

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: P562855

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562855
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-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5624.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

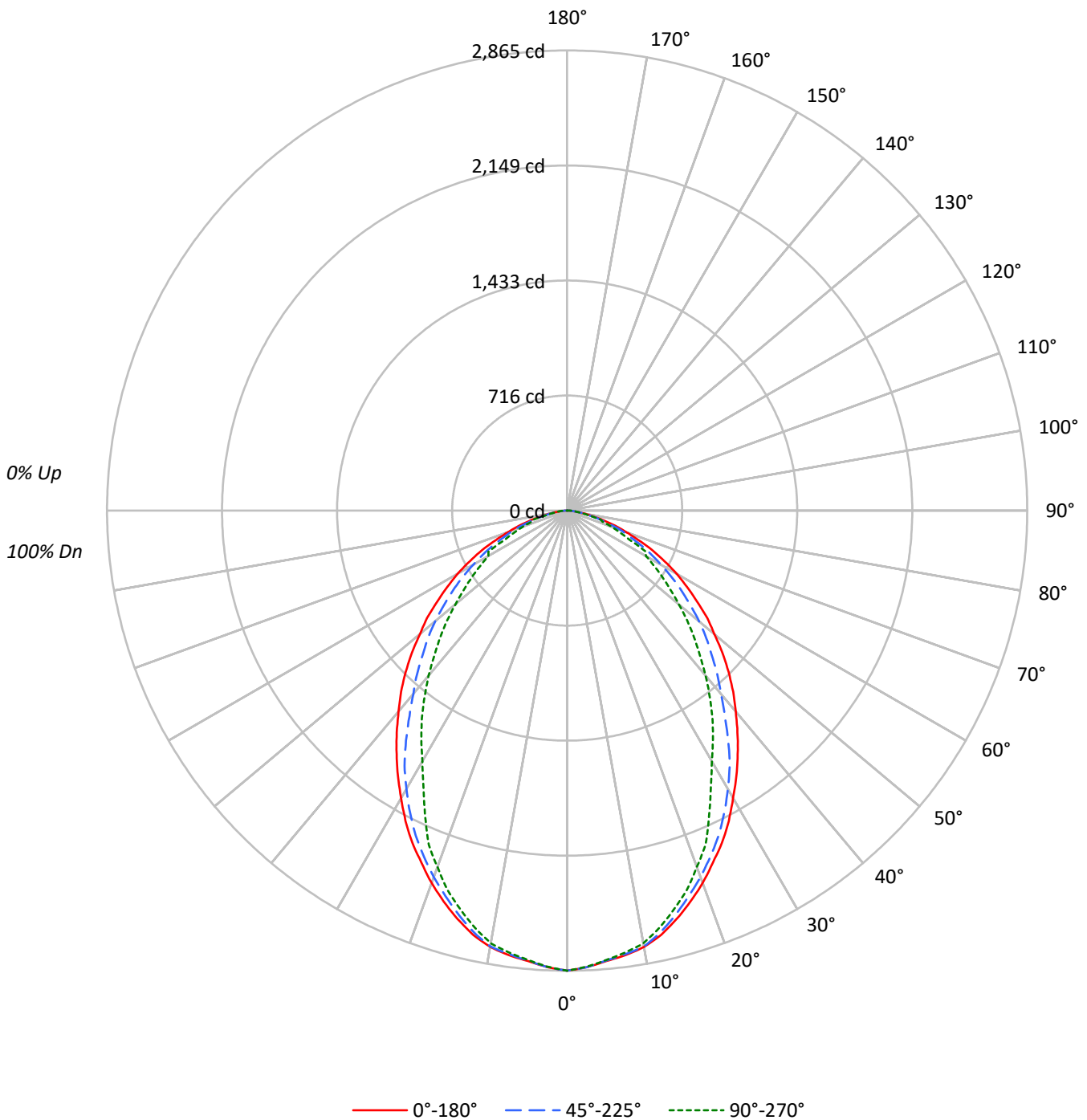
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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									100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3855	3855	3855
5°	3802	3798	3793
10°	3769	3765	3738
15°	3668	3631	3580
20°	3533	3476	3381
25°	3388	3314	3107
30°	3211	3108	2799
35°	3041	2872	2589
40°	2868	2618	2356
45°	2704	2420	2130
50°	2503	2246	1900
55°	2315	2035	1701
60°	2121	1818	1524
65°	1866	1592	1350
70°	1537	1394	1146
75°	1222	1067	1119
80°	821	770	718
85°	511	613	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.7	4.7
10°-20°	731.9	13.0
20°-30°	1013.2	18.0
30°-40°	1080.4	19.2
40°-50°	985.6	17.5
50°-60°	772.2	13.7
60°-70°	503.3	8.9
70°-80°	223.0	4.0
80°-90°	47.9	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°	2011.8	35.8
0°-40°	3092.1	55.0
0°-60°	4849.9	86.2
0°-90°	5624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2865	2865	2865	2865	2865	
5°	2815	2812	2812	2808	2808	267
15°	2633	2633	2606	2580	2570	740
25°	2282	2269	2232	2153	2093	1048
35°	1851	1838	1749	1616	1576	1157
45°	1421	1391	1272	1166	1119	1094
55°	987	957	868	765	725	885
65°	586	553	500	510	424	578
75°	235	219	205	195	215	252
85°	33	36	40	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2864.8	2864.8	2864.8	2864.8	2864.8
2.5°	2844.9	2844.9	2844.9	2841.6	2841.6
5°	2815.1	2811.8	2811.8	2808.5	2808.5
7.5°	2791.9	2788.6	2785.3	2782.0	2775.4
10°	2758.8	2758.8	2755.5	2738.9	2735.6
12.5°	2705.8	2702.5	2689.3	2666.1	2659.5
15°	2633.0	2633.0	2606.5	2580.0	2570.0
17.5°	2553.5	2550.2	2517.0	2490.5	2477.3
20°	2467.4	2460.7	2427.6	2384.6	2361.4
22.5°	2371.3	2371.3	2331.6	2275.3	2252.1
25°	2281.9	2268.6	2232.2	2152.7	2093.1
27.5°	2179.2	2159.4	2119.6	2007.0	1937.5
30°	2066.6	2056.7	2000.4	1854.7	1801.7
32.5°	1960.6	1944.1	1884.5	1732.1	1689.1
35°	1851.4	1838.1	1748.7	1616.2	1576.5
37.5°	1742.1	1725.5	1612.9	1506.9	1457.2
40°	1632.8	1612.9	1490.4	1394.3	1341.3
42.5°	1530.1	1503.6	1384.4	1281.7	1222.1
45°	1420.8	1391.0	1271.8	1165.8	1119.4
47.5°	1311.5	1285.0	1175.7	1066.4	1013.4
50°	1195.6	1172.4	1073.1	963.8	907.5
52.5°	1099.5	1063.1	967.1	857.8	811.4
55°	986.9	957.1	867.7	765.0	725.3
57.5°	884.3	854.5	771.7	675.6	642.5
60°	788.2	745.2	675.6	592.8	566.3
62.5°	682.3	649.1	589.5	520.0	553.1
65°	586.2	553.1	500.1	510.0	423.9
67.5°	480.2	463.7	417.3	370.9	357.7
70°	390.8	370.9	354.4	304.7	291.4
72.5°	311.3	291.4	268.3	241.8	231.8
75°	235.1	218.6	205.3	195.4	215.3
77.5°	162.3	155.7	145.7	135.8	132.5
80°	106.0	102.7	99.4	96.0	92.7
82.5°	62.9	62.9	62.9	62.9	62.9
85°	33.1	36.4	39.7	43.1	46.4
87.5°	19.9	19.9	23.2	26.5	29.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)