

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: P590753

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590753
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-LD4-4HI-40-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7756.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

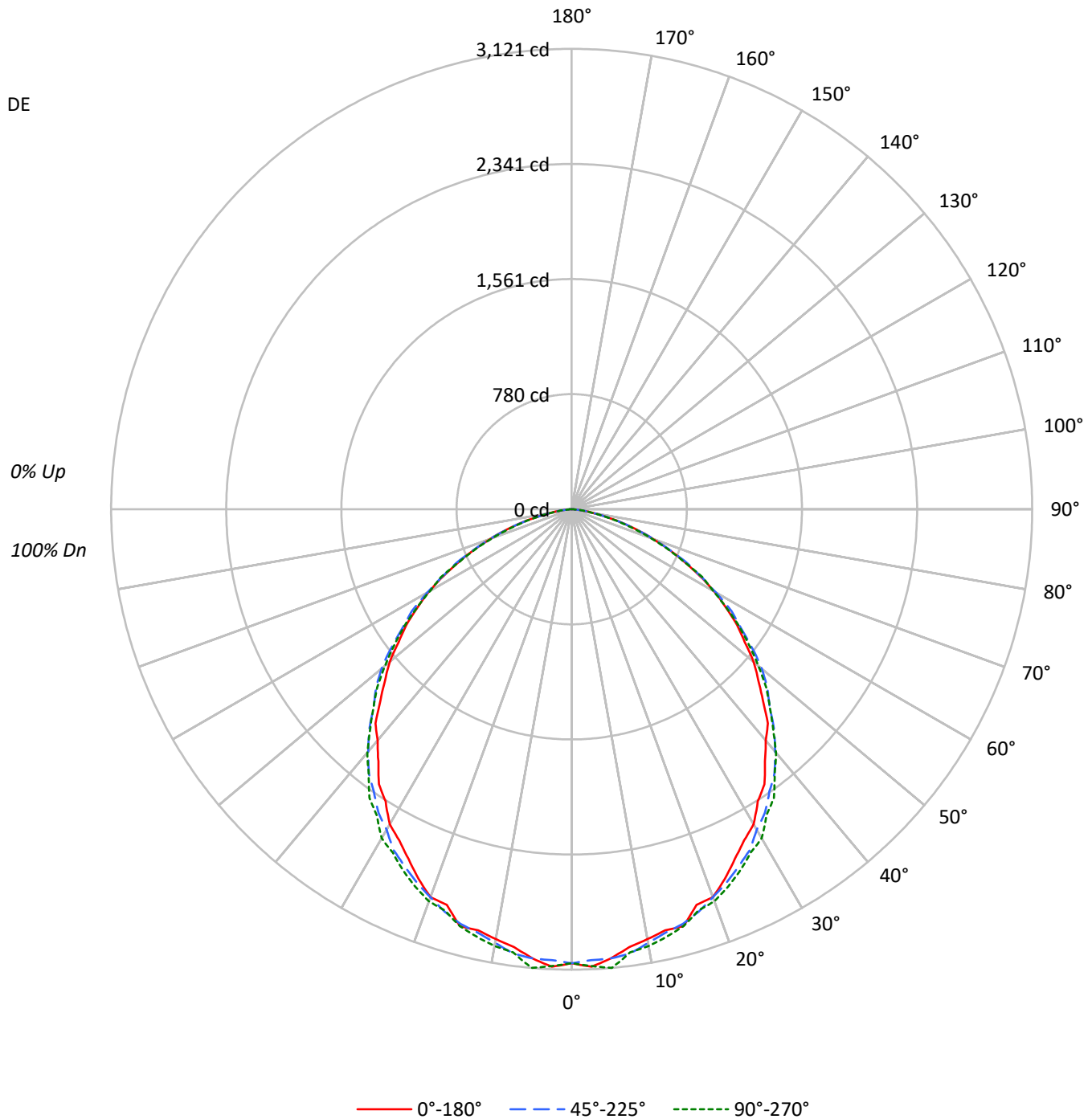
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						100														
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86						86														
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73						73														
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						62														
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53						53														
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46						46														
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41						41														
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36						36														
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32						32														
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29						29														
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26						26														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8281	8281	8281
5°	8254	8257	8431
10°	8087	8157	8215
15°	8150	8106	8152
20°	8013	8013	8098
25°	7766	7936	8024
30°	7660	7794	8002
35°	7479	7675	7847
40°	7188	7534	7568
45°	6971	7219	7230
50°	6742	7046	6911
55°	6424	6549	6502
60°	6007	6067	5958
65°	5356	5493	5318
70°	4596	4611	4483
75°	3640	3632	3491
80°	2438	2371	2278
85°	1325	1312	1226

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.5	3.7
10°-20°	820.4	10.6
20°-30°	1229.1	15.8
30°-40°	1456.8	18.8
40°-50°	1459.5	18.8
50°-60°	1238.8	16.0
60°-70°	835.2	10.8
70°-80°	367.0	4.7
80°-90°	59.6	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°	2339.0	30.2
0°-40°	3795.8	48.9
0°-60°	6494.1	83.7
0°-90°	7756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3077	3077	3077	3077	3077	
5°	3056	3048	3057	3048	3121	288
15°	2926	2892	2910	2925	2926	815
25°	2616	2630	2673	2708	2702	1209
35°	2277	2284	2336	2390	2389	1414
45°	1832	1866	1897	1946	1900	1417
55°	1369	1360	1396	1386	1386	1218
65°	841	830	863	830	835	837
75°	350	343	349	325	336	375
85°	43	42	42	41	40	62
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3077.4	3077.4	3077.4	3077.4	3077.4
2.5°	3104.0	3080.6	3058.7	3084.1	3099.6
5°	3055.5	3048.4	3056.7	3047.6	3121.1
7.5°	2992.8	3020.2	3036.1	3026.1	3030.5
10°	2959.4	2949.8	2985.2	3009.8	3006.3
12.5°	2923.6	2937.9	2939.9	2966.5	2968.9
15°	2925.6	2891.8	2909.7	2924.8	2926.0
17.5°	2812.0	2848.5	2860.8	2895.4	2852.5
20°	2798.1	2771.4	2798.1	2833.4	2827.9
22.5°	2712.6	2682.8	2740.0	2771.4	2769.4
25°	2615.7	2630.0	2672.9	2707.9	2702.3
27.5°	2530.6	2547.3	2608.5	2656.6	2625.6
30°	2465.1	2456.7	2508.4	2551.3	2575.1
32.5°	2347.9	2378.1	2438.5	2481.0	2458.3
35°	2276.7	2283.5	2336.3	2390.4	2388.8
37.5°	2152.4	2183.8	2258.1	2273.2	2259.3
40°	2046.3	2077.7	2144.8	2161.1	2154.4
42.5°	1968.0	1973.6	2031.2	2049.9	2020.1
45°	1831.7	1865.9	1896.9	1945.8	1899.7
47.5°	1715.7	1731.6	1798.4	1811.5	1787.2
50°	1610.4	1616.0	1683.1	1666.8	1650.9
52.5°	1478.1	1501.5	1539.3	1536.1	1517.4
55°	1369.2	1360.1	1395.8	1386.3	1385.9
57.5°	1238.5	1254.4	1283.8	1268.7	1244.5
60°	1116.1	1116.5	1127.2	1110.2	1107.0
62.5°	979.8	984.6	987.0	965.9	1000.1
65°	841.2	830.0	862.6	829.6	835.2
67.5°	713.6	719.2	716.0	695.3	703.3
70°	584.1	591.2	586.1	562.6	569.8
72.5°	465.7	456.9	462.5	433.1	446.6
75°	350.1	342.9	349.3	324.6	335.8
77.5°	238.4	244.0	240.0	226.9	234.4
80°	157.3	153.0	153.0	145.4	147.0
82.5°	91.8	87.4	86.2	83.8	87.4
85°	42.9	41.7	42.5	41.3	39.7
87.5°	15.5	15.9	15.9	15.1	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)