

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: P590981

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590981
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-50-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7455.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

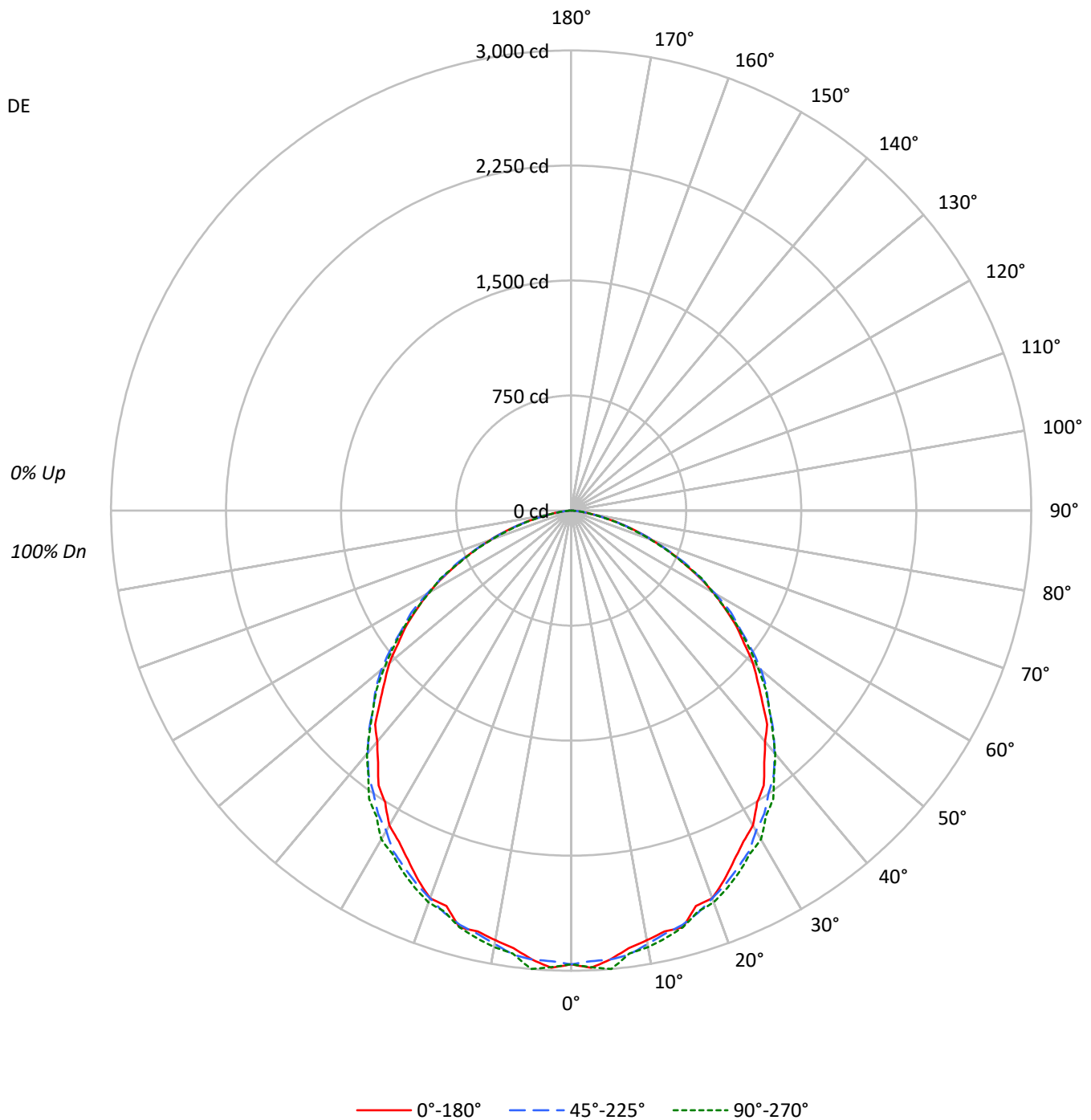
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590981

CATALOG NUMBER: FSR-24-2-LD4-4STD-50-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590981

CATALOG NUMBER: FSR-24-2-LD4-4STD-50-UNV-82-84-EDD

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°	7960	7960	7960
5°	7934	7937	8104
10°	7773	7841	7896
15°	7834	7792	7835
20°	7702	7702	7784
25°	7465	7628	7712
30°	7362	7492	7691
35°	7189	7377	7543
40°	6909	7242	7274
45°	6700	6939	6949
50°	6480	6773	6643
55°	6175	6295	6250
60°	5774	5831	5726
65°	5148	5279	5112
70°	4417	4432	4309
75°	3499	3490	3355
80°	2343	2278	2190
85°	1272	1263	1179

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7118 cd/sqm



TEST NUMBER: P590981

CATALOG NUMBER: FSR-24-2-LD4-4STD-50-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.2	3.7
10°-20°	788.6	10.6
20°-30°	1181.4	15.8
30°-40°	1400.2	18.8
40°-50°	1402.8	18.8
50°-60°	1190.8	16.0
60°-70°	802.8	10.8
70°-80°	352.8	4.7
80°-90°	57.3	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°	2248.3	30.2
0°-40°	3648.5	48.9
0°-60°	6242.1	83.7
0°-90°	7455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7455.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2958	2958	2958	2958	2958	
5°	2937	2930	2938	2929	3000	277
15°	2812	2780	2797	2811	2812	783
25°	2514	2528	2569	2603	2597	1162
35°	2188	2195	2246	2298	2296	1359
45°	1761	1794	1823	1870	1826	1362
55°	1316	1307	1342	1332	1332	1171
65°	808	798	829	797	803	804
75°	336	330	336	312	323	361
85°	41	40	41	40	38	60
90°	0	0	0	0	0	



TEST NUMBER: P590981

CATALOG NUMBER: FSR-24-2-LD4-4STD-50-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2958.0	2958.0	2958.0	2958.0	2958.0
2.5°	2983.5	2961.0	2940.0	2964.4	2979.3
5°	2937.0	2930.1	2938.1	2929.3	3000.0
7.5°	2876.6	2903.0	2918.2	2908.7	2912.9
10°	2844.5	2835.4	2869.4	2893.0	2889.6
12.5°	2810.2	2823.9	2825.8	2851.4	2853.7
15°	2812.1	2779.6	2796.8	2811.3	2812.4
17.5°	2702.8	2738.0	2749.8	2783.0	2741.8
20°	2689.5	2663.9	2689.5	2723.5	2718.1
22.5°	2607.4	2578.7	2633.7	2663.9	2662.0
25°	2514.2	2527.9	2569.2	2602.8	2597.4
27.5°	2432.4	2448.5	2507.3	2553.5	2523.7
30°	2369.4	2361.4	2411.0	2452.3	2475.2
32.5°	2256.8	2285.8	2343.8	2384.7	2362.9
35°	2188.4	2194.9	2245.7	2297.6	2296.1
37.5°	2068.9	2099.0	2170.4	2185.0	2171.6
40°	1966.9	1997.0	2061.6	2077.3	2070.8
42.5°	1891.6	1897.0	1952.4	1970.3	1941.7
45°	1760.6	1793.5	1823.3	1870.3	1826.0
47.5°	1649.1	1664.4	1728.6	1741.2	1717.9
50°	1547.9	1553.3	1617.8	1602.1	1586.9
52.5°	1420.7	1443.3	1479.6	1476.5	1458.5
55°	1316.1	1307.3	1341.7	1332.5	1332.1
57.5°	1190.4	1205.7	1234.0	1219.5	1196.2
60°	1072.8	1073.2	1083.5	1067.1	1064.0
62.5°	941.8	946.4	948.7	928.4	961.3
65°	808.5	797.8	829.1	797.4	802.8
67.5°	685.9	691.3	688.2	668.4	676.0
70°	561.4	568.3	563.3	540.8	547.7
72.5°	447.6	439.2	444.6	416.3	429.3
75°	336.5	329.6	335.7	312.0	322.7
77.5°	229.2	234.5	230.7	218.1	225.3
80°	151.2	147.0	147.0	139.8	141.3
82.5°	88.2	84.0	82.9	80.6	84.0
85°	41.2	40.1	40.9	39.7	38.2
87.5°	14.9	15.3	15.3	14.5	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)