

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: P562099

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562099
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-LD4-1HI-50-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4819.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

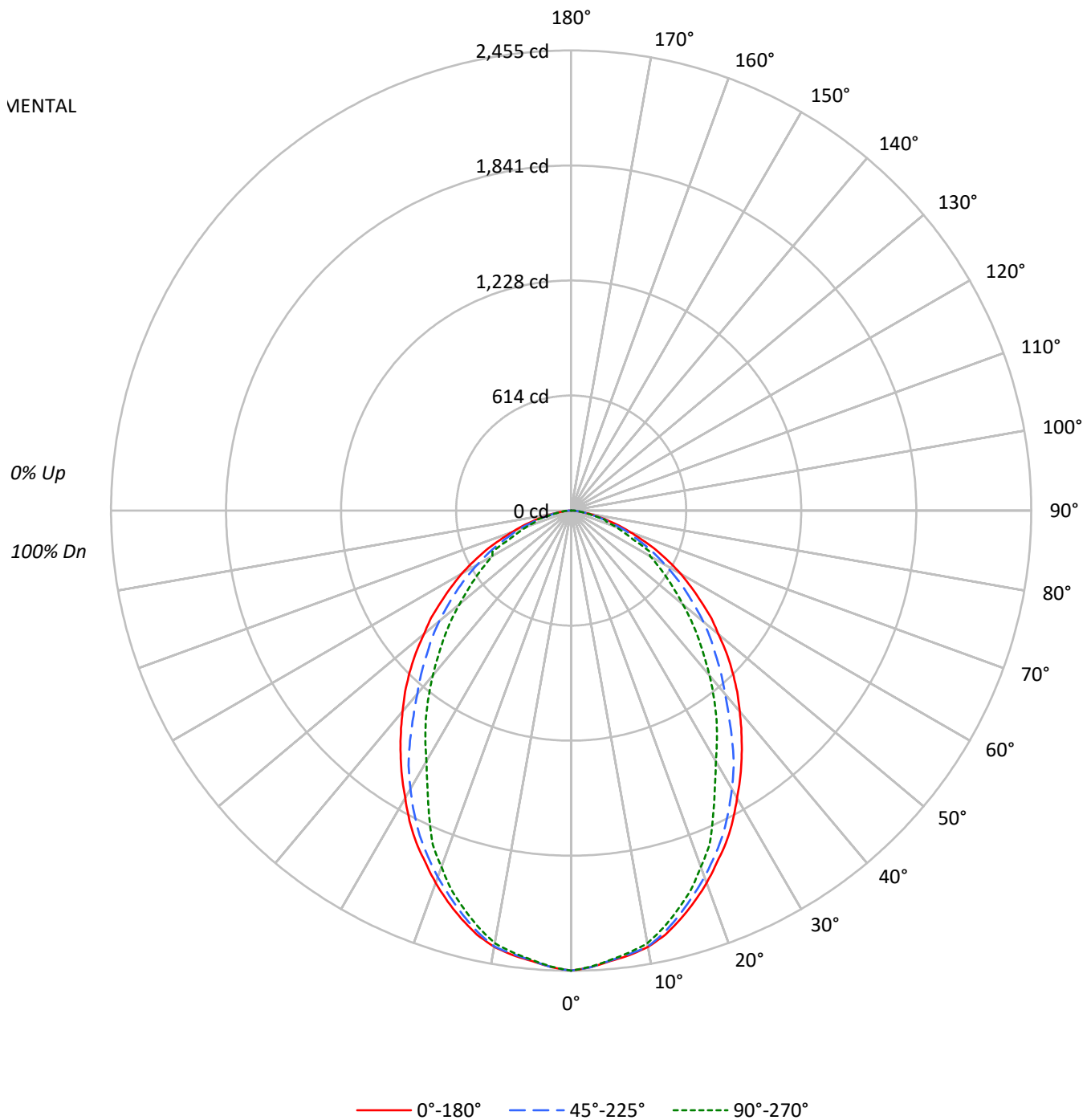
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3303	3303	3303
5°	3258	3254	3250
10°	3230	3226	3203
15°	3143	3111	3068
20°	3027	2978	2897
25°	2903	2840	2663
30°	2751	2663	2399
35°	2606	2461	2219
40°	2457	2243	2019
45°	2316	2073	1825
50°	2144	1925	1628
55°	1984	1744	1458
60°	1817	1558	1306
65°	1599	1364	1156
70°	1317	1194	982
75°	1048	914	959
80°	704	659	616
85°	438	526	613

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.5	4.7
10°-20°	627.1	13.0
20°-30°	868.2	18.0
30°-40°	925.7	19.2
40°-50°	844.5	17.5
50°-60°	661.6	13.7
60°-70°	431.2	8.9
70°-80°	191.1	4.0
80°-90°	41.0	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°	1723.8	35.8
0°-40°	2649.5	55.0
0°-60°	4155.7	86.2
0°-90°	4819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2455	2455	2455	2455	2455	
5°	2412	2409	2409	2406	2406	229
15°	2256	2256	2233	2211	2202	634
25°	1955	1944	1913	1845	1794	898
35°	1586	1575	1498	1385	1351	992
45°	1217	1192	1090	999	959	938
55°	846	820	744	656	622	759
65°	502	474	428	437	363	495
75°	202	187	176	167	184	216
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2437.7	2437.7	2437.7	2434.9	2434.9
5°	2412.2	2409.3	2409.3	2406.5	2406.5
7.5°	2392.3	2389.5	2386.6	2383.8	2378.1
10°	2363.9	2363.9	2361.1	2346.9	2344.1
12.5°	2318.5	2315.7	2304.3	2284.5	2278.8
15°	2256.1	2256.1	2233.4	2210.7	2202.2
17.5°	2188.0	2185.1	2156.8	2134.1	2122.7
20°	2114.2	2108.5	2080.1	2043.2	2023.4
22.5°	2031.9	2031.9	1997.8	1949.6	1929.7
25°	1955.3	1943.9	1912.7	1844.6	1793.5
27.5°	1867.3	1850.3	1816.2	1719.7	1660.1
30°	1770.8	1762.3	1714.1	1589.2	1543.8
32.5°	1680.0	1665.8	1614.7	1484.2	1447.3
35°	1586.4	1575.0	1498.4	1384.9	1350.8
37.5°	1492.7	1478.5	1382.0	1291.2	1248.7
40°	1399.1	1382.0	1277.0	1194.7	1149.3
42.5°	1311.1	1288.4	1186.2	1098.2	1047.2
45°	1217.4	1191.9	1089.7	998.9	959.2
47.5°	1123.8	1101.1	1007.4	913.8	868.4
50°	1024.5	1004.6	919.5	825.8	777.6
52.5°	942.2	910.9	828.7	735.0	695.3
55°	845.7	820.1	743.5	655.5	621.5
57.5°	757.7	732.2	661.2	578.9	550.5
60°	675.4	638.5	578.9	508.0	485.3
62.5°	584.6	556.2	505.1	445.5	473.9
65°	502.3	473.9	428.5	437.0	363.2
67.5°	411.5	397.3	357.6	317.8	306.5
70°	334.9	317.8	303.6	261.1	249.7
72.5°	266.8	249.7	229.9	207.2	198.6
75°	201.5	187.3	175.9	167.4	184.5
77.5°	139.1	133.4	124.9	116.4	113.5
80°	90.8	88.0	85.1	82.3	79.5
82.5°	53.9	53.9	53.9	53.9	53.9
85°	28.4	31.2	34.1	36.9	39.7
87.5°	17.0	17.0	19.9	22.7	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)