

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: P590741

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590741
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-40-UNV-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9669.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

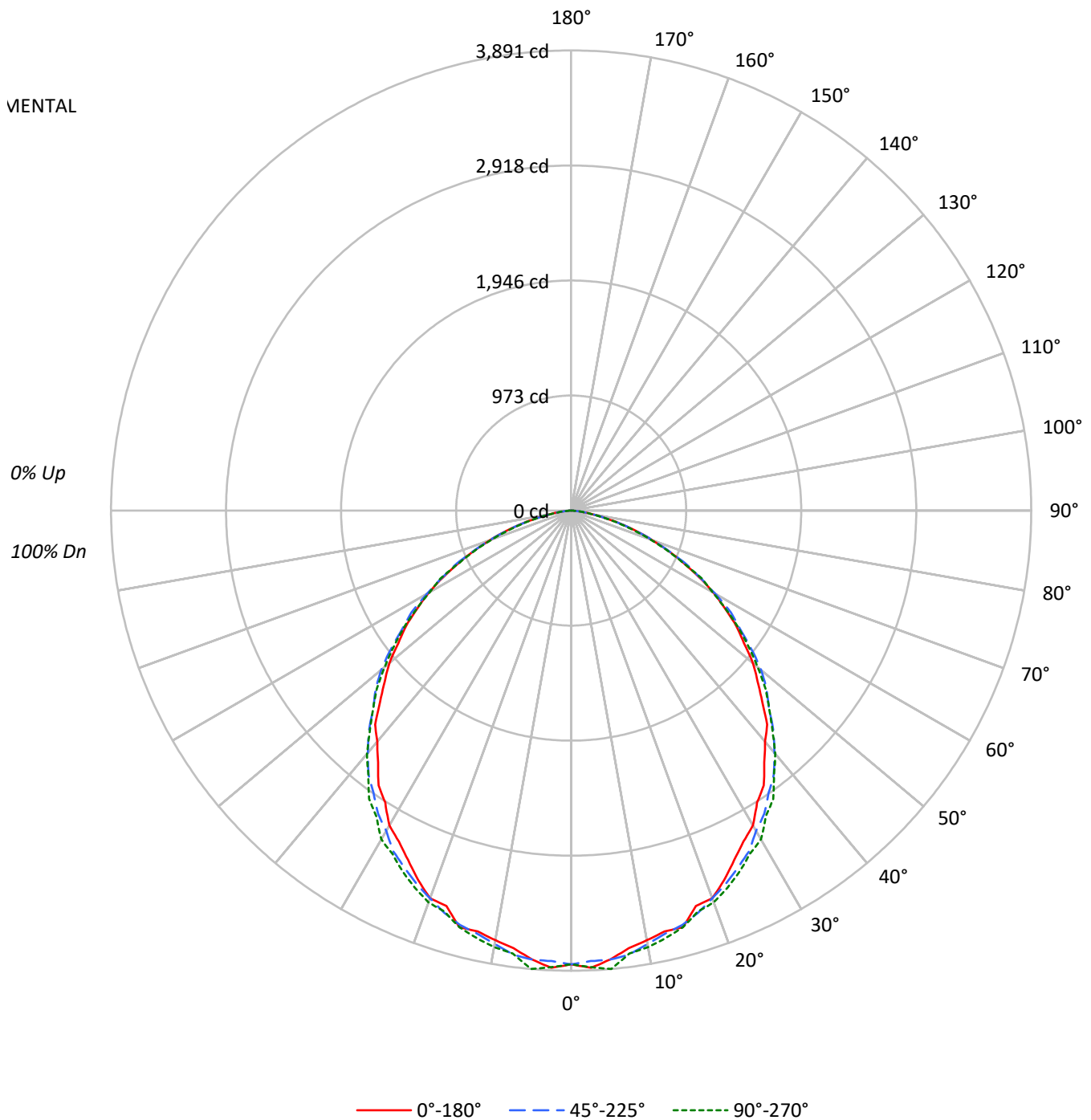
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10324	10324	10324
5°	10290	10294	10510
10°	10081	10169	10241
15°	10161	10106	10162
20°	9989	9989	10095
25°	9682	9894	10003
30°	9549	9717	9975
35°	9324	9568	9783
40°	8961	9393	9434
45°	8690	9000	9012
50°	8405	8784	8616
55°	8008	8164	8106
60°	7488	7563	7427
65°	6677	6848	6630
70°	5729	5748	5589
75°	4537	4527	4352
80°	3040	2955	2841
85°	1652	1636	1528

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9231 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.9	3.7
10°-20°	1022.8	10.6
20°-30°	1532.3	15.8
30°-40°	1816.1	18.8
40°-50°	1819.5	18.8
50°-60°	1544.4	16.0
60°-70°	1041.2	10.8
70°-80°	457.5	4.7
80°-90°	74.3	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°	2915.9	30.2
0°-40°	4732.0	48.9
0°-60°	8095.9	83.7
0°-90°	9669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9669.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3836	3836	3836	3836	3836	
5°	3809	3800	3811	3799	3891	359
15°	3647	3605	3627	3646	3648	1016
25°	3261	3279	3332	3376	3369	1507
35°	2838	2847	2913	2980	2978	1762
45°	2284	2326	2365	2426	2368	1766
55°	1707	1696	1740	1728	1728	1518
65°	1049	1035	1075	1034	1041	1043
75°	436	428	435	405	419	468
85°	54	52	53	52	50	78
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3836.4	3836.4	3836.4	3836.4	3836.4
2.5°	3869.6	3840.4	3813.1	3844.8	3864.2
5°	3809.2	3800.3	3810.7	3799.3	3890.9
7.5°	3730.9	3765.1	3784.9	3772.5	3778.0
10°	3689.3	3677.4	3721.5	3752.2	3747.7
12.5°	3644.7	3662.6	3665.0	3698.2	3701.2
15°	3647.2	3605.1	3627.4	3646.2	3647.7
17.5°	3505.5	3551.1	3566.5	3609.5	3556.1
20°	3488.2	3455.0	3488.2	3532.3	3525.3
22.5°	3381.7	3344.5	3415.9	3455.0	3452.5
25°	3260.8	3278.7	3332.2	3375.7	3368.8
27.5°	3154.8	3175.6	3251.9	3311.8	3273.2
30°	3073.1	3062.7	3127.1	3180.6	3210.3
32.5°	2927.0	2964.6	3039.9	3092.9	3064.7
35°	2838.3	2846.7	2912.6	2980.0	2978.0
37.5°	2683.3	2722.4	2815.0	2833.8	2816.5
40°	2551.0	2590.1	2673.8	2694.2	2685.7
42.5°	2453.4	2460.4	2532.2	2555.5	2518.3
45°	2283.5	2326.1	2364.8	2425.7	2368.2
47.5°	2138.9	2158.7	2241.9	2258.3	2228.0
50°	2007.6	2014.6	2098.3	2078.0	2058.1
52.5°	1842.7	1871.9	1919.0	1915.0	1891.7
55°	1706.9	1695.6	1740.1	1728.2	1727.7
57.5°	1544.0	1563.8	1600.4	1581.6	1551.4
60°	1391.4	1391.9	1405.3	1384.0	1380.0
62.5°	1221.5	1227.5	1230.4	1204.2	1246.8
65°	1048.6	1034.8	1075.4	1034.3	1041.2
67.5°	889.6	896.6	892.6	866.8	876.8
70°	728.2	737.1	730.6	701.4	710.3
72.5°	580.5	569.6	576.6	539.9	556.8
75°	436.4	427.5	435.4	404.7	418.6
77.5°	297.2	304.1	299.2	282.8	292.3
80°	196.2	190.7	190.7	181.3	183.3
82.5°	114.4	109.0	107.5	104.5	109.0
85°	53.5	52.0	53.0	51.5	49.5
87.5°	19.3	19.8	19.8	18.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)