Project		Catalog #		Type	A1/A1E
Prepared by		Notes		Date	

Proud

Regressed Flush
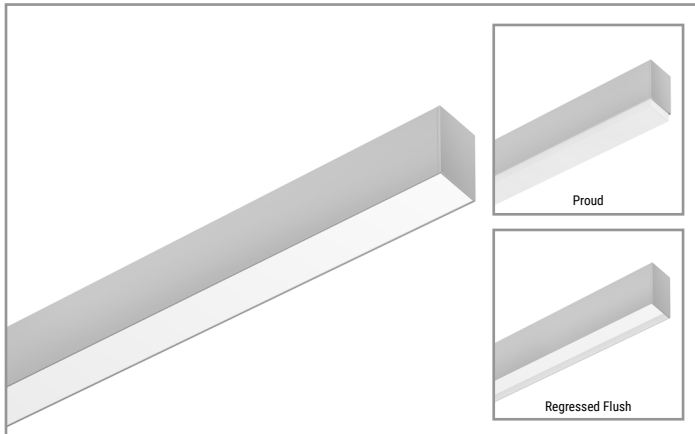
Neo-Ray

Define 4

4" LED
Wall Mount
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

🖰 Interactive Menu

Product Certification

Product Features

damp location

powered by
fifthlight

VividTune
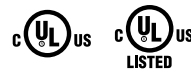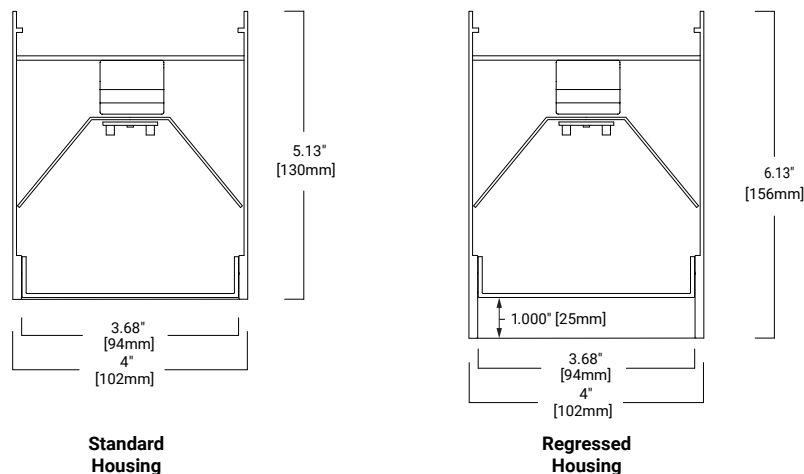
Top Product Features

- Wall Mount Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available

Dimensional and Mounting Details

5.13"
[130mm]

3.68"
[94mm]
4"
[102mm]

Standard Housing

6.13"
[156mm]

1.000" [25mm]

3.68"
[94mm]
4"
[102mm]

Regressed Housing

🖰 additional
product diagrams

COOPER
Lighting Solutions

Order Information

Icon Key: Ø Consult factory for availability

SAMPLE ORDER NUMBER: **S124DW-C795D835-4F0-1E-UDD-D-W**

Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Luminaire Length (Ft)	Max section length	Circuiting
S124DW=Define 4 Direct Wall **S124RDW**=Define 4 Regressed Direct Wall	**-C**=Core **-H**=High Performance **-V**=VividTune Ø	**350D**=350 Lms/ft (2.9W/ft) **575D**=575 Lms/ft (4.8W/ft) **795D**=795 Lms/ft (6.7W/ft) **1020D**=1020 Lms/ft (8.8W/ft) **1195D**=1195 Lms/ft (10.6W) **____D**=Custom Lms/ft Ø	**8**=80 **9**=90	**27**=2700K **30**=3000K **35**=3500K **40**=4000K **50**=5000K **2765**=2700K-6500K **3050**=3000K-5000K	**-___F0**=Nominal Length	**(blank)**=12ft (std) **/8**=8ft	**-1**=Single Circuit **-S**=Secondary Circuit
Notes RDW regress of 1" will add an additional 1" to fixture depth.	**Notes** See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 795 lms/ft or greater.	**Notes** 3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 350 Lms/ft not available on 2ft fixture length.		**Notes** Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.	**Notes** Minimum fixture length is 2ft. Specify to nearest foot in length.	**Notes** Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	**Notes** Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.

Additional Section Wiring	Voltage	Driver Type	Shielding Down
E=Emergency Circuit **B1**=Surelite 7W 120-277V EM battery pack (EL7W) **B2**=Surelite 14W 120-277V EM battery pack (EL14W) **T**=UL924 EPC Emergency Bypass Relay	**U**=Universal (120V-277V) **1**=120V **2**=277V **3**=347V	**DD**=Standard 0-10V Dimming (1%-100%) **5L**=Fifth Light DALI (5%-100%) **L5**=Lutron 5 Series (LDE5-Series) 5%-100% EcoSys **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSys **W2A**=White Tuning, 0-10V Dimming (VividTune only)	**F**=Satin White Diffuser **D**=Satin Drop diffuser **A**=Asymmetric Diffuser **L**=Straight Blade Diffuser w/ diffuser **C**=Corridor Diffuser
Notes Battery available on fixture ≥ 4ft in length. B1-B2 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	**Notes** 347V only available with DD driver option.	**Notes** DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	**Notes** All lensing options are snap-in lenses. "L" option may require additional lead-time, please consult factory for details. "A" option is asymmetric toward the wall, "C" option is asymmetric away from the wall.

Options	Finish	Integrated Sensor
R=GLR Fuse (Fast) **F**=GMF Fuse (Slow**)**	**W**=White **S**=Silver **B**=Black **C**=Custom Match **R**=RAL Custom	**SWPD1**=WaveLinx Wireless **LWIPD1**=Lumawatt Pro Wireless **SVPD1**=Standalone **(Blank)**=None
Notes	**Notes**	**Notes** DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

Product Specifications

Construction
- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2'-12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish
- Electrostatically applied polyester powder coat paint

LED Module
- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine
- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥80CRI or ≥90CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers
- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors
- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and LumaWatt Pro wireless sensors as well as stand-alone sensors available

Mounting
- Wall

Lengths
- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces
- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configutor or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options
- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors
- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance
- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output
- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical
- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors
- Please reference page 5 for details

Weight
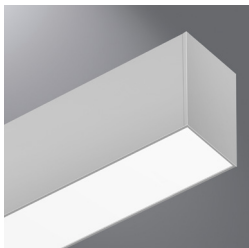- 4.0 lbs per foot

Approvals
- cULus - listed for damp locations
- Meets NYC requirements
- Meets CCEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire

Warranty
- Five year warranty standard.

Shielding Options

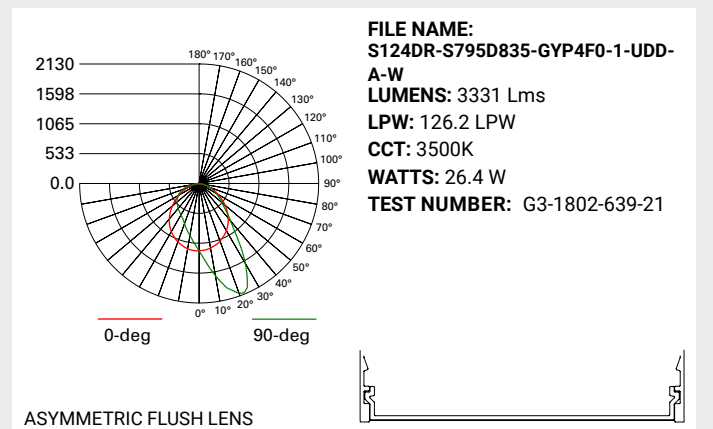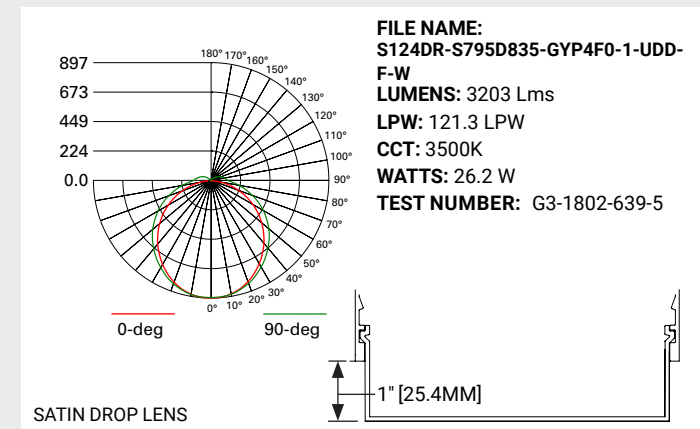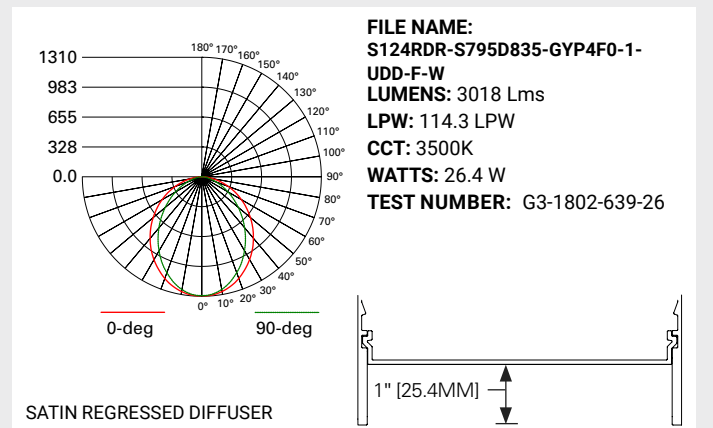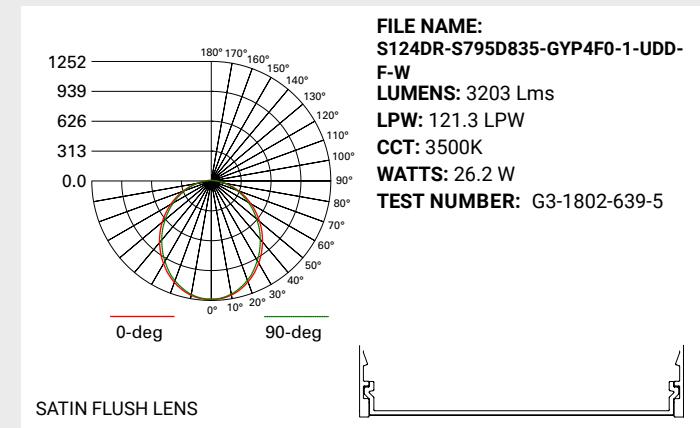**Standard Flush Lens**

Regressed Flush Lens

Standard Proud Lens

Asymmetric Lens

Photometric Data

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3203 Lms
LPW: 121.3 LPW
CCT: 3500K
WATTS: 26.2 W
TEST NUMBER: G3-1802-639-5

SATIN FLUSH LENS

FILE NAME:
S124RDR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3018 Lms
LPW: 114.3 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-26

1" [25.4MM]

SATIN REGRESSED DIFFUSER

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3203 Lms
LPW: 121.3 LPW
CCT: 3500K
WATTS: 26.2 W
TEST NUMBER: G3-1802-639-5

1" [25.4MM]

SATIN DROP LENS

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-A-W
LUMENS: 3331 Lms
LPW: 126.2 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-21

ASYMMETRIC FLUSH LENS

Photometric Overview and Performance Data

Direct Performance Per Linear Foot at 3500K/80CRI

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
350	2.9	133	2.9	136	3	129
575	4.8	134	4.4	140	4.9	130
795	6.7	131	6.1	141	6.7	128
1020	8.8	129	8.1	137	8.9	125
1195	10.6	124	9.7	132	10.7	121

LUMEN ADJUSTMENT CALCULATIONS

Example 1 - Adjusted Lumen Output
Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot
Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K= 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
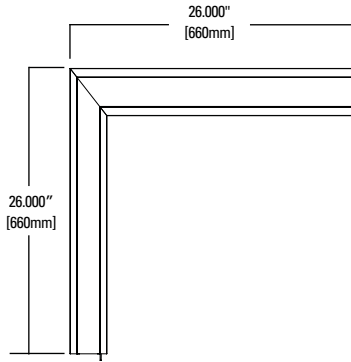Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output

Total Light Output Range (lms/ft)

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	277-946
3000K	0.943	0.815	330-1127	285-974
3500K	1.000	0.861	350-1195	301-1029
4000K	1.010	0.892	354-1207	312-1066
5000K	1.010	0.892	354-1207	312-1066

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Corner Transitions

26.000"
[660mm]

26.000"
[660mm]

Integrated Sensor Details and Placement

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinx	Yes	Integral to Fixture	Mounted in solid cover	SWPD1
LumaWatt Pro (enlighted)	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinx and LumaWatt Pro sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit Cooper Lighting Solutions Connected Lighting Website

◯ Standard Sensor with Luminaire Control
⊗ Auxiliary Sensor used for Sensor Coverage (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual

>8ft Individual

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

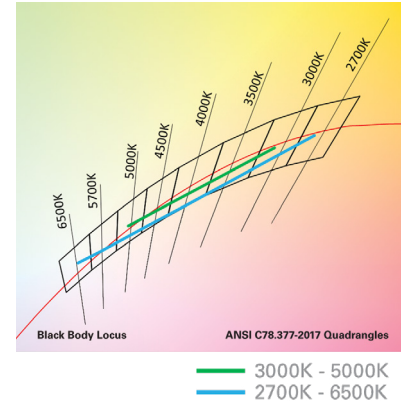Beginning of Run (BOR)

Intermediate Section (INT)

End of Run (EOR) > 4ft

End of Run (EOR) ≤ 4ft

VividTune™
color tuning solutions

Define 4 Pendant LED with VividTune Tunable White

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.
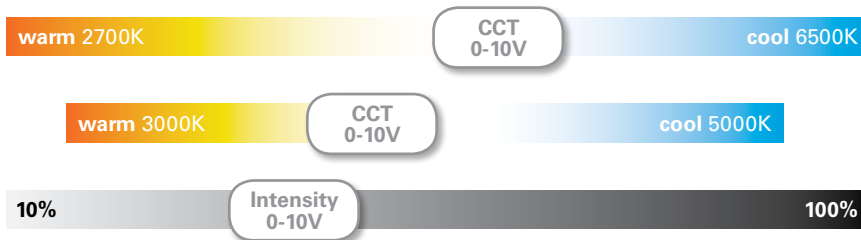

Black Body Locus   ANSI C78.377-2017 Quadrangles

—— 3000K - 5000K
—— 2700K - 6500K

Performance Data*

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	S124DW-C1020D835-UDD-F-W	S124DW-V1020D83050-UW2A-F-W	S124DW-V1020D93050-UW2A-F-W
3000K	-	3648	3003
3500K	4080	3860	3280
4000K	-	4051	3541
4500K	-	4088	3603
5000K	-	4088	3603

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.cooperlighting.com for tunable white application guides.

warm 2700K   CCT 0-10V   cool 6500K

warm 3000K   CCT 0-10V   cool 5000K

10%   Intensity 0-10V   100%

Example of Lumen Adjustment Calculation

S124DW-V1020D83050-UW2A-F-W
at 80 CRI tuned to 3500K

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 4080 x 0.946

Adjusted Lumen = 3860 lm

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

LITHONIA LIGHTING®

LED Striplight

ZL1N

24", 48" and 96" Lengths

FEATURES & SPECIFICATIONS

INTENDED USE — Built on the compact, low-profile Z strip channel, this LED strip offers long maintenance-free life, several color temperatures, lumen outputs and lengths. Ideal for new construction and retrofit applications in T5 and T8 lengths. Ideal for uplight and downlight in commercial, retail, manufacturing, warehouse, cove and display applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.**

CONSTRUCTION — Compact-design channel and cover are formed from code-gauge cold-rolled steel. Easy to install row aligner included for continuous row mounting.

Finish: Paint options include high-gloss, baked white enamel (WH), galvanized (GALV), matte black (MB) and smoke gray (SKGY). After fabrication, five-stage iron phosphate pre-treatment ensures superior paint adhesion and rust resistance.

OPTICS — Standard diffuse snap on/snap off lens eliminates pixels, improves uniformity and minimizes glare. L/LENS option available.

ELECTRICAL — L70>60,000hours. Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Optional internal pluggable wiring harness for reduced labor cost in row mounting applications. (See PLR_ ordering information on page 3.) Electronic LED driver is rated for 75 input watts maximum (see Operational Data on page two for actual wattage consumption), **multi-volt input and 0-10V dimming standard**. This fixture is designed to withstand a maximum line surge of 2.5kV at 0.75kA combination wave for indoor locations, for applications requiring higher level of protection additional surge protection must be provided.

LEDs provide nominal 80 CRI at 3000 K, 3500 K,4000 K, or 5000 K.

Lumen output up to 2,000 lumens per foot. In 86°F (30°C) ambient environments. Luminaire should be installed in applications where ambient temperatures do not exceed 86°F (30°C).

INSTALLATION — Tool-less channel cover for easy installation.

Fixture may be surface mounted (with or without ZSPRG hanger), pendant or stem mounted with appropriate mounting options. Three-point aligner locks in place for easy continuous row mounting.

LISTINGS — CSA certified to US and Canadian safety standards. For use in damp locations between -40°F (-40°C) and 86°F (30°C).

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/resources/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

L/Lens

Lensed

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency

- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

ZL1N LED Striplight

A+ Capable options indicated by this color background.

Lead times will vary depending on options selected. Consult with your sales representative. **Example:** ZL1N L48 3000LM FST MVOLT 40K 80CRI WH

Series		Length		Reflectors[2]		Nominal lumens[3]		Diffuser		Voltage	
ZL1N	LED striplight	L24	24" [1]	(blank)	Less reflector	1500LM	1,500 lumens	FST	Snap on frosted, diffuse	MVOLT	120-277V
				SMR	Symmetric	2500LM	2,500 lumens	L/LENS	No diffuser	120	120V
						3500LM	3,500 lumens	SBL FST	Straight blade louver with snap on frosted, diffuse	208	208V
		L46	46"	(blank)	Less reflector	3000LM	3,000 lumens			240	240V
		L48	48"	ASR	Asymmetric (L48 only)	5000LM	5,000 lumens			277	277V
				SMR	Symmetric	7000LM	7,000 lumens			347	347V [4]
TZL1N	LED striplight	L92	92"	(blank)	Less reflector	6000LM	6,000 lumens			480	480V [4]
		L96	96"	SMR	Symmetric	10000LM	10,000 lumens				
						14000LM	14,000 lumens				

Color temperature		Color rendering index		Options				Paint finish	
30K	3000 K	80CRI	80 CRI	PLR__	Plug-in wiring[5,6]	**Individual Controls** [5]		WH	White
35K	3500 K	90CRI	90 CRI	PLR1LVG	Plug-in wiring-low voltage[5,6]	LB0ZU	360° low mount motion sensor, pre-wired [10]	GALV	Galvanized
40K	4000 K			E7W	Emergency battery pack, 7W CA Title 20 Noncompliant[7]	LBH0SZU	360° low mount motion sensor with dimming, pre-wired [10]	MB	Matte black
50K	5000 K			2E7W	Two Emergency battery packs, 7W CA Title 20 Noncompliant[7,8]	LBPZU	360° low mount motion sensor with photocell, pre-wired [10]	SKGY	Smoke gray
				E10WLCP	Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS[7,8]	LBM0SZU	360° low mount motion sensor, dimming & switching photocell, pre-wired [10]		
				2E10WLCP	Two Emergency battery packs, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS[7,8]	**Cord sets:** [11]			
						CS1W	Straight plug, 120V		
				E15WLCP	Emergency battery pack, 15W Linear Constant Power, Certified in CA Title 20 MAEDBS[7,8]	CS3W	Twist-lock, 120V		
						CS7W	Straight plug, 277V		
				OUTEND	Cord set to exit endplate of fixture	CS11W	Twist-lock, 277V		
				Wireless Controls [5]		CS25W	Twist-lock, 347V		
				NLTAIR2 RLSXR10	nLight Air Generation 2 Fixture mount, LSXR sensor low mount 360°	CS97W	Twist-lock, 480V		
				NLTAIR2 RLSXR10EM	nLight Air Generation 2 Fixture mount, LSXR sensor low mount 360°, UL924 Emergency operation [9]	CS93W	600V SEOOW white cord, no plug (no voltage required)		

Accessories: *Order as separate catalog number.*

HC36	Hanger chain, 36"
ZACVH	Aircraft cable 10' (one pair)
ZLANGBKT	Luma-tilt™ angle bracket for shelf or ledge mounting only
SQ_	Stem kit, 2" increments up to 48"
NPP16D	nLight® switching/dimming module
rPP20D	nLight® Air switching/dimming module
LSXR	Sensor Switch® LSXR occupancy sensor [4]
ZSPRG	For 15/16" T-grid only
WGZ24	24" wireguard, white [12]
WGZ48	48" wireguard, white [12,13]
ZLR L24 SYM UPL WH	24" symmetric reflector with uplight, white finish

ZLR L24 SYM WH	24" symmetric reflector, white finish
ZLR L46 SYM UPL WH	46" symmetric reflector with uplight, white finish
ZLR L46 SYM WH	46" symmetric reflector, white finish
ZLR L48 ASY WH	48" asymmetric reflector, white finish
ZLR L48 SYM UPL WH	48" symmetric reflector with uplight, white finish
ZLR L48 SYM WH	48" symmetric reflector, white finish
ZLR L92 SYM UPL WH	92" symmetric reflector with uplight, white finish
ZLR L92 SYM WH	92" symmetric reflector, white finish
ZLR L96 SYM UPL WH	96" symmetric reflector with uplight, white finish
ZLR L96 SYM WH	96" symmetric reflector, white finish
UNIVERSAL REFL ALIGNER	Universal reflector aligners, quantity 1

Notes

1. Not available with 347V, 480V or Batteries
2. Optional. Reflectors ship separately.
3. See Operational Data on page 2 for actual lumens.
4. Utilizes step down transformer.
5. See ordering information on pages 4 and 5 and rLSXR specification sheet for more configurations. When choosing Sensor and PLR for same fixture, consult the factory.
6. Not available with cord sets.
7. MVOLT only. Battery Spec sheet linked for more information.
8. Only available with 10,000LM and 14,000LM packages.
9. MVOLT only.
10. Available with MVOLT, 347V and 480V only. This sensor configuration is suitable for minimum ambient temperature of 14°F (-10°C). See page 6 for low temperature option providing -4°F (-20°C) minimum ambient Sensors come prewired, they must be snapped into place at time of installation.
11. Cordsets exit back of fixture unless OUTEND option is specified. Must specify voltage (not required when ordering CS93W).
12. Not compatible with reflector
13. Order 2 for tandem double length fixtures (TZL1N).

ZL1N LED Striplight

OPERATIONAL DATA

	Nominal lumen package	Length (inches)	Delivered Lumens 3000 K CCT @ 77°F (25°C) ambient temperature		Delivered Lumens 3500 K CCT @ 77°F (25°C) ambient temperature		Delivered Lumens 4000 K CCT @ 77°F (25°C) ambient temperature		Delivered Lumens 5000 K CCT @ 77°F (25°C) ambient temperature		Wattage @ 120V/277V	Comparable Light Source
			80 CRI	90 CRI	80 CRI	90 CRI	80 CRI	90 CRI	80 CRI	90 CRI		
Lensed	1500LM	24	1738	1409	1777	1467	1804	1494	1871	1528	15	1-lamp 17W T8
	2500LM	24	2265	1846	2315	1900	2351	1947	2438	1991	19	1-lamp 17W T8
	3500LM	24	3586	2924	3666	3026	3723	3084	3860	3152	31	1-lamp 32W T8, 1-lamp 54W T5H0, 50W HID
	3000LM	46 or 48	3172	2586	3243	2677	3293	2728	3415	2788	25	1-lamp 32W T8, 1-lamp 54W T5H0, 50W HID
	5000LM	46 or 48	4417	3601	4515	3727	4585	3798	4754	3882	34	2-lamp 32W T8, 1-lamp 54W T5H0, 70W HID
	7000LM	46 or 48	6535	5328	6681	5515	6785	5619	7035	5744	52	3-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	6000LM	92 or 96	6561	5349	6708	5537	6812	5642	7063	5767	48	3-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	10000LM	92 or 96	8687	7082	8881	7331	9019	7470	9351	7636	68	4-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	14000LM	92 or 96	12457	10513	12735	10665	12933	10711	13409	10949	104	4-lamp 32W T8, 3-lamp 54W T5H0, 150W HID
Unlensed	1500LM	24	1881	1534	1923	1588	1953	1618	2025	1654	15	1-lamp 17W T8
	2500LM	24	2452	1999	2506	2069	2545	2108	2639	2155	19	1-lamp 17W T8
	3500LM	24	3882	3165	3969	3276	4031	3338	4179	3412	31	1-lamp 32W T8, 1-lamp 54W T5H0, 50W HID
	3000LM	46 or 48	3434	2800	3511	2898	3565	2953	3697	3019	25	1-lamp 32W T8, 1-lamp 54W T5H0, 50W HID
	5000LM	46 or 48	4781	3898	4888	4035	4964	4111	5147	4203	34	2-lamp 32W T8, 1-lamp 54W T5H0, 70W HID
	7000LM	46 or 48	7075	5768	7233	5971	7345	6083	7616	6219	52	3-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	6000LM	92 or 96	7103	5791	7261	5995	7374	6108	7646	6243	48	3-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	10000LM	92 or 96	9404	7667	9614	7937	9764	8087	10123	8266	68	4-lamp 32W T8, 2-lamp 54W T5H0, 100W HID
	14000LM	92 or 96	13485	10994	13786	11381	14001	11596	14516	11853	104	4-lamp 32W T8, 3-lamp 54W T5H0, 150W HID

DIMENSIONS

All dimensions are shown in inches (centimeters) unless otherwise noted.

Specifications subject to change without notice.

PALLET DIMENSIONS

Length	Approximate weight	Fixtures per pallet	Approximate pallet dimensions (L x W x H)
L24	7 lbs.	408	46" X 51" X 32 11/16"
L46	11 lbs.	176	46" X 51" X 32 1/16"
L48	12 lbs.	176	46" X 51" X 31 3/8"
L92	22 lbs.	176	46" X 98 1/2" X 31 1/16"
L96	24 lbs.	176	46" X 98 1/2" X 31 1/16"

Mounting Hole Location - All Lengths

Knockout hole is .86in in diameter.
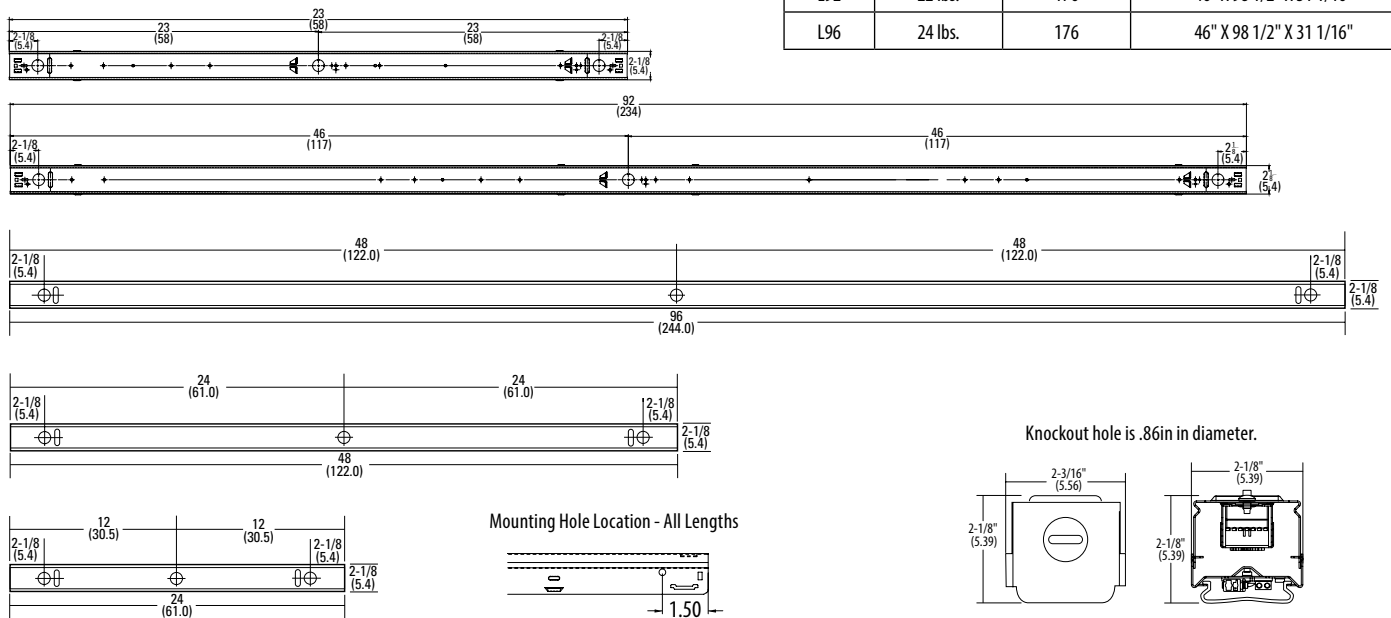
PHOTOMETRICS

Please see www.lithonia.com

REFLECTORS (Optional)

L24 Reflector

3.67
24.00
10.70

L48 Reflector

3.67
48.00
10.70

L96 Reflector

3.67
96.00
10.70
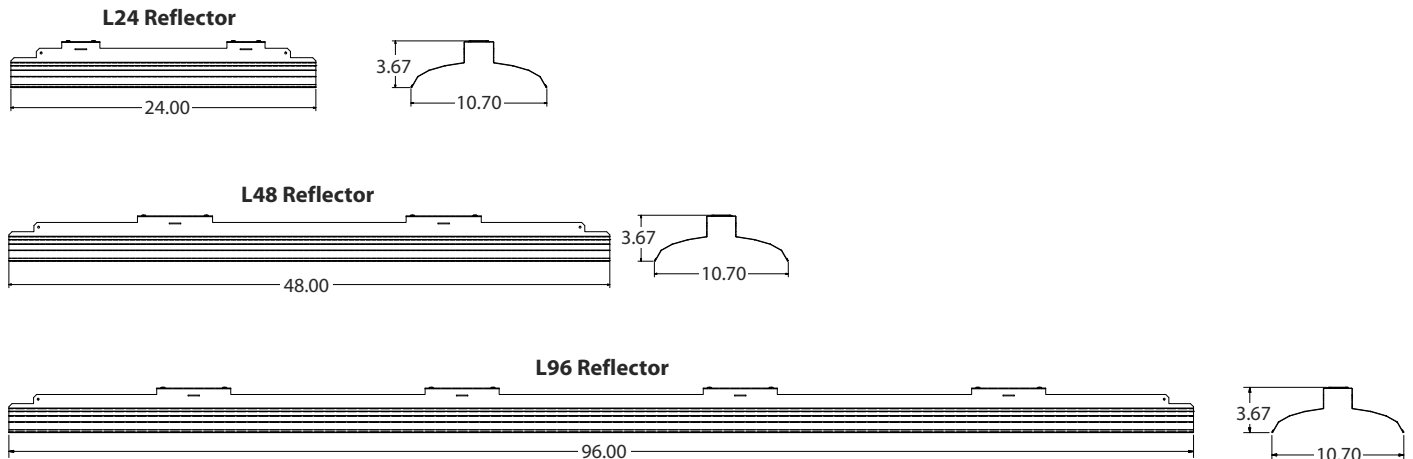
PHOTOMETRICS

Please see www.lithonia.com

PRODUCT INFORMATION

Wiring

PLR

Advanced plug-in system with two-circuit capability. Available on industrial and strip products and a variety of architectural products mounted in continuous rows. 1, 2, 3 and 4-lamp fixtures. PLR22 (2-circuit) and crossover harness switches hot circuit serving next fixture in row. Reduces fixture types on job for alternating circuit applications (see example below.)

Easy one-step installation, saves up to 35% on labor costs. Expanded switching flexibility helps save energy.

Rows can be 50% longer with two-circuit systems. Polarized, lock-together nylon connectors prevent miswiring in the field. #12 THHN conductor, rated 600V, 90°C. White neutral wire included. Grounding accomplished by fixture in-row connectors.

Advanced 1 or 2-Circuit Plug-In

CSA certified systems available with up to 2 circuits. G ground required.

Note: Specifications subject to change without notice.

ORDERING INFORMATION   Lead times will vary depending on options selected. Consult with your sales representative.

Series	Number of hot wires		Branch circuits				Dimming		Ground	
PLR	(blank)	Not required for 22	Circuits to which ballast is connected		Emergency circuit connected		LV	Low-voltage dimming	G	Ground, required
PLR22	1	Black	(blank)	Not required for 22 or PLR1	(blank)	No emergency circuit				
	2	Black and red	A	Black wire	ELA	Emergency circuit wired to black wire				
			B	Red wire	ELB	Emergency circuit wired to red wire				

Typical Applications

- Multiple-circuit and single-circuit for longer continuous rows
- Multiple-circuit with alternating fixtures on separate circuits, 2-circuit (PLR 22)
- Multiple circuit with night-lights located along row as desired

LSXR – Fixture Mount Occupancy Sensor (see
www.AcuityControls.com for additional information)

- Three interchangeable lens options to satisfy multiple mounting heights and coverage pattern requirements.
- Integrated mounting bracket drops lens down 3" from chase nipple.
- Single or dual relay versions — designed with robust protection from the harsh switching requirements of T5 and LED loads.
- Photocell and 0-10VDC dimming options.
- No PIR field calibration or sensitivity adjustments required.
- Sensor ambient temperature rating of 14°F (-10°C) to 131°F (55°C).

LSXR configuration	Comparable CMRB sensor	Old style sensor nomenclature
For shortest lead times use one of the following LSXR configurations		
LCOZU	CMRB 50	MSI
LCH0SZU	CMRB 50 D	MSID
LCPZU	CMRB 50 P	MSIPED
LAOZU	CMRB 6	MSI360
LAH0SZU	CMRB 6 D	MSI360D
LAPZU	CMRB 6 P	MSI360PED

SELECTIONS BELOW WILL EXTEND ORDER LEAD TIME. CONSULT YOUR SALES REPRESENTATIVE FOR DETAILS.

SINGLE RELAY

ORDERING INFORMATION						

Example: LAH0SZU

Series	Lens option	Dimming/Photocell	Max. dim level	Min. dim level	Temp/Humidity	Default occupancy time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360° B Low mount, 360° C High mount aisleway	O None[1] H High/low occupancy operation P Switching photocell (on/off)[1] M Dimming and switching photocell G Dimming and switching photocell with high/low occupancy operation	0 10 VDC 9 9 VDC 8 8 VDC 7 7 VDC	S Minimum dim level of ballast 1 1 VDC 2 2 VDC 3 3 VDC 4 4 VDC 5 5 VDC 6 6 VDC	Z None T Low temperature[2]	I 30 sec D 2.5 min X 5.0 min R 7.5 min U 10.0 min (with minimum 15 minute on time) V 15.0 min W 20.0 min Y 30.0 min

Notes

1 Max and min dim levels not applicable with this option.

2 Ambient temperature rating of -4°F (-20°C) to 131°F (55°C).

DUAL RELAY (Available with 120, 277, and 347V only)

ORDERING INFORMATION					

Example: LA2KZU

Series	Lens option	Poles	Operating mode	Temp/Humidity	Default occupancy time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360° B Low mount, 360° C High mount aisleway	2 Dual relay	J None K Alternating off relays (promotes even lamp wear) O Alternating off relays w/photocell P Switching photocell(on/off) E Photocell on/off (pole 1 only) F Photocell on/off - both poles (dual set-point)	Z None T Low temperature[1]	I 30 sec D 2.5 min X 5.0 min R 7.5 min U 10.0 min (with minimum 15 minute on time) V 15.0 min W 20.0 min Y 30.0 min

Notes

1 Ambient temperature rating of -4°F (-20°C) to 131°F (55°C).

Example: LENS 50 J100

| Replacement lenses: Order as separate catalog number.		
Series	Lens type	Package quantity
LENS	6 High mount 360° 10 Low mount 360° 50 High mount aisleway	[blank] Single Lens J10 10-pack J100 100-pack

OPTIONS AND ACCESSORIE

The Z Series fixture offers numerous options for almost every electrical and optical component, including a long list of field-installable accessories.
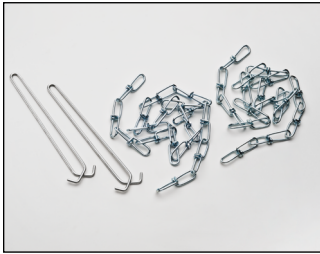
HANGER CHAIN

36" chain with Y hanger.

Order as:

HC36
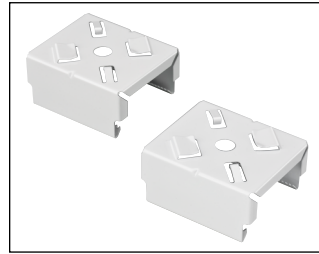
Z SPRING HANGER

Snap 'n' lock design requires no fasteners and can be used on T-grid ceiling or universal mounting systems.

Order as:

ZSPRG

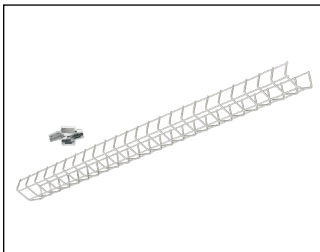**ZACVH HANGER**

10' Aircraft cable with Y hanger.

Order as:

ZACVH

ANGLE MOUNTING BRACKET
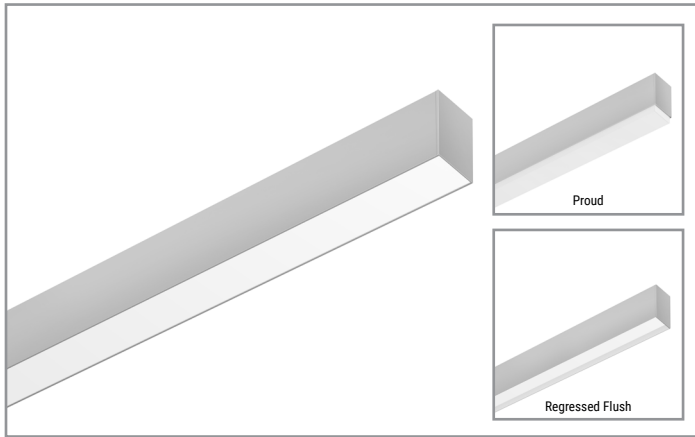
Luma-tilt™ angle bracket ships as a pair

Order as:

ZLANGBKT

WIRE GUARD

Order as:
WGZ24
WGZ48

LITHONIA LIGHTING®

Proud

Regressed Flush

Neo-Ray

Define 4

4" LED
Surface
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

Product Certification

Product Features

damp location

powered by
fifthlight technology

VividTune
color tuning solutions

Top Product Features

- Surface Mount Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available

Dimensional and Mounting Details

5.13"
[130mm]

3.68"
[94mm]
4"
[102mm]

**Standard
Housing**

1.000" [25mm]

3.68"
[94mm]
4"
[102mm]

**Regressed
Housing**

additional
product diagrams

COOPER
Lighting Solutions
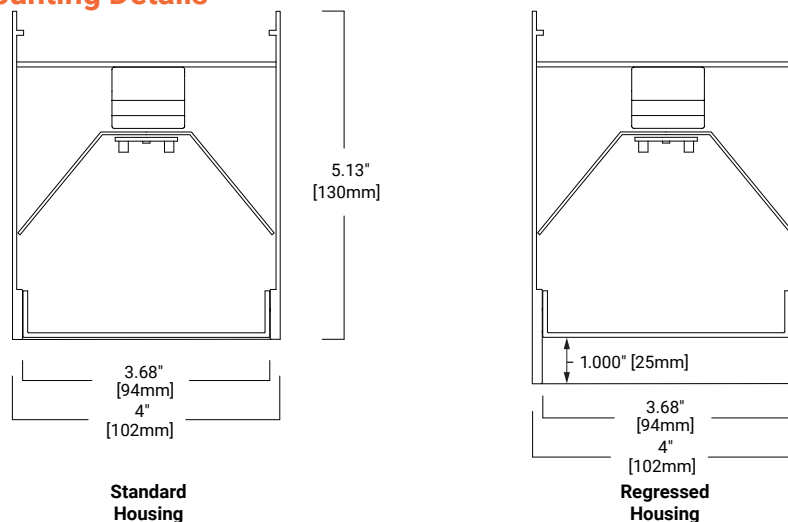
Order Information

Icon Key: Ø Consult factory for availability

SAMPLE ORDER NUMBER: **S124DS-C350D835JB-4F0-1-UDD-A-W**

Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Ceiling Type	Luminaire Length (Ft)	Max section length
S124DS=Define 4 Direct Surface **S124RDS**=Define 4 Regressed Direct Surface	**-C**=Core **-H**=High Performance **-V**=VividTune Ø	**350D**=350 Lms/ft (2.9W/ft) **575D**=575 Lms/ft (4.8W/ft) **795D**=795 Lms/ft (6.7W/ft) **1020D**=1020 Lms/ft (8.8W/ft) **1195D**=1195 Lms/ft (10.6W) **___D**=Custom Lms/ft Ø	**8**=80 **9**=90	**27**=2700K **30**=3000K **35**=3500K **40**=4000K **50**=5000K **2765**=2700K-6500K **3050**=3000K-5000K	**JB**=Gypsum Board, Junction Box, Structure **T1**=15/16" T-Grid (ETG) **T9**=9/16" T-Grid (FTG) **TS**=9/16" Slot (STG), Tegular (FTT), Interlude (ITG)	**-___F0**=Nominal Length	**(blank)**=12ft (std) **/8**=8ft
Notes RDS regress of 1" will add an additional 1" to fixture depth.	**Notes** See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 795 lms/ft or greater.	**Notes** 3500K/80CRI/DIP/F Lens. Please refer to scaling data or other variables. For custom lumen output, please refer to additional information on page 3. 350 Lms/ft not available on 2ft fixture length	**Notes** Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.		**Notes**	**Notes** Minimum fixture length is 2ft. Specify to nearest foot in length.	**Notes** Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).

Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
-1=Single Circuit **-S**=Secondary Circuit	**E**=Emergency Circuit **B1**=Surelite 7W 120-277V EM battery pack (EL7W) **B2**=Surelite 14W 120-277V EM battery pack (EL14W) **T**=UL924 EPC Emergency Bypass Relay	**-U**=Universal (120V-277V) **-1**=120V **-2**=277V **-3**=347V	**DD**=Standard 0-10V Dimming (1%-100%) **5L**=Fifth Light DALI (5%-100%) **L5**=Lutron 5 Series (LDE5-Series) 5%-100% EcoSys **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSys **W2A**=White Tuning, 0-10V Dimming (VividTune only)	**-F**=Satin White Diffuser **-D**=Satin Drop diffuser **-A**=Asymmetric Diffuser **-L**=Straight Blade Diffuser w/ diffuser
Notes Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	**Notes** Battery available on fixture ≥ 4ft in length. B1-B2 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	**Notes** 347V only available with DD driver option.	**Notes** DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	**Notes** All lensing options are snap-in lenses. "L" option may require additional lead-time, please consult factory for details.

Options	Finish	Integrated Sensor
-R=GLR Fuse (Fast) **-F**=GMF Fuse (Slow)	**-W**=White **-S**=Silver **-B**=Black **-C**=Custom Match **-R**=RAL Custom	**-SWPD1**=WaveLinx Wireless **-LWIPD1**=Lumawatt Pro Wireless **-SVPD1**=Standalone **(Blank)**=None
Notes Additional lead-time may apply	**Notes** Contact factory for C and R options. W/S/B are standard.	**Notes** DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

Product Specifications

Construction
- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2'-12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish
- Electrostatically applied polyester powder coat paint

LED Module
- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine
- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥80CRI or ≥90CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers
- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors
- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and LumaWatt Pro wireless sensors as well as stand-alone sensors available

Mounting
- Surface

Lengths
- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces
- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configutor or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options
- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors
- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance
- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output
- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4 .

Electrical
- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors
- Please reference page 5 for details

Weight
- 4.0 lbs per foot

Approvals
- cULus - listed for damp locations
- Meets NYC requirements
- Meets CCEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium, refer to www.designlights.org for details and listed configurations.

Warranty
- Five year warranty standard.

Shielding Options

Standard Flush Lens

Regressed Flush Lens

Standard Proud Lens

Asymmetric Lens

COOPER
Lighting Solutions

Photometric Data

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3203 Lms
LPW: 121.3 LPW
CCT: 3500K
WATTS: 26.2 W
TEST NUMBER: G3-1802-639-5

SATIN FLUSH LENS

FILE NAME:
S124RDR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3018 Lms
LPW: 114.3 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-26

SATIN REGRESSED DIFFUSER

1" [25.4MM]

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-F-W
LUMENS: 3203 Lms
LPW: 121.3 LPW
CCT: 3500K
WATTS: 26.2 W
TEST NUMBER: G3-1802-639-5

SATIN DROP LENS

1" [25.4MM]

FILE NAME:
S124DR-S795D835-GYP4F0-1-UDD-A-W
LUMENS: 3331 Lms
LPW: 126.2 LPW
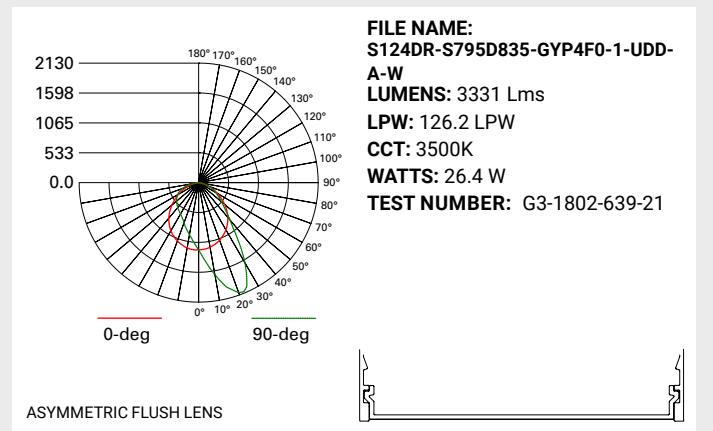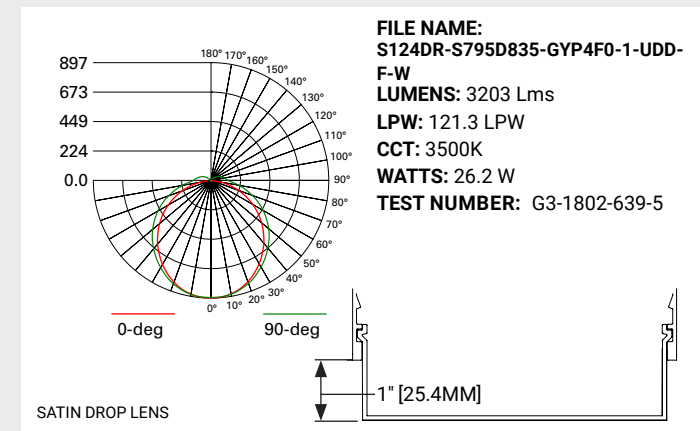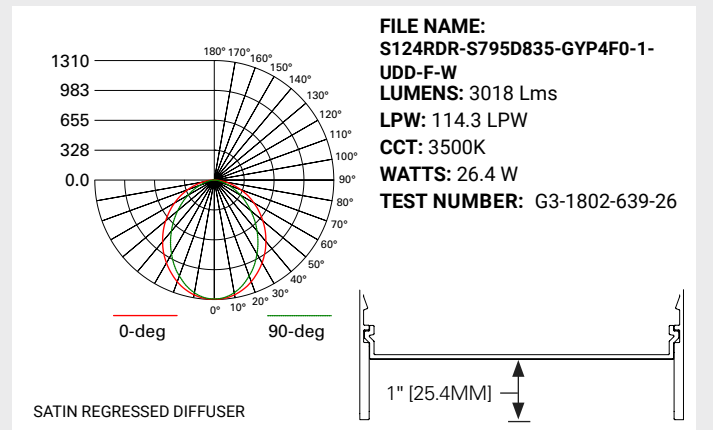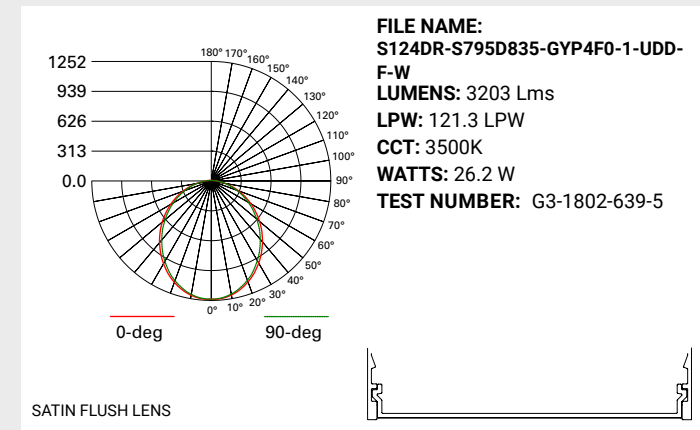**CCT:** 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-21

ASYMMETRIC FLUSH LENS

Photometric Overview and Performance Data

Direct Performance Per Linear Foot at 3500K/80CRI

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
350	2.9	133	2.9	136	3	129
575	4.8	134	4.4	140	4.9	130
795	6.7	131	6.1	141	6.7	128
1020	8.8	129	8.1	137	8.9	125
1195	10.6	124	9.7	132	10.7	121

LUMEN ADJUSTMENT CALCULATIONS

Example 1 - Adjusted Lumen Output
Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot
Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K= 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output

Total Light Output Range (lms/ft)

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	277-946
3000K	0.943	0.815	330-1127	285-974
3500K	1.000	0.861	350-1195	301-1029
4000K	1.010	0.892	354-1207	312-1066
5000K	1.010	0.892	354-1207	312-1066

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Corner Transitions

26.000"
[660mm]

26.000"
[660mm]

Integrated Sensor Details and Placement

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinx	Yes	Integral to Fixture	Mounted in solid cover	SWPD1
LumaWatt Pro (enlighted)	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinx and LumaWatt Pro sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit Cooper Lighting Solutions' Connected Lighting Website.

○ Standard Sensor with Luminaire Control
⊗ Auxiliary Sensor used for Sensor Coverage
  (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual   ○

>8ft Individual   ○   ⊗

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

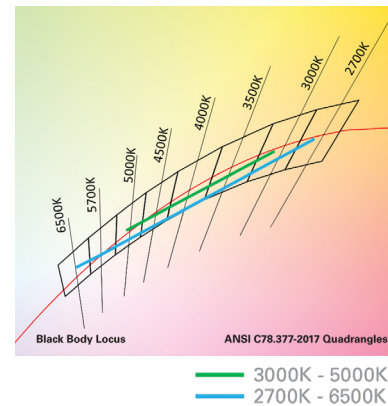**Beginning of Run (BOR)**   ○

Intermediate Section (INT)   ○

End of Run (EOR) > 4ft   ○   ⊗

End of Run (EOR) ≤ 4ft   ○

COOPER
Lighting Solutions

VividTune™
color tuning solutions

Define 4 Pendant LED with VividTune Tunable White

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.
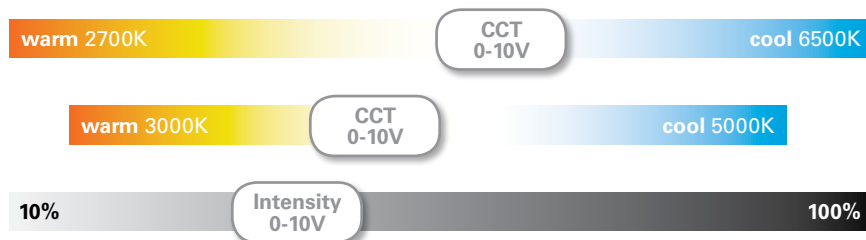

Black Body Locus   ANSI C78.377-2017 Quadrangles

— 3000K - 5000K
— 2700K - 6500K

Performance Data*

	Tunable White - Lumen Adjustment Factors			
CCT	**3000K-5000K**		**2700K-6500K**	
	80 CRI	**90 CRI**	**80 CRI**	**90 CRI**
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

	Example of Approximate Lumen Calculation		
	Standard Catalog #	**VividTune 80 CRI Catalog #**	**VividTune 90 CRI Catalog #**
CCT Setting	**S124DS-C1020D835-X-UDD-F-W**	**S124DS-V1020D83050-X-UW2A-F-W**	**S124DS-V1020D93050-X-UW2A-F-W**
3000K	-	3648	3003
3500K	4080	3860	3280
4000K	-	4051	3541
4500K	-	4088	3603
5000K	-	4088	3603

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.cooperlighting.com for tunable white application guides.

warm 2700K   CCT 0-10V   **cool** 6500K

warm 3000K   CCT 0-10V   **cool** 5000K

10%   Intensity 0-10V   100%

Example of Lumen Adjustment Calculation

S124DS-V1020D83050-X-UW2A-F-W
at 80 CRI tuned to 3500K

Adjusted Lumen =
published lm x adjusted lm factor

Adjusted Lumen = 4080 x 0.946

Adjusted Lumen = 3860 lm

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

COOPER
Lighting Solutions

Cooper Lighting Solutions
18001 East Colfax Avenue
Aurora, CO 80011
P: 303-393-1522
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

BeveLED® 2.2 Primary® - P4RDF
4.5" Round Downlight

USAI Lighting

P4RDF TRIM DETAILS

usailighting.com/beveled22primary

BeveLED 2.2 Primary provides consistent, high quality white light in an economical architectural solution with our iconic BeveLED trim.

FEATURES

- 2700K, 3000K or 3500K color temperature options in 80+ and 90+ CRI
- Downlight, adjustable and wallwash configurations
- Dry/damp/wet location rated for bathrooms and showers
- Dimmable with forward and reverse phase dimmers
- High LED performance with budget-conscious features

1" Regress

Bevel Trim

Glass Lens

$3^5/_{16}$" Ø
$4^1/_2$" Ø
$5^1/_2$" Ø
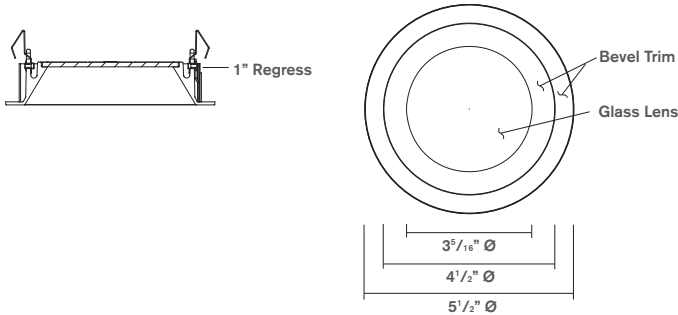
BEVELED 2.2 PRIMARY
DOWNLIGHT PERFORMANCE DATA

DELIVERED* PERFORMANCE:	Classic White		
	9W	**15W**	**22W**
Source Lumens:	1075	1575	2000
Lumens Per Watt:	92	88	81
Delivered Lumens:	925	1225	1700
Color Consistency:	2-Step MacAdam Ellipse		

*Based on 3000K, 80+ CRI, Medium beam. Performance varies for each specific beamspread and color temperature. See IES files for exact values at usailighting.com.

CORRELATED COLOR TEMPERATURE MULTIPLIER

|	Classic White					
	2700K		**3000K**		**3500K**	
Color Rendering Index:	80+	90+	80+	90+	80+	90+
Multiplier for Lumen Output:	0.98	0.81	1.00	0.84	1.02	0.98

BeveLED®2.2 Primary® - P4RDF
4.5" Round Downlight

USAI® Lighting

Specify fixture part number. (All boxes must be completed to correctly order)

P4RDF				WH	NC				
Downlight	**Wattage Options**	**LED Color Temperature Options**	**Beam Options**	**Trim Finish**	**Housing**	**Voltage Options** *Select one*	**Dimming Driver Options**		**Accessories (Optional)**
P4RDF 4.5" Round Downlight	⬡ **Classic White**		**M** Medium 35° Beam	**WH** White	**NC** New Construction	**UNV** 120V-277V	*For use with Universal Voltage 120V - 277V* **D22** ERP 0-10V, 1%		**CK27** 27" C-Channel Bar Kit with Butterfly Brackets
	09L2 9W LED	**27KS** 2700K, 80+ CRI **27KH** 2700K, 90+ CRI							
	15L2 15W LED	**30KS** 3000K, 80+ CRI **30KH** 3000K, 90+ CRI	**F** Flood 95° Beam			**120V**	*For use with 120V only* **D21** ERP Forward/reverse phase dim, 1%		**CK52** 52" C-Channel Bar Kit with Butterfly Brackets
	22L2 22W LED	**35KS** 3500K, 80+ CRI **35KH** 3500K, 90+ CRI							
		2-Step MacAdam Ellipse Color Consistency is standard for all							

HOUSING DETAILS

New Construction Housing – NC

CK 27: 27"
CK 52: 52"
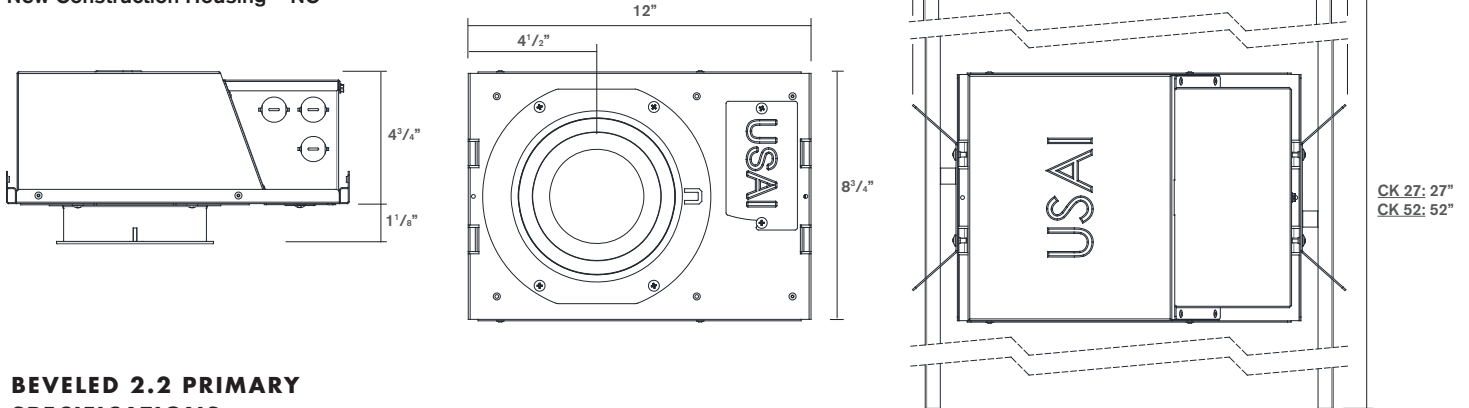
BEVELED 2.2 PRIMARY SPECIFICATIONS

TRIM
4.5" round aperture with a 1" regressed bevel and 1/2" flange, retained by two mounting clips. Die cast aluminum bevel is self-flanged and is available in white.

TRIM LENS
Trim is shipped with integral solite lens.

REFLECTOR
Interchangeable specular reflector available in medium and wide beam distributions.

FIELD REPLACEABLE LED LIGHT ENGINE
is serviceable through the aperture with a Phillips screwdriver.

COLOR
All LED color options are tightly binned for fixture-to-fixture color consistency within a 2-Step MacAdam Ellipse.

RATED LIFE
Based on IESNA LM80-2008 50,000 hours at 70% lumen maintenance (L70).

FIELD REPLACEABLE DRIVER
Solid state electronic constant current 0-10V dimming driver with a high power factor provided standard and sources 2mA. Driver complies with IEEE C62.41 surge protection. Some on-time delay may be experienced depending on control system used.

FIXTURE WEIGHT
5 lbs.

HOUSING
Fabricated of black electrocoated 20 ga. steel with 18 ga. steel J-box.

MOUNTING
Adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers. Channel bar kits with butterfly brackets are available in 27" and 52" lengths as an add-on accessory for use in acoustical ceilings.

WARRANTY
USAI limited warranty covers replacement parts for 5 years from date of shipment.

CEILING CUT OUT
5¹⁄₁₆" Ø

LISTINGS
Dry/Damp/Wet. NRTL/CSA-US tested to UL standards. IBEW union made.

NOTES
• Not for use in corrosive environment
• Use of pressure washer voids warranty

PHOTOMETRICS
Consult factory or website for IES files. Tested in accordance with IESNA LM79.

USAI Lighting

DIMMING DRIVER WIRING SCHEMES:

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.

2. Only qualified electricians in accordance to local codes should install these fixtures.

3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.

4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.

5. Cap any wires not used separately (not together).

D21 LED: ERP EBR015 series or equivalent - Forward and Reverse Phase Dimming Driver.
Dims down to 1% contingent upon dimmer specification and load (see compatibility chart below). 120V only.

D21
2 WIRE PHASE DIMMING

D21 Dimmer Compatibility Chart

120V ONLY PHASE DIMMING				
Dimmer Information		Dimming Range		Qty Fixtures
Manufacturer	Product	Maximum	Minimum	Per Dimmer
Cooper	DAL06P	100%	0%	Use fixture wattage per fixture specification sheet to determine maximum number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating per dimmer specification sheet.
	DLC03P	100%	0%	
	SLC03P	100%	0%	
Leviton	6161	99%	10%	
	6631-2	100%	0%	
	6633-P	100%	0%	
	6673-10W	99%	6%	
	6683-IW	100%	2%	
	IPE04	100%	3%	
	IPI06-1LZ	99%	0%	
	VPE06	100%	5%	
Lightolier	ZP260QEW	99%	3%	
Lutron	CT103P	99%	6%	
	DV600P	99%	3%	
	DVCL-153P	99%	0%	
	DVELV303P	97%	3%	
	FAELV500	99%	7%	
	LG600P	99%	5%	
	MAELV600	99%	7%	
	S600P	99%	1%	
	S-603PG	86%	4%	
	SELV300P	97%	3%	
	TG-600P	99%	13%	
	TGCL-153P	99%	2%	

USAI Lighting

USAI® Lighting

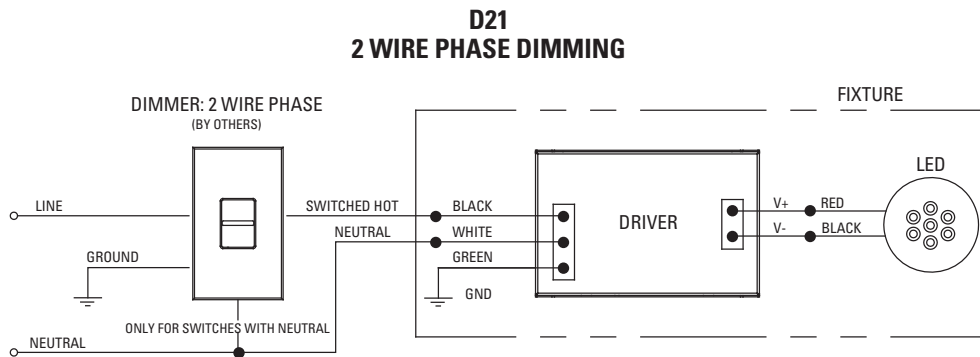## DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
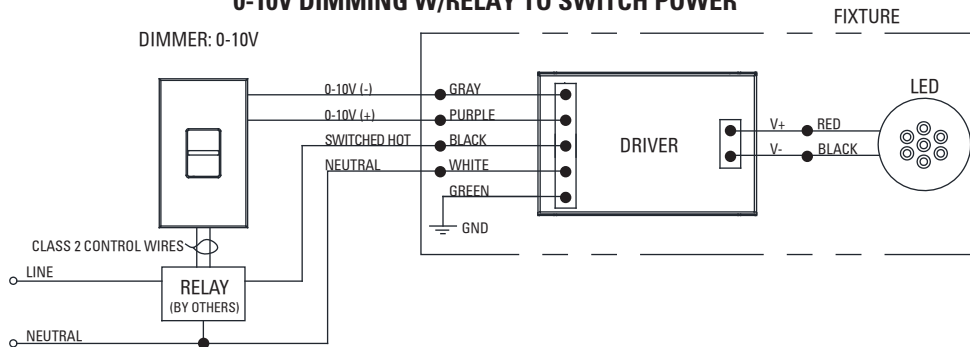## - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D22 LED: ERP ESS 0-10V Dimming Driver Wiring (Dims down to 1%)

D22 Dimmer Compatibility Chart				
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
120V / 277V				Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Crestron	iLux dimmer expansion module	CLS-EXP-DIMFLV	100% - 1%	
Crestron	DIN Rail dimmer	DIN-4DIMFLV4	100% - 1%	
Crestron	DIN Rail analog output module	DIN-A08	100% - 1%	
Crestron	8 Channel dimmer module	GLX-DIMFLV8	100% - 1%	
Crestron	8 Channel dimmer module	GLXP-DIMFLV8	100% - 1%	
Leviton	IllumaTech dimmer	IP710-DLX	100% - 1%	
Lutron	Nova T	NFTV-XX	100% - 1%	
Lutron	Diva	DVTV-XX	100% - 1%	

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D22
0-10V DIMMING W/RELAY TO SWITCH POWER

NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

D22
0-10V DIMMING (NO RELAY)

NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

USAI® Lighting

www.usailighting.com
info@usailighting.com

1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

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I2-264-22 Revised 12/18/2019

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Lighting

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
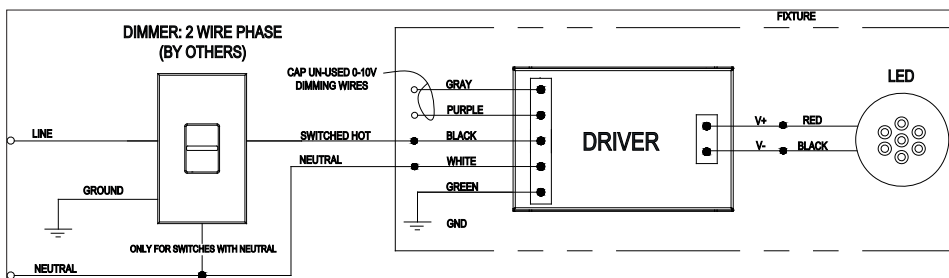3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D22 LED: ERP ESS series or equivalent - Forward and Reverse Phase Dimming Driver.
Dims down to 1% contingent upon dimmer specification and load (see compatibility chart below). 120V only.

D22
2 WIRE PHASE DIMMING

D22 Dimmer Compatibility Chart

120V ONLY PHASE DIMMING				
Dimmer Information		Dimming Range		Qty Fixtures
Manufacturer	Product	Maximum	Minimum	Per Dimmer
Cooper	DAL06P	100%	0%	Use fixture wattage per fixture specification sheet to determine maximum number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating per dimmer specification sheet.
	DLC03P	100%	0%	
	SLC03P	100%	0%	
Leviton	6161	99%	10%	
	6631-2	100%	0%	
	6633-P	100%	0%	
	6673-10W	99%	6%	
	6683-IW	100%	2%	
	IPE04	100%	3%	
	IPI06-1LZ	99%	0%	
	VPE06	100%	5%	
Lightolier	ZP260QEW	99%	3%	
Lutron	CT103P	99%	6%	
	DV600P	99%	3%	
	DVCL-153P	99%	0%	
	DVELV303P	97%	3%	
	FAELV500	99%	7%	
	LG600P	99%	5%	
	MAELV600	99%	7%	
	S600P	99%	1%	
	S-603PG	86%	4%	
	SELV300P	97%	3%	
	TG-600P	99%	13%	
	TGCL-153P	99%	2%	

USAI
Lighting

www.usailighting.com
info@usailighting.com

1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

BeveLED Mini® Complete - B3RD
3" Round Downlight

USAI
Lighting

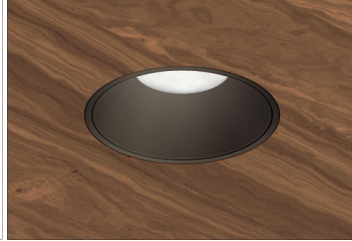## Universal and Field Convertible - Trim | Trimless | Millwork

Trimmed - B3RDF

Trimless - B3RDL

Millwork - B3RDM

Trimless Acoustical Tile - B3RDP

usailighting.com/beveledmini

To specify Trimless Acoustical Lighting visit usailighting.com/B3RDP

Introducing new and improved BeveLED Mini, the smallest member of our iconic BeveLED family. BeveLED Mini has been infused with upgraded performance for superior light in every application. Now available with the following features, by popular demand:

FEATURES

- Upgraded performance and more LED color options than ever before!
- Field Flexibility - it's now easy to change trim in the field between trimmed, trimless and millwork
- Dry/damp/wet location rated for bathrooms and showers, including trimless and millwork
- More dimming options and all color technologies available
- Clear overspray protector for installation convenience
- Full family platform
- Iconic beveled look

DOWNLIGHT PERFORMANCE DATA

LED COLOR CHOICES

DELIVERED* PERFORMANCE:	Classic White			Warm Glow Dimming		Color Select	
	9W	**15W**	**20W**	**15W**	**20W**	**12W**	**18W**
Source Lumens:	1175	1825	2475	1350	1800	925	1200
Lumens Per Watt:	102	102	97	68	66	65	57
Delivered Lumens:	925	1425	1950	1025	1375	775	1050

*Based on 3000K. Performance varies for each specific beamspread and color temperature. See IES files for exact values at usailighting.com.

CORRELATED COLOR TEMPERATURE MULTIPLIER

	Classic White											
	2700K			**3000K**			**3500K**			**4000K**		
Color Rendering Index:	80+	90+	95+	80+	90+	95+	80+	90+	95+	80+	90+	95+
Multiplier for Lumen	0.96	0.81	0.70	1.00	0.86	0.74	1.03	0.88	0.79	1.06	0.81	0.81

	Warm Glow Dimming					Color Select						
	2700K		**3000K**		**3500K**	**2200K**	**2700K**	**3000K**	**3500K**	**4000K**	**5000K**	**6000K**
Color Rendering Index:	80+	90+	80+	90+	80+	80+	80+	80+	80+	80+	80+	80+
Multiplier for Lumen	1.00	0.78	1.00	0.83	1.05	0.92	0.97	1.00	1.03	1.05	1.10	1.13

BeveLED Mini® Complete - B3RD
3" Round Downlight with Integral Driver Housings

USAI®
Lighting

Specify fixture part number. (All boxes must be filled in to correctly order)

B3RD__										
BeveLED Trim Style	**Wattage Options**	**LED Color Options**	**Beam Options**	**Lens Options**	**Bevel Trim Finish Options**	***Flange/ Millwork Collar Finish**	**Housing Options**	**Voltage Options** *Select one*	**Dimming Driver Options**	**Accessories (Optional)***

BeveLED Trim Style

F Trimmed with Flange (use with all materials)

L Trimless Spackle-in (use with sheetrock and plaster only)

M Millwork Knife-Edge (use with wood and stone)

Wattage Options / LED Color Options / Beam Options

🔵 Classic White Light

Wattage	LED Color	Beam
09X3 9W LED	**27KS** 2700K, 80+ CRI	**40** 40° beam
15X3 15W LED	**27KH** 2700K, 90+ CRI	**55** 55° beam
20X3 20W LED	**27KU** 2700K, 95+ CRI	**65** 65° beam
	30KS 3000K, 80+ CRI	
	30KH 3000K, 90+ CRI	
	30KU 3000K, 95+ CRI	
	35KS 3500K, 80+ CRI	
	35KH 3500K, 90+ CRI	
	35KU 3500K, 95+ CRI	
	40KS 4000K, 80+ CRI	
	40KH 4000K, 90+ CRI	
	40KU 4000K, 95+ CRI	

🔴 Warm Glow Dimming

Wattage	LED Color	Beam
15WG2 15W LED	**2722KS** 2700K-2200K, 80+ CRI	**45** 45° beam
20WG2 20W LED	**2722KH** 2700K-2200K, 90+ CRI	**55** 55° beam
	3022KS 3000K-2200K, 80+ CRI	**65** 65° beam
	3022KH 3000K-2200K, 90+ CRI	
	3522KS 3500K-2200K, 80+ CRI	

🌈 Color Select Tunable White

Wattage	LED Color	Beam
12CS1 12W LED	**6022KS** 6000K-2200K, Tunable White Light 80+ CRI	**45** 45° beam
18CS1 18W LED (5)		**55** 55° beam
		65 65° beam

Lens Options

S Solite (provided standard)

SF Solite Frosted

BF Borosilicate Frosted

Bevel Trim Finish Options

WH White
SC Conduit Silver
GR Grey
BL Black
BZ Bronze
PR Primer Finish
AC Clear Matte Anodized
AB Piano Gloss Black
RAL Custom Color Specify RAL #

*Flange/Millwork Collar Finish

WH White
SC Conduit Silver
GR Grey
BL Black
BZ Bronze
PR Primer Finish
AC Clear Matte Anodized
AB Piano Gloss Black
  WH White
  GR Grey
  BL Black
  BZ Bronze
RAL Custom Color Specify RAL #

*Leave blank for Trimless

Housing Options

FT Flat Housing New Construction (1, 2)

FTIC Flat Housing IC-Rated (up to 15W maximum) (1, 2)

FTA Flat Adjustable Housing

NC1 New Construction All-in-One

NCCP Chicago Plenum

NCIC Insulation Contact Rated / Airtight

Voltage Options / Dimming Driver Options

UNV 120V-277V

For use with Universal Voltage 120V - 277V

No Additional Charge
D22 ERP 0-10V, 1% (2)
D6E EldoLED 0-10V, 1% (4)
D6F EldoLED 0-10V, 1% (4)

D4A Lutron ECO, 0.1% (1, 2, 4)
D4E Lutron 5 ECO, 5% (1, 2, 3, 4)
D4H Lutron H ECO, 1% Fade (1, 2, 3, 4)
D4P Lutron ECO, 1% (4)
D6A EldoLED 0-10V, 0.1% (4)
D6B EldoLED 0-10V, 0.1% (4)
D7 EldoLED DALI, 0.1% (4)
D18 Moons' DMX, 0.1% (2, 3, 4, 8)

120V

For use with 120V only

No Additional Charge
D19 Phase 2-wire, 1% (1, 2)
D22 ERP Phase 2-wire, 1% (2)

D3 Lutron 2-wire, 1% (4, 6)

347V

For use with 347V only

D15 0-10V dim, 1% 347V only (1, 2, 3, 4)

Accessories (Optional)*

CB27 27" C-Channel Bars
CB32 32" C-Channel Bars
CB52 52" C-Channel Bars
CM27 27" C-Channel Bars (use with FT and FTIC housings only)
CM52 52" C-Channel Bars (use with FT and FTIC housings only)
EM Emergency Battery (7)
EMW Emergency Battery Wet Location (7)

* Residential grade nailer bars provided standard

Notes:
1. Not available for Warm Glow.
2. Not available for Color Select
3. Not available with 9W
4. Not available with FT or FTIC housing
5. Not available with NCIC housing
6. Use only up to 15W max with NCIC housing
7. Not available with 347V. NC1 housing only. Requires above ceiling access for service
8. Not available in trimless and millwork

TRIM FINISH OPTIONS

White	Grey	Black	Bronze	Custom RAL (example)	Custom RAL (example)

Custom colors and primer finish also available

BeveLED Mini® Complete - B3RD
3" Round Downlight with Remote Driver

USAI Lighting

1. Specify fixture part number. (All boxes must be filled in to correctly order)

B3RD__									RM	
BeveLED Trim Style	**Wattage Options**	**LED Color Options**	**Beam Options**	**Lens Options**	**Bevel Trim Finish Options**	***Flange/ Millwork Collar Finish**	**Housing Options**		**Remote Dimming Driver**	**Accessories (Optional)**

BeveLED Trim Style

F Trimmed with Flange (use with all materials)

L Trimless Spackle-in (use with sheetrock and plaster only)

M Millwork Knife-Edge (use with wood and stone)

Wattage Options / LED Color Options

◉ Classic White Light

Wattage	
09X3 9W LED	
15X3 15W LED	
20X3 20W LED	

LED Color	
27KS 2700K, 80+ CRI
27KH 2700K, 90+ CRI
27KU 2700K, 95+ CRI
30KS 3000K, 80+ CRI
30KH 3000K, 90+ CRI
30KU 3000K, 95+ CRI
35KS 3500K, 80+ CRI
35KH 3500K, 90+ CRI
35KU 3500K, 95+ CRI
40KS 4000K, 80+ CRI
40KH 4000K, 90+ CRI
40KU 4000K, 95+ CRI

Beam Options

40 40° beam
55 55° beam
65 65° beam

◉ Warm Glow Dimming

Wattage	
15WG2 15W LED
20WG2 20W LED

LED Color	
2722KS 2700K-2200K, 80+ CRI
2722KH 2700K-2200K, 90+ CRI
3022KS 3000K-2200K, 80+ CRI
3022KH 3000K-2200K, 90+ CRI
3522KS 3500K-2200K, 80+ CRI

Beam Options

45 45° beam
55 55° beam
65 65° beam

Lens Options

S Solite (provided standard)

SF Solite Frosted

BF Borosilicate Frosted

Bevel Trim Finish Options

WH White
SC Conduit Silver
GR Grey
BL Black
BZ Bronze
PR Primer Finish
AC Clear Matte Anodized

AB Piano Gloss Black

RAL Custom Color Specify RAL #

*Flange/ Millwork Collar Finish

WH White
SC Conduit Silver
GR Grey
BL Black
BZ Bronze
PR Primer Finish
AC Clear Matte Anodized
WH White
BL Black
GR Grey
BZ Bronze

AB Piano Gloss Black
WH White
GR Grey
BL Black
BZ Bronze

RAL Custom Color Specify RAL #

*Leave blank for Trimless

Housing Options

FT Flat Housing New Construction

FTIC Flat Housing IC-Rated (up to 15W maximum)

FTA Flat Adjustable Housing

NC1 New Construction All-in-One

NCCP Chicago Plenum

NCIC Insulation Contact Rated / Airtight

Remote Dimming Driver

RM Remote Dimming Driver, specify remote power supply in table below

Accessories (Optional)

CB27 27" C-Channel Bars

CB32 32" C-Channel Bars

CB52 52" C-Channel Bars

CM27 27" C-Channel Bars (use with FT and FTIC housings only)

CM52 52" C-Channel Bars (use with FT and FTIC housings only)

* Residential grade nailer bars provided standard

> **USAI Power Supply Must Be Specified**

2. Specify Remote Power Supply

RPB-01				
Remote Power Supply	**Wattage Options**	**Voltage**	**Remote Dimming Type and Level**	**Remote Emergency Option**

Remote Power Supply

RPB-01 BeveLED Mini Remote Power Supply

Wattage Options

◉ Classic White

09X3 9W LED
15X3 15W LED
20X3 20W LED

◉ Warm Glow

15WG2 15W LED
20WG2 20W LED

Voltage

UNV 120V - 277V

120V 120V Only

Remote Dimming Type and Level

D4A Lutron ECO, 0.1% (1)
D4E Lutron 5 ECO, 5% (1, 2)
D4H Lutron H ECO, 1% Fade (1, 2)
D4P Lutron ECO, 1%
D6A EldoLED 0-10V, 0.1%
D6B EldoLED 0-10V, 0.1%
D6E EldoLED 0-10V, 1%
D6F EldoLED 0-10V, 1%
D7 EldoLED DALI, 0.1%
D18 Moons DMX, 0.1% (2)
D3 Lutron 2-wire, 1%
D19 Hatch Phase 2-wire, 1% (1)

1 Not available for Warm Glow   2 Not available for 9W

Remote Emergency Option

EM7 EM battery requires remote enclosure by others, minimum size 14.5" L x 6.5" W x 3" H

> NOTE:
> Remote Power Supplies Require Enclosures by Others.
> See Page 6 for Details.

Trimmed - B3RDF

TRIM DETAILS

Trimmed - B3RDF
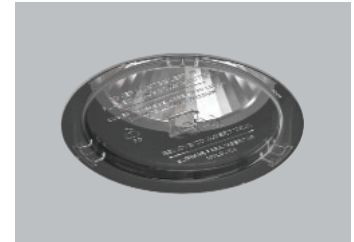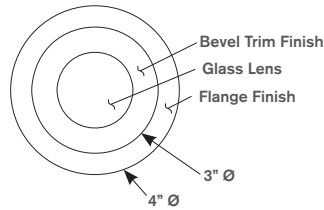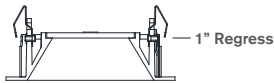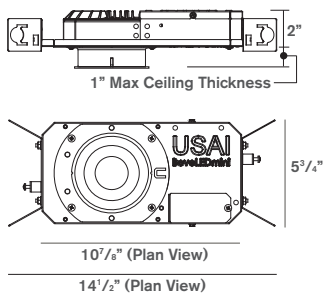
1" Regress

Bevel Trim Finish
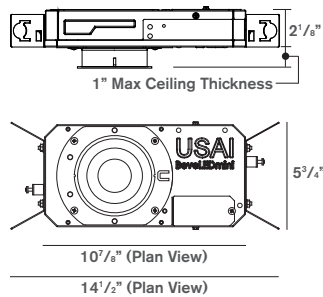Glass Lens
Flange Finish

3" Ø
4" Ø

Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

HOUSING OPTIONS

Flat Housing - FT

2"
1" Max Ceiling Thickness
$5^3/_4$"
$10^7/_8$" (Plan View)
$14^1/_2$" (Plan View)

Flat Housing, IC-Rated - FTIC (up to 15W maximum)

$2^1/_8$"
1" Max Ceiling Thickness
$5^3/_4$"
$10^7/_8$" (Plan View)
$14^1/_2$" (Plan View)

Flat Adjustable Housing - FTA

4"
1" Max Ceiling Thickness
7"
10"
$14^1/_2$" (Plan View)
$18^3/_{16}$" (Plan View)

New Construction Housing - NC1
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP

$5^1/_2$"
1" Max Ceiling Thickness
$19^1/_8$"
$6^7/_8$"
$10^1/_8$"
OPTIONAL EM
$1^9/_{16}$"

Trimless - B3RDL

TRIM DETAILS

Trimless - B3RDL
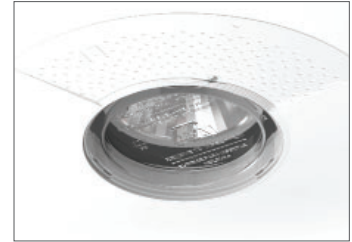
1" Regress

Bevel Finish

Glass Lens

3" Ø

Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.
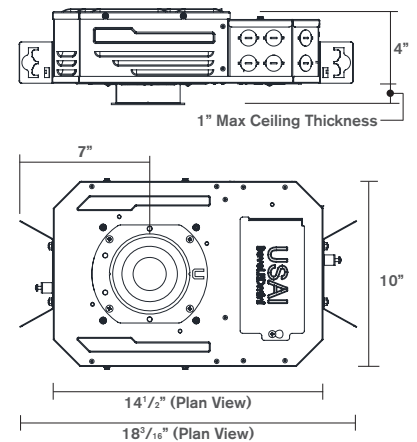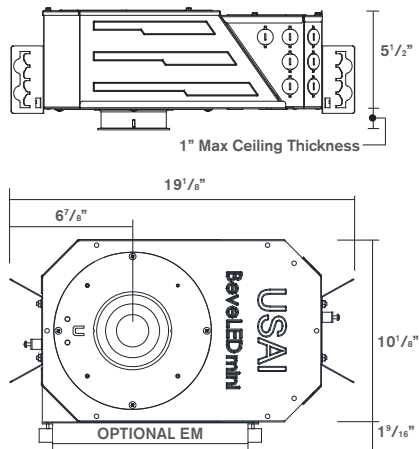
HOUSING OPTIONS

Flat Housing - FT

2"

1" Max Ceiling Thickness

$5^3/_4$"

$10^7/_8$" (Plan View)

$14^1/_2$" (Plan View)

Flat Housing, IC-Rated - FTIC (up to 15W maximum)

$2^1/_8$"

1" Max Ceiling Thickness

$5^3/_4$"

$10^7/_8$" (Plan View)

$14^1/_2$" (Plan View)

Flat Adjustable Housing - FTA

4"

1" Max Ceiling Thickness

7"

10"

$14^1/_2$" (Plan View)

$18^3/_{16}$" (Plan View)

New Construction Housing - NC1
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP

$5^1/_2$"

1" Max Ceiling Thickness

$19^1/_8$"

$6^7/_8$"

$10^1/_8$"

OPTIONAL EM

$1^9/_{16}$"

Millwork - B3RDM

TRIM DETAILS

Millwork - B3RAM
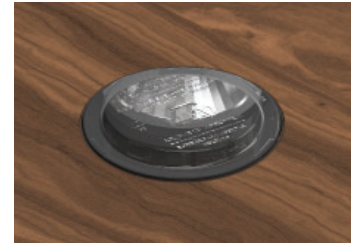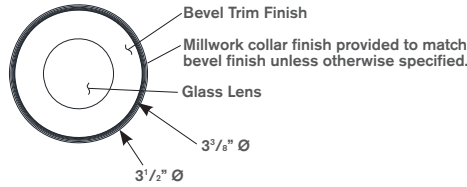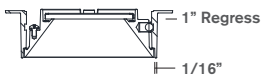
1" Regress

1/16"

Bevel Trim Finish

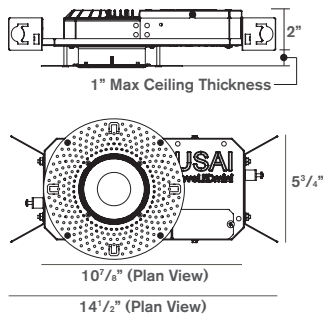Millwork collar finish provided to match bevel finish unless otherwise specified.
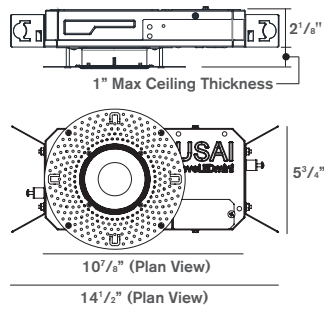
Glass Lens

3³/₈" Ø

3¹/₂" Ø

Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.
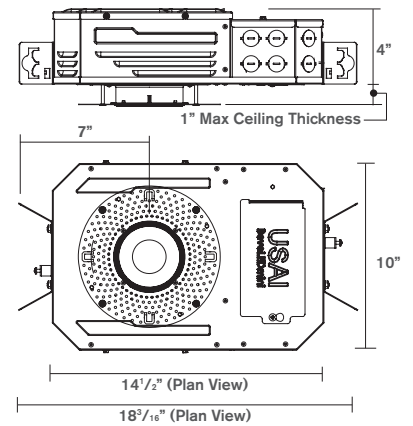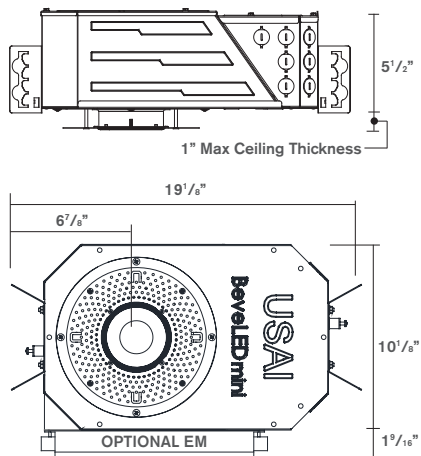
HOUSING OPTIONS

Flat Housing - FT

2"

1¹/₈" Max Ceiling Thickness

5³/₄"

10⁷/₈" (Plan View)

14¹/₂" (Plan View)

**Flat Housing, IC-Rated - FTIC
(up to 15W maximum)**

2¹/₈"

1¹/₈" Max Ceiling Thickness

5³/₄"

10⁷/₈" (Plan View)

14¹/₂" (Plan View)

Flat Adjustable Housing - FTA

4"

1¹/₈" Max Ceiling Thickness

7"

10"

14¹/₂" (Plan View)

18³/₁₆" (Plan View)

**New Construction Housing - NC1
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP**

5¹/₂"

1¹/₈" Max Ceiling Thickness

19¹/₈"

6⁷/₈"

10¹/₈"

1⁹/₁₆"

OPTIONAL EM
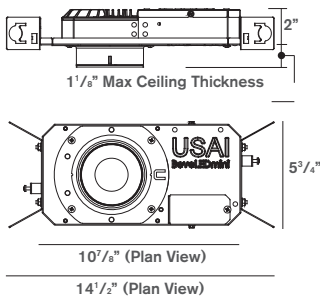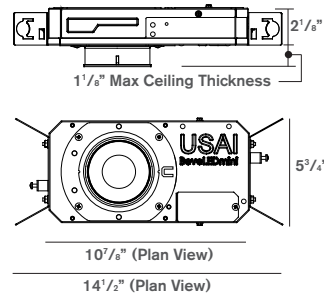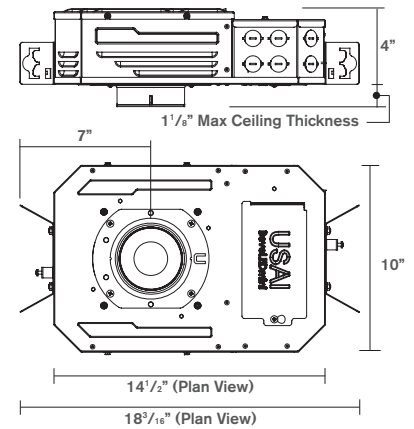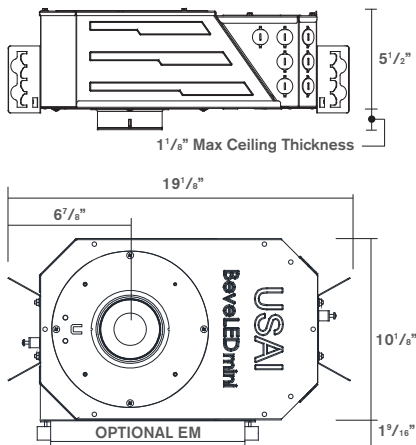
BEVELED MINI SPECIFICATIONS

FIELD REPLACEABLE LED LIGHT ENGINE
is serviceable through the aperture with a Phillips screwdriver. All USAI Lighting light engines feature industry-leading color consistency.

FIELD REPLACEABLE INTEGRAL DRIVER
Unless otherwise specified, a 0-10V, 100%-1% solid state electronic constant current integral D22 dimming driver with a high power factor is provided standard and sources 2mA. All integral dimming drivers are located within the fixture housing and are serviceable from below the ceiling through the aperture. Some on-time delay may be experienced depending on control system used. All dimming drivers comply with IEEE C62.41 surge protection.

INTEGRAL EMERGENCY BATTERY
An integral emergency battery pack is available as an option with the NC1 housing and integral driver/power supply only. IOTA emergency battery provides backup power for 90 minutes. NC1 fixtures are provided with an integral emergency battery that requires above ceiling access for service, and a remote test switch, which comes with a 24" lead length for location of the test switch. Remote EM test switch is dry/damp only; select EMW emergency option for a wet location-rated EM test switch. Fixtures that have no USAI EM option may be connected to an inverter (by others) for emergency lighting. Battery is not available with 347V.

Remote Emergency Test Switch included with NC1 housing and integral driver only. Above ceiling access required for service.

REMOTE LOCATION DRIVER
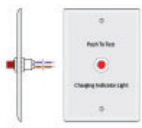BeveLED Mini is available for use with remotely located driver. Driver is provided separately for remote location on site, enclosure to be provided by others. Remote dimming driver power supply option must be clearly specified in the "RP" table. Remote power supplies require enclosures by others that meet local codes and must be located in an accessible service panel within 100ft of the light fixture; see remote driver table below for coordination of enclosure sizes and wire gauges required. All dimming drivers comply with IEEE C62.41 surge protection.

Remote Power Supply Requirements and Wiring Diagram
enclosure sizes and wire gauge with **1 fixture** per power supply.

Remote Power Supply	Dimming Option		Wire Gauge Required*	Minimum Enclosure Size Required (by others)	
				RP Only	RP with EM Option**
RPB-01-09X3 RPB-01-15X3 RPB-01-20X3 RPB-01-15WG2 RPB-01-20WG2	UNV-D4A	Lutron ECO, 0.1% (1)	14/12	6.25" W x 4" L x 2" H	14.5" W x 6.5" L x 3" H
	UNV-D4E	Lutron 5 ECO, 5% (1, 2)			
	UNV-D4H	Lutron H ECO, 1% fade (1, 2)			
	UNV-D4P	Lutron ECO, 1%			
	UNV-D6A	EldoLED 0-10V, 0.1%	18/16		
	UNV-D6B	EldoLED 0-10V, 0.1%			
	UNV-D6E	EldoLED 0-10V, 1%			
	UNV-D6F	EldoLED 0-10V, 1%			
	UNV-D7	EldoLED DALI, 0.1%			
	UNV-D18	Moons DMX, 0.1% (2)			
	120V-D3	Lutron 2-wire phase, 1%	14/12	5.75" W X 2.625" L x 2" H	
	120V-D19	Hatch 2-wire phase, 1% (1)	14/12		

1 Not available for Warm Glow
2 Not available for 9W

Not all dimming options are availbale with all LED light engine options. See RP ordering table for details.

* Wire gauge 14/12 = Maximum distance from light fixture to remote power supply is 100' using 12 gauge wire, 50' using 14 gauge wire.

* Wire gauge 18/16 = Maximum distance from light fixture to remote power supply is 100' using 16 gauge wire, 50' using 18 gauge wire.

** Emergency battery remote power supplies cannot be located any more than 50 feet from light fixture.

Note: All light fixtures must be wired in homeruns per wiring diagram below.

HOMERUN

INPUT WIRES
SEE DIMMING COMPATIBILTY SHEETS FOR DETAILS

RPB REMOTE POWER SUPPLY

FIXTURE

A
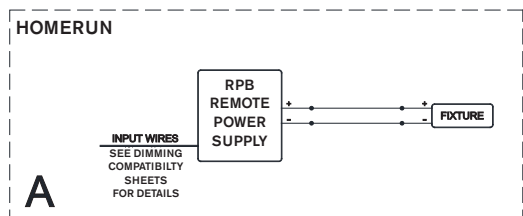
BEVELED MINI SPECIFICATIONS

HOUSING

All BeveLED Mini fixtures are field-flexible which allows for field changes from trimless or millwork to trimmed with a simple components change with parts from USAI. Housings are fabricated of 20 ga. steel construction with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring. FTIC and NCIC housing for use with 9W, 12W, and 15W light engines only are rated for direct contact with spray foam insulation of R-42 or less. FTIC housing is IC-rated up to 15W maximum.

MOUNTING

B3RDF overlap flange fixtures are designed for use in sheetrock, acoustical ceiling tile, and many other ceiling materials. B3RDL trimless fixtures are provided with a spackle collar and are designed for use in sheetrock/mud-in ceiling applications. B3RDM millwork fixtures are provided with a millwork collar and are designed for use in wood/millwork and stone construction applications. Butterfly brackets and residential grade adjustable nailer bars extendible from 14" to 24" centers with integral nails are provided standard for attachment to building structure. C-channel bars are optionally available for acoustical ceiling applications. If channel bars are specified for FT or FTIC housing, special reduced height channel bars (CM27 or CM52) will be provided.

Residential-grade nailer bars provided standard.

FIXTURE WEIGHT

FT and FTIC housings weigh 4 lbs. FTA housing weighs 10 lbs. NC1, NCIC, and NCCP housings weigh 11 lbs. NC1 housing with EM weighs 14 lbs.

WARRANTY

Based on IESNA LM80-2008, BeveLED has a 50,000 hour rated life at 70% lumen maintenance (L70). USAI Lighting Warranty covers replacement parts for 5 years from date of shipment. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

CEILING CUT OUT

B3RDF Trimmed with Overlap Flange: 3-5/8"Ø
B3RDL Trimless Spackle-in: 4-3/16"Ø
B3RDM Millwork Knife-edge: 3-9/16"Ø

LISTINGS

Dry/Damp/Wet location. AC and AB trim finishes are dry/damp only. EM test switch is dry/damp only. Select EMW option for wet location remote test switch. UL2043 rated for use in air handling plenums. NRTL/CSA-US tested to UL standards. IBEW union made.

NOTES

• Not for use in corrosive environment
• Use of pressure washer voids warranty

PHOTOMETRICS

Consult factory or website for IES files. Tested in accordance with IESNA LM79.

LED COLOR OPTIONS

Classic White Light

Our proprietary LED light engines achieve a 2-step MacAdam ellipse along the black body locus, resulting in reliable and uniform color from fixture to fixture. You'll see the results in consistently beautiful light throughout your space, whichever USAI LED product you specify.
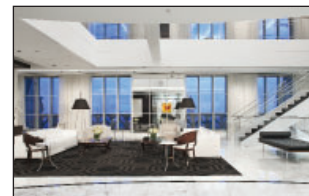
Warm Glow® Dimming

Warm Glow Dimming provides warmth and glow once possible only in dimmed incandescent sources. Utilizing our patented proprietary algorithm and circuitry, Warm Glow Dimming technologies precisely mimic the black body curve of a standard 100W A19 lamp by gradually transitioning from 2700K , 3000K or 3500K down to 2200K. The result is virtually indistinguishable from an incandescent light source.
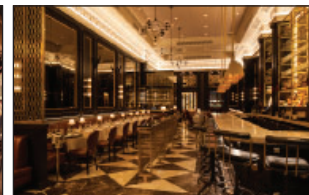
Color Select® Tunable White

Color Select represents the next innovation in color temperature control for advanced LED recessed downlighting. Color Select® products allow users to adjust color temperature from 6000K down to 2200K while independently adjusting intensity to achieve ultimate control over the quality of light in a space with a single fixture type. Color Select interfaces with standard dimming and control systems.

DIMMING DRIVER WIRING SCHEMES:

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.

2. Only qualified electricians in accordance to local codes should install these fixtures.

3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.

4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.

5. Cap any wires not used separately (not together).

D3 / DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V

D3 / DIML3 Dimmer Compatibility Chart				Qty Fixtures Per Dimmer* Fixture Wattage	
Manufacturer	Product	Part Number	Dimmed Light Output Range		
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
ETC	Unison DRd Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
Lutron	Maestro Wireless® 600W dimmer	MRF2-6ND-120-	100% - 1%	1 – 8	1 – 4
Lutron	Maestro Wireless® 1000W dimmer	MRF2-10ND-120-	100% - 1%	1 – 13	1 – 6
Lutron	HomeWorks® QS adaptive dimmer	HQRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 600W dimmer	HQRD-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 1000 W dimmer	HQRD-10ND-	100% - 1%	1 – 13	1 – 6
Lutron	Caseta Wireless® Pro 1000W dimmer	PD-10NXD-	100% - 1%	1 – 13	1 – 6
Lutron	Stanza® dimmer	SZ-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 adaptive dimmer	RRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 1000 W dimmer	RRD-10ND-	100% - 1%	1 – 6	1 – 3
Lutron	myRoom DIN power module	MQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120-	100% - 1%	1 – 26	1 – 13
Lutron	Homeworks® DIN power module	LQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® wallbox power module	HWI-WPM-6D-120	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4U module	HW-RPM-4U-120, LP-RPM-4U-120	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4A module	HW-RPM-4A-120, LP-RPM-4A-120	100% - 1%	1 – 26	1 – 13
Lutron	GP dimming panels	Various	100% - 1%	1 – 26	1 – 13
Lutron	Ariadni CL 250W dimmer	AYCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Diva CL 250W dimmer	DVCL-253P-, DVSCCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Grafik T CL or RF CL dimmer	GT-250M-, GTJ-250M-	100%-1%	1 – 8	1 – 4
Lutron	Nova T CL 250W dimmer	NTCL-250-	100%-1%	1 – 10	1 – 5

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D3 / DIML3
2 WIRE PHASE DIMMING

USAI Lighting®

www.usailighting.com
info@usailighting.com

1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

DIMMING DRIVER WIRING SCHEMES:

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

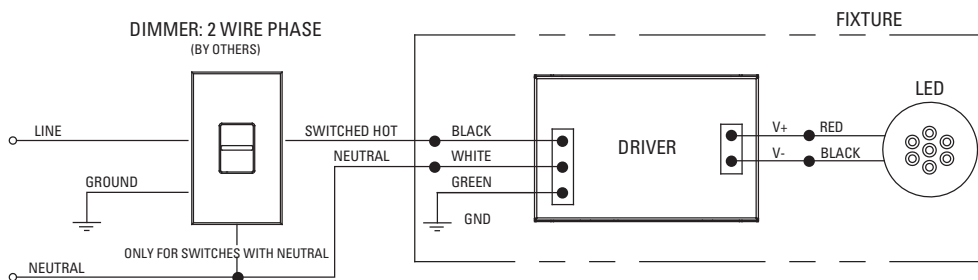### IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D4A / DIML4A LED: Lutron Hi-Lume Premier EcoSystem LED Driver (Dims down to 0.1%)

D4P / DIML4P LED: Lutron Hi-Lume Premier EcoSystem LED Driver (Dims down to 1%)

D4A / D4P EcoSystem Controls Dimmer Compatibility Chart			
Manufacturer	Product	Part Number	Maximum Quantity Light Fixtures Per Control
120V / 277V			
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	32
		FCJ/FCJS-ECO	3
120V ONLY			
Lutron	Energi Savr Node	QSN-1ECO-S	64
		QSN-2ECO-S	128
	GRAFIK Eye QS/ Homeworks QS control unit	QSGRJ-_ E, QSGR-_E	64
	Quantum Hub	QP2-_ _2C	128
		QP2-_ _4C	256
		QP2-_ _6C	384
		QP2-_ _8C	512
	HomeWorks QS / myRoom Plus power module	LQSE-2ECO-D	128

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D4A / DIML4A and D4P / DIML4P
EcoSystem CONTROLS

USAI Lighting®

www.usailighting.com
info@usailighting.com

1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

USAI Lighting

DIMMING DRIVER WIRING SCHEMES:

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.

2. Only qualified electricians in accordance to local codes should install these fixtures.

3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.

4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.

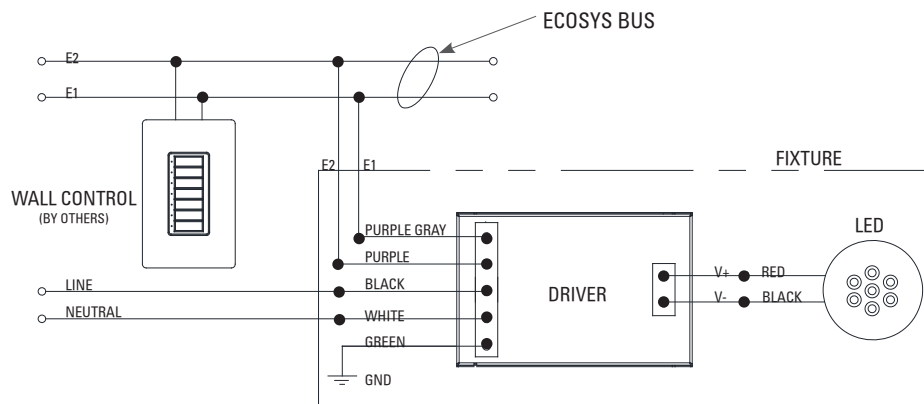5. Cap any wires not used separately (not together).

D4E / DIML4E LED: Lutron 5 Series EcoSystem LED Driver / LED Dimming Driver Wiring (Dims down to 5%)

D4E / DIML4E EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–5%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–5%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–5%	1–64	1 – 32
Lutron	Quantum	Various	100%–5%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D4H / DIML4H LED: Lutron H Series EcoSystem LED Driver with Fade to Black (dims down to 1%)

| D4H / DIML4H EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1 – 32
Lutron	Quantum	Various	100%–1%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D4E / DIML4E and D4H / DIML 4H
EcoSystem CONTROLS
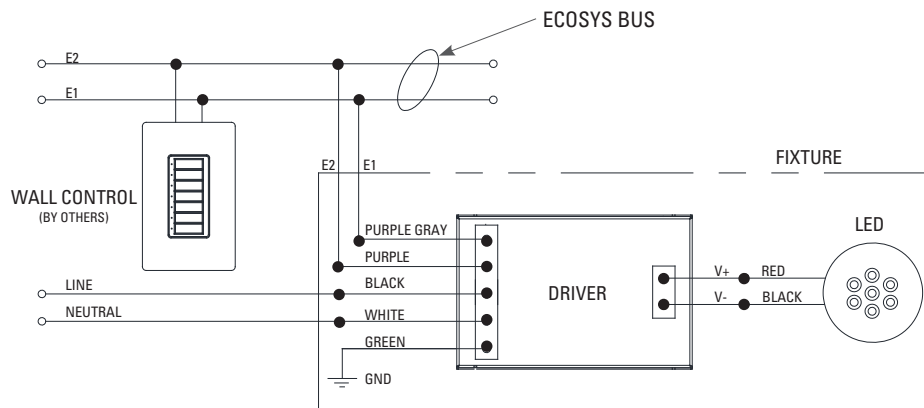
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IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS
1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D6A / DIML6A and D6E / DIML6E LED Dimming Compatibility Table
D6A / DIML6A and D6E / DIML6E are linearly programmed dimming drivers for use with the dimming controls listed in the table below.
D6A / DIML6A = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%
D6E / DIML6E = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6A / DIML6A and D6E / DIML6E Dimmer Compatibility Chart						Qty Fixtures Per Dimmer*
Manufacturer	Product	Part Number	Dimmed Light Output Range			Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
120V & 277V			DIML6A	6E		
Lutron	Diva	DVTV/NFTV with PP-20	99% - 0.1%	1%		
Lutron	Nova T	NTFTV with PP-20	99% - 0.1%	1%		
Lutron	Energi Savr Node	QSN-4T16-S	100% - 0.1%	1%		
Lutron	GP Dimming Panels	TVM2 Module	99% - 0.1%	1%		
Lutron	Interfaces	GRX-TVI w/ GRX3503	100% - 0.1%	1%		
Sensor Switch	nIO	nIO EZ	100% - 0.1%	1%		
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%		

D6B / DIML6B and D6F / DIML6F LED Dimming Compatibility Table
D6B / DIML6B and D6F / DIML6F are logarithmic-programmed dimming drivers for use with the dimming controls listed in the table below.
D6B / DIML6B = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%   D6F / DIML6F = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart					Qty Fixtures Per Dimmer*
Manufacturer	Product	Part Number	Dimmed Light Output Range		Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
120V & 277V			DIML6B	6F	
Bush-Jaeger	Electronic potentiometer	2112U-101	100% - 0.1%	1%	
Jung	Electronic potentiometer	240-10	100% - 0.1%	1%	
Leviton	Iluma Tech dimmer	IP710-DLX	100% - 0.1%	1%	
Lightolier (Philips)	Momentum (120V ONLY)	ZP600FAM120	100% - 0.1%	1%	
Merten	Electronic potentiometer	5729	100% - 0.1%	1%	
Pass & Seymour	Titan	CD4FB-W	100% - 0.1%	1%	
Watt Stopper	Miro	DCLV1	100% - 0.1%	1%	
Synergy	Wallbox Dimmers	ISD BC	100% - 0.1%	1%	
ABB	i-bus	SD/S 2.16.1	100% - 0.1%	1%	
Crestron	Modules	GLX-DIMFLV8, GLXP-DIMFLV8	100% - 0.1%	1%	
Crestron	Green Light	GLPAC-DIMFLV4-, GLPAC-DIMFLV8-	100% - 0.1%	1%	
Crestron	Green Light Power Pack	GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM	100% - 0.1%	1%	
Crestron	DIN Rail Analog Output Module	DIN-A08	100% - 0.1%	1%	
Crestron	DIN Rail 0-10V Fluorescent Dimmer	DIN-4DIMFLV4	100% - 0.1%	1%	
Crestron	iLux 0-10V Dimmer Expansion Module	CLS-EXP-DIMFLV	100% - 0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%	

DIMMING DRIVER WIRING SCHEMES:

NOTES: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

D6 / DIML6
0-10V DIMMING W/RELAY TO SWITCH POWER

DIMMER: 0-10V
0-10V (-) — GRAY
0-10V (+) — PURPLE
SWITCHED HOT — BLACK
NEUTRAL — WHITE
GREEN
DRIVER
V+ RED
V- BLACK
LED
FIXTURE
CLASS 2 CONTROL WIRES
LINE
NEUTRAL
RELAY (BY OTHERS)
GND

D6 / DIML6
0-10V DIMMING (NO RELAY)

DIMMER: 0-10V w/ POWER SWITCHING (BY OTHERS)
LINE
GROUND
0-10V (-) — GRAY
0-10V (+) — PURPLE
SWITCHED HOT — BLACK
NEUTRAL — WHITE
GREEN
DRIVER
V+ RED
V- BLACK
LED
FIXTURE
GND

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info@usailighting.com

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DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.

2. Only qualified electricians in accordance to local codes should install these fixtures.

3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.

4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.

5. Cap any wires not used separately (not together).

D7 / DIML7 and D7E Dimming Driver Wiring

D7 / DIML7 and D7E are linearly programmed dimming drivers.
D7 / DIML7 = EldoLED SOLOdrive DALI control dims from 100% to 0.1%
D7E = EldoLED ECOdrive DALI control dims from 100% to 1%

**D7 / DIML7 / D7E
DALI CONTROLS**

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DIMMING DRIVER WIRING SCHEMES:

NOTES:

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4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.

5. Cap any wires not used separately (not together).

D15 / DIML15 LED: 0-10V, 347V Dimming Driver Wiring (Dims down to 1%) 347V Only

D15 / DIML15 Dimmer Compatibility Chart			
Manufacturer	Product	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
347			Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Acuity	Synergy ISD-BC	100% - 1%	
Douglas Lighting	WPN-5721, WPN-5822	100% - 1%	
Hubbell	Light Hawk2 LHD-IRS3-N347-xx	100% - 1%	
Leviton	Illumatech IP710-DLZ with 347V relay	100% - 1%	
Leviton	Centura Fluorescent Control System	100% - 1%	
Lutron	Nova NFTV-* dimmer plus 347V relay	100% - 1%	
Lutron	Diva DVTV-* dimmer plus 347V relay	100% - 1%	

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D15 / DIML15
0-10V DIMMING W/RELAY TO SWITCH POWER

NOTE:

If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

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DIMMING DRIVER WIRING SCHEMES:

NOTES:
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IMPORTANT SAFETY INSTRUCTIONS
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4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
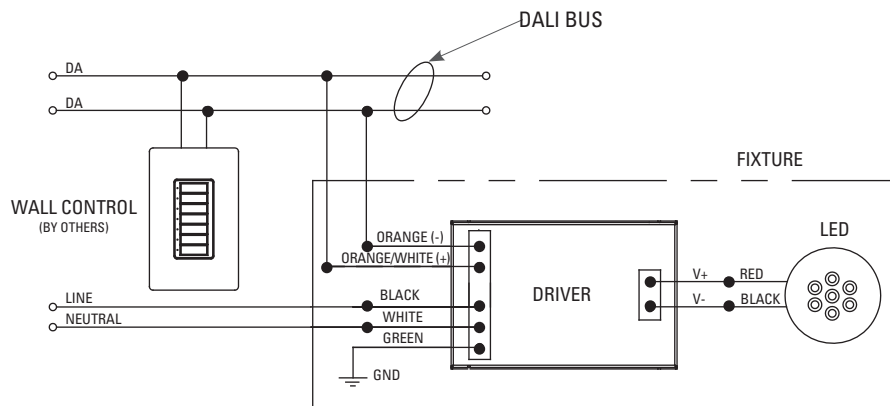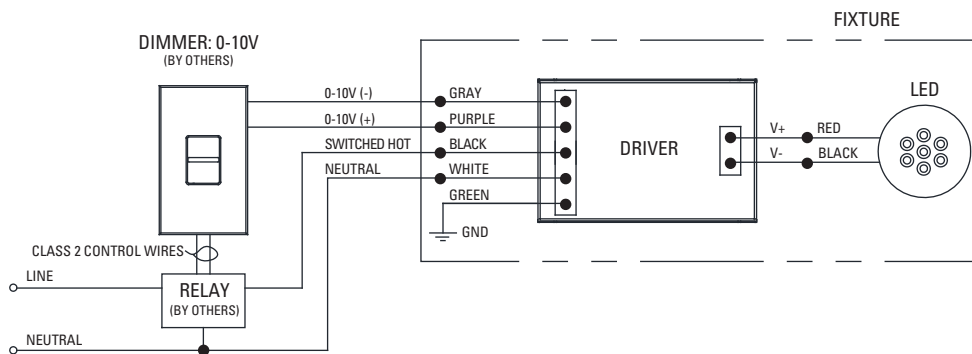5. Cap any wires not used separately (not together).

D18 Dimming Driver Wiring
D18 are programmed dimming drivers.
D18 Moons DMX control dims from 100% to 1%

DMX BUS -
SHIELDED DATA CABLE

The data cable used must meet the following requirements:
- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device, provided through Dip Switch on connection board, should be used on last fixture in line on a circuit to avoid signal loss.

D18
DMX CONTROLS

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DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
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2. Only qualified electricians in accordance to local codes should install these fixtures.
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4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D19 / DIML19 LED: Hatch XTC series or equivalent - Forward and Reverse Phase Dimming Driver. **Dims down to 1% contingent upon dimmer specification and load. 120V only.**

D19 / DIML19
2 WIRE PHASE DIMMING
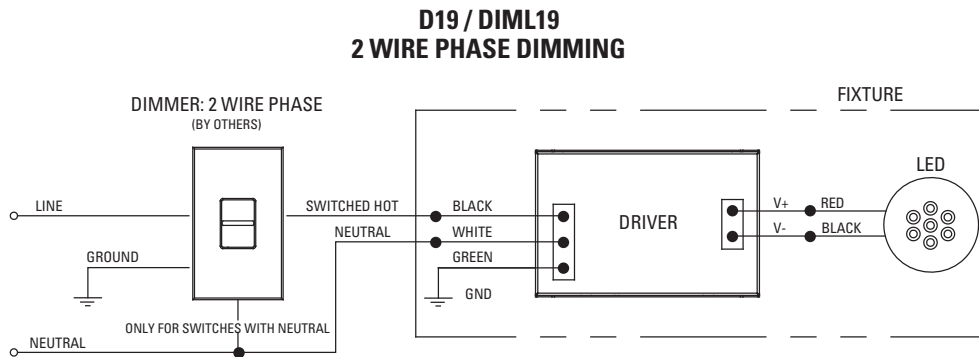
D19 / DIML19 Dimmer Compatibility Chart

120V ONLY		
Forward Phase / TRIAC Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	IPL06-10Z	Use fixture wattage per
	6613-xxx	fixture specification
Lutron	S-600P	sheet to determine
	S-603P	number of fixtures
	DV-600P	per dimmer. Max number
	DV-603P	of fixtures is limited by
	DVSC-603P	dimmer load rating.
	CT-600P	
	CT-603P	

120V ONLY		
Reverse Phase / ELV Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	6615	Use fixture wattage per
	IPE04-xxx	fixture specification
Lutron	NTELV-300	sheet to determine
	NTELV-600	number of fixtures
	SELV-300P	per dimmer. Max number
	SELV-303P	of fixtures is limited by
	DVELV-300P	dimmer load rating.
	DVELV-303P	

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DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
- SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D22 LED: ERP ESS 0-10V Dimming Driver Wiring (Dims down to 1%)

D22 Dimmer Compatibility Chart				
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
120V / 277V				Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Crestron	iLux dimmer expansion module	CLS-EXP-DIMFLV	100% - 1%	
Crestron	DIN Rail dimmer	DIN-4DIMFLV4	100% - 1%	
Crestron	DIN Rail analog output module	DIN-A08	100% - 1%	
Crestron	8 Channel dimmer module	GLX-DIMFLV8	100% - 1%	
Crestron	8 Channel dimmer module	GLXP-DIMFLV8	100% - 1%	
Leviton	IllumaTech dimmer	IP710-DLX	100% - 1%	
Lutron	Nova T	NFTV-XX	100% - 1%	
Lutron	Diva	DVTV-XX	100% - 1%	

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D22
0-10V DIMMING W/RELAY TO SWITCH POWER

NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

D22
0-10V DIMMING (NO RELAY)

NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

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DIMMING DRIVER WIRING SCHEMES:

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS
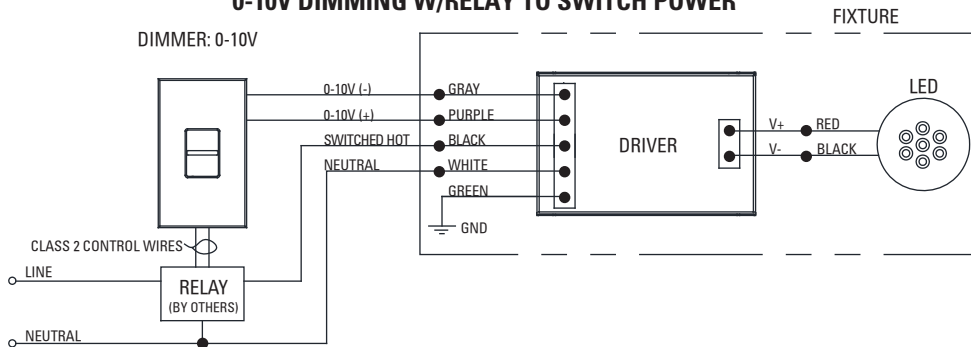## - SAVE THESE INSTRUCTIONS

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3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D22 LED: ERP ESS series or equivalent - Forward and Reverse Phase Dimming Driver.
Dims down to 1% contingent upon dimmer specification and load (see compatibility chart below). 120V only.

D22
2 WIRE PHASE DIMMING

D22 Dimmer Compatibility Chart

120V ONLY PHASE DIMMING				
Dimmer Information		Dimming Range		Qty Fixtures
Manufacturer	Product	Maximum	Minimum	Per Dimmer
Cooper	DAL06P	100%	0%	Use fixture wattage per fixture specification sheet to determine maximum number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating per dimmer specification sheet.
	DLC03P	100%	0%	
	SLC03P	100%	0%	
Leviton	6161	99%	10%	
	6631-2	100%	0%	
	6633-P	100%	0%	
	6673-10W	99%	6%	
	6683-IW	100%	2%	
	IPE04	100%	3%	
	IPI06-1LZ	99%	0%	
	VPE06	100%	5%	
Lightolier	ZP260QEW	99%	3%	
Lutron	CT103P	99%	6%	
	DV600P	99%	3%	
	DVCL-153P	99%	0%	
	DVELV303P	97%	3%	
	FAELV500	99%	7%	
	LG600P	99%	5%	
	MAELV600	99%	7%	
	S600P	99%	1%	
	S-603PG	86%	4%	
	SELV300P	97%	3%	
	TG-600P	99%	13%	
	TGCL-153P	99%	2%	

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INTENSITY DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

__DIML3 LED__: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V only.

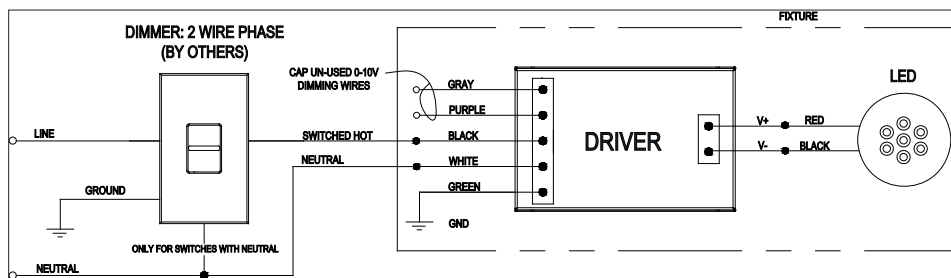| D3 / DIML3 Dimmer Compatibility Chart				Qty Fixtures Per Dimmer* Fixture Wattage	
Manufacturer	Product	Part Number	Dimmed Light Output Range	39W and Less	40W - 80W
120V Only					
ETC	Sensor+ Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
ETC	Unison DRd Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
Lutron	Maestro Wireless® 600W dimmer	MRF2-6ND-120-	100% - 1%	1 – 8	1 – 4
Lutron	Maestro Wireless® 1000W dimmer	MRF2-10ND-120-	100% - 1%	1 – 13	1 – 6
Lutron	HomeWorks® QS adaptive dimmer	HQRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 600W dimmer	HQRD-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 1000 W dimmer	HQRD-10ND-	100% - 1%	1 – 13	1 – 6
Lutron	Caseta Wireless® Pro 1000W dimmer	PD-10NXD-	100% - 1%	1 – 13	1 – 6
Lutron	Stanza® dimmer	SZ-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 adaptive dimmer	RRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 1000 W dimmer	RRD-10ND-	100% - 1%	1 – 6	1 – 3
Lutron	myRoom DIN power module	MQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120-	100% - 1%	1 – 26	1 – 13
Lutron	Homeworks® DIN power module	LQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® wallbox power module	HWI-WPM-6D-120	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4U module	HW-RPM-4U-120, LP-RPM-4U-120	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4A module	HW-RPM-4A-120, LP-RPM-4A-120	100% - 1%	1 – 26	1 – 13
Lutron	GP dimming panels	Various	100% - 1%	1 – 26	1 – 13
Lutron	Ariadni CL 250W dimmer	AYCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Diva CL 250W dimmer	DVCL-253P-, DVSCCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Grafik T CL or RF CL dimmer	GT-250M-, GTJ-250M-	100%-1%	1 – 8	1 – 4
Lutron	Nova T CL 250W dimmer	NTCL-250-	100%-1%	1 – 10	1 – 5

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

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INTENSITY DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
D4 / DIML4 3-Wire Dimmer Compatibility Chart					
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	1–53	1–26
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	1–53	1–26
Lutron	Nova T	NTF-10-	100%–1%	1–41	1–20
Lutron	Nova T	NTF-103P-	100%–1%	1–20	1–10
Lutron	Nova	NF-10-	100%–1%	1–41	1–20
Lutron	Nova	NF-103P-	100%–1%	1–20	1–10
Lutron	Vareo	VF-10-	100%–1%	1–20	1–10
Lutron	Skylark	SF-10P-, SF-103P-	100%–1%	1–20	1–10
Lutron	Diva	DVF-103P-, DVSCF-103P-	100%–1%	1–20	1–10
Lutron	Ariadni	AYF-103P-	100%–1%	1–20	1–10
Lutron	Vierti	VTF-6A-	100%–1%	1–15	1–7
Lutron	Maestro	MAF-6AM-, MSCF-6AM-	100%–1%	1–15	1–7
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%–1%	1–15	1–7
Lutron	RadioRA 2	RRD-F6AN-DV-	100%–1%	1–15	1–7
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%–1%	1–15	1–7
Lutron	Interfaces	PHPM-3F-120, PHPM-3F-DV	100%–1%	1–41	1–20
Lutron	GP Dimming Panels	Various	100%–1%	1–41	1–20
277V Only				40W and Less	41W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	1–53	1–26
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	1–53	1–26
Lutron	Nova T	NTF-10-277-	100%–1%	1–44	1–22
Lutron	Nova T	NTF-103P-277-	100%–1%	1–33	1–16
Lutron	Nova	NF-10-277-	100%–1%	1–44	1–22
Lutron	Nova	NF-103P-277-	100%–1%	1–33	1–16
Lutron	Skylark	SF-12P-277-, SF-12P-277-3	100%–1%	1–33	1–16
Lutron	Diva	DVF-103P-277-, DVSCF-103P-277-	100%–1%	1–33	1–16
Lutron	Ariadni	AYF-103P-277-	100%–1%	1–44	1–22
Lutron	Vierti	VTF-6A-	100%–1%	1–33	1–16
Lutron	Maestro	MAF-6AM-277-, MSCF-6AM-277-	100%–1%	1–20	1–10
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%–1%	1–33	1–16
Lutron	RadioRA 2	RRD-F6AN-DV-	100%–1%	1–33	1–16
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%–1%	1–33	1–16
Lutron	Interfaces	PHPM-3F-DV	100%–1%	1–88	1–44
Lutron	GP Dimming Panels	Various	100%–1%	1–88	1–44

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

USAI®

www.usailighting.com
info@usailighting.com

1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

USAI Lighting

COLOR SELECT®
Covered By US Patents 8,581,520 and 8,456,109

INTENSITY DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with EcoSystem Control / LED Dimming Driver Wiring (Dims down to
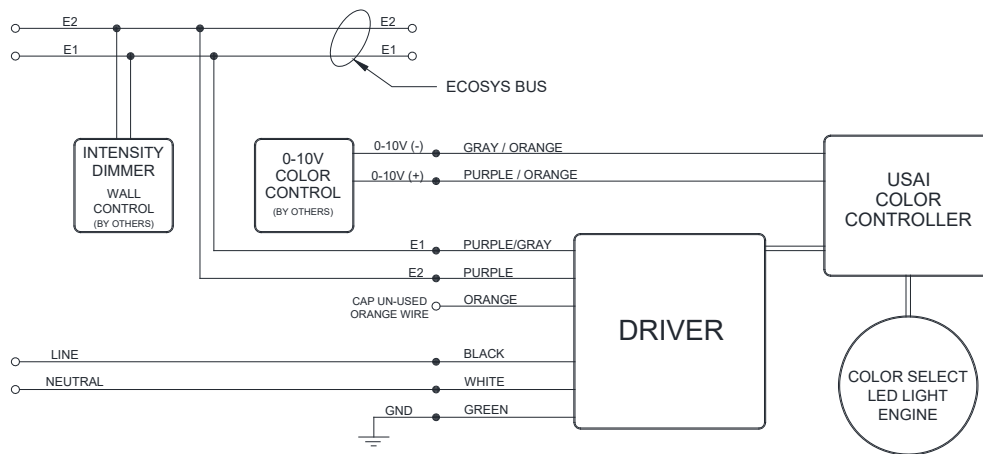
D4 / DIML4 EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1 – 32
Lutron	Quantum	Various	100%–1%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

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INTENSITY DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

0-10V Dimming w/ Relay Switch to Power
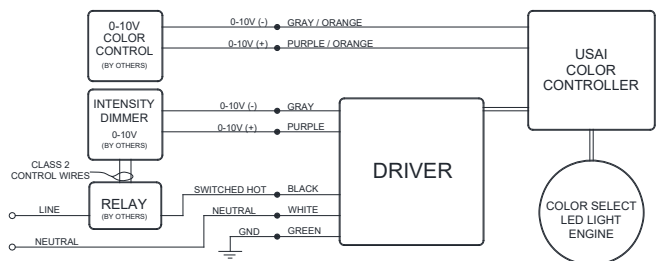
0-10V Dimming

D6A / DIML6A and D6E / DIML6E LED Dimming Compatibility Table

D6A / DIML6A and D6E / DIML6E are linearly programmed dimming drivers for use with the dimming controls listed in the table below
D6A / DIML6A = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%
D6E / DIML6E = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6A / DIML6A and D6E / DIML6E Dimmer Compatibility Chart			Dimmed Light Output Range		Qty Fixtures Per Dimmer*
Manufacturer	Product	Part Number	DIML6A	6E	
120V & 277V					Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Lutron	Diva	DVTV/NFTV with PP-20	99% - 0.1%	1%	
Lutron	Nova T	NTFTV with PP-20	99% - 0.1%	1%	
Lutron	Energi Savr Node	QSN-4T16-S	100% - 0.1%	1%	
Lutron	GP Dimming Panels	TVM2 Module	99% - 0.1%	1%	
Lutron	Interfaces	GRX-TVI w/ GRX3503	100% - 0.1%	1%	
Sensor Switch	nIO	nIO EZ	100% - 0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%	

D6B / DIML6B and D6F / DIML6F LED Dimming Compatibility Table

D6B / DIML6B and D6F / DIML6F are logarithmic-programmed dimming drivers for use with the dimming controls listed in the table below
D6B / DIML6B = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%   D6F / DIML6F = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart			Dimmed Light Output Range		Qty Fixtures Per Dimmer*
Manufacturer	Product	Part Number	DIML6B	6F	
120V & 277V					Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Bush-Jaeger	Electronic potentiometer	2112U-101	100% - 0.1%	1%	
Jung	Electronic potentiometer	240-10	100% - 0.1%	1%	
Leviton	Iluma Tech dimmer	IP710-DLX	100% - 0.1%	1%	
Lightolier (Philips)	Momentum (120V ONLY)	ZP600FAM120	100% - 0.1%	1%	
Merten	Electronic potentiometer	5729	100% - 0.1%	1%	
Pass & Seymour	Titan	CD4FB-W	100% - 0.1%	1%	
Watt Stopper	Miro	DCLV1	100% - 0.1%	1%	
Synergy	Wallbox Dimmers	ISD BC	100% - 0.1%	1%	
ABB	i-bus	SD/S 2.16.1	100% - 0.1%	1%	
Crestron	Modules	GLX-DIMFLV8, GLXP-DIMFLV8	100% - 0.1%	1%	
Crestron	Green Light	GLPAC-DIMFLV4-, GLPAC-DIMFLV8-	100% - 0.1%	1%	
Crestron	Green Light Power Pack	GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM	100% - 0.1%	1%	
Crestron	DIN Rail Analog Output Module	DIN-A08	100% - 0.1%	1%	
Crestron	DIN Rail 0-10V Fluorescent Dimmer	DIN-4DIMFLV4	100% - 0.1%	1%	
Crestron	iLux 0-10V Dimmer Expansion Module	CLS-EXP-DIMFLV	100% - 0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%	

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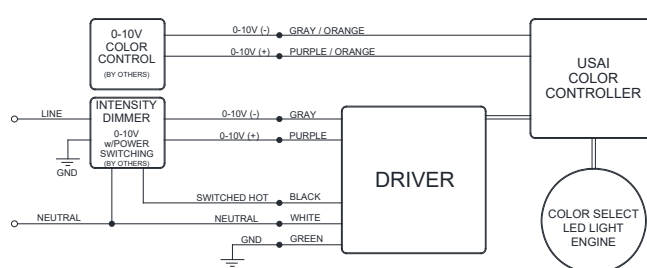**Covered By US Patents 8,581,520 and 8,456,109**

INTENSITY DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

DIML7 LED: eldoLED DALI dimming driver (dims down to 0.1%)
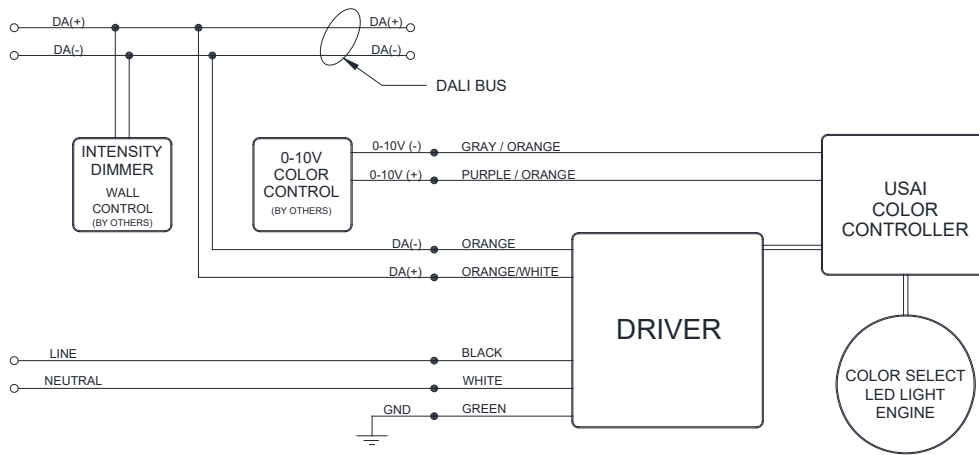
NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

PCOH2824OI
Cohen Pendant
Oil Rubbed Bronze

DETAILS

Material: Steel

Glass/Shade Description: Etched Acrylic

Remote Included: No

LAMPING

Light Source: Integrated LED

PHOTOMETRICS

LED

Lumens: 1790

LED Total Watts: 34

Color Rendering: 90

Color Temperature: Warm(3000K)

ELECTRICAL

Dimmable: Yes

Dimmable To: 5%

Voltage: 120v

Wire Length: 8'

INSTALLATION

Location Rating: Damp

Sloped Ceiling Compatible: Yes

DIMENSIONS

Dimensions: 23.5" W x 2.75" H x 23.5" D

Overall Height: 85.5"

Canopy Dimensions: 6.00" Dia.

Weight: 5.30 lbs

Dimensional Weight: 21.00 lbs

LIGHTOLIER
by **Signify**

Provides a comfortable 60° cut-off to both the actual and reflected source. Utilizes a robust frame-in kit, light engine and reflector design that is designed for a wide variety of installation conditions with a plenum depth of 4-1⁄2".

Project:
Location:
Cat.No:
Type: **S1/S1E**
Lamps: Qty:
Notes:

Frame

(frame + trim = complete product)   example: 4RN

Series	Aperture	Installation	Options		
4 4-inch Non-IC	**R** Round	**N** New construction (Non-IC)	**—** Universal 120/277V (specify for Power Over Ethernet) **LC** Chicago Plenum **EM** Emergency[1]	**3** 347V (not compatible with ELV dimming) **3IP** 347V with Interact Pro (for use with 0-10V engines only) **IP** Interact Pro (for use with 0-10V engines only)	
		R Remodeler (Non-IC)	**—** Universal 120/277V (specify for Power Over Ethernet)	**3** 347V (not compatible with ELV dimming)	
		A AirSeal (IC)	**—** Universal 120/277V (specify for Power Over Ethernet)		

Trim

example: P4RDL20835CDZ10U

Series	Style	Lumen	CRI/CCT	Reflector	Flange	Dimming[2]	Voltage
P4R LyteProfile 4-inch Round	**DL** Downlight **LW** Lensed Wall Wash	**05** 500lm (0-10V only) **10** 1000lm **15** 1500lm **20** 2000lm **25** 2500lm	**827** 80CRI / 2700K **830** 80CRI / 3000K **835** 80CRI / 3500K **840** 80CRI / 4000K **850** 80CRI / 5000K	**CL** Specular clear **CC** Comfort clear **CD** Comfort clear diffuse **WH** White (matte)	**—** White (matte) **P** Polished	**Z10** 0-10V 1% **L** Lutron LDE1 EcoSystem (fade-to-black)	**U** Universal 120/277/347V
				BK Black (matte)	**—** White (matte) **B** Black (matte)	**P** Power over Ethernet (PoE) **E** Ethernet 48V DC Only compatible with 1000 (10) to 2500 (25) lumen configurations	

Accessories

CAEM Field instalable EM pack (for use with new construction frame only)
AMS ActiLume multi-sensor (optional accessory for PoE configurations)
SWZDT SpaceWise wireless controller with dwell time functionality (compatible with all 0-10V options, see SWZDT spec sheet)
SRAINT InterAct Office Accessory (for use with Lightolier UniFrame 0-10V products)

1. Emergency (EM) frame includes emergency battery with ceiling and reflector mountable test switch (see page 2 for details and limitations). Integral emergency battery not compatible with Power over Ethernet configurations.
2. Consult factory for available Dali and 0-10V dimming to 0.1% availability.

Note: For reflector mounted test switch add "EM" to end of catalog code (example: P4RDL20835CDZ10UEM). Leave blank for ceiling mounted test switch.

IC INSULATION CONTACT   c(UL)us LISTED   WET LOCATION   RoHS COMPLIANT   ENERGY STAR   interact ready.

P4R LyteProfile 4"
Round Downlight & Lensed Wall Wash

Features

Optics
- Provides a 60° cutoff (physical and reflected)
- Wide beam distribution for general illumination
- Spun and anodized reflectors available in specular (clear), semi-specular (comfort clear and diffuse finishes. Also available in white and black painted finishes.

Quality of light
- Lumen Maintenance: L80 at 60,000 hours
- Color consistency: 3 SDCM
- 80 CRI minimum

Construction (New Construction)

- Galvanized stamped steal for dry / plaster ceilings.
- Pre-installed telescoping mounting bars (13"–24")
- Frame accommodates C- channel, black iron, and 3/4" EMT for mounting distances greater than 24" between joists.
- Manufactured from 20 gage galvanized steel construction with rolled edge aperture to guide cutting tools for perfect hole cutting.

Max ceiling thickness is 1.5" (38 mm).
Including PoE frame 4.88" (124 mm).

Patented install Mounting frame

- Pre-installed mounting bars allow for fast and tool–less install into T-grid & hat channel ceilings
- Close-cut aperture design eliminates an undesired gap between ceiling material and reflector.
- Simple plug-and-play connection between frame and light engine from below the ceiling allows for:
  - Easy upgrades
  - Technology changes
  - Repairs and troubleshooting

Dimming

– Advance 0-10V 1% dimming
– Lutron Hi-lume EcoSystem H Series 1% dimming
– EldoLED ECOdrive Dali 1% dimming
– EldoLED SOLOdrive 0-10V 0.1% dimming
– EldoLED DMX POWERdrive

Light engine

Quick connect power pack allow for easy installation and replacement from below ceiling with no need for additional wiring. This allows for:

- Frame and ceiling installation to be performed while still finalizing details such as lumen packages, CCT and control type.
- Easy replacement of electronics at end of life with minimal wasted material and labor required.
- Ease and upgradability of technology.

Optical systems

Comfort throughout the space:
True 50° physical cutoff and 45° reflected cutoff

Quality of light:
2 SDCM ensures color consistency from fixture to fixture and over the luminaire's long lifetime.

Wired Controls Options

Interact Office Wired (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- PoE lighting controller is accessible from below.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.
- Optional integral emergency controller and battery pack provides 600lm nominal output.
- Test switch and indicator light mounted on side of chassis on one end.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of 20C to 30C (–4F to 86F) ambient, and 45-85% relative humidity.
- For more information on Interact Office Wired, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/systemareas/offices.

Interact Office Wired (PoE), Static White and Tunable White:

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible Zigbee Green Power wall dimmer and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on wayfinding, room/desk reservation and offers open APIs
- Requires compatible Interact Office Gateway and internet connectivity for commissioning.
- For more information on Interact Office Wireless, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/systemareas/offices.

Interact Pro (IAP)

- Interact Pro brings the power of connected lighting to small and medium businesses without the complexity usually associated with connected lighting.
- Interact Pro includes an app, a portal and a broad portfolio of wireless Luminaires, lamps and retrofit kits all working on the same system.
- Commissioning via Interact Pro App (Android or iPhone).
- Prepare commissioning remotely via Interact Pro portal.
- Requires compatible Interact Pro Gateway and internet connectivity for commissioning.
- Compatible with UID8451/10 ZigBee Greenpower wireless dimmer switch.
- Compatible with wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) or wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact Pro visit: www.interact-lighting.com/pro.
- For more information on Interact Ready visit: www.philips.com/interact-ready.

Power over Ethernet

Powered via Philips PoE lighting controller: complies with FCC rules per Title 47 part 15 (Class A) for EMI / RFI (conducted & radiated). PoE lighting controller accessible from below ceiling.

Rated life: 60,000 hrs at 80% lumen maintenance based on IES LM-80-08 and TM-21-11.

Emergency

For reflector mounted test switch add "EM" to end of the catalog code (example: P4RDL20835CDZ10UEM). Leave blank for ceiling mounted test switch.

Reflector mounted test switch requires above ceiling access and 1.25" max ceiling thickness for downlight only. See LED-EM spec sheet for more details.

ENERGY STAR® exceptions

– 500lm configurations
– Black finishes
– PoE drivers

Labels and Listings

– cULus listed for wet locations
– CCEA (frames with *LC suffix)
– ENERGY STAR® certified
– RoHS certified

Warranty

5 year limited warranty
Visit Signify.com/warranties for more information on Signify's standard 5–year limited warranty on complete luminaire systems.

P4R   LyteProfile 4"

Round Downlight & Lensed Wall Wash

Dimensions

Round New Construction

Round Remodeler
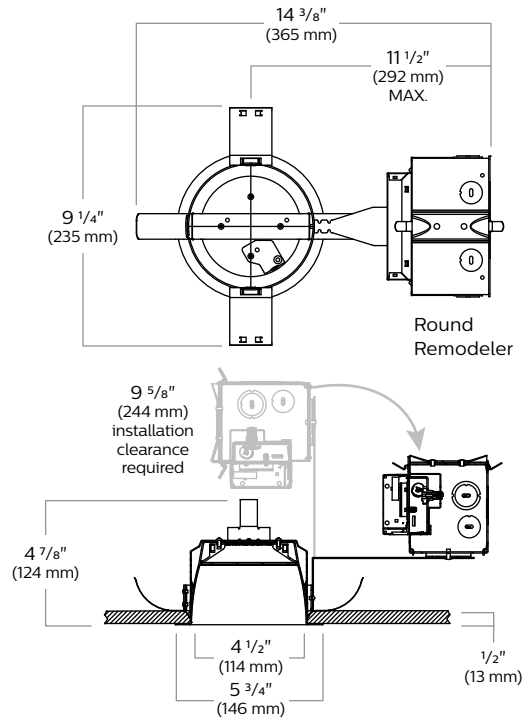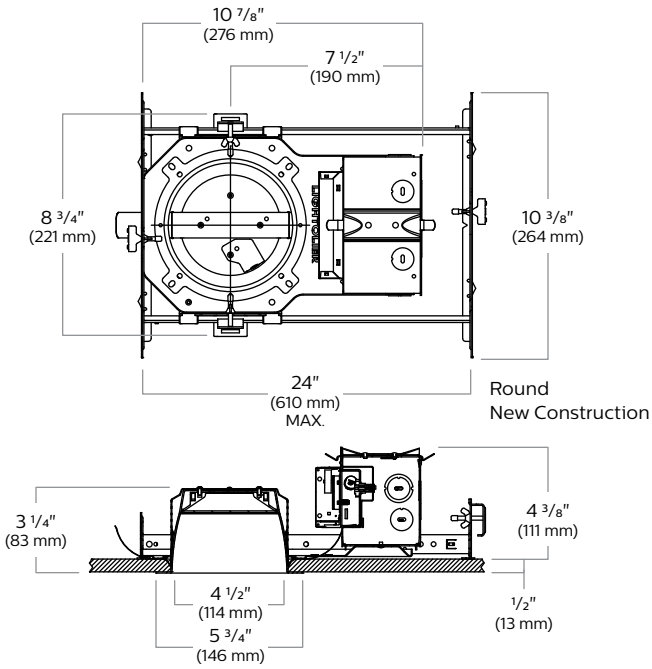
AirSeal (A)
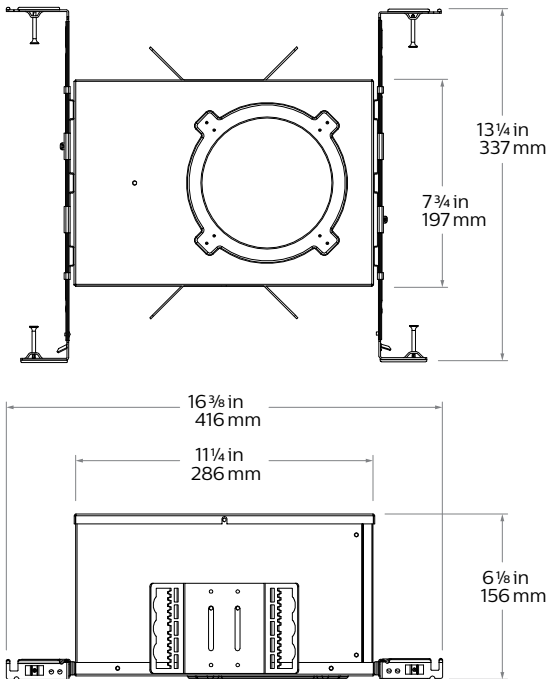
Electrical

Product	Input Volts	Input Freq.	Input Current (A)	Input Power (W)
P4*05*Z10U	120	50/60Hz	0.06	7
	277		0.029	7
P4*10*Z10U	120	50/60Hz	0.122	11
	277		0.038	10
P4*15*Z10U	120	50/60Hz	0.13	15
	277		0.063	16
P4*20*Z10U	120	50/60Hz	0.175	21
	277		0.078	21
P4*25*Z10U	120	50/60Hz	0.22	26
	277		0.099	27

Product	Input Volts	Input Freq.	Input Current (A)	Input Power (W)
P4*10*LU	120	50/60Hz	0.094	10
	277		0.047	10
P4*15*LU	120	50/60Hz	0.134	15
	277		0.07	15
P4*20*LU	120	50/60Hz	0.176	21
	277		0.086	21
P4*25*LU	120	50/60Hz	0.23	27
	277		0.106	28

P4R LyteProfile 4"
Round Downlight & Lensed Wall Wash

P4RDL20835CLZ10U • 20W LED, 80 CRI, 3500 K

Candela Curves
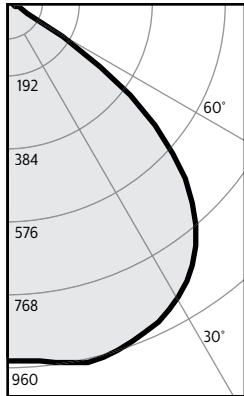
Angle	Mean CP	Lumens
0	937	
5	940	90
10	956	
15	960	271
20	941	
25	921	424
30	886	
35	836	520
40	759	
45	652	495
50	498	
55	289	250
60	54	
65	20	24
70	12	
75	6	7
80	3	
85	1	1
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	37	7.0'
6'	26	8.4'
7'	19	9.8'
8'	15	11.2'
9'	12	12.6'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	90.3	0.87
6'	59.3	0.57
7'	42.3	0.41
8'	35.3	0.34
9'	28.2	0.27

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method – Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	112	108	105	103	106	101	102	98	98	95	90
2	104	98	93	88	96	87	93	85	90	84	80
3	97	88	82	77	87	76	84	75	82	74	71
4	90	80	73	67	79	67	76	66	74	65	62
5	83	72	65	59	71	59	69	58	68	58	55
6	77	66	58	53	65	52	63	52	62	52	49
7	72	60	53	47	59	47	58	47	57	46	44
8	67	55	48	42	55	42	53	42	52	42	40
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	46	35	46	35	45	35	33

Room Cavity Ratio

Report[1]: 1550GFR

Output lumens:	2082 lms	Efficacy:	105.7 lm/w
Spacing Criterion:	1.4	CCT[3]:	3500 K
Beam Angle:	99°	CRI:	80 min
Input Watts[2]:	19.7 W		

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0–30	785	37.7%
0–40	1306	62.7%
0–60	2050	98.5%
0–90	2082	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

P4RLW20835CLZ10U • 20W LED, 80 CRI, 3500 K

Candela Curve

Room side   Wall side
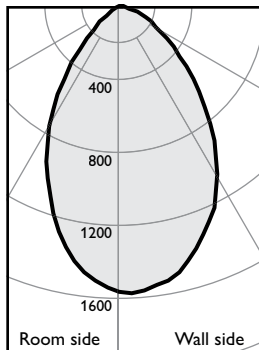
Report[1]: 1559GFR

Efficacy:	104.6 lm/w
Output lumens:	2060 lms
Input watts[2]:	19.7 W
CRI:	80 min
CCT[3]:	3500K

Multiple unit data
Footcandles on wall

2' from wall
3' on ctr.

Distance from ceiling in feet			
1	38	25	38
2	64	51	64
3	59	54	59
4	47	45	47
5	36	36	36
6	28	28	28
7	23	23	23
8	19	19	19
9	16	16	16
10	14	14	14
12	11	11	11
14	10	10	10

Multiple unit data
Footcandles on wall

3' from wall
3' on ctr.

Distance from ceiling in feet			
1	14	12	14
2	30	29	30
3	39	38	39
4	40	39	40
5	36	36	36
6	32	31	32
7	27	27	27
8	23	23	23
9	20	20	20
10	17	17	17
12	14	14	14
14	12	12	12

Multiple unit data
Footcandles on wall

3' from wall
4' on ctr.

Distance from ceiling in feet			
1	12	9	9
2	25	20	20
3	32	28	28
4	31	30	30
5	28	27	27
6	24	24	24
7	21	21	21
8	18	18	18
9	16	15	15
10	14	14	14
12	11	11	11
14	10	10	10

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.

Alcon Lighting **Pavo** Architectural LED 4 Inch Cylinder/Square Surface Mount Direct Down Light Fixture

FIXTURE SPECIFICATIONS

INTENDED USE

The **Pavo LED Architectural Surface Mount Down Light** is a versatile low glare lighting fixture that can be used indoor and outdoor, up or down, in commercial or retail settings. The Pavo is used to accent and create dramatic effects while providing a great source of lighting from above.

FEATURES

Construction: Round One Piece High Grade Aluminum Extrusion with Die Cast Aluminum Top Plate Tamper Resistant

Adjustable Option: 25° Rotation

Light Engine: LED Chip-On-Board

Lens: Round One Piece Extruded Aluminum with Powder Coat Finish, Clear, Tempered Glass and Silicone O-Ring

Reflector: Glare-Free, One piece, Heavy Gauge Aluminum

Mounting: Includes Bracket for Installation Directly to a 3-1/2" or 4" octagonal electrical junction-box

Voltage: 120 *(120-277 Available for Dimming)*

CRI: 84+

Dimming: Universal Dimming System Compatitble with Most 3-Wire ELV, 2-Wire Incandescent and 5-Wire 0-10V Fluorescent Dimmers

Life: L70 - 50,000 Hours

Emergency: 90 Minutes Minimum Remote Test Switch, Plate Cover, Junction Box Included

Listing: ETL/cETL Listed Suitable for Wet Location

ORDERING INFORMATION Example: (11223-DIR-15W-WF60-UNI-40K-WH-EM)

Model		Lumen Output		Beam Spread		Dimming		Color Temperature		Finish		Options
11223 Pavo-Square View Product ▶	-	*DIRECT DOWN LIGHT* **DIR-15W** 15 watts | 1000 lms **DIR-22W** 22 watts | 1500 lms	-	**WF60** 60° Wide Flood **PE2²** 2° Pencil **NS10²** 10° Narrow Spot **SP20²** 20° Spot	-	**ND** Non-Dimming (120V) **UNI** Universal (Triac / ELV / 0-10V)	-	**17K³,⁴** 1700K **25K³,⁴** 2500K **27K³** 2700K **30K** 3000K **35K³** 3500K **40K** 4000K	-	**WH** White **BK** Black **BR³** Bronze	-	**EM** Remote Emergency Backup Battery **HXC²** Black Hexcell Louver **FR²** Frosted Lens
11235 Pavo-Round View Product ▶		*ADJUSTABLE* **ADJ-9W¹** 9 watts | 700 lms View Product ▶		**FL45** 45° Flood **WW²** Wall Wash				**50K³** 5000K **56K³,⁴** 5600K **27C³** 2700K (97 CRI) **30C³** 3000K (97 CRI)		**SL³** Silver		**JB** Integral Junction Box

¹Only Available for Pavo-Round.
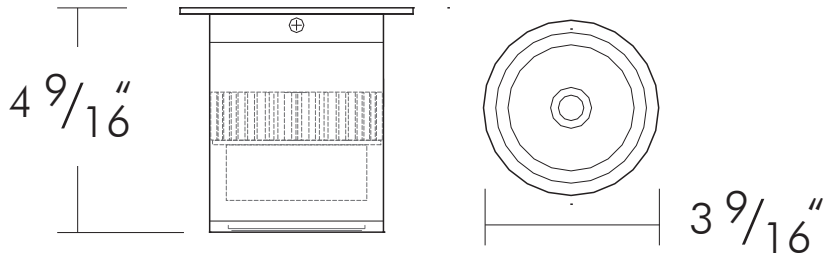²Not Available for Adjustable Models.
³Special Order. Minimum lead time may apply.
⁴Minimum Order Required (25).

SPEC GRADE

DIMMABLE

LIMITED 5 YEAR WARRANTY

Dark Sky Compliant

WET LOCATION SUITABLE

IP65 TESTED ETL APPROVED

cETLus

Round - Direct

4 9/16 "

3 9/16 "

Round - Adjustable

5 3/16 "

1 5/8 "

5 7/8 "

3 9/16 "

30°   30°

Square - Direct

4 5/8 "

3 7/16 "

LED
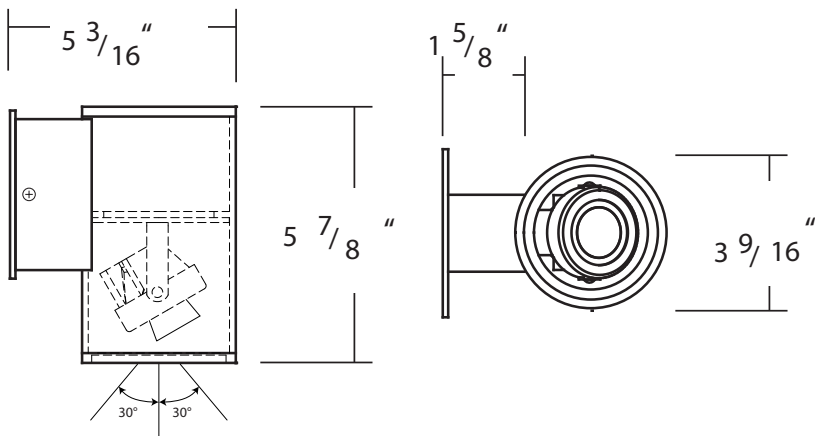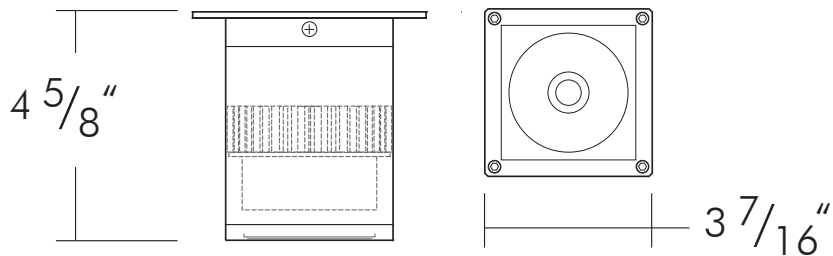
Stonco LytePro LED medium wall sconce LPW16 features outstanding value in a compact, architectural design. This powerful and precise combination offers outstanding energy savings with excellent photometric performance. LPW16 is ideal for entryways and corridors in addition to wall lighting applications requiring strong lateral spacing and forward pattern projection.

Project:

Location:

Cat.No:

Type: **S3E**

Lamps: Qty:

Notes:

Ordering guide

Example: **LPW16-20-NW-G3-3-120-PCB-BZ**

Prefix	Wattage	LED Color/Gen	Distribution	Voltage	Options Photocontrol	Finish
LPW16						
LPW16 LytePro 16 LED medium wall sconce	**20** 20W **30** 30W **50** 50W	**NW-G3** Neutral White 4000K 70 CRI Generation 3 **WW-G3** Warm White 3000K 70 CRI Generation 3	**3** Type 3 **4** Type 4	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120–277V (50/60Hz) **HVU** 347–480V (50/60Hz)	**---** None **PCB** Photocontrol Button[1]	**Textured** **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray **Customer specified** **RAL** Specify optional color or RAL (ex: OC–LGP or OC–RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

Stocked luminaires – Ordering guide

Catalog Number	Description	Master Pack, Qty	UPC Code
LPW16-G3-8-BZ	LPW16, 30W, 650mA, 4000K, Type 3, 120-277V, Bronze textured paint	6	622252813872
LPW16-G3-8-DGY	LPW16, 30W, 650mA, 4000K, Type 3, 120-277V, Dark gray textured paint	6	622252813865

Stocked accessories - Ordering guide (Must be ordered separately)

Catalog Number	Description	Master Pack, Qty	UPC Code
LPWCVRPLT-BZ[2]	LPW Universal wall cover mounting plate, Bronze textured paint	(none)	786034960618

[1] Must specify voltage. Not available in 347V or 480V.

[2] Other colors available upon request as made-to-order

DLC QPL LISTED

ETL INTERTEK LISTED C US

LPW16 LytePro

LED medium wall sconce

Dimensions

12.0" (30 cm)

5.7" (15 cm)

4.6" (12 cm)

Luminaire weight: 6lbs (2.7 kg)

Accessory dimensions (ordered separately)

LPWCVRPLT-BZ LPW Universal wall cover mounting plate, 0.08" aluminum, bronze textured paint (used to cover larger pre-existing opening or surfaces, field installed). Offers same J-Box pattern as luminaire or may lagged to wall using (4) knockouts.
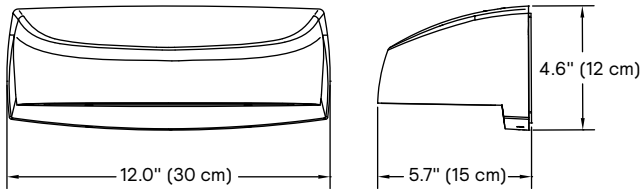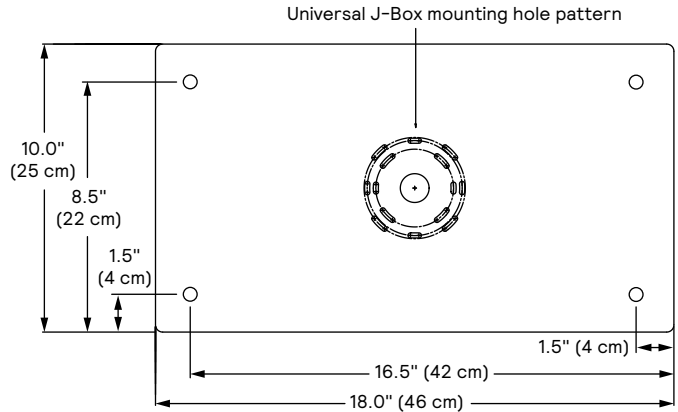
Universal J-Box mounting hole pattern

10.0" (25 cm)

8.5" (22 cm)

1.5" (4 cm)

1.5" (4 cm)

16.5" (42 cm)

18.0" (46 cm)

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
LPW-16-20-NW-G3	16	400	4000	22.3	2,316	B1-U0-G1	104	2,242	B1-U0-G1	101
LPW-16-30-NW-G3	16	650	4000	34.3	3,474	B1-U0-G1	101	3,364	B1-U0-G1	98
LPW-16-50-NW-G3	16	900	4000	48.0	4,629	B1-U0-G1	96	4,482	B1-U0-G1	93
LPW-16-20-WW-G3	16	400	3000	22.3	2,132	B1-U0-G0	96	2,065	B1-U0-G1	93
LPW-16-30-WW-G3	16	650	3000	34.3	3,200	B1-U0-G1	93	3,098	B1-U0-G1	90
LPW-16-50-WW-G3	16	900	3000	47.5	4,263	B1-U0-G1	90	4,128	B1-U0-G1	87

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown.

Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

Predicted lumen depreciation data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

Ambient Temperature °C	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
up to 40°C	>200,000 hours	>54,000 hours	>96%

Optical distributions

Based on LPW16-30-NW-G3 at 15' mounting height

Type 3

Type 4
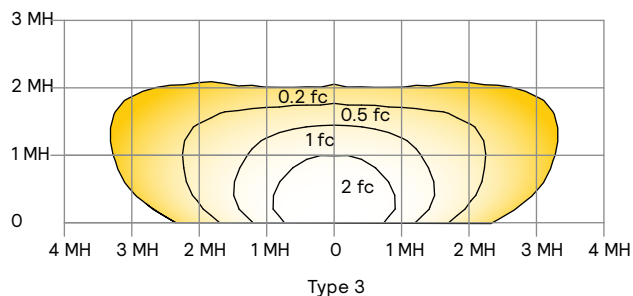
LPW16 15' mounting height			
Mounting height	10 ft	12 ft	15 ft
Multiplier	1.57	1.34	1.00
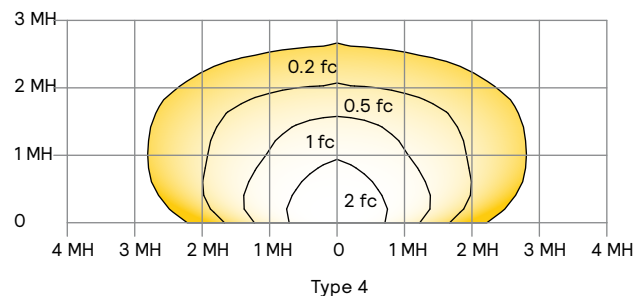
LPW16 15' mounting height			
Mounting height	10 ft	12 ft	15 ft
Multiplier	1.46	1.27	0.87

LPW16 LytePro

LED medium wall sconce

General Description

LytePro LED medium wall sconce LPW16 combines excellent performance, design and value to meet the needs of the energy and budget conscious. The LPW16 is available for use in downward facing, surface wall mount applications, over recessed j-boxes or where power can be directly fed through back surface, whereby connections splices can be made inside the luminaire housing. Two SKU's are available as in-stock configurations only (2-day quick ship).

Housing

Die-cast housing houses both the LED and driver assemblies. Design incorporates an integrated heat sink to maximize thermal performance and reliability. Backplate is corrosion free, composite polycarbonate, with built-in level bubble, offers integral interlocking hook and mount design for easy installation.

Mounting

Easy interlocking hook and mount housing/ backplate design for easy installation. Mounts over 3.5", 4" octagonal j-boxes and single gang switch boxes or can be directly lagged to surface. Ensure proper steps for gasket/sealing luminaire to surface.

IP Rating

Optical compartment is IP65 rated.

LED Board and Array

Provides up to 104 lm/W at the system level. Standard color temp is 4000K or 3000K +/- 250K, minimum 70 CRI.

Electrical

Driver efficiency (>90% standard). 120-277V and 347-480V available. All drivers are dimmable. Temp range: -40°C (-40°F) to 40°C (104°F). Open/short circuit protection. Inherent surge protection up to (6KVA). RoHS compliant.

Surge protection (SP1): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA.

Listings

Product is cETLus listed suitable for Wet Locations. Suitable for use in ambients from -40°C to 40°C (-40°F to 104°F). DesignLights Consortium® qualified.

Finish

Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish.

Warranty

LPW16 luminaires, the LED arrays, and the drivers are all covered by a 5-year limited warranty. See www.signify.com/warranties for details.

OPAL
FM7512-BN
FLUSH MOUNT

DESCRIPTION

Classy Retro LED flush mount with segmental shaped glass. The glass is uniquely designed with frosted white opal interior and crystal clear edges. When lit its simple look provides elegance to the room and circulates the light evenly with our powerful 120V AC LED technology. Fine metal details in brushed nickel and is available in three different sizes, see series for more details.

SPECIFICATION DETAILS

* For custom options, consult factory for details.

Fixture Dimensions	D12" x H2-3/4"
Light Source	LED
Wattage	18W
Total Lumens	1300lm
Delivered Lumens	BN-603lm
Voltage	120V
Color Temperature	3000K
CRI (Ra)	>90
Optional Color Temps	2700K - 5000K Available, Minimum Order Quantities Apply
LED Rated Life	50,000 hours
Dimming	100% - 10%, ELV Dimmer (Not Included)
Glass Details	White Opal Center Encased in Clear Glass
Location	Dry
Warranty	5 Years

Ø8"

1"

2-3/4"

Opal Glass

Clear Glass

FInish
BN- Brushed Nickel

Ø12"
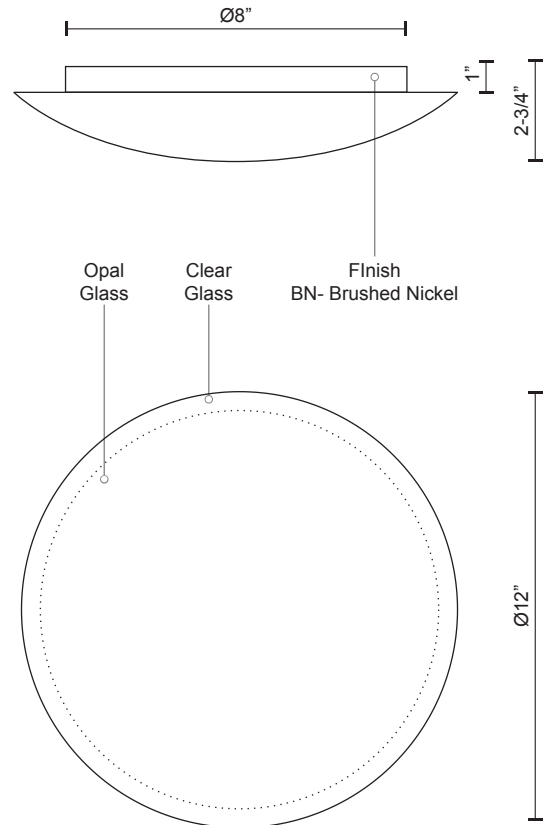
COMMENT

FERGUSON
VL60220

VANITY

DESCRIPTION

An extruded oblong diffuser surrounds the LED source of the geometric vanity fixture and gently spreads light. Enclosed at the ends by two thick caps the design is characterized by minimal details and clever features. During installation the lamp assembly may slide on the mounting track to allow for ideal positioning. Adding to the versatile function are the multiple fixture lengths and mounting orientations. Optional installation without backplate for smaller junction boxes.

VL60220-BK	VL60220-CH
Black	Chrome

SPECIFICATION DETAILS

* For custom options, consult factory for details.

Fixture Dimensions	W20" x H4" x E1-7/8"
Light Source	LED
Wattage	20W
Total Lumens	1600lm
Delivered Lumens	BK-1226lm; CH-1270lm;
Voltage	120V
Color Temperature	3000K
CRI (Ra)	>90
Optional Color Temps	2700K - 5000K Available, Minimum Order Quantities Apply
LED Rated Life	50,000 hours
Dimming	100% - 10%, ELV Dimmer (Not Included)
Diffuser Details	White Acrylic Diffuser
Location	Damp
Warranty	5 Years
ADA Compliant	Yes
Canopy Dimensions	W4-1/2" x H4-1/2" x E1/4"

Metal Finish
CH - Chrome
BK - Black

4-1/2"
20"
4-1/2"
1/4" H
2-7/8"
1-7/8"
4"

COMMENT

ETL LISTED
c us
Intertek

NORDIC
EW3105

WALL

DESCRIPTION

High powered LED exterior single light wall mount fixture, die-cast aluminum housing molded into a cylinder shape with in powder coated black, gray and silver finishes. Concealed inside is our 120V AC LED technology with a tempered glass diffuser radiating light either upward or downward depending how it is mounted on the wall. Certified ETL wet location listed and is available in different sizes and two light options.

| EW3105-BK | EW3105-GY | EW3105-SV |
| Black | Grey | Silver |

SPECIFICATION DETAILS

* For custom options, consult factory for details.

Fixture Dimensions	W3-1/2" x H5-3/8" x E5-7/8"
Light Source	LED
Wattage	12W
Total Lumens	800lm
Delivered Lumens	BK-714lm; GY-772lm; SV-750lm;
Voltage	120V
Color Temperature	3000K
CRI (Ra)	>90
Optional Color Temps	2700K - 5000K Available, Minimum Order Quantities Apply
LED Rated Life	50,000 hours
Dimming	100% - 10%, ELV Dimmer (Not Included)
Diffuser Details	Tempered Glass
Location	Wet
Warranty	5 Years
Canopy Dimensions	W4-3/4" x H4-3/4" x E2-3/8

3-1/2"
4-3/4"
5-7/8"
5-3/8"
2-3/8"

Single LED Board   Tempered Glass   Powder Coated Finish
BK - Black
GY - Gray
SV - Silver

KUZCO

19054 28TH AVENUE
SURREY - BC V3Z 6M3
CANADA

WWW.KUZCOLIGHTING.COM

COMMENT

HALO

DESCRIPTION

The Halo Surface LED Downlight (SLD) incorporates WaveStream™ technology to create an ultra-low profile surface mounting luminaire with the performance and look of a traditional downlight. SLD4 is designed for installation in many 3-1/2" and 4" round or octagon junction boxes. Dedicated LED wiring connector meets high-efficacy code requirement in recessed downlighting. Suitable for residential or commercial installations. Ideal for closets, storage areas, attics and basements. Compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5).

SPECIFICATION FEATURES

CONSTRUCTION
• Die cast aluminum trim ring and die formed aluminum frame

OPTICS
• WaveStream™ technology provides uniform luminance from a low profile flat lens
• AccuAim™ optics provide directional control for the "cone-of-light" beam distribution of a traditional downlight
• Precision molded lens features high transmission polymer with UV stabilized protecting film

DESIGNER TRIMS
Accessories (sold separately)
SLD designer trims are accessory rings that attach to the SLD for a permanent finish. Refer to SLD accessories specification sheet for details.
• White (Paintable)
• Satin Nickel
• Tuscan Bronze

ELECTRICAL JUNCTION BOX MOUNTING
• SLD may be used in compatible electrical junction boxes in direct contact with insulation including spray foam insulation
• Suitable for installation in many 3-1/2" and 4" octagon and round electrical junction boxes. **Note:** Driver consumes 3 cubic inches of junction box.
• Installer must ensure compatibility of fit, wiring and proper mounting in the electrical junction box. This includes all applicable national and local electrical and building codes
• Proprietary Slot-N-Lock quick installation system for junction box installation

• T-bracket with Slot-N-Lock mounting tabs included

LED
• Trilateral linear LED assembly is integrated in trim perimeter.
• Color Temperature: 2700K, 3000K, 3500K, 4000K
• CRI options: 80 and 90
  - 90 CRI can be used for California Title 24 compliance/ certified to Title 20
  - 80 CRI can be used to comply with California Title 24 Non-Residential Lighting Controls as a LED luminaire.
• L70 at 50,000 hours projected in accordance with TM-21

WARRANTY
Cooper Lighting Solutions provides a five year limited warranty on the SLD LED

LED CHROMATICITY
• A tight chromaticity specification ensures LED color uniformity, sustainable Color Rendering Index (CRI) and Correlated Color Temperature (CCT) over the useful life of the LED
• LED chromaticity of 3 SDCM exceeds ENERGY STAR® color standards per ANSI C78.377-2008
• 90 CRI model features high color performance with R9 greater than 50
• Every Halo LED is quality tested, measured, and serialized in a permanent record to register lumens, wattage, CRI and CCT.

• Halo LED serialized testing and measurement ensures color and lumen consistency on a per-unit basis, and validates long-term product consistency over time

ELECTRICAL CONNECTIONS
Junction Box
• Compatible with many 3-1/2" x 2" and 4" x 1-1/2" round and octagon boxes (2-1/8" deep boxes recommended)
• Supply Wire Adapter with LED quick connector included

LED DRIVER
• Driver is a 120V input high efficiency, dimmable electronic power supply providing DC power to the LED array
• Driver features high power factor, low THD, and has integral thermal protection in the event of over temperature or internal failure.
• Driver is replaceable if it should be required

DIMMING
• Designed for continuous dimming capability to nominally 5% with many 120V Leading Edge (LE) and Trailing Edge (TE) phase control dimmers. Dimming to 5% is best assured using dimmers with low end trim adjustment. Consult dimmer manufacturer for compatibility and conditions of use. (Note some dimmers require a neutral in the wallbox.)

COMPLIANCE
• cULus Listed ceiling and wall
• cULus Damp Location listed ceiling and wall
• cULus Wet Location Listed, ceiling only (shower rated)
• Suitable for use in closets, compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5)
• SLD may be used in compatible electrical junction boxes in direct contact with insulation including spray foam insulation continued...

SLD4058xxWHJB
80CRI
2700K, 3000K, 3500K, and 4000K

SLD4059xxWHJB
90CRI
2700K, 3000K, 3500K, and 4000K

4" Surface LED Downlight

Suitable for ceiling or wall electrical junction boxes

ENERGY DATA

	80 CRI	90 CRI
Lumens (4000K models)	800	710
Input Voltage	120V	120V
Frequency	50/60 Hz	50/60 Hz
Input Current	0.10 A	0.10 A
Input Power	12.2 W	12 W
Efficiency (4000K models)	66 lm/W	59 lm/W
THD	≤ 20%	
Power Factor	≥ 0.90	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

NOMENCLATURE

S L D 405 8 30 WH JB
- **405** = 4" SLD
- **8** = >80 CRI
- **30** = 3000K
- **WH** = Matte White
- **JB** = Junction Box kit only
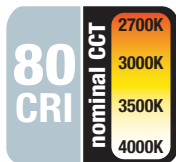
Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.

Refer to ENERGY STAR® Certified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.

COOPER Lighting Solutions

ADV141377
11/13/2018

HALO
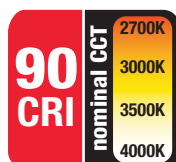
- EMI/RFI: meets FCC 47CFR Part 15 Class B limits, and is suitable for use in residential and commercial installations
- Airtight certified per ASTM E283 (not exceeding 2.0 CFM under 57 Pascals pressure difference)
- 90 CRI: Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.
- 80 CRI: Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED luminaire.

- Can be used for International Energy Conservation Code (IECC) and Washington State Energy Code high efficiency luminaire compliance
- ENERGY STAR® Certified luminaire - consult ENERGY STAR® Certified Product List
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79
- Lumen maintenance projections in accordance with IES LM-80 and TM-21
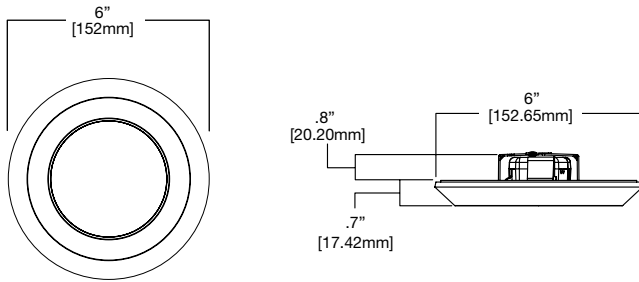
SLD4058xxWHJB

80CRI

2700K, 3000K, 3500K, and 4000K

SLD4059xxWHJB

90CRI

2700K, 3000K, 3500K, and 4000K

4" Surface LED Downlight

Suitable for ceiling or wall electrical junction boxes

DIMENSIONS

6"
[152mm]

6"
[152.65mm]

.8"
[20.20mm]

.7"
[17.42mm]

ORDERING INFORMATION

SAMPLE NUMBER: SLD405830WHJB
Order junction box separately, as supplied by others, to complete installation.

Models	Color Rendering Index	Color Temperature (CCT)	Finish	JB
SLD405= 4" Surface LED Downlight, 120V	**8**=80 CRI **9**=90 CRI	**27**=2700K **30**=3000K **35**=3500K **40**=4000K	**WH**=White	**JB**=Junction Box kit

Accessories

Designer Trims
Fit over the SLD4 for a designer finish
SLD4TRMSN=4" SLD Satin Nickel
SLD4TRMTBZ=4" SLD Tuscan Bronze
SLD4TRMWH=4" SLD White (paintable)

J-Box Spacer Extension Ring
Add 15/16" depth when SLD driver cannot fit into installed junction box
SLD4EXT=4" Surface LED J-Box Extender, 7.75" O.D.

RAD Adapters
When junction box is mounted flat on a ceiling or beam surface (not recessed in ceiling)
SLD4RAD=4" SLD Round Surface J-Box Adapter,
6.15" O.D. (For 4-inch round or octagon junction boxes)

Spare Parts
SLD4ACCKIT=4" Accessory Parts Replacement Kit (Screwbase adapter, torsion springs, friction blades)
SLD4BRKT=4" Junction Box Bracket & Screws

Refer to SLD Accessories specification sheet for further information.

COOPER
Lighting Solutions

HALO

COMPATIBLE WITH COOPER LIGHTING SOLUTIONS' CROUSE-HINDS JUNCTION BOXES

TP316
for non-metallic cable
4" x 4" x 2-1/8"
(102mm x 102mm x 54mm)
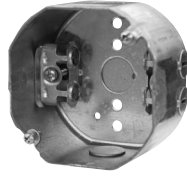
TP317
for metal clad cable
4" x 4" x 2-1/8"
(102mm x 102mm x 54mm)

- **TP316 -** for non-metallic cable
- **TP317 -** for metal clad cable
- UL Listed
- Refer to www.crouse-hinds.com

COMPATIBLE WITH MANY OTHER JUNCTION BOXES*

4" octagon light fixture/fan steel box
4" x 4" x 2-1/8"
(102mm x 102mm x 54mm)

4" octagon steel box
4" x 4" x 1-1/2"
(102mm x 102mm x 38mm)
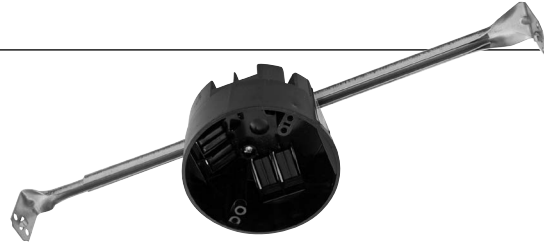
4" round new work non-metallic box with hanger bar assembly
4" diameter x 2-3/16" (102mm x 56mm)

4" round new work non-metallic light fixture/fan box
4" diameter x 2-3/16"
(102mm x 56mm)

3-1/2" round new work non-metallic ceiling box
3-1/2" diameter x 2-3/4"
(89mm x 70mm)

3-1/2" round old work non-metallic box
4-1/4" O.D. flange, 3-1/2" I.D. x 2-5/8"
(108mm O.D., 89mm I.D. x 67mm)

4" round surface mount box
4" diameter x 1-1/2"
(102mm x 38mm)
Requires SLD4RAD adapter

*This is a representative list of compatible junction boxes only. Information contained in this literature about other manufacturers' products is from published information made available by the manufacturer and is deemed to be reliable, but has not been verified. Cooper Lighting Solutions makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied. Installer must determine that site conditions are suitable to allow proper installation of the SLD mounting bracket in the box.

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PRODUCT DATA

Cat No.	CRI	CCT	Lumens	Power (W)	LPW
SLD405827WH	81	2700	720	12.2	59
SLD405830WH	81	3000	750	12.2	61
SLD405835WH	81	3500	780	12.2	64
SLD405840WH	81	4000	800	12.2	66
SLD405927WH	92	2700	650	12	54
SLD405930WH	92	3000	670	12	56
SLD405935WH	92	3500	690	12	58
SLD405940WH	92	4000	710	12	59

Performance values are presented as typical for the model(s) indicated. Field results may vary.

LIGHTING FACTS®

SLD405827WH - 80 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	720
Watts	12.2
Lumens per Watt (Efficacy)	59.02

Color Accuracy
Color Rendering Index (CRI) — 81

Light Color
Correlated Color Temperature (CCT) — 2700 (Warm White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-7SR3UK (4/17/2015)
Model Number: SLD405827WH
Type: Luminaire - Downlight

SLD405830WH - 80 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	750
Watts	12.2
Lumens per Watt (Efficacy)	61.48

Color Accuracy
Color Rendering Index (CRI) — 81

Light Color
Correlated Color Temperature (CCT) — 3000 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-O7DLC2 (5/7/2015)
Model Number: SLD405830WH [Upgrade 04/2015]
Type: Luminaire - Downlight

SLD405835WH - 80 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	780
Watts	12.2
Lumens per Watt (Efficacy)	63.93

Color Accuracy
Color Rendering Index (CRI) — 81

Light Color
Correlated Color Temperature (CCT) — 3500 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-B618FN (4/17/2015)
Model Number: SLD405835WH
Type: Luminaire - Downlight

SLD405840WH - 80 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	800
Watts	12.2
Lumens per Watt (Efficacy)	65.57

Color Accuracy
Color Rendering Index (CRI) — 81
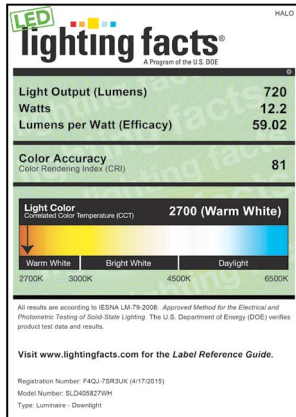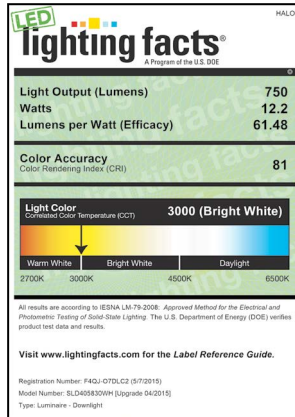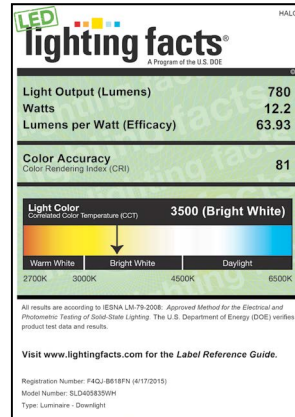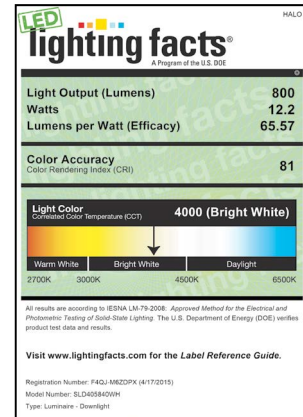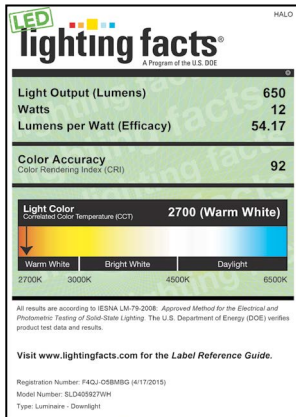
Light Color
Correlated Color Temperature (CCT) — 4000 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-M6ZDPX (4/17/2015)
Model Number: SLD405840WH
Type: Luminaire - Downlight

SLD405927WH - 90 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	650
Watts	12
Lumens per Watt (Efficacy)	54.17

Color Accuracy
Color Rendering Index (CRI) — 92

Light Color
Correlated Color Temperature (CCT) — 2700 (Warm White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-O5BMBG (4/17/2015)
Model Number: SLD405927WH
Type: Luminaire - Downlight

SLD405930WH - 90 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	670
Watts	12
Lumens per Watt (Efficacy)	55.83

Color Accuracy
Color Rendering Index (CRI) — 92

Light Color
Correlated Color Temperature (CCT) — 3000 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-14JHS1 (5/7/2015)
Model Number: SLD405930WH [Upgrade 04/2015]
Type: Luminaire - Downlight

SLD405935WH - 90 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	690
Watts	12
Lumens per Watt (Efficacy)	57.5

Color Accuracy
Color Rendering Index (CRI) — 92

Light Color
Correlated Color Temperature (CCT) — 3500 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-2QFUIT (4/17/2015)
Model Number: SLD405935WH
Type: Luminaire - Downlight

SLD405940WH - 90 CRI

LED lighting facts® — A Program of the U.S. DOE — HALO

Light Output (Lumens)	710
Watts	12
Lumens per Watt (Efficacy)	59.17

Color Accuracy
Color Rendering Index (CRI) — 92

Light Color
Correlated Color Temperature (CCT) — 4000 (Bright White)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.* The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide.*

Registration Number: F4QJ-1K23GB (4/17/2015)
Model Number: SLD405940WH
Type: Luminaire - Downlight