

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: P562146

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562146
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-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4201.0 lumens
Efficiency: N/A
Efficacy: 97.2 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

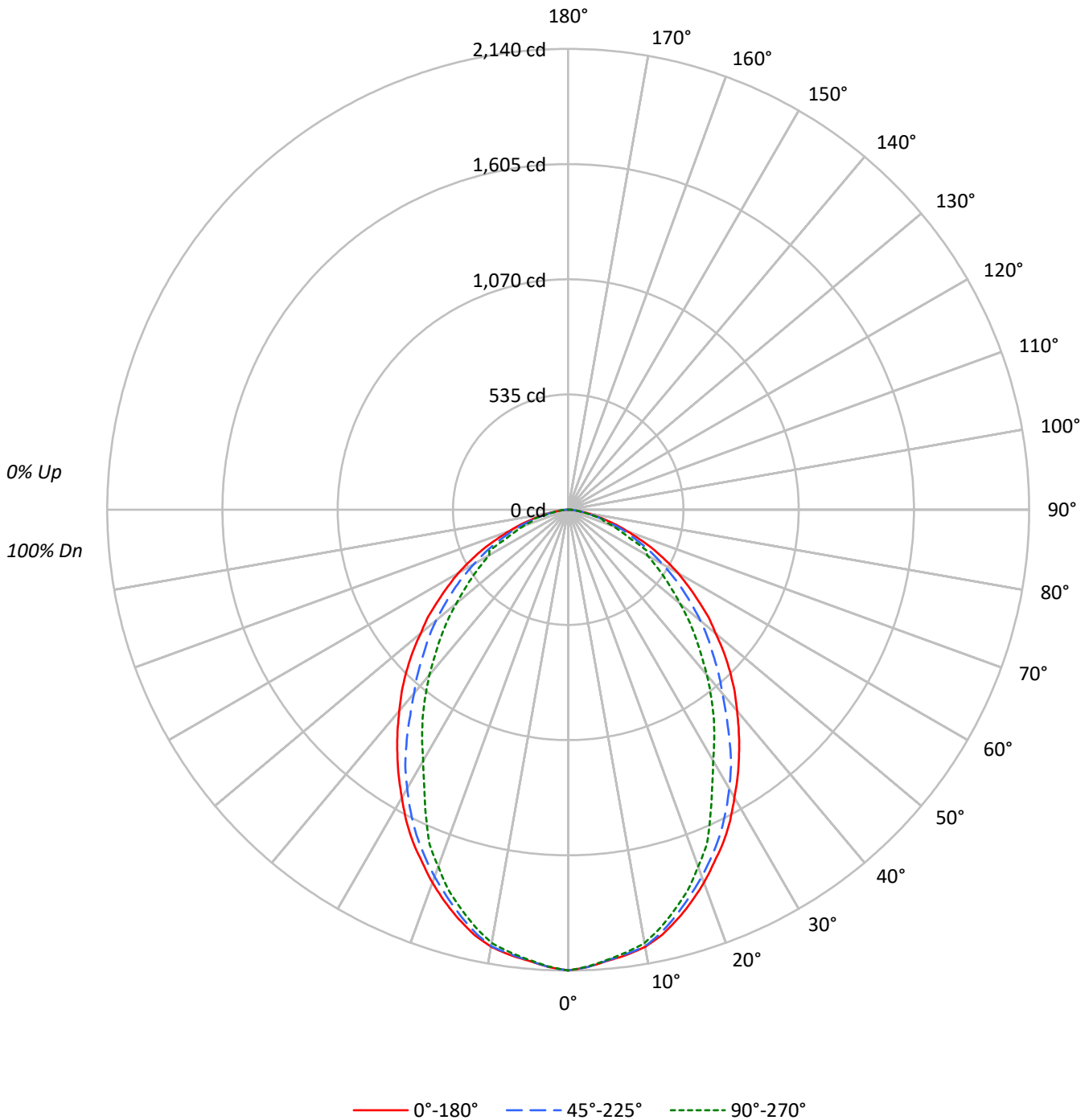
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2879	2879	2879
5°	2840	2837	2833
10°	2816	2812	2792
15°	2740	2712	2674
20°	2639	2596	2526
25°	2530	2475	2321
30°	2398	2321	2091
35°	2271	2145	1934
40°	2142	1955	1760
45°	2019	1808	1591
50°	1869	1678	1419
55°	1729	1521	1271
60°	1584	1358	1138
65°	1394	1189	1008
70°	1148	1041	856
75°	913	797	836
80°	614	575	537
85°	381	459	534

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2019 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.2	4.7
10°-20°	546.7	13.0
20°-30°	756.8	18.0
30°-40°	807.0	19.2
40°-50°	736.2	17.5
50°-60°	576.8	13.7
60°-70°	375.9	8.9
70°-80°	166.6	4.0
80°-90°	35.8	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°	1502.7	35.8
0°-40°	2309.8	55.0
0°-60°	3622.8	86.2
0°-90°	4201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2140	2140	2140	2140	2140	
5°	2103	2100	2100	2098	2098	200
15°	1967	1967	1947	1927	1920	553
25°	1704	1695	1667	1608	1564	783
35°	1383	1373	1306	1207	1178	865
45°	1061	1039	950	871	836	818
55°	737	715	648	572	542	661
65°	438	413	374	381	317	432
75°	176	163	153	146	161	188
85°	25	27	30	32	35	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2139.9	2139.9	2139.9	2139.9	2139.9
2.5°	2125.1	2125.1	2125.1	2122.6	2122.6
5°	2102.8	2100.4	2100.4	2097.9	2097.9
7.5°	2085.5	2083.0	2080.6	2078.1	2073.1
10°	2060.8	2060.8	2058.3	2045.9	2043.5
12.5°	2021.2	2018.7	2008.8	1991.5	1986.6
15°	1966.8	1966.8	1947.0	1927.2	1919.8
17.5°	1907.4	1904.9	1880.2	1860.4	1850.5
20°	1843.1	1838.1	1813.4	1781.2	1763.9
22.5°	1771.3	1771.3	1741.6	1699.6	1682.3
25°	1704.5	1694.6	1667.4	1608.0	1563.5
27.5°	1627.8	1613.0	1583.3	1499.2	1447.2
30°	1543.7	1536.3	1494.2	1385.4	1345.8
32.5°	1464.6	1452.2	1407.7	1293.9	1261.7
35°	1382.9	1373.0	1306.2	1207.3	1177.6
37.5°	1301.3	1288.9	1204.8	1125.6	1088.5
40°	1219.6	1204.8	1113.3	1041.5	1001.9
42.5°	1142.9	1123.2	1034.1	957.4	912.9
45°	1061.3	1039.0	950.0	870.8	836.2
47.5°	979.7	959.9	878.2	796.6	757.0
50°	893.1	875.8	801.5	719.9	677.9
52.5°	821.3	794.1	722.4	640.7	606.1
55°	737.2	715.0	648.2	571.5	541.8
57.5°	660.5	638.3	576.4	504.7	479.9
60°	588.8	556.6	504.7	442.8	423.0
62.5°	509.6	484.9	440.4	388.4	413.1
65°	437.9	413.1	373.6	381.0	316.7
67.5°	358.7	346.3	311.7	277.1	267.2
70°	291.9	277.1	264.7	227.6	217.7
72.5°	232.5	217.7	200.4	180.6	173.2
75°	175.6	163.3	153.4	146.0	160.8
77.5°	121.2	116.3	108.9	101.4	99.0
80°	79.2	76.7	74.2	71.7	69.3
82.5°	47.0	47.0	47.0	47.0	47.0
85°	24.7	27.2	29.7	32.2	34.6
87.5°	14.8	14.8	17.3	19.8	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)