

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: P561854

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561854
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-12-4-LD4-2STD-50-UNV-80-97-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 5673.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

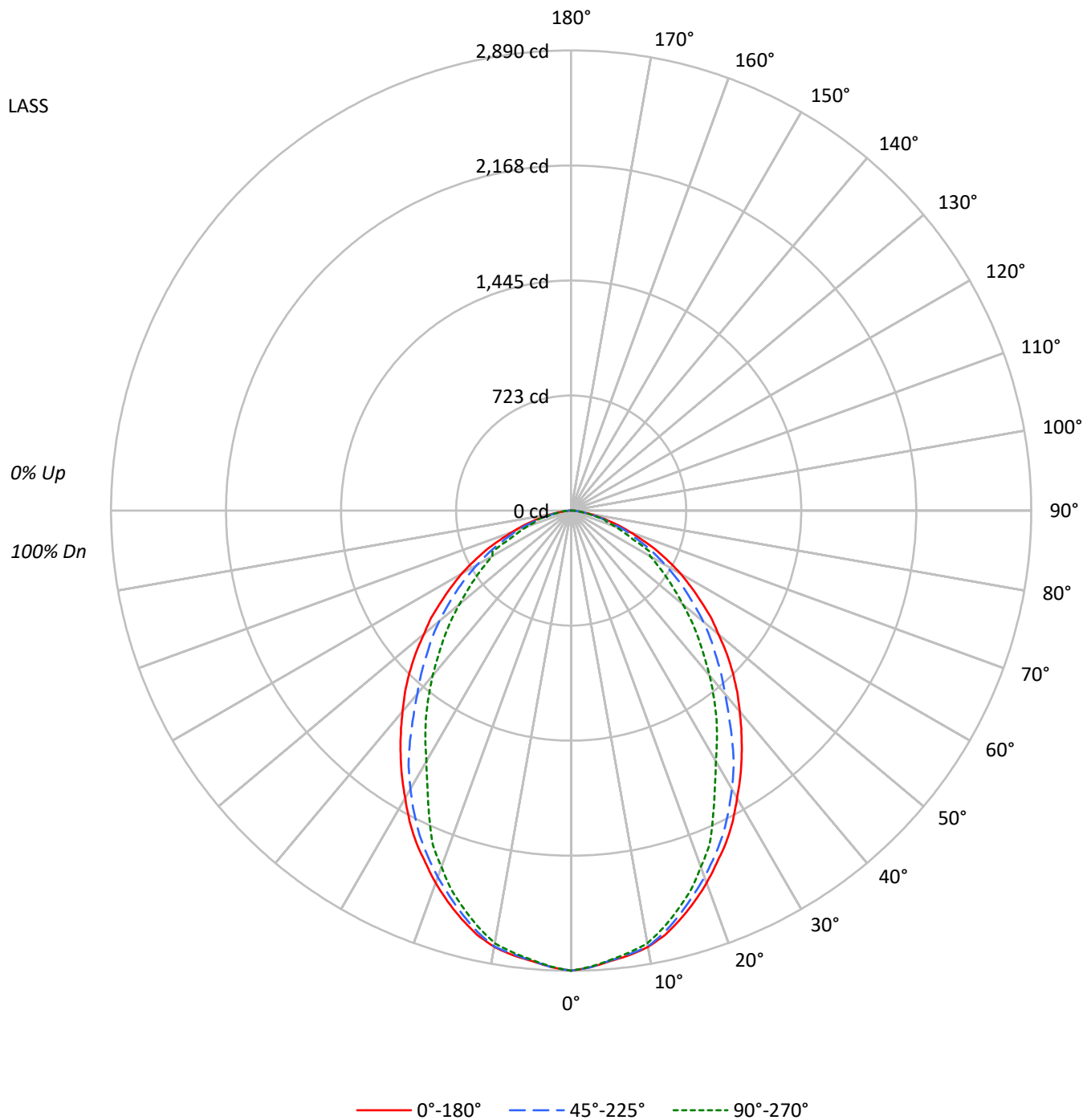
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7776	7776	7776
5°	7670	7662	7653
10°	7604	7595	7540
15°	7399	7325	7222
20°	7127	7013	6821
25°	6834	6686	6269
30°	6477	6270	5647
35°	6135	5795	5224
40°	5786	5281	4753
45°	5454	4882	4297
50°	5049	4531	3832
55°	4670	4107	3432
60°	4279	3668	3075
65°	3765	3212	2723
70°	3102	2813	2313
75°	2466	2153	2257
80°	1657	1553	1449
85°	1031	1238	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5454 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.0	4.7
10°-20°	738.2	13.0
20°-30°	1022.0	18.0
30°-40°	1089.8	19.2
40°-50°	994.2	17.5
50°-60°	778.9	13.7
60°-70°	507.6	8.9
70°-80°	224.9	4.0
80°-90°	48.3	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°	2029.3	35.8
0°-40°	3119.1	55.0
0°-60°	4892.2	86.2
0°-90°	5673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2890	2890	2890	2890	2890	
5°	2840	2836	2836	2833	2833	270
15°	2656	2656	2629	2602	2592	747
25°	2302	2288	2252	2172	2111	1057
35°	1868	1854	1764	1630	1590	1168
45°	1433	1403	1283	1176	1129	1104
55°	996	966	875	772	732	893
65°	591	558	504	514	428	583
75°	237	220	207	197	217	254
85°	33	37	40	43	47	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2889.8	2889.8	2889.8	2889.8	2889.8
2.5°	2869.7	2869.7	2869.7	2866.4	2866.4
5°	2839.6	2836.3	2836.3	2833.0	2833.0
7.5°	2816.3	2812.9	2809.6	2806.2	2799.6
10°	2782.8	2782.8	2779.5	2762.8	2759.5
12.5°	2729.4	2726.1	2712.7	2689.3	2682.6
15°	2655.9	2655.9	2629.2	2602.4	2592.4
17.5°	2575.7	2572.4	2539.0	2512.2	2498.9
20°	2488.9	2482.2	2448.8	2405.3	2382.0
22.5°	2392.0	2392.0	2351.9	2295.1	2271.7
25°	2301.8	2288.4	2251.7	2171.5	2111.4
27.5°	2198.2	2178.2	2138.1	2024.5	1954.3
30°	2084.6	2074.6	2017.8	1870.8	1817.4
32.5°	1977.7	1961.0	1900.9	1747.2	1703.8
35°	1867.5	1854.1	1763.9	1630.3	1590.2
37.5°	1757.2	1740.5	1626.9	1520.0	1469.9
40°	1647.0	1626.9	1503.3	1406.5	1353.0
42.5°	1543.4	1516.7	1396.4	1292.9	1232.7
45°	1433.2	1403.1	1282.8	1175.9	1129.2
47.5°	1322.9	1296.2	1186.0	1075.7	1022.3
50°	1206.0	1182.6	1082.4	972.2	915.4
52.5°	1109.1	1072.4	975.5	865.3	818.5
55°	995.5	965.5	875.3	771.7	731.6
57.5°	892.0	861.9	778.4	681.5	648.1
60°	795.1	751.7	681.5	598.0	571.3
62.5°	688.2	654.8	594.7	524.5	557.9
65°	591.3	557.9	504.5	514.5	427.6
67.5°	484.4	467.7	420.9	374.2	360.8
70°	394.2	374.2	357.5	307.3	294.0
72.5°	314.0	294.0	270.6	243.9	233.9
75°	237.2	220.5	207.1	197.1	217.1
77.5°	163.7	157.0	147.0	137.0	133.6
80°	106.9	103.6	100.2	96.9	93.5
82.5°	63.5	63.5	63.5	63.5	63.5
85°	33.4	36.7	40.1	43.4	46.8
87.5°	20.0	20.0	23.4	26.7	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)