

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: P562873

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-80-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562873  
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-LD4-2STD-35-UNV-80-88-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

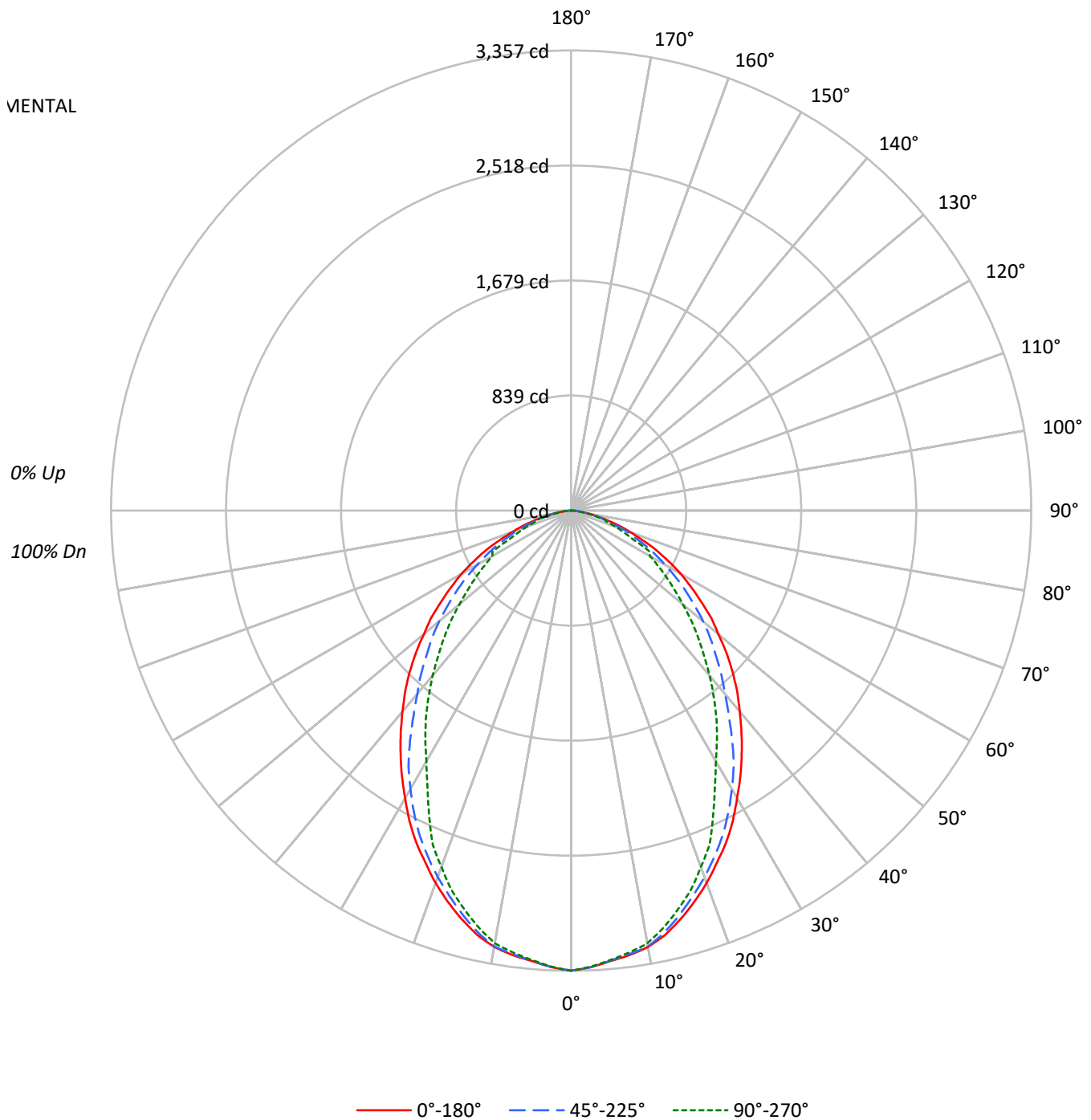
Lumens per Lamp: N/A  
Luminaire Lumens: 6590.0 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4517	4517	4517
5°	4455	4450	4445
10°	4417	4411	4380
15°	4298	4254	4195
20°	4140	4073	3962
25°	3969	3883	3641
30°	3762	3642	3280
35°	3563	3366	3034
40°	3360	3067	2761
45°	3168	2836	2496
50°	2933	2632	2226
55°	2713	2385	1994
60°	2485	2130	1786
65°	2187	1866	1581
70°	1801	1633	1343
75°	1432	1251	1311
80°	962	902	842
85°	599	719	838

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3168 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.5	4.7
10°-20°	857.6	13.0
20°-30°	1187.2	18.0
30°-40°	1265.9	19.2
40°-50°	1154.9	17.5
50°-60°	904.8	13.7
60°-70°	589.7	8.9
70°-80°	261.3	4.0
80°-90°	56.1	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°	2357.3	35.8
0°-40°	3623.2	55.0
0°-60°	5683.0	86.2
0°-90°	6590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6590.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3357	3357	3357	3357	3357	
5°	3299	3295	3295	3291	3291	313
15°	3085	3085	3054	3023	3012	867
25°	2674	2658	2616	2522	2453	1228
35°	2169	2154	2049	1894	1847	1356
45°	1665	1630	1490	1366	1312	1282
55°	1156	1122	1017	896	850	1037
65°	687	648	586	598	497	677
75°	276	256	241	229	252	295
85°	39	43	47	50	54	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3356.9	3356.9	3356.9	3356.9	3356.9
2.5°	3333.6	3333.6	3333.6	3329.7	3329.7
5°	3298.6	3294.8	3294.8	3290.9	3290.9
7.5°	3271.5	3267.6	3263.7	3259.8	3252.1
10°	3232.7	3232.7	3228.8	3209.4	3205.5
12.5°	3170.6	3166.7	3151.2	3124.0	3116.3
15°	3085.2	3085.2	3054.2	3023.1	3011.5
17.5°	2992.1	2988.2	2949.4	2918.3	2902.8
20°	2891.2	2883.4	2844.6	2794.1	2767.0
22.5°	2778.6	2778.6	2732.1	2666.1	2638.9
25°	2673.8	2658.3	2615.6	2522.5	2452.6
27.5°	2553.5	2530.3	2483.7	2351.7	2270.2
30°	2421.6	2410.0	2344.0	2173.2	2111.1
32.5°	2297.4	2278.0	2208.2	2029.6	1979.2
35°	2169.3	2153.8	2049.0	1893.8	1847.2
37.5°	2041.3	2021.9	1889.9	1765.7	1707.5
40°	1913.2	1889.9	1746.3	1633.8	1571.7
42.5°	1792.9	1761.9	1622.2	1501.9	1432.0
45°	1664.8	1629.9	1490.2	1366.0	1311.7
47.5°	1536.8	1505.7	1377.7	1249.6	1187.5
50°	1401.0	1373.8	1257.4	1129.3	1063.3
52.5°	1288.4	1245.7	1133.2	1005.1	950.8
55°	1156.5	1121.5	1016.8	896.5	849.9
57.5°	1036.2	1001.2	904.2	791.7	752.9
60°	923.6	873.2	791.7	694.7	663.6
62.5°	799.4	760.6	690.8	609.3	648.1
65°	686.9	648.1	586.0	597.6	496.7
67.5°	562.7	543.3	489.0	434.6	419.1
70°	457.9	434.6	415.2	357.0	341.5
72.5°	364.8	341.5	314.3	283.3	271.7
75°	275.5	256.1	240.6	229.0	252.2
77.5°	190.2	182.4	170.8	159.1	155.2
80°	124.2	120.3	116.4	112.5	108.7
82.5°	73.7	73.7	73.7	73.7	73.7
85°	38.8	42.7	46.6	50.4	54.3
87.5°	23.3	23.3	27.2	31.0	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)