

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: P590489

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-80-88-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590489  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-3HI-50-UNV-80-88-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

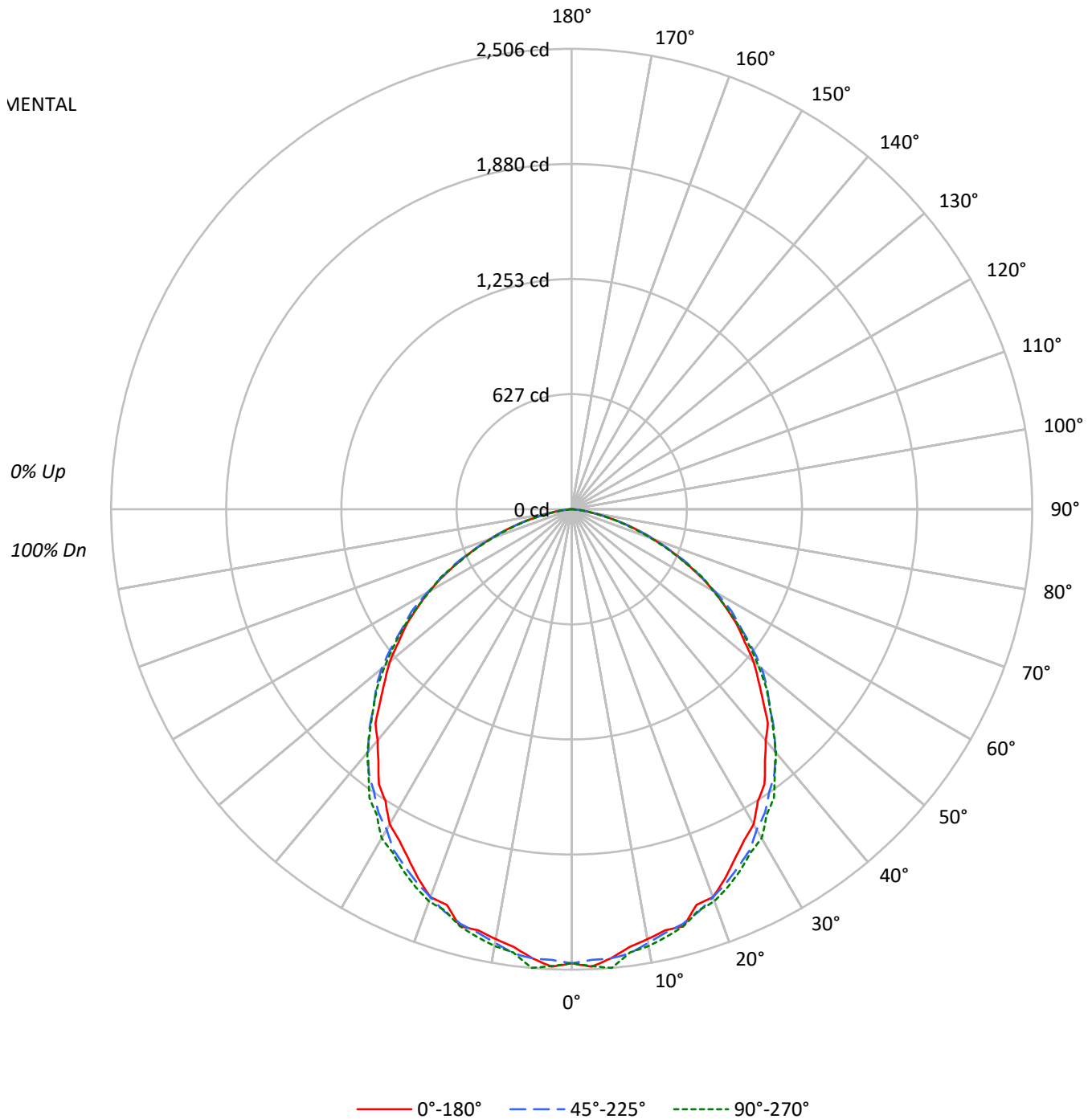
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6227.0 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.8  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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

	0°	45°	90°
0°	6649	6649	6649
5°	6627	6629	6769
10°	6492	6549	6595
15°	6544	6508	6545
20°	6433	6433	6502
25°	6235	6372	6442
30°	6150	6258	6424
35°	6005	6162	6300
40°	5771	6049	6076
45°	5597	5796	5804
50°	5413	5657	5549
55°	5157	5258	5220
60°	4823	4871	4783
65°	4300	4410	4270
70°	3689	3702	3600
75°	2922	2915	2803
80°	1957	1903	1829
85°	1065	1053	985

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 5945 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.4	3.7
10°-20°	658.7	10.6
20°-30°	986.8	15.8
30°-40°	1169.6	18.8
40°-50°	1171.8	18.8
50°-60°	994.6	16.0
60°-70°	670.6	10.8
70°-80°	294.7	4.7
80°-90°	47.9	0.8
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°	1877.9	30.2
0°-40°	3047.5	48.9
0°-60°	5213.9	83.7
0°-90°	6227.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6227.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2471	2471	2471	2471	2471	
5°	2453	2447	2454	2447	2506	231
15°	2349	2322	2336	2348	2349	654
25°	2100	2112	2146	2174	2170	971
35°	1828	1833	1876	1919	1918	1135
45°	1471	1498	1523	1562	1525	1138
55°	1099	1092	1121	1113	1113	978
65°	675	666	693	666	671	672
75°	281	275	280	261	270	301
85°	34	34	34	33	32	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2470.7	2470.7	2470.7	2470.7	2470.7
2.5°	2492.1	2473.3	2455.7	2476.1	2488.6
5°	2453.2	2447.4	2454.1	2446.8	2505.8
7.5°	2402.8	2424.8	2437.5	2429.6	2433.1
10°	2376.0	2368.3	2396.7	2416.5	2413.6
12.5°	2347.3	2358.7	2360.3	2381.7	2383.6
15°	2348.9	2321.7	2336.1	2348.2	2349.2
17.5°	2257.6	2287.0	2296.9	2324.6	2290.2
20°	2246.5	2225.1	2246.5	2274.8	2270.4
22.5°	2177.9	2153.9	2199.9	2225.1	2223.5
25°	2100.0	2111.5	2146.0	2174.0	2169.6
27.5°	2031.8	2045.2	2094.3	2132.9	2108.0
30°	1979.1	1972.4	2013.9	2048.3	2067.5
32.5°	1885.0	1909.3	1957.8	1991.9	1973.7
35°	1827.9	1833.3	1875.8	1919.2	1917.9
37.5°	1728.1	1753.3	1812.9	1825.0	1813.9
40°	1642.9	1668.1	1722.0	1735.1	1729.7
42.5°	1580.0	1584.5	1630.8	1645.8	1621.8
45°	1470.6	1498.1	1522.9	1562.2	1525.2
47.5°	1377.5	1390.2	1443.8	1454.4	1434.9
50°	1292.9	1297.4	1351.3	1338.2	1325.5
52.5°	1186.7	1205.5	1235.8	1233.3	1218.3
55°	1099.3	1092.0	1120.7	1113.0	1112.7
57.5°	994.3	1007.1	1030.7	1018.6	999.1
60°	896.1	896.4	905.0	891.3	888.8
62.5°	786.7	790.5	792.4	775.5	802.9
65°	675.3	666.4	692.6	666.1	670.6
67.5°	572.9	577.4	574.9	558.3	564.6
70°	468.9	474.7	470.5	451.7	457.5
72.5°	373.9	366.9	371.3	347.7	358.6
75°	281.0	275.3	280.4	260.6	269.6
77.5°	191.4	195.9	192.7	182.2	188.2
80°	126.3	122.8	122.8	116.8	118.0
82.5°	73.7	70.2	69.2	67.3	70.2
85°	34.5	33.5	34.1	33.2	31.9
87.5°	12.4	12.8	12.8	12.1	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)