

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: P590727

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590727
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-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: 8628.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

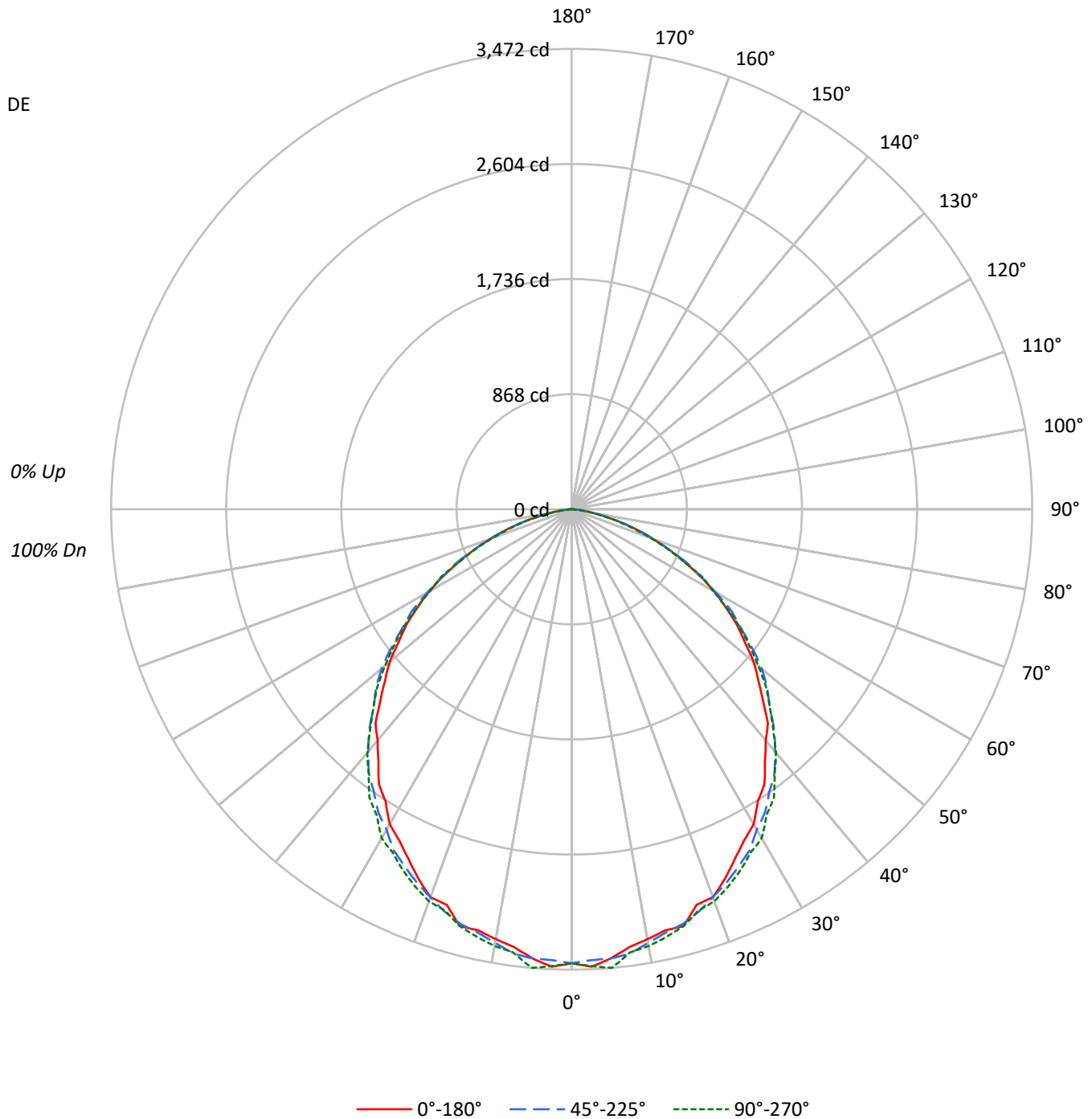
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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				
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°	9212	9212	9212
5°	9182	9185	9379
10°	8996	9074	9138
15°	9067	9017	9068
20°	8913	8913	9009
25°	8640	8829	8926
30°	8521	8671	8901
35°	8320	8538	8730
40°	7997	8382	8419
45°	7755	8031	8042
50°	7500	7839	7689
55°	7146	7285	7233
60°	6682	6749	6627
65°	5958	6110	5916
70°	5113	5130	4987
75°	4049	4039	3883
80°	2712	2638	2534
85°	1473	1460	1365

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8237 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.0	3.7
10°-20°	912.6	10.6
20°-30°	1367.3	15.8
30°-40°	1620.6	18.8
40°-50°	1623.6	18.8
50°-60°	1378.1	16.0
60°-70°	929.1	10.8
70°-80°	408.3	4.7
80°-90°	66.3	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°	2602.0	30.2
0°-40°	4222.5	48.9
0°-60°	7224.2	83.7
0°-90°	8628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3423	3423	3423	3423	3423	
5°	3399	3391	3400	3390	3472	320
15°	3254	3217	3237	3254	3255	907
25°	2910	2926	2973	3012	3006	1345
35°	2533	2540	2599	2659	2657	1573
45°	2038	2076	2110	2164	2113	1576
55°	1523	1513	1553	1542	1542	1355
65°	936	923	960	923	929	931
75°	389	382	388	361	374	417
85°	48	46	47	46	44	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3423.4	3423.4	3423.4	3423.4	3423.4
2.5°	3453.0	3426.9	3402.6	3430.9	3448.1
5°	3399.1	3391.1	3400.4	3390.2	3472.0
7.5°	3329.2	3359.7	3377.4	3366.4	3371.2
10°	3292.1	3281.5	3320.8	3348.2	3344.3
12.5°	3252.3	3268.2	3270.4	3300.1	3302.7
15°	3254.5	3217.0	3236.8	3253.6	3255.0
17.5°	3128.1	3168.8	3182.5	3220.9	3173.2
20°	3112.6	3083.0	3112.6	3152.0	3145.8
22.5°	3017.6	2984.5	3048.1	3083.0	3080.8
25°	2909.8	2925.7	2973.4	3012.3	3006.1
27.5°	2815.2	2833.7	2901.8	2955.3	2920.8
30°	2742.2	2733.0	2790.4	2838.2	2864.7
32.5°	2611.8	2645.4	2712.6	2759.9	2734.7
35°	2532.7	2540.2	2599.0	2659.1	2657.4
37.5°	2394.4	2429.3	2511.9	2528.7	2513.3
40°	2276.4	2311.3	2386.0	2404.1	2396.6
42.5°	2189.3	2195.5	2259.6	2280.3	2247.2
45°	2037.7	2075.7	2110.2	2164.5	2113.3
47.5°	1908.6	1926.3	2000.5	2015.1	1988.2
50°	1791.5	1797.7	1872.4	1854.2	1836.6
52.5°	1644.3	1670.4	1712.3	1708.8	1688.0
55°	1523.2	1513.0	1552.8	1542.2	1541.7
57.5°	1377.7	1395.4	1428.1	1411.3	1384.4
60°	1241.6	1242.0	1254.0	1235.0	1231.4
62.5°	1090.0	1095.3	1098.0	1074.5	1112.5
65°	935.7	923.4	959.6	922.9	929.1
67.5°	793.9	800.0	796.5	773.5	782.4
70°	649.8	657.7	652.0	625.9	633.8
72.5°	518.0	508.3	514.5	481.8	496.8
75°	389.4	381.5	388.5	361.1	373.5
77.5°	265.2	271.4	267.0	252.4	260.8
80°	175.0	170.2	170.2	161.8	163.5
82.5°	102.1	97.2	95.9	93.3	97.2
85°	47.7	46.4	47.3	46.0	44.2
87.5°	17.2	17.7	17.7	16.8	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)