

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562634

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562634  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-4-LD4-2HI-50-UNV-81-94-EDD-90  
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

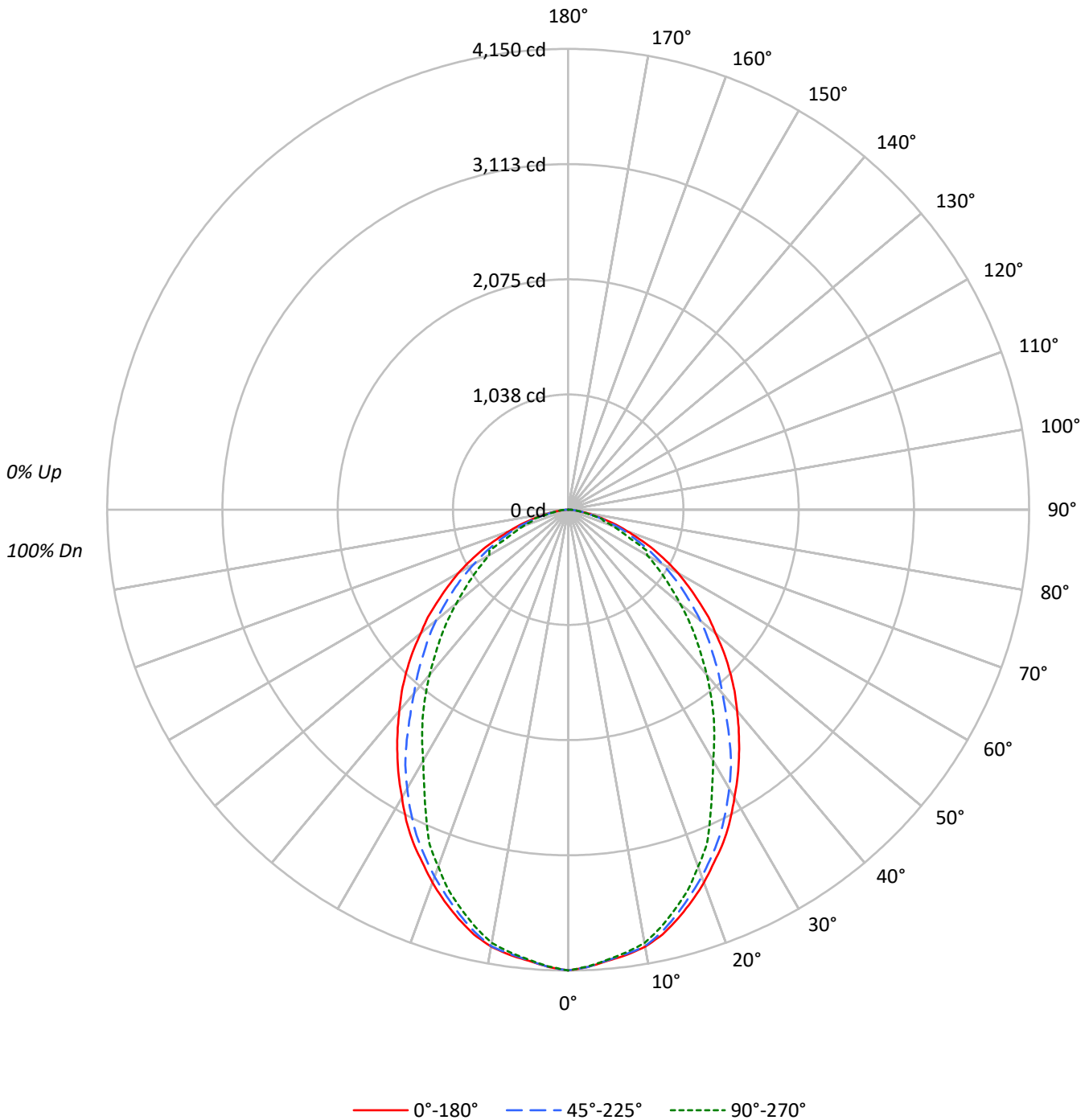
Lumens per Lamp: N/A  
Luminaire Lumens: 8146.0 lumens  
Efficiency: N/A  
Efficacy: 94.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 86.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5583	5583	5583
5°	5507	5501	5494
10°	5460	5453	5414
15°	5312	5259	5185
20°	5117	5035	4897
25°	4907	4800	4501
30°	4651	4502	4054
35°	4405	4160	3751
40°	4154	3792	3412
45°	3916	3505	3085
50°	3625	3253	2751
55°	3353	2948	2464
60°	3072	2633	2207
65°	2703	2306	1955
70°	2227	2019	1661
75°	1771	1546	1621
80°	1189	1115	1041
85°	741	889	1037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3916 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	386.3	4.7
10°-20°	1060.1	13.0
20°-30°	1467.6	18.0
30°-40°	1564.9	19.2
40°-50°	1427.6	17.5
50°-60°	1118.4	13.7
60°-70°	728.9	8.9
70°-80°	323.0	4.0
80°-90°	69.3	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2913.9	35.8
0°-40°	4478.8	55.0
0°-60°	7024.8	86.2
0°-90°	8146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8146.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4150	4150	4150	4150	4150	
5°	4078	4073	4073	4068	4068	387
15°	3814	3814	3775	3737	3722	1072
25°	3305	3286	3233	3118	3032	1517
35°	2682	2662	2533	2341	2283	1676
45°	2058	2015	1842	1689	1621	1585
55°	1430	1386	1257	1108	1051	1282
65°	849	801	724	739	614	837
75°	341	317	297	283	312	365
85°	48	53	58	62	67	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4149.5	4149.5	4149.5	4149.5	4149.5
2.5°	4120.7	4120.7	4120.7	4115.9	4115.9
5°	4077.5	4072.7	4072.7	4067.9	4067.9
7.5°	4043.9	4039.1	4034.3	4029.5	4019.9
10°	3996.0	3996.0	3991.2	3967.2	3962.4
12.5°	3919.2	3914.4	3895.2	3861.6	3852.0
15°	3813.7	3813.7	3775.3	3736.9	3722.5
17.5°	3698.5	3693.7	3645.8	3607.4	3588.2
20°	3573.8	3564.2	3516.3	3453.9	3420.3
22.5°	3434.7	3434.7	3377.1	3295.6	3262.0
25°	3305.2	3286.0	3233.2	3118.1	3031.7
27.5°	3156.5	3127.7	3070.1	2907.0	2806.3
30°	2993.4	2979.0	2897.4	2686.4	2609.6
32.5°	2839.9	2815.9	2729.5	2508.9	2446.5
35°	2681.6	2662.4	2532.9	2341.0	2283.4
37.5°	2523.3	2499.3	2336.2	2182.7	2110.7
40°	2365.0	2336.2	2158.7	2019.6	1942.8
42.5°	2216.2	2177.9	2005.2	1856.5	1770.1
45°	2057.9	2014.8	1842.1	1688.6	1621.4
47.5°	1899.6	1861.3	1703.0	1544.7	1467.9
50°	1731.7	1698.2	1554.2	1395.9	1314.4
52.5°	1592.6	1539.9	1400.7	1242.4	1175.3
55°	1429.5	1386.4	1256.8	1108.1	1050.6
57.5°	1280.8	1237.6	1117.7	978.6	930.6
60°	1141.7	1079.3	978.6	858.7	820.3
62.5°	988.2	940.2	853.9	753.1	801.1
65°	849.1	801.1	724.4	738.7	614.0
67.5°	695.6	671.6	604.4	537.3	518.1
70°	566.1	537.3	513.3	441.3	422.1
72.5°	450.9	422.1	388.6	350.2	335.8
75°	340.6	316.6	297.4	283.0	311.8
77.5°	235.1	225.5	211.1	196.7	191.9
80°	153.5	148.7	143.9	139.1	134.3
82.5°	91.1	91.1	91.1	91.1	91.1
85°	48.0	52.8	57.6	62.4	67.2
87.5°	28.8	28.8	33.6	38.4	43.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)