

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: P590733

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590733
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-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9592.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

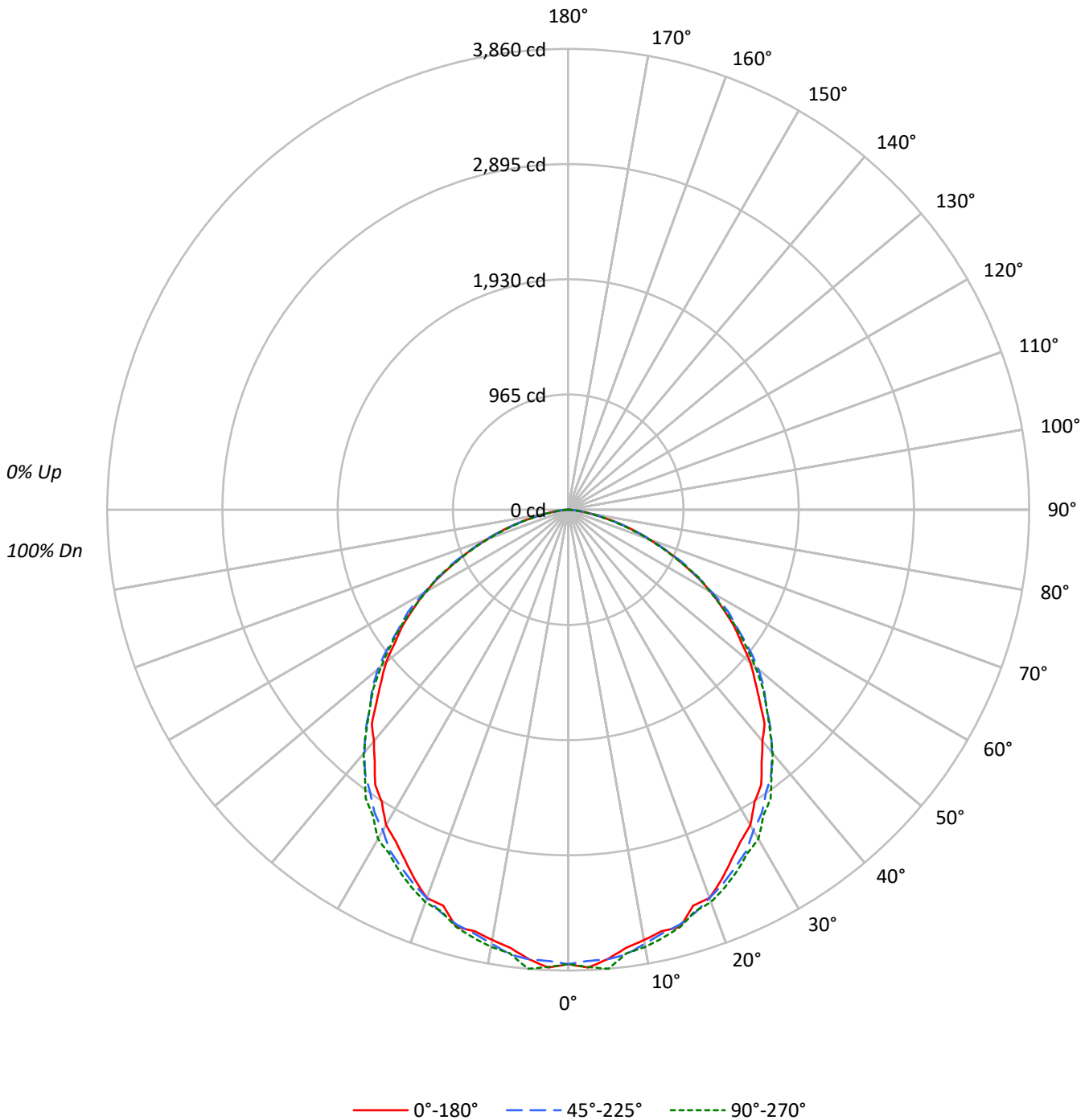
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10242	10242	10242
5°	10208	10212	10427
10°	10001	10088	10159
15°	10080	10025	10081
20°	9909	9909	10015
25°	9605	9815	9923
30°	9473	9639	9896
35°	9250	9492	9705
40°	8890	9318	9360
45°	8621	8928	8941
50°	8338	8714	8548
55°	7945	8099	8041
60°	7429	7503	7368
65°	6624	6793	6577
70°	5684	5703	5545
75°	4501	4491	4317
80°	3016	2932	2817
85°	1639	1624	1516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9158 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.0	3.7
10°-20°	1014.6	10.6
20°-30°	1520.1	15.8
30°-40°	1801.6	18.8
40°-50°	1805.0	18.8
50°-60°	1532.1	16.0
60°-70°	1032.9	10.8
70°-80°	453.9	4.7
80°-90°	73.8	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°	2892.7	30.2
0°-40°	4694.3	48.9
0°-60°	8031.4	83.7
0°-90°	9592.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9592.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3806	3806	3806	3806	3806	
5°	3779	3770	3780	3769	3860	356
15°	3618	3576	3598	3617	3619	1008
25°	3235	3253	3306	3349	3342	1496
35°	2816	2824	2889	2956	2954	1748
45°	2265	2308	2346	2406	2349	1752
55°	1693	1682	1726	1714	1714	1506
65°	1040	1026	1067	1026	1033	1035
75°	433	424	432	402	415	464
85°	53	52	53	51	49	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3805.9	3805.9	3805.9	3805.9	3805.9
2.5°	3838.8	3809.8	3782.8	3814.2	3833.4
5°	3778.8	3770.0	3780.3	3769.0	3859.9
7.5°	3701.2	3735.1	3754.8	3742.5	3747.9
10°	3659.9	3648.1	3691.9	3722.3	3717.9
12.5°	3615.7	3633.4	3635.8	3668.8	3671.7
15°	3618.1	3576.4	3598.5	3617.2	3618.6
17.5°	3477.6	3522.8	3538.1	3580.8	3527.7
20°	3460.4	3427.5	3460.4	3504.1	3497.3
22.5°	3354.8	3317.9	3388.7	3427.5	3425.0
25°	3234.9	3252.6	3305.6	3348.9	3342.0
27.5°	3129.7	3150.3	3226.0	3285.5	3247.1
30°	3048.6	3038.3	3102.2	3155.3	3184.7
32.5°	2903.7	2941.0	3015.7	3068.3	3040.3
35°	2815.7	2824.1	2889.4	2956.2	2954.3
37.5°	2661.9	2700.7	2792.6	2811.3	2794.1
40°	2530.7	2569.5	2652.6	2672.7	2664.4
42.5°	2433.9	2440.8	2512.0	2535.1	2498.3
45°	2265.3	2307.6	2345.9	2406.4	2349.4
47.5°	2121.8	2141.5	2224.1	2240.3	2210.3
50°	1991.6	1998.5	2081.6	2061.4	2041.8
52.5°	1828.0	1857.0	1903.7	1899.7	1876.6
55°	1693.4	1682.0	1726.3	1714.5	1714.0
57.5°	1531.7	1551.3	1587.7	1569.0	1539.1
60°	1380.3	1380.8	1394.1	1373.0	1369.0
62.5°	1211.8	1217.7	1220.6	1194.6	1236.8
65°	1040.3	1026.5	1066.8	1026.0	1032.9
67.5°	882.5	889.4	885.5	859.9	869.8
70°	722.4	731.2	724.8	695.8	704.7
72.5°	575.9	565.1	572.0	535.6	552.3
75°	432.9	424.1	431.9	401.5	415.2
77.5°	294.8	301.7	296.8	280.6	289.9
80°	194.6	189.2	189.2	179.9	181.8
82.5°	113.5	108.1	106.6	103.7	108.1
85°	53.1	51.6	52.6	51.1	49.1
87.5°	19.2	19.7	19.7	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)