMAVISION

CCT Tunable or Fixed-Color White LED Sports & Entertainment Luminaire

Typical Applications

• Aerial and Ground Sports Venues • Multi-Event Centers
• Gymnasiums & Field Houses • Outdoor Courts • Basketball Courts
• Tennis Courts • Pickleball Courts • Volleyball Courts • Playgrounds & Skateparks
• Parks and Recreation Venues • Ice Hockey & Skating Arenas

Interactive Menu

- Ordering Information page 2
- Performance Data page 3
- Ordering Information Accessories page 6
- Accessory Details page 6
- Dimensional and Mounting Details page 9 - 24
- Sample System Topology page 25

Product Certification

POOL POLE LIGHTING WITH 30-50FT POLE HEIGHT; QTY. OF HEAD TBD PER PHOTOMETRIC CALCS.

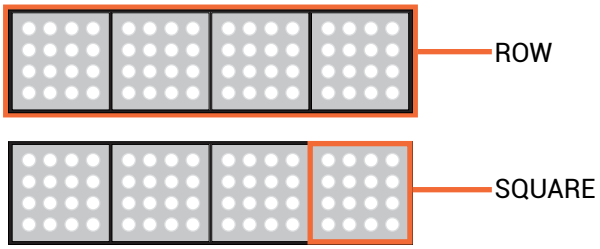
Top Product Features

- **Optical Performance**
  - **AccuLED Optics™:** LumaVision utilizes patented and industry leading UV coated AccuLED Optics™ preventing yellowing and degradation over time.
  - **Glare and Spill Light Control:** Twenty (20) available beam distributions provide the flexibility and performance required for indoor and outdoor sports lighting.
  - **CCT Pro Tuning Option:** Allows for a tunable color temperature range of 3000K-6500K.
  - **Dark Sky Compliance Capable:** Light your game for the players and the community
- **Reliability**
  - **Built To Perform:** Thermally managed driver and LED housing provides demonstrated reliability confidence.
  - **L90:** With a 90,000+ hour rated life (at greater than 90% lumen maintenance), the LumaVision LED luminaire is designed for long life.
- **Take Control of Your System**
  - Compatible with the Ephesus control ecosystem, putting the control of your system in the palm of your hand.
- **Ease of Installation**
  - 6 flexible indoor/outdoor mounting options
- **Customizable**
  - 7 factory custom color options.
- **Accessories**
  - Custom visors provide additional cutoff and spill light control. Sport specific impact resistance technologies reduce maintenance on the system.

Installation Manual

Product Model Terminology

Model Name	Description
Luma**Vision 3**	1 Row, 3 Squares
Luma**Vision 4**	1 Row, 4 Squares
Luma**Vision 6**	2 Rows, 6 Squares
Luma**Vision 7**	2 Rows, 7 Squares
Luma**Vision 8**	2 Rows, 8 Squares



Order Information -

NOTE: A complete fixture order requires a selection entry for **Brand, Family, Model, Drive Current, Voltage, Color, Trim Option, Mount, CRI/CCT, Optic, Control, AC Whip, Surge Options, Construction Options.**

SAMPLE ORDER NUMBER: **EPH-VN-08-D-HV-AP-WHT-YOKE-930-11-010-A07-10MSP-ST**

Brand	Family	Model	Drive Current	Voltage	Color	Trim Option
EPH = Ephesus, Standard **TAA**=Trade Agreements Act[1]	**VN** = LumaVision	**03** = 3 Light Squares[3] **04** = 4 Light Squares[3] **06** = 6 Light Squares[4] **07** = 7 Light Squares[4] **08** = 8 Light Squares[4]	**D** = 1200 mA[5] **E** = 1500 mA	**HV** = High Voltage **LV** = Low Voltage	**AP** = Grey (Standard) **BK** = Black **BZ** = Bronze **WH** = White **GR** = Green **GM** = Graphite Metallic **DP** = Dark Platinum	**WHT** = White (Standard) **LCF** = Trim painted to match color[6]
Notes: (1)Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	Notes:	Notes: (2) **PRO** = CCT Tuning 3000-6500K option only available in **04**, **06**, and **08** Models (3) Single Bar Configuration (4) Double Bar Configuration	Notes: (5) Available as a reduced drive current option for models with HA or HSS. **D** option also available for higher efficacy 8 square model.	Notes: **HV** = 347-480 VAC **LV** = 120-277 VAC	Notes:	Notes: (6) **LCF** Not available with optical types **33, 44, 55, 66, 77 and LAM**

Mount	CRI/CCT	Optic	Control	AC Whip	Surge Options	Construction Options
YOKE = Yoke (Standard)[7] **PNDT** = Pendant **AAJL** = Adjustable arm direct pole mount[7 9] **AAJC** = Adjustable arm direct pole (cord through housing)[7] **ADJL** = Slipfitter (Leads through slipfitter)[7 8 9] **ADJC**= Slipfitter (Cord through housing)[7 8]	**730** = 70CRI, 3000K **735** = 70CRI, 3500K **740** = 70CRI, 4000K **750** = 70CRI, 5000K **760** = 70CRI, 5700K **930** = 90CRI, 3000K **935** = 90CRI, 3500K **940** = 90CRI, 4000K **950** = 90CRI, 5000K **PRO** = CCT Tuning 3000-6500K[10]	**33** = NEMA 3H x 3V[11] **44** = NEMA 4H x 4V[11] **55** = NEMA 5H x 5V[11] **66** = NEMA 6H x 6V[11] **77** = NEMA 7H x 7V **LAM** = Lambertian Distribution **T1** = Type I **T2** = Type II **T2R** = Type II Roadway **T3** = Type III **T3R** = Type III Roadway **T4FT** = Type IV Forward Throw **T4W** = Type IV Wide **5NQ** = Type V Narrow **5MQ** = Type V Square Medium **5WQ** = Type V Square Wide **SL2** = Type II w/Spill Control **SL3** = Type III w/Spill Control **SL4** = Type IV w/Spill Control **RW** = Rectangular Wide Type I	**010** = 0-10V (Standard) **AMS** = AirMesh[11] **DAL** = DALI **LBI** = DMX, Indoor[12] **LBO** = DMX, Outdoor[12]	**NC** = No Cord **A05** = 5ft whip **A07** = 7ft whip (Standard) **A10** = 10ft whip **A15** = 15ft whip	**10MSP** = Parallel 10kV MOV Surge Protective Device (Standard) **20MSP** = Parallel 20kV MOV Surge Protective Device	**ST** = Standard **HA** = 50°C High Ambient[16] **CC** = Coastal Construction finish **HSS** = House Side Shield[15 16]
Notes: (7)3G Vibration Rated Per ANSI C136.31-2010 (8)Slipfitter mount to fasten luminaire to a 3 inch outer diameter tenon size. (9) Must use **NC**=No Cord for AC whip option	Notes: (10) Available for 4 Square, 6 Square and 8 Square models. Requires an AMS, LBI or LBO control option. Only compatible with optics 33, 44, 55, 66, 77 or LAM.	Notes: (11) For downlight applications only, if uplight is required contact Ephesus for more details.	Notes: **010** = 5C/16 BLK Cord **AMS** = 3C/16 BLK Cord **DAL** = 5C/16 BLK Cord (11) For downlight applications only, if uplight is required contact Ephesus for more details. (12) DMX indoor is two XLR cables, DMX outdoor is a single 5-conductor cable for watertight connection. Not compatible with AAJC, ADJL or ADJC mounts. For more details on DMX system response rates please refer to the product installation manual.	Notes: (13) AC Whip connecting the Driver Box to the electrical power source. **NC**=No Cord required for ADJL and AAJL mounting types. All other options require a cord length selection.	Notes: (14) Contact ephesus for additional protection options.	Notes: (15) Not avilable with optical tyes **33, 44, 55, 66, 77, LAM, T1, 5NQ, 5MQ, 5WQ** & **RW** (16) Can not be used with drive current type **E** = 1500mA

DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details

Performance Data[1]

	LumaVision 3	LumaVision 4	LumaVision 6	LumaVision 7	LumaVision 8
Nominal Lumen Output (at 70 CRI)[2]	28000	36000	55000	60000	73000
Nominal Lumen Output (at 90 CRI)[3]	20200	26200	39700	42300	52000
Nominal Power[4]	232	304	464	532	627
Voltage Range (Low)	120-277VAC				
Voltage Range (High)	347 - 480VAC				
Efficacy (lm/W)	121	119	119	111	116
CRI[5]	70, 90 CRI				
TLCI (at 90 CRI)[5]	92				
CCT Range (at 70 CRI)	3000-5700K				
CCT Range (at 90 CRI)	3000-5000K				
CCT Tunable Range (PRO Option)	3000-6500K				
Distribution (NEMA)	Refer to Order Information on page 3 for optic options				
Dimming Range	10%-100%				
Operating Temperature Range	-40°C to +40°C				
Usage	INDOOR, OUTDOOR				
Electrical Certifications	FCC Part 15, UL8750, UL1598, DLC STANDARD				
Environmental Certifications	IP66; ANSI C136.31-2010, RoHS				
Impact Certifications[6]	IK10 Rated				
Surge	10kV (standard), 20kV (option)				

Luminaire Approximate Weight[7]	LumaVision 3	LumaVision 4	LumaVision 6	LumaVision 7	LumaVision 8
With Yoke Weight (LBS)	24.25	26.44	45.93	50.58	50.58
With Pendant (LBS)	24.48	26.28	42.16	45.31	45.31
With Slipfitter (LBS)	27.8	29.98	45.53	46.49	46.49

Mount Vibration Rating Per ANSI C136.31-2010	
YOKE = Yoke (Standard)	3G
PNDT = Pendant	N/A
AAJL = Adjustable arm direct pole mount	3G
AAJC = Adjustable arm direct pole (cord through housing)	3G
ADJL = Slipfitter (Leads through slipfitter)	3G
ADJC= Slipfitter (Cord through housing)	3G

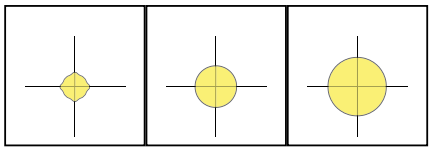
Effective Projected Area (EPA)[8] [9]	LumaVision 3	LumaVision 4	LumaVision 6	LumaVision 7	LumaVision 8
YOKE = Yoke (Standard)	1.61 (sq. ft.)	1.64 (sq. ft.)	2.38 (sq. ft.)	2.78 (sq. ft.)	2.78 (sq. ft.)
PNDT = Pendant	1.6 (sq. ft.)	1.89 (sq. ft.)	2.34 (sq. ft.)	2.9 (sq. ft.)	2.9 (sq. ft.)
AAJL = Adjustable arm direct pole mount	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)
AAJC = Adjustable arm direct pole (cord through housing)	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)	1.8 (sq. ft.)
ADJL = Slipfitter (Leads through slipfitter)	1.77 (sq. ft.)	2.04 (sq. ft.)	2.47 (sq. ft.)	2.99 (sq. ft.)	2.99 (sq. ft.)
ADJC= Slipfitter (Cord through housing)	1.77 (sq. ft.)	2.04 (sq. ft.)	2.47 (sq. ft.)	2.99 (sq. ft.)	2.99 (sq. ft.)

NOTES:

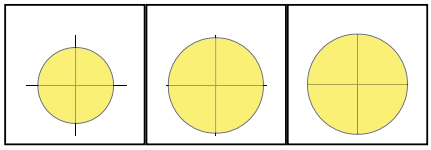
(1) Specifications are subject to change without notice
(2) Based on T4FT lens, 70 CRI, 5000K
(3) Based on 66 lens, 70 CRI, 5000K
(4) Values are +/- 5% when fixture is operated at 25°C ambient
(5) Values are +/- 3 points
(6) IK10 Rating applies to LumaVision configurations using the Vandal Shield accessory. (VSH3, VSH4, VSH6, VSH7, VSH8)
(7)Weight varies depending on mounting bracket, lighthead and driverbox selection
(8) Calculated with luminaire aimed 45° to the ground
(9) EPA varies depending on the aiming angle of the fixture

LUMAVISION AccuLED Optics™

Symmetrical

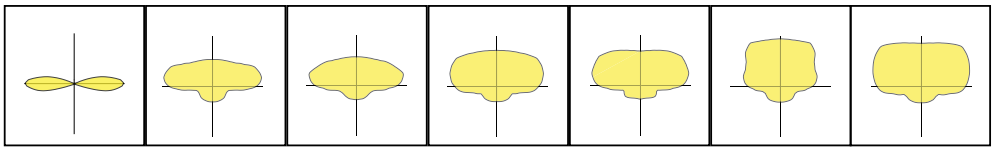


33 = NEMA 3H x 3V | **44** = NEMA 4H x 4V | **55** = NEMA 5H x 5V

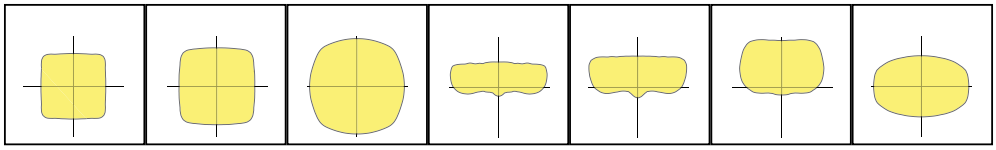


66 = NEMA 6H x 6V | **77** = NEMA 7H x 7V | **LAM** = Lambertian Distribution

Asymmetrical

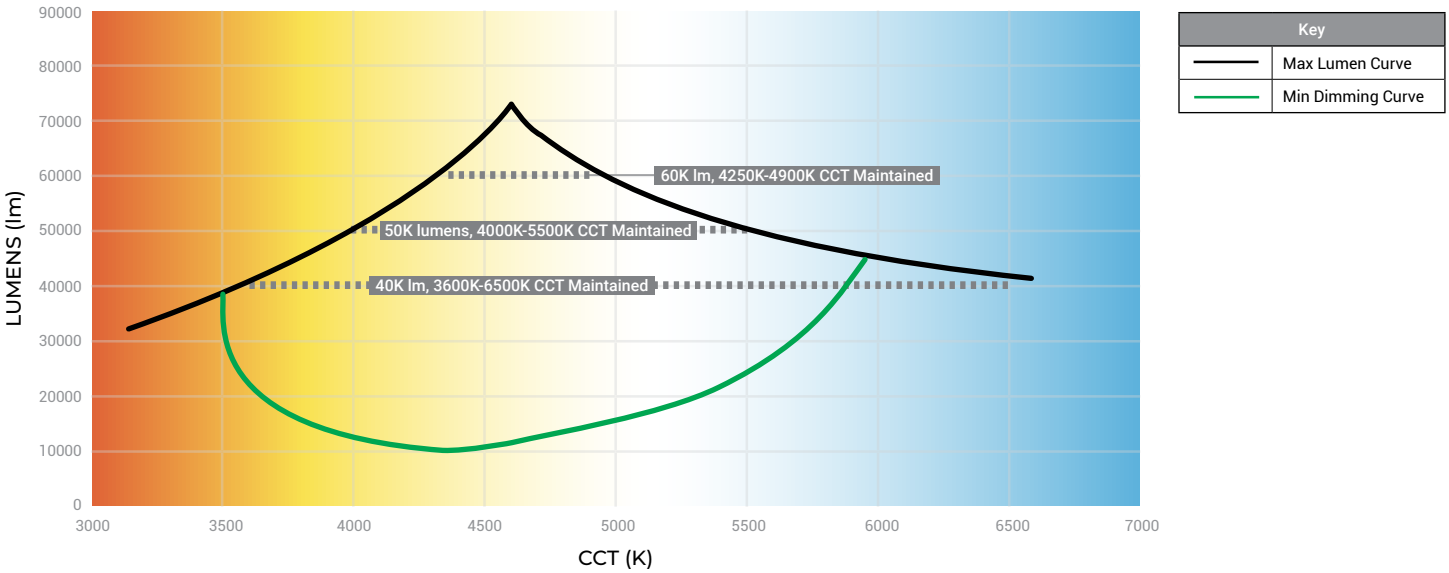


T1 = Type I | **T2** = Type II | **T2R** = Type II Roadway | **T3** = Type III | **T3R** = Type III Roadway | **T4FT** = Type IV Forward Throw | **T4W** = Type IV Wide

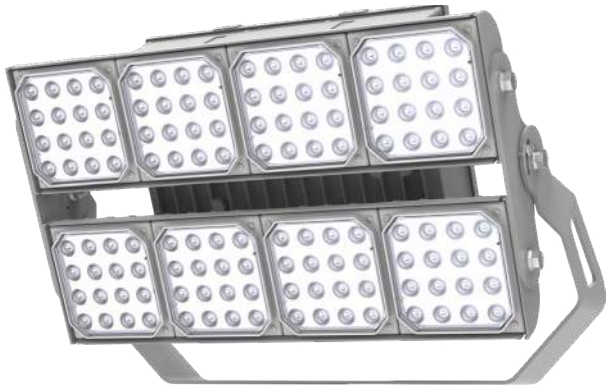


5NQ = Type V Narrow | **5MQ** = Type V Square Medium | **5WQ** = Type V Square Wide | **SL2** = Type II w/Spill Control | **SL3** = Type III w/Spill Control | **SL4** = Type IV w/Spill Control | **RW** = Rectangular Wide Type I

LUMAVISION CCT PRO TUNING OPERATING RANGE



Color Options



AP = GREY (STANDARD)

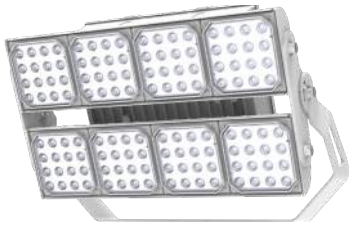
AP = GREY (STANDARD)	BK = BLACK	BZ = BRONZE	WH = WHITE	GR = GREEN	GM = GRAPHITE METALLIC	DP = DARK PLATINUM

- Customizeable color options (7 options)
- Factory custom built accessories

Note: colors may appear differently based on viewing device.

BK = BLACK

BZ = BRONZE



WH = WHITE

GR = GREEN

GM = GRAPHITE METALLIC

DP = DARK PLATINUM

Ordering Information for External Accessories

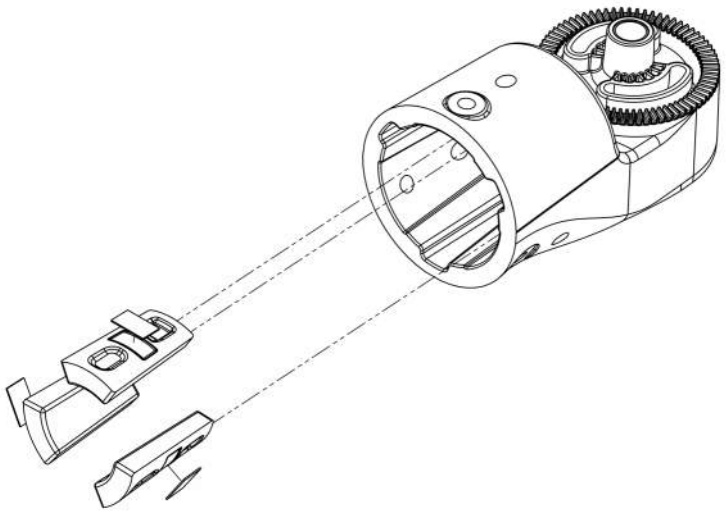
NOTE: A complete accessory order requires a selection entry for **Brand, Family, Accessory, Visor Color (If applicable).**
SAMPLE ORDER NUMBER: **EPH-VN-VIS3-AP**

Brand	Family	Accessory	Visor Color

Brand	Family	Accessory[1]	Visor Color	Intended Use
EPH = Ephesus	**VN** = LumaVision	**VIS3** = Visor for Model **03** = 3 Light Squares **VIS4** = Visor for Model **04** = 4 Light Squares **VIS6** = Visor for Model **06** = 6 Light Squares **VIS7** = Visor for Model **07** = 7 Light Squares **VIS8** = Visor for Model **08** = 8 Light Squares	**AP** = Grey (Standard) **BK** = Black **BZ** = Bronze **WH** = White **GR** = Green **GM** = Graphite Metallic **DP** = Dark Platinum	For additional cutoff and spill light control.
		VSH3 = Vandal Shield for Model **03** = 3 Light Squares **VSH4** = Vandal Shield for Model **04** = 4 Light Squares **VSH6** = Vandal Shield for Model **06** = 6 Light Squares **VSH7** = Vandal Shield for Model **07** = 7 Light Squares **VSH8** = Vandal Shield for Model **08** = 8 Light Squares		IK10 rated polycarbonate shield improves impact resistance to small projectiles (ie. rocks, or pellets).
		WRG3 = Wire Guard for Model **03** = 3 Light Squares **WRG4** = Wire Guard for Model **04** = 4 Light Squares **WRG6** = Wire Guard for Model **06** = 6 Light Squares **WRG7** = Wire Guard for Model **07** = 7 Light Squares **WRG8** = Wire Guard for Model **08** = 8 Light Squares		Stainless steel cage improves impact resistance to large projectiles (ie. basketball, pucks).
		SRA238 = Slipfitter Spacer		Used with the **ADJC** & **ADJL** Slipfitter mount to fasten luminaire to a 2 3/8in outer diameter tenon size.
		HWCB = Center Bolt Mount Fastening Hardware		Center Bolt Mount with a ¾ - 10 x 1.75in bolt in the center of pedant mount. Fastening hardware used to replace common Arena Mounting style "CS" for catwalk brackets and other center stud mount applications.
		HWMM = Multi-Point Mount Fastening Hardware		Multi-Point Mounting with 2 qty. 5/16-18 x 1.25in bolts on either edge of the pendant yoke. Can be paired with "HWCB" or "HWCN" as necessary.
		HWCN = Conduit Nuts Fastening Hardware		Two Conduit Nuts to attach a standard 3/4in threaded conduit to the center of the pendant mount yoke. Equivalent to the Arena "MM" multi-mount style mount when paired with "HWMM".
Notes:				

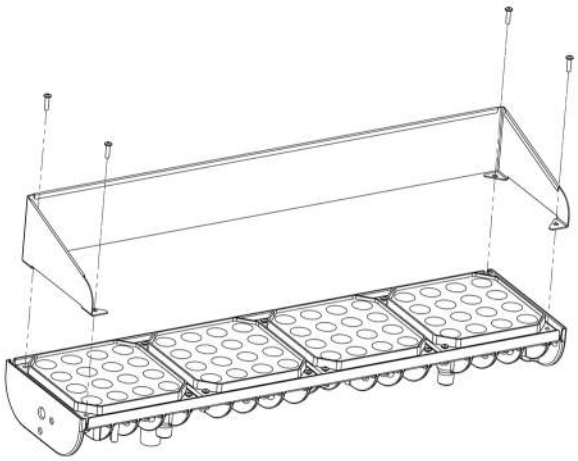
Specifications and dimensions subject to change without notice. Consult your lighting representative at Ephesus Sports Lighting or visit www.EphesusLighting.com for available options, accessories and ordering information.

Mounting Accessory Part Details:



Slipfitter Spacer (SRA238)

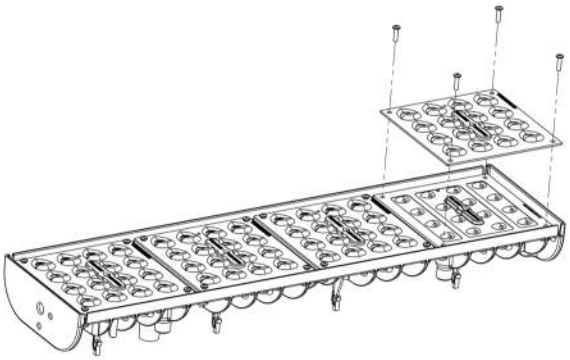
External Optical Cut-off Accessory Part Details:



Visor Full Bar (VIS) Parts[1]

ITEM NO.	DESCRIPTION	WEIGHT (LBS)
VIS3	Visor for Model **03** = 3 Light Squares	1.19
VIS4	Visor for Model **04** = 4 Light Squares	1.46
VIS6	Visor for Model **06** = 6 Light Squares	2.38
VIS7	Visor for Model **07** = 7 Light Squares	2.65
VIS8	Visor for Model **08** = 8 Light Squares	2.92

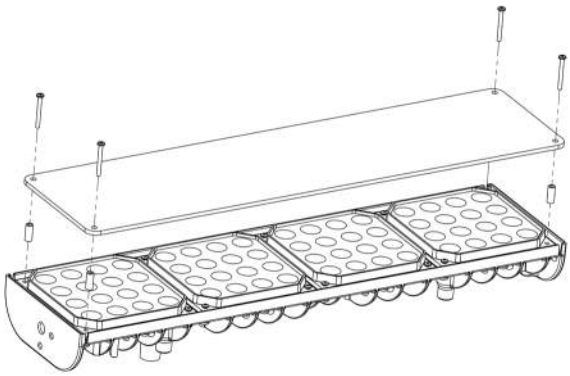
[1]image shown in **EPH-VN-VIS4-XX** configuration. See page 5 for color options.



House Side Shield (HSS)

Factory Installation only

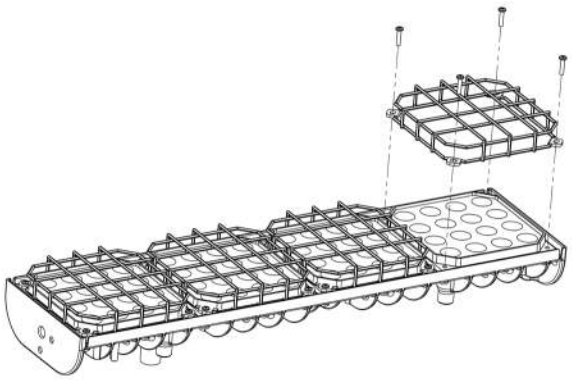
External Impact Shield and Guard Accessory Part Details:



Vandal Shield (VSH) Parts[1]

ITEM NO.	DESCRIPTION	WEIGHT (LBS)
VSH3	Vandal Shield for Model **03** = 3 Light Squares	0.78
VSH4	Vandal Shield for Model **04** = 4 Light Squares	1.04
VSH6	Vandal Shield for Model **06** = 6 Light Squares	1.56
VSH7	Vandal Shield for Model **07** = 7 Light Squares	1.82
VSH8	Vandal Shield for Model **08** = 8 Light Squares	2.08

[1]image shown in **EPH-VN-VSH4** configuration

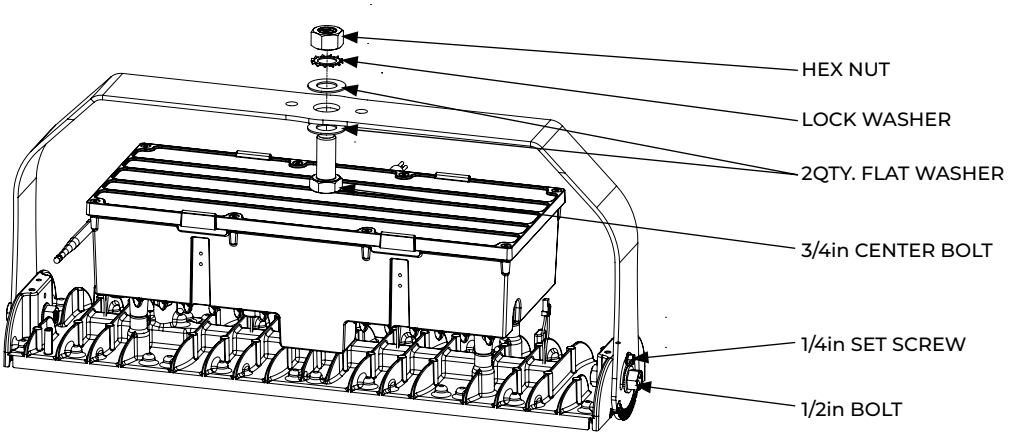


Wire Guard (WRG) Parts[1]

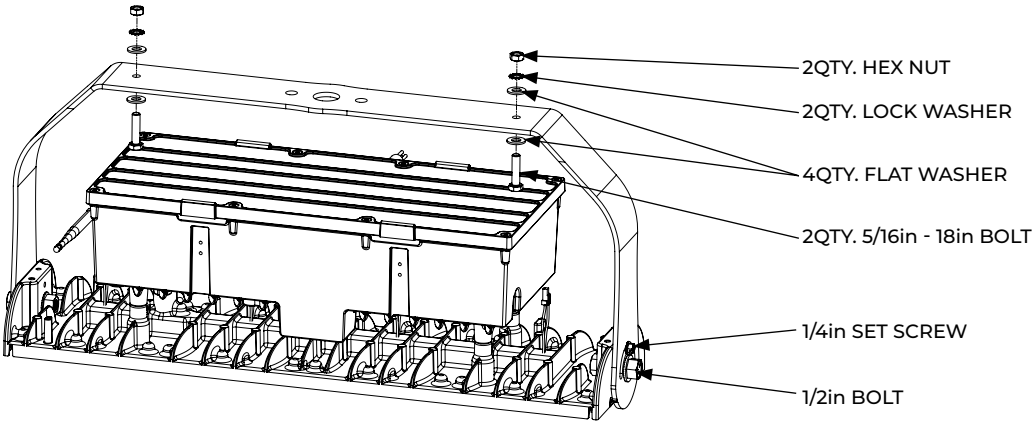
ITEM NO.	DESCRIPTION	WEIGHT (LBS)
WRG3	Wire Guard for Model **03** = 3 Light Squares	1.08
WRG4	Wire Guard for Model **04** = 4 Light Squares	1.44
WRG6	Wire Guard for Model **06** = 6 Light Squares	2.16
WRG7	Wire Guard for Model **07** = 7 Light Squares	2.52
WRG8	Wire Guard for Model **08** = 8 Light Squares	2.88

[1]image shown in **EPH-VN-WRG4** configuration

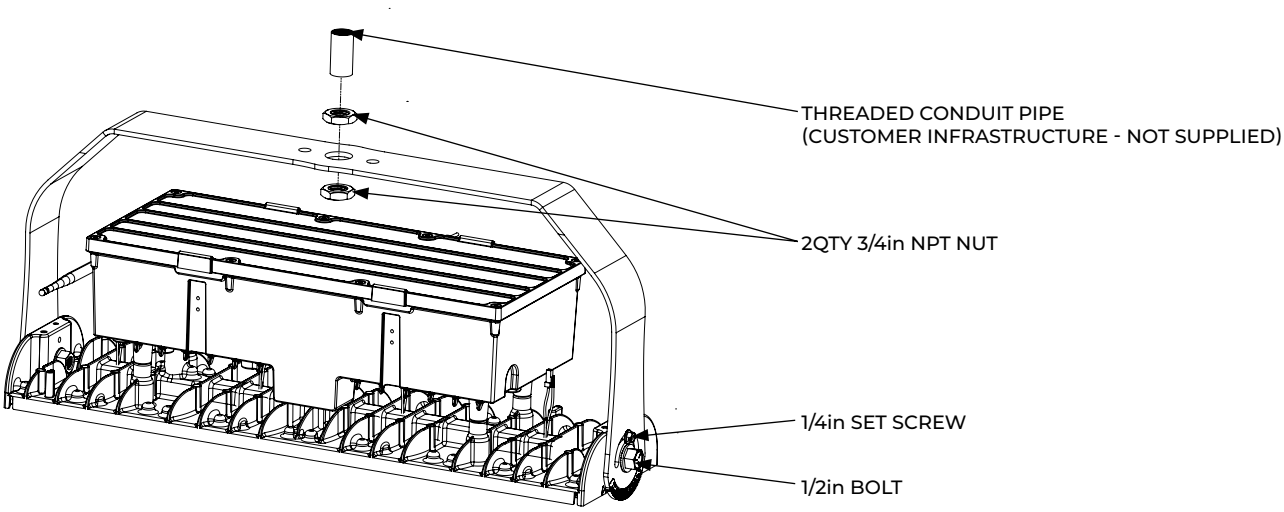
Fastening Hardware Accessory Part Details:



Center Bolt Mount Fastening Hardware (HWCB)



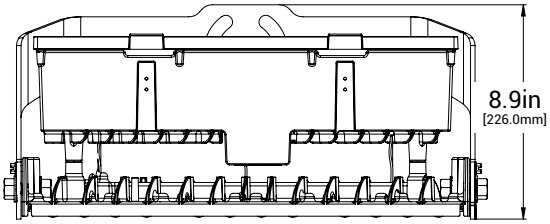
Multi-point Mount Fastening Hardware (HWMM)

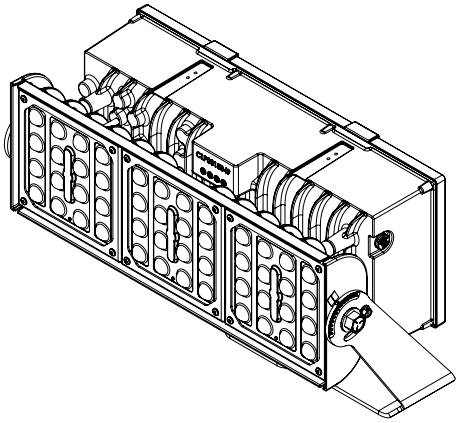


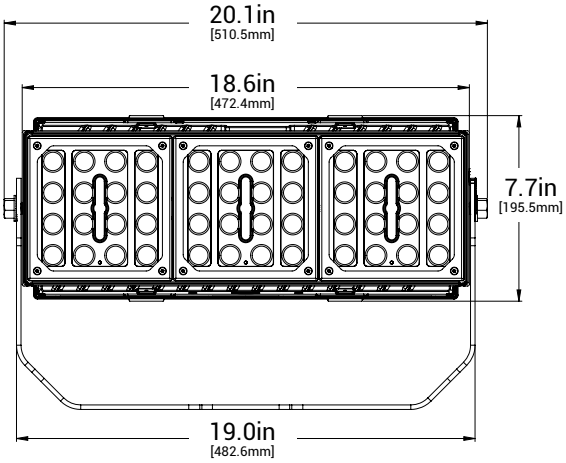
Conduit Nuts Fastening Hardware (HWCN)

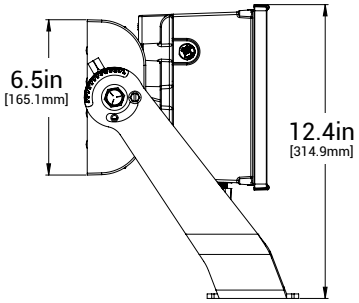
Dimensional & Mounting Details

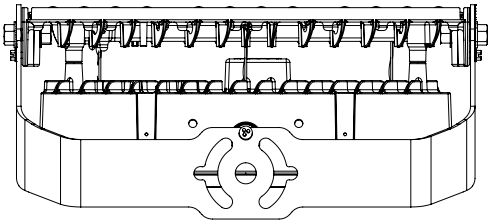
PRODUCT FAMILY: LUMAVISION
MODEL: 3
MOUNT TYPE: YOKE (YOKE MOUNT)

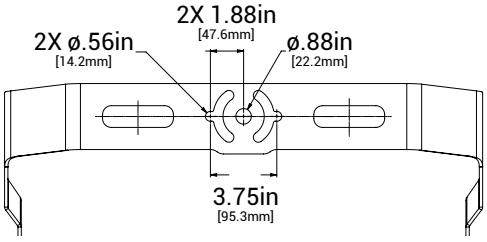






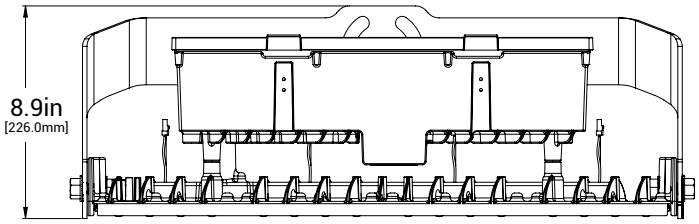


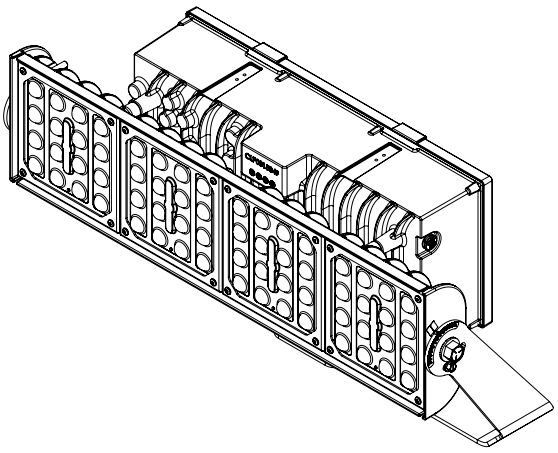


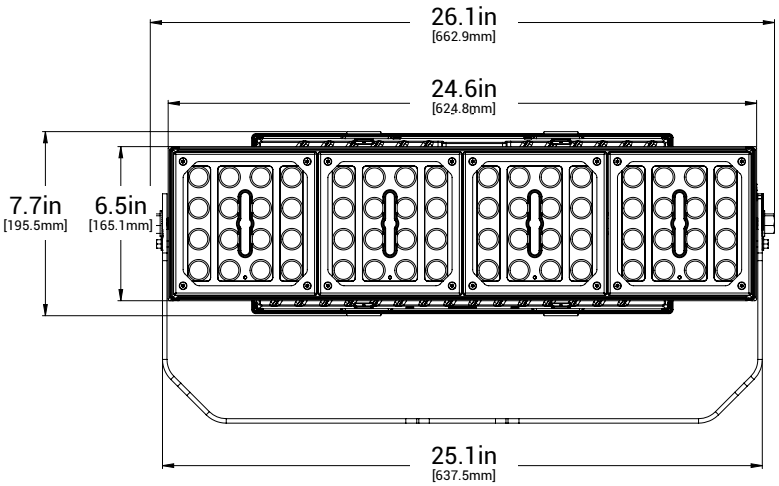


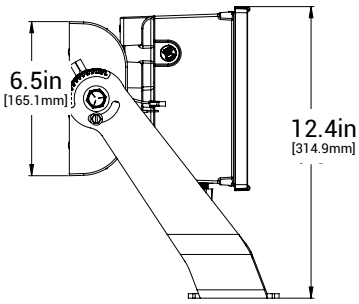
Dimensional & Mounting Details

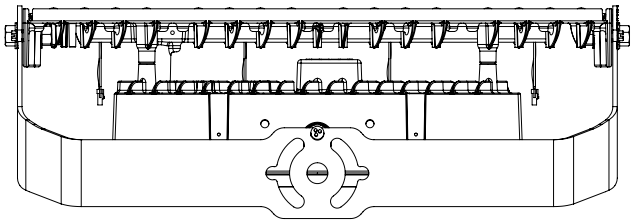
PRODUCT FAMILY: LUMAVISION
MODEL: 4
MOUNT TYPE: YOKE (YOKE MOUNT)

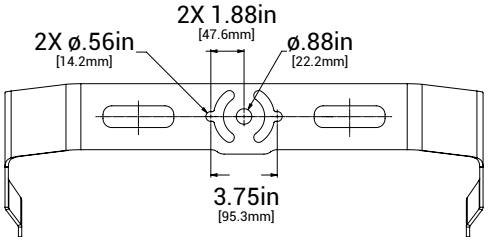






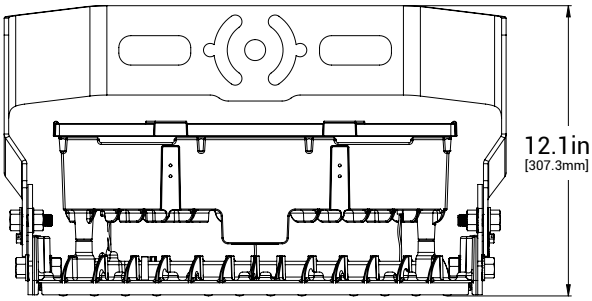


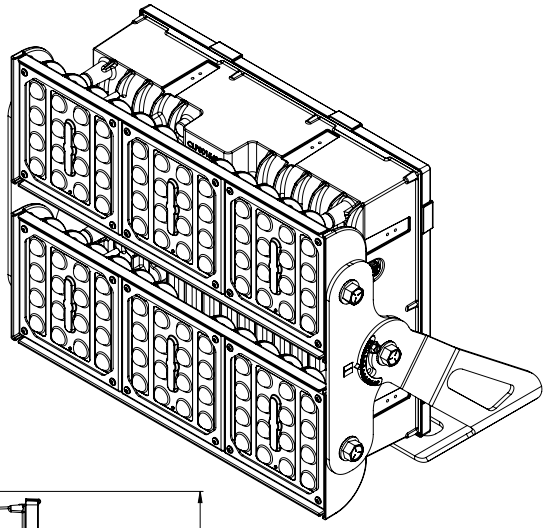


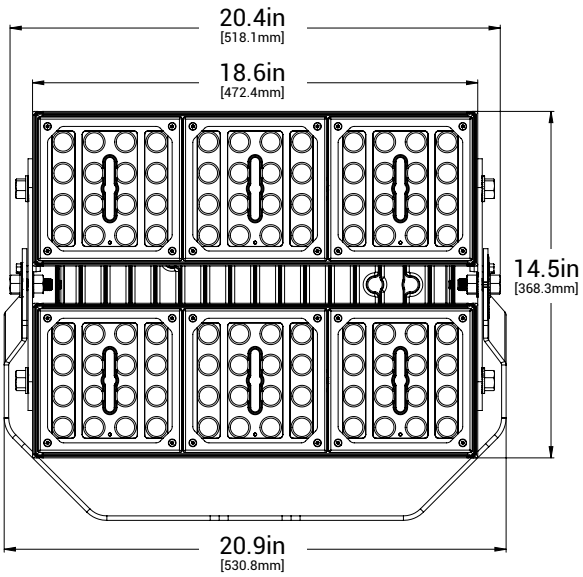


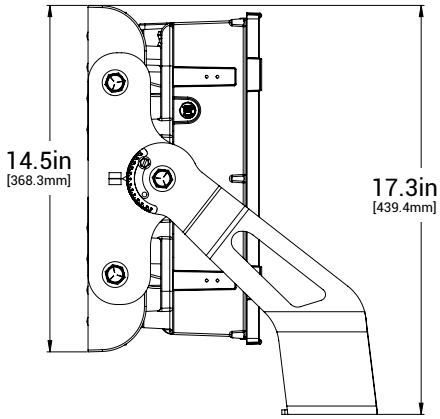
Dimensional & Mounting Details

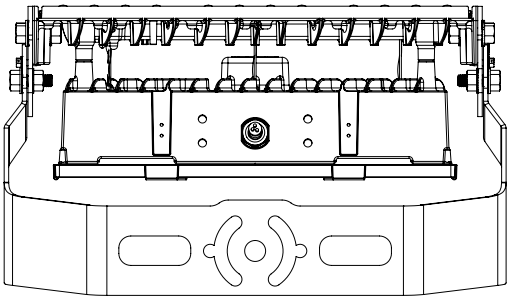
PRODUCT FAMILY: LUMAVISION
MODEL: 6
MOUNT TYPE: YOKE (YOKE MOUNT)

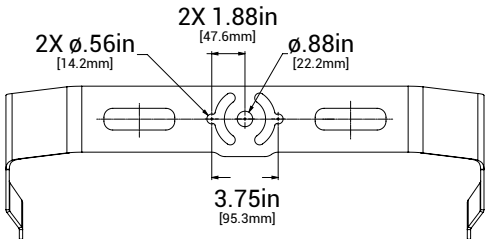






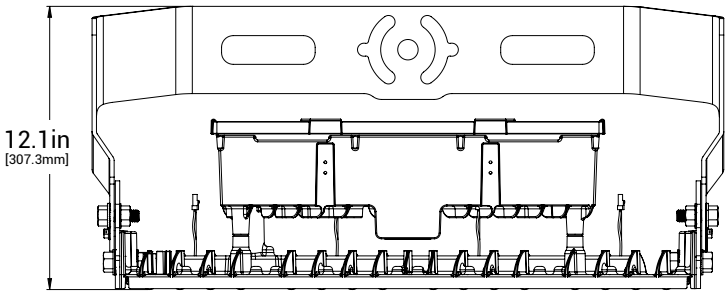


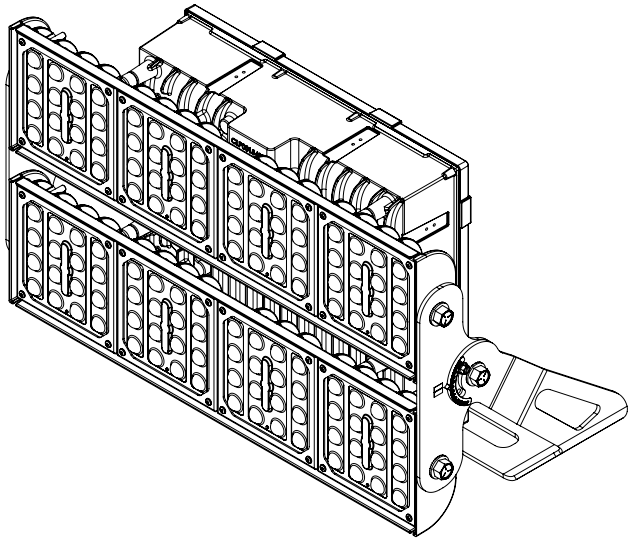


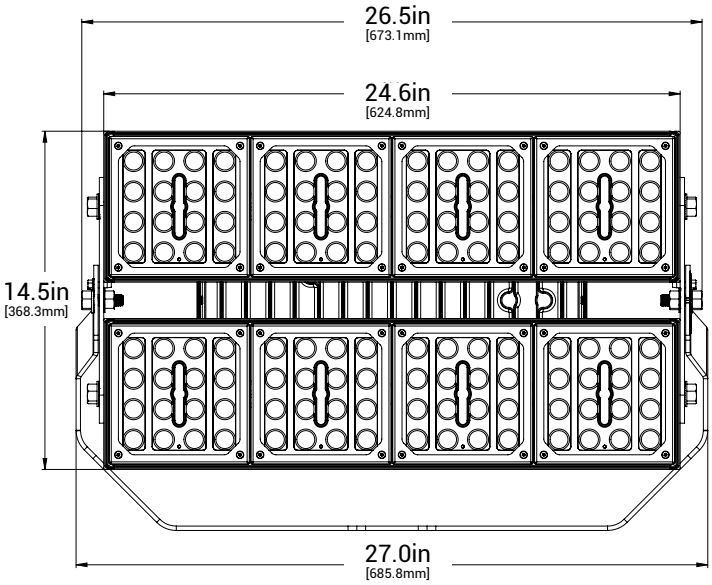


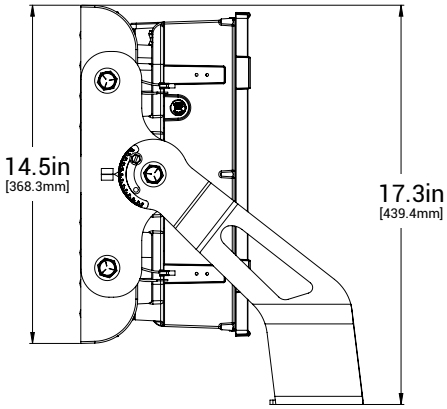
Dimensional & Mounting Details

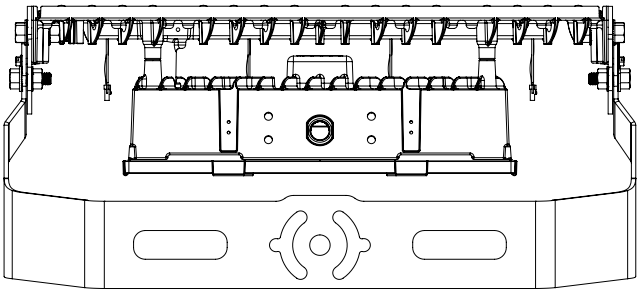
PRODUCT FAMILY: LUMAVISION
MODEL: 7 & 8
MOUNT TYPE: YOKE (YOKE MOUNT)

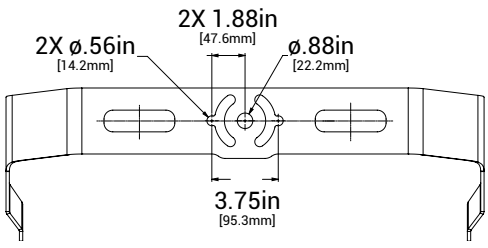






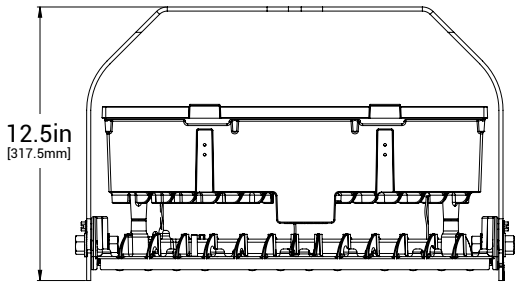


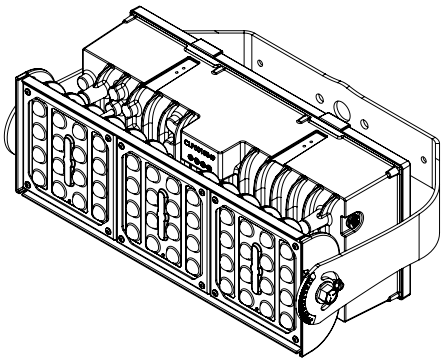


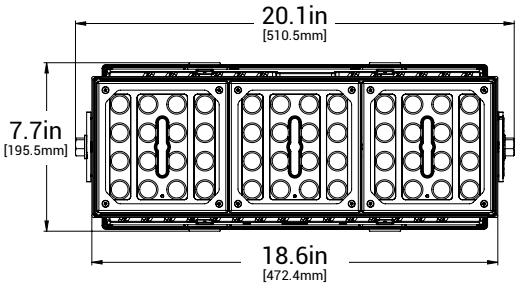


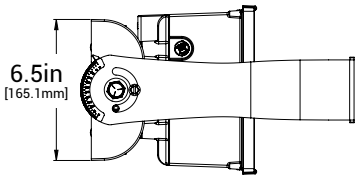
Dimensional & Mounting Details

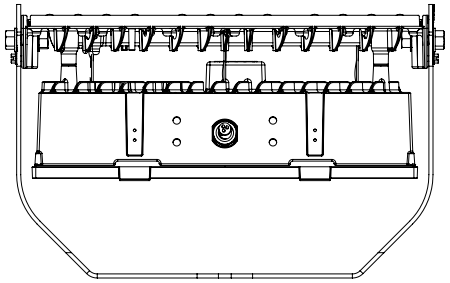
PRODUCT FAMILY: LUMAVISION
MODEL: 3
MOUNT TYPE: PNDT (PENDANT MOUNT)

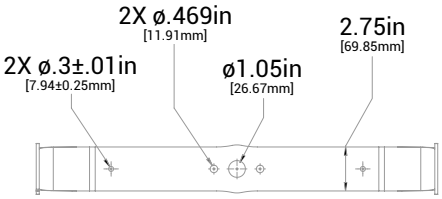






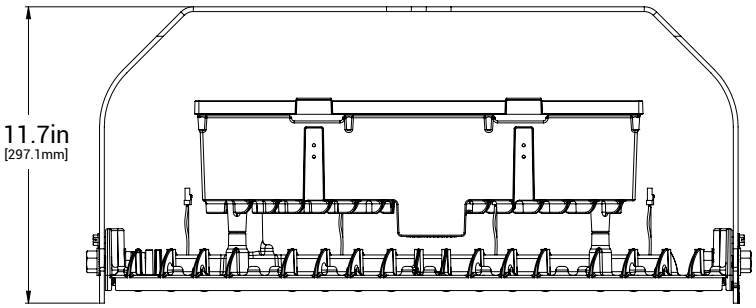


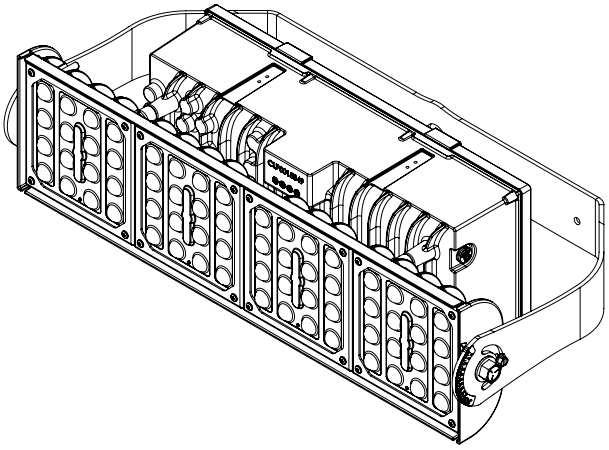


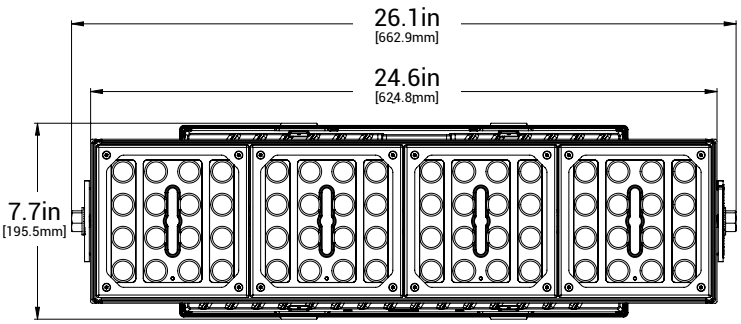


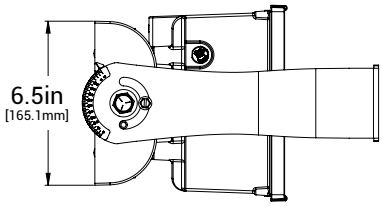
Dimensional & Mounting Details

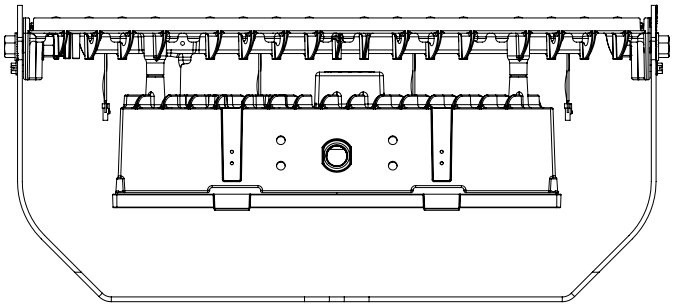
PRODUCT FAMILY: LUMAVISION
MODEL: 4
MOUNT TYPE: PNDT (PENDANT MOUNT)

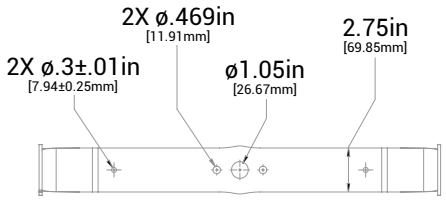






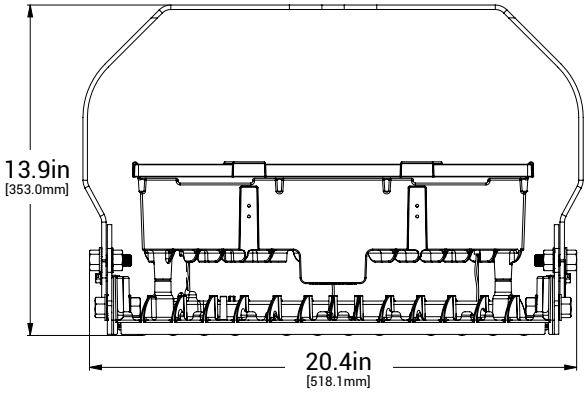


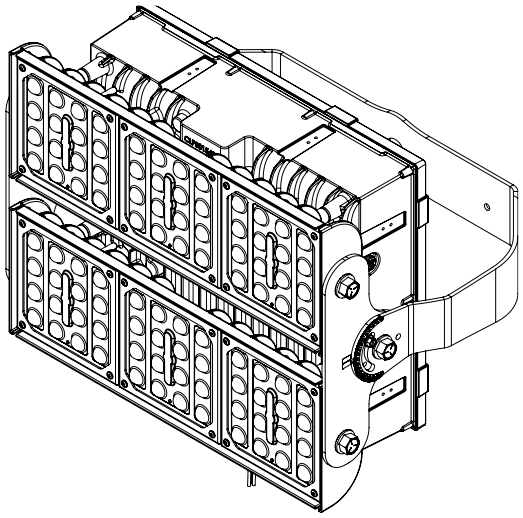


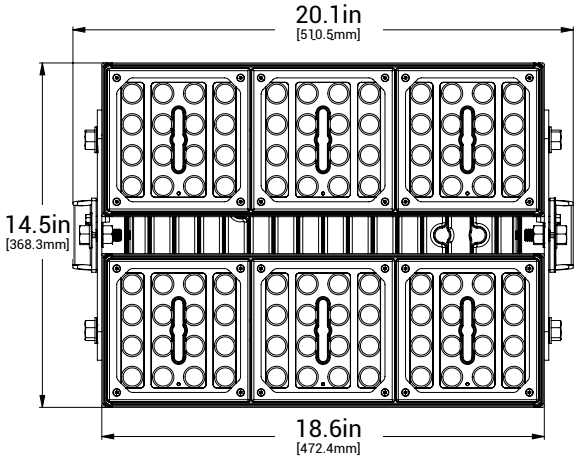


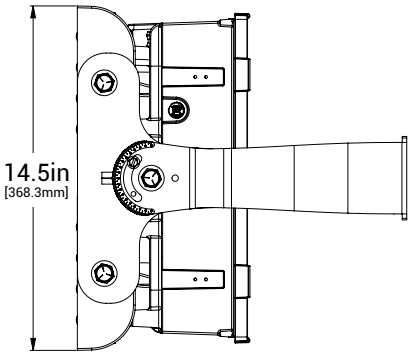
Dimensional & Mounting Details

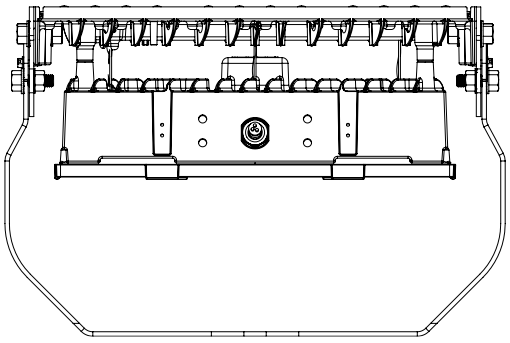
PRODUCT FAMILY: LUMAVISION
MODEL: 6
MOUNT TYPE: PNDT (PENDANT MOUNT)

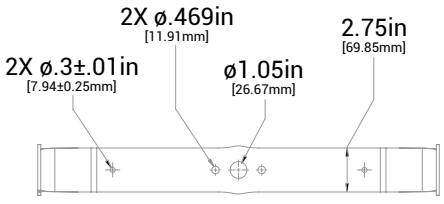






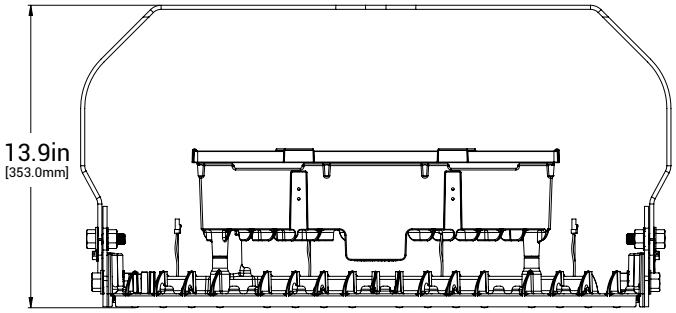


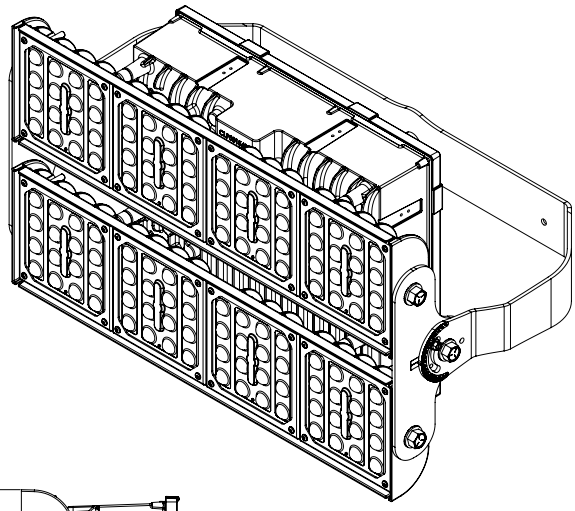


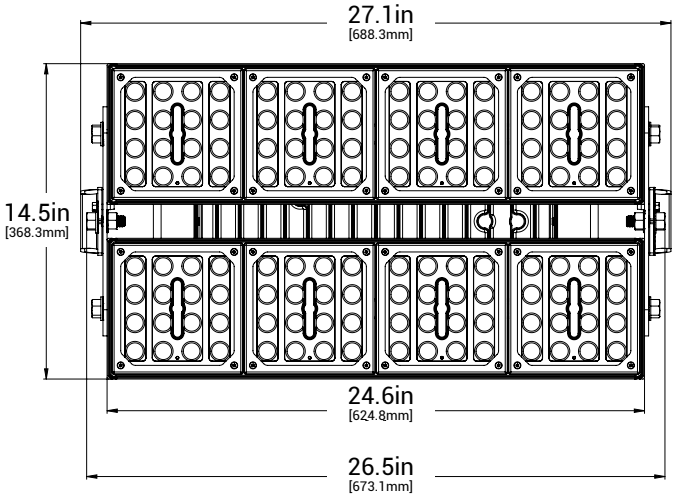


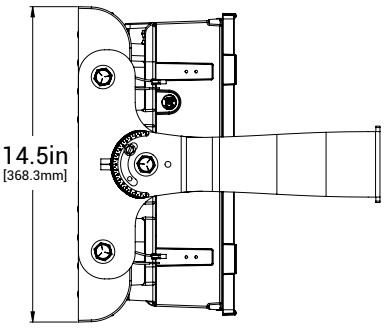
Dimensional & Mounting Details

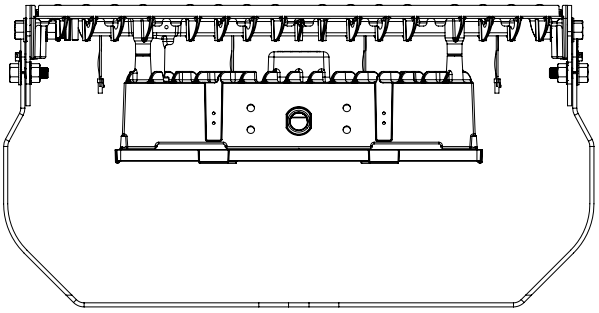
PRODUCT FAMILY: LUMAVISION
MODEL: 7 & 8
MOUNT TYPE: PNDT (PENDANT MOUNT)

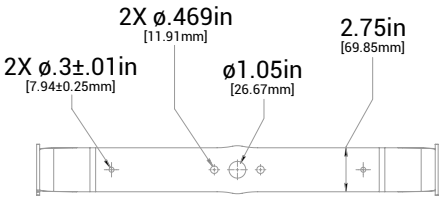








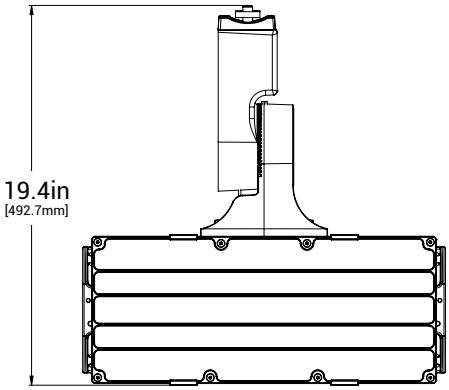


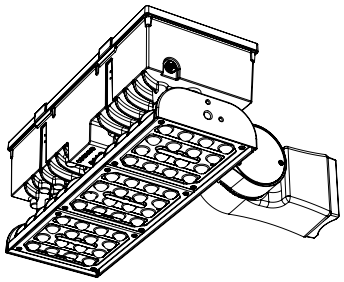


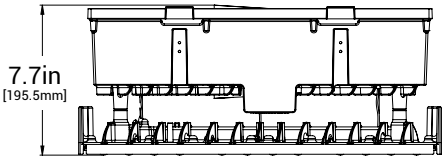
Dimensional & Mounting Details

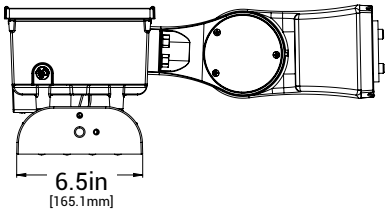
PRODUCT FAMILY: LUMAVISION
MODEL: 3
MOUNT TYPE:

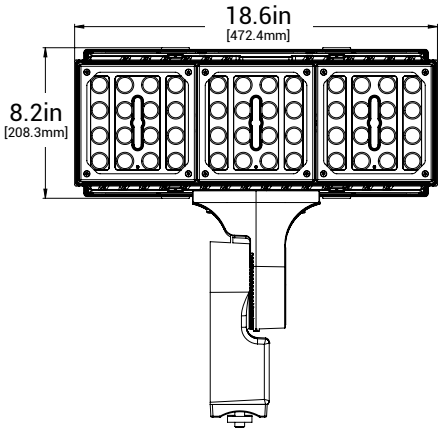
- **AAJL** (ADJUSTABLE ARM DIRECT POLE MOUNT)
- **AAJC** (ADJUSTABLE ARM DIRECT POLE MOUNT [CORD THROUGH HOUSING])

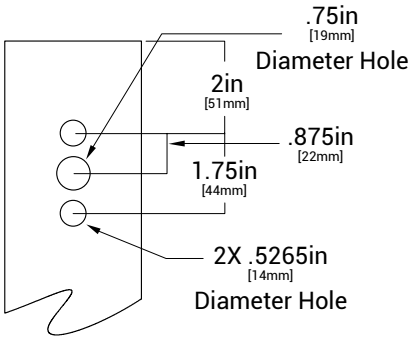












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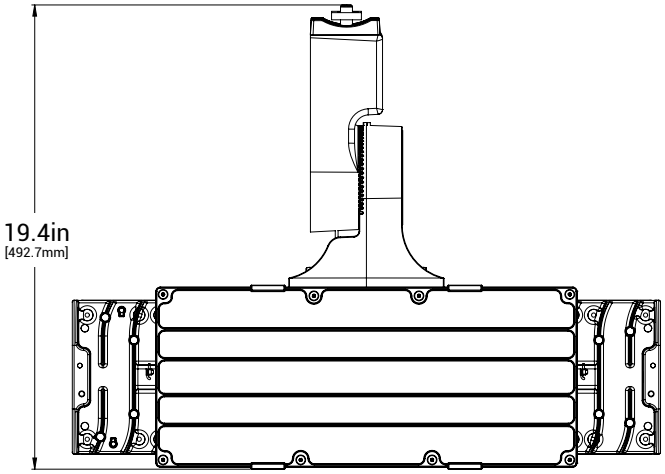
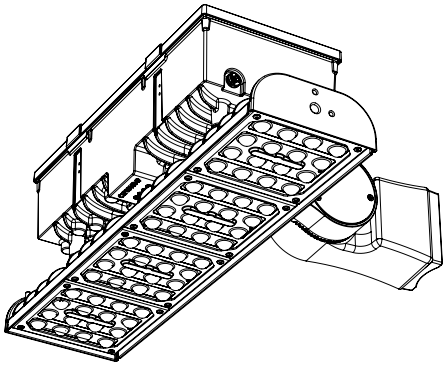
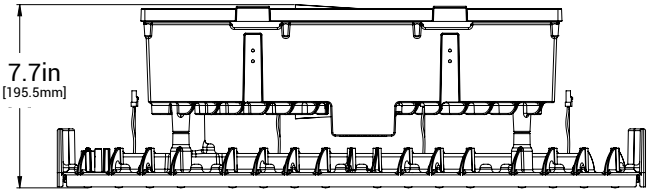
Dimensional & Mounting Details

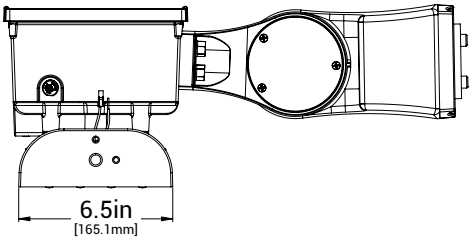
PRODUCT FAMILY: LUMAVISION
MODEL: 4
MOUNT TYPE:

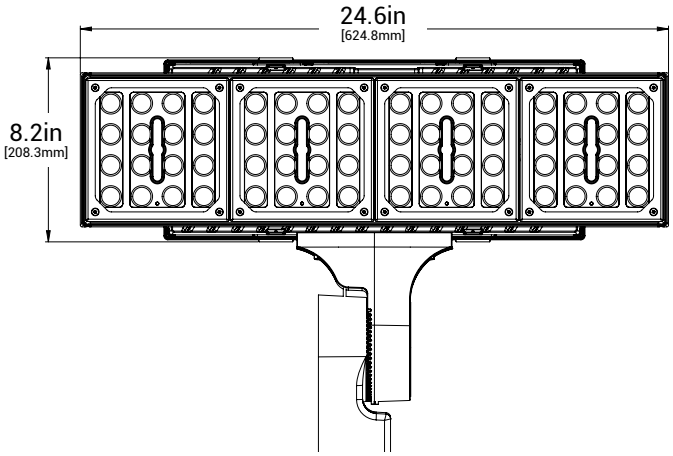
- **AAJL** (ADJUSTABLE ARM DIRECT POLE MOUNT)
- **AAJC** (ADJUSTABLE ARM DIRECT POLE MOUNT [CORD THROUGH HOUSING])

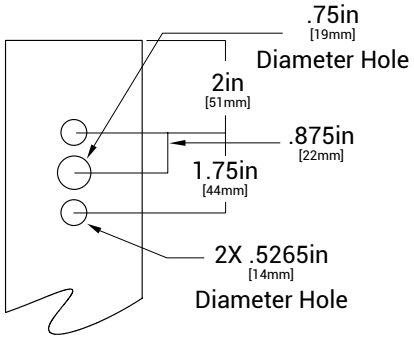












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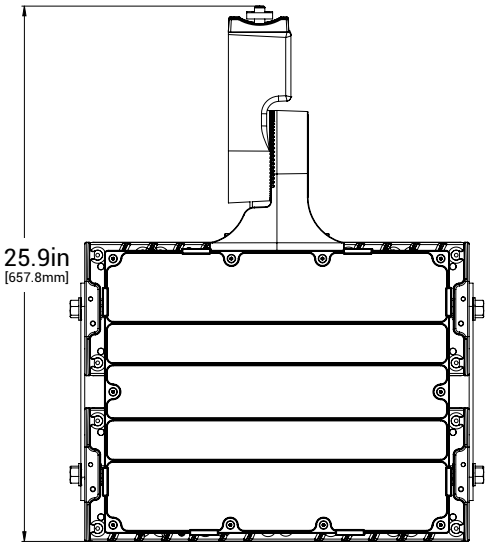
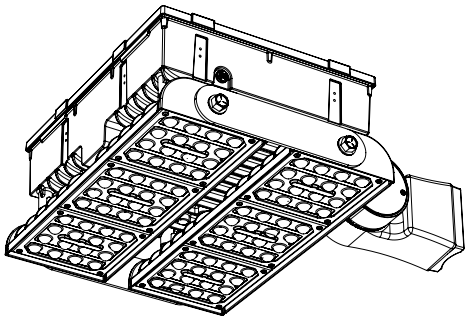
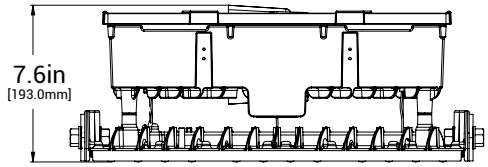
Dimensional & Mounting Details

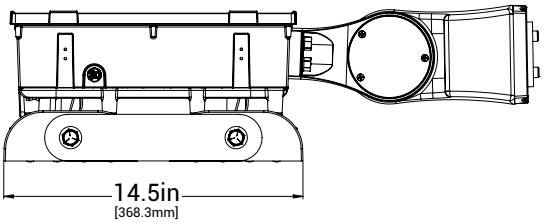
PRODUCT FAMILY: LUMAVISION
MODEL: 6
MOUNT TYPE:

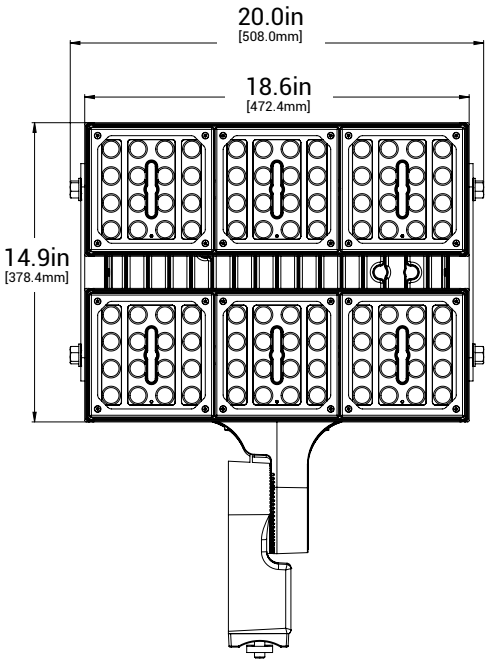
- **AAJL** (ADJUSTABLE ARM DIRECT POLE MOUNT)
- **AAJC** (ADJUSTABLE ARM DIRECT POLE MOUNT [CORD THROUGH HOUSING])

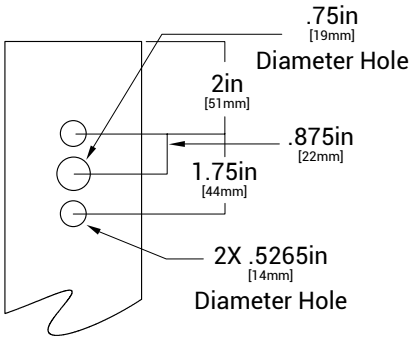












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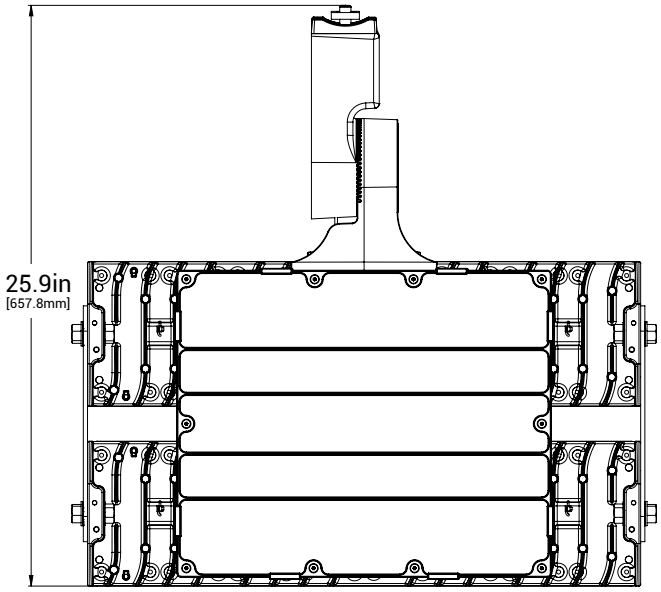
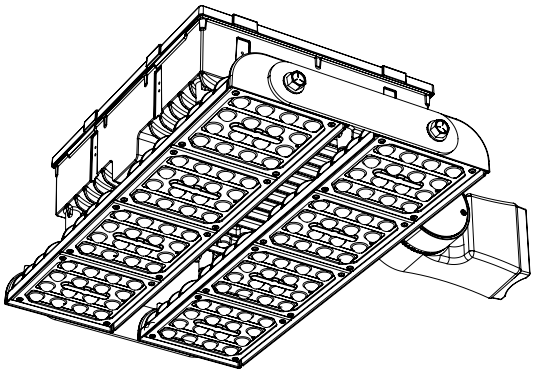
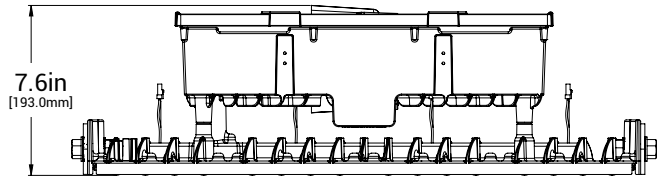
Dimensional & Mounting Details

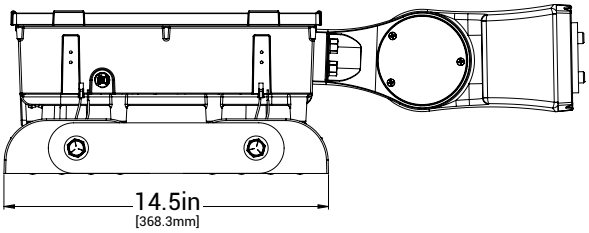
PRODUCT FAMILY: LUMAVISION
MODEL: 7 & 8
MOUNT TYPE:

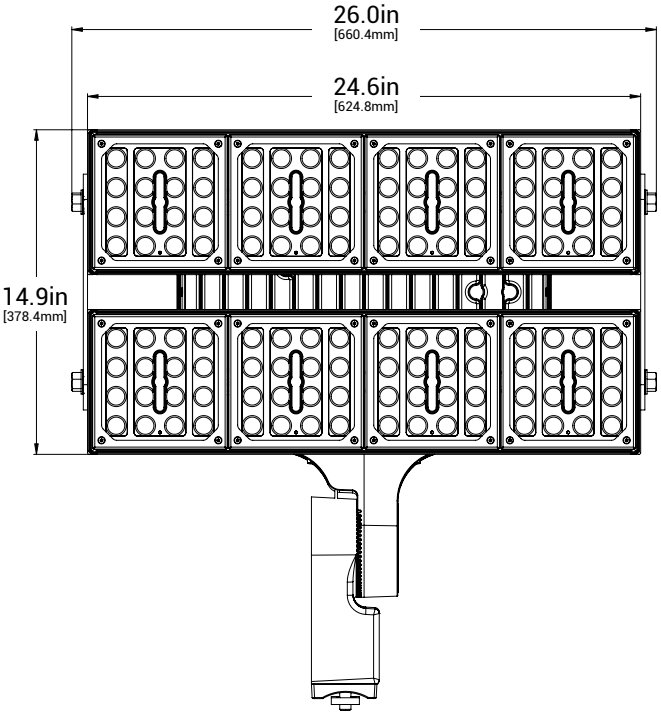
- **AAJL** (ADJUSTABLE ARM DIRECT POLE MOUNT)
- **AAJC** (ADJUSTABLE ARM DIRECT POLE MOUNT [CORD THROUGH HOUSING])

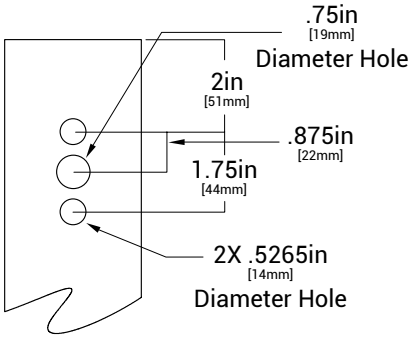








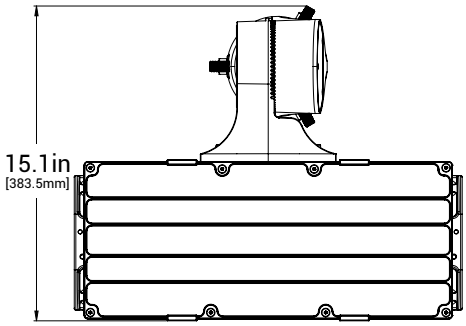


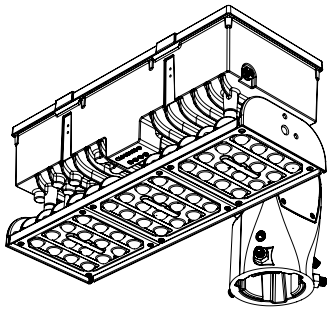


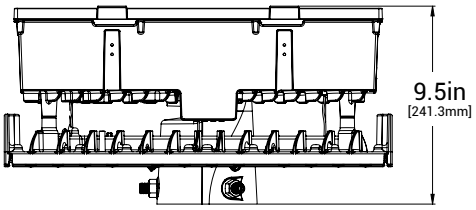
WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to Pole Drill Patterns Document for additional support information.

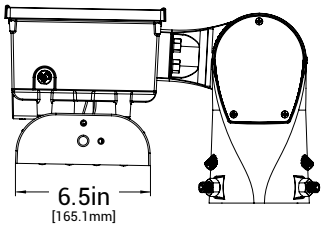
Dimensional & Mounting Details

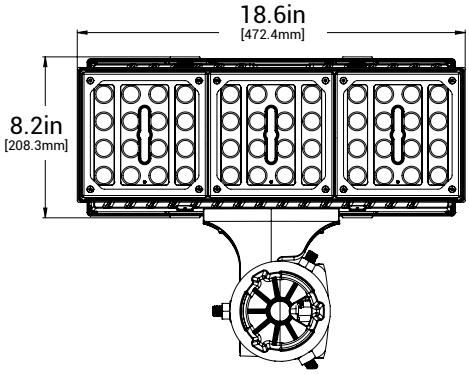
PRODUCT FAMILY: LUMAVISION
MODEL: 3
MOUNT TYPE: SLIPFITTER

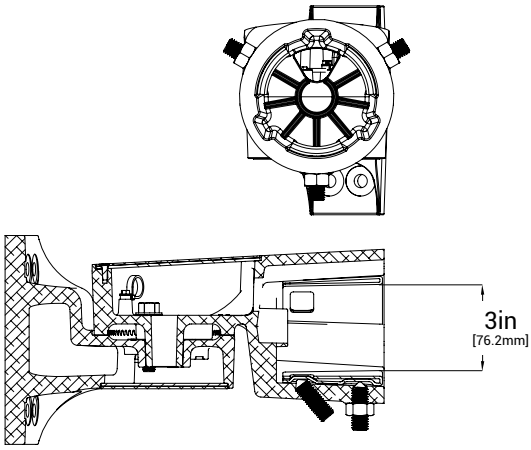








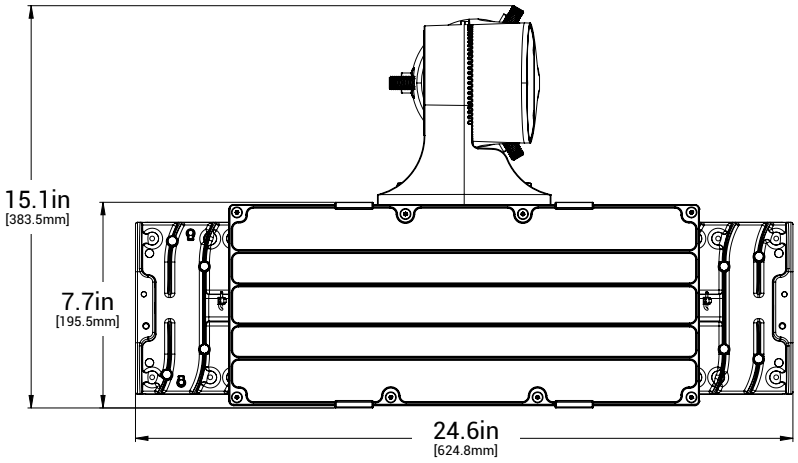


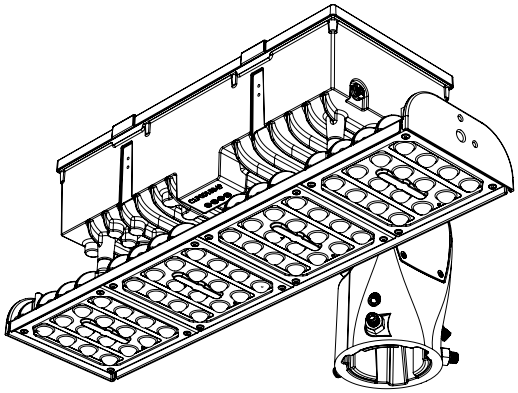


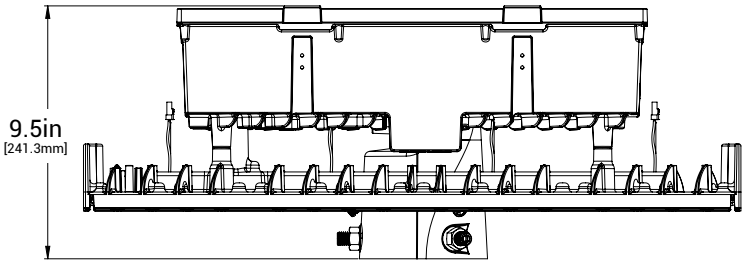
Note: The slip fitter is only intended to mount on a vertical orientation with a suitable 3 inch diameter pole or accessory tenon topper. For 2.375 inch tenon sizes, a separate spacer accessory is needed that isn't included with the standard unit.

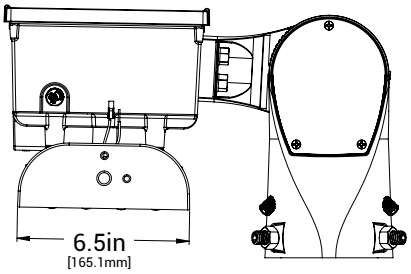
Dimensional & Mounting Details

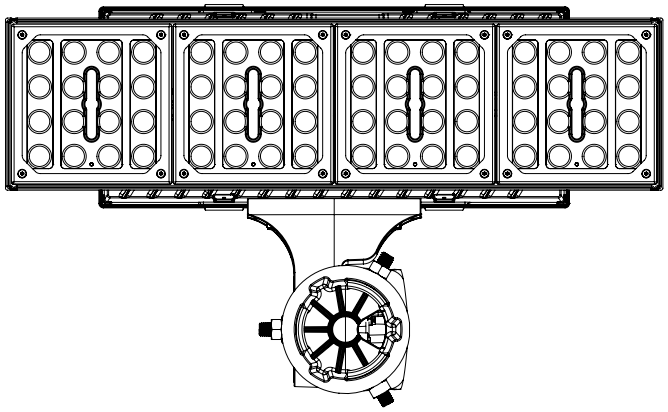
PRODUCT FAMILY: LUMAVISION
MODEL: 4
MOUNT TYPE: SLIPFITTER

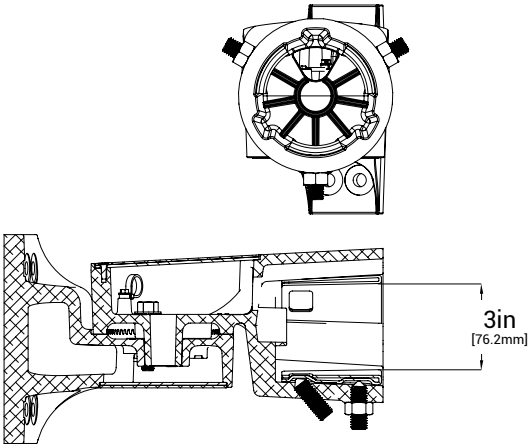








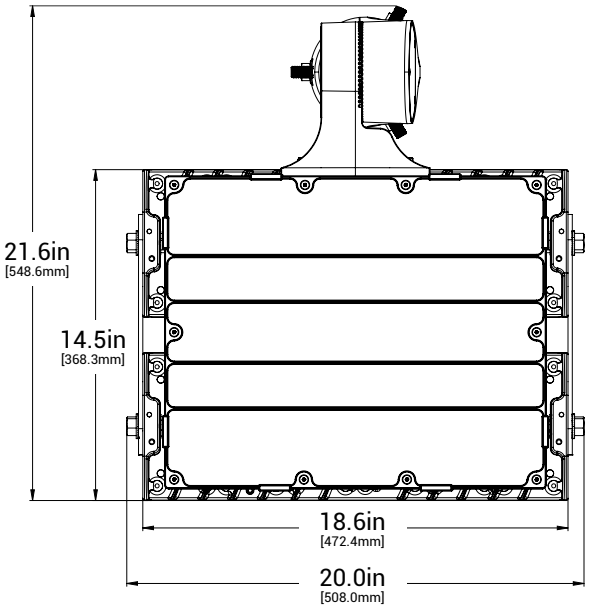


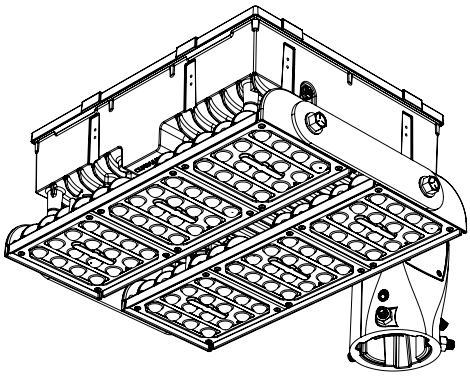


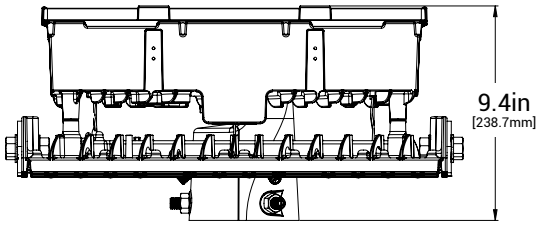
Note: The slip fitter is only intended to mount on a vertical orientation with a suitable 3 inch diameter pole or accessory tenon topper. For 2.375 inch tenon sizes, a separate spacer accessory is needed that isn't included with the standard unit.

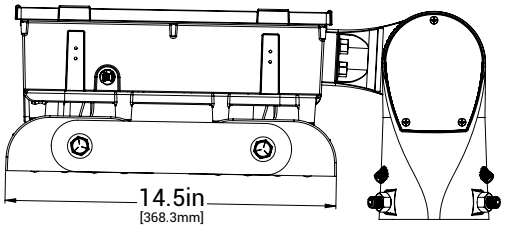
Dimensional & Mounting Details

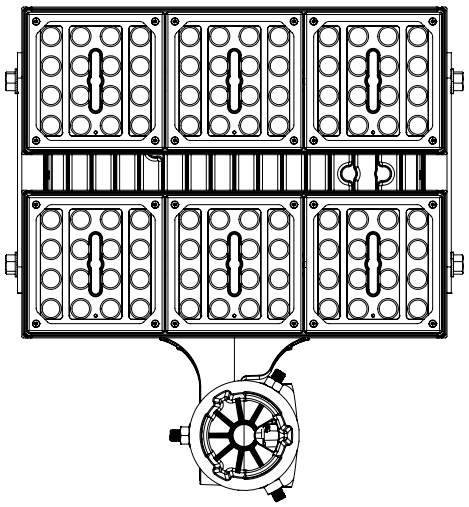
PRODUCT FAMILY: LUMAVISION
MODEL: 6
MOUNT TYPE: SLIPFITTER

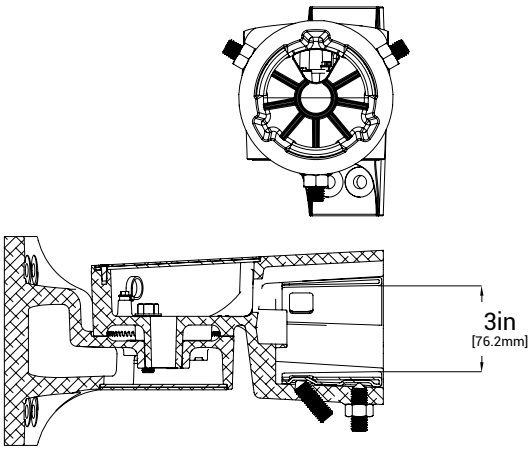








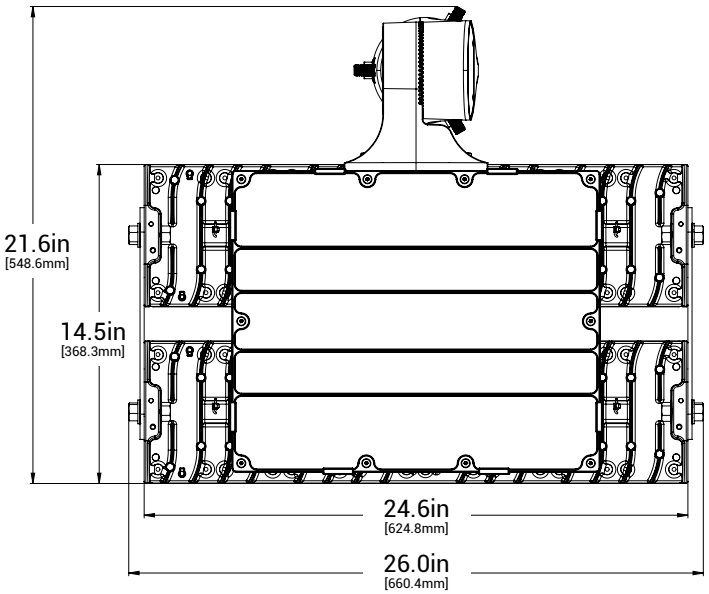


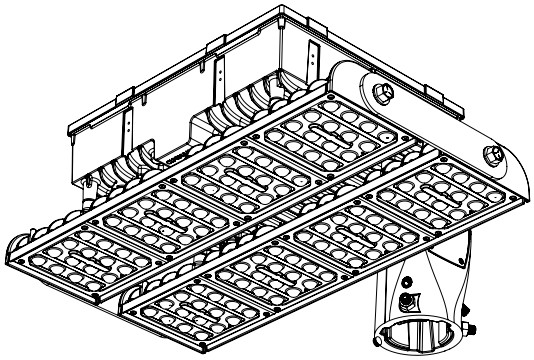


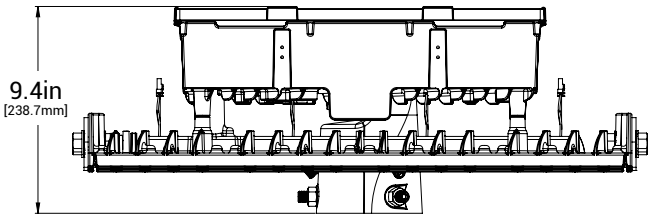
Note: The slip fitter is only intended to mount on a vertical orientation with a suitable 3 inch diameter pole or accessory tenon topper. For 2.375 inch tenon sizes, a separate spacer accessory is needed that isn't included with the standard unit.

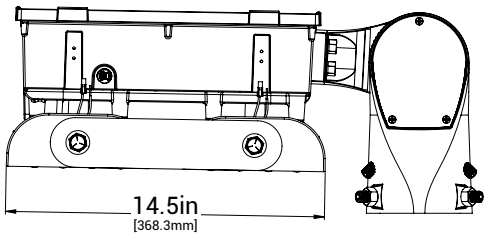
Dimensional & Mounting Details

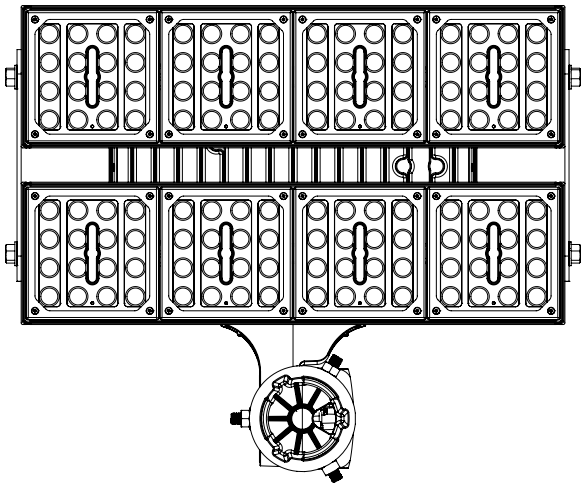
PRODUCT FAMILY: LUMAVISION
MODEL: 7 & 8
MOUNT TYPE: SLIPFITTER

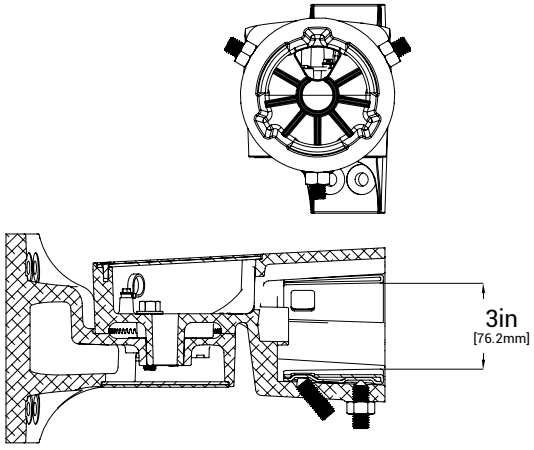










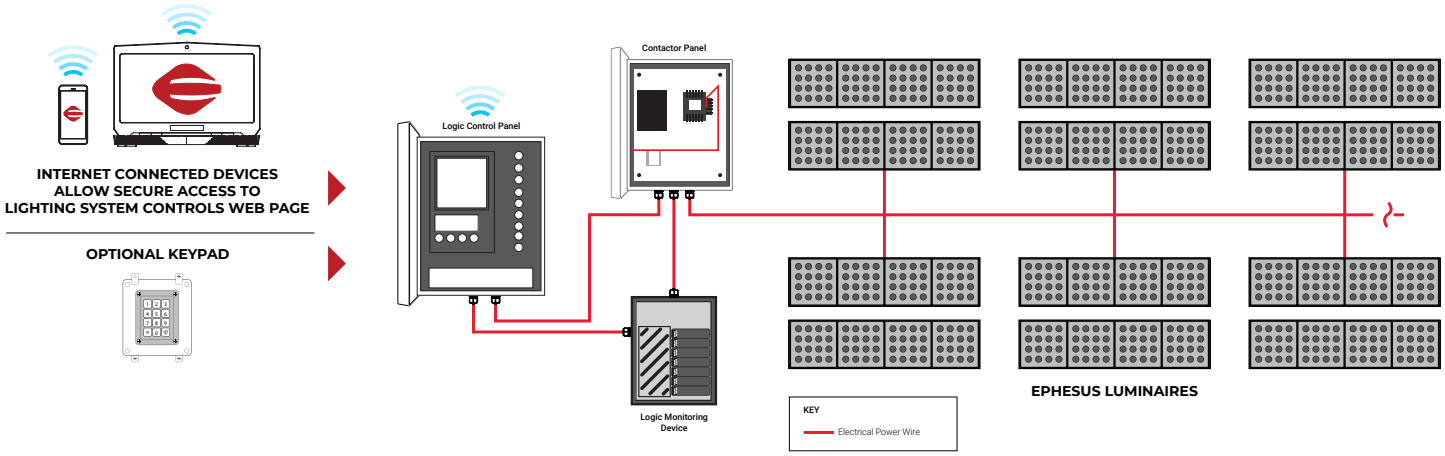


Note: The slip fitter is only intended to mount on a verticalorientation with a suitable 3 inch diameter pole or accessory tenon topper. For 2.375 inch tenon sizes, a separate spacer accessory is needed that isn't included with the standard unit.

Example Topology: Recreation Management Controls

Controls Protocol: Contactor Controls

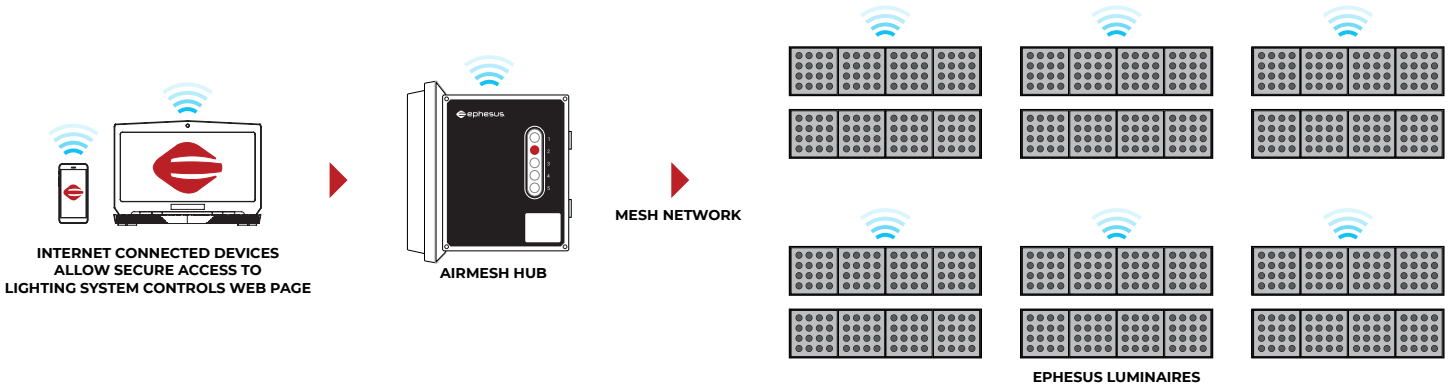
Example system topology showing the LUMA**VISION** System in a Wired Contactor Controls Installation.
Note: Laptop and mobile device not included. A cellular network connection requires a cellular carrier network plan.



Example Topology: Wireless Controls

Controls Protocol: AirMesh

Example system topology showing the LUMA**VISION** System in a Wireless AirMesh Control Installation.
Note: Laptop and mobile device not included. A cellular network connection requires a cellular carrier network plan.



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