

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: P562483

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562483  
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-35-UNV-80-85-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

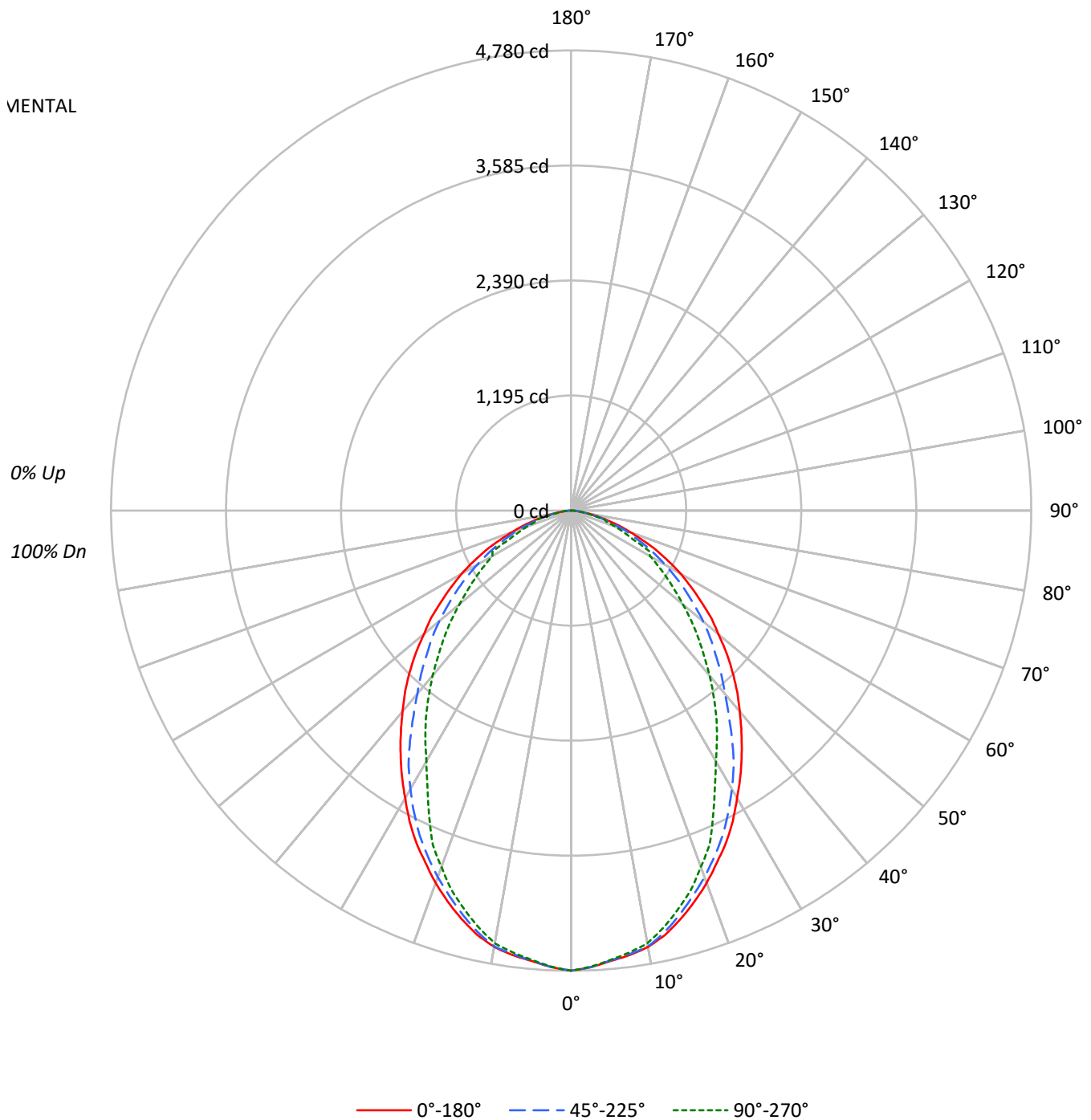
Lumens per Lamp: N/A  
Luminaire Lumens: 9383.0 lumens  
Efficiency: N/A  
Efficacy: 108.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 86.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6431	6431	6431
5°	6343	6336	6329
10°	6289	6281	6236
15°	6119	6057	5973
20°	5894	5799	5641
25°	5652	5529	5184
30°	5357	5185	4670
35°	5073	4792	4320
40°	4785	4367	3930
45°	4510	4037	3554
50°	4175	3747	3169
55°	3863	3396	2839
60°	3539	3033	2543
65°	3114	2656	2252
70°	2565	2326	1913
75°	2039	1781	1867
80°	1370	1285	1199
85°	854	1024	1195

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4510 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	444.9	4.7
10°-20°	1221.0	13.0
20°-30°	1690.4	18.0
30°-40°	1802.5	19.2
40°-50°	1644.4	17.5
50°-60°	1288.3	13.7
60°-70°	839.6	8.9
70°-80°	372.0	4.0
80°-90°	79.9	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°	3356.4	35.8
0°-40°	5158.9	55.0
0°-60°	8091.5	86.2
0°-90°	9383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9383.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4780	4780	4780	4780	4780	
5°	4697	4691	4691	4686	4686	446
15°	4393	4393	4349	4304	4288	1235
25°	3807	3785	3724	3592	3492	1748
35°	3089	3067	2918	2696	2630	1931
45°	2370	2321	2122	1945	1868	1826
55°	1647	1597	1448	1276	1210	1477
65°	978	923	834	851	707	964
75°	392	365	343	326	359	420
85°	55	61	66	72	77	77
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4779.6	4779.6	4779.6	4779.6	4779.6
2.5°	4746.4	4746.4	4746.4	4740.9	4740.9
5°	4696.7	4691.2	4691.2	4685.6	4685.6
7.5°	4658.0	4652.5	4647.0	4641.4	4630.4
10°	4602.8	4602.8	4597.2	4569.6	4564.1
12.5°	4514.3	4508.8	4486.7	4448.0	4437.0
15°	4392.8	4392.8	4348.6	4304.4	4287.8
17.5°	4260.2	4254.7	4199.4	4155.2	4133.1
20°	4116.5	4105.5	4050.2	3978.4	3939.7
22.5°	3956.3	3956.3	3890.0	3796.0	3757.4
25°	3807.1	3785.0	3724.2	3591.6	3492.1
27.5°	3635.8	3602.6	3536.3	3348.5	3232.4
30°	3447.9	3431.3	3337.4	3094.3	3005.9
32.5°	3271.1	3243.5	3144.0	2889.8	2818.0
35°	3088.8	3066.7	2917.5	2696.5	2630.1
37.5°	2906.4	2878.8	2690.9	2514.1	2431.2
40°	2724.1	2690.9	2486.5	2326.2	2237.8
42.5°	2552.8	2508.6	2309.7	2138.4	2038.9
45°	2370.4	2320.7	2121.8	1945.0	1867.6
47.5°	2188.1	2143.9	1961.6	1779.2	1690.8
50°	1994.7	1956.0	1790.3	1607.9	1514.0
52.5°	1834.5	1773.7	1613.5	1431.1	1353.8
55°	1646.6	1596.9	1447.7	1276.4	1210.1
57.5°	1475.3	1425.6	1287.4	1127.2	1072.0
60°	1315.1	1243.2	1127.2	989.1	944.9
62.5°	1138.3	1083.0	983.5	867.5	922.8
65°	978.0	922.8	834.4	850.9	707.3
67.5°	801.2	773.6	696.2	618.9	596.8
70°	652.0	618.9	591.2	508.3	486.2
72.5°	519.4	486.2	447.6	403.4	386.8
75°	392.3	364.7	342.6	326.0	359.2
77.5°	270.8	259.7	243.1	226.5	221.0
80°	176.8	171.3	165.8	160.2	154.7
82.5°	105.0	105.0	105.0	105.0	105.0
85°	55.3	60.8	66.3	71.8	77.4
87.5°	33.2	33.2	38.7	44.2	49.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)