

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: P590777

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590777
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-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8303.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

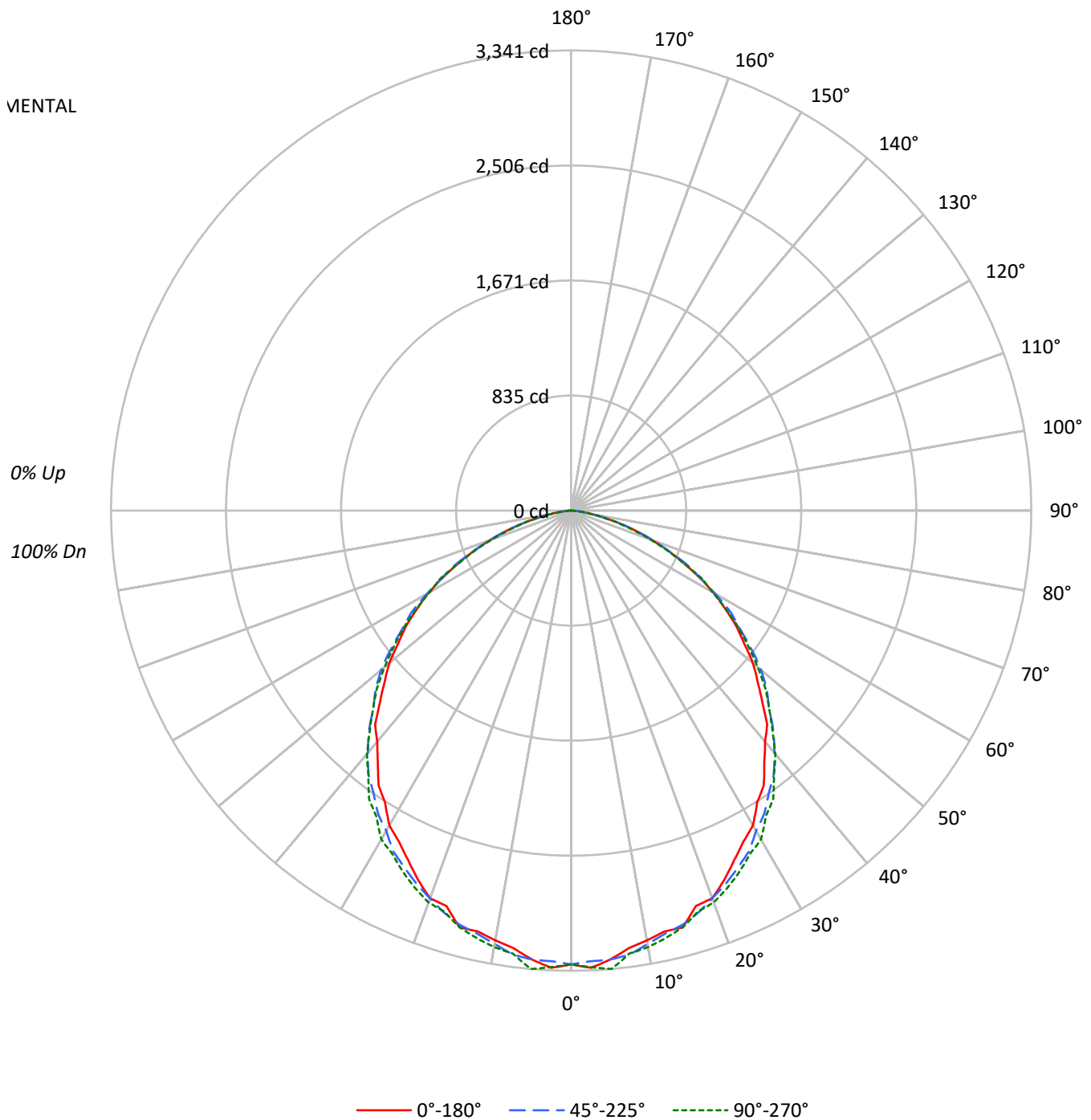
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8865	8865	8865
5°	8836	8839	9025
10°	8657	8732	8794
15°	8725	8678	8727
20°	8578	8578	8669
25°	8314	8496	8590
30°	8200	8344	8566
35°	8007	8216	8401
40°	7695	8066	8102
45°	7462	7728	7739
50°	7217	7543	7399
55°	6877	7011	6961
60°	6430	6494	6378
65°	5734	5880	5693
70°	4920	4936	4799
75°	3896	3887	3737
80°	2610	2538	2439
85°	1417	1405	1312

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7927 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.9	3.7
10°-20°	878.3	10.6
20°-30°	1315.8	15.8
30°-40°	1559.5	18.8
40°-50°	1562.4	18.8
50°-60°	1326.2	16.0
60°-70°	894.1	10.8
70°-80°	392.9	4.7
80°-90°	63.9	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°	2504.0	30.2
0°-40°	4063.5	48.9
0°-60°	6952.1	83.7
0°-90°	8303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3294	3294	3294	3294	3294	
5°	3271	3263	3272	3262	3341	308
15°	3132	3096	3115	3131	3132	873
25°	2800	2816	2861	2899	2893	1295
35°	2437	2444	2501	2559	2557	1513
45°	1961	1998	2031	2083	2034	1517
55°	1466	1456	1494	1484	1484	1304
65°	900	889	924	888	894	896
75°	375	367	374	348	359	402
85°	46	45	46	44	42	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3294.4	3294.4	3294.4	3294.4	3294.4
2.5°	3322.9	3297.8	3274.4	3301.7	3318.2
5°	3271.0	3263.4	3272.3	3262.5	3341.2
7.5°	3203.8	3233.2	3250.2	3239.5	3244.2
10°	3168.1	3157.9	3195.7	3222.1	3218.3
12.5°	3129.8	3145.1	3147.2	3175.7	3178.3
15°	3131.9	3095.8	3114.9	3131.1	3132.4
17.5°	3010.3	3049.4	3062.6	3099.6	3053.7
20°	2995.4	2966.9	2995.4	3033.2	3027.3
22.5°	2903.9	2872.0	2933.3	2966.9	2964.8
25°	2800.2	2815.5	2861.4	2898.8	2892.9
27.5°	2709.1	2727.0	2792.5	2844.0	2810.8
30°	2638.9	2630.0	2685.3	2731.2	2756.8
32.5°	2513.5	2545.8	2610.4	2656.0	2631.7
35°	2437.3	2444.5	2501.1	2559.0	2557.3
37.5°	2304.2	2337.8	2417.3	2433.5	2418.6
40°	2190.6	2224.2	2296.1	2313.5	2306.3
42.5°	2106.8	2112.8	2174.4	2194.4	2162.5
45°	1960.9	1997.5	2030.7	2083.0	2033.7
47.5°	1836.7	1853.7	1925.2	1939.2	1913.3
50°	1724.0	1729.9	1801.8	1784.4	1767.4
52.5°	1582.3	1607.4	1647.8	1644.4	1624.5
55°	1465.8	1456.0	1494.3	1484.1	1483.7
57.5°	1325.9	1342.9	1374.3	1358.2	1332.2
60°	1194.8	1195.3	1206.7	1188.5	1185.1
62.5°	1048.9	1054.0	1056.6	1034.1	1070.6
65°	900.5	888.6	923.5	888.2	894.1
67.5°	763.9	769.9	766.5	744.4	752.9
70°	625.3	632.9	627.4	602.3	610.0
72.5°	498.5	489.2	495.1	463.6	478.1
75°	374.7	367.1	373.9	347.5	359.4
77.5°	255.2	261.2	256.9	242.9	251.0
80°	168.4	163.8	163.8	155.7	157.4
82.5°	98.3	93.6	92.3	89.8	93.6
85°	45.9	44.7	45.5	44.2	42.5
87.5°	16.6	17.0	17.0	16.2	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)