

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

High Performance 2.5" Aperture (HPX) Recessed

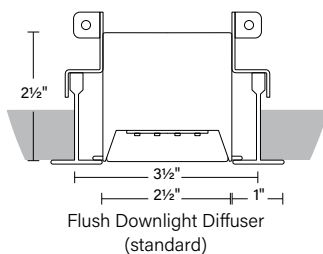


The High Performance 2.5" Aperture (HPX) is a patented LED linear luminaire with a square micro profile and internal driver design. This Line-of-Light luminaire delivers excellent performance and is equipped with a unique LED configuration for superior illumination. HPX can be tailored from 2' to 12' sections in 1' increments and is available in Pendant, Surface Mount, and Recessed.

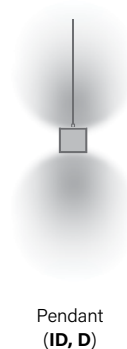
This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Red List Declared** status.

CROSS SECTIONS

Recessed



ALSO AVAILABLE IN



LUMEN OUTPUT PACKAGES



Standard



Boosted Standard



High



Very High

PERFORMANCE

Up to
2057
Lumens per Foot

Up to
125
Lumens per Watt



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Ordering Guide Example: HP - X - R - D - 36' - S - 835 - F - 120 - SC - FC-10% - C1 - FE - SW - LGD18W - OBD - CP

BODY TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Run Length of Configuration
HP - High Performance	X - 2.5" Square	R - Recessed	D - Direct	Minimum 2' section length. Increments of 1'; 12' maximum section length

OUTPUT AND LED TYPE

**MECHANICAL/
OPTICAL OPTIONS**

ELECTRICAL OPTIONS

Downlight Output	CCT and CRI	Downlight Option	Voltage	Circuiting ¹
S - Standard B - Boosted Standard H - High V - Very High TL - Tailored: _____ lm/ft * * Specify lm/ft of outputs between Standard (S) and Very High (V). Consult factory for tailored lumen output outside of this range.	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 8TW - 80 CRI min, Tunable White 9TW - 90 CRI min, Tunable White	F - Flush	120 - 120 Voltage 277 - 277 Voltage 347 - 347 Voltage (OTi only)	SC - Single Circuit* One single circuit in a run MC - Multi Circuit* More than one switch leg or zone (not 'DC' independent control of up and down separately for an I/D style fixture). Factory shop drawings required *Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

MOUNTING OPTIONS

Driver Selection	Ceiling Hardware Type
0-10V Driver Options FC-10% - 0-10V 10% (standard) FC-1% - 0-10V 1% OTi-10% - EldoLED OTi, 0-10V 10% ² OTi-1% - EldoLED OTi, 0-10V 1% ² ELD-10V - EldoLED SOLOdrive, 0-10V 0.1% 10V-TW-10% - EldoLED OTi, 0-10V 10% (Tunable White) ² DALI Driver Options FC-DALI-1% - DALI 1% DXL-DALI-1% - EldoLED Dexal, 1% ELD-DALI-0% - EldoLED SOLOdrive, DALI 0.1% ELD-DALI-TW - EldoLED Dual Drive Light Shape, 1% (Tunable White)	C1 - 15/16" T-Bar C2 - 9/16" T-Bar C3 - Screw Slot SF - Spackle Flange
DMX Driver Options DMX - EldoLED POWERdrive, 0.1% 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	

OTHER OPTIONS

Endcap Style	Emergency Style (Optional) <small>See page 4 Backup Battery table</small>	Integrated Sensor (Optional) ⁵	Special Options (Optional)	
FE - Flat Endcap Finish SW - Signal White FB - Finelite Black SA - Satin Aluminum #### - RAL Color Code ⁴	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 ⁴ GTD - Generator Transfer Device ALCR - Automatic Load Control Relay	OBO - Occupancy OBD - Daylight W601 - Wattstopper Sensor ⁶ OBE - Enlighted Sensor ⁷ REE - Remote Enlighted ⁸ CLM-99 - Encelium RF SLM-99 - Encelium Sensor	AOCC-W - Lutron Athena Sensor ⁹ <i>(Device Color White)</i> AOCC-B - Lutron Athena Sensor ⁹ <i>(Device Color Black)</i> ARF-W - Lutron Athena RF ⁹ <i>(Device Color White)</i> ARF-B - Lutron Athena RF ⁹ <i>(Device Color Black)</i> VOCC - Lutron Vive Sensor ¹⁰ VRF - Lutron Vive RF ¹⁰	CP - Chicago Plenum RLA - Red List Approved RLD - Declare

¹ Contact factory for switching options

² Add DTO to gain "Dim to Off" functionality (FC-10% - DTO, FC-1% - DTO)

³ 20 Business day lead time for color

⁴ BSL310LP work with HPX Direct 8ft without sensor only

⁵ Minimum fixture length with a sensor is 4ft.

⁶ 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.

⁷ Enlighted components installed by Finelite; Provided by other

⁸ Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor

⁹ 0-10V Drivers - **AOCC** up to 10 drivers may be connected; **ARF** up to 40 driver may be connected.

DALI Drivers - **AOCC** & **ARF** up to 4 drivers can be connected

¹⁰ Lutron Vive Integrated Sensors require a DALI driver.

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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)
ODXL-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

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SPECIFICATIONS

BODY TYPE

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

LENGTHS: Any length, 2' minimum section length. Increments of 1'. 12' maximum section length.

OUTPUT AND LED TYPE

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. 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 (F) frost white snap-in diffuser, standard; 73% transmissive, 99% diffusion

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

ELECTRICAL OPTIONS

STATIC WHITE FEED: 18-gauge/5-conductor single-circuit feed wire, standard. 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 fixture current exceeds 5 amps.

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%. 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 STATIC DRIVER OPTIONS:

LUT-ES - 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/277V.

- **Power factor** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100 - 1%
- **Expected driver lifetime:** 100,000 hours

LUTRON TUNABLE WHITE DRIVER OPTION:

LUT-TW - Lutron LD2 Dali-2 1%, Tunable White.

MOUNTING TYPE

HANGING HARDWARE:

- **Recessed Spackle Flange:** Drywal surfaces (walls or ceilings); 1/4" - 20 stud and nut (provided by others). Mounted with three equidistant suspension points.
- **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.

OTHER OPTIONS

ENDCAPS: Flat endcaps (FE) at each end of run add 1/16" to each end of luminaire.

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
HPX-R-D		
Min. Housing Length	8'*	8'*
EM Lumen Output	2024	1202
EM Section Illuminated	2'	2' or 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 7.

TUNABLE WHITE ELECTRICAL OPTIONS:

TW Driver Options

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

Bodine GTD and Legrand ALCR Min. Length	
Configuration	Min Length
Generator	4'
Generator + OCC	6'
Daylight	4'
Generator + Daylight	6'

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 4ft.

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SPECIFICATIONS

FINISHES: Finelite Signal White (**SW**) powder coat standard. Finelite Black (RAL 9005) with semi gloss fine texture (**FB**) and satin Aluminum (**SA**) are available. Optional Adders: 179 RAL colors. ¹

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, contact factory for more details. These fixtures are rated for Damp Location. IC Rated. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been

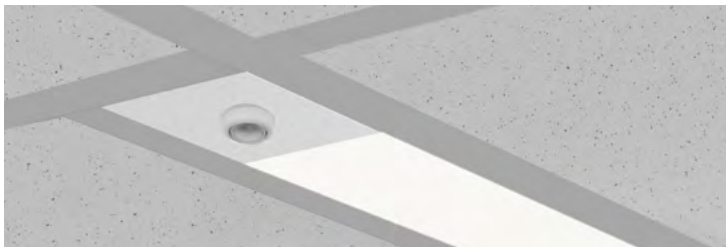
verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. High efficacy LED light source requirements. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Red List Declared) to your part number.

WEIGHT: 2.3 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.

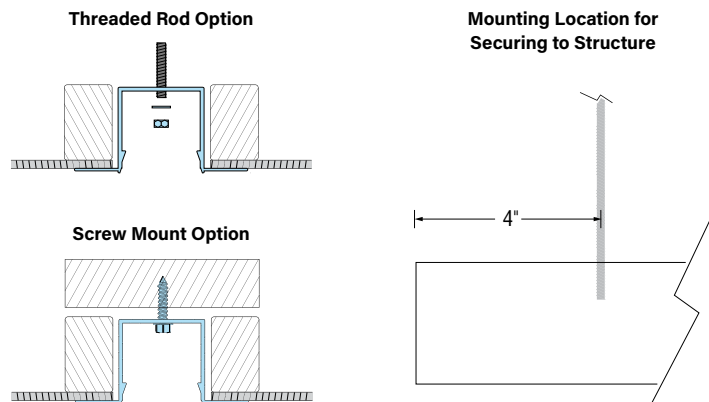
¹20 Business day lead time for color

INTEGRATED SENSOR



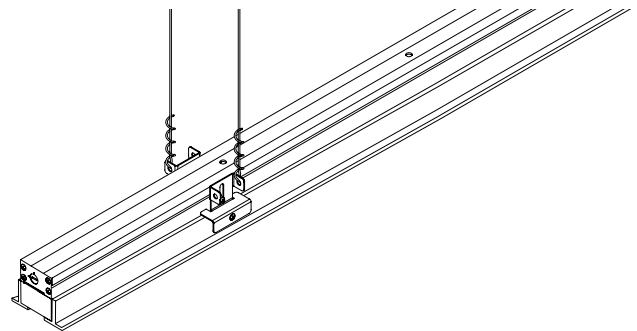
Integrated PIR (Passive Infrared) occupancy or daylight sensors available with Flush and Bottom Glow downlight diffusers. Refer to Occupancy Sensor and Daylight Sensor tech sheets for more info.

HARD CEILING MOUNTING OPTIONS



Two mounting options: threaded rod and screw mounting options. Mounting locations are located on each end of the luminaire. Mounting location is 4" away from each end of luminaire

T-BAR INSTALLATION

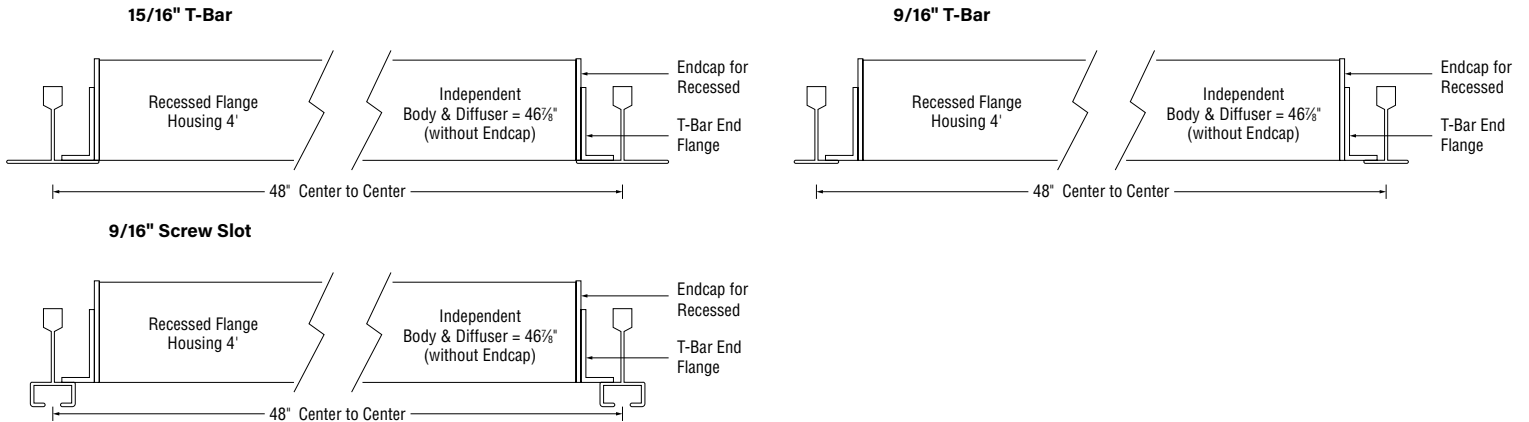


HPX-R for T-Bar installations comes standard with a splice plate at the end of the luminaire. Mounting brackets (supplied) secure the luminaire to T-Bar and provide support to structure location. All even foot length (2, 4, 6...) luminaire runs are reduced in length an appropriate amount to fit within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

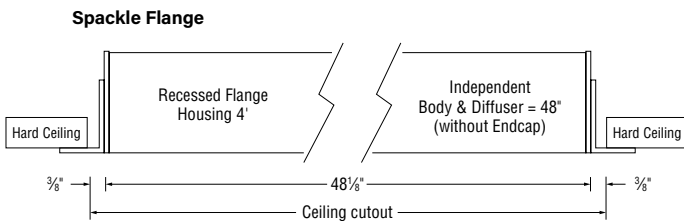
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GRID LENGTH DETAIL - 4' EXAMPLE

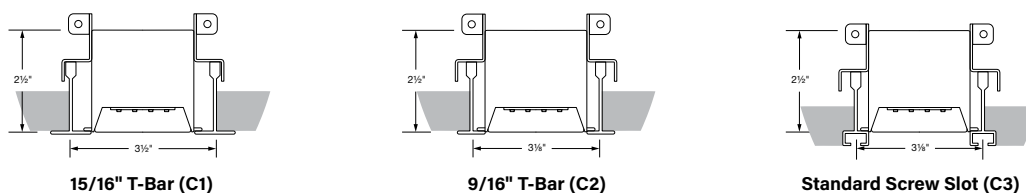


HARD CEILING LENGTH DETAIL - 4' EXAMPLE

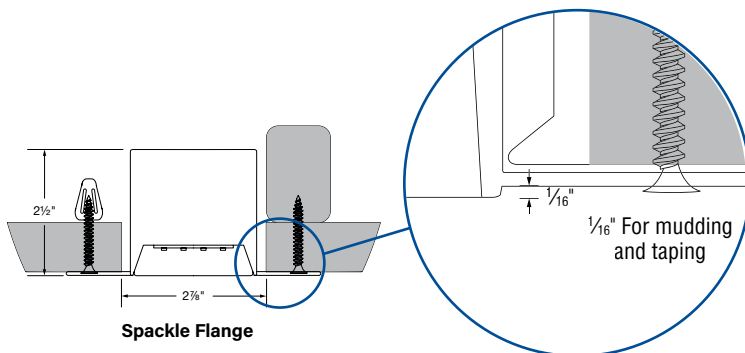


RECESSED MOUNTING TYPES T-BAR

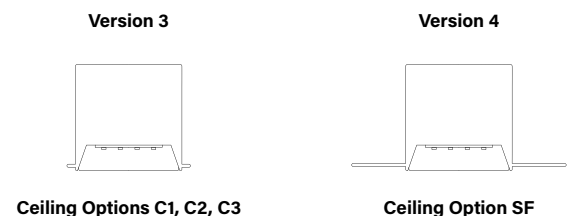
Rough-In Dimensions



RECESSED MOUNTING TYPES CUTOUT DIMENSIONS



HOUSING



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Recessed Photometry

4' Luminaire 3500k

HPX-R-D-V-835-F

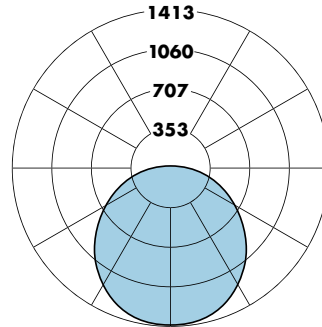
Efficacy: 124 lm/W

Total luminaire output: 4127 lumens (1032 lumens/ft)
33.2 watts (8.3 watts/ft)

Peak Candela Value: 1413 @ 0°

CRI: 80 / CCT: 3500K

ITL LM79 Report 93256



CANDLEPOWER SUMMARY

	0.0	22.5	45.0	67.5	90.0	Flux
0	1413	1413	1413	1413	1413	
5	1409	1407	1408	1408	1407	134
15	1363	1354	1360	1361	1358	383
25	1267	1253	1264	1264	1261	581
35	1127	1116	1126	1123	1119	702
45	951	945	950	946	944	731
55	746	743	747	743	741	665
65	520	521	523	522	522	517
75	292	295	298	299	300	315
85	89	88	91	91	91	100
90	0	0	0	0	0	

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: 3210 lm x 0.789 = 2533 lm

Total Light Output per Foot: 802 lm x 0.789 = 633 lm

watts/foot: 6.4 W/ft.

$$\text{Efficacy} = \frac{633 \frac{\text{lm}}{\text{ft}}}{6.4 \frac{\text{W}}{\text{ft}}} = 99 \text{ lm/W}$$

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire

S ¹	B ¹	H ¹	V ²
1689	2124	3210	4127

Light Output, 3500K, 80 CRI (Lumens Per Foot)

S ¹	B ¹	H ¹	V ²
422	531	802	1032

Power, 3500K, CRI (Watts Per Foot)

S ¹	B ¹	H ¹	V ²
3.2	4.1	6.4	8.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)

S ¹	B ¹	H ¹	V ²
130	129	126	124

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

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

¹ Based on 4' luminaire 3500K Very High Output (V) test - 120V.

² Based on ITL report: 93256

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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

Recessed Direct	Section Lengths										
	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.										
Integral Battery Backup (BSL310LP)							✓		✓		✓

EN/GEN sections available for all body lengths

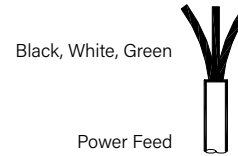
PHOTOMETRY

Apply a power adjustment factor to calculate wattage usage

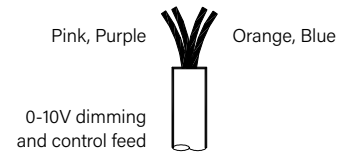
POWER	CONVERSION FACTOR
	1.1X

(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