



CRF-LED

Security **LED** Recessed Flange

PRODUCT SPECIFICATION

The CRF series is designed for use in all levels of security facilities, behavioral health units, and high abuse applications. Anti-ligature for patient safety.

Mounting

Mounts recessed in metal pan or gypsum ceiling with swing brackets that extend and clamp with a single screw action.

Housing

18 gauge die-formed cold rolled steel with seams welded and ground smooth.

Door

One-piece die-formed cold rolled steel overlapping door with 14 gauge lens retainers. Freedom Hinge™ design permits removal and hinging from either side. Stainless steel available.

Internal Lens

Optic Plus lens (standard) completely hides diode image while providing minimum 95% light transmission.

Finish

Polyester powder-coated after phosphate pretreatment for superior adhesion and corrosion resistance. Brushed stainless steel door available.

Hardware

Recessed, stainless steel, tamper-proof fasteners.

Driver

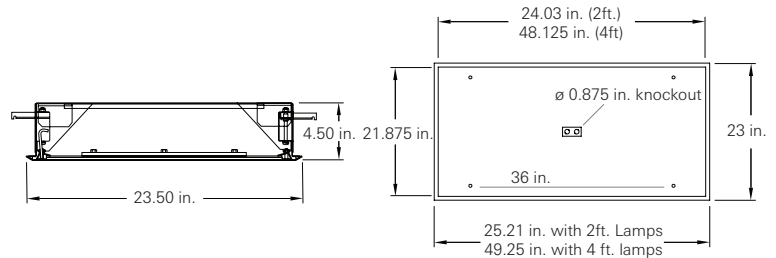
0-10Vdc dimming, Range 1%-100%
-40°C Min. starting temperature, >0.9 PF, <20% THD

Wiring

Driver provided with pre-wired 3-wire self-aligning input power quick disconnect and 2-wire quick disconnect to LED module.

Certifications

UL Listed damp or wet location. Wet location option is IP65 rated.



CRF	one	two	three	four	five	six	seven	eight	nine	ten	eleven	twelve	thirteen
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one Luminaire Size

- 2 2 ft fixture
- 4 4 ft fixture

two LED Rows

- 2L Two
- 3L Three
- 4L Four

three Color Temperature

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

four Door Gauge

- N 18 gauge, minimum security
- D 16 gauge, medium security
- X 14 gauge, maximum security
- U 12 gauge, super max, CRS only

five Door Material

- C Cold rolled steel
- S Stainless steel

six Finish

- R Brushed stainless steel
- W White

seven Voltage

- 120 120 V, 60 Hz
- 277 277 V, 60 Hz
- VAR Variable, 120-277 V, 50/60Hz

eight Driver

- DM 0-10Vdc Dimming, standard

nine Internal Lens

- 122 Optic Plus LED diffusing acrylic lens, standard
- 53 .125 in. K12 prismatic acrylic
- 12 .125 in K12 prismatic polycarbonate
- 15 .156 in. K12 prismatic polycarbonate
- 16 .187 in. K12 prismatic polycarbonate
- 75 .156 in. C73 prismatic tempered glass

ten External Lens

- 30 .187 in. clear polycarbonate
- 32 .250 in. clear polycarbonate
- 36 .375 in. clear polycarbonate
- 38 .500 in. clear polycarbonate
- 90 .187 in. clear tempered glass
- 92 .250 in. clear tempered glass
- 96 .375 in. clear tempered glass

eleven Door Fasteners

- AP Stainless steel allen head with pin
- TP Stainless steel torx head with pin
- PH Phillips, non-security

twelve UL Listing

- D Damp Location
- W Wet Location

thirteen Options

- SO Specified output*
- 2C Two-circuit wired
- CU Canadian UL Listing
- EM Emergency battery backup
- FH Fuse and holder
- NL-LED Night light, LED (Amber available)
5-100% Adjustability
- IMS Integral Occ Sensor
- PF Plaster frame

* Indicated as SO(xx/xxxx). Specified output, Input watts / delivered lumens to be determined based on specified requirements.

Consult factory for 14 and 16 gauge CRS and SS housings.

Modifications are available to meet custom requirements.

Photometric Data for a 2x2 fixture with four rows (Full Output)

Lumens	Input Watts	Lumens / Watt	CCT	CRI	LED Life
13007	109 watts	119	4000K	>80	>100,000

Photometric Data for a 2x4 fixture with three rows (Full Output)

Lumens	Input Watts	Lumens / Watt	CCT	CRI	LED Life
22250	175.5 watts	127	4000K	>80	>100,000

Coefficients of Utilization - Zonal Cavity Method (CRF-LED 2x4)

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.10	1.05	1.01	.98	1.07	1.03	.99	.86	.99	.96	.93	.95	.92	.90	.91	.89	.88	.86
2	1.00	.92	.86	.80	.97	.90	.84	.73	.87	.82	.78	.84	.79	.76	.81	.77	.74	.72
3	.91	.81	.73	.67	.89	.80	.72	.63	.77	.71	.65	.74	.69	.64	.72	.67	.63	.61
4	.84	.72	.64	.57	.82	.71	.63	.54	.69	.62	.56	.66	.60	.55	.64	.59	.55	.53
5	.77	.65	.56	.50	.75	.64	.55	.48	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6	.71	.58	.50	.43	.70	.58	.49	.42	.56	.48	.43	.54	.48	.43	.53	.47	.42	.40
7	.66	.53	.45	.39	.65	.52	.44	.37	.51	.43	.38	.49	.43	.38	.48	.42	.38	.36
8	.62	.49	.40	.34	.60	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
9	.58	.45	.37	.31	.56	.44	.36	.30	.43	.36	.31	.42	.35	.31	.41	.35	.31	.29
10	.54	.41	.33	.28	.53	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26

CRF-LED - Polar Candela Distribution (CRF-LED 2x4)

