

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: P561465

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561465
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-12-4-LD4-2HI-50-UNV-80-88-EDD
Description: 1X4 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

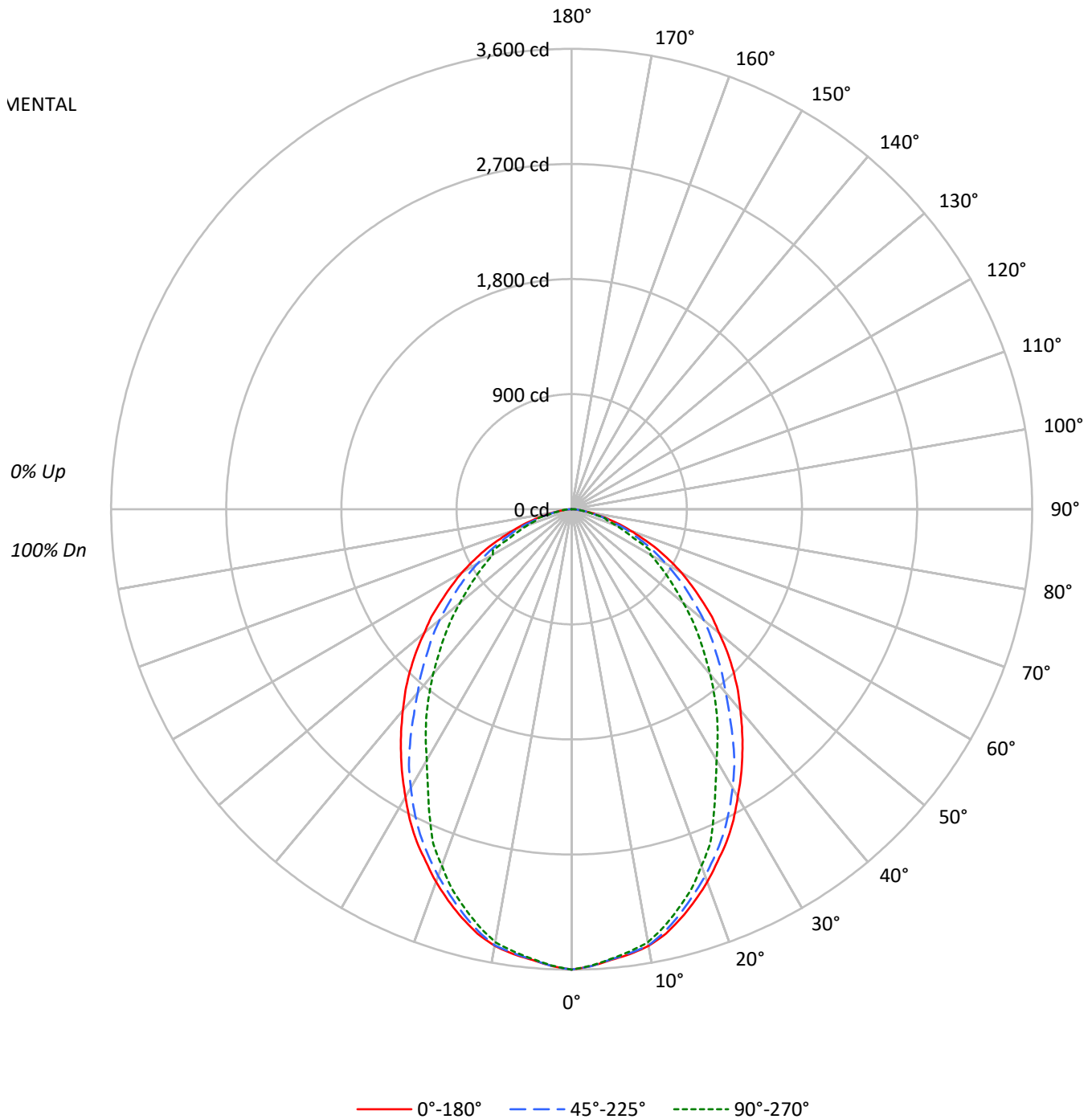
Lumens per Lamp: N/A
Luminaire Lumens: 7067.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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																		
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°	9687	9687	9687
5°	9555	9544	9533
10°	9473	9461	9393
15°	9217	9124	8997
20°	8879	8736	8497
25°	8514	8329	7810
30°	8069	7810	7035
35°	7642	7219	6507
40°	7207	6578	5921
45°	6795	6082	5353
50°	6290	5645	4774
55°	5818	5116	4276
60°	5331	4569	3830
65°	4690	4001	3392
70°	3864	3504	2881
75°	3072	2682	2812
80°	2064	1934	1805
85°	1284	1541	1800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6795 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.1	4.7
10°-20°	919.6	13.0
20°-30°	1273.2	18.0
30°-40°	1357.6	19.2
40°-50°	1238.5	17.5
50°-60°	970.3	13.7
60°-70°	632.4	8.9
70°-80°	280.2	4.0
80°-90°	60.2	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°	2527.9	35.8
0°-40°	3885.5	55.0
0°-60°	6094.3	86.2
0°-90°	7067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7067.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3600	3600	3600	3600	3600	
5°	3537	3533	3533	3529	3529	336
15°	3308	3308	3275	3242	3229	930
25°	2867	2851	2805	2705	2630	1316
35°	2326	2310	2197	2031	1981	1454
45°	1785	1748	1598	1465	1407	1375
55°	1240	1203	1090	961	911	1112
65°	737	695	628	641	533	726
75°	296	275	258	246	270	317
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3599.8	3599.8	3599.8	3599.8	3599.8
2.5°	3574.9	3574.9	3574.9	3570.7	3570.7
5°	3537.4	3533.2	3533.2	3529.1	3529.1
7.5°	3508.3	3504.1	3500.0	3495.8	3487.5
10°	3466.7	3466.7	3462.5	3441.7	3437.5
12.5°	3400.1	3395.9	3379.3	3350.1	3341.8
15°	3308.5	3308.5	3275.2	3241.9	3229.4
17.5°	3208.6	3204.5	3162.9	3129.6	3112.9
20°	3100.4	3092.1	3050.5	2996.4	2967.3
22.5°	2979.7	2979.7	2929.8	2859.1	2829.9
25°	2867.4	2850.7	2805.0	2705.1	2630.2
27.5°	2738.4	2713.4	2663.5	2522.0	2434.6
30°	2596.9	2584.4	2513.6	2330.5	2263.9
32.5°	2463.7	2442.9	2368.0	2176.5	2122.4
35°	2326.4	2309.7	2197.4	2030.9	1980.9
37.5°	2189.0	2168.2	2026.7	1893.6	1831.1
40°	2051.7	2026.7	1872.7	1752.1	1685.5
42.5°	1922.7	1889.4	1739.6	1610.6	1535.7
45°	1785.4	1747.9	1598.1	1464.9	1406.6
47.5°	1648.0	1614.7	1477.4	1340.1	1273.5
50°	1502.4	1473.2	1348.4	1211.0	1140.3
52.5°	1381.7	1335.9	1215.2	1077.9	1019.6
55°	1240.2	1202.7	1090.4	961.3	911.4
57.5°	1111.2	1073.7	969.7	849.0	807.4
60°	990.5	936.4	849.0	744.9	711.6
62.5°	857.3	815.7	740.8	653.4	695.0
65°	736.6	695.0	628.4	640.9	532.7
67.5°	603.4	582.6	524.4	466.1	449.5
70°	491.1	466.1	445.3	382.9	366.2
72.5°	391.2	366.2	337.1	303.8	291.3
75°	295.5	274.7	258.0	245.5	270.5
77.5°	203.9	195.6	183.1	170.6	166.5
80°	133.2	129.0	124.8	120.7	116.5
82.5°	79.1	79.1	79.1	79.1	79.1
85°	41.6	45.8	49.9	54.1	58.3
87.5°	25.0	25.0	29.1	33.3	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)