

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: P562727

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562727
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-35-UNV-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5476.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

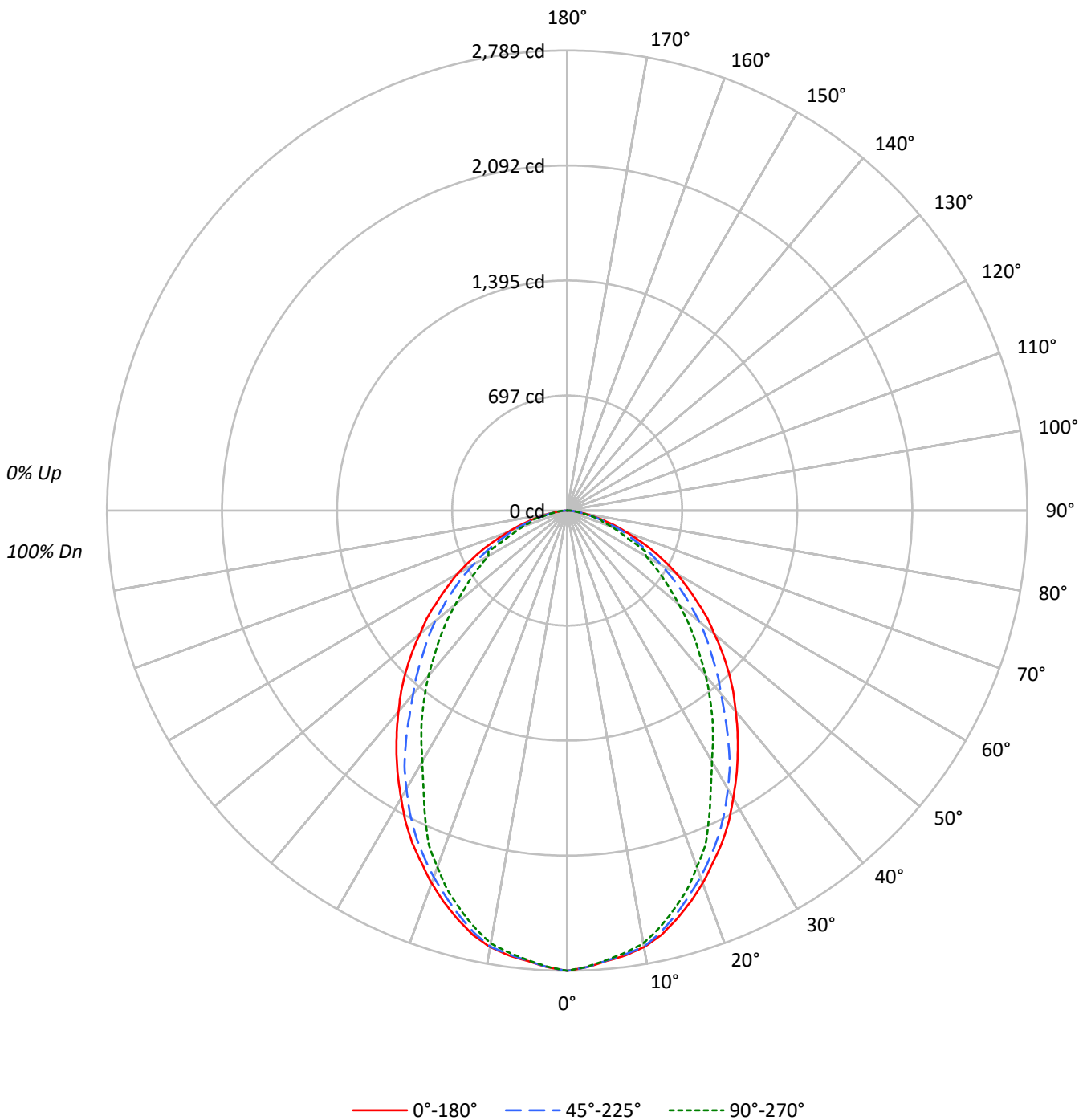
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3753	3753	3753
5°	3702	3698	3693
10°	3670	3666	3639
15°	3571	3535	3486
20°	3440	3384	3292
25°	3298	3227	3026
30°	3126	3026	2726
35°	2961	2797	2521
40°	2792	2549	2294
45°	2632	2356	2074
50°	2437	2187	1850
55°	2254	1982	1657
60°	2065	1770	1484
65°	1817	1550	1314
70°	1497	1357	1116
75°	1190	1039	1090
80°	800	749	700
85°	497	597	696

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2632 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.7	4.7
10°-20°	712.6	13.0
20°-30°	986.5	18.0
30°-40°	1051.9	19.2
40°-50°	959.7	17.5
50°-60°	751.8	13.7
60°-70°	490.0	8.9
70°-80°	217.1	4.0
80°-90°	46.6	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°	1958.8	35.8
0°-40°	3010.8	55.0
0°-60°	4722.3	86.2
0°-90°	5476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2789	2789	2789	2789	2789	
5°	2741	2738	2738	2735	2735	260
15°	2564	2564	2538	2512	2502	721
25°	2222	2209	2174	2096	2038	1020
35°	1803	1790	1703	1574	1535	1127
45°	1383	1354	1238	1135	1090	1066
55°	961	932	845	745	706	862
65°	571	538	487	497	413	563
75°	229	213	200	190	210	245
85°	32	36	39	42	45	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2789.4	2789.4	2789.4	2789.4	2789.4
2.5°	2770.1	2770.1	2770.1	2766.8	2766.8
5°	2741.0	2737.8	2737.8	2734.6	2734.6
7.5°	2718.5	2715.2	2712.0	2708.8	2702.3
10°	2686.2	2686.2	2683.0	2666.9	2663.6
12.5°	2634.6	2631.4	2618.5	2595.9	2589.5
15°	2563.7	2563.7	2537.9	2512.1	2502.4
17.5°	2486.3	2483.1	2450.8	2425.0	2412.1
20°	2402.4	2396.0	2363.7	2321.8	2299.2
22.5°	2308.9	2308.9	2270.2	2215.4	2192.8
25°	2221.8	2208.9	2173.5	2096.1	2038.0
27.5°	2121.9	2102.5	2063.8	1954.2	1886.5
30°	2012.2	2002.6	1947.7	1805.9	1754.3
32.5°	1909.0	1892.9	1834.9	1686.5	1644.6
35°	1802.6	1789.7	1702.7	1573.7	1535.0
37.5°	1696.2	1680.1	1570.4	1467.3	1418.9
40°	1589.8	1570.4	1451.1	1357.6	1306.0
42.5°	1489.8	1464.0	1347.9	1248.0	1189.9
45°	1383.4	1354.4	1238.3	1135.1	1090.0
47.5°	1277.0	1251.2	1144.8	1038.4	986.8
50°	1164.1	1141.6	1044.8	938.4	883.6
52.5°	1070.6	1035.1	941.6	835.2	790.1
55°	961.0	932.0	844.9	744.9	706.2
57.5°	861.0	832.0	751.4	657.8	625.6
60°	767.5	725.6	657.8	577.2	551.4
62.5°	664.3	632.0	574.0	506.3	538.5
65°	570.8	538.5	486.9	496.6	412.8
67.5°	467.6	451.5	406.3	361.2	348.3
70°	380.5	361.2	345.0	296.7	283.8
72.5°	303.1	283.8	261.2	235.4	225.7
75°	229.0	212.8	199.9	190.3	209.6
77.5°	158.0	151.6	141.9	132.2	129.0
80°	103.2	100.0	96.7	93.5	90.3
82.5°	61.3	61.3	61.3	61.3	61.3
85°	32.2	35.5	38.7	41.9	45.1
87.5°	19.3	19.3	22.6	25.8	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)