

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: P590785

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590785
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7887.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

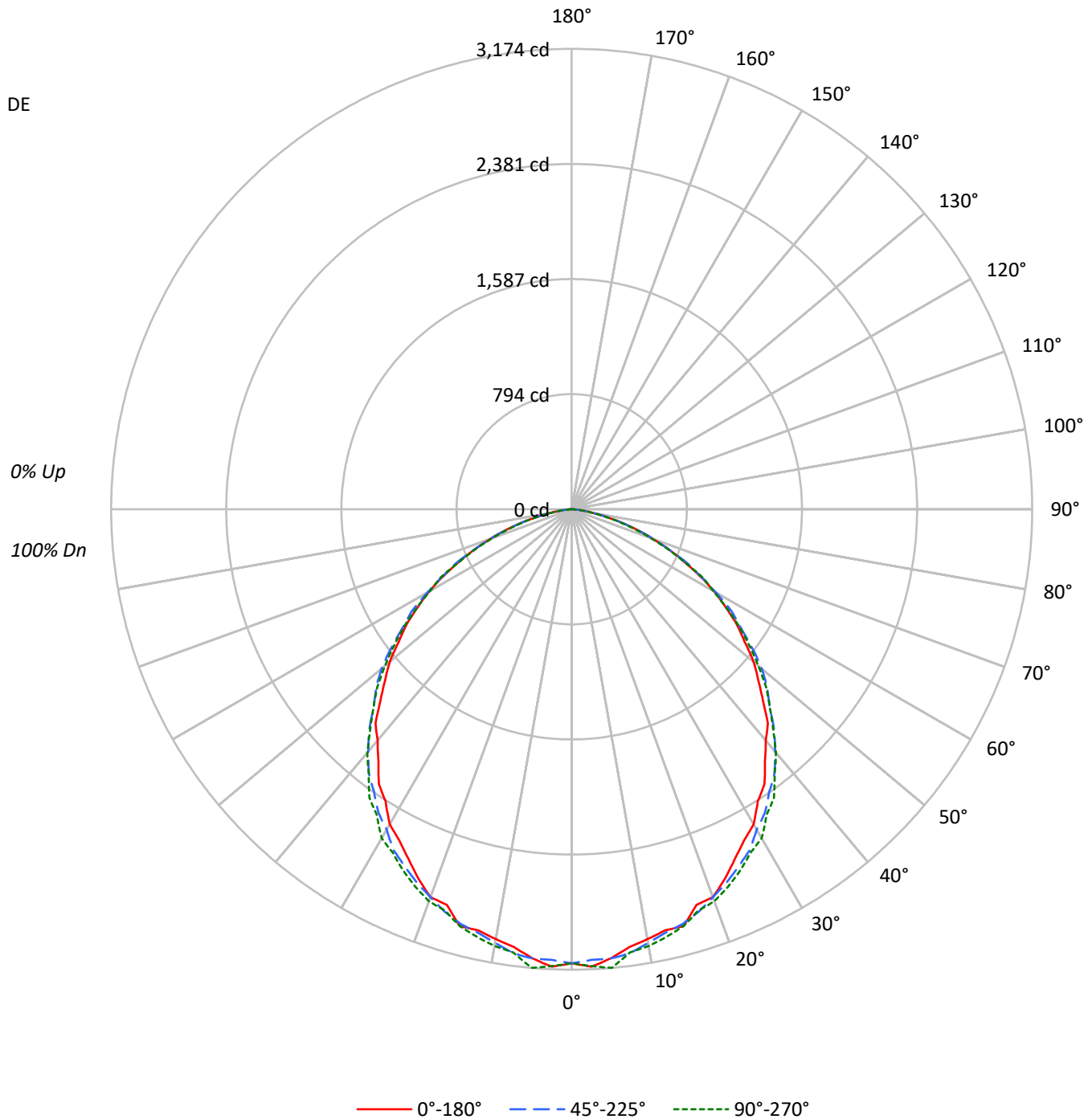
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	8421	8421	8421
5°	8393	8397	8573
10°	8223	8295	8353
15°	8288	8243	8289
20°	8148	8148	8235
25°	7898	8070	8159
30°	7789	7926	8137
35°	7606	7805	7980
40°	7310	7662	7696
45°	7089	7341	7352
50°	6856	7165	7028
55°	6533	6659	6612
60°	6109	6169	6058
65°	5447	5585	5408
70°	4674	4689	4559
75°	3701	3693	3550
80°	2479	2411	2317
85°	1346	1334	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7530 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.4	3.7
10°-20°	834.3	10.6
20°-30°	1249.9	15.8
30°-40°	1481.4	18.8
40°-50°	1484.1	18.8
50°-60°	1259.8	16.0
60°-70°	849.3	10.8
70°-80°	373.2	4.7
80°-90°	60.7	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°	2378.5	30.2
0°-40°	3859.9	48.9
0°-60°	6603.8	83.7
0°-90°	7887.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7887.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3129	3129	3129	3129	3129	
5°	3107	3100	3108	3099	3174	293
15°	2975	2941	2959	2974	2975	829
25°	2660	2674	2718	2754	2748	1230
35°	2315	2322	2376	2431	2429	1437
45°	1863	1897	1929	1979	1932	1441
55°	1392	1383	1419	1410	1409	1239
65°	855	844	877	844	849	851
75°	356	349	355	330	341	381
85°	44	42	43	42	40	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3129.4	3129.4	3129.4	3129.4	3129.4
2.5°	3156.4	3132.6	3110.4	3136.2	3152.0
5°	3107.1	3099.9	3108.4	3099.1	3173.8
7.5°	3043.3	3071.2	3087.3	3077.2	3081.7
10°	3009.4	2999.7	3035.6	3060.7	3057.0
12.5°	2973.0	2987.5	2989.6	3016.6	3019.1
15°	2975.0	2940.7	2958.9	2974.2	2975.4
17.5°	2859.5	2896.6	2909.2	2944.3	2900.7
20°	2845.3	2818.2	2845.3	2881.3	2875.6
22.5°	2758.4	2728.1	2786.3	2818.2	2816.2
25°	2659.9	2674.4	2718.0	2753.6	2747.9
27.5°	2573.4	2590.4	2652.6	2701.5	2670.0
30°	2506.7	2498.2	2550.8	2594.4	2618.6
32.5°	2387.5	2418.2	2479.7	2522.9	2499.9
35°	2315.2	2322.1	2375.8	2430.8	2429.1
37.5°	2188.7	2220.7	2296.2	2311.6	2297.4
40°	2080.9	2112.8	2181.1	2197.6	2190.8
42.5°	2001.3	2006.9	2065.5	2084.5	2054.2
45°	1862.7	1897.4	1928.9	1978.6	1931.8
47.5°	1744.7	1760.8	1828.7	1842.1	1817.4
50°	1637.6	1643.3	1711.6	1695.0	1678.8
52.5°	1503.1	1526.9	1565.3	1562.1	1543.1
55°	1392.4	1383.1	1419.4	1409.7	1409.3
57.5°	1259.4	1275.6	1305.5	1290.1	1265.5
60°	1135.0	1135.4	1146.3	1128.9	1125.7
62.5°	996.4	1001.2	1003.7	982.2	1017.0
65°	855.4	844.1	877.2	843.7	849.3
67.5°	725.7	731.3	728.1	707.1	715.2
70°	594.0	601.2	596.0	572.1	579.4
72.5°	473.5	464.7	470.3	440.4	454.2
75°	356.0	348.7	355.2	330.1	341.4
77.5°	242.4	248.1	244.0	230.7	238.4
80°	160.0	155.6	155.6	147.9	149.5
82.5°	93.3	88.9	87.7	85.3	88.9
85°	43.6	42.4	43.2	42.0	40.4
87.5°	15.8	16.2	16.2	15.4	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)