

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: P562810

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562810  
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-LD4-2LO-50-UNV-80-94-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

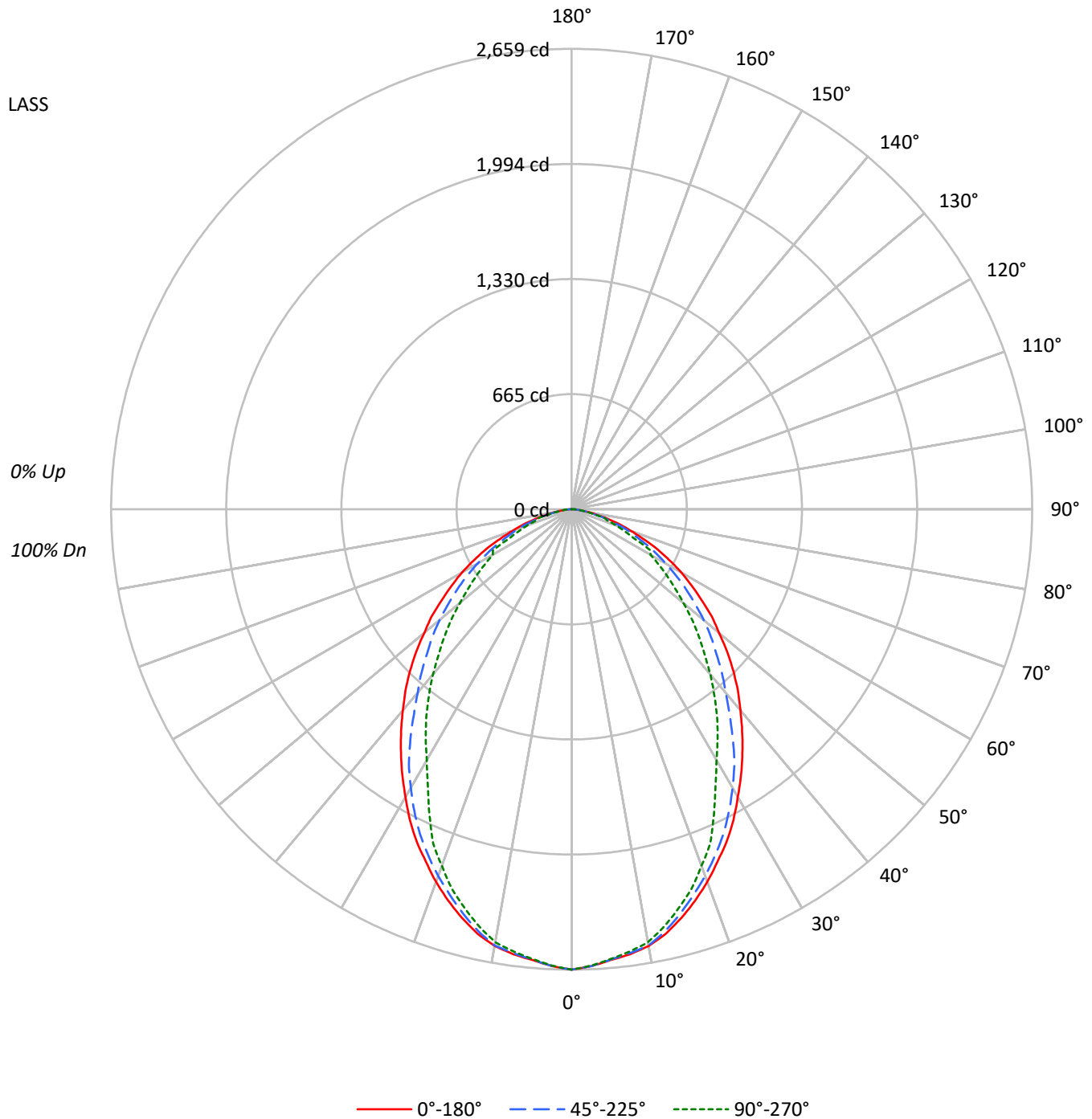
Lumens per Lamp: N/A  
Luminaire Lumens: 5220.0 lumens  
Efficiency: N/A  
Efficacy: 111.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3578	3578	3578
5°	3529	3525	3521
10°	3498	3494	3469
15°	3404	3370	3323
20°	3279	3226	3138
25°	3144	3076	2884
30°	2980	2885	2598
35°	2823	2666	2403
40°	2662	2430	2187
45°	2509	2246	1977
50°	2323	2085	1763
55°	2149	1889	1579
60°	1969	1688	1415
65°	1732	1478	1253
70°	1427	1294	1064
75°	1135	991	1039
80°	762	714	667
85°	474	570	664

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2509 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.5	4.7
10°-20°	679.3	13.0
20°-30°	940.4	18.0
30°-40°	1002.8	19.2
40°-50°	914.8	17.5
50°-60°	716.7	13.7
60°-70°	467.1	8.9
70°-80°	207.0	4.0
80°-90°	44.4	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°	1867.2	35.8
0°-40°	2870.0	55.0
0°-60°	4501.5	86.2
0°-90°	5220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5220.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2659	2659	2659	2659	2659	
5°	2613	2610	2610	2607	2607	248
15°	2444	2444	2419	2395	2385	687
25°	2118	2106	2072	1998	1943	972
35°	1718	1706	1623	1500	1463	1074
45°	1319	1291	1180	1082	1039	1016
55°	916	888	805	710	673	822
65°	544	513	464	473	394	536
75°	218	203	191	181	200	234
85°	31	34	37	40	43	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2659.0	2659.0	2659.0	2659.0	2659.0
2.5°	2640.6	2640.6	2640.6	2637.5	2637.5
5°	2612.9	2609.8	2609.8	2606.7	2606.7
7.5°	2591.4	2588.3	2585.2	2582.1	2576.0
10°	2560.6	2560.6	2557.6	2542.2	2539.1
12.5°	2511.4	2508.4	2496.1	2474.6	2468.4
15°	2443.8	2443.8	2419.2	2394.6	2385.4
17.5°	2370.0	2367.0	2336.2	2311.6	2299.3
20°	2290.1	2284.0	2253.2	2213.3	2191.8
22.5°	2201.0	2201.0	2164.1	2111.8	2090.3
25°	2118.0	2105.7	2071.9	1998.1	1942.8
27.5°	2022.7	2004.2	1967.4	1862.8	1798.3
30°	1918.2	1908.9	1856.7	1721.4	1672.2
32.5°	1819.8	1804.4	1749.1	1607.7	1567.7
35°	1718.4	1706.1	1623.1	1500.1	1463.2
37.5°	1616.9	1601.5	1497.0	1398.7	1352.6
40°	1515.5	1497.0	1383.3	1294.1	1245.0
42.5°	1420.2	1395.6	1284.9	1189.6	1134.3
45°	1318.7	1291.1	1180.4	1082.0	1039.0
47.5°	1217.3	1192.7	1091.3	989.8	940.6
50°	1109.7	1088.2	996.0	894.5	842.3
52.5°	1020.6	986.7	897.6	796.2	753.1
55°	916.0	888.4	805.4	710.1	673.2
57.5°	820.8	793.1	716.2	627.1	596.4
60°	731.6	691.6	627.1	550.2	525.7
62.5°	633.2	602.5	547.2	482.6	513.4
65°	544.1	513.4	464.2	473.4	393.5
67.5°	445.7	430.4	387.3	344.3	332.0
70°	362.7	344.3	328.9	282.8	270.5
72.5°	289.0	270.5	249.0	224.4	215.2
75°	218.3	202.9	190.6	181.4	199.8
77.5°	150.6	144.5	135.3	126.0	123.0
80°	98.4	95.3	92.2	89.1	86.1
82.5°	58.4	58.4	58.4	58.4	58.4
85°	30.7	33.8	36.9	40.0	43.0
87.5°	18.4	18.4	21.5	24.6	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)