

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: P562401

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562401
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-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3949.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

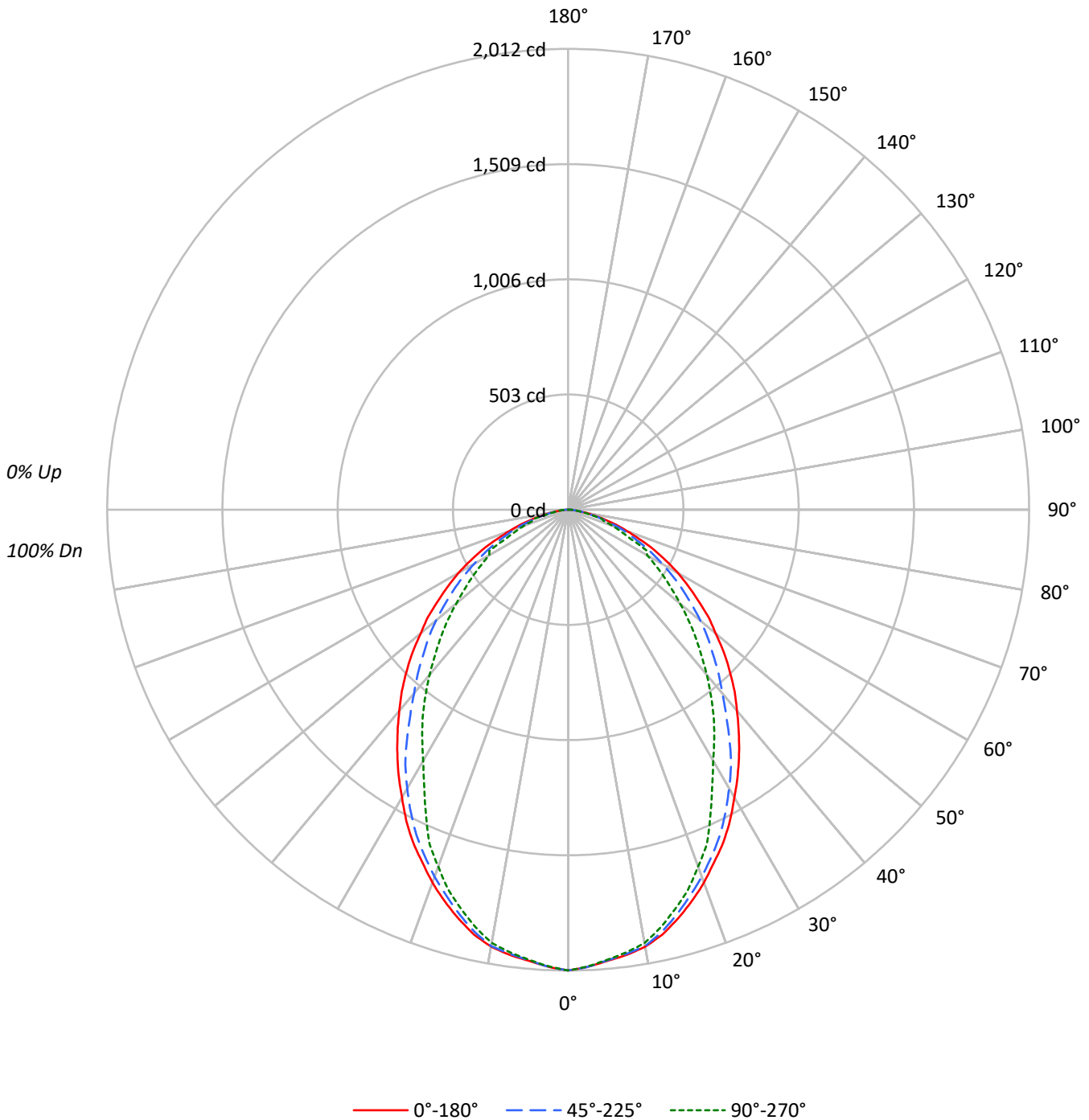
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2707	2707	2707
5°	2670	2667	2663
10°	2647	2643	2624
15°	2575	2549	2514
20°	2481	2441	2374
25°	2379	2327	2182
30°	2254	2182	1966
35°	2135	2017	1818
40°	2014	1838	1654
45°	1898	1699	1496
50°	1757	1577	1334
55°	1626	1429	1195
60°	1489	1277	1070
65°	1310	1118	948
70°	1079	979	805
75°	858	750	786
80°	576	541	504
85°	360	431	503

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1898 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.3	4.7
10°-20°	513.9	13.0
20°-30°	711.5	18.0
30°-40°	758.6	19.2
40°-50°	692.1	17.5
50°-60°	542.2	13.7
60°-70°	353.4	8.9
70°-80°	156.6	4.0
80°-90°	33.6	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°	1412.6	35.8
0°-40°	2171.2	55.0
0°-60°	3405.5	86.2
0°-90°	3949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2012	2012	2012	2012	2012	
5°	1977	1974	1974	1972	1972	188
15°	1849	1849	1830	1812	1805	520
25°	1602	1593	1567	1512	1470	736
35°	1300	1291	1228	1135	1107	813
45°	998	977	893	819	786	768
55°	693	672	609	537	509	622
65°	412	388	351	358	298	406
75°	165	154	144	137	151	177
85°	23	26	28	30	33	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2011.6	2011.6	2011.6	2011.6	2011.6
2.5°	1997.6	1997.6	1997.6	1995.3	1995.3
5°	1976.7	1974.4	1974.4	1972.0	1972.0
7.5°	1960.4	1958.1	1955.8	1953.4	1948.8
10°	1937.2	1937.2	1934.8	1923.2	1920.9
12.5°	1899.9	1897.6	1888.3	1872.0	1867.4
15°	1848.8	1848.8	1830.2	1811.6	1804.6
17.5°	1793.0	1790.6	1767.4	1748.8	1739.5
20°	1732.5	1727.9	1704.6	1674.4	1658.1
22.5°	1665.1	1665.1	1637.2	1597.6	1581.3
25°	1602.3	1593.0	1567.4	1511.6	1469.7
27.5°	1530.2	1516.2	1488.3	1409.3	1360.4
30°	1451.1	1444.1	1404.6	1302.3	1265.1
32.5°	1376.7	1365.1	1323.2	1216.2	1186.0
35°	1300.0	1290.7	1227.9	1134.8	1106.9
37.5°	1223.2	1211.6	1132.5	1058.1	1023.2
40°	1146.5	1132.5	1046.5	979.0	941.8
42.5°	1074.4	1055.8	972.1	900.0	858.1
45°	997.6	976.7	893.0	818.6	786.0
47.5°	920.9	902.3	825.6	748.8	711.6
50°	839.5	823.2	753.5	676.7	637.2
52.5°	772.1	746.5	679.0	602.3	569.8
55°	693.0	672.1	609.3	537.2	509.3
57.5°	620.9	600.0	541.8	474.4	451.1
60°	553.5	523.2	474.4	416.3	397.7
62.5°	479.1	455.8	413.9	365.1	388.4
65°	411.6	388.4	351.2	358.1	297.7
67.5°	337.2	325.6	293.0	260.5	251.2
70°	274.4	260.5	248.8	213.9	204.6
72.5°	218.6	204.6	188.4	169.8	162.8
75°	165.1	153.5	144.2	137.2	151.2
77.5°	114.0	109.3	102.3	95.3	93.0
80°	74.4	72.1	69.8	67.4	65.1
82.5°	44.2	44.2	44.2	44.2	44.2
85°	23.3	25.6	27.9	30.2	32.6
87.5°	14.0	14.0	16.3	18.6	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)