

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: P590726

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590726
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8726.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

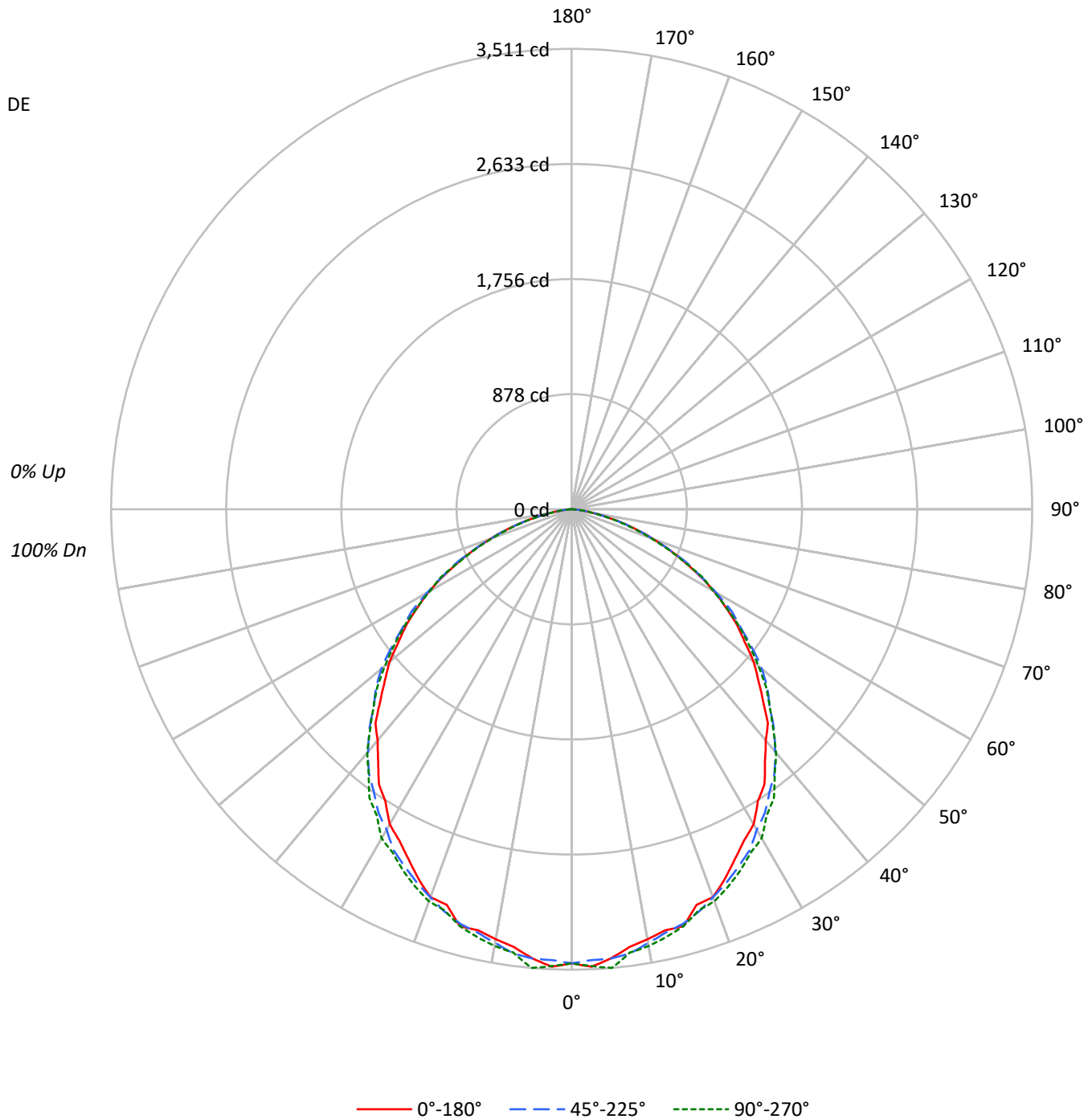
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9317	9317	9317
5°	9286	9290	9485
10°	9098	9177	9242
15°	9170	9120	9171
20°	9015	9015	9111
25°	8738	8929	9027
30°	8618	8769	9002
35°	8415	8635	8829
40°	8087	8477	8514
45°	7843	8122	8134
50°	7585	7927	7776
55°	7227	7368	7315
60°	6758	6825	6703
65°	6026	6180	5983
70°	5170	5188	5043
75°	4094	4085	3927
80°	2743	2667	2563
85°	1491	1476	1380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.7	3.7
10°-20°	923.0	10.6
20°-30°	1382.9	15.8
30°-40°	1639.0	18.8
40°-50°	1642.0	18.8
50°-60°	1393.8	16.0
60°-70°	939.7	10.8
70°-80°	412.9	4.7
80°-90°	67.1	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°	2631.5	30.2
0°-40°	4270.5	48.9
0°-60°	7306.3	83.7
0°-90°	8726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3462	3462	3462	3462	3462	
5°	3438	3430	3439	3429	3511	324
15°	3292	3254	3274	3291	3292	917
25°	2943	2959	3007	3046	3040	1360
35°	2562	2569	2628	2689	2688	1590
45°	2061	2099	2134	2189	2137	1594
55°	1540	1530	1570	1560	1559	1370
65°	946	934	970	933	940	941
75°	394	386	393	365	378	422
85°	48	47	48	46	45	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3462.3	3462.3	3462.3	3462.3	3462.3
2.5°	3492.2	3465.8	3441.2	3469.9	3487.3
5°	3437.7	3429.6	3439.0	3428.7	3511.4
7.5°	3367.0	3397.9	3415.8	3404.6	3409.5
10°	3329.5	3318.8	3358.5	3386.3	3382.2
12.5°	3289.3	3305.3	3307.6	3337.5	3340.2
15°	3291.5	3253.5	3273.6	3290.6	3291.9
17.5°	3163.6	3204.8	3218.6	3257.5	3209.2
20°	3148.0	3118.0	3148.0	3187.8	3181.5
22.5°	3051.9	3018.4	3082.7	3118.0	3115.8
25°	2942.8	2958.9	3007.2	3046.5	3040.3
27.5°	2847.1	2865.9	2934.8	2988.9	2954.0
30°	2773.4	2764.0	2822.1	2870.4	2897.2
32.5°	2641.5	2675.5	2743.4	2791.3	2765.8
35°	2561.5	2569.1	2628.5	2689.3	2687.6
37.5°	2421.6	2456.9	2540.5	2557.5	2541.8
40°	2302.2	2337.5	2413.1	2431.4	2423.8
42.5°	2214.1	2220.4	2285.2	2306.2	2272.7
45°	2060.8	2099.3	2134.1	2189.1	2137.3
47.5°	1930.3	1948.2	2023.3	2038.0	2010.7
50°	1811.8	1818.1	1893.6	1875.3	1857.4
52.5°	1663.0	1689.3	1731.8	1728.2	1707.2
55°	1540.5	1530.2	1570.4	1559.7	1559.2
57.5°	1393.4	1411.3	1444.4	1427.4	1400.1
60°	1255.7	1256.2	1268.2	1249.0	1245.4
62.5°	1102.4	1107.7	1110.4	1086.7	1125.2
65°	946.4	933.8	970.5	933.4	939.7
67.5°	802.9	809.1	805.6	782.3	791.2
70°	657.1	665.2	659.4	633.0	641.0
72.5°	523.9	514.1	520.3	487.3	502.5
75°	393.8	385.8	392.9	365.2	377.7
77.5°	268.2	274.5	270.0	255.3	263.7
80°	177.0	172.1	172.1	163.6	165.4
82.5°	103.3	98.3	97.0	94.3	98.3
85°	48.3	46.9	47.8	46.5	44.7
87.5°	17.4	17.9	17.9	17.0	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)