

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: P590794

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590794
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-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9166.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

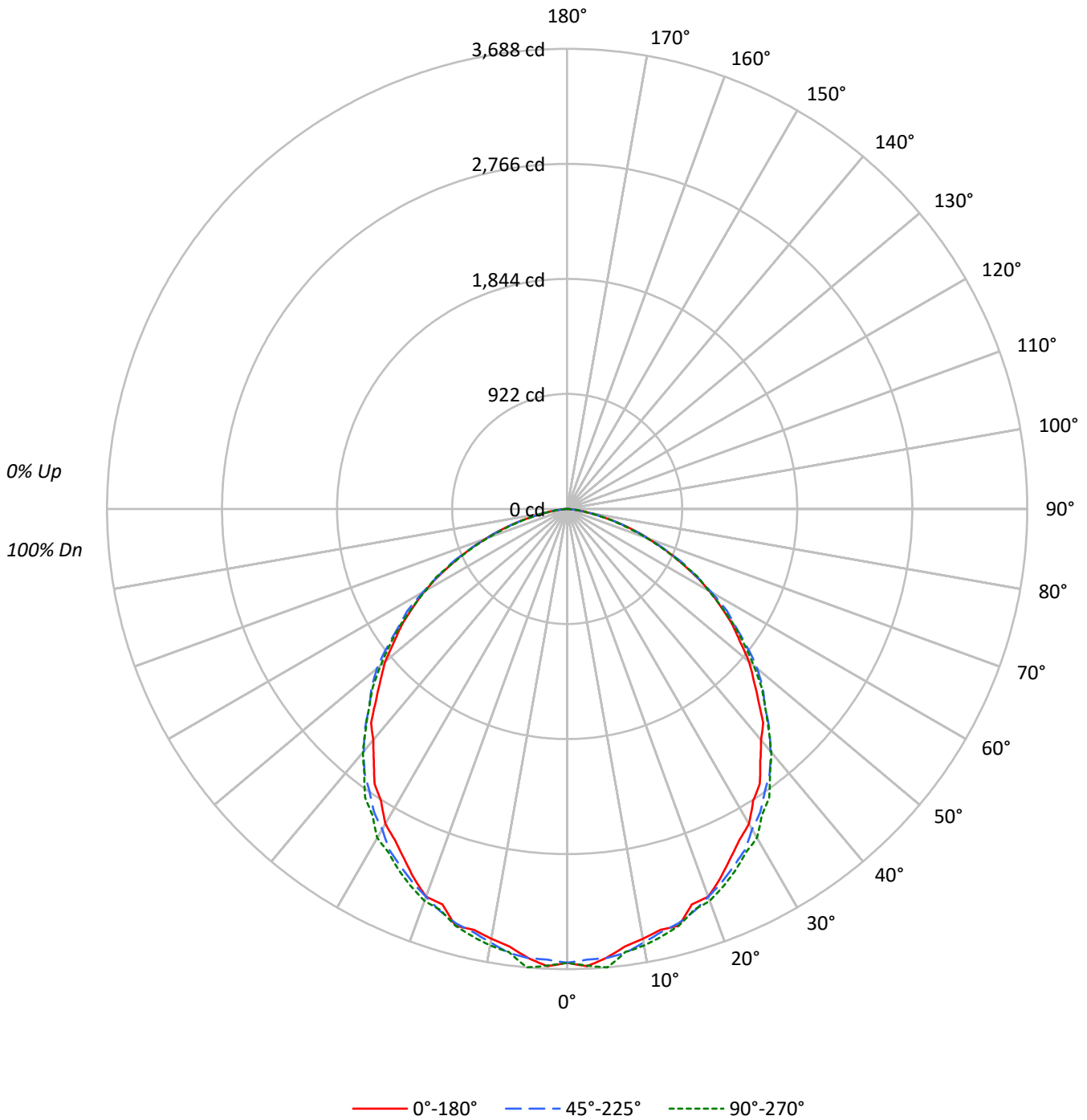
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9787	9787	9787
5°	9754	9758	9964
10°	9557	9640	9708
15°	9632	9580	9633
20°	9469	9469	9570
25°	9178	9379	9482
30°	9052	9211	9456
35°	8839	9070	9274
40°	8495	8904	8944
45°	8238	8531	8544
50°	7968	8327	8168
55°	7591	7739	7684
60°	7099	7170	7041
65°	6330	6491	6285
70°	5431	5449	5298
75°	4301	4292	4126
80°	2882	2802	2692
85°	1565	1550	1451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8751 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.1	3.7
10°-20°	969.6	10.6
20°-30°	1452.6	15.8
30°-40°	1721.6	18.8
40°-50°	1724.8	18.8
50°-60°	1464.1	16.0
60°-70°	987.1	10.8
70°-80°	433.7	4.7
80°-90°	70.5	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°	2764.2	30.2
0°-40°	4485.9	48.9
0°-60°	7674.7	83.7
0°-90°	9166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3637	3637	3637	3637	3637	
5°	3611	3603	3612	3602	3688	340
15°	3458	3418	3439	3456	3458	963
25°	3091	3108	3159	3200	3194	1429
35°	2691	2699	2761	2825	2823	1671
45°	2165	2205	2242	2300	2245	1675
55°	1618	1607	1650	1638	1638	1439
65°	994	981	1019	980	987	989
75°	414	405	413	384	397	443
85°	51	49	50	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3636.8	3636.8	3636.8	3636.8	3636.8
2.5°	3668.3	3640.6	3614.8	3644.8	3663.1
5°	3611.0	3602.6	3612.4	3601.6	3688.5
7.5°	3536.8	3569.2	3588.0	3576.3	3581.4
10°	3497.4	3486.1	3527.9	3557.0	3552.8
12.5°	3455.1	3472.0	3474.4	3505.8	3508.6
15°	3457.5	3417.5	3438.7	3456.5	3457.9
17.5°	3323.2	3366.4	3380.9	3421.8	3371.1
20°	3306.7	3275.3	3306.7	3348.5	3341.9
22.5°	3205.8	3170.6	3238.2	3275.3	3272.9
25°	3091.2	3108.1	3158.8	3200.1	3193.6
27.5°	2990.7	3010.4	3082.7	3139.6	3102.9
30°	2913.2	2903.4	2964.4	3015.1	3043.3
32.5°	2774.7	2810.4	2881.8	2932.0	2905.2
35°	2690.6	2698.6	2761.1	2824.9	2823.1
37.5°	2543.7	2580.8	2668.6	2686.4	2670.0
40°	2418.3	2455.4	2534.8	2554.0	2546.0
42.5°	2325.8	2332.4	2400.5	2422.5	2387.3
45°	2164.7	2205.1	2241.7	2299.5	2245.0
47.5°	2027.6	2046.4	2125.3	2140.8	2112.1
50°	1903.2	1909.8	1989.1	1969.9	1951.1
52.5°	1746.8	1774.5	1819.1	1815.4	1793.3
55°	1618.1	1607.3	1649.6	1638.3	1637.9
57.5°	1463.7	1482.4	1517.2	1499.3	1470.7
60°	1319.0	1319.5	1332.2	1312.0	1308.2
62.5°	1158.0	1163.6	1166.4	1141.5	1181.9
65°	994.1	980.9	1019.4	980.5	987.0
67.5°	843.4	849.9	846.2	821.8	831.1
70°	690.3	698.7	692.6	664.9	673.4
72.5°	550.3	540.0	546.6	511.8	527.8
75°	413.7	405.2	412.8	383.6	396.8
77.5°	281.7	288.3	283.6	268.1	277.0
80°	186.0	180.8	180.8	171.9	173.7
82.5°	108.5	103.3	101.9	99.1	103.3
85°	50.7	49.3	50.2	48.8	47.0
87.5°	18.3	18.8	18.8	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)