

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: P590919

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590919
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-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7034.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

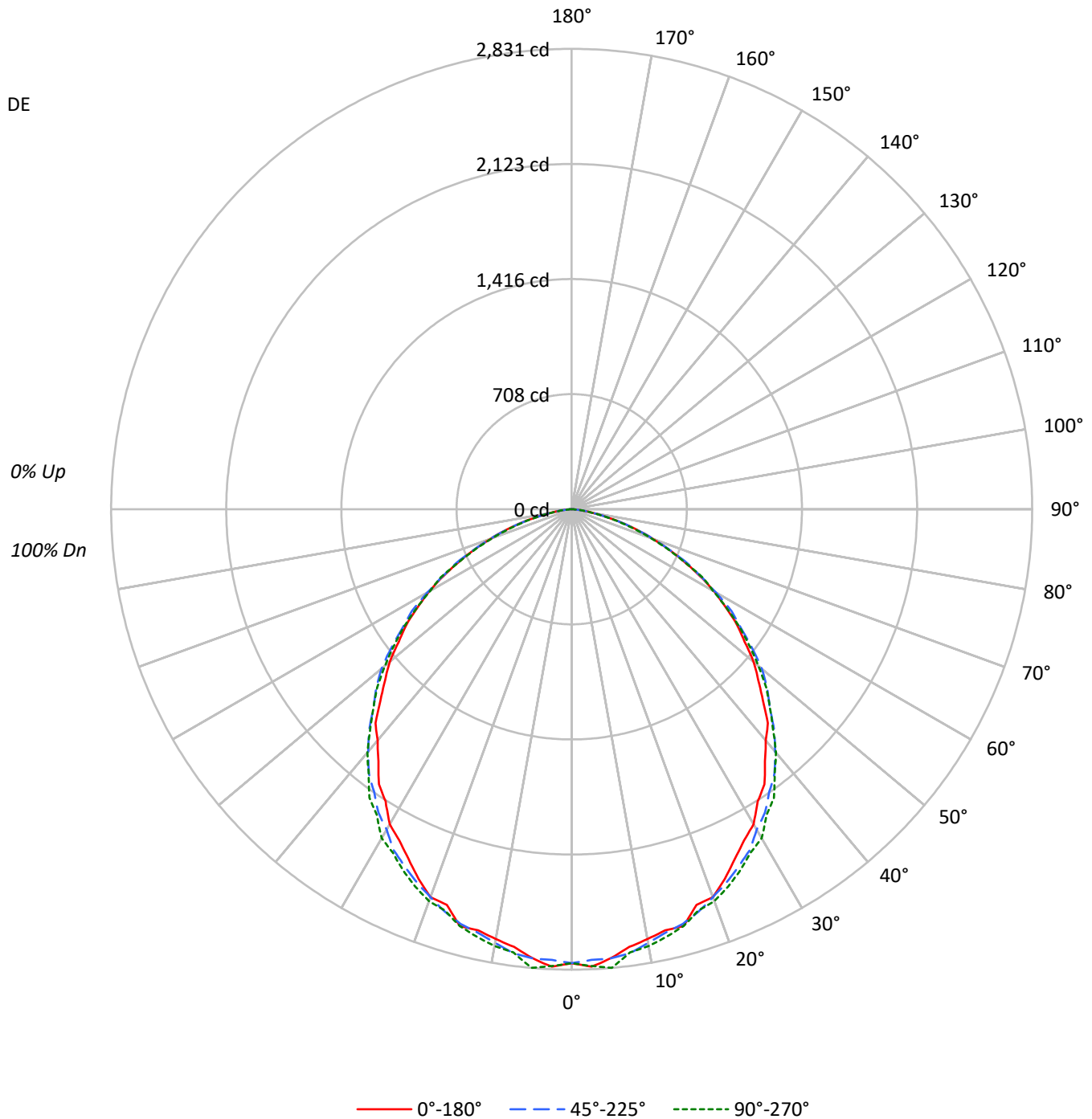
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7510	7510	7510
5°	7485	7488	7646
10°	7334	7398	7450
15°	7392	7351	7393
20°	7267	7267	7344
25°	7043	7198	7277
30°	6947	7069	7257
35°	6783	6961	7117
40°	6519	6833	6863
45°	6322	6547	6556
50°	6114	6390	6268
55°	5826	5939	5897
60°	5448	5502	5403
65°	4858	4981	4823
70°	4168	4182	4065
75°	3301	3293	3166
80°	2211	2149	2066
85°	1201	1192	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6715 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.5	3.7
10°-20°	744.0	10.6
20°-30°	1114.7	15.8
30°-40°	1321.2	18.8
40°-50°	1323.6	18.8
50°-60°	1123.5	16.0
60°-70°	757.5	10.8
70°-80°	332.8	4.7
80°-90°	54.1	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°	2121.3	30.2
0°-40°	3442.5	48.9
0°-60°	5889.6	83.7
0°-90°	7034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7034.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2791	2791	2791	2791	2791	
5°	2771	2765	2772	2764	2831	261
15°	2653	2623	2639	2652	2654	739
25°	2372	2385	2424	2456	2451	1097
35°	2065	2071	2119	2168	2166	1282
45°	1661	1692	1720	1765	1723	1285
55°	1242	1234	1266	1257	1257	1105
65°	763	753	782	752	758	759
75°	318	311	317	294	304	340
85°	39	38	39	38	36	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2790.9	2790.9	2790.9	2790.9	2790.9
2.5°	2815.1	2793.8	2774.0	2797.0	2811.1
5°	2771.1	2764.6	2772.2	2763.9	2830.6
7.5°	2714.2	2739.0	2753.4	2744.4	2748.4
10°	2683.9	2675.2	2707.3	2729.7	2726.4
12.5°	2651.5	2664.4	2666.2	2690.4	2692.5
15°	2653.3	2622.6	2638.8	2652.5	2653.6
17.5°	2550.2	2583.4	2594.5	2625.9	2587.0
20°	2537.6	2513.4	2537.6	2569.7	2564.6
22.5°	2460.1	2433.1	2485.0	2513.4	2511.6
25°	2372.2	2385.2	2424.1	2455.8	2450.7
27.5°	2295.1	2310.2	2365.7	2409.3	2381.2
30°	2235.6	2228.0	2274.9	2313.8	2335.4
32.5°	2129.3	2156.7	2211.5	2250.0	2229.5
35°	2064.8	2070.9	2118.9	2167.9	2166.4
37.5°	1952.0	1980.5	2047.9	2061.6	2049.0
40°	1855.8	1884.3	1945.2	1959.9	1953.8
42.5°	1784.8	1789.9	1842.1	1859.0	1832.0
45°	1661.2	1692.2	1720.3	1764.6	1722.8
47.5°	1556.0	1570.4	1630.9	1642.8	1620.9
50°	1460.5	1465.5	1526.4	1511.7	1497.3
52.5°	1340.5	1361.8	1396.0	1393.1	1376.2
55°	1241.8	1233.5	1265.9	1257.3	1256.9
57.5°	1123.2	1137.6	1164.3	1150.6	1128.6
60°	1012.2	1012.6	1022.3	1006.8	1003.9
62.5°	888.6	892.9	895.1	876.0	907.0
65°	762.9	752.8	782.3	752.4	757.5
67.5°	647.2	652.2	649.4	630.6	637.8
70°	529.7	536.2	531.5	510.3	516.7
72.5°	422.3	414.4	419.4	392.8	405.0
75°	317.5	311.0	316.7	294.4	304.5
77.5°	216.2	221.3	217.7	205.8	212.6
80°	142.7	138.7	138.7	131.9	133.3
82.5°	83.2	79.3	78.2	76.0	79.3
85°	38.9	37.8	38.6	37.5	36.0
87.5°	14.1	14.4	14.4	13.7	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)