CRDA

Certolux Recessed Cleanroom Dual Access Walkable Troffer with Overlapping Door

LEVITON | Certolux Visioneering

Project:	Catalog:	Type:
Notes:		

Product Description

The CRDA Series is a sealed, walkable-ceiling cleanroom luminaire designed for controlled-environment applications requiring high levels of cleanliness, structural integrity, and serviceability. Intended for pharmaceutical, biotechnology, semiconductor, and other high-performance clean spaces, CRDA features a dual-access design allowing maintenance from both the room side and plenum while preserving environmental separation. The fixture installs within and is supported by finished composite ceilings of 2, 3, or 4 inches and is rated for an 1000 lb static load without fixture damage. An overlapping, gasketed room-side door frame, combined with gasketed lens and top cover assemblies, provides a continuous seal against dust, liquid, and vapor ingress. High Lumen 2x2 configurations are designed for use in IMP ceilings for Food Processing applications. CRDA is ETL certified for wet locations, ISO Class 3 cleanroom rated, and IP65 certified for dust-tight and water-resistant performance, and is tested to ASTM E72 and ASTM E2322 for strength and load resistance.

Features

- Up to 25000 lumens
- Convenient lift handles
- Serviceable from above
- Ceiling thickness 2” to 4”

Options

- Emergency battery backup options
- Optional 90 CRI
- Nominal or enhanced lens luminance
- Multiple lens frame material options

Housing

Precision formed and welded 16 gauge cold rolled steel housing. Single top surface located knockout for power entry.

Top Access Door

Inset, one-piece access door, fabricated from 16 gauge cold rolled steel with TIG welded corners. Reinforced with welded structural brackets to support walking loads. Regressed handle provided as lifting point. Optional textured finish available.

Room Side Door Frame

Removable, reversible and overlapping single-piece door frame fabricated from 16-gauge cold-rolled steel with TIG-welded corners. Door frame is secured with captive, countersunk stainless-steel fasteners with integral sealing washers and hinged by stainless steel aircraft cables. See options for additional material choices.

Lens

High diffusion, impact resistant 0.125” thick acrylic lens provides symmetric distribution. Smooth external surface for easy cleaning. Other lens options available. (See Ordering Key). No roomside hardware. (Electronics not intended to be serviced from the cleanroom side).

Gasket Systems

Lens: RTV 100% pure silicone seals lens to door. Door: Highly resilient and chemical resistant micro cellular closed-cell neoprene gasket seals door frame to the housing. Housing: Highly resilient and chemical resistant micro cellular closed-cell neoprene gasket provided to seal flange to ceiling. Door screws: Silicone o-rings with special sealing flat-head screws.

LED

LED board modules are high efficiency and closely regulated to maintain CRI, color consistency, lumen performance and efficacy. Select from 3000K, 3500K, 4000K and 5000K color temperatures with a color consistency of 3 SDCM, standard 80 CRI, optional 90 CRI. Optional Amber LED arrays available alone or in combination with white LEDs, Lifetime L70 is greater than 60,000 hrs. Modules are field replaceable and commercially available.

Electrical

The standard electronic driver is constant current, programmable and dimmable to 1% using a 0-10V protocol. High efficiency (>85%) and low THD (<10%). Meets requirements of FCC Part 15. 120-277Vac or 347Vac, 50/60hz. See “Options” for driver choices. Internal Emergency Drivers are serviceable from the walkable ceiling.

Finish

Standard finish is gloss white polyester powder coating with 5-stage pre-treatment. Optional Antimicrobial gloss white polyester powder coat finish with 5-stage pre-treatment. Satin polished #4 brushed finish available for stainless steel doorframes.

Mounting/Installation

Installed in precut holes within ceiling panels of 2, 3 & 4 inches thickness. Conduit entry through ½” trades-size conduit access hole. (See chart for ceiling cutout details). Hazardous location connections through a provided 1/2” trade size threaded hub. Option for side wall entrance available.

Certifications

ETL Certified for recessed ceilings and wet locations under covered ceiling. Recessed Type non-IC ceilings. NSF2 for Non-food zone, Splash Zone. IEC60598 IP65 Certified from below. Cleanroom classified ISO3-8.

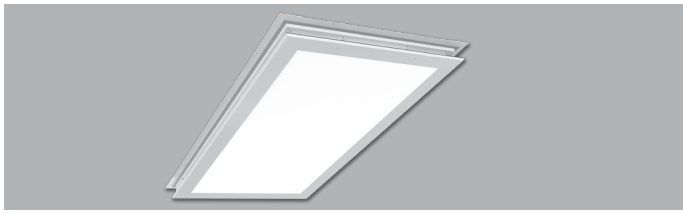
Warranty

5-year limited warranty. For complete warranty, click here: 5YR Warranty

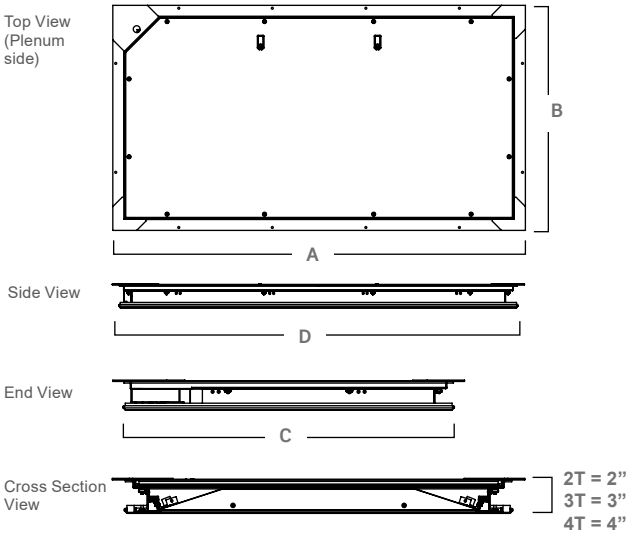
Approvals

- UL Certified for recessed ceilings and wet locations
- Certified IP65 and NSF2
- Cleanroom class ISO3-8

Intertek | NSF | RoHS COMPLIANT | ISO 3-8 | WET LOC | IP 65



Dimensions



Ceiling Cut-Out Dimensions (Inches)			Plenum Side		Room Side	
Size	Width	Length	A	B	C	D
1x4	14.25	50.25	53	17	15.25	51.21
2x2	26.25	26.25	29	29	27.25	27.25
2x4	26.25	50.25	53	29	27.25	51.25

Consult the installation guide for exact dimensions.

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Order Key

Example: CRDA2X4B/B-LED840K70LUNV-2T-DSA

CRDA [ ] [ ] - LED [ ] [ ] [ ] [ ] - [ ] - [ ] - [ ]

Series

Size (Width x Length)
1x4
2x2
2x4

Material Lens Frame/Housing

Lens Frame
B - 16 Ga. CRS Painted
F - 16 Ga. 304 SS Painted
J - 16 Ga. 304 SS #4 Brushed
M - 16 Ga. 316 SS Painted
MB - 16 Ga. 316 SS #4 Brushed

Housing
B - 16 Ga. CRS Painted

CRI
8 - (80+)
9 - (90+) ^

CCT
30K - 3000K
35K - 3500K
40K - 4000K
50K - 5000K

Voltage
UNV - 120-277V
347 - 347V

Ceiling Thickness
2T - 2" Thick Ceilings
3T - 3" Thick Ceilings
4T - 4" Thick Ceilings

Nominal Lumens

2x2 / 1x4
035L - 3500
055L - 5500
070L - 7000
080L - 8000
100L - 10000
120L - 12000
180L - 18000 (2x2 & 4T only)
240L - 24000 (2x2 & 4T only)

2x4
055L - 5500
070L - 7000
080L - 8000
100L - 10000
120L - 12000
180L - 18000
250L - 25000

Enhanced Lens Luminance

2x2 / 1x4
035EL - 3500
055EL - 5500
070EL - 7000
080EL - 8000
100EL - 10000

2x4
045EL - 4500
055EL - 5500
070EL - 7000
080EL - 8000
090EL - 9000
100EL - 10000
120EL - 12000
180EL - 18000

Lens Options
DSA - Diffuse Acrylic .125" (Std.)
P06 - Lens Clear Tempered Glass .156" Thick
P82 - Diffuse White Acrylic Overlay .04 Thick
P73 - High Diffusion Polycarbonate Overlay .04" Thick
P103 - Lens Clear Poly 0.125 Inch w/White Translucent Overlay
P56 - Clear Acrylic .125" Thick
P56P82 - Lens Acrylic Clear 0.125 Thk + diffuse inner layer

Options

Driver Options
B39 Emergency Bat. Pack -LED 10 Watts *

Construction Options
C132(F08) Access Door Finish Textured White (F08)

Wiring Options
C66 Side Conduit Entry

Packaging Options
K0 Bulk Packaging

Finish Options
F47 Antimicrobial Gloss White

Nominal Lumens Performance Chart

Size	Order Code	Lumens (4000K)	Watts	Efficacy
1x4	035L	3501	28	125.0
	055L	5503	41	134.2
	070L	7003	52	134.7
	080L	8020	62	129.0
	100L	10004	75	133.4
	120L	12194	90	135.5
2x2	035L	3557	26	136.8
	055L	5589	40	139.7
	070L	7113	51	139.5
	080L	8042	62	120.0
	100L	10161	73	139.2
	120L	12180	88	138.4
	180L	18187	125	145
	240L	24122	170	141
2x4	055L	5601	41	136.6
	070L	7128	52	137.1
	080L	8094	61	132.0
	100L	10183	74	137.6
	120L	12220	89	137.3
	180L	18330	135	136.0
	250L	24929	178	137.0

Enhanced Lens Luminance Performance Chart

Size	Order Code	Lumens (4000K)	Watts	Efficacy
1x4	035EL	3532	27.2	129.8
	055EL	5532	44.3	124.9
	070EL	7029	57.8	121.6
	080EL	8006	67.0	119.4
	100EL	10010	86.8	115.3
2x2	035EL	3548	27.1	131.0
	055EL	5511	43.4	126.8
	070EL	7032	56.8	123.8
	080EL	8028	65.9	121.9
	100EL	10026	84.8	118.2
2x4	045EL	4557	34.0	134.0
	055EL	5507	41.4	132.9
	070EL	7037	53.7	131.1
	080EL	8029	61.8	130.0
	090EL	9015	69.9	128.9
	100EL	10051	78.6	127.8
	120EL	12044	95.7	125.8
	180EL	18016	150.1	120

Consult factory for Hazardous Location requirements.

^ 90 CRI not available in Enhanced Lens Luminance
* Consult factory for EM pack availability and location

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EM Ordering Guide

EM Function	Order Code	Description	Notes
Standard EM	B39	10W EM battery pack	Standard 10W output, 90 minute run time in emergency mode.
High Wattage EM	B39(20W)	20W EM battery pack	Standard 20W output, 90 minute run time in emergency mode.
347V EM	347…B39	8W 347V EM battery pack	Fixture part number indicates 347V input voltage.
347 High Wattage EM	347…B39(20W)	20W 347V EM battery pack	Fixture part number indicates 347V input voltage.
Self Testing EM	B39(SD)	10W Self Test EM battery pack	Self test instructions provided with each fixture. Digital copies available as needed.
Cold Weather	B06…B39	10W Cold Weather EM battery pack suitable to -20°C	Standard EM battery pack 0°C minimum temperature.
120 Minute EM	B39(2HR)	EM battery pack with 120 minute minimum run time	Standard 14W output, 120 minute run time in emergency mode.
Specified EM	B39(xx)	Customer to specify brand, model number and/or feature.	xx Indicates model number of specified by Viscor.

LED Performance Multipliers		
CRI	**CCT**	**Lumen Multipliers**
80 CRI	3500K	0.98
	4000K	1.00
	5000K	1.04
90 CRI	3500K	0.83
	4000K	0.85
	5000K	0.90

Lifetime Expectancy

	Calculated Hours	Reported Hours
L70	≥ 238,000	> 60,000
L80	≥ 149,000	> 60,000
L90	≥ 71,000	> 60,000