

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: P562676

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562676
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-35-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4726.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

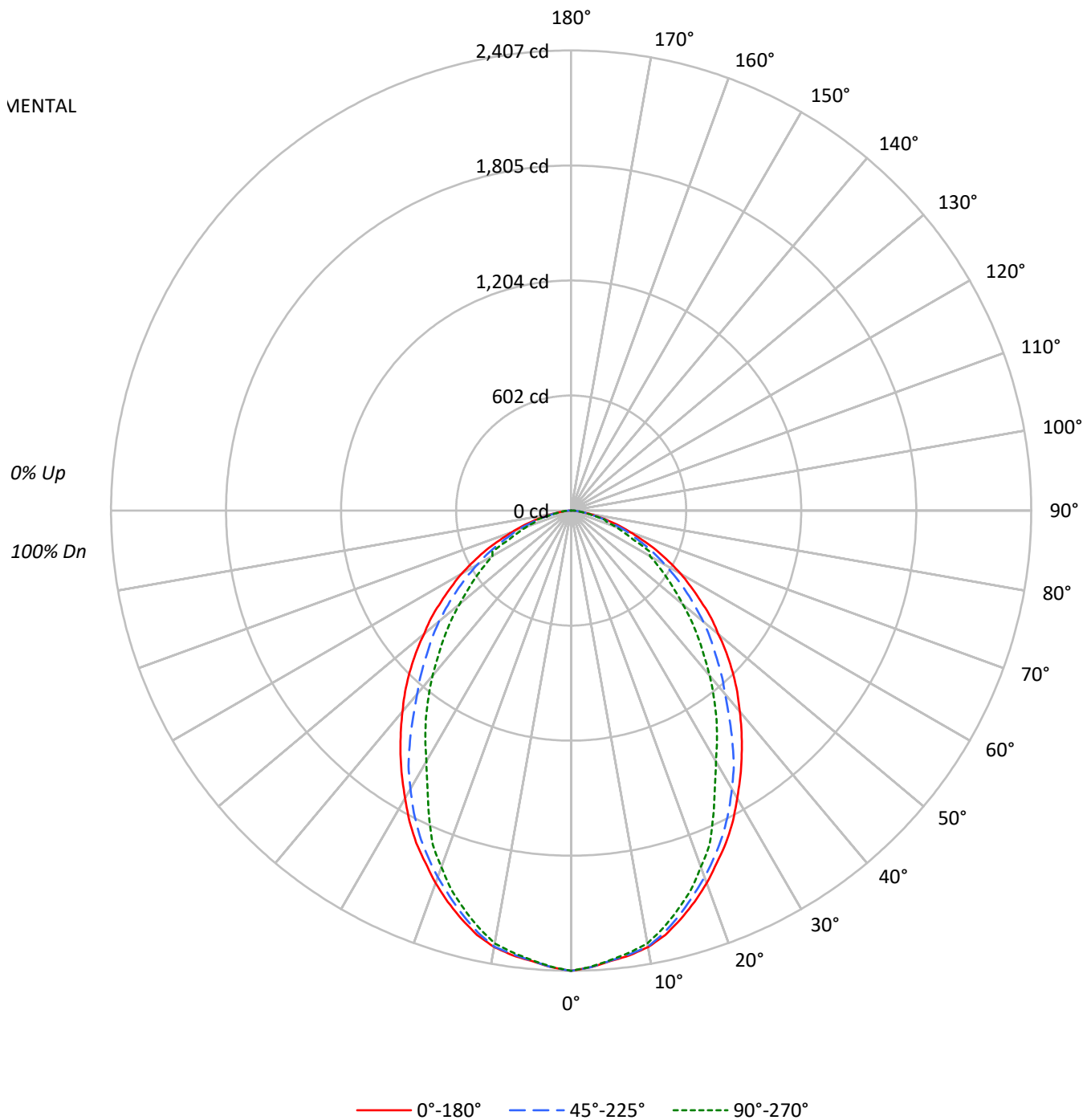
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3239	3239	3239
5°	3195	3191	3187
10°	3167	3164	3141
15°	3082	3051	3008
20°	2969	2921	2841
25°	2847	2785	2611
30°	2698	2612	2352
35°	2555	2414	2176
40°	2410	2200	1980
45°	2272	2034	1790
50°	2103	1887	1596
55°	1946	1711	1430
60°	1783	1528	1281
65°	1568	1338	1134
70°	1292	1172	963
75°	1027	897	940
80°	690	647	604
85°	429	516	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2272 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	4.7
10°-20°	615.0	13.0
20°-30°	851.4	18.0
30°-40°	907.9	19.2
40°-50°	828.2	17.5
50°-60°	648.9	13.7
60°-70°	422.9	8.9
70°-80°	187.4	4.0
80°-90°	40.2	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°	1690.5	35.8
0°-40°	2598.4	55.0
0°-60°	4075.5	86.2
0°-90°	4726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2407	2407	2407	2407	2407	
5°	2366	2363	2363	2360	2360	225
15°	2212	2212	2190	2168	2160	622
25°	1918	1906	1876	1809	1759	880
35°	1556	1545	1470	1358	1325	973
45°	1194	1169	1069	980	941	920
55°	829	804	729	643	610	744
65°	493	465	420	429	356	485
75°	198	184	173	164	181	212
85°	28	31	33	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2407.4	2407.4	2407.4	2407.4	2407.4
2.5°	2390.7	2390.7	2390.7	2387.9	2387.9
5°	2365.6	2362.8	2362.8	2360.0	2360.0
7.5°	2346.1	2343.4	2340.6	2337.8	2332.2
10°	2318.3	2318.3	2315.5	2301.6	2298.8
12.5°	2273.8	2271.0	2259.9	2240.4	2234.8
15°	2212.5	2212.5	2190.3	2168.0	2159.7
17.5°	2145.8	2143.0	2115.1	2092.9	2081.7
20°	2073.4	2067.8	2040.0	2003.8	1984.3
22.5°	1992.7	1992.7	1959.3	1912.0	1892.5
25°	1917.5	1906.4	1875.8	1809.0	1758.9
27.5°	1831.3	1814.6	1781.2	1686.5	1628.1
30°	1736.6	1728.3	1681.0	1558.5	1514.0
32.5°	1647.6	1633.7	1583.6	1455.5	1419.4
35°	1555.7	1544.6	1469.5	1358.1	1324.7
37.5°	1463.9	1450.0	1355.4	1266.3	1224.6
40°	1372.1	1355.4	1252.4	1171.7	1127.1
42.5°	1285.8	1263.5	1163.3	1077.1	1027.0
45°	1193.9	1168.9	1068.7	979.6	940.7
47.5°	1102.1	1079.8	988.0	896.2	851.6
50°	1004.7	985.2	901.7	809.9	762.6
52.5°	924.0	893.4	812.7	720.8	681.9
55°	829.4	804.3	729.2	642.9	609.5
57.5°	743.1	718.0	648.5	567.7	539.9
60°	662.4	626.2	567.7	498.2	475.9
62.5°	573.3	545.5	495.4	436.9	464.8
65°	492.6	464.8	420.2	428.6	356.2
67.5°	403.5	389.6	350.7	311.7	300.6
70°	328.4	311.7	297.8	256.0	244.9
72.5°	261.6	244.9	225.4	203.2	194.8
75°	197.6	183.7	172.6	164.2	180.9
77.5°	136.4	130.8	122.5	114.1	111.3
80°	89.1	86.3	83.5	80.7	77.9
82.5°	52.9	52.9	52.9	52.9	52.9
85°	27.8	30.6	33.4	36.2	39.0
87.5°	16.7	16.7	19.5	22.3	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)