

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: P562075

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562075
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-40-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4506.0 lumens
Efficiency: N/A
Efficacy: 104.3 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

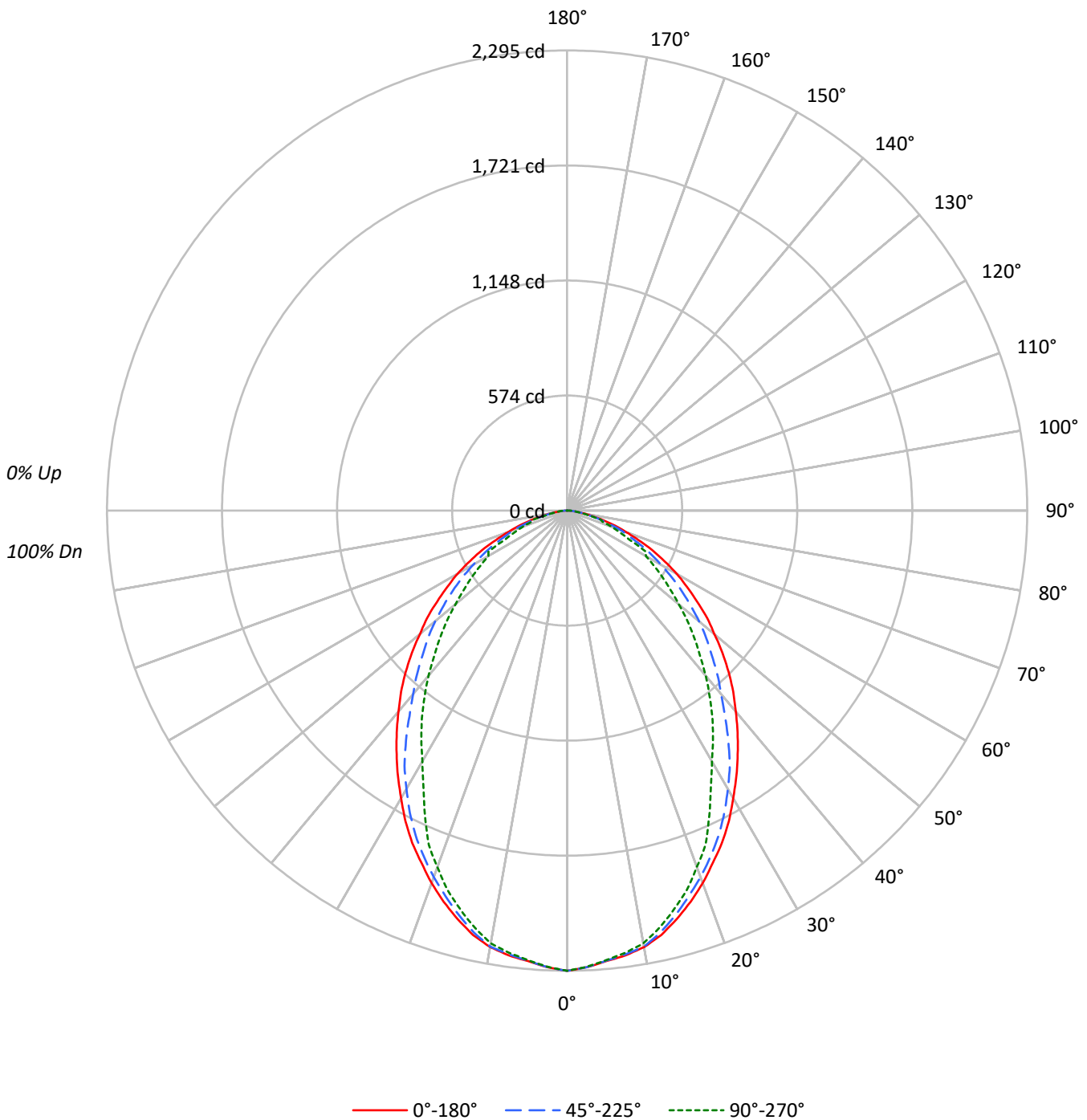
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3088	3088	3088
5°	3046	3043	3039
10°	3020	3016	2995
15°	2938	2909	2868
20°	2831	2785	2709
25°	2714	2655	2490
30°	2573	2490	2243
35°	2436	2301	2075
40°	2298	2097	1888
45°	2166	1939	1707
50°	2005	1800	1522
55°	1855	1631	1363
60°	1699	1457	1221
65°	1495	1276	1082
70°	1232	1117	919
75°	979	855	897
80°	658	617	576
85°	409	491	573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2166 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.7	4.7
10°-20°	586.4	13.0
20°-30°	811.8	18.0
30°-40°	865.6	19.2
40°-50°	789.7	17.5
50°-60°	618.7	13.7
60°-70°	403.2	8.9
70°-80°	178.6	4.0
80°-90°	38.3	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°	1611.8	35.8
0°-40°	2477.5	55.0
0°-60°	3885.8	86.2
0°-90°	4506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4506.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2295	2295	2295	2295	2295	
5°	2256	2253	2253	2250	2250	214
15°	2110	2110	2088	2067	2059	593
25°	1828	1818	1788	1725	1677	839
35°	1483	1473	1401	1295	1263	927
45°	1138	1114	1019	934	897	877
55°	791	767	695	613	581	709
65°	470	443	401	409	340	463
75°	188	175	164	157	172	202
85°	26	29	32	34	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2295.3	2295.3	2295.3	2295.3	2295.3
2.5°	2279.4	2279.4	2279.4	2276.7	2276.7
5°	2255.5	2252.8	2252.8	2250.2	2250.2
7.5°	2236.9	2234.3	2231.6	2229.0	2223.7
10°	2210.4	2210.4	2207.7	2194.5	2191.8
12.5°	2167.9	2165.3	2154.7	2136.1	2130.8
15°	2109.5	2109.5	2088.3	2067.1	2059.1
17.5°	2045.9	2043.2	2016.7	1995.4	1984.8
20°	1976.9	1971.6	1945.0	1910.5	1892.0
22.5°	1899.9	1899.9	1868.1	1823.0	1804.4
25°	1828.3	1817.7	1788.5	1724.8	1677.0
27.5°	1746.0	1730.1	1698.3	1608.0	1552.3
30°	1655.8	1647.8	1602.7	1486.0	1443.5
32.5°	1570.9	1557.6	1509.9	1387.8	1353.3
35°	1483.3	1472.7	1401.1	1294.9	1263.1
37.5°	1395.8	1382.5	1292.3	1207.4	1167.5
40°	1308.2	1292.3	1194.1	1117.1	1074.7
42.5°	1225.9	1204.7	1109.2	1026.9	979.1
45°	1138.4	1114.5	1019.0	934.0	896.9
47.5°	1050.8	1029.6	942.0	854.4	812.0
50°	957.9	939.3	859.7	772.2	727.1
52.5°	881.0	851.8	774.8	687.3	650.1
55°	790.7	766.9	695.2	613.0	581.1
57.5°	708.5	684.6	618.3	541.3	514.8
60°	631.5	597.0	541.3	475.0	453.8
62.5°	546.6	520.1	472.3	416.6	443.1
65°	469.7	443.1	400.7	408.6	339.7
67.5°	384.8	371.5	334.3	297.2	286.6
70°	313.1	297.2	283.9	244.1	233.5
72.5°	249.4	233.5	214.9	193.7	185.7
75°	188.4	175.1	164.5	156.6	172.5
77.5°	130.0	124.7	116.8	108.8	106.1
80°	84.9	82.3	79.6	77.0	74.3
82.5°	50.4	50.4	50.4	50.4	50.4
85°	26.5	29.2	31.8	34.5	37.1
87.5°	15.9	15.9	18.6	21.2	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)