

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: P563006

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563006  
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-50-UNV-80-97-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

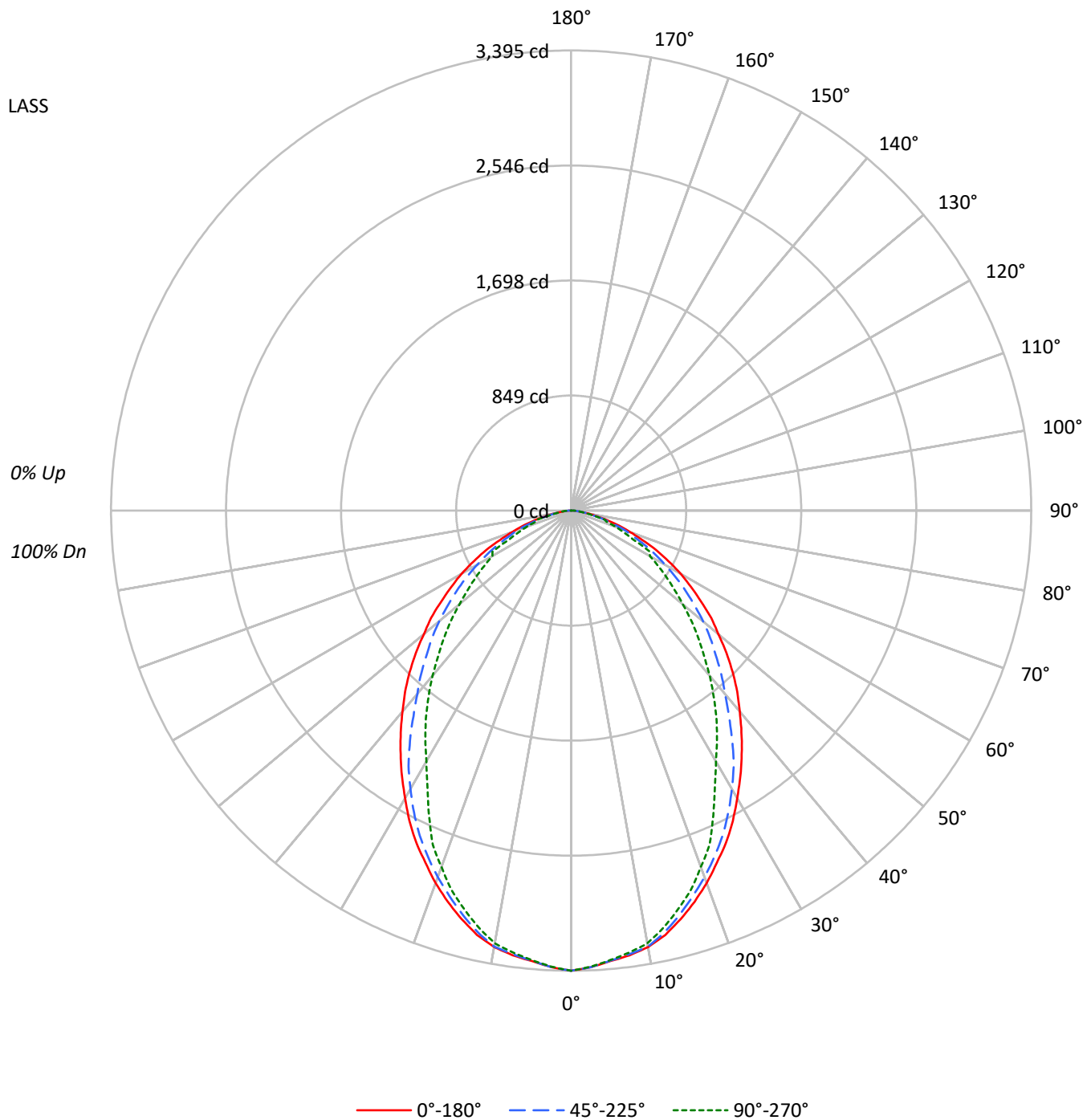
Lumens per Lamp: N/A  
Luminaire Lumens: 6665.0 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4568	4568	4568
5°	4506	4501	4495
10°	4467	4461	4429
15°	4346	4303	4243
20°	4187	4119	4007
25°	4015	3927	3683
30°	3805	3683	3317
35°	3604	3404	3069
40°	3399	3102	2792
45°	3204	2868	2524
50°	2966	2662	2251
55°	2744	2412	2016
60°	2514	2155	1806
65°	2212	1887	1599
70°	1822	1652	1359
75°	1449	1265	1326
80°	973	912	852
85°	605	727	848

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3204 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	316.0	4.7
10°-20°	867.3	13.0
20°-30°	1200.8	18.0
30°-40°	1280.4	19.2
40°-50°	1168.1	17.5
50°-60°	915.1	13.7
60°-70°	596.4	8.9
70°-80°	264.2	4.0
80°-90°	56.7	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°	2384.1	35.8
0°-40°	3664.5	55.0
0°-60°	5747.6	86.2
0°-90°	6665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6665.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3395	3395	3395	3395	3395	
5°	3336	3332	3332	3328	3328	317
15°	3120	3120	3089	3058	3046	877
25°	2704	2689	2645	2551	2481	1242
35°	2194	2178	2072	1915	1868	1372
45°	1684	1648	1507	1382	1327	1297
55°	1170	1134	1028	907	860	1049
65°	695	656	593	604	502	685
75°	279	259	243	232	255	299
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3395.1	3395.1	3395.1	3395.1	3395.1
2.5°	3371.5	3371.5	3371.5	3367.6	3367.6
5°	3336.2	3332.3	3332.3	3328.3	3328.3
7.5°	3308.7	3304.8	3300.9	3296.9	3289.1
10°	3269.5	3269.5	3265.5	3245.9	3242.0
12.5°	3206.7	3202.7	3187.0	3159.6	3151.7
15°	3120.3	3120.3	3088.9	3057.5	3045.7
17.5°	3026.1	3022.2	2982.9	2951.5	2935.8
20°	2924.1	2916.2	2877.0	2825.9	2798.5
22.5°	2810.2	2810.2	2763.1	2696.4	2669.0
25°	2704.3	2688.6	2645.4	2551.2	2480.6
27.5°	2582.6	2559.1	2512.0	2378.5	2296.1
30°	2449.2	2437.4	2370.7	2198.0	2135.2
32.5°	2323.6	2303.9	2233.3	2052.7	2001.7
35°	2194.0	2178.3	2072.4	1915.4	1868.3
37.5°	2064.5	2044.9	1911.4	1785.8	1727.0
40°	1935.0	1911.4	1766.2	1652.4	1589.6
42.5°	1813.3	1781.9	1640.6	1518.9	1448.3
45°	1683.8	1648.5	1507.2	1381.6	1326.6
47.5°	1554.3	1522.9	1393.3	1263.8	1201.0
50°	1416.9	1389.4	1271.7	1142.2	1075.4
52.5°	1303.1	1259.9	1146.1	1016.6	961.6
55°	1169.6	1134.3	1028.3	906.7	859.6
57.5°	1048.0	1012.6	914.5	800.7	761.4
60°	934.1	883.1	800.7	702.6	671.2
62.5°	808.5	769.3	698.6	616.2	655.5
65°	694.7	655.5	592.7	604.4	502.4
67.5°	569.1	549.5	494.5	439.6	423.9
70°	463.1	439.6	420.0	361.1	345.4
72.5°	368.9	345.4	317.9	286.5	274.7
75°	278.7	259.0	243.3	231.6	255.1
77.5°	192.3	184.5	172.7	160.9	157.0
80°	125.6	121.7	117.7	113.8	109.9
82.5°	74.6	74.6	74.6	74.6	74.6
85°	39.2	43.2	47.1	51.0	54.9
87.5°	23.5	23.5	27.5	31.4	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)