

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: P562853

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562853
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-50-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5813.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

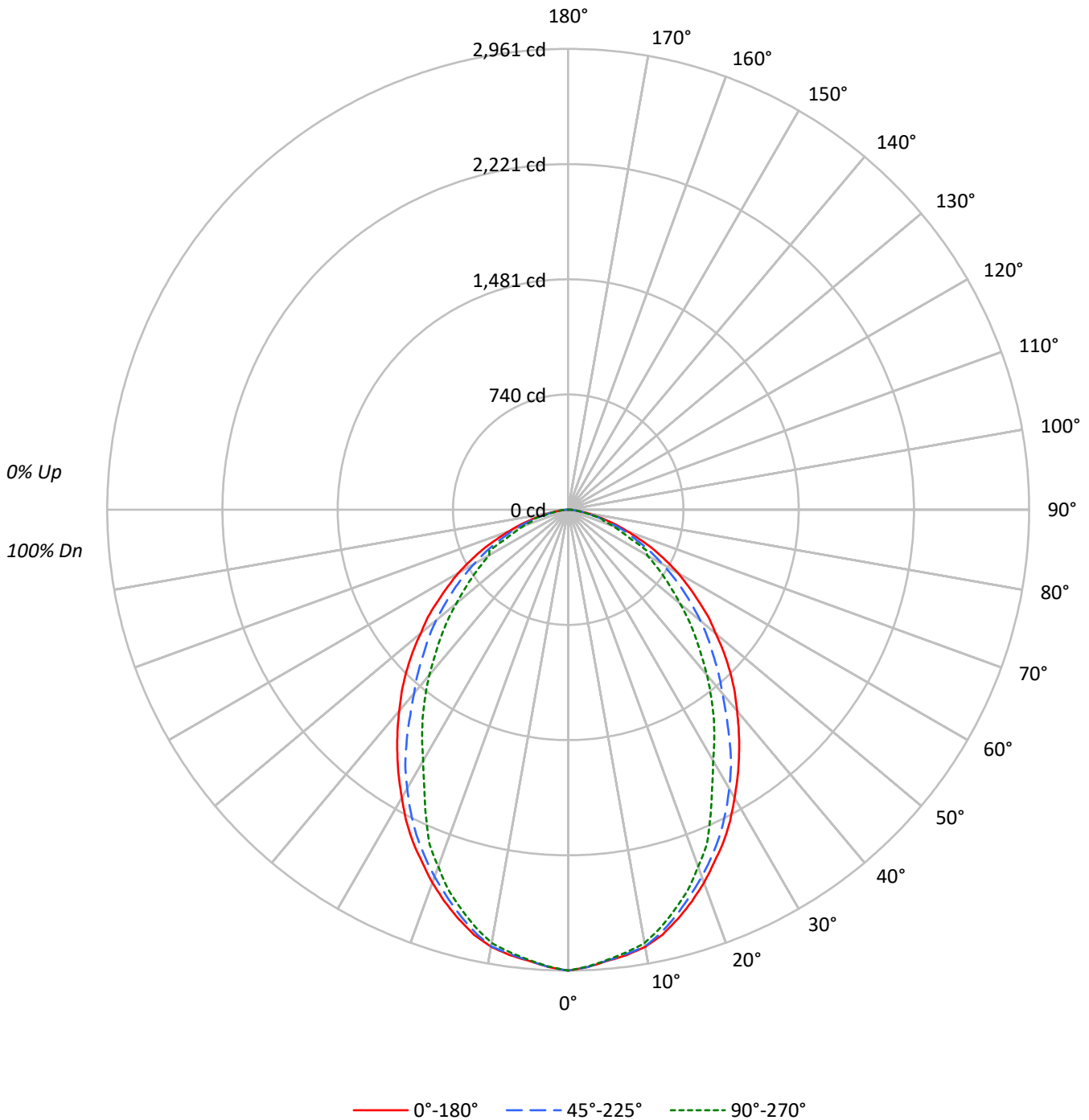
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3984	3984	3984
5°	3930	3925	3921
10°	3896	3891	3863
15°	3791	3753	3700
20°	3652	3593	3495
25°	3502	3425	3212
30°	3319	3212	2893
35°	3143	2969	2676
40°	2964	2706	2435
45°	2794	2501	2202
50°	2587	2322	1963
55°	2393	2104	1759
60°	2192	1879	1575
65°	1929	1646	1395
70°	1589	1441	1185
75°	1263	1103	1157
80°	848	796	742
85°	528	634	739

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2794 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.6	4.7
10°-20°	756.5	13.0
20°-30°	1047.3	18.0
30°-40°	1116.7	19.2
40°-50°	1018.7	17.5
50°-60°	798.1	13.7
60°-70°	520.2	8.9
70°-80°	230.4	4.0
80°-90°	49.5	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°	2079.4	35.8
0°-40°	3196.0	55.0
0°-60°	5012.9	86.2
0°-90°	5813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2961	2961	2961	2961	2961	
5°	2910	2906	2906	2903	2903	276
15°	2721	2721	2694	2667	2656	765
25°	2359	2345	2307	2225	2164	1083
35°	1914	1900	1807	1670	1629	1196
45°	1469	1438	1314	1205	1157	1131
55°	1020	989	897	791	750	915
65°	606	572	517	527	438	597
75°	243	226	212	202	222	260
85°	34	38	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2961.1	2961.1	2961.1	2961.1	2961.1
2.5°	2940.5	2940.5	2940.5	2937.1	2937.1
5°	2909.7	2906.3	2906.3	2902.9	2902.9
7.5°	2885.8	2882.3	2878.9	2875.5	2868.6
10°	2851.5	2851.5	2848.1	2831.0	2827.6
12.5°	2796.8	2793.3	2779.6	2755.7	2748.8
15°	2721.4	2721.4	2694.1	2666.7	2656.4
17.5°	2639.3	2635.9	2601.6	2574.2	2560.6
20°	2550.3	2543.4	2509.2	2464.7	2440.7
22.5°	2451.0	2451.0	2409.9	2351.7	2327.8
25°	2358.6	2344.9	2307.2	2225.1	2163.5
27.5°	2252.5	2231.9	2190.8	2074.5	2002.6
30°	2136.1	2125.8	2067.6	1917.0	1862.2
32.5°	2026.5	2009.4	1947.8	1790.3	1745.8
35°	1913.6	1899.9	1807.4	1670.5	1629.4
37.5°	1800.6	1783.5	1667.1	1557.6	1506.2
40°	1687.6	1667.1	1540.4	1441.2	1386.4
42.5°	1581.5	1554.1	1430.9	1324.8	1263.2
45°	1468.6	1437.7	1314.5	1205.0	1157.0
47.5°	1355.6	1328.2	1215.2	1102.3	1047.5
50°	1235.8	1211.8	1109.1	996.2	938.0
52.5°	1136.5	1098.8	999.6	886.6	838.7
55°	1020.1	989.3	896.9	790.8	749.7
57.5°	914.0	883.2	797.6	698.3	664.1
60°	814.7	770.2	698.3	612.8	585.4
62.5°	705.2	670.9	609.3	537.4	571.7
65°	605.9	571.7	516.9	527.2	438.2
67.5°	496.4	479.2	431.3	383.4	369.7
70°	403.9	383.4	366.3	314.9	301.2
72.5°	321.8	301.2	277.3	249.9	239.6
75°	243.0	225.9	212.2	202.0	222.5
77.5°	167.7	160.9	150.6	140.4	136.9
80°	109.5	106.1	102.7	99.3	95.8
82.5°	65.0	65.0	65.0	65.0	65.0
85°	34.2	37.7	41.1	44.5	47.9
87.5°	20.5	20.5	24.0	27.4	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)