SUBMITTAL

Rumsey/Tecot Electric

55 Lukens Drive New Castle, DE 19720 Tel: (302) 421-3900 Fax: (302) 429-6268



PROJECT: CAPE HENLOPEN

COMPANY: APPLE ELECTRIC

TYPE		MANUFACTURER'S CATALOG NUMBER
L1	KENALL	SH548W-1-32-IS-DV
L2	NOT USED	
L3	DUAL LITE	LZ30I-03L NOT AVAILABLE WITH NI-CAD BATTERY
L4	DUAL LITE	LXURWEI
L5	RAB	SLIM C 37 N PC
L6	RAB	CLED 2X20YW

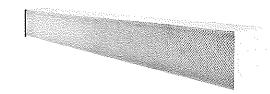
SHERIFF™

SH548 SERIES FOR WET WALL MOUNT LOCATIONS

	PROJECT INFORMATION
Job Name	
Fixture Type	L1
Catalog Nu	SH548W-1-32-IS-1-DV
Approved b	

PRODUCT FEATURES:

- » Surface wall mount 5"×48"
- » ADA Compliant
- » 16-gauge cold rolled steel baseplate with seam welded end caps
- » P12 polycarbonate wraparound lens
- » Peace of Mind Guarantee® against breakage



SPECIFICATIONS

BASEPLATE: One-piece 16-gauge CRS baseplate with welded corners. Baseplate provided with six-point mounting holes and one wireway hole -- see Cross Section/Details. TGIC polyester powder coat - 5-stage pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%. Lens is positioned in baseplate channels and retained with six stainless steel Torx® fasteners Baseplate/end caps mount flush to wall surface.

LENS: Cold formed .156" P12 polycarbonate lens. See Options for alternate lenses.

SOCKETS: Shock-resistant sockets with internal locking collar to ensure positive lamp retention.

HARDWARE: Stainless steel Torx® fasteners secure lens in baseplate channel.

ELECTRICAL: Class P ballasts. Fluorescent electronic 120/277/347 and dual voltage ballasts high power factor.

INSTALLATION: Six-point mounting required for Peace of Mind Guarantee®.

LISTINGS: UL and CUL listed for Wet Location. (Horizontal wall mount only.)



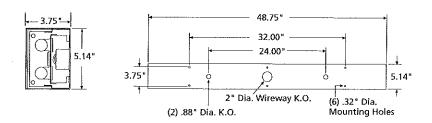




ORDERING INFORMATION (Ex: SH548W-2-32-RS-1-DV-F5)

Model	Lamp Qty	Lamp Туре	Ballast Type	Ballast Qty	V	oltage	Options	Accessory
SH548W	1	32	IS	1		DV		
Lamp Quantity 1 One Lamp 2 Two Lamps (T5,T8,40B) 3 Three Lamps (T8 only) Lamp Type 28 F28T5 32 F32T8 54* F54T5HO 40B F40TT (2)		RS Rapid S (CFL, T8			9500	Standard Lu .187" P12 I Marine Grain Brush Stain: LED Night L Single Fuse Two 1/2" El Opal Polyca Painted Stai	MT Conduit Entry Knock rbonate Lens nless Steel Housing Tube NPF Night Light (n driver	ol (100% - 20%) outs (one per end cap)

DIMENSIONAL DATA







RANGER™ R12 SERIES

PRODUCT FEATURES:

- » Surface mount wall or ceiling; 12"×48"
- » 20-gauge cold rolled steel baseplate with one-piece extruded clear prismatic acrylic lens
- » ADA compliant
- » One year guarantee



	PROJECT INFORMATION
Job Name	
Fixture Type_L2	
	R12-48-3-32-IS-S-DV
Approved by	

SPECIFICATIONS

HOUSING: One-piece 20-gauge CRS baseplate and end caps. Baseplate provided with four-point mounting holes and one wireway hole — see Cross Section/Details. White TGIC polyester powder coat — 5-stage pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%. Baseplate/endcaps mount flush to ceiling or wall surface.

LENS: One-piece extruded clear prismatic impact blend acrylic. See Options for alternate lenses.

SOCKETS: Shock-resistant sockets with internal locking collar to ensure positive lamp retention.

HARDWARE: Two white nylon fasteners secure lens in baseplate channel.

ELECTRICAL: <u>LED</u>: Available 3500K, 4000K and 5000K color temperatures, 82 CRI. 120-277VAC, 50/60Hz electrical input with serviceable high power factor electronic, constant-current driver (<20% THD, >0.95 PF). Maximum driver source of 250 μA. <u>LF</u>: Class P ballasts. Fluorescent electronic 120/277/347 and dual voltage ballasts high power factor. One-lamp 90 minute nickel-cadmium battery pack (EL) includes inverter charger, test switch and charging indicator lamp — indoor use only.

INSTALLATION: Six-point mounting required for One Year Guarantee.

WARRANTY: Limited five (5) year warranty for LED lamps.

LISTINGS: UL and CUL listed for Damp Locations -- wall and ceiling mount. See WL Option for Wet Locations, covered ceilings only. ADA Compliant.



In Stock SKU R12-48-76L40K-SCC-1-DV

Model	Nom Length	Lamp Qty	Lamp Type	Ballas	t/Driver Type	Ballast/Driver Qty	Voltage	Optio	ons	Accessories
R12	48	3	32	IS	040	2	DV			¥
Nominal L	ength	Lamp Type			st/Driver Typ			Opti		
48 4'			Watt 3500K LED	IS		Electronic <10% THD (AL	Marine Grade Aluminum	
			3 Watt 4000K LED	RS		lectronic <10% THD (T	8, T8HO, T5,T5HO)	PSS	Painted Stainless Steel Ho	
Lamp Qua			Watt 5000K LED	CW	Cold Weather			BSS	Brushed Stainless Steel H	
	Lamps		Watt 3500K LED	SB	Specified Ball			.156		
	e Lamps		Watt 4000K LED	SCC	Standard Cor	stant Current LED Driv	er (LED only)	.187		
4 Four	Lamps		Watt 5000K LED					EL†	One-Lamp Indoor Battery	Pack (32°F)
			8T5	Ballas	st/Driver Qua	intity		FS	Single Fuse & Holder	
			2T8	1	One			KO	Two 1/2" EMT Conduit E	ntry Knockouts (one per endca
		54* F5	4T5H0	2†	Two			PM	Pendant Mount – 2 and 4	l lamp
								PM3	Pendant Mount – 3 lamp	
				Volta	ge			TR	Torx [®] Fasteners	
				120	120 Volt			WL	Wet Location Rating (cove	ered ceiling only)
				277	277 Volt					
				347	347 Volt			Acce	ssory	
				DV	120-277 Volt	s (<10% THD)		9500	Torx [®] with center pin	
									ilable with 2 or 3 lamps on with LED	ly



RANGER™

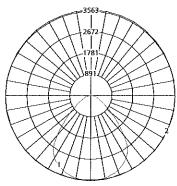
R12 SERIES

PERFORMANCE

	Initial Delive	red Lumens			
Lamp Type	@ 25°C (lm)	Efficacy (lm/W)	Input Power (W)	Drive Current (mA)	Estd. L70 LED Life (Hrs)
38L35K	3582	81	44	94	80,000
38L40K	3819	87	44	94	80,000
38L50K	3972	90	44	94	80,000
76L35K	7006	79	89	94	60,000
76L40K	7469	84	89	94	60,000
76L50K	7768	88	89	94	60,000

Displayed information is for selected luminaires only. Additional wattages and color temperatures are also available. Visit www.kenall.com for additional information.

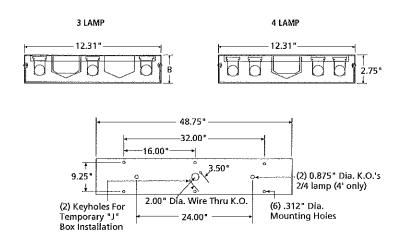
Model: R12-48-1-76L40K-SCC-1-DV



 $\label{eq:maximum Candela} \mbox{Maximum Candela} = 3563 \; \mbox{Located At Horizontal Angle} = 15, \mbox{Vertical Angle} = 2.5$

- --- 1 Vertical Plane Through Horizontal Angles (15-195) (Through Max. Cd.) --- 2 Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

DIMENSIONAL DATA





FEATURES

Application

The LZ Series is an indoor emergency lighting unit with 10 - 30W capacity utilizing a sealed lead-calcium battery in 6 VDC. Supplied standard with two halogen MR16 lamps. High-output LED based MR16 option provides increased spacing, additional run-time and/or increased remote capacity. Matching remote heads are also offered. The integrated lamp design offers greater protection from vandalism.

Construction

Available in two housing sizes, one for standard capacity models (LZ2, LZ15) and increased depth for higher capacity models. Made from UV stabilized thermoplastic with a snap-together design in white or black finish. Includes test switch and AC-ON indicator.

Installation

Unit mounts to 31/2", 4" octagon or 4" square boxes. Back-plate provides a universal knockout pattern for mounting to outlet box. Keyholes provided for securing housing to wall surface. LZ2 and LZ15 can be ceiling mounted. All AC connections made inside unit housing.

Illumination

The LZ Series provides illumination with two halogen MR16 lamps positioned inside an adjustable "eyeball" style housing. Optional lamps for greater light output include 10W MR16 and maximum coverage high-output LED based MR16.

Compliances

UL 924 Listed (optional damp location listed)

NFPA 70

NFPA 101

ADA compliant (LZ standard models only)

U.S. Patent Nos. D400,991, D419,708, D400,995, 6,280,042 and 6,019,477

Warranty

Fixture: 3 Years Full, 5 Years Full with Spectron

Battery:

Lead-Acid Models - 2 Years Full, 3 Years Pro Rata Ni-Cad Models - 2 Years Full, 8 Years Pro Rata Lifetime LED Warranty

LZ Series

Designer Emergency Lighting Unit 15W

LZ30I-03L

NOT AVAILABLE WITH NICD

1.3



Standard Size



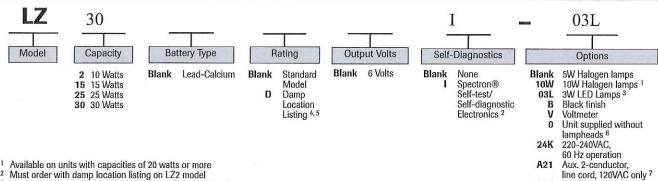
30 Watt Capacity with deep housing



LZR remote heads (sold separately)



ORDERING GUIDE



- Available on units with capacities of 20 watts or more
- Must order with damp location listing on LZ2 model
- Not available with LZ2I and LZ15I Spectron® equipped unit
- Not available with -03L (LED) option Only available with LZ2 or LZ25
- Available with LZ30 model only
- Available on LZ2 only
- Available on all models except LZ2

Auxiliary 3-conductor line cord, 120VAC only 8



LZ Series

Designer Emergency Lighting Unit 15W

	Voltage	Battery	Lamp	Capacity	Runtime	Extended Runtime	Remote Watts	Number of Remotes: 5W HAL	Number of Remotes: 10W HAL	Number of Remotes: 3W LED
LZ2	6VDC	Lead Calcium	5W HAL	10 watts	90 min.	No	0	0	0	0
LZ15	6VDC	Lead Calcium	5W HAL	15 watts	90 min.	Yes	5	1	0	1
LZ30	6VDC	Lead Calcium	5W HAL	30 watts	90 min.	Yes	20	4	2	6
LZ2D	6VDC	Lead Calcium	5W HAL	10 watts	90 min.	No	0	0	0	=
LZ25D	6VDC	Lead Calcium	5W HAL	25 watts	90 min.	Yes	15	3	1	=
LZ2-03L	6VDC	Lead Calcium	3W LED	10 watts	90 min.	No	0	0	0	0
LZ15-03L	6VDC	Lead Calcium	3W LED	15 watts	90 min.	Yes	9	1	0	3
LZ30-03L	6VDC	Lead Calcium	3W LED	30 watts	90 min.	Yes	24	4	2	8

SPECIFICATIONS

Standard Features:

- · External push-to-test switch and AC-ON indicator
- · Low voltage disconnect
- Transformer isolation
- · Temperature compensated charger circuitry
- MR16 Halogen lamp with rated 200 hour life
- Standard 120/277VAC, 60Hz.
- Optional 220/240VAC, 50/60Hz
- · Weight is 4-12 lbs. depending on capacity

Optional Features:

- Spectron® self-test/self-diagnostic circuitry monitors lamp status, lamp load transfer circuitry and battery capacity; displays any fault detected via a flashing code. Automatically runs periodic diagnostic routines to ensure unit readiness. Multicolor LED indicates fault condition and charging status.
- · LED MR16 lamps rated at 50,000 hour life expectancy
- · Available without integral lamp heads for added run time or remote capacity operation.

Operating Temperature Range:

Standard models: 20°C to 30°C (68°F to 86°F)

Damp location models: 10°C to 40°C (50°F to 104°F)

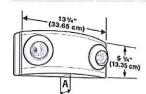
Power consumption for LZ2 and LZ15

Maximum: 4.0W, 120VAC or 277VAC Normal: 1.3W, 120VAC or 277VAC

Power consumption for LZ30

	Lead-Acid Battery		
	6 Volt	12 Volt	
Maximum	14W	14.0W	
Normal	1.8W	2.0W	

DIMENSIONS

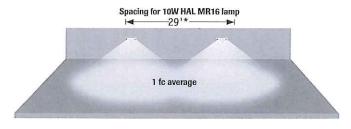


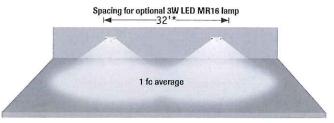
Standard size (LZ2, LZ15) depth is 3.625" (9.2cm). LZ30 model depth is 5.125" (13cm).

APPLICATION DATA









Meets Life Safety Code minimum illuminance of 0.1 fc and average illuminance of 1.0 fc. Assumes open space with no obstructions, mounting height of 7.5', ceiling height of 9' and reflectances of 80/50/20 on a 3' path. Photometry files available on the Dual-Lite web site (www.dual-lite.com).

* Due to limitations in aiming





FEATURES

Application

The LX Series offers bright and even LED EXIT panel illumination with Green or Red letters and attractive UV stable thermo-plastic housing. Features include AC or Emergency operation with optional Spectron® self-test/self diagnostic circuitry. Housing designed for quick and easy installation with low energy consumption. Damp location listed. Accepts 120 or 277 VAC input,

Construction

The precision-molded thermoplastic housing is impact resistant and scratch resistant, corrosion proof and UL stabilized to resist discoloration. Available in white or black finish. Innovative snap-together design. Includes additional face-plate for single or double face applications. Snap-in directional chevrons, Exit stencil with 6" letters and 34" stroke. Includes push-in wire connectors for easy installation.

Installation

Universal mounting (ceiling, end, wall) to standard 3-1/2" or 4" octagon or square electrical box by use of easily removed, template configured knockouts. Canopy and universal mounting plate included. All mounting hardware is fully concealed.

Illumination

Exit face illumination is provided by energy saving, long-life red or green LED's. Exceeds UL 924 requirements for brightness and uniformity, UL listed LED run-time of 120 minutes. 10 year LED life.

Compliances

UL 924 Listed (Meets1998 brightness and uniformity requirments) **UL Damp Location Listed**

NFPA-70

NFPA-101

US Patent No. D402,316, and D406,863

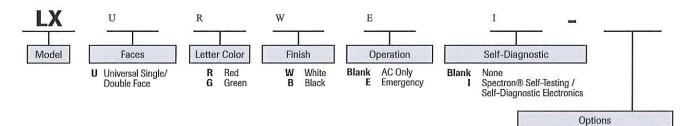
Warranty

Unit and electronics: 5 years full





ORDERING GUIDE



ACCESSORIES (order separately)

VRS-3 Vandal Resistant Shield

FCM-R Kit Converts AC red letter models to emergency operation Kit Converts AC green letter models to emergency operation 12 ½" Pendant Mounting Kit (white) FCM-G

PMLXW 12 1/2" Pendant Mounting Kit (black) **PMLXB**

WGLX WGLXC Wire Guard (wall mount) Wire Guard (ceiling mount) WGLXE Wire Guard (end mount)

FEATURES

- (1) For use with Spectron® self-diagnostic models only.
- (2) For use with AC models only.
- (3) Operates with 24-volt AC or DC fire alarm panels.
- (4) For emergency illumination of sign from remote 6-24 VDC power sources.
- (5) -DC option may not be specified with -2C or -FAP options.
- (6) -AF, -FM and -FAP options may not be specified together.



2-Circuit Operation 2, 5 Fire Alarm Panel Interface 1, 3, 5, 6

Remote DC Operation 2, 4, 5 220-240 VAC, 60Hz Operation

Flasher Module 1, 6 Audible/Flasher Module 1, 6

DC





SPECIFICATIONS

Electronics

Available with AC, emergency and Spectron® self-diagnostic/self-testing electronics option. Emergency and self-diagnostic models equipped with isolation transformer and fully automatic constant current solid-state charger with sealed maintenance-free nickel-cadmium battery. All components mounted inside housing. Includes test switch and AC-on indicator. Transient/surge protection, low-voltage disconnect and AC lock –out features included. Battery re-charge within UL time standards. Includes pre-stripped AC input pigtail leads.UL listed LED run-time of 120 minutes.

Power Consumption

Model	120VAC	277VAC
Red AC Only	2.64 watts	2.70 watts
Green AC Only	2.24 watts	2.24 watts
Red Emergency	3.81 watts	3.80 watts
Green Emergency	3.50 watts	3.50 watts

* Wattage figures include LED lamps, transformer and electronics power requirements. LED lamp assemblies (red or green) consume less than 1 watt.

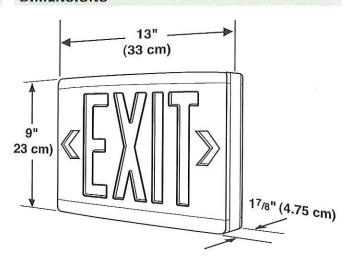
Power Factor, Average: .8 (lagging)

Battery Type: Maintenance-free sealed nickel cadmium battery

AC Input: 120/277VAC, 60 Hz. (all models)

Operating Temperature Range: 0°C to 40°C (32°F to 104°F)

DIMENSIONS



SLIM37





37, 57 and 62 Watt SLIM Wallpacks are designed to cover the footprint of most traditional wallpacks. They are suitable for mounting heights from 20' to 30', and replace HID Wattages from 200W MH to 320W MH. These ultra-high efficiency fixtures are available in cutoff or full cutoff models.

Color: Bronze

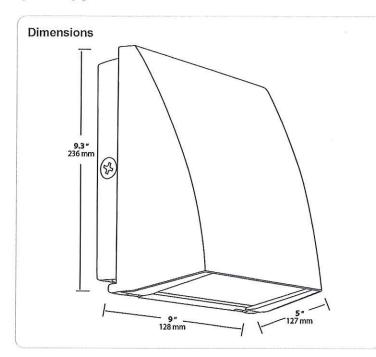
Weight: 7.5 lbs



Driver Info)	LED Info		
Type:	Constant Current	Watts:	37W	
120V:	0.31A	Color Temp:	5000K	
208V:	0.19A	Color Accuracy:	75 CRI	
240V:	0.16A	L70 Lifespan:	100000	
277V:	0.14A	Lumens:	2,688	
Input Watts:	37W	Efficacy:	73 LPW	
Efficiency:	N/A			

SLIM37





Features

Covers footprint of most traditional wallpacks

Easy installation with hinged access, bubble level and multiple conduit entries

Tight-lock gasket keeps elements out

100,000-hour LED lifespan

5-Year warranty





Technical Specifications

Listings

UL Listing:

Suitable for wet locations. Wall Mount only.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

DLC Product Code: P0000171T

Construction

Footprint:

Designed to replace RAB HID WP1 wallpacks, both in size and footprint template, so upgrading to LED is easy and seamless.

IP Rating

Ingress Protection rating of IP66 for dust and water.

Cold Weather Starting:

The minimum starting temperature is -40° C/-40°F

Ambient Temperature:

Suitable for use in 40°C (104°F) ambient temperatures

Thermal Management:

Superior thermal management with internal Air-Flow fins.

Housing:

Precision die-cast aluminum housing and door frame.

Mounting:

Die-cast back box with four (4) conduit entry points and knockout pattern for junction box or direct wall mounting. Hinged housing and bubble level for easy installation.

Cutoff:

Cutoff (7.5°)

Recommended Mounting Height:

Up to 20 ft.

Lens:

Microprismatic diffusion glass lens reduces glare and has smooth and even light distribution.

Reflector:

Specular thermoplastic.

Gaskets:

The unique design of the tight-lock gasket ensures no water or environmental elements will ever get inside the SLIM.

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Green Technology:

Mercury and UV free, and RoHS compliant.

LED Characteristics

LED:

Long-life, high-efficiency, micro-power, surface mount LEDs; binned and mixed for uniform light output and color.

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Correlated Color Temp. (Nominal CCT): 5000K

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Consistency:

7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Electrical

Driver:

Constant Current, 100-277V. 50/60Hz, 100-277VAC 0.6A, 4kV Surge Protection, 700mA, Power Factor 99.6%.

THD:

7.3% at 120V, 8,5% at 277V

Other

HID Replacement Range:

The SLIM37 can be used to replace 200W MH based on delivered lumens.

Accessories:

Available accessories include polyshield and wire guard. Click to see all accessories.

California Title 24:

See SLIM37/BL for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

Patents:

The design of the SLIMTM is protected by patents pending in US, Canada, China, Taiwan and Mexico.

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

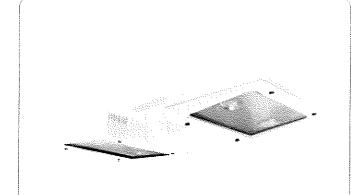
Optical

BUG Rating:

B1 U1 G1

CLED2X20YW





40 Watts of energy efficient ceiling mounted LED lighting. 100,000-hour LED lifespan. 5 year warranty. Flush mount fixture bracket. LED Light Engine included.

Color: White Weight: 12.2 lbs

Project:	Type: L6
Prepared By:	Date:

Driver Info	•	LED Info				
Type:	Constant Current	Watts:	40W			
120V;	0.38A	Color Temp:	3000K			
208V:	0.23A	Color Accuracy:	71 CRI			
240V:	0.2A	L70 Lifespan:	100000			
277V:	0.17A	Lumens:	1,904			
Input Watts:	44W	Efficacy:	44 LPW			
Efficiency:	92%					
1						

Correct Note: Specifications are subject to change at any time without notice

Listinas

UL Listing:

Suitable for wet locations.

IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Color Consistency:

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Color Accuracy:

71 CRI

Color Temperature (Nominal CCT):

3000K

Electrical

Driver:

Two Multi-chip 10W high output long life LED Driver Constant Current, Class 2

Total Harmonic Distortion:

THD = 6.9%.

Driver:

Automatic Voltage Sensing Driver for 120-277 volts.

Construction

Thermal Management:

Cast aluminum Thermal Management system for optimal heat sinking. Designed for cool operation, most efficient output and maximum LED life by minimizing LED junction temperature.

Housing:

Precision die cast aluminum housing and lens framing.

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-tasting color, and contains no VOC or toxic heavy metals.

Green Technology:

RAB LEDs are Mercury, Arsenic and UV free.

Mounting Accessory:

Surface mounting box

Cold Weather Starting:

The minimum starting temperature is -40° C/-40°F

Ambient Temperature:

Suitable for use in 40°C (104°F) ambient temperatures

Optical

Lumen Maintenance:

The LED will deliver 70% of its initial lumens at 100,000 hours of operation.

Fixture Efficacy:

44 Lumens per Watt

Other

Patents:

The design of the CLED is protected by U.S. Pat. D634872, Canada Pat. 133206, China Pat. ZL201030129122.3, Taiwan Pat. D139372 and Mexico Pat. 32490.

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Equivalency:

The CLED2X20 is Equivalent in delivered lumens to a 100W Metal Halide Ceiling Fixture.

HID Replacement Range:

The CLED2X20 can be used to replace 100-150W Metal Halide Ceiling Lights based on delivered lumens.

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act--Construction Materials (October 2010).

Trade Agreements Act Compliant:

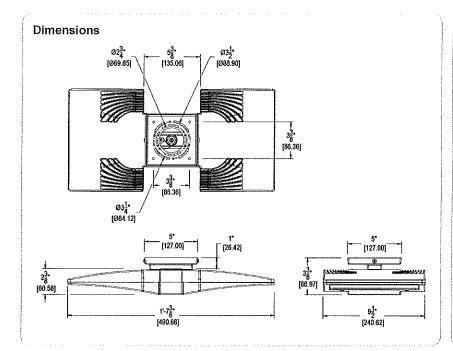
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

CLED2X20YW





Features

Flush mount fixture bracket

Die cast aluminum lens frame with tempered glass and double gasketing

Fully Shielded, Full Cutoff Optics

LED Light Engine life delivers 70% of rated lumens at 100,000 hours

Great for parking garages, canopies, stairwells and entrance ways

LM-70 and LM-80 tested

5-year warranty