

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: P563001

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563001  
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-80-88-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

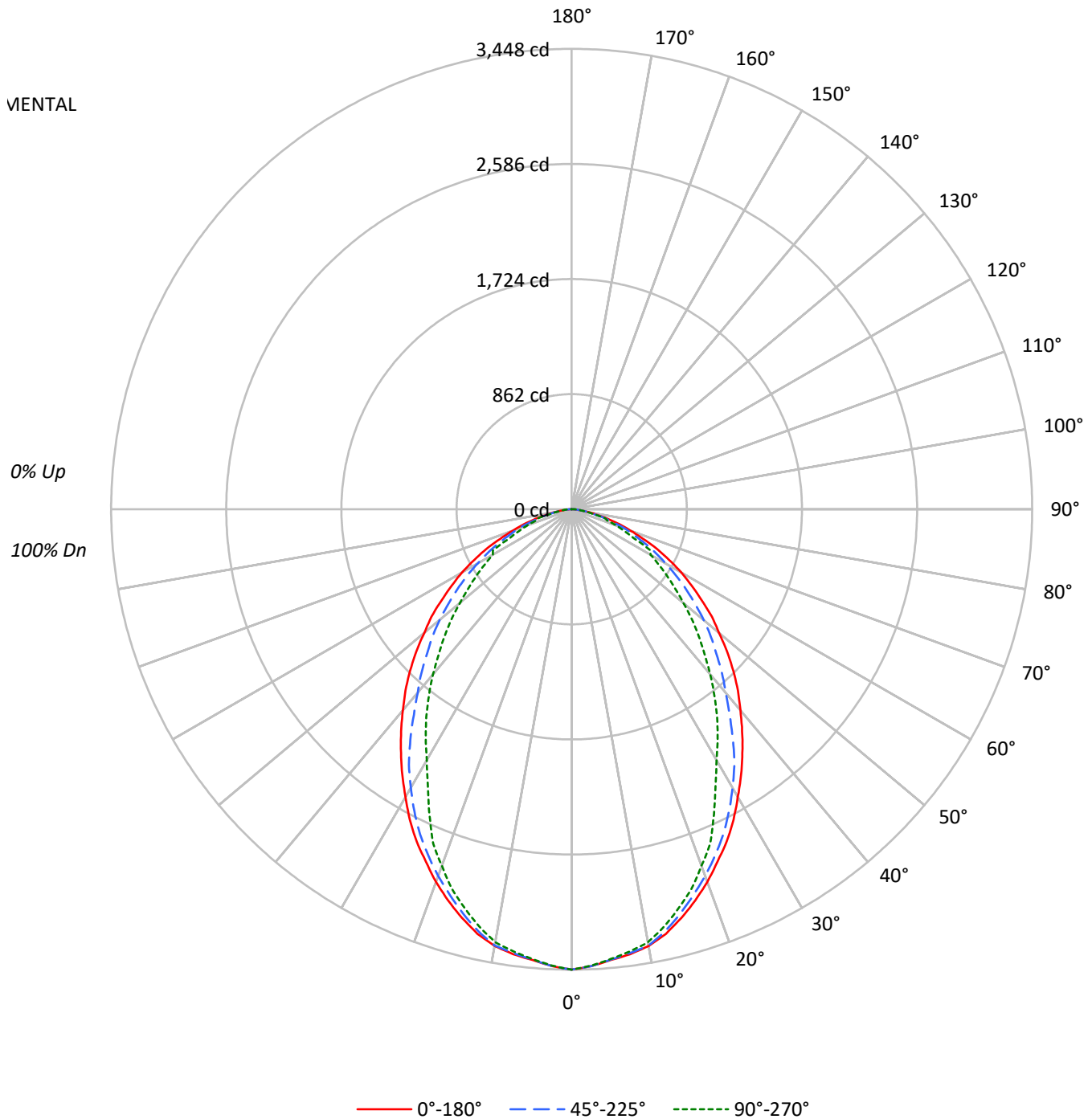
Lumens per Lamp: N/A  
Luminaire Lumens: 6769.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P563001

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P563001

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-88-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

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

	0°	45°	90°
0°	4639	4639	4639
5°	4576	4571	4566
10°	4537	4531	4499
15°	4414	4370	4309
20°	4252	4184	4069
25°	4077	3989	3740
30°	3865	3741	3369
35°	3660	3457	3117
40°	3452	3151	2836
45°	3254	2913	2564
50°	3012	2703	2286
55°	2787	2450	2048
60°	2553	2188	1834
65°	2246	1916	1624
70°	1851	1678	1380
75°	1471	1285	1347
80°	989	927	865
85°	616	738	861

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3254 cd/sqm



TEST NUMBER: P563001

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.0	4.7
10°-20°	880.9	13.0
20°-30°	1219.5	18.0
30°-40°	1300.3	19.2
40°-50°	1186.3	17.5
50°-60°	929.4	13.7
60°-70°	605.7	8.9
70°-80°	268.4	4.0
80°-90°	57.6	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°	2421.3	35.8
0°-40°	3721.7	55.0
0°-60°	5837.3	86.2
0°-90°	6769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6769.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3448	3448	3448	3448	3448	
5°	3388	3384	3384	3380	3380	322
15°	3169	3169	3137	3105	3093	891
25°	2746	2730	2687	2591	2519	1261
35°	2228	2212	2105	1945	1897	1393
45°	1710	1674	1531	1403	1347	1317
55°	1188	1152	1044	921	873	1065
65°	706	666	602	614	510	695
75°	283	263	247	235	259	303
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



TEST NUMBER: P563001

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3448.0	3448.0	3448.0	3448.0	3448.0
2.5°	3424.1	3424.1	3424.1	3420.1	3420.1
5°	3388.2	3384.3	3384.3	3380.3	3380.3
7.5°	3360.3	3356.4	3352.4	3348.4	3340.4
10°	3320.5	3320.5	3316.5	3296.6	3292.6
12.5°	3256.7	3252.7	3236.8	3208.9	3200.9
15°	3169.0	3169.0	3137.1	3105.2	3093.3
17.5°	3073.3	3069.4	3029.5	2997.6	2981.7
20°	2969.7	2961.7	2921.9	2870.0	2842.1
22.5°	2854.1	2854.1	2806.3	2738.5	2710.6
25°	2746.5	2730.5	2686.7	2591.0	2519.3
27.5°	2622.9	2599.0	2551.1	2415.6	2331.9
30°	2487.4	2475.4	2407.6	2232.3	2168.5
32.5°	2359.8	2339.9	2268.1	2084.8	2032.9
35°	2228.3	2212.3	2104.7	1945.3	1897.4
37.5°	2096.7	2076.8	1941.3	1813.7	1753.9
40°	1965.2	1941.3	1793.8	1678.2	1614.4
42.5°	1841.6	1809.7	1666.2	1542.6	1470.9
45°	1710.1	1674.2	1530.7	1403.1	1347.3
47.5°	1578.5	1546.6	1415.1	1283.5	1219.8
50°	1439.0	1411.1	1291.5	1160.0	1092.2
52.5°	1323.4	1279.6	1164.0	1032.4	976.6
55°	1187.9	1152.0	1044.4	920.8	873.0
57.5°	1064.3	1028.4	928.8	813.2	773.3
60°	948.7	896.9	813.2	713.5	681.6
62.5°	821.2	781.3	709.5	625.8	665.7
65°	705.6	665.7	601.9	613.9	510.2
67.5°	578.0	558.1	502.3	446.5	430.5
70°	470.4	446.5	426.5	366.7	350.8
72.5°	374.7	350.8	322.9	291.0	279.0
75°	283.0	263.1	247.1	235.2	259.1
77.5°	195.3	187.4	175.4	163.4	159.4
80°	127.6	123.6	119.6	115.6	111.6
82.5°	75.7	75.7	75.7	75.7	75.7
85°	39.9	43.8	47.8	51.8	55.8
87.5°	23.9	23.9	27.9	31.9	35.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)