

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: P562108

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562108
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-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4240.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

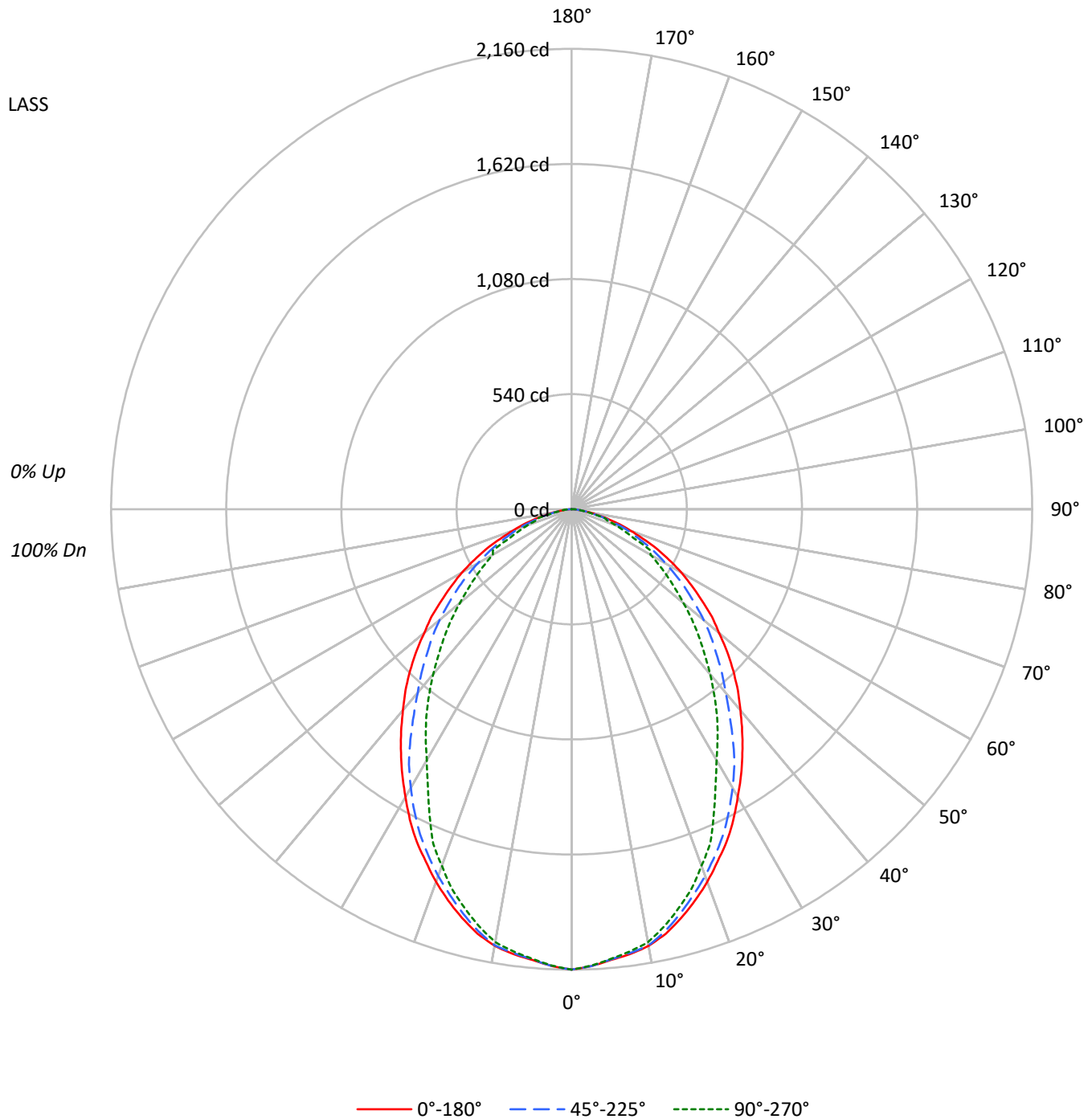
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	2906	2906	2906
5°	2866	2863	2860
10°	2842	2838	2818
15°	2765	2737	2699
20°	2664	2621	2549
25°	2554	2498	2343
30°	2421	2343	2110
35°	2293	2166	1952
40°	2162	1974	1776
45°	2038	1824	1606
50°	1887	1693	1432
55°	1746	1535	1283
60°	1599	1371	1149
65°	1407	1200	1018
70°	1159	1051	864
75°	922	805	844
80°	619	580	542
85°	386	463	540

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2038 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.0	4.7
10°-20°	551.8	13.0
20°-30°	763.9	18.0
30°-40°	814.5	19.2
40°-50°	743.1	17.5
50°-60°	582.1	13.7
60°-70°	379.4	8.9
70°-80°	168.1	4.0
80°-90°	36.1	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°	1516.7	35.8
0°-40°	2331.2	55.0
0°-60°	3656.4	86.2
0°-90°	4240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2160	2160	2160	2160	2160	
5°	2122	2120	2120	2117	2117	201
15°	1985	1985	1965	1945	1938	558
25°	1720	1710	1683	1623	1578	790
35°	1396	1386	1318	1218	1188	873
45°	1071	1049	959	879	844	825
55°	744	722	654	577	547	667
65°	442	417	377	384	320	436
75°	177	165	155	147	162	190
85°	25	28	30	32	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2159.8	2159.8	2159.8	2159.8	2159.8
2.5°	2144.8	2144.8	2144.8	2142.3	2142.3
5°	2122.3	2119.8	2119.8	2117.4	2117.4
7.5°	2104.9	2102.4	2099.9	2097.4	2092.4
10°	2079.9	2079.9	2077.4	2064.9	2062.4
12.5°	2039.9	2037.5	2027.5	2010.0	2005.0
15°	1985.0	1985.0	1965.0	1945.1	1937.6
17.5°	1925.1	1922.6	1897.6	1877.7	1867.7
20°	1860.2	1855.2	1830.2	1797.8	1780.3
22.5°	1787.8	1787.8	1757.8	1715.4	1697.9
25°	1720.3	1710.4	1682.9	1623.0	1578.0
27.5°	1642.9	1628.0	1598.0	1513.1	1460.7
30°	1558.1	1550.6	1508.1	1398.3	1358.3
32.5°	1478.2	1465.7	1420.7	1305.9	1273.4
35°	1395.8	1385.8	1318.4	1218.5	1188.5
37.5°	1313.4	1300.9	1216.0	1136.1	1098.6
40°	1231.0	1216.0	1123.6	1051.2	1011.2
42.5°	1153.6	1133.6	1043.7	966.3	921.3
45°	1071.2	1048.7	958.8	878.9	843.9
47.5°	988.8	968.8	886.4	804.0	764.0
50°	901.4	883.9	809.0	726.6	684.1
52.5°	829.0	801.5	729.1	646.7	611.7
55°	744.1	721.6	654.2	576.8	546.8
57.5°	666.7	644.2	581.8	509.4	484.4
60°	594.3	561.8	509.4	446.9	427.0
62.5°	514.4	489.4	444.4	392.0	417.0
65°	441.9	417.0	377.0	384.5	319.6
67.5°	362.0	349.6	314.6	279.7	269.7
70°	294.6	279.7	267.2	229.7	219.7
72.5°	234.7	219.7	202.2	182.3	174.8
75°	177.3	164.8	154.8	147.3	162.3
77.5°	122.3	117.4	109.9	102.4	99.9
80°	79.9	77.4	74.9	72.4	69.9
82.5°	47.4	47.4	47.4	47.4	47.4
85°	25.0	27.5	30.0	32.5	35.0
87.5°	15.0	15.0	17.5	20.0	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)