

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: P590790

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590790
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8963.0 lumens
Efficiency: N/A
Efficacy: 103.7 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

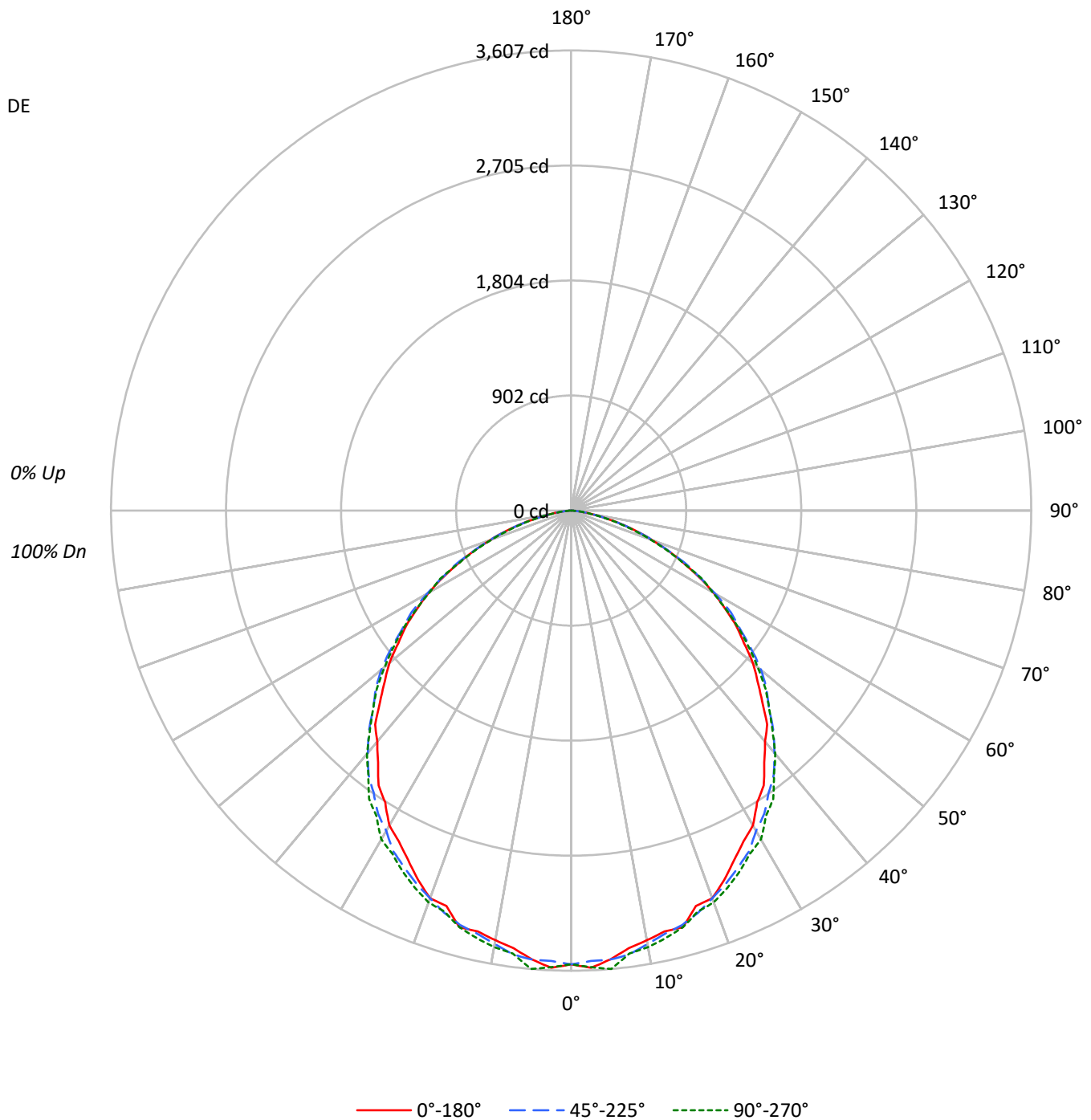
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9570	9570	9570
5°	9538	9542	9743
10°	9345	9427	9493
15°	9419	9368	9420
20°	9260	9260	9358
25°	8975	9171	9272
30°	8852	9007	9247
35°	8643	8869	9068
40°	8307	8707	8746
45°	8056	8342	8354
50°	7791	8143	7987
55°	7423	7568	7514
60°	6942	7011	6885
65°	6190	6348	6146
70°	5311	5329	5181
75°	4206	4196	4034
80°	2817	2740	2633
85°	1531	1516	1417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8557 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.5	3.7
10°-20°	948.1	10.6
20°-30°	1420.4	15.8
30°-40°	1683.5	18.8
40°-50°	1686.6	18.8
50°-60°	1431.6	16.0
60°-70°	965.2	10.8
70°-80°	424.1	4.7
80°-90°	68.9	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°	2703.0	30.2
0°-40°	4386.5	48.9
0°-60°	7504.8	83.7
0°-90°	8963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3556	3556	3556	3556	3556	
5°	3531	3523	3532	3522	3607	333
15°	3381	3342	3362	3380	3381	942
25°	3023	3039	3089	3129	3123	1397
35°	2631	2639	2700	2762	2760	1634
45°	2117	2156	2192	2249	2195	1637
55°	1582	1572	1613	1602	1602	1408
65°	972	959	997	959	965	967
75°	404	396	404	375	388	434
85°	50	48	49	48	46	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3556.3	3556.3	3556.3	3556.3	3556.3
2.5°	3587.1	3560.0	3534.7	3564.1	3582.0
5°	3531.0	3522.8	3532.4	3521.9	3606.8
7.5°	3458.5	3490.2	3508.5	3497.1	3502.1
10°	3419.9	3408.9	3449.8	3478.2	3474.1
12.5°	3378.6	3395.1	3397.4	3428.2	3430.9
15°	3380.9	3341.9	3362.5	3380.0	3381.3
17.5°	3249.6	3291.8	3306.0	3346.0	3296.4
20°	3233.5	3202.7	3233.5	3274.4	3267.9
22.5°	3134.8	3100.3	3166.5	3202.7	3200.4
25°	3022.7	3039.3	3088.9	3129.3	3122.8
27.5°	2924.5	2943.8	3014.5	3070.0	3034.2
30°	2848.7	2839.1	2898.8	2948.3	2975.9
32.5°	2713.3	2748.1	2817.9	2867.1	2840.9
35°	2631.1	2638.9	2699.9	2762.4	2760.5
37.5°	2487.3	2523.6	2609.5	2626.9	2610.9
40°	2364.7	2401.0	2478.6	2497.4	2489.6
42.5°	2274.3	2280.7	2347.3	2368.9	2334.4
45°	2116.8	2156.3	2192.1	2248.6	2195.3
47.5°	1982.7	2001.1	2078.2	2093.4	2065.4
50°	1861.0	1867.5	1945.1	1926.2	1907.9
52.5°	1708.1	1735.2	1778.8	1775.2	1753.6
55°	1582.3	1571.7	1613.1	1602.1	1601.6
57.5°	1431.2	1449.6	1483.6	1466.1	1438.1
60°	1289.8	1290.3	1302.7	1282.9	1279.3
62.5°	1132.3	1137.8	1140.6	1116.2	1155.7
65°	972.1	959.2	996.9	958.8	965.2
67.5°	824.7	831.1	827.4	803.6	812.7
70°	675.0	683.2	677.3	650.2	658.5
72.5°	538.2	528.0	534.5	500.5	516.1
75°	404.5	396.3	403.6	375.1	388.0
77.5°	275.5	281.9	277.3	262.2	270.9
80°	181.8	176.8	176.8	168.1	169.9
82.5°	106.1	101.0	99.6	96.9	101.0
85°	49.6	48.2	49.1	47.8	45.9
87.5°	17.9	18.4	18.4	17.4	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)