

CRO LED

Recessed lighting for clean room
or sanitary applications

 **RIG-A-LITE™**
An Avail Infrastructure Solutions Company



Classifications

- Suitable for Ordinary, Damp and Wet Locations
- Suitable for ISO 3-9 Cleanroom Spaces
- Suitable for BSL 3 & 4
- NSF Certified Food Equipment
- IP56: Inset Door
- IP66: Overlapping Door
- Rated for -20°C minimum starting temperature
- 40°C maximum ambient temperature rating

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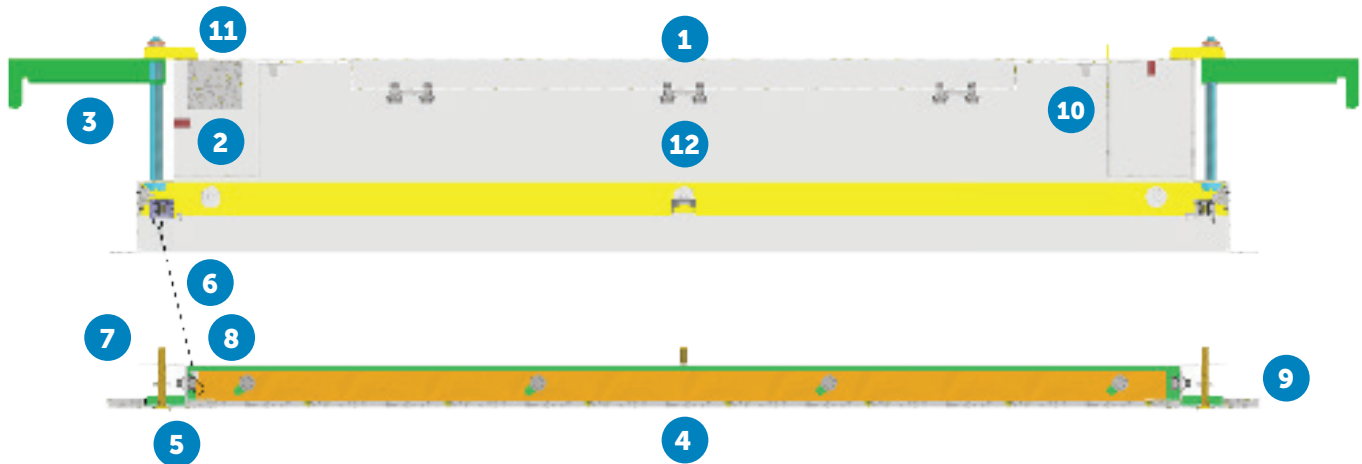
8500 Hansen Road,
Houston, TX 77075
(713) 943-0340

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Key Features

- 1 Single piece formed housing with TIG welded corners, in Aluminum, CRS or SS
- 2 Self clinching studs installed in various assemblies provide a watertight integrity
- 3 Recessed flanged housing with adjustable swing arms for rapid installation
- 4 Lens available in diffuse acrylic or diffuse tempered glass
- 5 One-piece door frame available in painted aluminum, painted CRS, or #2 brushed SS
- 6 Door frame suspended by nylon coated SS cables, with snap hooks for easy removal
- 7 Captive flush-head screws with nylon seal washers for a smooth look and seal integrity
- 8 The door frame is easily supported with the clip-on cables to aid lifting back into place
- 9 Closed cell sponge gasket to protect IP ratings and maintain a lasting seal
- 10 Easily removable reflectors for quick access to wiring during installation
- 11 Numerous 1/2" and 3/4" knockouts provided on the back side of the housing
- 12 A variety of lumen packages with various Kelvin colors and Tunable white



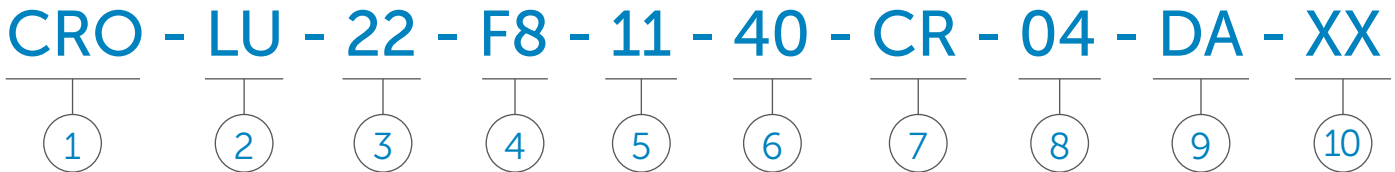
Additional Features

- Housing/lens frame one-piece welded construction
- Overlapping or inset lens mounting frames
- Ideal for clean room or sanitary applications

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Catalog Number Logic



1

BASIC LUMINAIRE

CRO = Clean Room Ordinary Damp/Wet Locations

2

LUMINAIRE TYPE/VOLTAGE

LU = LED Type 120-277 VAC 50/60 Hz
LN = LED Type 347 VAC 60 Hz

3

SIZE

14 = (1 x 4) for 1' X 4' Ceiling Grid
22 = (2 x 2) for 2' X 2' Ceiling Grid
24 = (2 x 4) for 2' X 4' Ceiling Grid

4

CRI

F8 = Fixed Output 83CRI
T8 = Tunable 83CRI
T9 = Tunable 93CRI

5

LUMENS

1' X 4' Size F8:

05 = 5,250
08 = 8,335
10 = 10,225
13 = 12,650
16 = 15,800

1' X 4' Size T8:

06 = 5,565
08 = 8,500
11 = 11,040

1' X 4' Size T9:

05 = 4,585
07 = 7,045
09 = 8,900

2' X 2' Size F8:

06 = 5,565
07 = 6,680
09 = 8,900
11 = 10,950
13 = 12,850
16 = 15,724
20 = 19,655

2' X 2' Size T8:

06 = 5,500
08 = 8,225
11 = 10,675

6

CCT

30 = 3,000
35 = 3,500
40 = 4,000
50 = 5,000
27 = 2,700 - 6,500 Tunable CCT

7

HOUSING MATERIAL AND FINISH

CR = 20 Ga Cold Rolled Steel Painted White
AL = 0.040 Thick Aluminum Painted White
S4 = 20 Ga Type 304 Stainless Steel, Natural
S6 = 20 Ga Type 316 Stainless Steel, Natural

8

LENS FRAME MATERIAL AND FINISH

IC = Inset Door 20 Ga CRS Painted White
IA = Inset Door 0.040 Thick Aluminum Painted White
I4 = Inset Door 20 Ga Type 304 SS, Brushed Finish
I6 = Inset Door 20 Ga Type 316 SS, Brushed Finish
OC = Overlapping Door 20 Ga CRS Painted White
OA = Overlapping Door 0.040 Aluminum Painted White
O4 = Overlapping Door 20 Ga Type 304 SS, Brushed Finish
O6 = Overlapping Door 20 Ga Type 316 SS, Brushed Finish

9

LENS MATERIAL TYPE

DA = Diffuse Acrylic
TG = Diffuse Tempered Glass

10

OPTIONS

DMG = 0 - 10% Dimming
EM1 = 10 Watt Emergency
FB1 = Single Fuse Circuit
FB2 = Double Fuse Circuit
SWW = Sealed Wire Way
10K = 10kv Surge Protection
TWC = Two Driver Circuit
40F = -40C Drivers
WLH = Wet Location Hub
GTD = Generator Transfer Device
WPX = Cord, X = Length
OCD = Occupancy Sensor Device
ANF = Anti-Microbial Finish
FZR = Food Zone/Non-Contact

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Photometric Data: CROLU22F811CRO4DA

Electrical Test Conditions

Temp	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.7912 A	94.20W	0.997	60 Hz	6.35%

Summary of Results

Total Lumen Output	10710 Lumens
Luminaire Efficacy	113.7 lm/w
Maximum Candela	4457 Candela
CCT	4090 K
CRI	83.0
Duv	-0.0007
TM-30 Rf	83.0
TM-30 Rg	95.0

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3462	31.7%
0-40	5570	51.0%
0-60	9186	84.2%
0-90	10915	100.0%
40-90	5345	49.0%
60-90	1729	15.8%
90-180	0	0.0%
0-180	10915	100.0%

Spacing Criteria

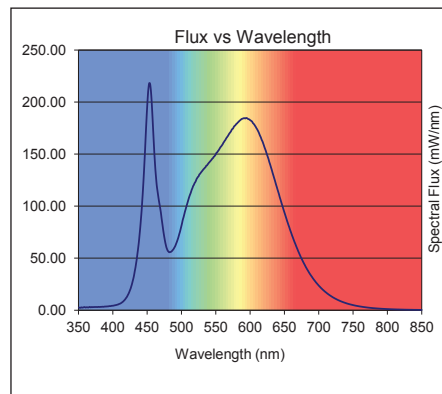
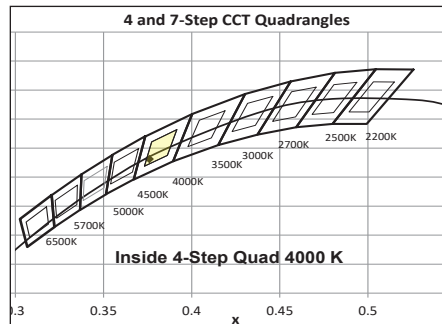
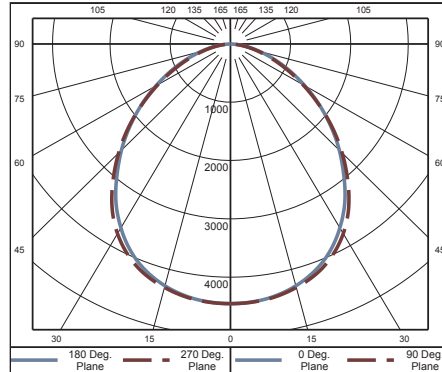
0-180	1.21
90-270	1.25

Average Luminance cd/m²

Vertical Angle	Horizontal Angle 0°
0	11990
45	9743
55	8431
65	6929
75	5374
85	3586

Cone of Light Tabulation

Mounting Height (Ft)	Footcandles at Nadir	Diameter (Ft)
4.00	278	4.93
6.00	124	7.39
8.00	69.6	9.85
10.0	44.6	12.3
12.0	30.9	14.8
14.0	22.7	17.2
16.0	17.4	19.7



Intensity (Candlepower) Summary

Angle	Mean CP	Lumens
0	4455	
5	4441	422
10	4392	
15	4300	1214
20	4167	
25	3970	1826
30	3706	
35	3381	2108
40	2996	
45	2601	2005
50	2200	
55	1800	1610
60	1416	
65	1069	1063
70	761	
75	498	534
80	286	
85	110	131
90	0	

Color Rendering Index Details

Ra (CRI)	83.0
R1	81.6
R2	89.7
R3	94.5
R4	81.1
R5	81.2
R6	84.9
R7	85.9
R8	65.0
R9	9.9
R10	74.5
R11	79.4
R12	60.3
R13	83.7
R14	97.1

Chromaticity Coordinates

Chromaticity (x)	0.3760
Chromaticity (y)	0.3725
Chromaticity (u)	0.2239
Chromaticity (v)	0.3327
Chromaticity (u')	0.2239
Chromaticity (v')	0.4990
Duv	-0.0007

Testing was performed in accordance with LM-79-08
The results contained in this summary pertain only to report #14765226.01

CRO LED

Recessed lighting for clean room or sanitary applications

Photometric Data: CROLU22F816CRO4DA

Electrical Test Conditions

Temp	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	1.196 A	143.1 W	0.997	60 Hz	7.29%

Summary of Results

Total Lumen Output	15480 Lumens
Luminaire Efficacy	108.1 lm/w
Maximum Candela	6592 Candela
CCT	4133 K
CRI	82.7
Duv	-0.0008
TM-30 Rf	83.0
TM-30 Rg	95.0

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	5125	31.6%
0-40	8272	50.9%
0-60	13677	84.2%
0-90	16236	100.0%
40-90	7964	49.1%
60-90	2559	15.8%
90-180	0	0.0%
0-180	16236	100.0%

Spacing Criteria

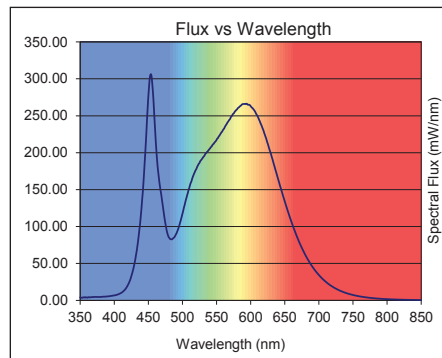
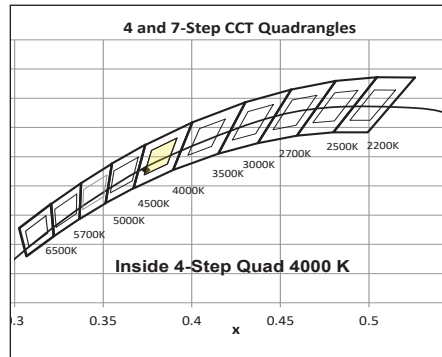
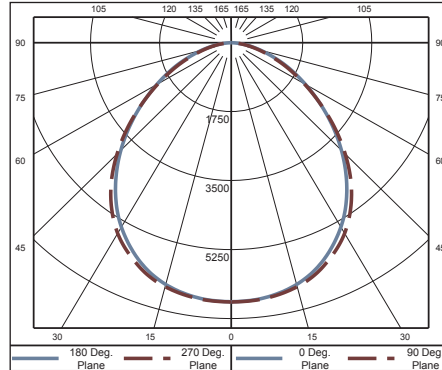
0-180	1.22
90-270	1.25

Average Luminance cd/m²

Vertical Angle	Horizontal Angle 0°
0	26840
45	22100
55	18880
65	15620
75	12080
85	8268

Cone of Light Tabulation

Mounting Height (Ft)	Footcandles at Nadir	Diameter (Ft)
4.00	412	4.95
6.00	183	7.42
8.00	103	9.90
10.0	65.8	12.4
12.0	45.7	14.8
14.0	33.6	17.3
16.0	25.7	19.8



Intensity (Candlepower) Summary

Angle	Mean CP	Lumens
0	6584	
5	6567	625
10	6498	
15	6374	1798
20	6166	
25	5868	2702
30	5503	
35	5042	3147
40	4504	
45	3911	3012
50	3291	
55	2673	2394
60	2098	
65	1591	1578
70	1126	
75	735	788
80	420	
85	165	192
90	0	

Color Rendering Index Details

Ra (CRI)	82.7
R1	81.2
R2	89.4
R3	94.3
R4	80.8
R5	81
R6	84.5
R7	85.9
R8	64.8
R9	8.8
R10	73.8
R11	79
R12	60.7
R13	83.4
R14	97.0

Chromaticity Coordinates

Chromaticity (x)	0.3741
Chromaticity (y)	0.3710
Chromaticity (u)	0.2232
Chromaticity (v)	0.3320
Chromaticity (u')	0.2232
Chromaticity (v')	0.4981
Duv	-0.0008

Testing was performed in accordance with LM-79-08
The results contained in this summary pertain only to report #14718129.01

CRO LED

Recessed lighting for clean room or sanitary applications

Photometric Data: CROLU24F814CRO4DA

Electrical Test Conditions

Temp	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.9632 A	115.3 W	0.998	60 Hz	5.05%

Summary of Results

Total Lumen Output	14170 Lumens
Luminaire Efficacy	123 lm/w
Maximum Candela	5905 Candela
CCT	4096 K
CRI	82.9
Duv	-0.0008
TM-30 Rf	83.0
TM-30 Rg	95.0

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	4565	31.2%
0-40	7377	50.3%
0-60	12294	83.9%
0-90	14653	100.0%
40-90	7276	49.7%
60-90	2359	16.1%
90-180	0	0.0%
0-180	14653	100.0%

Spacing Criteria

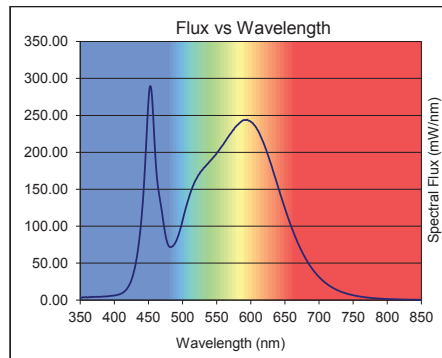
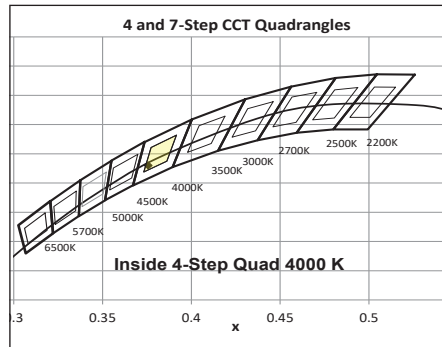
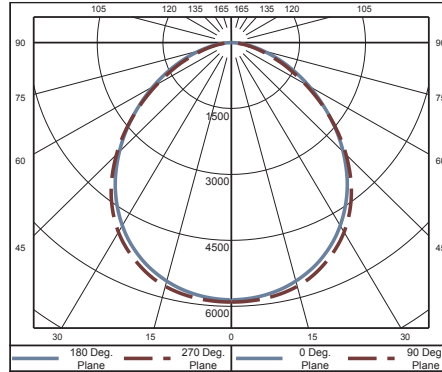
0-180	1.21
90-270	1.25

Average Luminance cd/m²

Vertical Angle	Horizontal Angle 0°
0	7933
45	6624
55	5775
65	4845
75	3816
85	2608

Cone of Light Tabulation

Mounting Height (Ft)	Footcandles at Nadir	Diameter (Ft)
4.00	369	4.93
6.00	164	7.39
8.00	92.1	9.86
10.0	59.0	12.3
12.0	40.9	14.8
14.0	30.1	17.3
16.0	23.0	19.7



Intensity (Candlepower) Summary

Angle	Mean CP	Lumens
0	5896	
5	5874	559
10	5803	
15	5676	1601
20	5484	
25	5225	2405
30	4900	
35	4504	2812
40	4044	
45	3533	2722
50	2997	
55	2453	2195
60	1935	
65	1467	1457
70	1041	
75	678	727
80	387	
85	147	175
90	0	

Color Rendering Index Details

Ra (CRI)	82.9
R1	81.5
R2	89.3
R3	94.1
R4	81.3
R5	81.2
R6	84.4
R7	86.1
R8	65.2
R9	9.8
R10	73.6
R11	79.7
R12	60.3
R13	83.5
R14	96.8

Chromaticity Coordinates

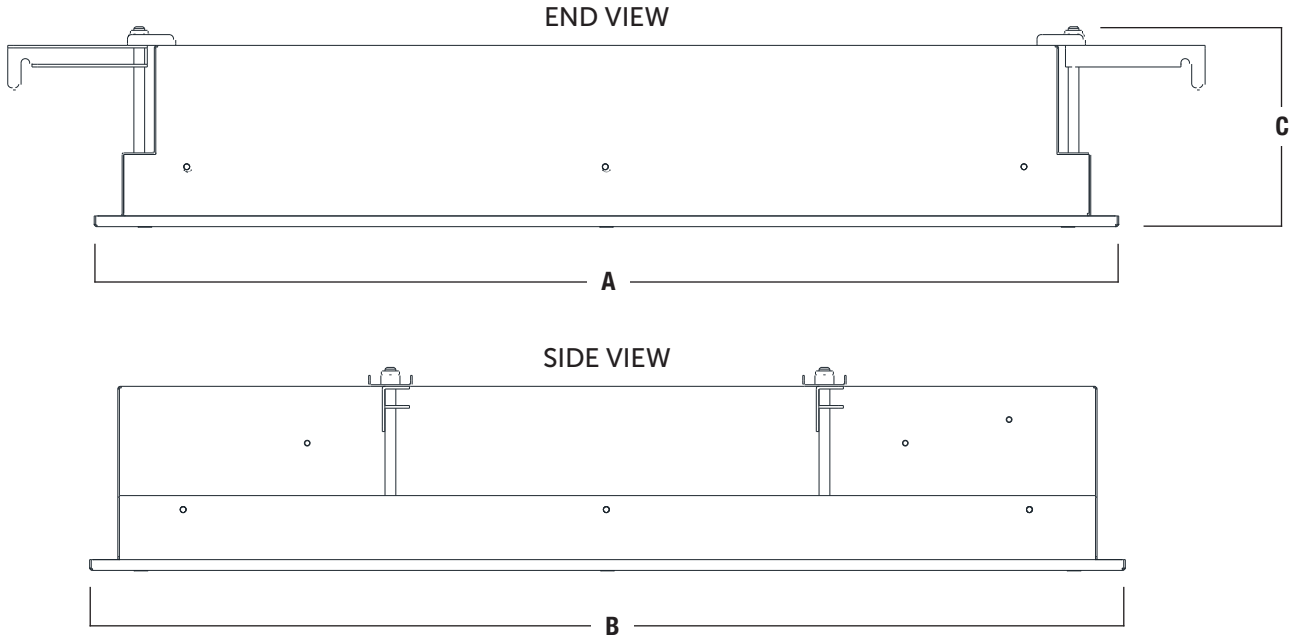
Chromaticity (x)	0.3757
Chromaticity (y)	0.3720
Chromaticity (u)	0.2239
Chromaticity (v)	0.3325
Chromaticity (u')	0.2239
Chromaticity (v')	0.4988
Duv	-0.0008

Testing was performed in accordance with LM-79-08
The results contained in this summary pertain only to report #14765226.02

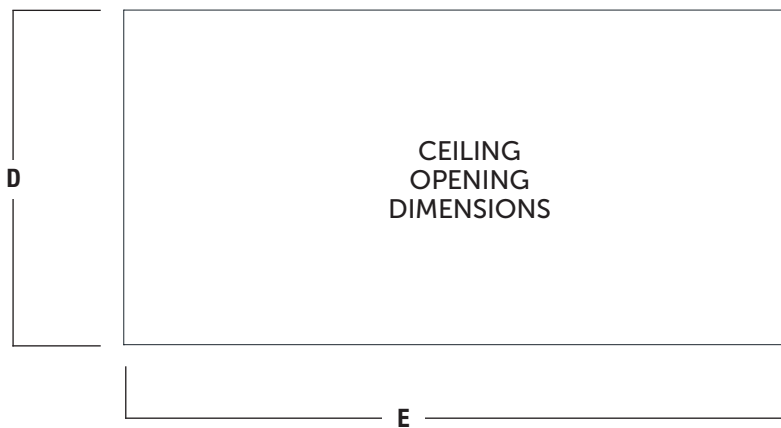
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Fixture Dimensions (inches)



Size	Dimensions (inches)				
	A	B	C	D	E
1 x 4	11.860	47.860	4.650	10.750	46.750
2 x 2	23.860	23.860	4.650	22.750	22.750
2 x 4	23.860	47.860	4.650	22.750	46.750



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