



NYC

Compliant Product Selection Guide

Columbia
LIGHTING

COLUMBIA LIGHTING ENERGY SOLUTIONS INITIATIVE

createchange® is our commitment to meeting the challenges and opportunities posed by rising energy costs, environmental concerns, energy legislation, LEED certification, utility rebates, and EAct tax deductions. It is a product philosophy dedicated to development of innovative, high performance luminaires.

To receive the createchange® trademark, a product must meet three criteria. When compared to fixtures traditionally used in lighting applications, createchange luminaires must:

1. Save at least 20% in energy
2. Maintain lighting quality
3. Maintain light levels

We achieve these goals through innovative design that optimizes performance through our choice of lamp, ballast, reflector, refractor, and control technologies, to create ultra-high efficiency luminaires that deliver proper light levels and distribution at the lowest possible wattage.

ENERGY BENEFITS

Energy efficient lighting solutions can help cut lighting costs by up to 52% without sacrificing light levels; even higher savings can be realized when combined with lighting controls.

- createchange® lighting solutions typically pay for themselves in under two years when installed in new buildings.
- createchange® solutions costs are often recouped in one to three years following installation in a remodel project.
- createchange® solutions, if used wherever possible, would lower the nation's electrical demand by over 10%, saving ratepayers nearly \$17 billion annually.

COLLATERAL BENEFITS

EAct

createchange® energy solutions can help leverage federal tax deductions by up to \$0.60 per square foot when meeting guidelines established by the Energy Policy Act of 2005.

LEED

Reducing power demand is the largest single consideration when applying for LEED certification. createchange® energy solutions help achieve that goal.

Utility Rebates

Many electrical utilities offer substantial rebates for energy-efficient lighting. createchange® energy solutions typically qualify, in many cases completely defraying most or all of the cost of the fixture.

ENVIRONMENTAL BENEFITS

The use of createchange® energy solutions contributes significantly to the reduction of greenhouse gases. If just the estimated 50 million 400W metal halide high bays and 100 million 3-lamp parabolics in use today were converted to their createchange equivalents, we could save 43 million metric tons of CO₂ emissions annually—an amount equal to 1.7% of all CO₂ caused by the generation of electricity in the U.S. This equates to taking 7.8 million cars off the road. Replacing troffers and other fixtures that use outdated technology could save far greater amounts.

A rapid transition to energy efficiency and renewable energy sources will combat global climate change, protect human health, create new jobs, protect wildlife habitats, and ensure a secure, affordable energy future.

NEMA PREMIUM BALLAST STANDARD

Columbia Lighting is making it even easier for customers to choose energy-efficient, rebate-qualified T8 luminaires. NEMA Premium ballasts are now standard in all F32T8 fixtures. All factory choice ballast options for F32 full wattage or reduced wattage lamp types use ballasts meeting NEMA Premium and CEE (Consortium for Energy Efficiency) standards.

For more createchange® information, visit www.columbialighting.com



PAGE(S)	NAME	DESCRIPTION	PRODUCT CATEGORY	TYPE
4	CWW	Contemporary Wall Wash	Recessed Architectural	LED
5	LCAT	LED Light Commercial Architectural Troffer	Recessed Architectural	LED
6	LEPC	e•poc® LED Full Distribution Luminaire	Recessed Architectural	LED
7	LSER	Serrano® LED Architecturally Styled Luminaire	Recessed Architectural	LED
8	LSTE	Stratus® LED Architectural Recessed	Recessed Architectural	LED
9	LTGR	LED Specification Grade Architectural Recessed	Recessed Architectural	LED
10	LTRE	Transition® LED Enclosed High Efficiency Architectural Lensed	Recessed Architectural	LED
11	LTRX	Ambient / Exam Enclosed Luminaire	Recessed Architectural	LED
12	LZPT	LED Zero Plenum® Troffer	Recessed Architectural	LED
13	RLA	LED Architectural Luminaire	Recessed Architectural	LED
14	TCAT	LED Twin Contemporary Architectural Troffer	Recessed Architectural	LED
15	SER	Serrano® Architectural Luminaire	Recessed Architectural	Fluorescent
16	STE	Stratus® E-Series Recessed Indirect	Recessed Architectural	Fluorescent
17	ZPT	Zero Plenum® Troffer High Efficiency Architectural Luminaire	Recessed Architectural	Fluorescent
18	FW	Fluorescent Wall Wash	Parabolics	Fluorescent
19	P4D	High Performance Parabolic	Parabolics	Fluorescent
20	ST8	Low Profile Specification Troffer	Lensed Troffers	Fluorescent
21	LBIL	LED Bi-Level Luminaire with Controls	Surface	LED
22	BIL	Bi-Level Luminaire	Surface	Fluorescent
23	LAW	Low Profile LED Wraparound	Wraps	LED
24	LPT	Premium LED Corridor Wraparound	Wraps	LED
25	LRO	LED Corridor Wraparound	Wraps	LED
26	LWC	Specification Grade LED Wraparound	Wraps	LED
27	AW	Low Profile Wraparound	Wraps	Fluorescent
28	WC	Specification Grade Wraparound	Wraps	Fluorescent
29	LLHV	VersaBay® LED High Bay	Industrials	LED
30	CSR	Industrial	Industrials	Fluorescent
31	KL	Premium Industrial	Industrials	Fluorescent
32	LHR	Ultra-Efficient Fluorescent High Bay	Industrials	Fluorescent
33	LHS	Slim Body Linear High Bay	Industrials	Fluorescent
34	LHV	VersaBay® Fluorescent High Bay	Industrials	Fluorescent
35	LCL	LED Lensed Striplight	Striplights	LED
36	LCR	LED Industrial Striplight	Striplights	LED
37	LCS	LED Open Striplight	Striplights	LED
38	CS	Straight-Sided Utility Channel	Striplights	Fluorescent
39	HEM	Hazardous Enclosed and Gasketed Fiberglass Extreme Environment LED	Extreme Environment	LED
40	CRC	Cleanroom, Class 1000	Extreme Environment	Fluorescent
41	CRS	Cleanroom, Class 1	Extreme Environment	Fluorescent
42	SLA	Outdoor Sign and Facade Luminaire	Outdoor	Fluorescent
43-59	TECHNICAL	Accessories; Recessed Options; Ballast Options; Electrical Options Wiring Options; Lamp & Packaging Options; Troubleshooting	Technical	

LED



createchange



FEATURES

- Narrow 3" aperture creates clean finished appearance
- Proprietary optical design provides excellent vertical uniformity while maintaining visual comfort
- Multiple optical distributions for varying wall wash applications
- 60,000 hour LEDs at L80 (up to 150,000 hours projected life) for reduced maintenance
- Four LED color choices and standard 80 CRI
- Optional 90 CRI for color sensitive applications
- Six lumen packages with outputs up to 1300 Lm/ft
- Best in class efficacy with up to 116 LPW
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- QR code traceability
- Integral battery pack optional on most models
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

CWW									
MODEL	CRI	LUMEN OUTPUT	CEILING TYPE	DRIVER	OPTIONS	SIZE	COLOR TEMP	DISTRIBUTION	VOLTAGE
CWW Contemporary LED Wall Wash	Blank >80 9 >90 ¹	XW Extra Low Watt VW Very Low Watt MW Medium Low Watt LW Low Watt ^{6,7} ML Medium Lumen ^{5,7} See Product Availability Table below.	G Grid SG Slot Grid F Drywall Flange	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming ESD Step Dimming ^{2,4} LUT5 Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{2,3,4} LUTH 5-Series EcoSystem LED driver ^{2,3,4}	ELL14 Emergency Battery Pack, 1400 Lumens ^{2,3,8} C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse CP Chicago Plenum NYC NYC Compliant	2 2' 4 4'	30 3000K 35 3500K 40 4000K 50 5000K	1WW Asymmetric Wallwash 1WR Asymmetric Wallwash with Roomside 2WW Double Wallwash	U 120V-277V 347 347V

¹ Not available with 2' 347V & LUT drivers

² Not available in 347V

³ For compatibility with Dual-Lite inverters, contact Hubbell Lighting Representative.

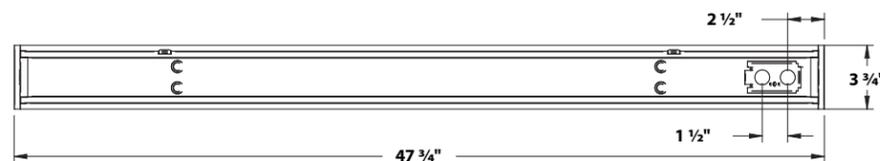
⁴ ESD, LUT5, and LUTH not compatible with 2' Drywall Flange (F) option.

⁵ Not compatible with thru wiring configuration.

⁶ Lumen package not available with ELL14 Emergency backup in 2' configuration

⁷ Lumen package not available with ELL14 Emergency backup in 4' configuration

⁸ Not available with 2' drywall flange (F) option



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS PER WATT
2	VW	1370 - 1539	15	90-103
	MW	1788 - 2067	20	87-102
	LW	2456 - 2806	27	91-103
4	XW	2554 - 2880	25	103-116
	VW	3119 - 3523	31	103-114
	MW	3430 - 3906	35	98-111
	LW	3901 - 4645	40	98-116
	ML	4712 - 5458	50	95-106

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures, optics, and other factors. See photometric test(s).

LED



createchange

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- 60,000 hour LEDs at L80 (up to 150,000 projected life) for reduced maintenance
- 83 CRI standard or optional 90 CRI for color sensitive applications
- HE lumen packages available
- LED modules and electrical accessible from below
- QR code traceability
- Compatible with Dual-Lite inverters
- Air return option
- Optional SpectraSync™ offers three modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- DesignLights Consortium® (DLC) qualified, many configurations qualify for DLC Premium; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LCAT									
MODEL	CRI	COLOR TEMP	CEILING TYPE	AIR FUNCTION	VOLTAGE	OPTIONS	SIZE	DRIVER	SHIELDING
LCAT LED Contemporary Architectural Troffer	Blank >80 9 >90 ¹	30 3000K 35 3500K 40 4000K 50 5000K 2750T 2700K-5000K SpectraSync™ Tunable White ² 2765T 2700K-6500K SpectraSync™ Tunable White ²	G Grid Lay-in ³ SM Surface Mount ^{4,18} CM Cable/Suspended Mount ^{4,5}	Blank Static A Air Return Side Slots	U 120V-277V 347 347V ¹⁶	ELL14 Emergency Battery Pack, 1400 Lumens ^{7,8,17} C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) ⁴ INT Intermediate (SM and CM only. Provides end wiring access for continuous row mounting.) ⁴ CP Chicago Plenum	12 1' x 2' 14 1' x 4' 22 2' x 2' 24 2' x 4'	E Fixed Output ¹⁵ ED 0-10V Dimming ED1 0-10V 1% Dimming EDD 0-10V Dim-to-Dark ¹⁵ ESD Step Dimming ^{6,9,15} LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6,8,15} LUT5 5-Series EcoSystem LED driver ^{6,8,15}	Blank Curve R Rectangular
ACCESSORIES (ORDER SEPARATELY)									
FK12	1' x 2' Single Flange Kit								
FK14	1' x 4' Flange Kit								
FK22	2' x 2' Flange Kit								
FK24	2' x 4' Flange Kit								
CM48Y2SC3F-KIT	48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire								
CM48Y1SC3F-KIT	48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-Wire								
LUMEN OUTPUT									
XW	Extra Low Watt								
XWHE	Extra Low Watt High Efficacy								
VW	Very Low Watt								
VWHE	Very Low Watt High Efficacy								
MW	Medium Low Watt								
MWHE	Medium Low Watt High Efficacy								
LW	Low Watt								
ML	Medium Lumen								
MLHE	Medium Lumen High Efficacy								
HL	High Lumen								
HLHE	High Lumen High Efficacy								
VL	Very High Lumen								
VLHE	Very High Lumen High Efficacy								
XL	Extra High Lumen								
See Product Availability Table below.									

¹ Not available with HE Lumen output.

² Available with ED driver and 80 CRI only, N/A with HE, VL (2x2) XL (2x4) lumen outputs.

³ For drywall, order G with Flange Kit Accessory.

⁴ Not available with Air Return (A) air function.

⁵ Order hanger accessories separately.

⁶ Limitations apply based on product size and lumen packages; see individual spec sheets.

⁷ For compatibility with Dual-Lite LiteGear(R) inverters, contact Hubbell Lighting Representative.

⁸ Not available in 347V.

⁹ Only available with 0-10V Dimming (ED) Driver Option.

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS PER WATT
22	VW	1567-1785	14	115-131
	VWHE	1530-1743	13	121-138
	MW	2049-2334	18	114-130
	MWHE	2010-2289	17	122-139
	LW	2689-3063	23	119-136
	ML	3320-3781	29	116-132
	MLHE	3392-3751	28	119-136
	HL	3599-4099	32	113-129
	HLHE	3497-3769	27	126-136
	VL	4270-4863	39	111-126
	VLHE	4257-4649	35	123-134
	XW	2341-2524	19	123-132
24	XWHE	2458-2650	19	129-139
	VW	3124-3558	28	113-129
	VWHE	3310-3770	27	123-140
	MW	3363-3831	30	111-127
	MWHE	3717-4234	31	121-138
	LW	4268-4861	36	118-135
	ML	4771-5434	39	123-140
	HL	5443-6200	44	124-141
	VL	6999-7972	59	119-135
XL	8168-9304	74	111-126	

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS PER WATT
14	XW	2299-2478	19	119-128
	XWHE	2457-2648	19	127-136
	VW	3147-3584	28	114-130
	VWHE	3083-3511	24	128-146
	MW	3656-4164	32	113-129
	MWHE	3820-4351	31	125-142
	LW	4376-4985	36	122-138
	ML	4689-5341	38	122-139
	HL	5405-6156	44	123-140
VL	6793-7738	58	118-135	

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS PER WATT
12	VW	1519-1730	13	114-130
	MW	1744-1986	18	99-113
	LW	2676-3047	23	118-135
	ML	3331-3794	29	116-132
	HL	3584-4083	32	113-129

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).

¹⁰ Registered trademark of Daintree Networks, used by permission.

¹¹ Not available with ESD, LUTH or LUT5.

¹² VIVE is a trademark of Lutron Electronics Co., Inc.

¹³ Installations controlled solely by the Lutron Pico controller require accessing the LV (Lutron FCJS) module for commissioning after the circuit has been energized.

For questions about configuration options, contact Hubbell Representative.

¹⁴ NX controls can only be used with NX Sensor options.

¹⁵ NX is available with ED and ED1 drivers only.

¹⁶ NX is not available with 347V.

¹⁷ NX is not available with ELL14.

¹⁸ NXSW and NXWE cannot be used with surface mount versions.

LEPC

e•poc® LED Full Distribution Luminaire



LED



createchange

FEATURES

- Long-life, 60,000 hour LEDs at L80 reduce life cycle maintenance costs
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Four LED color choices
- Four lumen packages per size
- Superior color consistency to a 3-step MacAdam ellipse and 82 CRI
- Full distribution provides controlled high angle light for visual comfort
- Lens design and materials provide uniform appearance without pixilation
- Unique frameless optical system and modular electrical system allow for easy LED module or driver replacement from below the ceiling
- Most configurations produce low W/ft² to meet the most restrictive lighting power density codes
- Five year warranty (Terms and Conditions apply)
- U.S. Transformed
- UL Sanitation Approved

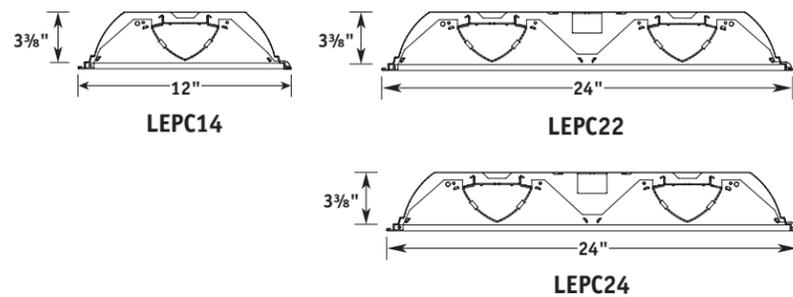
ORDERING INFORMATION



MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	AIR FUNCTION	DRIVER	OPTIONS
LEPC e•poc® LED Full Distribution Luminaire	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	LL Low Lamp Image	Blank Static A Air Return Side Slots (N/A 1 x 4)	E Fixed Output ED 0-10V Dimming LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ⁷ LUT5 5-Series EcoSystem LED driver ⁷	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse NYC NYC Compliant EOR End of Row (SM/CM only) ^{4,5} INT Intermediate (SM/CM only) ^{4,5} ELL14 Emergency Battery Pack Installed, 1400 Lumens ³ GTD Generator Transfer Device ⁸ CP Chicago Plenum
SIZE	LUMEN OUTPUT					
14 1' x 4'	LW Low Watt					
22 2' x 2'	ML Medium Lumen					
24 2' x 4'	HL High Lumen VL Very High Lumen					
See Product Availability Table below.						

¹ For drywall, order G with Flange Kit Accessory.
² Order hanger accessories separately.
³ In-Fixture Module Antenna adds 2" to overall fixture height at power feed location.
⁴ Not available with Surface Mount ceiling types.
⁵ Provides ends with wiring access for continuous row mounting.
⁶ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
⁷ Not available in 1x4

Damp Label - standard
 IC Rating - standard (no through wiring)



PRODUCT AVAILABILITY

Size	Lumen Package	Nominal Lumens (4000K)	Nominal Watts	Lumens Per Watt
1' x 4'	LW	4100	35	116
	ML	4950	44	114
	HL	5450	49	112
	VL	6725	62	108
2' x 2'	LW	2900	25	117
	ML	3350	29	115
	HL	3975	35	112
2' x 4'	VL	4550	41	111
	LW	3625	29	127
	ML	4625	37	124
	HL	5175	42	124
	VL	7250	60	121

Lumens vary according to color temperature and other factors. For exact lumens and watts see specific photometric test(s).

LSER

Serrano® LED Architectural Luminaire



LED



createchange

FEATURES

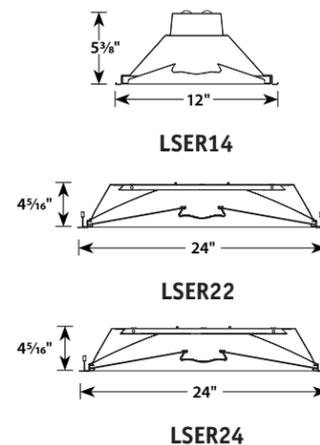
- High efficacy, sustainable LED design
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Eight lumen packages for design flexibility
- Four LED color choices
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Lens design and materials provide uniform appearance without pixilation
- Hinged optical system for modular replaceability of LED boards and drivers from below
- Two optional lens aesthetics
- Architecturally enhanced triple lens design
- Lenses interlock for structural integrity
- 2x2, 2x4, or 1x4
- Recessed, Surface, or Cable Mount
- IC rating is standard on all models (Does not apply to thru-wiring)
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Optional architecturally styled integration of daylight, occupancy, or daylight and occupancy sensor(s)
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION



MODEL	COLOR TEMP	CEILING TYPE	DRIVER	VOLTAGE	OPTIONS
LSER Serrano® LED Architectural Luminaire	30 3000K 35 3500K 40 4000K 50 5000K	G Grid ¹ SM Surface Mount CM Cable Mount ²	E Fixed Output ESD Step Dimming ED 0-10V Dimming ED1 0-10V Dimming to 1% EDD 0-10V Dimming, Dim to Dark ⁹ LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUTH5 5-Series EcoSystem LED driver	U 120V-277V 347 347V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack, 1400 Lumens ³ GLR Fast Blow Fuse GTD Generator Transfer Device ⁸ NYC NYC Compliant EOR End of Row (SM/CM only) ⁶ INT Intermediate (SM/CM only) ⁶ ODP Occupancy and Daylight Sensors, Philips ⁷ DP Daylight Sensor, Philips ⁷ DPO Daylight Sensor with Dim-to-Off, Philips ⁷ ODW Occupancy and Daylight Sensors, WattStopper ⁷ DW Daylight Sensor, WattStopper ⁷ OW Occupancy Sensor, WattStopper ⁷ CP Chicago Plenum
SIZE	LUMEN OUTPUT	SHIELDING	ACCESSORIES (ORDER SEPARATELY)		
14 1' x 4'	LW Low Watt	C Contour R Rail	FK14 1' x 4' Single Flange Kit FK22 2' x 2' Single Flange Kit FK24 2' x 4' Single Flange Kit FKCR Flange Kit Row Adaptor CM48Y1SC3F-KIT 48" Cable Mount Kit for 1' wide CM ceiling type, 3 Wire Feed Cord CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM ceiling type, 3 Wire Feed Cord WSR WattStopper Sensor Commissioning Remote ⁷ WSOR WattStopper Sensor Occupant Remote ⁷		
22 2' x 2'	ML Medium Lumen	See Product Availability Table below.			
24 2' x 4'	HL High Lumen VL Very High Lumen XL Extra High Lumen				

¹ For drywall, order G with Flange Kit Accessory.
² Order hanger accessories separately.
³ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
⁴ In-Fixture Module Antenna adds 2" to overall fixture height at power feed location.
⁵ Not available with SM ceiling types.
⁶ Provides ends with wiring access for continuous row mounting.
⁷ For details, see Sensor Table on Specification Sheet, page 3.
⁸ Not available in 1x4
⁹ 50 Watt and Below
 Damp Label - standard



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (3500K)	NOMINAL WATTS
14	XW	2,143	20
	VW	2,888	27
	MW	3,262	31
22	LW	3,539	34
	ML	4,256	43
	HL	4,974	50
24	VL	6,181	59
	VW	1,403	13
	MW	1,901	18
	LW	2,466	24
	ML	3,445	31
	HL	3,750	35
	VL	4,293	42

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (3500K)	NOMINAL WATTS
24	XW	2398	19
	VW	3252	27
	MW	3674	31
24	LW	4033	34
	ML	4795	42
	HL	5615	50
	VL	6992	59
	XL	8276	72

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

LTRE

Transition® Enclosed LED High Efficiency Architectural Lensed

LED



createchange

FEATURES

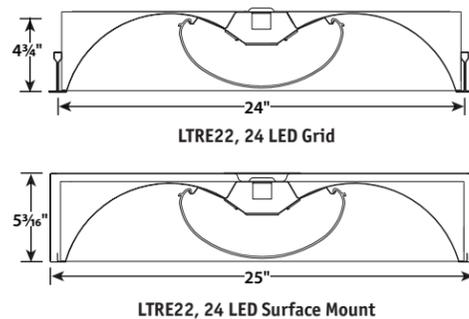
- Enclosed high efficiency lens features linear prism acrylic for high performance without pixelation
- Appropriate for schools, medical, dining areas, locker rooms, and public spaces
- Enclosed lens resists intrusion of contaminants
- High performance matte white paint standard
- Optional Antimicrobial® paint (AM option) resists bacterial growth on exposed painted surfaces
- Optional lens gasket surrounds lamp cavity
- Wet Location listing available
- 60,000 hour LEDs at L80 (up to 150,000 projected life) for reduced maintenance
- Four LED color choices
- LED modules and electrical accessible from below
- QR code traceability
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LTRE		RFA		U	
MODEL	COLOR TEMPERATURE	CEILING TYPE	DRIVER	OPTIONS	VOLTAGE
LTRE Transition® LED Enclosed High Efficiency Architectural Lensed	30 3000K 35 3500K 40 4000K 50 5000K	G Grid Lay-in ¹ SM Surface Mount CM Cable/Suspended Mount ²	E Fixed Output ESD Fixed Output/Step Dimming ³ ED 0-10V Dimming ED1 0-10V Dimming to 1% LUT5 5-Series EcoSystem LED driver ⁴	ELL14 Emergency Battery Pack, 1400 Lumens ^{4,7,8,9} C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse GTD Generator Transfer Device AM Antimicrobial Paint ⁵ G1 Lens Gasketing WL Wet Label ^{7,8,9} NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) INT Intermediate (SM and CM only. Provides end wiring access for continuous row mounting.) CP Chicago Plenum	U 120V-277V
SIZE	LUMEN OUTPUT	SHIELDING			
22 2' x 2' 24 2' x 4'	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen XL Extra High Lumen ¹⁰	RFA Ribbed Frosted Acrylic			

- ¹ For drywall, order G with Flange Kit Accessory.
² Order hanger accessories separately.
³ Can be converted to fixed output by tying hot leads together.
⁴ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative.
⁵ Not available on 2x2 SM or CM ceiling types.
⁶ Optional antimicrobial paint (AM option) resists bacterial growth on exposed painted surfaces.
⁷ In-Fixture Module Antenna adds 2" to overall fixture height at power feed location.
⁸ Not available on Surface Mount Ceiling Types.
⁹ WL not available with battery pack.
¹⁰ 2x4 XL not available with through wiring.
 For questions about configuration options, contact Hubbell Representative.

ACCESSORIES (ORDER SEPARATELY)	
FK22	2' x 2' Flange Kit
FK24	2' x 4' Flange Kit
CM48Y2SC3F-KIT	48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	LUMENS PER WATT
22	ML	2,975 - 3,100	30	100 - 104
	HL	3,625 - 3,875	36	101 - 108
	VL	4,275 - 4,925	44	98 - 112
24	LW	4,275 - 4,875	38	114 - 130
	ML	4,650 - 5,325	41	112 - 129
	HL	5,575 - 6,475	52	108 - 126
	VL	7,225 - 8,250	67	109 - 124
	XL	8,350 - 9,650	81	103 - 119

Nominal lumen range represents 3000K through 5000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).

LTRX

Ambient /Exam Enclosed Luminaire

LED



createchange

FEATURES

- Designed specifically to provide comfortable ambient lighting or high lumen levels for examinations on demand
- Step dimming LED drivers provide ability to go from ambient to exam light levels
- Standard high performance matte white Antimicrobial® paint resists bacterial growth on exposed painted surfaces
- 90 CRI standard with a high R9 for excellent color rendering
- Enclosed lens protects against intrusion of contaminants
- Long life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- High efficiency lens features linear prism acrylic for visual comfort and high performance without LED pixelation
- Lens gasket option and wet location listing available
- Low W/ft2 ratio typically meets most restrictive lighting power density codes
- Electrical components accessible from below the ceiling with modular replaceability
- QR code for future traceability
- DesignLights Consortium® (DLC) qualified; see www.designlights.org

ORDERING INFORMATION

LTRX		AX		RFA		EAX		U	
MODEL	COLOR TEMPERATURE	CEILING TYPE	DRIVER	OPTIONS	VOLTAGE				
LTRX Ambient/Exam Enclosed Luminaire	30 3000K 35 3500K 40 4000K	G Grid Lay-in ¹ SM Surface Mount CM Cable/Suspended Mount ²	EAX Ambient/Exam	C488 4-Wire Flex GLR Fast Blow Fuse ELL14 Emergency Battery Pack, 1400 Lumens ^{3,4} CP Chicago Plenum NYC NYC Compliant G1 Lens Gasketing WL Wet Location ⁴	U 120V-277V				
SIZE	LUMEN OUTPUT	SHIELDING							
22 2' x 2' 24 2' x 4'	AX Ambient/Exam See Product Availability Table below.	RFA Ribbed Frosted Acrylic							

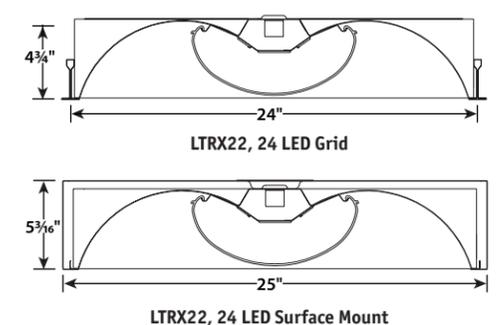
- ¹ For drywall order FK24 accessories separately.
² Order hanger accessories separately.
³ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting Representative.
⁴ Wet Location not available with battery packs.
 For questions about configuration options, contact Hubbell Representative.

ACCESSORIES (ORDER SEPARATELY)	
FK22	2' x 2' Flange Kit
FK24	2' x 4' Flange Kit
CM48Y2SC3F-KIT	48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire

PRODUCT AVAILABILITY

SIZE	OUTPUT	LEVEL	LUMENS	WATTS	LUMENS PER WATT
22	AX	Ambient	1450-1675	17	95-98
		Exam	3650-4175	40	91-104
24	AX	Ambient	2950-3300	34	86-96
		Exam	7350-8275	81	91-103

Range represents 3000K through 4000K. Lumens vary according to color temperatures and other factors. See specific photometric test(s).





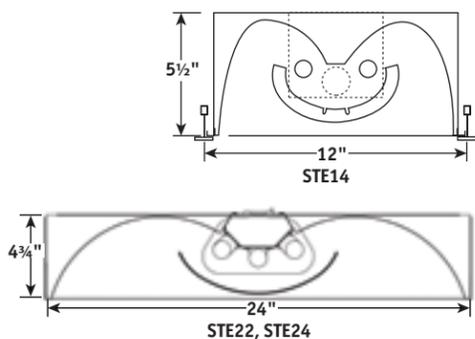
FEATURES

- Precision optical design produces high efficiency in a high visual comfort architecturally direct/indirect distribution
- Custom perforated metal basket is backed by a high transmission lamp obscuring overlay
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet
- Recessed, surface or cable mount
- Available for use with T8, T5, or T5HO linear fluorescent and twin tube lamps
- Optional acrylic dust guard pivots to protect lamp compartment against contaminants especially for schools, medical facilities and public spaces
- UL listed 1598, cUL or CSA, Damp Location Listed

ORDERING INFORMATION

STE	-		-		-	MPO	-		-	
MODEL	NO. OF LAMPS IN CROSS SECTION	CEILING TYPE	BALLAST	OPTIONS	SIZE	LAMP TYPE	SHIELDING	VOLTAGE	ACCESSORIES (ORDER SEPARATELY)	
STE Stratus® E-Series Recessed Indirect	1 One 2 Two 3 Three	G Grid ¹ SM Surface Mount CM Cable Mount ²	E Electronic T8, Instant Start ED Electronic Dimming T8 and T5 EP Electronic T5, T5HO, or T8, Programmed Start ETT Electronic Twin Tube, Instant Start EPTT Electronic Twin Tube, Programmed Start 3E 3-Lamp Electronic T8, Instant Start 3EP 3-Lamp Electronic T8, Programmed Start ELW 2-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 3ELW 3-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start	EL Emergency Battery Pack, T8 EL5 Emergency Battery Pack, T5 F830 30K 78+CRI T8 Lamps Installed F835 35K 78+CRI T8 Lamps Installed F841 41K 78+CRI T8 Lamps Installed F0830 30K 82CRI T8 Lamps Installed F0835 35K 82CRI T8 Lamps Installed F0841 41K 82CRI T8 Lamps Installed F5830 30K 85CRI T5 or T5HO Lamps Installed F5835 35K 85CRI T5 or T5HO Lamps Installed F5841 41K 85CRI T5 or T5HO Lamps Installed FTT830 30K 82CRI 40W TT Lamps Installed FTT835 35K 82CRI 40W TT Lamps Installed FTT841 41K 82CRI 40W TT Lamps Installed C388 3-Wire Flex C488 4-Wire Flex DG Dust Guard NYC NYC Compliant NYCU NYC Compliant, Union Label CP Chicago Plenum	22 2' x 2' 24 2' x 4'	14 2' T5; 14 Watt 17 2', T8; 17 Watt 24 2', T5HO: 24 Watt 28 4', T5; 28 Watt 32 4', T8; 32, 30, 28 or 25 Watt 40TT 2', Twin Tube Compact, 2G11 Base; 40 Watt 54 4', T5HO, 54 Watt	MPO Metal Perf w/Overlay	U 120V-277V 347 347V	FK22 2' x 2' Flange Kit FK24 2' x 4' Flange Kit FKCR Flange Kit Row Adapter CM 48Y1SC3F 48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3 Wire CM 48Y2SC3F 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3 Wire	

¹ For drywall, order Flange Kit accessories separately.
² CM (2) Order Hanger Accessories separately.



PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN FIXTURE	LAMP TYPE	HEIGHT
2' x 2'	2	2	14, 17, 24, 40TT	4 3/4"
	3	3	14, 17, 24, 40TT	4 3/4"
2' x 4'	2	2	28, 32, 54	4 3/4"
	2	4	40TT	4 3/4"
	3	3	28, 32, 54	4 3/4"
		6	40TT	4 3/4"



FEATURES

- Soft, uniform light distribution provides excellent vertical illumination free from harsh contrast
- Employs T5 or T5HO technology for high efficiency and high performance
- Housing depth of only 1 1/2" for a luminaire no taller than standard T-Bar rails
- Unique telescoping housing minimizes installation depth and simplifies installation
- Does not intrude into usable plenum space
- Multiple shielding options include linear prismatic lens, injection molded, high impact acrylic baffle, or descending perforated metal diffuser
- Three reflector options provide customized aesthetics
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

ZPT	-	2	-		-		-		-	
MODEL	NO. OF LAMPS	CEILING TYPE	REFLECTOR	VOLTAGE	SIZE	LAMP TYPE	SHIELDING	BALLAST	OPTIONS	
ZPT Zero Plenum® Troffer	2 Two	G Grid Lay-in SM Surface Mount ²	O Open (N/A with PRF) R Ribbed Curve (N/A w/ 1 x 4) S Smooth Curve (N/A w/ 1 x 4)	U 120V-277V 347 347V	14 1' x 4' 22 2' x 2' 24 2' x 4'	14 2', T5; 14 Watt 24 2', T5HO: 24 Watt 28 4', T5; 28 Watt 54 4', T5HO: 54 or 51 Watt	FCB Flush Curved Baffle LSR Linear Prismatic Lens with Surface Relief Diffuser PRF Metal Perf w/Overlay (N/A w/ 1x4) SB Solid Basket (N/A on 1x4)	NOTE: See Technical Section for other ballast options. EP Electronic T5, 1.00 Ballast Factor (28W or 54W) EP95 Electronic T5, 0.95 Ballast Factor (28W only) EP115 Electronic T5, 1.15 Ballast Factor (28W only) ED Electronic T5, 1.00 Ballast Factor, Variable Dimming Ballast (28W or 54W) ESD95 Electronic T5, 0.95 Ballast Factor, Step Dimming (28W only) ESD115 Electronic T5, 1.15 Ballast Factor, Step Dimming (28W only)	C38890 3-Wire Flex, 90° Connector ¹ C48890 4-Wire Flex (Step Dimming or -EL Option ¹) GLR Fast Blow Fuse GMF Slow Blow Fuse TB4 (4) Bulk T-Bar Clips ¹ EL5 Emergency Battery Pack (N/A 2 x 2) F5835 35K 85CRI T5 or T5HO Lamps Installed F5841 41K 85CRI T5 or T5HO Lamps Installed NYC NYC Compliant CP Chicago Plenum	

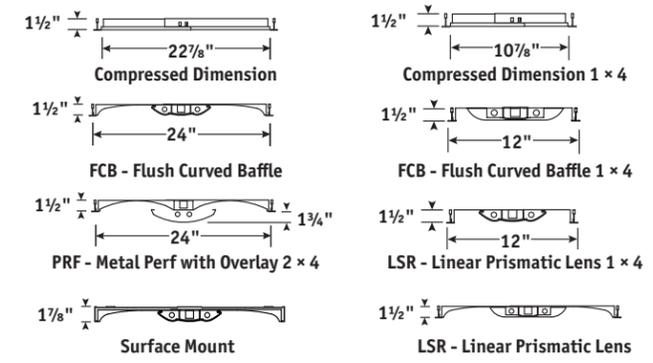
ACCESSORIES (ORDER SEPARATELY)

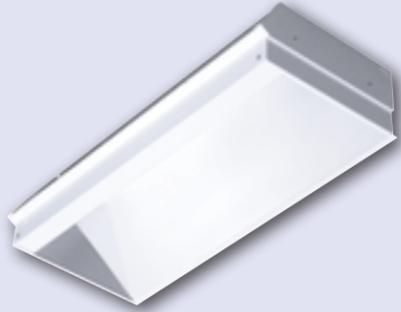
FK14	1' x 4' Flange Kit
FK22	2' x 2' Flange Kit
FK24	2' x 4' Flange Kit
FKCR	Flange Kit Row Adaptor
ZPTSMK22	ZPT Surface Mounting Kit (2'x 2')
ZPTSMK24	ZPT Surface Mounting Kit (2'x4')

¹ Recessed only.
² Zero Plenum may be ordered as a factory-assembled surface mounted unit ordered as grid ("G") ceiling type and surface mounted in the field using the ZPTSMK surface mounting kit.
³ Where available.

PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS	LAMP TYPE	COMPRESSED WIDTH	INSTALLED WIDTH	LENGTH	HEIGHT
1' x 4'	2	28, 54	10 7/8"	11 3/4"	47 3/4"	1 1/2"
2' x 2'	2	14, 24	22 7/8"	23 3/4"	23 3/4"	1 1/2"
2' x 4'	2	28, 54	22 7/8"	23 3/4"	47 3/4"	1 1/2"



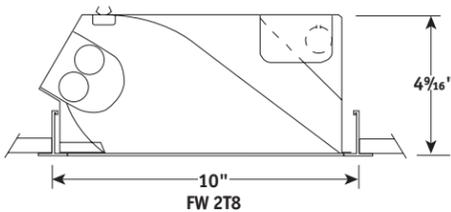
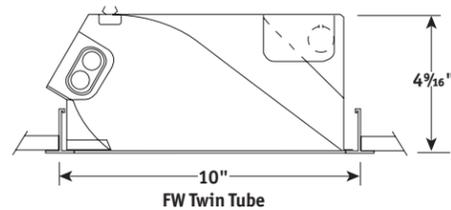


FEATURES

- Wall wash luminaire
- Directs majority of light to vertical surface
- Brighter walls open up spaces, minimize contrast ratios
- Versatile and economical
- Presents a clean, uninterrupted reflecting surface
- Contractor friendly
- Wireway completely accessible from below
- Suitable for individual or continuous row mounting
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

FW							
MODEL	NO. OF LAMPS	CEILING TYPE	REFLECTOR FINISH	VOLTAGE	OPTIONS	SIZE	LAMP TYPE
FW Fluorescent Wall Wash	1 One 2 Two (Not available in Twin Tube) See Product Availability table below.	G Grid SM Surface Mount (For hard ceiling use flange kit.)	MA Matte Anodized Low Iridescent Semi-Specular Aluminum MW Matte White	U 120V-277V 347 347V	EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse MS9 Master/Satellite Pair with 9' Harness MSEE Master/Satellite End-To-End NYC NYC Compliant	102 10" x 2" 104 10" x 4"	14 2', T5: 14 Watt 17 2', T8: 17 Watt 24 2', T5H0: 24 Watt 28 4', T5: 28 Watt 32 4', T8: 32 Watt 40TT Twin Tube Compact, 2G11 Base: 40 Watt 54 4', T5H0: 54 Watt
BALLAST		ACCESSORIES (ORDER SEPARATELY)					
NOTE: See Technical Section for other ballast options. E Electronic T8, Instant Start EP Electronic T5 or T8, Programmed Start ETT Electronic Twin Tube, Instant Start (Specify voltage) EPTT Electronic Twin Tube, Programmed Start		FK102 Flange Adaptor for Hard Ceilings, 2' Fixture FK104 Flange Adaptor for Hard Ceilings, 4' Fixture		For other options see pages 96-112.			



PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN UNIT	LAMP TYPE	HEIGHT	LENGTH
10" x 2'	1	1	14, 17, 24, 40TT	4 9/16"	24"
	2	2	14, 17, 24	4 9/16"	24"
10" x 4'	1	1	28, 32, 54, 40TT	4 9/16"	48"
	1	2	40TT	4 9/16"	48"
	2	2	28, 32, 54	4 9/16"	48"



FEATURES

- Nominal 3" deep louver
- Black reveal with full air handling capabilities
- Matte anodized low iridescent, semi-specular (MA) louver finish virtually eliminates visibility of fingerprints and construction dust
- Shallow housing
- Lightweight
- Recessed, surface, or cable mount
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

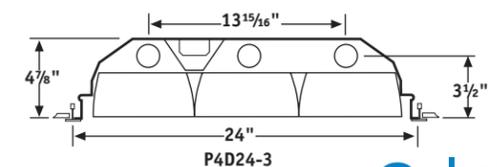
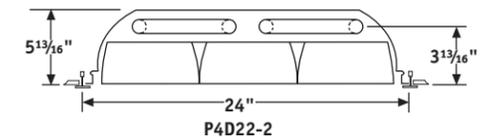
P4D							
MODEL	NO. OF LAMPS	CEILING TYPE	CELLS WIDE BY CELLS LONG	BALLAST	VOLTAGE	SIZE	LAMP TYPE
P4D High Performance Parabolic	2 Two 3 Three 4 Four (N/A in 2x2) See Product Availability table below.	G Grid SM Surface Mount (static only) CM Cable Mount (static only) ⁴ For hard ceilings, use flange kit. See options in Technical section.	See Product Availability table below.	NOTE: See Technical Section for other ballast options. E Electronic T8, Instant Start 3E 3-Lamp Electronic T8, Instant Start 4E 4-Lamp Electronic T8, Instant Start EP Electronic T5 or T8, Programmed Start 3EP 3-Lamp Electronic T5H0 or T8, Programmed Start 4EP 4-Lamp Electronic T5H0 (N/A 347V) or T8, Programmed Start 24E 2 or 4-Lamp Electronic T8, Instant Start (For 3-Lamp Master/Satellite only) ELW 2-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 3ELW 3-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 4ELW 4-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start ETT Electronic Twin Tube, Instant Start (Specify voltage)	U 120V-277V 347 347V	22 2' x 2' ¹³ 24 2' x 4'	14 2', T5: 14 Watt 17 2', T8: 17 Watt 24 2', T5H0: 24 Watt 28 4', T5: 28 Watt 31U1 U-Bent, 1 1/8" Leg Spacing T8: 31 Watt 32 4', T8: 32, 30, 28 or 25 Watt 32U6 U-Bent, 6" Leg Spacing T8: 32 Watt 40TT Twin Tube Compact, 2G11 Base: 40 Watt 54 4', T5H0: 54 or 51 Watt
AIR HANDLING		ACCESSORIES (ORDER SEPARATELY)					
S Static ¹ A Air Handling ¹ AV Air Handling with Supply Vanes ¹ C Combination Supply/Extract ² CV Combination Supply Vanes/Extract ² CD Combination Supply Extract Dampers ² CVD Combination Supply Vanes Extract Dampers ² H Heat Extract ² HD Heat Extract with Dampers ²		LS Low Iridescent Specular MA Matte Anodized Low Iridescent Semi-Specular Aluminum (Std.) LD Low Iridescent Semi-Specular		F835 35K 78+CRI T8 Lamps Installed F841 41K 78+CRI T8 Lamps Installed F0835 35K 82CRI T8 Lamps Installed F0841 41K 82CRI T8 Lamps Installed F5835 35K 85CRI T5 Lamps Installed 2BC Two Ballast Covers C388 3-Wire Flex C488 4-Wire Flex EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse MS9 Master/Satellite w/9' Harness PAF Paint After Fabrication TB4 (4) Bulk T-Bar Clips EOR End of Row (SM/CM only. Provides end wiring access for continuous row mounting) ⁵ INT Intermediate (SM/CM only. Provides ends with wiring access for continuous row mounting) ⁵ NYC NYC Compliant			
For other options see Technical section. Options and configurations may change fixture dimensions.							

¹ All fixtures supplied with integral T-Bar clips.
² 2' x 2' fixtures supplied with integral T-Bar clips, 2' x 4' fixtures supplied with two non-integral T-Bar clips.
³ Various options may increase fixture height on 2' x 2'.
⁴ Order hanger accessories separately.
⁵ Contact factory for continuous row, 3-lamp fixtures.

PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS	LAMP TYPE	LOUVER CONFIGURATIONS
2' x 2'	2	14, 17, 24, 31U1, 32U6, 40TT	2 x 3 (6), 2 x 4 (8), 3 x 3 (9) , 4 x 4 (16)
	3	14, 17, 24, 31U1, 40TT	3 x 3 (9) , 4 x 4 (16)
	4	17	3 x 3 (9) , 4 x 4 (16)
2' x 4'	2	28, 32, 54	2 x 6 (12) , 2 x 8 (16), 4 x 6 (24), 4 x 8 (32)
	3	28, 32, 54	3 x 6 (18) , 3 x 8 (24)
	4	28, 32, 54	2 x 6 (12), 2 x 8 (16), 4 x 6 (24), 4 x 8 (32)

Standard louver configurations shown in bold. Ballast quantities or emergency pack options may be restricted in some models.



ST8

Low Profile Specification Troffer



FEATURES

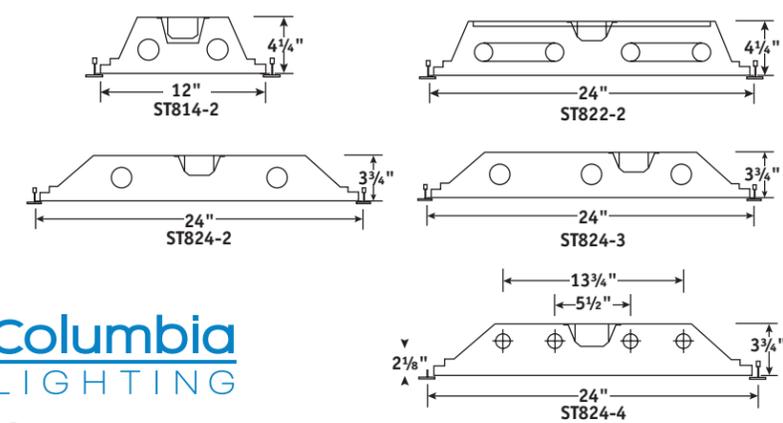
- Optical performance designed for T8 lamp technology
- 2 1/8" minimum spacing from bottom of lamp to bottom of lens
- Mechanical light seal
- Rolled fixture edges for comfortable handling
- Spring loaded latches optional
- Snap-in ballast covers can be removed when lamps are installed
- Integral T-Bar clips (2' x 4' only)
- Optional flush or regressed aluminum door frames available
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

ST8 - [] - [] - [] - [] - [] - [] - [] - []

MODEL	NO. OF LAMPS	CEILING TYPE	SHIELDING	VOLTAGE
ST8 Low Profile Specification Troffer	1 One 2 Two 3 Three 4 Four 6 Six <i>See Product Availability table below.</i>	G Inverted T-Bar F Overlap Flange (1x4 only)	A12 Pattern 12 Acrylic Lens A12125 Pattern 12 Acrylic Lens, 0.125" Nominal A19 Pattern 19 Acrylic Lens, 0.156" Nominal PC1 1/2" x 1/2" x 1/2" Specular Silver Polystyrene Louver PC2 1 1/2" x 1 1/2" x 1" Specular Silver Polystyrene Louver <i>For more shielding options see page 40.</i>	U 120V-277V 347 347V

SIZE	LAMP TYPE	DOOR	BALLAST
22 2' x 2'	14 2', T5: 14 Watt	FS White Flush Steel	NOTE: See Technical Section for other ballast options.
24 2' x 4'	17 2', T8: 17 Watt 24 2', T5H0: 24 Watt 31U1 U-Bent, 1 1/8" Leg Spacing T8: 31 Watt (2 or 3 lamps) 28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 32U6 U-Bent, 6" Leg Spacing T8: 32 Watt (2 lamps) 40TT Twin Tube Compact, 2G11 Base: 40 Watt (2 or 3 lamps) 54 4', T5H0: 54 or 51 Watt	FA White Flush Aluminum RA White Regressed Aluminum PS Premium Steel	E Electronic T8, Instant Start 3E 3-Lamp Electronic T8, Instant Start 4E 4-Lamp Electronic T8, Instant Start EP Electronic T5 or T8, Programmed Start 3EP 3-Lamp Electronic T5H0 or T8, Programmed Start 4EP 4-Lamp Electronic T5H0 (N/A 347V) or T8, Programmed Start ELW 2-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 3ELW 3-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 4ELW 4-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 24E 2 or 4-Lamp Electronic T8, Instant Start (For 3-Lamp Master/Satellite only) EPTT Electronic Twin Tube, Programmed Start



PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS	LAMP TYPE	GRID TRIM HEIGHT
2' x 2'	2	14, 17, 31U1, 32U6, 40TT	4 1/4"
	3	14, 17, 31U1, 40TT	4 1/4"
	4	14, 17	4 1/4"
2' x 4'	2	28, 32, 54	3 3/4"
	3	28, 32, 54	3 3/4"
	4	28, 32, 54	3 3/4"

LBIL

LED Bi-Level Luminaire with Controls



FEATURES

- Energy saving luminaire with integrated occupancy controls
- Long-life 50,000 hour LEDs at L70 for reduced maintenance
- Choice of four lumen packages
- Occupancy controlled dimming of the LEDs increases energy savings while maintaining base light levels in stairwells at all times.
- White steel housing
- Tool-less access to driver for ease of maintenance
- Can be surface mounted, wall mounted, or suspended
- Fail-safe operation switches light level to 100% if sensor is damaged
- Optional battery backup available for emergency egress applications
- Designlights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LBIL 4 - [] - [] - [] - [] - [] - [] - [] - []

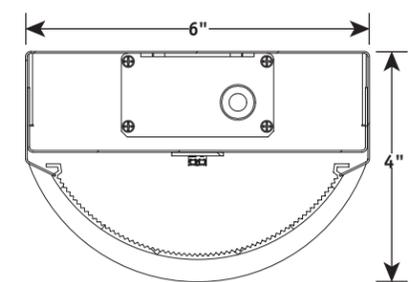
MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LBIL LED Bi-Level Luminaire	2 2' 4 4' 8 8'	35 3500K 40 4000K 50 5000K	VW VW Very Low Watt (2' Only) MW Medium Low Watt (2' Only) LW Low Watt ML Medium Lumen <i>See Product Availability Table below.</i>	E Fixed Output ESD Step Dimming ED 0-10V Dimming	U 120V-277V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ¹ NYC NYC Compliant C6TL15_ 6' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277) C6TL20_ 6' Cord and Twist-Lock™ Plug 20A (Add Voltage: 1=120, 2=277) C6P151 6' Cord and Straight Blade Plug 15A, 120V VH (2) V-Hangers

¹ N/A on 2'

PRODUCT AVAILABILITY, 100% LIGHT OUTPUT

Size	Lumen Package	Nominal Lumens	Nominal Watts	Efficacy
2'	VW	1,600	16	99
	MW	2,000	21	97
	LW	3,000	28	105
4'	LW	3,000	31	98
	ML	5,000	51	96
8'	LW	6,000	62	98
	ML	10,000	102	96

Lumens vary according to color temperatures and other factors. See specific photometric test(s).



BIL

Bi-Level Luminaire



createchange

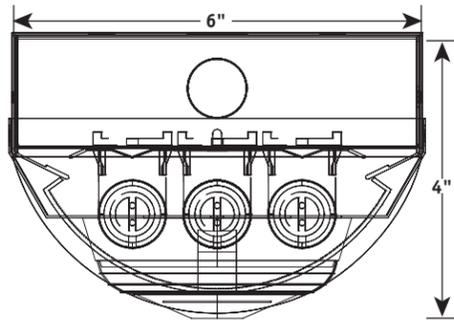
FEATURES

- Energy saving luminaire with integrated occupancy controls
- Bi-level light control offers safety and security
- Ideal for stairwells, parking structures, restrooms and areas where maximum light levels are not needed when area is unoccupied
- A single low wattage 2' T8 lamp delivers constant light output while the 4' T8 lamps are controlled by an integral sensor
- Hubbell Building Automation- Internally mounted Passive Infrared Occupancy sensor with 360° coverage lens and a 2:1 radius to height ratio coverage pattern
- Sensor includes adjustable time delay and motion/ photocell sensitivity
- White aluminum body allows for greater heat dissipation
- Tool-less access to ballast for ease of maintenance
- Can be surface mounted or suspended
- Multiple ballast options available for needed energy savings and light output
- All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Units are UL 924 listed when equipped with optional battery back-up and meet requirements of the life safety code /NFPA101.

ORDERING INFORMATION

BIL	4	2		U																									
MODEL BIL Bi-Level Luminaire	NO. OF LAMPS IN CROSS SECTION 2 Two See Product Availability table below.	PRIMARY BALLAST NOTE: See Technical Section for other ballast options. EP Electronic T5, T5HO or T8, Programmed Start EPLW Electronic T8, 0.77 Ballast Factor, Low Wattage, Programmed Start EPHL Electronic T8, 1.18 Ballast Factor, High Light Output, Programmed Start	VOLTAGE U 120V-277V	OPTIONS F0830 30K 82CRI T8 Lamps Installed F0835 35K 82CRI T8 Lamps Installed EL Emergency Battery Pack ² NYC NYC Compliant ODS1 Factory Installed Occupancy Sensor with daylight harvesting photosensor, 120/277/347V, one relay ¹ VH (2) V-Hangers																									
SIZE 4 4'	LAMP TYPE 32 4', T8: 32, 30, 28 or 25 Watt and 2', T8: 17 Watt 28 4', T5: 28 Watt and 2', T5: 14 Watt 54 4', T5HO: 54, 51 or 49 Watt and 2', T5: 14 Watt	<table border="1"> <thead> <tr> <th rowspan="2">Ballast Type</th> <th colspan="2">UNOCCUPIED (1) 17 WATT T8 LAMP</th> <th colspan="2">OCCUPIED (1) 17 WATT T8 LAMP & (2) 32 WATT T8 LAMPS</th> </tr> <tr> <th>Watts</th> <th>Lumens</th> <th>Watts</th> <th>Lumens</th> </tr> </thead> <tbody> <tr> <td>EP (0.88 BF)</td> <td>15</td> <td>989</td> <td>74</td> <td>4669</td> </tr> <tr> <td>EPLW (0.77 BF)</td> <td>15</td> <td>989</td> <td>62</td> <td>4208</td> </tr> <tr> <td>EPHL (1.18 BF)</td> <td>15</td> <td>989</td> <td>90</td> <td>5170</td> </tr> </tbody> </table>				Ballast Type	UNOCCUPIED (1) 17 WATT T8 LAMP		OCCUPIED (1) 17 WATT T8 LAMP & (2) 32 WATT T8 LAMPS		Watts	Lumens	Watts	Lumens	EP (0.88 BF)	15	989	74	4669	EPLW (0.77 BF)	15	989	62	4208	EPHL (1.18 BF)	15	989	90	5170
Ballast Type	UNOCCUPIED (1) 17 WATT T8 LAMP		OCCUPIED (1) 17 WATT T8 LAMP & (2) 32 WATT T8 LAMPS																										
	Watts	Lumens	Watts	Lumens																									
EP (0.88 BF)	15	989	74	4669																									
EPLW (0.77 BF)	15	989	62	4208																									
EPHL (1.18 BF)	15	989	90	5170																									

¹Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories contact your Columbia lighting representative.
²Voltage Required



PRODUCT AVAILABILITY

SIZE	NO. OF CONTROLLED LAMPS	CONTROLLED LAMP TYPE	NO. OF CONSTANT LAMPS	CONSTANT LAMP TYPE	WIDTH	LENGTH	HEIGHT
4'	2	32	1	17	6"	54"	4"

LAW

Low Profile LED Wraparound



DLC LISTED

FEATURES

- Long-life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices
- 4' Size offers seven lumen packages
- 2' Size offers four lumen packages
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Optional integral emergency battery pack
- Heavy gauge steel housing, die embossed for maximum rigidity
- White steel end plates
- Diffuser features flat bottom and vertical sides
- Hinges from either side
- LED boards and driver accessible for future maintenance or upgrades; modular, replaceable
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Surface Mount or Suspended
- For narrow corridor wrap with matching appearance use LRO
- QR code traceability
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LAW							
MODEL LAW LED Wraparound	SIZE 2 2' 4 4'	COLOR TEMP 30 3000K 35 3500K 40 4000K 50 5000K	LUMEN OUTPUT XW Extra Low Watt VW Very Low Watt MW Medium Low Watt LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen See Product Availability Table below.	DRIVER E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUT5 5-Series EcoSystem LED driver	VOLTAGE U 120V-277V 347 347 (E,ED,ED1 only)	OPTIONS ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication NYC NYC Compliant	

¹For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
²Only available in 4 ft.

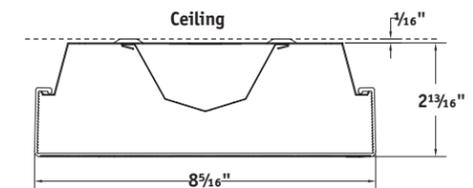
ACCESSORIES (ORDER SEPARATELY)

- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	EFFICACY
2'	LW	2,685	24	111
	ML	3,346	28	118
	HL	3,751	32	116
4'	VL	4,565	41	111
	XW	2,406	19	128
	VW	3,346	27	126
	MW	3,787	31	124
4'	LW	4,477	37	120
	ML	4,984	43	117
	HL	5,714	51	112
	VL	7,074	58	121

Lumens vary according to color temperatures and other factors. See specific photometric test(s).



LPT

Premium LED Corridor Wraparound



FEATURES

- Matches LWC (LED) in appearance
- Long-life 50,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices
- Four lumen packages
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 4' and 8' lengths
- Heavy gauge steel housing, die embossed for maximum rigidity
- Injection molded ends sonically welded to prismatic lens extrusion
- Diffuser features flat bottom and vertical sides
- LED boards and driver accessible for future maintenance or upgrades; modular replaceability
- Surface mount or stem mount
- QR code traceability
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)



createchange

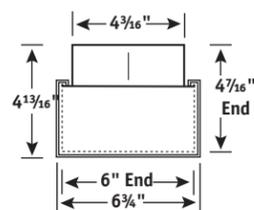
ORDERING INFORMATION

MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LPT Premium LED Corridor Lensed Striplight	4 4' 8 8'	30 3000K 35 3500K 40 4000K 50 5000K	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen <small>See Product Availability Table below.</small>	E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ³ LUT5 5-Series EcoSystem LED driver ³	U 120V-277V 347 347 (E,ED,ED1 only)	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication NYC NYC Compliant

ACCESSORIES (ORDER SEPARATELY)

- ITB4 T-Bar Hanger
- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel, Canopy

¹ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting Representative.
² ELL14 not available with VL lumen packages.
³ Not available in VL packages.



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (3500K)	NOMINAL WATTS
4'	LW	2,700	25
	ML	5,000	53
	HL	6,400	63
	VL	9,600	105
8'	LW	5,400	50
	ML	10,000	106
	HL	12,800	126
	VL	19,200	210

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

LRO

LED Corridor Wraparound



FEATURES

- Matches LAW (LED) in appearance
- Long-life 50,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 4' and 8' lengths
- Four lumen packages
- Heavy gauge steel housing, die embossed for cooler operation and longer life
- Clear prismatic diffuser with flat bottom and vertical sides
- Hinges from either side
- LED boards and driver accessible for future maintenance or upgrades; modular replaceability
- Surface mount or stem mount
- QR code traceability
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)



createchange

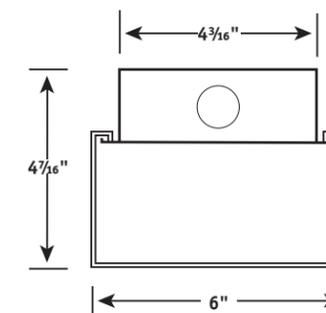
ORDERING INFORMATION

MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LRO LED Corridor Lensed Striplight	4 4' 8 8'	30 3000K 35 3500K 40 4000K 50 5000K	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen <small>See Product Availability Table below.</small>	E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ³ LUT5 5-Series EcoSystem LED driver ³	U 120V-277V 347 347 (E,ED,ED1 only)	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication NYC NYC Compliant

ACCESSORIES (ORDER SEPARATELY)

- ITB4 T-Bar Hanger
- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel, Canopy

¹ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
² ELL14 not available with VL lumen packages.
³ Not available in VL packages.



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (3500K)	NOMINAL WATTS
4'	LW	2,700	25
	ML	5,000	53
	HL	6,400	63
	VL	9,600	105
8'	LW	5,400	50
	ML	10,000	106
	HL	12,800	126
	VL	19,200	210

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

LED



createchange



FEATURES

- Matches WC (fluorescent) in appearance
- Excellent efficacy with up to 131 lumens per watt
- Long-life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices
- 2' Size offers four lumen packages
- 4' Size offers seven lumen packages
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Heavy gauge steel housing, die embossed for maximum rigidity
- Injection molded ends sonically welded to prismatic lens extrusion
- Clear prismatic diffuser with overlay features flat bottom and vertical sides
- LED boards and driver accessible for future maintenance or upgrades; modular replaceability
- Surface mount or stem mount
- QR code traceability
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

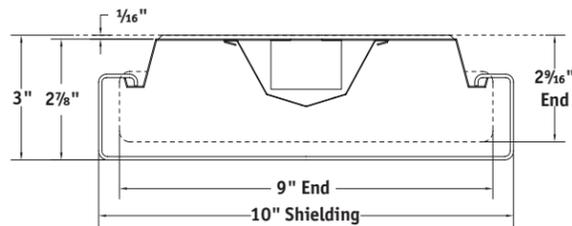
MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LWC						
LWC LED Premium Specification Grade Wraparound	2 2' 4 4'	30 3000K 35 3500K 40 4000K 50 5000K	XW Extra Low Watt VW Very Low Watt MW Medium Low Watt LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology LUT5 5-Series EcoSystem LED driver	U 120V-277V 347 347 (E,ED,ED1 only)	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication DR 50% DR Content, Clear Prismatic Acrylic NYC NYC Compliant

See Product Availability Table below.

ACCESSORIES (ORDER SEPARATELY)

- ITB4 T-Bar Hanger
- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel, Canopy

¹ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
² Battery not compatible with 2' fixture.



PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (4000K)	NOMINAL WATTS	EFFICACY
2'	LW	2,599	24	108
	ML	3,278	28	117
	HL	3,715	32	116
	VL	4,545	41	111
4'	XW	2,396	19	127
	VW	3,347	27	125
	MW	3,792	31	124
	LW	4,423	37	120
	ML	5,018	43	118
	HL	5,732	51	113
	VL	7,065	58	121

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

FEATURES

- Clear acrylic prismatic diffuser with flat bottom and vertical sides
- Two, three, or four-lamp cross sections
- Hinges from either side
- White steel end plates with flush knockouts for continuous row mounting
- Heavy gauge steel housing die embossed for maximum rigidity
- Heat sink embossments and levelling projections allow direct mounting of HPF fixtures on combustible low density cellulose fiberboard ceilings
- All metal parts are treated with a five stage phosphate bonding process and finished with a baked white enamel
- UL listed 1598, cUL or CSA. Damp Location standard



ORDERING INFORMATION

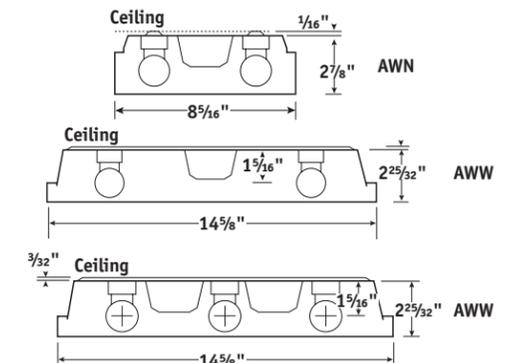
MODEL	SIZE	NO. OF LAMPS IN CROSS SECTION	LAMP TYPE	BALLAST	VOLTAGE	OPTIONS
AWN 8 5/16" Wide	2 2' (AWN only)	2 Two	17 2', T8: 17 Watt	NOTE: See Technical Section for other ballast options. E Electronic Instant Start (Std.) 3E 3-Lamp Electronic T8, Instant Start 4E 4-Lamp Electronic T8, Instant Start 24E (1) 2-Lamp and (1) 4-Lamp Electronic T8, Instant Start EP Electronic T5 or T8, Programmed Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start 4EP 4-Lamp Electronic T5HO (N/A 347V) or T8, Programmed Start	U 120V-277V 347 347V	EL Emergency Battery Pack GLR Fast Blow Fuse PAF Paint After Fabrication SB3 Stem Mounting Bracket (Required for 3-Lamp units only) NYC NYC Compliant For more options see pages 96-112.
AWW 14 5/8" Wide	4 4'	3 Three	28 4', T5: 28 Watt			
	8 8'	4 Four	32 4', T8: 32, 30, 28 or 25 Watt			
		See Product Availability table below.	54 4', T5HO: 54 Watt			

ACCESSORIES (ORDER SEPARATELY)

- S18 18" Stem w/Canopy
- SS18 18" 45° Swivel Stem w/Canopy

PRODUCT AVAILABILITY

SERIES	No. of lamps in cross section	No. Of lamps in fixture	Lamp Type	Lamp length	WIDTH	LENGTH	HEIGHT
AWN2	2	2	17	2'	8 5/16"	2'	2 7/8"
AWN4	2	2	28, 32, 54	4'	8 5/16"	4'	2 7/8"
AWN8	2	4	28, 32, 54	4'	8 5/16"	8'	2 7/8"
AWW4	2	2	28, 32, 54	4'	14 5/8"	4'	2 25/32"
	3	3	28, 32, 54	4'	14 5/8"	4'	2 25/32"
	4	4	28, 32, 54	4'	14 5/8"	4'	2 25/32"
AWW8	2	4	28, 32, 54	4'	14 5/8"	8'	2 25/32"
	3	6	28, 32, 54	4'	14 5/8"	8'	2 25/32"
	4	8	28, 32, 54	4'	14 5/8"	8'	2 25/32"





FEATURES

- Clear acrylic prismatic diffuser, flat bottom with vertical sides, and injection molded glow ends
- Two, three, or four-lamp cross sections
- Heavy gauge steel housing die embossed for maximum rigidity
- Heat sink embossments and levelling projections allow direct mounting of HPF fixtures on combustible low density cellulose fiberboard ceilings
- All metal parts are treated with a five stage phosphate bonding process and finished with a baked white enamel
- Hinges from either side
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

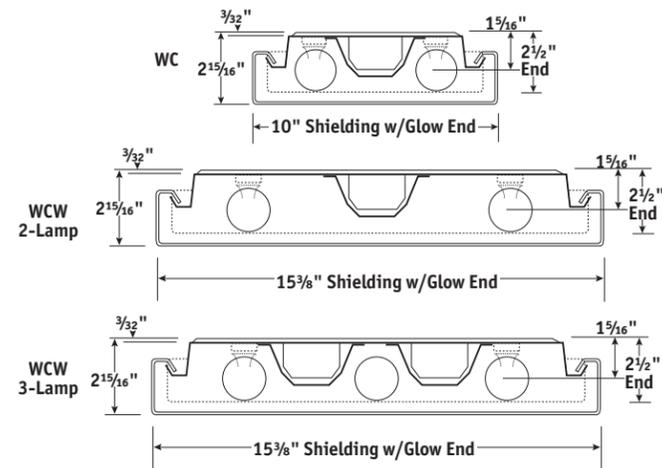
MODEL	SIZE	LAMP TYPE	BALLAST	VOLTAGE	OPTIONS
WC	10" Wide	2' T5: 14 Watt	NOTE: See Technical Section for other ballast options.	U 120V-277V	EL Emergency Battery Pack
WCW	15 3/8" Wide	2' T8: 17 Watt	E Electronic Instant Start (Std.)	120 120V	GLR Fast Blow Fuse
	4' 4"	24 2', T5HO: 24 Watt	3E 3-Lamp Electronic T8, Instant Start	347 347V	PAF Paint After Fabrication
	8' 8"	28 4', T5: 28 Watt	4E 4-Lamp Electronic T8, Instant Start		SB3 Stem Mounting Bracket (Required for 3-Lamp units only)
		32 4', T8: 32, 30, 28 or 25 Watt	24E (1) 2-Lamp and (1) 4-Lamp Electronic T8, Instant Start		NYC NYC Compliant
		54 4', T5HO: 54 Watt	EP Electronic T5 or T8, Programmed Start		
			3EP 3-Lamp Electronic T5HO or T8, Programmed Start		
			4EP 4-Lamp Electronic T5HO (N/A 347V) or T8, Programmed Start		
			24EP (1) 2-Lamp and (1) 4-Lamp Electronic T5 or T8, Programmed Start		

NO. OF LAMPS IN CROSS SECTION
2 Two
3 Three
4 Four

See Product Availability table below.

LENS
Blank Clear Prismatic Acrylic
DR 50% DR content, Clear Prismatic Acrylic

ACCESSORIES (ORDER SEPARATELY)
S18 18" Stem w/Canopy
SS18 18" 45° Swivel Stem w/Canopy



PRODUCT AVAILABILITY

SERIES	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN FIXTURE	LAMP TYPE	LAMP LENGTH	WIDTH	LENGTH	HEIGHT
WC2	2	2	14, 17, 24	2'	10"	2'	2 15/16"
WC4	2	2	28, 32, 54	4'	10"	4'	2 15/16"
WC8	2	4	28, 32, 54	4'	10"	8'	2 15/16"
WCW2	2	2	14, 17, 24	2'	15 3/8"	2'	2 15/16"
WCW4	2	2	28, 32, 54	4'	15 3/8"	4'	2 15/16"
	3	3	28, 32, 54	4'	15 3/8"	4'	2 15/16"
	4	4	28, 32, 54	4'	15 3/8"	4'	2 15/16"
WCW8	2	4	28, 32, 54	4'	15 3/8"	8'	2 15/16"
	3	6	28, 32, 54	4'	15 3/8"	8'	2 15/16"
	4	8	28, 32, 54	4'	15 3/8"	8'	2 15/16"



FEATURES

- Optical design provides one-for-one replacement of metal halide and fluorescent high bays with substantial energy savings
- High efficacy LEDs provide up to 158 lumens per watt
- Available in narrow or wide distribution
- Long-Life LEDs 60,000 hours at L80 with projected life over 200,000 hours for reduced life cycle maintenance costs
- Easy center driver cover allows tool-less access to electrical components for modular replaceability
- Drivers include 6kV surge protection
- Fixture to be suspended a minimum of 28" from solid surface
- Extremely low profile—only 2" overall height
- Quick and simple hanging systems include chain, tong or aircraft cable mounting
- Access cover in channel for easy wiring access
- "Plug and play" occupancy sensor, daylight sensor, cord and plug
- ControlScope® compatible
- Wire guard and/or lens option
- DesignLights Consortium® (DLC) qualified; see www.designlights.org
- CSA listed and suitable for damp locations
- -20°C up to 65°C ambient operation; see table on specification sheet for details
- Five year warranty (Terms & Conditions apply)



createchange

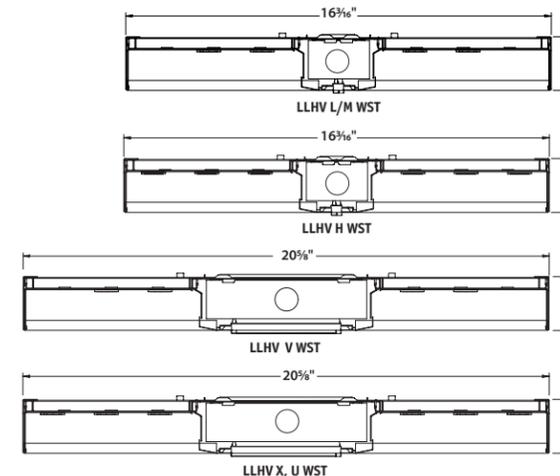
ORDERING INFORMATION

MODEL	SIZE	COLOR TEMP	REFLECTOR	UPLIGHT	VOLTAGE	OPTIONS
LLHV	4			ST		
	4' 4"	35 3500K 40 4000K 50 5000K	N Narrow Distribution W Wide Distribution	ST Solid Top (no uplight)	U 120V-277V 347 347V ⁹ 480 480V ⁹	C6TL15 6' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277) C6TL20 6' Cord and Twist-Lock™ Plug 20A (Add Voltage: 1=120, 2=277) C6P151 6' Cord and Straight Blade Plug 15A, 120V CA Clear Acrylic Lens ^{1,2} CP Clear Polycarbonate Lens ^{1,2} SFA Smooth Frosted Acrylic Lens ^{1,2} CAWG Clear Acrylic Lens and Flat Wire Guard ^{1,2,3} CPWG Clear Polycarbonate Lens and Flat Wire Guard ^{1,2,3} SFAWG Smooth Frosted Acrylic Lens with Flat Wire Guard ^{1,2,3} WG Flat Wire Guard ^{1,3} SP Side Panels Installed ^{1,4} ELL14 Emergency Battery Pack, 1400 Lumens ^{5,6} FAC5 4-Conductor Cord GLR Fast Blow Fuse OS1360 Factory Installed Occupancy/Daylight, Sensor, 1-relay, 360° lens 120/277 OS2360 Factory Installed Occupancy/Daylight, Sensor, 2-relay, 360° lens 120/277 OS1A Factory Installed Occupancy/Daylight Sensor, 1-relay, Aisle lens, 120/277 OS2A Factory Installed Occupancy/Daylight Sensor, 2-relay, Aisle lens, 120/277 ODS1360 Factory Installed Dimming Occupancy/Daylight Sensor, 1-relay, 360° lens 120/277 ODS1A Factory Installed Dimming Occupancy/Daylight Sensor, 1-relay, Aisle lens 120/277 NYC NYC Compliant ZRE ControlScope® compatible ⁸ LV Lutron Vive Enabled, 0-10V ^{11,12}

PRODUCT AVAILABILITY

LUMEN PACKAGE	NOMINAL LUMENS	NOMINAL WATTS	EFFICACY
L	12,060 - 13,557	89	152
M	14,416 - 20,340	138	147
H	19,917 - 26,837	195	158
V	27,268 - 34,964	245	143
X	32,502 - 39,650	287	138
U	37,936 - 52,434	368	142

Actual lumens will vary according to color temperature and other factors. For exact lumens and watts see specific photometric test(s).





FEATURES

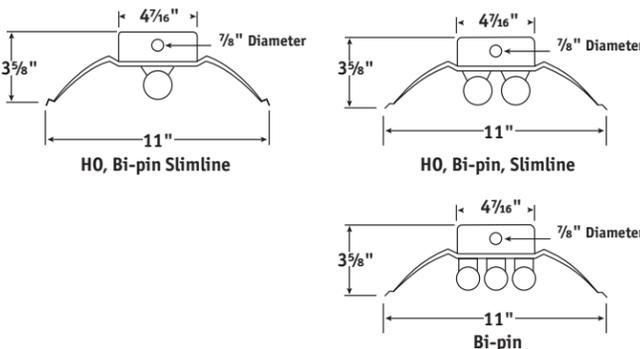
- Die formed steel housing with knockouts for stems or chain hangers
- Die embossed reflector with ribs
- Most models available with 5% uplight
- Individual or continuous row mounting
- Channel ends double as joiners
- All painted parts are treated with a five stage phosphate bonding process and finished with a baked white enamel
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

CSR - [] - [] - [] - [] - [] - [] - []

MODEL	NO. OF LAMPS	REFLECTOR TYPE	VOLTAGE	OPTIONS
CSR Industrial	1 One 2 Two 3 Three (T8 or T5) See Product Availability table below.	ST Solid Top Reflector U Apertured Reflector for 5% Uplight (Standard) (Solid Reflector not recommended with HO units) LSRU Apertured Alum. Reflector with Specular Silver Finish LSRST Solid Top Alum. Reflector with Specular Silver Finish M4RU Apertured Alum. Reflector with 95% Reflective Specular Silver Finish M4ST Solid Top Alum. Reflector with 95% Reflective Specular Silver Finish	U 120V-277V 347 347V	BC1 Branch Circuit Wiring Single Circuit (For more branch circuit wiring options see page 113.) EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse PAF Paint After Fabrication NYC NYC Compliant
SIZE	LAMP TYPE	BALLAST	ACCESSORIES (ORDER SEPARATELY)	
4 4' 8 8' 16 16' (Two housings)	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 48 4', T12 48HO 4', T12: 60 Watt 54 4', T5HO: 54 or 51 Watt 96 8', T12: 75 or 60 Watt 96T8 8', T8: 59 Watt 96HO 8', T12: 110 or 95 Watt 96T8HO 8', T8: 86 Watt	NOTE: See Technical Section for other ballast options. E Electronic, Instant Start 3E 3-Lamp Electronic T8 (32W), Instant Start 4E 4-Lamp Electronic T8 (32W), Instant Start 24E (1) 2-Lamp and (1) 4-Lamp Electronic T8 (32W), Instant Start EP Electronic, Programmed Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start 4EP 4-Lamp Electronic T5HO (N/A 347V) or T8, Programmed Start Instant Start ballasts available for 32, 96, and 96T8. Programmed Start ballasts available for all except 96 and 96T8.	CSRWG Wireguard CSHC Chain Hanger (pair) CSTH Slide Tong Hanger (pair) OS1360K Occupancy/Daylight sensor kit, 120/277/347V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring ¹	

¹Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories see the Industrial and Striplight Accessories page in the Technical section.



PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN FIXTURE	LAMP TYPE	WIDTH	LENGTH	HEIGHT
4'	1	1	28, 32	11"	48"	3 3/8"
	2	2	28, 32	11"	48"	3 3/8"
	1	1	48, 48HO, 54	11"	48"	3 3/8"
	2	2	48, 48HO, 54	11"	48"	4 1/2"
8'	1	2	28, 32, 54	11"	48"	3 3/8"
	2	4	28, 32, 54	11"	96"	3 3/8"
	1	2	96, 96T8	11"	96"	3 3/8"
	2	2	96, 96T8	11"	96"	3 3/8"
	2	2	96HO, 96T8HO	11"	96"	4 1/2"
	3	6	28, 32	11"	96"	3 3/8"
16' (Two housings)	2	8	28, 32, 54	11"	192"	3 3/8"
	2	4	96, 96T8	11"	192"	3 3/8"
	2	2	96HO, 96T8HO	11"	192"	4 1/2"
	2	4	96HO, 96T8HO	11"	192"	4 1/2"



FEATURES

- Heavy gauge steel housing with longitudinal ribs
- Die embossed reflector with ribs
- Wide variety of reflectors available including specular, deep V, and solid top
- Standard reflector has smooth extruded apertures with 15% uplight
- Spring loaded turret lampholders
- Individual or continuous row mounting
- Channel ends double as joiners
- All painted parts are treated with a five stage phosphate bonding process and finished with a baked white enamel
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

KL - [] - [] - [] - [] - [] - [] - []

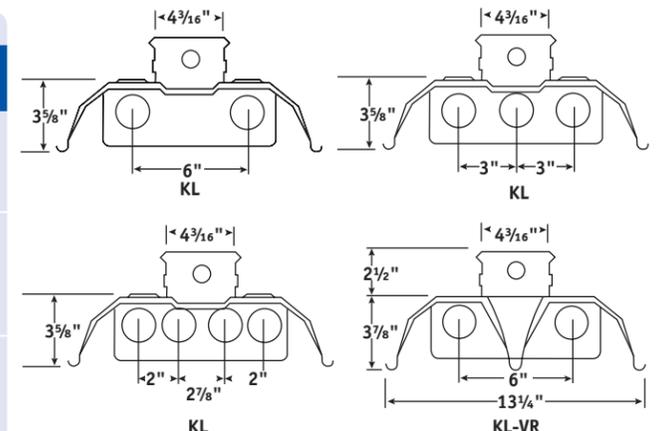
MODEL	NO. OF LAMPS	REFLECTOR TYPE	VOLTAGE	OPTIONS
KL Premium Industrial	2 Two 3 Three 4 Four See Product Availability table below.	U Apertured Uplight Reflector ST Solid Top VR Deep V Apertured Uplight Reflector (2-Lamp only)* M4RST Solid Top Reflector with 95% Reflective Specular Silver Finish M4RU Apertured Reflector with 95% Reflective Silver Finish	U 120V-277V 347 347V	BC1 Branch Circuit Wiring Single Circuit (For more branch circuit wiring options see page 113) EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse PAF Paint After Fabrication NYC NYC Compliant
SIZE	LAMP TYPE	BALLAST	ACCESSORIES (ORDER SEPARATELY)	
4 4' 8 8' 16 16' (Two housings)	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 48HO 4', T12: 60 Watt 54 4', T5HO: 54 or 51 Watt 96 8', T12: 75 or 60 Watt 96T8 8', T8: 59 Watt 96HO 8', T12: 110 or 95 Watt 96T8HO 8', T8: 86 Watt	NOTE: See Technical Section for other ballast options. E Electronic, Instant Start 3E 3-Lamp Electronic T8 (32W), Instant Start 4E 4-Lamp Electronic T8 (32W), Instant Start EP Electronic, Programmed Start 24E (1) 2-Lamp and (1) 4-Lamp Electronic T8 (32W), Instant Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start 4EP 4-Lamp Electronic T5HO (N/A 347V) or T8, Programmed Start Instant Start ballasts available for 32, 96, and 96T8. Programmed Start ballasts available for all except 96 and 96T8.	S18 18" Stem, Canopy and 8" Aligner SS18 18", 45° Swivel Stem and Canopy KHC 24" Chain Hanger Assembly KLEC Full Depth Endcap (pair) OS1360K Occupancy/Daylight sensor kit, 120/277/347V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring ¹	

¹Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories see the Industrial and Striplight Accessories page in the Technical section.

PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN FIXTURE	LAMP TYPE	WIDTH	LENGTH	HEIGHT
4'	2	2	28, 32, 54	13 3/8"	49 7/16"	6 1/8"*
	2	2	48HO	13 3/8"	48"	6 1/8"*
	3	3	28, 32, 54	13 3/8"	49 7/16"	6 1/8"
	4	4	28, 32, 54	13 3/8"	49 7/16"	6 1/8"
8'	2	4	28, 32, 54	13 3/8"	98 13/16"	6 1/8"*
	2	2	96T8, 96HO, 96T8HO	13 3/8"	96"	6 1/8"*
	3	6	28, 32, 54	13 3/8"	98 13/16"	6 1/8"
	3	3	59, 96HO, 96T8HO	13 3/8"	96"	6 1/8"
	3	8	96T8	13 3/8"	96"	6 1/8"
	4	8	28, 32, 54	13 3/8"	197 7/8"	6 1/8"*
16' (Two housings)	2	4	96T8, 96HO, 96T8HO	13 3/8"	192"	6 1/8"*
	3	12	28, 32, 54	13 3/8"	197 7/8"	6 1/8"
	3	6	96T8, 96HO, 96T8HO	13 3/8"	192"	6 1/8"
	4	16	28, 32, 54	13 3/8"	197 7/8"	6 1/8"
	4	8	29T8, 96HO, 96T8HO	13 3/8"	192"	6 1/8"

*VR reflector option increases fixture depth to 6 3/8". N/A in T5 lamping.



LHR

Ultra-Efficient Fluorescent High Bay



FEATURES

- Specifically contoured specular reflectors drive light downward for excellent high bay performance
- Efficiency up to 99.3%
- Choice of lumen packages and distribution curves replace and improve upon traditional 250W to 400W metal halide high bays
- Rotary locking lampholders keep T5 lamps secure
- Employs T5 or T8 technology
- Optional uplight, feed cords and plugs, or occupancy sensors to fit most applications
- Fast and flexible GLH adjustable cable option provides simplified mounting in virtually any installation, whether new construction or retrofit
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

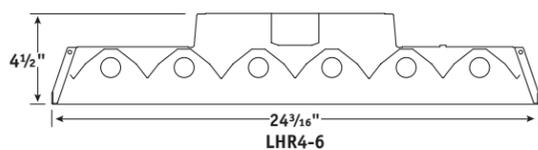
LHR	4	6				
MODEL	SIZE	NO. OF LAMPS	REFLECTOR	UPLIGHT	VOLTAGE	
LHR Ultra-Efficient Fluorescent High Bay	4 48" (Nominal)	6 Six	M4R 95% Reflective Specular Aluminum (Narrow Beam) LS Specular Anodized Aluminum (Narrow Beam) GW Gloss White Powder Coat (Wide Beam)	ST Solid Top (No uplight) U Uplight, 12%	U 120V-277V 347 347V 480 480V	

ACCESSORIES (ORDER SEPARATELY)	BALLAST
LHTF Fixture Safety Tether LHHB-LHR4-6LT Universal Hanger Bracket Kit for 6-Lamp Fixture LHSH Metal Strut Hanger GLH5 5' Adjustable Cable Kit* GLH10 10' Adjustable Cable Kit* GLH15 15' Adjustable Cable Kit* LHRWG6K Wire Guard Kit for 6-Lamp (not to be used with door frame) OS1360K Occupancy/Daylight Sensor Kit, 120/277/347V, One Relay, 360 Lens ¹	NOTE: See Technical Section for other ballast options. LHR4-654 EP (3) 2-Lamp Electronic T5HO, Programmed Start 3EP (2) 3-Lamp Electronic T5HO, Programmed Start 24EP (1) 2-Lamp and (1) 4-Lamp Electronic T5HO, Programmed Start LHR4-632 3E (2) 3-Lamp Electronic T8, Instant Start 3EP (2) 3-Lamp Electronic T8, Programmed Start 24E (1) 2-Lamp and (1) 4-Lamp Electronic T8, Instant Start 24EP (1) 2-Lamp & (1) 4-Lamp Electronic T8, Programmed Start 3EHL (2) 3-Lamp Electronic T8, High Light Output, Instant Start

OPTIONS
F5830 30K 85CRI T5 or T5HO Lamps Installed F5835 35K 85CRI T5 or T5HO Lamps Installed F5841 41K 85CRI T5 or T5HO Lamps Installed F5850 50K 82CRI T5HO Lamps Installed F0830 30K 82CRI T8 Lamps Installed F0835 35K 82CRI T8 Lamps Installed F0841 41K 82CRI T8 Lamps Installed LHHB Universal Hanger Bracket C6TL15 6' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277) C6TL20 6' Cord and Twist-Lock™ Plug 20A (Add Voltage 1=120, 2=277) C6P15 6' Cord and Straight Blade Plug 15A (Add Voltage: 1=120, 2=277) EL Emergency Battery Pack T8 EL5H Emergency Battery Pack T5 F3C* 3-Conductor Feed Cord Wired to Fixture F4C* 4-Conductor Feed Cord Wired to Fixture FSCA Flush Steel Door with Clear Acrylic Lens FSCP Flush Steel Door with Clear Polycarbonate Lens FSCAWG Flush Steel Door with Clear Polycarbonate Lens and Flat Wire Guard GLR Fast Blow Fuse LHTD Safety Tether for Door Assembly, Fastened to Fixture Housing PAF Paint After Fabrication NYC NYC Compliant

¹Use with LHHB. For more accessories see Technical Section.

¹Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories see page 98.



PRODUCT AVAILABILITY

MODEL	SOURCE	NO. OF LAMPS	UPLIGHT OPTIONS	LAMP TYPE	WIDTH	LENGTH	HEIGHT
LHR4-6	T5, T8	6	ST, 6, 12	28, 32, 54	24 3/16"	48"	4 1/2"

Note: Not intended for surface mounting. Provide a minimum of 3" clearance.

LHS

Slim Body Linear High Bay



FEATURES

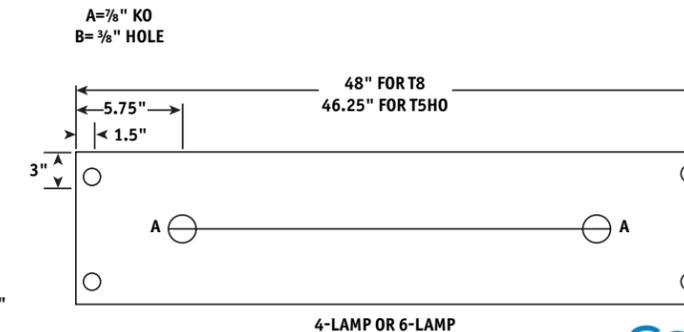
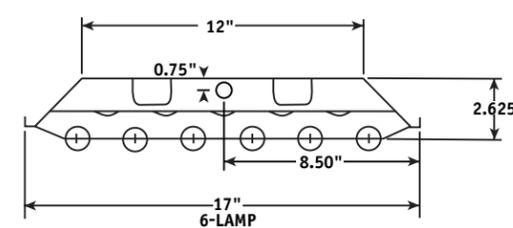
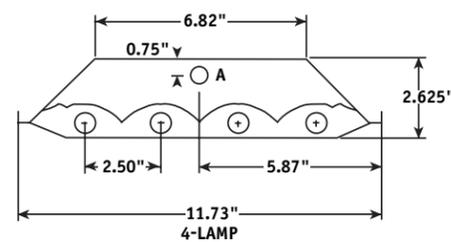
- Used in high and low bay, aisle and task lighting applications
- Ideal for mounting heights ranging 8 ft. to 40 ft.
- Rugged 22 gauge riveted full body steel housing
- 95% specular aluminum reflectors to precise control or finished white reflectors available for wide light distribution
- Tool-less ballast access for easy service
- V-hangers included for chain hanging
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LHS	4				U		
MODEL	SIZE	NO. OF LAMPS IN CROSS SECTION	REFLECTOR	VOLTAGE	LAMPS INSTALLED		
LHS Slim Body Linear High Bay	4 4'	4 Four 6 Six	M4R Aluminum 95% Reflective, Specular Silver (Narrow Beam) GW Gloss White (Wide Beam)	U 120V-277V	T8 F0841 85CRI, 4100K F0850 85CRI, 5000K T5HO F5841 85CRI, 4100K F5850 85CRI, 5000K		

ACCESSORIES (ORDER SEPARATELY)	LAMP TYPE	BALLAST	OPTIONS
LHTG5 Y-Fit Toggle Hanger, 5' Adjustable, Pair LHTG10 Y-Fit Toggle Hanger, 10' Adjustable, Pair GLH5 5', Adjustable Cable Kit GLH10 10', Adjustable Cable Kit GLH15 15', Adjustable Cable Kit OS1K Occupancy Sensor Kit, 120-347V, one relay* OS2K Occupancy Sensor Kit, 120-347V, two relay*	32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO: 54 or 51 Watt	T8 4EHL (1) 4-Lamp Electronic T8 High Light Output, Instant Start 3EHL (2) 3-Lamp Electronic T8 High Light Output, Instant Start 4EPHL (1) 4-Lamp Electronic T8 High Light Output, Programmed Start 3EPHL (2) 3-Lamp Electronic T8 High Light Output, Programmed Start T5HO 4EP (1) 4-Lamp Electronic T5HO, Programmed Start 24EP (1) 4-Lamp and (1) 2-Lamp Electronic T5HO, Programmed Start	F3C5 3-Conductor Cord F4C5 4-Conductor Cord C8TL15 8' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277) C8P151 8' Cord and Straight Blade Plug 15A, 120V EL Emergency Battery Pack, T8 1100-1200 Lumens, 1-Lamp or T5HO 1150 Lumens, 1-Lamp WG Cage Type Wire Guard NYC NYC Compliant

Use programmed start ballast. Not recommended for use with an instant start. For more occupancy/daylight harvesting sensor accessories contact your Columbia Lighting representative.





createchange

FEATURES

- Optical design provides one-for-one replacement 400 watt metal halide high bays at half the energy
- Advanced Thermal Management (ATM) provides optimized heat dissipation for cool ballast operation in unconditioned spaces
- Industry leading 5-year warranty for up to 65°C ambient operation
- Easy center-ballast cover allows tool-less access to electrical components without the removal of lamps, reflectors, or hardware
- Extremely low profile – only 2" overall height
- Reflector options include uplight (recommended) or solid top with either narrow or wide distribution
- Quick and simple hanging systems including chain, tong, or aircraft cable mounting
- Rotary locking lampholders
- Access cover in channel for easy wiring access
- "Plug and play" occupancy sensor and cord and plug accessories make installation simple to any standard LHV fixture
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

LHV 4 - [] - [] - [] - [] - [] - [] - []

SIZE	NO. OF LAMPS	REFLECTOR	UPLIGHT	VOLTAGE	OPTIONS
4 4'	4 Four	M4R 95% Reflective Specular Aluminum (Narrow Beam)	ST Solid Top	U 120V-277V	C6TL15 6' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277)
	6 Six	GW Gloss White (Wide Beam)	U Uplight	347 347V	C6TL20 6' Cord and Twist-Lock™ Plug 20A (Add Voltage 1=120, 2=277)
	8 Eight			480 480V	C6P151 6' Cord and Straight Blade Plug 15A, 120V

MODEL	LAMP TYPE	BALLAST	LAMPS INSTALLED
LHV VersaBay® Fluorescent High Bay	32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO: 54, 51, or 49 Watt	NOTE: See Technical Section for other ballast options. LHV4-454 4EP (1) 4-Lamp Electronic T5HO, Programmed Start LHV4-654 24EP (1) 2-Lamp and (1) 4-Lamp Electronic T5HO, Programmed Start LHV4-854 3EP (2) 3-Lamp and Electronic T5HO, Programmed Start LHV4-854 4EP (2) 4-Lamp Electronic T5HO, Programmed Start LHV4-432 4EHL (1) 4-Lamp Electronic T8, High Light Output, Instant Start EPHL (2) 2-Lamp Electronic T8, High Light Output, Programmed Start 4EPHL (1) 4-Lamp Electronic T8, High Light Output, Programmed Start LHV4-632 3EHL (2) 3-Lamp Electronic T8, High Light Output, Instant Start 24EHL (1) 2-Lamp and (1) 4-Lamp Electronic T8, High Light Output, Instant Start 3EPHL (2) 3-Lamp Electronic T8, High Light Output, Programmed Start LHV4-832 4EHL (2) 4-Lamp Electronic T8, High Light Output, Instant Start 4EPHL (2) 4-Lamp Electronic T8, High Light Output, Programmed Start	T8 F830 3000K 78+CRI F835 3500K 78+CRI F841 4100K 78+CRI F850 5000K 78+CRI T5HO F5830 3000K 85CRI F5835 3500K 85CRI F5841 4100K 85CRI F5850 5000K 85CRI F5865 6500K 85CRI F51830 3000K 85CRI 51W F51835 3500K 85CRI 51W F51841 4100K 85CRI 51W F51850 5000K 85CRI 51W F51865 6500K 85CRI 51W F49830 3000K 85CRI 49W F49835 3500K 85CRI 49W F49841 4100K 85CRI 49W F49850 5000K 85CRI 49W F49865 6500K 85CRI 49W

ACCESSORIES (ORDER SEPARATELY)

- LHVTH Tong Hanger (Pair)
- LHVWG4-4 Wireguard, White, 4-Lamp Fixture
- LHVWG4-6 Wireguard, White, 6-Lamp Fixture
- LHVWG4-8 Wireguard, White, 8-Lamp Fixture
- LHVQM5 Aircraft Cable, 5' (Pair)
- LHVQM10 Aircraft Cable, 10' (Pair)
- LHVSPM5 Single Point Mounting, Includes Pair of 5' Aircraft Cables
- LHVSP Side Panels (Pair)
- LHVOS1360 Occupancy/Daylight Sensor, with a 360° lens, 120/277/347V
- LHVOS2360 Occupancy/Daylight Sensor, with a 360° lens, 120/277/347V
- LHVOS480360 Occupancy/Daylight Sensor, with a 360° lens, 480V
- C6TL15-120 Cord and Plug Kit (white), 6 ft., Twist Lock NEMA L5-15P, 15 amp, 120V
- C6TL15-277 Cord and Plug Kit (white), 6 ft., Twist Lock NEMA L7-15P, 15 amp, 277V
- C6P15-120 Cord and Plug Kit (white), 6 ft., Straight Blade NEMA 5-15P, 15 amp, 120V
- CA Clear Acrylic Lens²
- CP Clear Polycarbonate Lens²
- CAWG Clear Acrylic Lens and Flat Wire Guard²
- CPWG Clear Polycarbonate Lens and Flat Wire Guard²
- EL141 1400 Lumens, Emergency Battery Pack T8 1-Lamp
- EL5H 1250 Lumens, Emergency Battery Pack T5HO 1-Lamp
- F4C5 4-Conductor Cord
- GLR Fast Blow Fuse
- OS1360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 120/277/347V
- OS2360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 120/277/347V
- OS1A Factory Installed Occupancy/Daylight Sensor, with Aisle lens, 120/277/347V
- OS2A Factory Installed Occupancy/Daylight Sensor, with Aisle lens, 120/277/347V
- OS480360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 480V
- OS480A Factory Installed Occupancy/Daylight Sensor, with a Aisle lens, 480V
- SP Side Panels Installed²
- WG Flat Wire Guard²
- NYC NYC Compliant

¹Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories see page 98.
²Side panels increase height to 2 7/8".

PRODUCT AVAILABILITY

MODEL	SOURCE	NO. OF LAMPS	UPLIGHT OPTIONS	LAMP TYPE	WIDTH	LENGTH	HEIGHT ²
LHV4	T5HO, T8	4	U, ST	32, 54	16 3/16"	48"	2"
	T5HO, T8	6	U, ST	32, 54	20 7/8"	48"	2"
	T5HO, T8	8	U, ST	32, 54	25"	48"	2"



createchange

FEATURES

- Long life 50,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices
- Four lumen packages per size
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Heavy die-formed steel channel with 100% acrylic formed diffuser
- Fully assembled fixture for quick installation
- LED boards and driver accessible for future maintenance or upgrades
- Modular replaceable LED components
- Surface mount, wall mount or suspended
- Maximum temperature 35°C on all lumen packages up to HL
- DesignLights Consortium® (DLC) qualified, many configurations qualify for DLC Premium; see www.designlights.org
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

LCL [] - [] - [] - [] - [] - [] - [] - []

MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LCL LED Striplight	4 4' 8 8'	30 3000K 35 3500K 40 4000K 50 5000K	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen See Product Availability Table below.	E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ³ LUT5 5-Series EcoSystem LED driver ³	U 120V-277V 347 347 (E,ED,ED1 only)	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication NYC NYC Compliant

MODEL	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LCL LED Striplight	4 4' 8 8'	30 3000K 35 3500K 40 4000K 50 5000K	LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen See Product Availability Table below.	E Fixed Output ESD Step Dimming ED 0-10V Dimming LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ³ LUT5 5-Series EcoSystem LED driver ³	U 120V-277V 347 347 (E,ED,ED1 only)	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2} GLR Fast Blow Fuse PAF Paint After Fabrication NYC NYC Compliant

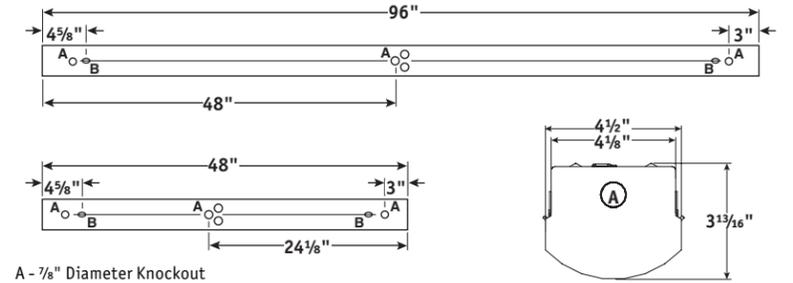
- ### ACCESSORIES (ORDER SEPARATELY)
- S18 18" Stem, Canopy
 - SS18 18" Swivel Stem—45° Swivel
 - CSHC Chain Hanger Assembly

¹ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
² Not available in 2 ft size.
³ Not available in VL package.

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (3500K)	NOMINAL WATTS	EFFICACY
2'	ML	2,805	24	119
4'	LW	2,576	19	138
	ML	5,329	42	127
	HL	6,395	52	123
	VL	10,241	85	120
8'	LW	5,152	38	138
	ML	10,658	84	127
	HL	12,790	104	123
	VL	20,482	170	120

Lumens vary according to color temperatures and other factors. See specific photometric test(s).



A - 7/8" Diameter Knockout
B - 3/16" x 1/2" hole
Note 1: All Non-Shielded (strip) fixtures—deduct 1/16" from overall dimension for continuous row mounting. Dimensions shown include end panel.

LCR

LED Industrial Striplight



FEATURES

- Narrow distribution industrial
- Long-life 50,000 hour LEDs at L80 for reduced maintenance
- Up to 118 lumens per watt
- Four LED color choices
- Four lumen packages per size
- Available in 2', 4' and 8' lengths
- Optional integral emergency battery pack
- Heavy die-formed steel channel
- Fully assembled fixture for quick installation
- LED boards and driver accessible for future maintenance or upgrades
- Modular replaceable LED components
- Surface mount or suspended
- Five year warranty (Terms and Conditions apply)

ORDERING INFORMATION

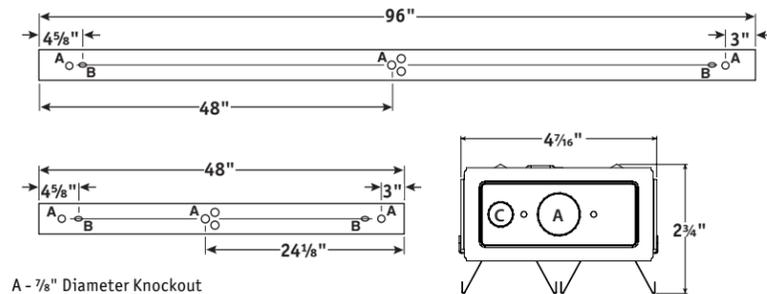
LCR	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LCR LED Open Striplight	4 4'	30 3000K	LW Low Watt	E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2,3}
	8 8'	35 3500K	ML Medium Lumen	ESD Step Dimming	347 347 (E,ED,ED1 only)	GLR Fast Blow Fuse
		40 4000K	HL High Lumen	ED 0-10V Dimming		PAF Paint After Fabrication
		50 5000K	VL Very High Lumen			NYC NYC Compliant

See Product Availability Table below.

ACCESSORIES (ORDER SEPARATELY)

- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel
- CSHC Chain Hanger Assembly

¹ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
² Not available in VL package.
³ Not available in 2' size.



A - 7/8" Diameter Knockout
 B - 5/16" x 1/2" hole
 C - 1/2" Diameter Knockout
 Note 1: All Non-Shielded (strip) fixtures—deduct 1/16" from overall dimension for continuous row mounting. Dimensions shown include end panel.

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMENS (4000K)	NOMINAL WATTS	EFFICACY
2'	ML	2,750	25	110
4'	LW	2,700	25	108
	ML	5,500	48	114
	HL	6,600	56	118
	VL	10,900	97	112
8'	LW	5,500	48	114
	ML	10,900	97	112
	HL	13,300	112	118
	VL	21,800	194	112

Lumens vary according to color temperatures and other factors. See specific photometric test(s).

LCS

LED Open Striplight



FEATURES

- Long-life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices and 80+ CRI
- Four lumen packages
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4', or 8' lengths
- Heavy die-formed steel channel
- LED boards and driver accessible for future maintenance or upgrades
- Surface Mount or Suspended
- QR code traceability
- Maximum temperature 25°C on all lumen packages up to HL
- DesignLights Consortium® (DLC) qualified, many configurations qualify for DLC Premium; see www.designlights.org
- Five year warranty (Terms and Conditions apply)



ORDERING INFORMATION

LCS	SIZE	COLOR TEMP	LUMEN OUTPUT	DRIVER	VOLTAGE	OPTIONS
LCS LED Striplight	2 2'	30 3000K	LW Low Watt	E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack, 1400 Lumens ^{1,2}
	4 4'	35 3500K	ML Medium Lumen	ESD Step Dimming	347 347 (E,ED only)	GLR Fast Blow Fuse
	8 8'	40 4000K	HL High Lumen	ED 0-10V Dimming		PAF Paint After Fabrication
		50 5000K	VL Very High Lumen	LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ³		NYC NYC Compliant
				LUT5 5-Series EcoSystem LED driver ³		

See Product Availability Table below.

ACCESSORIES (ORDER SEPARATELY)

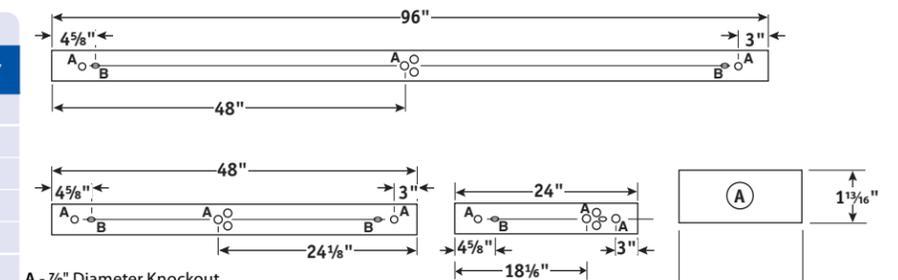
- CSWG4 4' Wire Guard
- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel
- CSHC Chain Hanger Assembly

¹ Not available in 2' size.
² For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.
³ Not available in VL package.

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	LUMENS (4000K)	NOMINAL WATTS	EFFICACY
2'	ML	3,041	23	131
4'	LW	2,795	19	149
	ML	5,661	42	136
	HL	6,900	52	132
	VL	11,334	88	129
8'	LW	5,590	38	149
	ML	11,322	83	136
	HL	13,800	105	132
	VL	22,668	176	129

Lumens vary according to color temperatures and other factors. See specific photometric test(s).



A - 7/8" Diameter Knockout
 B - 5/16" x 1/2" hole
 Note 1: All Non-Shielded (strip) fixtures- Deduct 1/16" from overall dimension for continuous row mounting. Dimensions shown include end panel.

Straight-Sided Utility Channel



FEATURES

- Die formed steel housing with heat sink embossments for cooler running ballasts
- Ballast cover retained by ¼ turn fasteners
- Individual or row mounting, surface or suspended
- Channel ends double as joiners
- All metal parts are treated with a five stage phosphate bonding process and finished with baked white enamel
- UL listed 1598, cUL or CSA. Damp Location standard

ORDERING INFORMATION

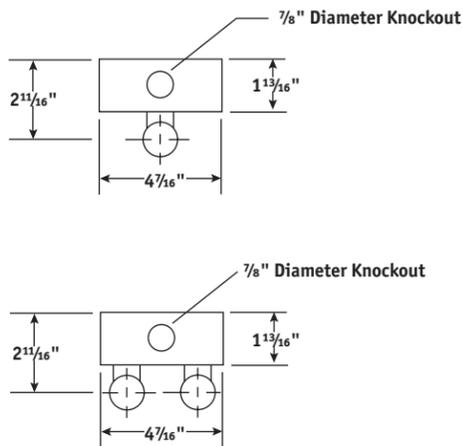
MODEL	SIZE	NO. OF LAMPS IN CROSS SECTION	LAMP TYPE	BALLAST	VOLTAGE	OPTIONS
CS	2 2'	1 One	14 2', T5: 14 Watt	NOTE: See Technical Section for other ballast options.	U 120V-277V	BC1 Branch Circuit Wiring, Single Circuit (For more branch circuit wiring options see page 113)
	3 3'	2 Two	17 2', T8: 17 Watt	E Electronic T8, Instant Start	347 347V	GLR Fast Blow Fuse
	4 4'	3 Three	21 3', T5: 21 Watt	3E 3-Lamp Electronic T8, Instant Start		EL Emergency Battery Pack
	6 6'	See Product Availability table below.	24 2', T5HO: 24 Watt	24E (1) 2-Lamp and (1) 4-Lamp Electronic T8, Instant Start		PAF Paint After Fabrication
	8 8'		25 3', T8: 25 Watt	EP Electronic T5 or T8, Programmed Start		NYC NYC Compliant
	16 16' (Two housings)		28 4', T5: 28 Watt	3EP 3-Lamp Electronic T5 or T8, Programmed Start		
			32 4', T8: 32, 30, 28 or 25 Watt			
			39 3', T5HO: 39 Watt			
			48 4', 12			
			54 4', T5HO: 54 or 51 Watt			
			96 8', T12: 75 or 60 Watt			
			96T8 8', T8: 59 Watt			

ACCESSORIES (ORDER SEPARATELY)

- CSWG3** 3' Wire Guard
 - CSWG4** 4' Wire Guard
 - CSR4** 4' Symmetric Reflector
 - CSRA4** 4' Asymmetric Reflector
 - CSRU4** 4' Symmetric Reflector 5% Uplight
 - S18** 18" Stem, 8° Swivel Stem and Canopy
 - SS18** 18", 45° Swivel Stem, and Canopy
 - CSHC** Chain Hanger Assembly
- For more accessories see pages 99-101.

PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS IN CROSS SECTION	NO. OF LAMPS IN FIXTURE	LAMP TYPE	WIDTH	LENGTH	HEIGHT
2'	1	1	14, 17, 24	4 7/16"	24"	1 3/16"
	2	2	14, 17, 24	4 7/16"	24"	1 3/16"
	3	3	17	4 7/16"	24"	1 3/16"
3'	1	1	21, 25, 39	4 7/16"	36"	1 3/16"
	2	2	21, 25, 39	4 7/16"	36"	1 3/16"
	3	3	25	4 7/16"	36"	1 3/16"
4'	1	1	28, 32, 48, 54	4 7/16"	48"	1 3/16"
	2	2	28, 32, 48, 54	4 7/16"	48"	1 3/16"
	3	3	28, 32, 54	4 7/16"	48"	1 3/16"
6'	1	2	21, 25, 39	4 7/16"	72"	1 3/16"
	2	4	21, 25, 39	4 7/16"	72"	1 3/16"
	3	6	21, 25, 39	4 7/16"	72"	1 3/16"
8'	1	2	28, 32, 54	4 7/16"	96"	1 3/16"
	1	1	96, 96T8	4 7/16"	96"	1 3/16"
	2	4	28, 32, 54	4 7/16"	96"	1 3/16"
	2	2	96, 96T8	4 7/16"	96"	1 3/16"
	3	6	28, 32	4 7/16"	96"	1 3/16"
	3	6	28, 32	4 7/16"	96"	1 3/16"
16'	1	4	28, 32, 54	4 7/16"	192"	1 3/16"
	1	2	96, 96T8	4 7/16"	192"	1 3/16"
	2	8	28, 32, 54	4 7/16"	192"	1 3/16"
	2	4	96, 96T8	4 7/16"	192"	1 3/16"



Hazardous Enclosed and Gasketed Fiberglass Extreme Environment / LED

FEATURES

- LED Hazardous Location enclosed and Gasketed
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Four LED color choices and 80 CRI
- Class 1, Division 2, Groups A, B, C, & D
- IP65, IP66, and IP67 all sizes
- UL Sanitation certified per NSF standards
- Available in 4' or 8' lengths
- Fiberglass housing with F1 weatherability rating, standard
- Smooth housing for easy cleaning
- Gasket is non-porous to ensure seal
- Impact modified acrylic lens equivalent to 100% DR
- Wide range of lens selections
- Stainless steel latching optional
- Removable gear tray electrical access for modular replaceability
- Standard ambient -40°C to 40°C
- Includes surface mounting brackets
- Five year warranty



ORDERING INFORMATION

MODEL	SIZE	COLOR TEMP	SHIELDING	DRIVER	VOLTAGE	OPTIONS
HEM	Hazardous LED Enclosed and Gasketed	4 4' 8 8'	30 3000K 35 3500K 40 4000K 50 5000K	RFA Ribbed Frosted Acrylic RA Ribbed Clear Acrylic DFA Deep Frosted Acrylic DCA Deep Clear Acrylic RFP Ribbed Frosted Polycarbonate ¹	E Fixed Output ED 0-10V Dimming	U 120V- 277V
						SSL Stainless Steel Tamper Resistant Ready Latches TP Tamper Proof Latches F3C8W 3 Wire 8' Wet Cord F3C15W 3 Wire 15' Wet Cord XEDPM Dual Pendant Brackets (pendant by others) ²

LUMEN OUTPUT

- ML** Medium Lumen
- HL** High Lumen¹
- VL** Very High Lumen

ACCESSORIES (ORDER SEPARATELY)

- XEHC** Chain Hanger Kit (Includes 14" Chain)
- XE45MB** 45° Mounting Bracket
- XE45MBSS** 45° Stainless Steel Mounting Bracket

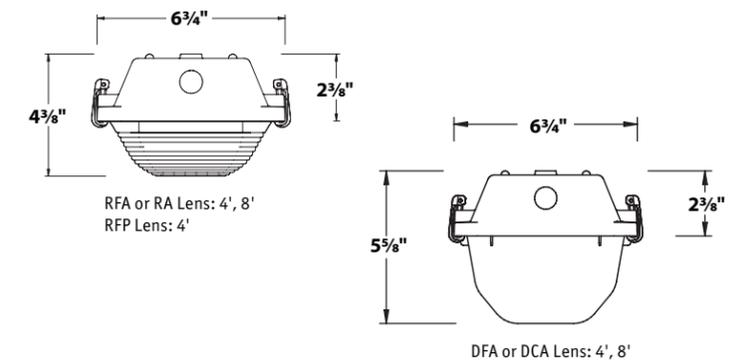
¹ 4' only, 8' not available.

² Requires 3/8" OD threaded rod by others.

PRODUCT AVAILABILITY

SIZE	LUMEN PACKAGE	NOMINAL LUMEN RANGE (DFA LENS)	NOMINAL WATTS	LUMENS/WATT (HIGHEST)	MAX TEMP
4'	ML	4850-5350	47	114	40°C
	HL	5800-6400	52	123	40°C
	VL	7350-8150	68	120	40°C
8'	ML	9700-10700	94	114	40°C
	HL	11600-12800	104	123	40°C
	VL	14700-16300	136	120	40°C

Lumens vary according to color temperatures and other factors. See specific photometric test(s). Output levels based on the DFA lens option.



SLA

Outdoor Sign and Façade Luminaire



FEATURES

- Wet location sign light can be mounted in any direction and still operate properly and retain its wet location approval
- Asymmetric reflector provides outstanding distribution for a crisp clean appearance
- Choice of lamps allows maximum flexibility for any application
- Outdoor ballast box is standard, indoor box available for lamps (ships separately on T8 and T12 models)
- Integrated ballast used for T5 lamping (damp location only)
- 360° aiming provides illumination for signage, eye-catching highlights to facilitate flow of foot traffic or grazing angles for added definition to architectural features
- Extruded aluminum reflector available in white or anodized gray finish
- Easy to aim with adjustable nut, stays in place with die cast ends, that interlock with cast socket housing

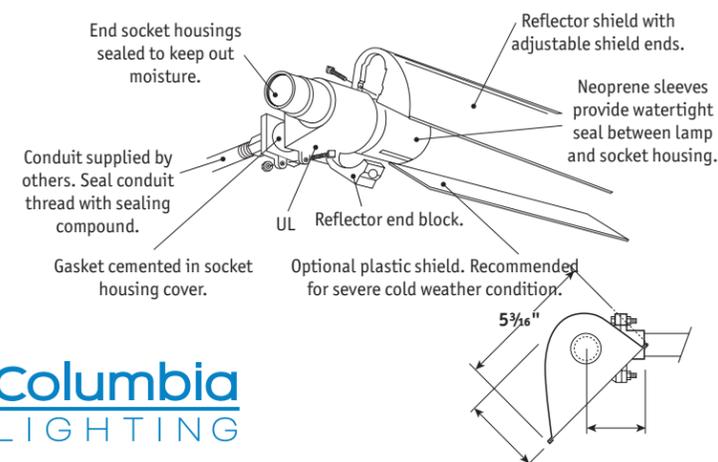
ORDERING INFORMATION

SLA	1					
MODEL	NO. OF LAMPS IN CROSS SECTION	OPTIONS	NO. OF LAMPS OPERATED	LAMP TYPE	VOLTAGE	OPTIONS
SLA Outdoor Sign and Façade Luminaire	1 One	DR High Impact Lens ANO Anodized Diffuse Exterior (Gray)	1 One 2 Two	See housing Lamp Type.	U 120V-277V (T8 and T5 only) 347 347V	GRAY Gray Ballast Box (Std. White) NYC NYC Compliant
SIZE¹	LAMP TYPE	BALLAST BOX MODEL	BALLAST			
4 4'	32 4', T8: 32, 30, 28 or 25 Watt	SLBB Standard Ballast Box (Outdoor vertical mount)	E Electronic T8, T12 or Slimline (N/A in HO), Instant Start			
6 6'	48 4', T12: Slimline	SLBI Indoor Ballast Box T8	EP Electronic, Programmed Start			
8 8'	48HO 4', T12: High Output		Electronic ballast remote mounting lead lengths vary. Minimum starting temperatures vary. Contact factory.			
	72 6', T12: Slimline					
	72HO 6', T12: High Output					
	96 8', T12: Slimline					
	96T8 8', T8: 59 Watt					
	96HO 8', T12: 110 or 95 Watt					
	96T8HO 8', T8: 86 Watt					

ORDERING INFORMATION (T5)

SLA	4	1			EP	
MODEL	SIZE¹	NO. OF LAMPS IN CROSS SECTION	LAMP TYPE	OPTIONS	BALLAST	VOLTAGE
SLA Outdoor Sign and Façade Luminaire	4 4'	1 One	28 4', T5: 28 Watt (Indoor only) 54 4', T5HO: 54 or 51 Watt (Indoor only)	Blank Gloss White ANO Anodized Diffuse Exterior (Gray)	EP Electronic, Programmed Start	U 120V-277V (T8 and T5 only) 347 347U

¹Sizes shown are based on nominal housing lengths. Where units will be mounted in rows, please provide row information. E.g. One 16' row consisting of (4) SLA4-154-EPU.



PRODUCT AVAILABILITY

SIZE	NO. OF LAMPS in Cross section	No. of Lamps in Fixture	LAMP TYPE	Width	Length*	HEIGHT
4'	1	1	28, 32, 54	5 3/16"	51 1/4"	3 3/16"
	1	1	48HO	5 3/16"	49 1/4"	3 3/16"
6'	1	1	72HO	5 3/16"	73 1/4"	3 3/16"
8'	1	1	96T8, 96HO	5 3/16"	97 1/4"	3 3/16"

*Length is measured center-to-center on mounting arms.

Accessories

Mounting Accessories

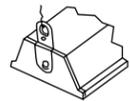
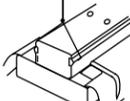
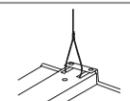
SURFACE MOUNT HANGERS

Surface Mount Hangers	Cat. No.	Description	For Use With
	ITB-4	Hanger for mounting close to ceiling on T-Bar grid system	All surface mounted fixtures
	CS-2	Ceiling spacer for mounting directly to outlet box. Used for mounting fixtures below combustible low density cellulose fiberboard ceilings. Maintains 1 1/2" spacing.	All surface mounted fixtures
	CS-4	All purpose spacer (1 1/2" x 2 1/4" x 4"), maintains 1" spacing on any type of installation	All surface mounted fixtures
	CS-5	All purpose spacer with special T-Bar clip and stud for mounting to an inverted T-Bar ceiling. Maintains 1 1/2" spacing.	All surface mounted fixtures
	CSZT	Zip tee hanger 1 1/2" spacer. Designed for 1 5/16" wide T-Bars.	CS, LCS, and CSR series except fluorescent HO and VHO models
	KZT	Zip tee hanger 1 1/2" spacer. Designed for 1 5/16" wide T-Bars.	K and KL
	CSTH	Slide tong hanger for ungrooved channel. Maintains 1 1/2" spacing.	CS, LCS, and CSR (Use KTH for fluorescent HO and VHO)
	KTH	Slide tong hanger with 7/8" hole. Maintains 1 1/2" spacing.	K and KL
	LHVTH	Slide tong hanger with 7/8" hole.	LHV and LHA
	LHSH6	Slide tong hanger with 5/16" holes	LHR 6-Lamp fixtures
	LHSH4	Slide tong hanger with 5/16" holes	LHR 4-Lamp fixtures
	PEBU	End surface mounting bracket for 2H3S hub options	LU, FNPS
	PEBUHMSMS	End surface mounting bracket for 2H and 2HS hub options	FNPV, FNPS
	PEBA	End surface mounting bracket with 90° adjustment for 2H3S hub options	LU, FNPS
	PEBAHMSMS	End surface mounting bracket with 90° adjustment for 2H and 2HS hub options	FNPV, FNPS
	PTBS	Surface mounting bracket, 304 Stainless steel, 2 brackets	FNPV, FNPS, FDPS, FNPH, FDPH
	PTBS3	Surface mounting bracket, 304 Stainless steel, 3 brackets	FNPV, FNPS, FDPS, FNPH, FDPH
	PTBA	Surface mounting bracket, 304 Stainless steel, wall mount with 90° adjustment in 15° increments, 2 brackets	FNPV, FNPS, FDPS, FNPH, FDPH
	PTBA3	Surface mounting bracket, 304 Stainless steel, wall mount with 90° adjustment in 15° increments, 3 brackets	FNPV, FNPS, FDPS, FNPH, FDPH
	FSPHB	Top bracket suspension kit, 304 Stainless Steel	FSPH
	FSPHWA	Top bracket wall/angle kit, 304 Stainless Steel	FSPH

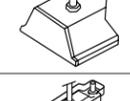
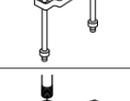
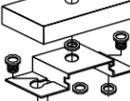
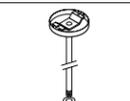
Accessories

Mounting Accessories

CHAIN AND CABLE HANGERS

Chain and Cable Hangers	Cat. No.	Description	For Use With
	XEHC	Chain mount kit includes 14" chain and triangular metal bail for attachment to standard surface mount bracket.	LXEM, XEM
	LUNHK	Chain hanging (chain not included)	LU
	SSHK	Stainless Steel hanging kit (chain not included)	LU
	CSHC	Chain hanging assembly includes two 14" lengths of chain and two hanger hooks.	CS, LCS, and CSR (Use KHC for fluorescent HO or VHO)
	KHC	Chain hanging assembly includes two 24" lengths of chain and two hanger hooks.	K and KL
	ICHC	Chain hanger assembly, #3 size double loop chain, 12'.	IC
	GLH5 GLH10 GLH20	Cable hangers, #2 size cable with loop-end, 5', 10', and 20' lengths, adjustable	All industrials
	LHVQM5 LHVQM10 LHVQM20	Y-Fit Hook Cable Hangers, #2 size cable, 5', 10', and 20' lengths, adjustable	LHV and LHA
	CM24 CM48	Single point mount cable with canopy kit, pair. (Feed and non-feed ends) 24" or 48" with barrel adjuster.	STP. Others may require field drilling of mounting holes.

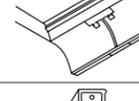
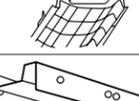
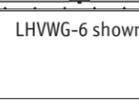
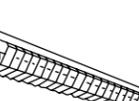
PENDANT/STEM MOUNTING ACCESSORIES

Pendant/Stem Mounting	Cat. No.	Description	For Use With
	XEDPM	Kit contains two brackets for pendant hanging with 3/8" threaded rod by others. No drilling of housing is required.	LXEM, XEM
	HUBK	Stem hanging kit consists of two die cast hubs, two "O" rings and locknuts. Hubs are threaded for 1/2" pipe. Housings must be drilled to install hubs.	FNPV, LU, FNPS, FNP, FDPH
	S18D	Double canopy (2) 18" stems	All 4' LRO, RO, LPT, and PT
	SB3	Stem hanger adaptor bracket for 3-lamp surface mounted units. Reduces total number of mounting points required.	MWW 3-lamp EWW 3-lamp AWW 3-lamp WCW 3-lamp (Use for 3-Lamp fluorescent only; use S18, SS18, C18, S018 for LED and 2-Lamp or 4-Lamp fluorescent)
	S18 SS18 C18 S018	Swivel canopy, one 18" stem - all white finish, 8° swivel Swivel canopy, one 18" stem - all white finish, 45° swivel Swivel canopy only - all white finish, 8° swivel One 18" stem only - all white finish	Individual or continuous row mounting of most surface and industrial fixtures

Accessories

Industrial and Striplight Accessories

REFLECTOR ACCESSORIES AND WIREGUARDS

Chain Hangers	Cat. No.	Description	For Use With
	KLRAC KLVAC	Full range aligners (set of two) for aligning reflector flanges and closing gaps between two reflectors. White	KL KL-V
	KLEC	Reflector end closure (per end). Baked white enamel	KL and KL-V
	KC2	Heavy duty 10" sleeve coupler	K, KL, KL-V, KT and CSR (HO)
	LHVGW-4	Wireguard, white, 4-lamp LHV	LHV 4-lamp
	LHVGW-6	Wireguard, white, 6-lamp LHV	LHV 6-lamp
	LHRWG4K	Wireguard, white, 4-lamp LHR	LHR 4-lamp
	LHRWG6K	Wireguard, white, 6-lamp LHR	LHR 6-lamp
	LHRNWG	Wireguard, white, LHR Narrow Body	LHR Narrow
	LHEMWG	Wireguard, chrome, LHEM fixtures	LHEM
	LHEWWG	Wireguard, chrome, LHEW fixtures	LHEW
	ICWG4 KLWG4	4 ft. Wireguard, chrome	IC KL
	CSRWG4-4PK	4 ft. Wireguard, chrome colored finish	CSR
	CSRWG2-4PK	2 ft. Wireguard, chrome colored finish	CSR
	CSRWG3-4PK	3 ft. Wireguard, chrome colored finish	CSR
	CSWG2-24PK	2 ft. Wireguard, chrome colored finish	CS
	CSWG3-12PK	3 ft. Wireguard, chrome colored finish	CS
	CSWG4	4 ft. Wireguard, chrome colored finish	K, CS
	CHWG2-12PK	2 ft. Wireguard, chrome colored finish	CH
	CHWG3-12PK	3 ft. Wireguard, chrome colored finish	CH
	CHWG4-12PK	4 ft. Wireguard, chrome colored finish	CH
	KLFA12	Framed acrylic shielding. Two required for 8 ft. units. Cannot be combined with the KLWG4	KL (not available with KL-V)

SENSOR ACCESSORIES FOR INDUSTRIAL AND STRIP FIXTURES¹



- Digital Passive Infrared (PIR) sensor
- Supports mounting heights up to 45 ft.
- Multiple (single and dual) output versions
- End mount and surface mount versions
- Unique Smart Cycling™ for improved lamp life
- Interchangeable area and aisle lens options
- Daylight sensor for daylight harvesting applications
- Kit includes "plug and play" wiring that enables use with standard fixtures



HIGH BAY, INDUSTRIAL AND STRIP FIXTURE ACCESSORY OFFERING (INCLUDES SNAP ON EXTENSION ADAPTOR*)

- OS1360K Occupancy/Daylight sensor kit, 120/277/347V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring
- OS2360K Occupancy/Daylight sensor kit, 120/277/347V, two relay, 360 Lens, snap on drop down adaptor, quick connect wiring
- OS480360K Occupancy/Daylight sensor kit, 480V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring

*Extension adaptor needed when the height of the edge of the ballast cavity knockout is greater than or equal to 1.5" from bottom side of housing or reflector
*Extension adaptor should be used to position the sensor below the bottom of the reflector for full field of view coverage

LHV SENSOR ACCESSORY OFFERING* (INCLUDES EASY TO INSTALL LHV SNAP ON BRACKET)

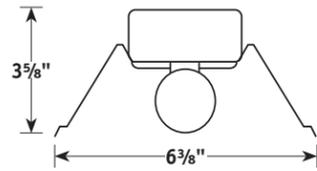
- LHV0S1360 Occupancy/Daylight sensor kit, 120/277/347V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring
- LHV0S2360 Occupancy/Daylight sensor kit, 120/277/347V, two relay, 360 Lens, snap on drop down adaptor, quick connect wiring
- LHV0S480360 Occupancy/Daylight sensor kit, 480V, one relay, 360 Lens, snap on drop down adaptor, quick connect wiring

*Factory installed sensor options available with LHV fixture, see page 60.

Accessories

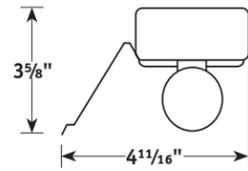
Reflector Accessories

REFLECTORS FOR CH 1-LAMP CHANNELS



Symmetric

CHR2 Symmetric reflector for 2' fixtures.
CHR3 Symmetric reflector for 3' fixtures.
CHR4 Symmetric reflector for 4' fixtures



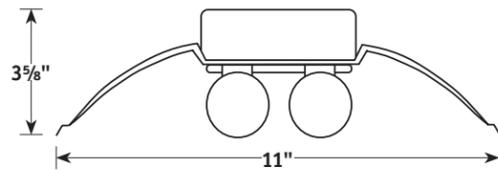
Asymmetric

CHRA2 Asymmetric reflector for 2' fixtures.
CHRA4 Asymmetric reflector for 4' fixtures.

Notes

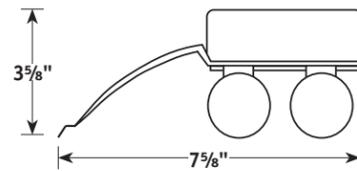
1. CHR and CHRA reflectors are secured to channel with sheet metal screws provided.
2. CHR and CHRA reflectors are pre-finished with baked enamel, 86% minimum reflectance.
3. Polyester powder coat paint after fabrication (PAF) available as option.

REFLECTORS FOR CS AND K 1- OR 2-LAMP CHANNELS



Symmetric - CSR4

Symmetric reflector for 4' fixtures (order two for 8' units).
 Center saddles are required for 8' channels.
 For CS channel order center saddle CSSAD.
 For K channel order center saddle KSAD.



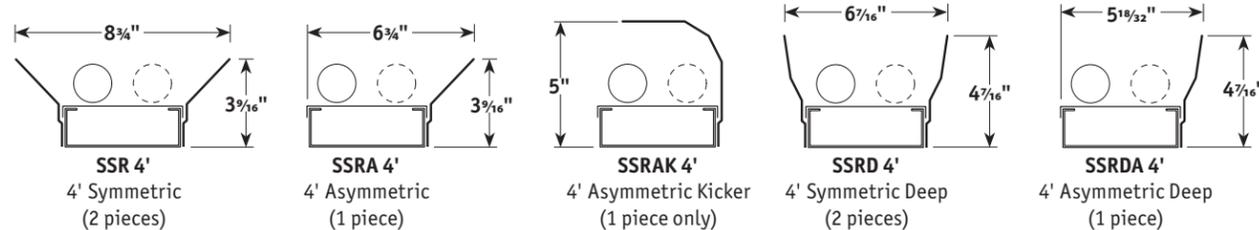
Asymmetric - CSRA4

Asymmetric reflector for 4' fixtures (order two for 8' units).
 Center saddles are required for 8' channels.
 For CS channel order center saddle CSSAD.
 For K channel order center saddle KSAD.

Notes

1. CSR and CSRA reflectors are attached with captive quarter turn fasteners included.
2. CSR and CSRA reflectors are pre-finished with baked enamel, 86% minimum reflectance.
3. Polyester powder coat paint after fabrication (PAF) available as option.

REFLECTORS FOR SS 1 OR 2-LAMP STAGGERED STRIPS



Ordering Guide: Note reflector requirements on strip catalog number to provide factory-drilled mounting holes.
 Reflectors attach with sheet metal screws (provided).

Notes

1. Accessory reflectors are ordered as separate line items. Asymmetric reflectors consist of one piece.
2. Adjustable housings require 4' reflectors for field adjustment. Job pack reflectors recommended.
3. Other reflector lengths available. Consult factory.

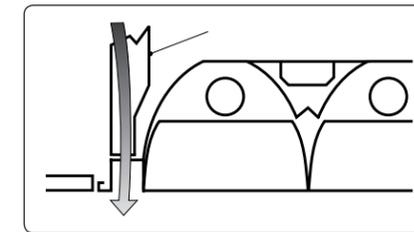
Reflectors are pre-finished with baked white enamel, 86% minimum reflectance.
 Polyester powder coat paint after fabrication (PAF) available as option.

Recessed Options

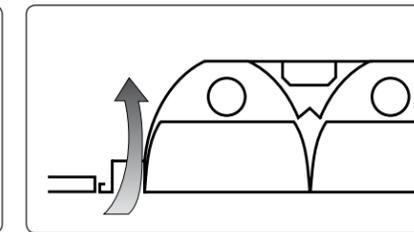
Air Handling

BASIC AIR FUNCTIONS

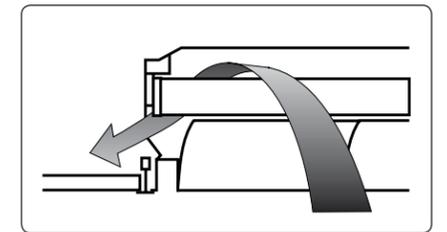
Designation	Description	Air Function
-S	Static	No air flows through fixture.
-A	Air Supply/Return	Air flows into room from plenum or back into plenum from room. We provide slots in housing. For optional vanes, see below.
-H	Heat Extract	Slots are provided in end cap or back of housing (instead of through black reveal). Units without a black reveal feature slots in door for air passage to lamp compartment. For optional dampers, see below.
-C	Combined	Both the -A and -H functions above are combined in one unit.



SUPPLY



RETURN



EXTRACT THROUGH END CAP

Note: Some units extract air through back of fixture housing.

AIR FUNCTION CONTROL OPTIONS

Vanes (V) Also referred to as air pattern blades or directional air vanes.

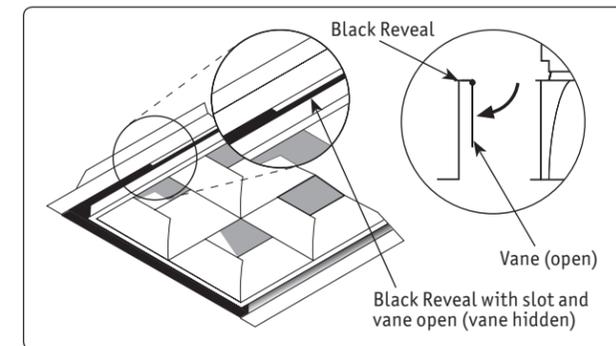
Vanes work with supply/return air (-A or -C). Vanes open outward, from 0 to 90 degrees, like a door swinging open. To control air flow, adjust opening as desired or close completely. When used on a -C fixture, vanes operate independently of dampers.

Dampers (D) Also referred to as heat removal dampers or control dampers.

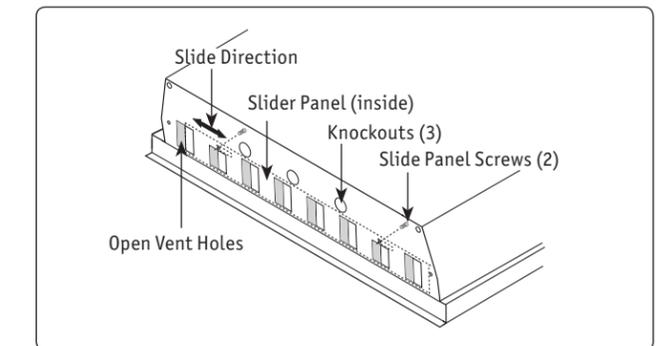
Dampers work with extract air (-H, -C). Dampers slide open, like a window. To control air flow, adjust opening as desired or close entirely. When used on a -C fixture, dampers are controlled independently of vanes.

Designation	Description
-AV	Air Supply/Return with Vanes
-CV	Combined with Vanes Only
-CVD	Combined with Vanes and Dampers

Designation	Description
-HD	Heat Extract with Dampers
-CD	Combined with Dampers Only



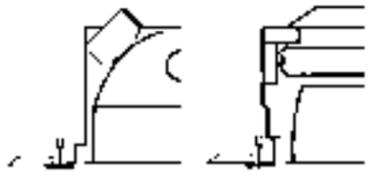
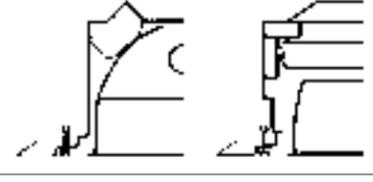
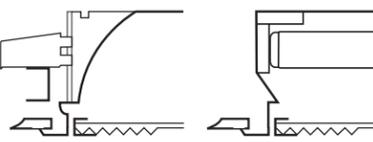
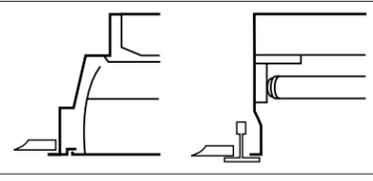
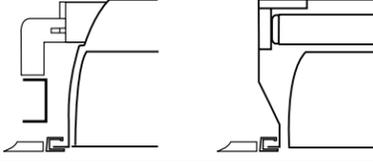
AIR WITH VANES (SUPPLY/RETURN OPTIONS)



DAMPERS (EXTRACT OPTION)

Recessed Options

Ceiling Trims

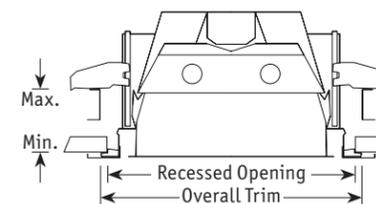
Ceiling Type	Recommended Trim	Cross Section	Availability
1" T-Bar	G (Grid)		45, 4PS, 4VS, 5PA, AC, BR, CRC, CRF, CRS, EMI, EMSE, EMX, EPC, FW, HC, HH, HV, JT8, STE, STEL, STS, STSL, TRA, VC, VHC, WT, ZPT
		For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 1½" allowed.	
¾" Slot Grid	SG (Slot Grid)		45, 5PA, BR, HC, P4, PW, STS, STSL
		For slot grid type ceilings with nominal ¾" face and ⅜" tall shoulder, louver will be level with the ceiling plane.	
Hard Ceiling	F (Flange)		45, 4PS, 4VS, 5PA, AC, CRC, CRS, HC, HH, HV, HZ, LHG, M46, P2, P4, ST8, VHC, WT
		For tile, plaster, or plasterboard type ceilings. Overlapping extruded aluminum trim conceals edges of ceiling opening. Wing hanger suspension system included. Designate INT (intermediate) or EOR (end of row) for fixtures in row applications.	NP and CRC series flange use yoke hanging system (not illustrated). For fixtures not available with integral (F) flanges, order (G) trim with corresponding Flange Kit (see pg. 106)
1" Tee across fixture ends. Supplied side trim support ceiling tile along length	GT (Integral Cross-tee)		4594, BR04, NP, PVHC94, VHC94
		For lay-in installation in grid ceilings. Fixture mounts on exposed tees at ends of fixture. Sides act as integral cross-tee to support tile, eliminating need for intermediary tees. Designed for nominal 1" tees.	
Metal Pan	M (Modular)		45, 4PS, 4VS, 5PA, HC, LHG, P2, P4
		For metal pan ceilings "Fit-in" style extruded trim aligns with modular tile joints. Fixture is supported from concealed suspension and includes all adjustable wing hangers.	

Recessed units available for Surface Mount (SM) applications:

45, 4PS, BR, CRS, EMS, EPC, FW, HC, JT8, LHG, LSL, PW, SER, STE, STEL, STS, STSL, VHC, ZPT. Refer to ordering guide to build.

Recessed Options

Flange Trims



DIMENSIONAL EXAMPLE

PARABOLICS

Series	Size	Vertical Wing Hanger Adjust		Overall Trim Dimensions		Single or Row		Rough-In Dimensions			
		Min.	Max.	Width	Length	Width	Length	Specify option INT (intermediate) or EOR (end of row).			
								Nom. Length	Multiply by	Plus	Example
P4, HC	1' x 4'	1¼"	4¼"	12 ¹³ / ₁₆ "	48 ¹³ / ₁₆ "	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1"	3"	24 ¹³ / ₁₆ "	24 ¹³ / ₁₆ "	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1"	3"	24 ¹³ / ₁₆ "	48 ¹³ / ₁₆ "	24"	48"	48"	# in row	"	(48" x 2) + " = 96"
45	1' x 4'	1"	3¼"	12 ¹³ / ₁₆ "	48 ¹³ / ₁₆ "	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1"	3"	24 ¹³ / ₁₆ "	24 ¹³ / ₁₆ "	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1"	3"	24 ¹³ / ₁₆ "	48 ¹³ / ₁₆ "	24"	48"	48"	# in row	"	(48" x 2) + " = 96"
VHC, PVHC	9" x 4'	2"	4"	10½"	48¾"	9"	48"	48"	# in row	"	(48" x 2) + " = 96"

LENSED TROFFERS

Series	Size	Vertical Wing Hanger Adjust		Overall Trim Dimensions		Single or Row		Rough-In Dimensions			
		Min.	Max.	Width	Length	Width	Length	Specify option INT (intermediate) or EOR (end of row).			
								Nom. Length	Multiply by	Plus	Example
4PS, 4VS	1' x 4'	"	3"	12¾"	48¾"	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1"	2"	24¾"	24¾"	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1"	2"	24¾"	48¾"	24"	48"	48"	# in row	"	(48" x 2) + " = 96"
5PA	1' x 4'	"	3"	12¾"	48¾"	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1¼"	2"	24¾"	24¾"	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1"	2"	24¾"	48¾"	24"	48"	48"	# in row	"	(48" x 2) + " = 96"
ST8, WT	1' x 4'	1"	3¾"	12¾"	49"	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1"	3¾"	24¾"	24"	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1"	3¾"	24¾"	49"	24"	48"	48"	# in row	"	(48" x 2) + " = 96"
CRS (FA Door)	1' x 4'	1¾"	4½"	12 ¹⁵ / ₁₆ "	49 ¹¹ / ₁₆ "	11¼"	48½"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1¾"	4½"	24 ¹⁵ / ₁₆ "	24¾"	23¾"	24¾"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1¾"	4½"	24 ¹⁵ / ₁₆ "	49 ¹¹ / ₁₆ "	23¾"	48½"	48"	# in row	"	(48" x 2) + " = 96"
CRS (FCS & FSS Door)	1' x 4'	1¾"	4½"	12 ¹⁵ / ₁₆ "	48¾"	12"	48½"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	1¾"	4½"	24 ¹⁵ / ₁₆ "	24¾"	24"	24¾"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	1¾"	4½"	24 ¹⁵ / ₁₆ "	48¾"	24"	48½"	48"	# in row	"	(48" x 2) + " = 96"
CRC	1' x 4'	3½"	4½"	12¾"	48¾"	12"	48"	48"	# in row	"	(48" x 2) + " = 96"
	2' x 2'	3½"	4½"	24¾"	24¾"	24"	24"	24"	# in row	"	(24" x 2) + " = 48"
	2' x 4'	3½"	4½"	24¾"	48¾"	24"	48"	48"	# in row	"	(48" x 2) + " = 96"

Recessed Accessories

Flange Kit and Plaster Frame Information

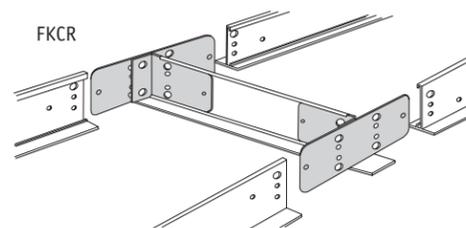
FLANGE KITS

Flange kits are extruded aluminum frames that act as individual fixture T-Bar frames to support the weight of any G (grid) trim recessed fixture in drywall or plaster ceilings. Kits snap together without the use of tools (18 gauge galvanized corner clips provided) and are hung by tie wire (by others) from the ceiling support structure.

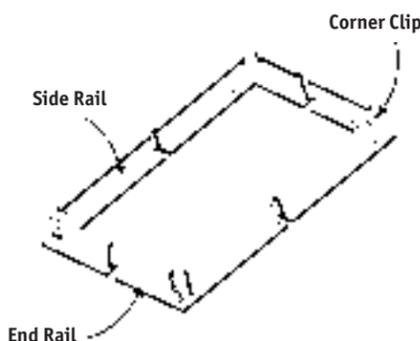
From the room side flange kits mimic the appearance of T-Bars in a baked white enamel finish. Consult chart for ceiling cut out dimension.

For continuous row applications order flange kits plus one FKCR, continuous row flange connector kit, for each joint between fixtures. (One less than the number of fixtures in the row.)

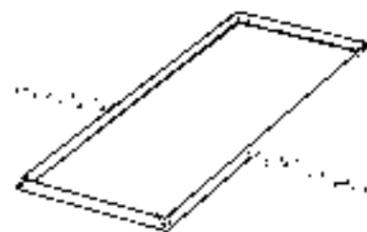
FLANGE KIT		CEILING OPENING	
Catalog No.	Size	Width	Length
FK14	1' x 4'	12 "	48 "
FK22	2' x 2'	24 "	24 "
FK24	2' x 4'	24 "	48 "
FK44	4' x 4'	48 "	48 "
FK81	8" x 1'	8 "	12 "
FK82	8" x 2'	8 "	24 "
FK84	8" x 4'	8 "	48 "



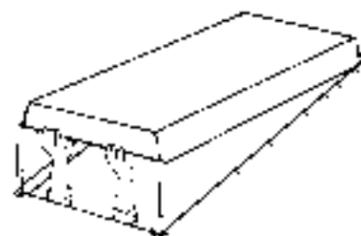
FLANGE KIT INSTALLATION INSTRUCTIONS



1. Cut ceiling opening to proper dimensions. Slip fit corner clips into side and end rails. No tools are required.



2. Place Flange Kit in ceiling opening and wire each corner to ceiling structure. Pull up tight against ceiling.



3. Place grid trim troffer in Flange Kit.

Standards Compliance

HOW TO ACHIEVE A FIRE RATING

UL publishes a book called The Fire Resistance Directory each February. A supplement is issued each August. The Fire Resistance Directory contains instructions for fire rated ceiling systems. Each approved ceiling system has a design number. The fire rated ceiling system is achieved by selecting a design number and following instructions, which include spacing criteria, enclosure requirements, and so on. When complete, the system carries a rating (for example: one hour). FR option provides a label indicating the fixture is suitable for use in such ceiling systems. Many ceiling designs required an enclosure or "tent" of fire resistant material over the back of the fixtures. These enclosures are either built on-site, sometimes of ceiling tile material, or purchased as one-piece molded covers.

Fire Rated Troffers: Debunking the Myth

WHAT IS A FIRE RATED LABEL?

Columbia Lighting can provide a fire rated label (FR option) which states that our recessed light fixtures are manufactured in accordance with UL1598 and, therefore, can be installed in a fire rated ceiling system. There are no additional requirements of a recessed fixture in order for it to be used in a fire rated design.

I NEED A FIRE RATED TROFFER.

A true fire rated troffer does not exist because UL does not list troffers as "fire rated". Instead, they list ceiling systems which may include UL listed troffers as part of that system.

BUT MY INSPECTOR SAYS I NEED ONE.

Your inspector has authority and jurisdiction over your project. However, a better understanding of the fire rated ceiling system process can help in your discussions. Order the FR option where required by local authorities.

I REMEMBER FIRE RATED TROFFERS FROM JOBS PAST.

UL listed three ceiling designs using a special fire rated troffer many years ago. Columbia Lighting (and a few others) offered this troffer, which consisted of a recessed unit with a sheet of fire resistant material attached to the back of it. Since all three ceilings have been obsolete for decades (some exceptions in Canada), Columbia Lighting no longer manufactures this troffer. Instead, we manufacture in accordance with UL 1598, which allows our recessed fixtures to be installed in a fire rated ceiling system.

FIRE RATED ENCLOSURES

An FR label does not indicate whether or not "tenting" of the fixtures is required; all installation must be in accordance with the UL Fire Rated Ceiling design.

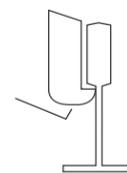
T-BAR LOCK CLIPS

Four integral T-Bar lock clips are standard on many Columbia Lighting recessed fixtures. Integral clips are built according to the rigorous demands of UL 1598. Where integral clips are not available, a parts bag is provided containing two clips for attachment to the housing structure. Four clips are available upon request.

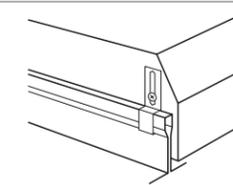
INTEGRAL CLIP

Fixture is equipped with integral T-Bar Clips at each end. To engage T-Bar, bend clip outward and lock under T-Bar.

For installation in the following NEMA ceiling types: -G -GR -NFG -NFGS -SS



NON-INTEGRAL CLIP



DAMP AND WET LOCATION LABELS

Columbia fixtures will be labeled suitable for installation in damp locations (most fixtures) or wet locations (select extreme environment and outdoor fixtures) as called out on the specification sheets. Installation of a dry-location listed customer specified component such as an emergency inverter requires the fixture to be labeled for dry location use only.

BALLAST DISCONNECT

All Columbia fixtures are in compliance with NEC and CEC requirements for ballast disconnects by including integral ballast disconnects in required fixtures.

The following fixtures are excluded from the ballast disconnect requirement:

- Hazardous location fixtures—HZ, FNPH, FDPH, FSPH, CRS (with D2 option)
- Fixtures with emergency battery pack options

CIRCLE I UL STANDARD 1958

All Columbia fixtures are in compliance with UL Standard 1598, Clause 8.8.1, which reads as follows:

"A luminaire with instant-start ballast(s), incorporating bi-pin lampholders shall:
 a) Be constructed with a ballast(s) identified as Type CC, or
 b) Be constructed with lampholder intended for use with instant-start ballasts in accordance with Clause 4.1. Lampholders marked with a circle "I" comply with these requirements."

Fire Rated Label

This fixture is equipped with premium low heat ballasts to prevent ballast cycling when installed in a fire rated ceiling system. This fixture is compatible with UL Fire Rated Ceiling designs when installed in accordance with the UL Fire Resistance Directory.

Ballast Options

Ballast Types

BALLAST TYPES

Columbia Lighting supplies ballasts from a variety of reputable vendors whose products conform to Columbia Lighting's standard specifications (pg. 107). See Ballast Specified Vendor Options to order a particular manufacturer's product or ballast series. All ballast information is based on manufacturer's published literature and is subject to change without notice.

ELECTRONIC BALLAST TYPES

Start Method	Definition	Designation	Characteristics
Electronic Instant Start	Strikes lamp without filament preheating. Lowest wattage draw option for applications without control systems. Used for T8 bi-pin and slimline lamp types. Ballasts for F32T8 full or reduced wattage lamps are NEMA Premium qualified.	E	Standard (.87-1.0 BF)
		E104	EnergyMax 1.04 BF
		EHL	High light output (1.18-1.2 BF)
		ELW	Low wattage (.77-.78 BF)
		ETT	Twin Tube lamp types
Electronic Programmed Start	Recommended for frequently switched applications including occupancy sensor controlled lighting because programmed filament preheating can help extend lamp life. Remote mounting distance more restricted than with instant start. Sometimes called programmed rapid start. Available for all 2-pin lamp types. Ballasts for F32T8 full or reduced wattage lamps are NEMA Premium qualified and parallel wired.	EP	Standard, 0.88 BF
		EPTT	Twin Tube lamp types
		EP_	Alternate ballast factors. Eg. EP95, EP115 for T5 lamp types, EP104 for T8 lamp types
		EPHL	High light output (1.15 - 1.20 ballast factor)
		EPSP5	Parallel Wired for T5 lamps
Electronic Step Dimming	Electronic programmed start ballast with two hot leads to allow both lamps to switching between 100% and 50% light levels for energy management. Requires two switched leads from same panel. Not suitable for remote mounting. 2-lamp ballasts.	ESD	Standard BF (T5 or T8 bi-pin)
		ESD104	EnergyMax 1.04 BF (T8 Bi-pin)
		ESD80	Alternate ballast factor for 54T5HO
Electronic Full Dimming	Responds to either line voltage or low voltage signals to dim lamps from 100% to 10% or lower, depending on model. Many ED ballast types require voltage specified. Not suitable for remote mounting.	ED_	Add vendor and ballast series compatible with control system. Eg. ED120 LUTEC10

MAGNETIC BALLAST TYPES

Start Method	Definition	Designation	Characteristics
Low Power Factor	Also called normal power factor (NPF). Labeled for residential use only.	L	For residential fixtures using 2', 3', or 4' Bi-pin T12 lamp types.

Ballast Options

Ballast Quantities and Specified Vendors

BALLAST QUANTITIES

Fixtures with 3, 4, 6, and 8 lamps will be supplied with two ballasts standard. Optional ballast quantities are available. See also Master-Satellite option for ballast quantity options on tandem-wired pairs. In tandem-length fixtures with more than one ballast, lamps are wired side by side unless left and right (LR option) is specified.

Number of Lamps in Fixture	Standard Designation	Optional Ballast Designation
1 or 2	Provides one ballast	Adding 11, such as 11E or 11EP, provides two (2) ballasts in 2-lamp fixtures
3	Provides two ballasts, one on inboard lamp, one on outboard	Adding 3, such as 3E or 3EP, provides one (1) 3-lamp ballast
4	Provides two ballasts, one on inboard lamps, one on outboard	Adding 4, such as 4E or 4EP, provides one (1) 4-lamp ballast
6	Must specify	Adding 24 (eg.), such as 24E or 24EP, provides a 2-lamp and 4-lamp ballast (recommended). 3E or 3EP provides (2) 3-lamp ballasts
8	4E provides two (2) 4-lamp ballasts wired on lamps 1, 4, 5, 8 and 2, 3, 6, 7	Consult factory

SPECIFIED VENDORS*

Specify ballast type, optional ballast quantity and vendor option. Eg. 3EDULUTEHD

Vendor	Vendor Specified Designation	Vendor and Series Specified Designation	Vendor's Series Name (normal ballast factor unless noted)
	LUT	LUTHIL	Hi-Lume Dimming
		LUTES	EcoSystem incl. E1/E2 only (Dimming)
		LUTESSW	EcoSystem incl. sensor wires (Dimming)
		LUTEHD	EcoSystem H
	ULT	ULTHE	Ultim8
		ULTHP	High Performance
 imagination at work	GE	GEMAXH	Ultramax High BF
		GEMAXL	Ultramax Low BF
		GEMAXN	Ultramax
		SYLQHE	High Efficiency
	SYL	SYLPSX	Extreme
		SYLPHO	Helios Dimming
		SYLDIM	Powersense Dimming
		ADVCMN	Centium
	ADV	ADVIOP	Optanium
		ADVMK10	Mark X Dimming
		ADVMK7	Mark VII Dimming

*Others available, call out ballast catalog number in fixture description. Dimming ballasts use ED plus voltage and vendor designation.

Ballast Options

Ballast Characteristics and Total System Watts

BALLAST CHARACTERISTICS

General Definitions

POWER FACTOR

Measure of how effectively ballast converts power source into usable watts. Ideal power factor would measure 1.0.

CREST FACTOR

Measure specifying the ratio of peak current to R.M.S. current in the waveform used to drive programmed start lamps. High crest factors shorten lamp life.

TOTAL HARMONIC DISTORTION

Measure of magnitude of input current harmonics compared with amplitude of fundamental frequency current.

BALLAST FACTOR

Lamp manufacturers publish lumen data based upon a "reference ballast" built to meet ANSI standards. Ballast factor is a measure of how well a ballast performs in comparison to the "reference ballast" as a percentage of rated lumen output.

COLUMBIA LIGHTING BALLAST SPECIFICATIONS

All factory-choice normal ballast factor electronic ballasts meet the following specifications. Optional ballast factors and customer specified vendor available as options.

Ballast must be high power factor, (min. .95), Class P, UL listed, meet IEEE and ANSI requirements C62 .41 Category A for transient protection and FCC Regulations, Class A for electromagnetic interference. Operates at voltage variance of +/- 10%, crest factor of <1.7, total harmonic distortion (THC) <10% for primary lamp type, minimum ballast factor (BF) of .87 (.95 for T5/T5HO lamp types). Ballast must start lamps at 0°F ambient temperature.



All ballasts for F32T8 full and reduced wattage lamps must be NEMA premium qualified.

TOTAL SYSTEM WATTS

The Total System Watts refer to the ballast and lamp watts consumed per luminaire. Input watts are based upon ANSI watts as published by ballast manufacturer's literature which is subject to change without notice. Ballast information shown is generic and serves as an approximation only; actual input watts vary according to specific ballast manufacturer and ballast number. For exact input wattage contact either the ballast manufacturer or Columbia Lighting Technical Support. Wattage published in Columbia IES photometric tests represents actual measured watts.

Total System Watts (Watts/Volts = Amps)

Ballast Type	Catalog Designation	Lamp Type	No. of Lamps	Input Watts*
Electronic Programmed Start T5	EP	F14/T5	1	19
	EP	F14/T5	2	34
	EP	F24/T5HO	1	28
	EP	F24/T5HO	2	53
	EP	F28/T5	1	34
	EP	F28/T5	2	66
	EP	F54/T5HO	1	63
	EP	F54/T5HO	2	121
	3EP	F54/T5HO	3	182
	4EP	F54/T5HO	4	240
	EP80	F54/T5HO	2	96
	EP95	F28/T5	2	60
	EP115	F28/T5	2	69
	ESD80	F54/T5HO	2	96/52
	ESD95	F28/T5	2	60/28
ESD104	F32/T8	2	65/32.5	
ESD115	F28/T5	1, 2	71/34	
Electronic Programmed Start T8	EP	F32/T8	1	31
	EP	F32/T8	2	62
	EP104	F32/T8	2	65
	3EP	F32/T8	3	92
	4EP	F32/T8	4	119
Electronic Instant Start T8	E	F32/T8	1	30
	E	F32/T8	2	56
	3E	F32/T8	3	85
	4E	F32/T8	4	112
	E	F96/T8	1	70
	E	F96/T8	2	108
	E	F96/HO/T8	1	100
	E	F96/HO/T8	2	185
	E104	F32/T8	2	67/66
	E104	F32/T8 (28 watt)	2	60/59
E105	F32/T8 (25 watt)	2	51/51	
Electronic T12	E	F96/T12/ES	1	64
	E	F96/T12/ES	2	105
	EP	F96/T12/HO	1	119
Electronic TT	ETT	F40/TT	1	39
	ETT	F40/TT	2	68
	3ETT	F40/TT	3	99
	EPTT	F40TT	1	38
	EPTT	F40TT	2	76
			3	110

*Where published input watts differ between 120/277V the higher (120V) wattage is given. For 2 level step dim ballasts (ESD types) both high and low output wattages are given.

Electrical Options

EMERGENCY BATTERY PACKS INSTALLED

Luminaires with factory installed battery packs will bear the UL Emergency equipment label. Dry location labeling standard. Standard inverter options below are not suitable for cold temperature starting, damp or wet location labeling. Optional inverters available for these applications. Consult factory or specify vendor's catalog number.

EL	350-450 lumens for one 2'-4' lamp (T8, T12, U-Bent, TT)	EL141	1100-1400 lumens for one 2'-8' lamp (T8, T12, U-Bent, TT)
EL61	500-600 lumens for one 2'-4' lamp (T8, T12, U-Bent, TT)	EL142	1100-1400 total lumens for two 2'-4' lamps
EL71	600-700 lumens for one 2'-8' lamp (T8, T12, U-Bent, TT)	EL5*	390-700 lumens for one 2'-4' T5/T5HO
EL72	600-700 total lumens for two 2'-8' lamps (T8, T12, U-Bent)	EL5H*	725-1250 lumens for one 2'-4' T5/T5HO

*These inverters not available in some 2' fixtures due to space constraints. Remote mounting using accessory enclosure (by others) recommended.

FUSING

Fusing is available on all fixtures to prevent over current from being transmitted upstream through the fixture as may be possible due to a dead short fault in a ballast. Specify GLR (fast blow) or GMF (slow blow) fusing options. Fuses are not UL listed to break under load and therefore are not a substitute for the in-fixture ballast disconnects supplied standard where required by the National Electric Code.

FIXTURE FLEX AND LEADS

Fixture flex (also called pre-wire or whip) is a UL listed lighting component for recessed fixtures to provide the electrical wiring between the junction box and recessed fixture. Flex may be no longer than 6'. Typical cables use 3/8" flexible conduit and three or four 18 gauge leads. Three wires provides one line voltage hot lead. Add a wire for each separate hot lead required including separately switched ballasts, switch dim ballast or battery pack to be powered through the flex cable. Flex cables are shipped pre-wired to the recessed fixture. Add option designation to catalog number after ballast options. Eg. C388. Wire colors will be coded black/white/red/yellow plus a ground for line voltages. 588DIMM is available with black/white violet, grey and ground for use with low voltage dimming leads.

CABLE	NO. OF WIRES	CABLE DIAMETER	WIRE GAUGE
C Cable	3 3	8 3/8"	8 18 gauge
	4 4	2 1/2"	4 14 gauge
	5 5		2 12 gauge

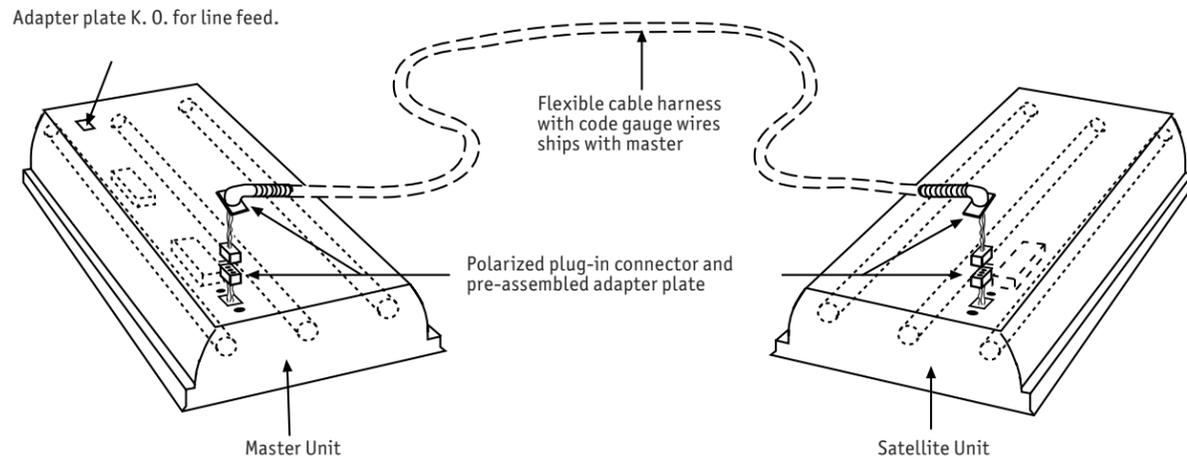
MISCELLANEOUS FIXTURES AND ELECTRICAL OPTIONS (ADD AS SUFFIX ON END OF CATALOG STRING)

Fixture/Option	Cat. No.	Description	For Use With
	PSW	Pull switch, one circuit, 120V only	Selected strips, surface units and industrials. Contact factory for applications
	PSWD	Pull switch, wired to the downlight circuit on a two circuit unit, 120V only	
	4PSW	Four-way pull switch for two circuit, two lamp unit, 120V only	
	NL	Medium base lampholder for 15W, 25W, 40W, or 60W T10 lamp. Lamp not included. 120V only	AWN, SM units
	PL7	Fluorescent Night Light for 7W, T-4, G23 lamp	4PS, SM, and WAL series
	PL9	Fluorescent Night Light for 9W, T-4, G23 lamp	
	PL13	Fluorescent Night Light for 13W, T-4, GX23 lamp	
		Lamp not included. PL ballast will default to fixture voltage unless specified	
	GCO	Grounded convenience outlet (120V only)	WPM, WM, WAL, UCS and UC Standard on SA, W
	C6P15_	6' Cord and Straight Blade, NEMA 5-15P, 15A (Add Voltage: 1 = 120)	All industrial fixtures
	C6TL15_	6' Cord and Twist-Lock Plug, NEMA L5-15P (120V) NEMA L7-15P (277V), 15A (Add Voltage: 1 = 120, 2 = 277)	
	C6TL20_	6' Cord and Twist-Lock Plug, NEMA L5-20P (120V) NEMA L7-20P (277V), 20A (Add Voltage: 1 = 120, 2 = 277)	
	F3C_	3-Conductor feed cord, 18ga stranded wire (Add length needed: 5 = 5', 10 = 10', or 15 = 15')	All industrial fixtures
	F4C_	4-Conductor feed cord, 18ga stranded wire (Add length needed: 5 = 5', 10 = 10', or 15 = 15')	
	GLR	Fast blow fuse, fuse amps based on fixture ordered	All fixtures

Wiring Options

Master/Satellite Wiring Harness

DETAIL FOR 2' x 4' 3-LAMP LUMINAIRES

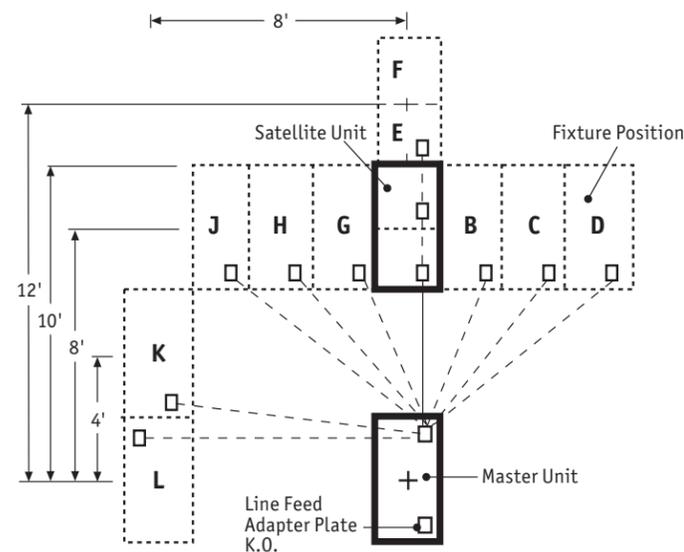


Ballast	Master	Satellite
E, EP	(2) 2-Lamp	(1) 2-Lamp
24E, 24EP	(1) 2-Lamp + (1) 4-Lamp	None

All wired for inboard-outboard

- Master/satellite units bear appropriate UL labels.
- Single units must be ordered to fill odd number layouts.
- Harness may be ordered with any Columbia Lighting 3-Lamp recessed luminaires.
- In master/satellite pairs requiring emergency inverters, UL requires that the inverter be located in the master and power lamps in the master.
- Many programmed start ballasts including all dimming and step dimming ballasts are not suitable for master/satellite applications due to lamp lead length restrictions. See ballast vendor technical data for more information.
- Available on most recessed fixtures. Not available on M46, WT, or AC series.

LAYOUT OPTIONS



Position	Minimum Length Harness Required
A	6'
B	7'
C	8'
D	9'
E	8'
F	10'
G	7'
H	7'
J	8'
K	9'
L	9'

Harness length must be specified on order.

Caution: Some electronic ballasts can only be wired with harnesses less than 11' or are not suitable for remote mounting. Consult with ballast manufacturer before specifying.

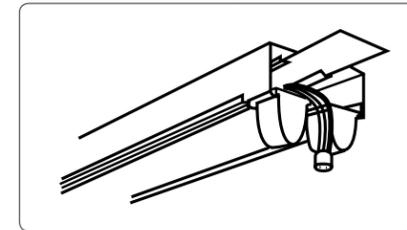
Wiring Options

Branch Circuits

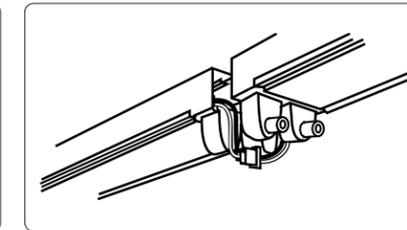
PLUG-ON BRANCH CIRCUIT FLUORESCENT WIRING

Plug-On Branch Circuit Wiring System features complete branch circuit wiring. You supply the feeder; Plug-On does the rest. The system will handle all popular voltage/phase combinations – 2 or 3 wire, 120V, 277V, or 240V, and 3-phase, 4 wire 120/208V or 277/480V-20 amp rating. It is UL listed and combines the following features:

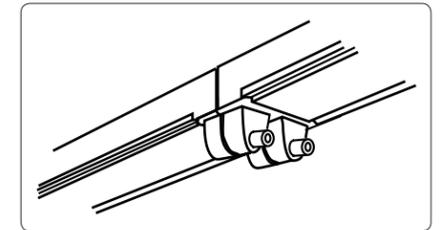
- Available on all continuous row surface mounted fixtures for up to 20 amp circuit runs. Supplied as single or multiple circuit with these fluorescent fixtures: Surface (PT, AW), Strips (CS, CN, K, LB, KT, SS), Industrials (KL, CSR).
- Available for easy wiring connections for single circuit (BC1), multiple circuits (BC2A, BC2B) or alternating AB or ABC patterns (BC2X, BC3X) for up to 4 circuits in a row.
- May be used with any conventional hanging method – chain, Zip-Tee, slide clamp, stem, or stud.
- Add "G" to option to add a ground wire in harness
- Complete, ready for connection as shipped – no separate parts to misplace. Connectors snap-lock for positive mechanical connection and are color coded for instant identification.
- Carton and channel marked for ballast circuit identity – aids installation, distribution, and maintenance.
- Free factory consulting on coordination of order is recommended to assure proper application.



Mount fixture in any economical, familiar manner.



Make electrical connection at same time as mounting next fixture. No need to come back. Power must be off when making connection.



Add lamps and move on to next fixture.

Catalog Number	-Suffix	Description
1 Circuit: 120V-277V (2 Wire)	-BC1	Ballasts connected to black/white wires
2 Circuit: 120V/240V or 120-277V (3 Wire)	-BC2A	Ballasts connected to black/white wires
	-BC2B	Ballasts connected to red/white wires
2 Circuit with 2 ballasts in fixture (3 Wire)	-BC2AB	Black and red wires. Ballast on each plus white. Add L/R option for left/right (in-line) switching
2 Circuit Alternating (3-wire with crossover for A-B-A-B circuit pattern)	-BC2X	Black and red wires. Ballast connected to first position plus white wires
3-Circuit Alternating (4-wire with crossover for A-B-C-A-B-C circuit pattern)	-BC3X	Black, red, and blue wires. Ballast connected to first position plus white wires
3 Circuit: 3 Phase 120V/208V or 277V/480V (4 Wire)	-BC3A	Ballasts connected to black/white wires
	-BC3B	Ballasts connected to red/white wires
	-BC3C	Ballasts connected to blue/white wires
	-BC3D	Ballasts connected to yellow/white wires
4 Circuit (5 Wire)	-BC4A	Ballasts connected to black/white wires
	-BC4B	Ballasts connected to red/white wires
	-BC4C	Ballasts connected to blue/white wires
	-BC4D	Ballasts connected to yellow/white wires

Standard wiring in fixtures with multiple ballasts

In board, out board wiring is standard in fixtures or master/satellite pairs with two or more ballasts and three or more lamps in cross section (except in high bay products).

In tandem-length fixtures lamps side by side will be on the same ballast. Specify L/R option for left/right switching and for most even light distribution when switching fixtures in continuous rows.

Lamp and Packaging Options

FLUORESCENT LAMP OPTIONS

Many fixtures can be ordered with lamps pre-installed. Some fixture designs are not available pre-lamped because there is no installation or shipping advantage. Lamp options listed below provide the factory's choice of reputable vendors. Insert lamp option after ballast voltage designation in fixture catalog number. NFO and reduced wattage designations provide lamps meeting applicable NEMA Premium and CEE listing criteria.

Color Rendering Index (CRI) refers to how accurately the lamps phosphor blend reproduces colors compared with a natural source (sunlight). Color temperature refers to how warm (3000°K) or cool (4100°K) the light appears. Candlelight represents an extreme warm (reddish) temperature while sunlight represents an extreme cool (blue-white) temperature.

Please specify vendor's catalog number if a specific vendor, series or lamp feature is required. Reduced wattage lamps may not be suitable for dimming or cold temperature applications. Consult vendor's specification.

LAMP PROFILE (F = FLUORESCENT)	COLOR TEMPERATURE	LAMP SHAPE
F8 T8, General Purpose. 78+ CRI	30 3000°K	Blank Straight or Twin Tube
F08 T8, Minimum 82 CRI	35 3500°K	U6 U-Lamp 6" Leg Spacing
F030 4' T8 reduced wattage (30W) ¹	41 4100°K	U1 U-Lamp 1 1/8" Leg Spacing
F028 4' T8 reduced wattage (28W) ¹ (PLUS)		
F025 4' T8 reduced wattage (25W) ¹		
FOH 4' T8 (high lumen)		
NFO 4' T8, NEMA Premium Full wattage (32W)		
F58 T5 or T5HO, Minimum 85 CRI		
FTT Twin Tube		

PACKAGING OPTIONS

Products are shipped in individual cartons standard. In fixtures ordered in pallet quantities or greater specify choice of job packaging to ease fixture handling and reduce job site waste disposal. Option available on lensed and parabolic troffers.

PWCS Cartoned, stretch-wrapped to standard pallet.

PNCS Cartoned, stretch-wrapped to narrow pallet.

PW Job pack standard pallet, less cartons with protective outer packaging and stretch-wrapped to 4-way pallet.

PN Job pack narrow, less cartons, with protected outer packaging and stretch-wrapped to 4-way pallet no greater than 24" wide.

¹Not recommended for use with step or full dimming.

Troubleshooting

FLICKERING FLUORESCENT LAMPS

1. New lamps need to be seasoned.

In the case of dimming ballasts, most manufacturers recommend 100 burning hours before dimming.

2. Line voltage varies.

Check to see that line voltage current is constant.

3. Air movement across lamp.

Check to make sure that HVAC is not directed across lamps, lowering temperature of lamps.

CYCLING OF BALLAST

1. Line voltage varies.

Check line voltage to make sure constant power is supplied.

2. Replace lamps to verify ballast problem.

3. Insulation covering fixtures.

Check to make sure that fixtures are not covered. Excess heat will cause thermal protector to cycle.

4. Fixtures are mounted on ceiling directly.

Verify that fixtures are designed to be mounted directly to ceiling. If not, an air space must be provided between ceiling and fixtures.

SLOW STARTING

1. Programmed Start ballast versus Instant Start ballast.

Programmed Start ballasts pre-heat the cathode and then ignite lamps. Instant Start ballasts use a high voltage surge to start lamps instantly. Programmed Start ballasts are slower starting but easier on lamps due to pre-heating of cathodes.

2. Line voltage too low.

Check line for correct voltage as required by ballast. (See "Fixtures Do Not Light")

3. Incorrect fluorescent lamp.

Make sure lamps are compatible with ballast.

4. Low ambient temperatures.

Is temperature above 50°? Some ballasts require higher starting temperatures to start properly.

FIXTURES DO NOT LIGHT

1. Is the power on?

2. Lamp compatibility.
Cross check lamps against ballast designation listed on ballast case. Some energy saving lamps and ballasts are not compatible.

3. Incorrect or loose wiring.

Disconnect power and check all wiring connections.

4. Check fuses if supplied.

Disconnect power before removing. Check with ohmmeter or test equipment. Reinstall and energize.

5. Line voltage low.

Voltage range for 120 volts is 112 minimum and 125 maximum. Voltage range for 277 volts is 255 minimum and 289 maximum.

6. Low ambient temperature.

Fluorescent lamps are hard to start at temperatures below 50°F.

7. Are lamps properly engaged in the lampholders?

Check to make sure that pins are properly engaged.

NOISE

1. Are all components secure?

Check ballast mounting and look for loose fixture components.

2. Is there furniture in the space?

Empty rooms magnify sound, emphasizing the normal operating hum. The sound which seemed so loud in an empty space will normally disappear once the room has been filled with furniture, partitions, and equipment.

3. Is the ballast functioning correctly?

Replace ballast if necessary.

4. What is the sound rating of the ballast?

Verify the ballast's proper sound rating for the environment. If the sound rating is inappropriate, remote mount the ballast or replace it with a ballast with the appropriate sound rating.



ALERA LIGHTING

ARCHITECTURAL AREA LIGHTING

BEACON PRODUCTS

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

HUBBELL CONTROL SOLUTIONS

HUBBELL INDUSTRIAL LIGHTING

HUBBELL OUTDOOR LIGHTING

KIM LIGHTING

KURT VERSEN

LITECONTROL

PRESCOLITE

WHITEWAY

701 Millennium Blvd. Greenville, SC 29607
Tel 864.678.1000 Fax 866.898.0131
www.columbialighting.com

C01046 September 2017

Copyright © 2017 Columbia Lighting, a division of Hubbell Lighting, Inc. All rights reserved.
Because of continuing product improvement programs, Columbia Lighting reserves the right to
change specifications without notice.