

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: P590908

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-35-UNV-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7459.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

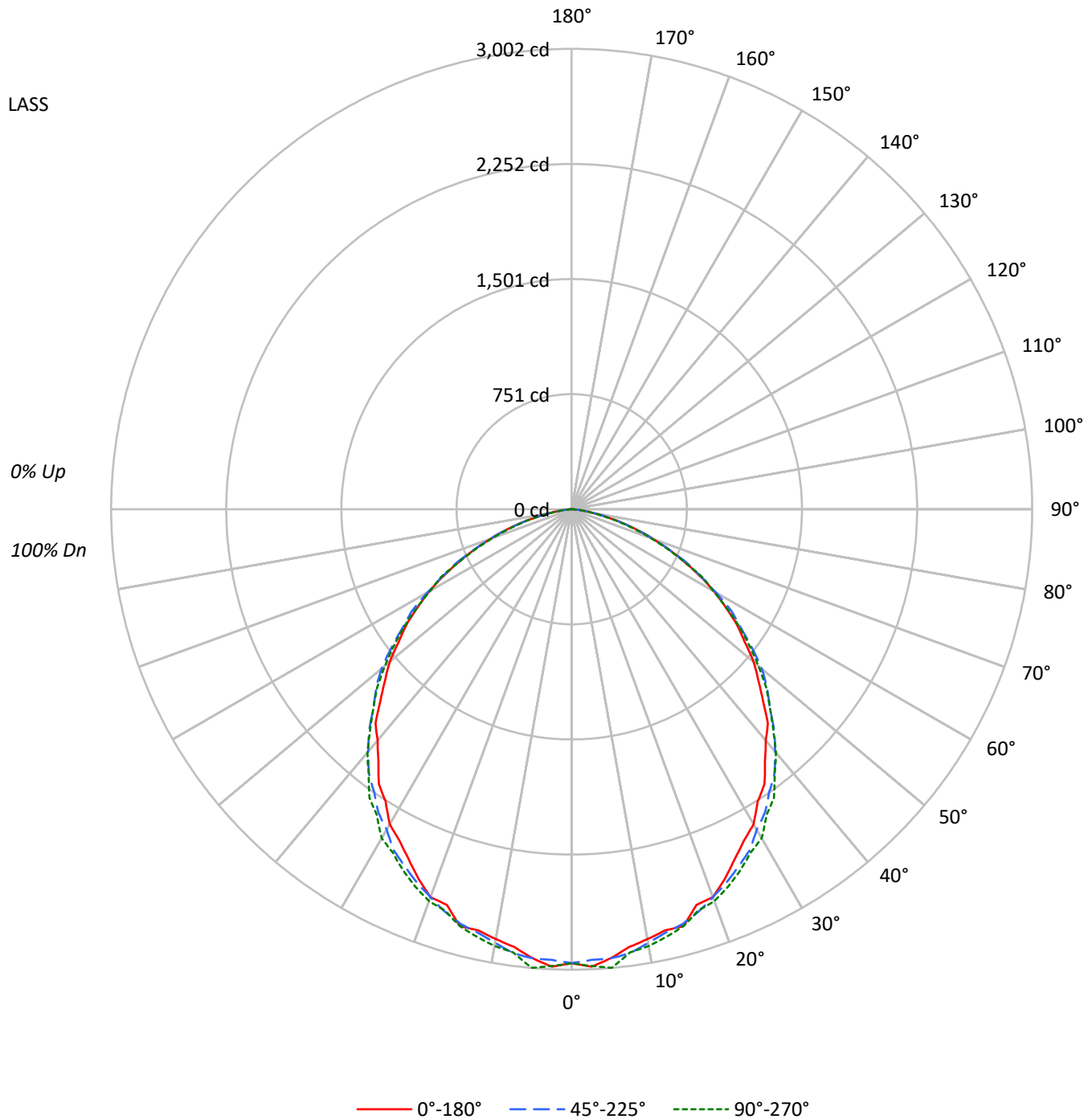
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7964	7964	7964
5°	7938	7941	8108
10°	7777	7845	7900
15°	7838	7796	7840
20°	7706	7706	7788
25°	7469	7632	7716
30°	7366	7496	7695
35°	7193	7381	7547
40°	6913	7246	7278
45°	6704	6943	6952
50°	6484	6777	6647
55°	6178	6298	6253
60°	5777	5835	5730
65°	5151	5282	5114
70°	4419	4434	4312
75°	3501	3492	3357
80°	2345	2280	2191
85°	1275	1263	1179

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7121 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.4	3.7
10°-20°	789.0	10.6
20°-30°	1182.1	15.8
30°-40°	1401.0	18.8
40°-50°	1403.6	18.8
50°-60°	1191.4	16.0
60°-70°	803.3	10.8
70°-80°	353.0	4.7
80°-90°	57.4	0.8
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°	2249.4	30.2
0°-40°	3650.4	48.9
0°-60°	6245.4	83.7
0°-90°	7459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2960	2960	2960	2960	2960	
5°	2938	2932	2940	2931	3002	277
15°	2814	2781	2798	2813	2814	784
25°	2516	2529	2570	2604	2599	1163
35°	2190	2196	2247	2299	2297	1359
45°	1762	1794	1824	1871	1827	1363
55°	1317	1308	1342	1333	1333	1171
65°	809	798	830	798	803	805
75°	337	330	336	312	323	361
85°	41	40	41	40	38	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2959.5	2959.5	2959.5	2959.5	2959.5
2.5°	2985.1	2962.6	2941.6	2966.0	2980.9
5°	2938.5	2931.6	2939.7	2930.9	3001.6
7.5°	2878.2	2904.5	2919.8	2910.2	2914.5
10°	2846.1	2836.9	2870.9	2894.6	2891.1
12.5°	2811.7	2825.4	2827.3	2852.9	2855.2
15°	2813.6	2781.1	2798.3	2812.8	2814.0
17.5°	2704.3	2739.4	2751.3	2784.5	2743.3
20°	2690.9	2665.3	2690.9	2724.9	2719.6
22.5°	2608.8	2580.1	2635.1	2665.3	2663.4
25°	2515.5	2529.3	2570.5	2604.2	2598.8
27.5°	2433.7	2449.8	2508.6	2554.9	2525.1
30°	2370.7	2362.7	2412.3	2453.6	2476.5
32.5°	2258.0	2287.0	2345.1	2386.0	2364.2
35°	2189.6	2196.1	2246.9	2298.9	2297.3
37.5°	2070.0	2100.1	2171.6	2186.1	2172.8
40°	1967.9	1998.1	2062.7	2078.4	2071.9
42.5°	1892.7	1898.0	1953.4	1971.4	1942.7
45°	1761.6	1794.4	1824.3	1871.3	1826.9
47.5°	1650.0	1665.3	1729.5	1742.1	1718.8
50°	1548.7	1554.1	1618.7	1603.0	1587.7
52.5°	1421.5	1444.0	1480.3	1477.3	1459.3
55°	1316.8	1308.0	1342.4	1333.2	1332.8
57.5°	1191.1	1206.4	1234.6	1220.1	1196.8
60°	1073.4	1073.8	1084.1	1067.7	1064.6
62.5°	942.3	946.9	949.2	928.9	961.8
65°	809.0	798.3	829.6	797.9	803.2
67.5°	686.3	691.6	688.6	668.7	676.4
70°	561.7	568.6	563.6	541.1	548.0
72.5°	447.8	439.4	444.8	416.5	429.5
75°	336.7	329.8	335.9	312.2	322.9
77.5°	229.3	234.6	230.8	218.2	225.5
80°	151.3	147.1	147.1	139.9	141.4
82.5°	88.3	84.1	82.9	80.6	84.1
85°	41.3	40.1	40.9	39.7	38.2
87.5°	14.9	15.3	15.3	14.5	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)