

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: P562343

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562343
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-LD4-1STD-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: 3666.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

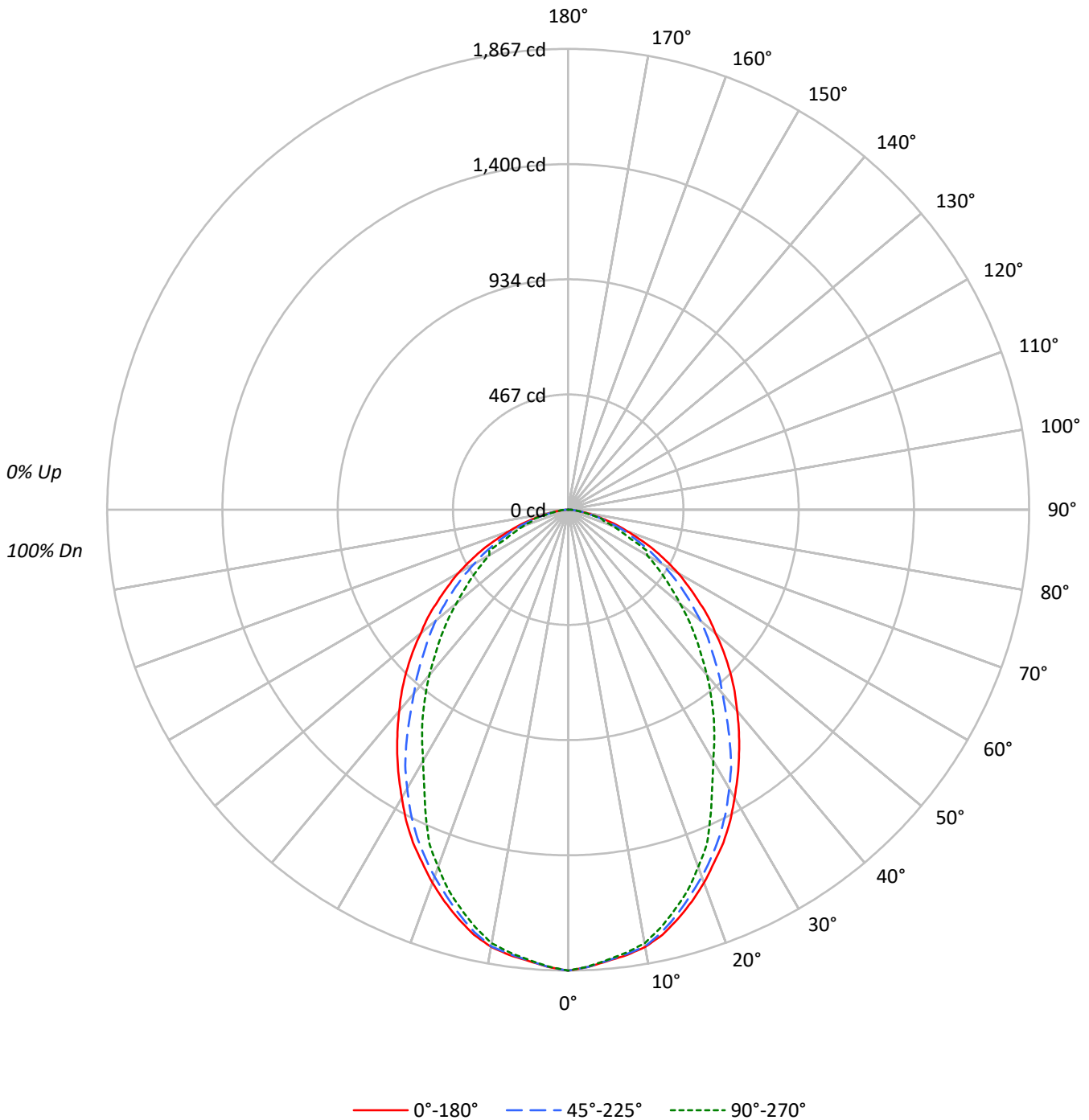
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2513	2513	2513
5°	2478	2476	2473
10°	2457	2454	2436
15°	2391	2367	2334
20°	2303	2266	2204
25°	2208	2160	2026
30°	2093	2026	1825
35°	1982	1872	1688
40°	1869	1706	1536
45°	1762	1577	1388
50°	1631	1464	1238
55°	1509	1327	1109
60°	1383	1185	994
65°	1216	1038	880
70°	1002	909	747
75°	797	696	729
80°	535	502	468
85°	333	400	466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1762 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.8	4.7
10°-20°	477.1	13.0
20°-30°	660.5	18.0
30°-40°	704.3	19.2
40°-50°	642.5	17.5
50°-60°	503.3	13.7
60°-70°	328.0	8.9
70°-80°	145.3	4.0
80°-90°	31.2	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°	1311.4	35.8
0°-40°	2015.6	55.0
0°-60°	3161.4	86.2
0°-90°	3666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3666.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1867	1867	1867	1867	1867	
5°	1835	1833	1833	1831	1831	174
15°	1716	1716	1699	1682	1675	482
25°	1488	1479	1455	1403	1364	683
35°	1207	1198	1140	1054	1028	754
45°	926	907	829	760	730	713
55°	643	624	566	499	473	577
65°	382	360	326	332	276	377
75°	153	142	134	127	140	164
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1867.4	1867.4	1867.4	1867.4	1867.4
2.5°	1854.5	1854.5	1854.5	1852.3	1852.3
5°	1835.0	1832.9	1832.9	1830.7	1830.7
7.5°	1819.9	1817.8	1815.6	1813.4	1809.1
10°	1798.3	1798.3	1796.2	1785.4	1783.2
12.5°	1763.8	1761.6	1753.0	1737.9	1733.6
15°	1716.3	1716.3	1699.0	1681.7	1675.3
17.5°	1664.5	1662.3	1640.7	1623.5	1614.8
20°	1608.3	1604.0	1582.4	1554.4	1539.3
22.5°	1545.7	1545.7	1519.8	1483.1	1468.0
25°	1487.5	1478.8	1455.1	1403.3	1364.4
27.5°	1420.5	1407.6	1381.7	1308.3	1262.9
30°	1347.1	1340.7	1303.9	1209.0	1174.4
32.5°	1278.0	1267.2	1228.4	1129.1	1101.0
35°	1206.8	1198.2	1139.9	1053.5	1027.6
37.5°	1135.6	1124.8	1051.4	982.3	949.9
40°	1064.3	1051.4	971.5	908.9	874.3
42.5°	997.4	980.1	902.4	835.5	796.6
45°	926.1	906.7	829.0	759.9	729.7
47.5°	854.9	837.6	766.4	695.2	660.6
50°	779.3	764.2	699.5	628.2	591.5
52.5°	716.7	693.0	630.4	559.1	528.9
55°	643.3	623.9	565.6	498.7	472.8
57.5°	576.4	557.0	503.0	440.4	418.8
60°	513.8	485.7	440.4	386.4	369.2
62.5°	444.7	423.1	384.3	338.9	360.5
65°	382.1	360.5	326.0	332.5	276.3
67.5°	313.0	302.2	272.0	241.8	233.2
70°	254.7	241.8	231.0	198.6	190.0
72.5°	202.9	190.0	174.9	157.6	151.1
75°	153.3	142.5	133.8	127.4	140.3
77.5°	105.8	101.5	95.0	88.5	86.4
80°	69.1	66.9	64.8	62.6	60.4
82.5°	41.0	41.0	41.0	41.0	41.0
85°	21.6	23.7	25.9	28.1	30.2
87.5°	13.0	13.0	15.1	17.3	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)