

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: P590774

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590774
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9638.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

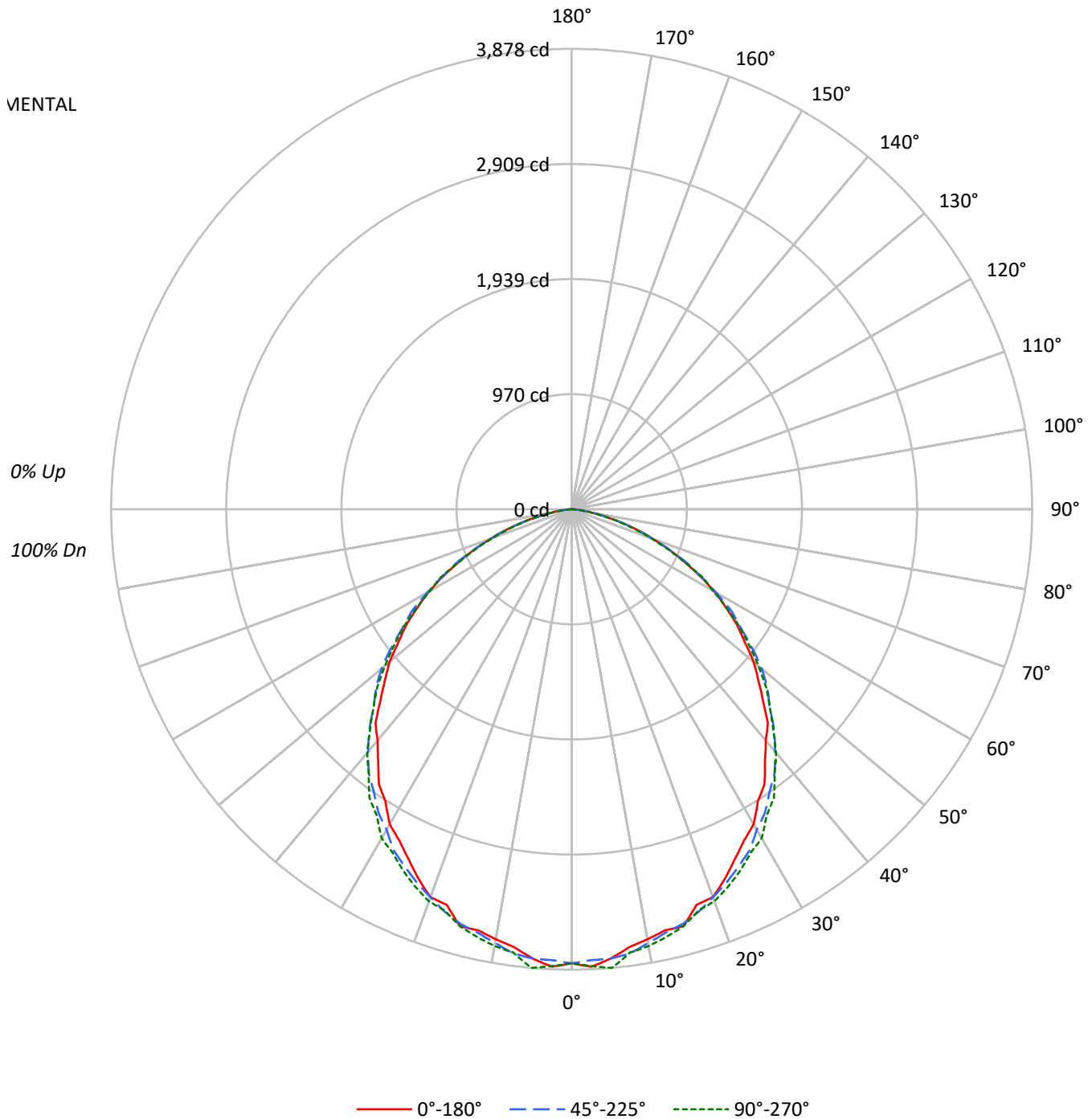
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10291	10291	10291
5°	10257	10260	10477
10°	10049	10136	10208
15°	10128	10073	10130
20°	9957	9957	10063
25°	9651	9862	9970
30°	9518	9686	9943
35°	9294	9538	9751
40°	8932	9363	9404
45°	8662	8971	8984
50°	8378	8756	8588
55°	7983	8138	8080
60°	7465	7539	7403
65°	6656	6825	6609
70°	5711	5730	5570
75°	4523	4512	4338
80°	3030	2946	2831
85°	1646	1630	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9202 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.7	3.7
10°-20°	1019.5	10.6
20°-30°	1527.4	15.8
30°-40°	1810.3	18.8
40°-50°	1813.6	18.8
50°-60°	1539.5	16.0
60°-70°	1037.9	10.8
70°-80°	456.1	4.7
80°-90°	74.1	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°	2906.6	30.2
0°-40°	4716.9	48.9
0°-60°	8069.9	83.7
0°-90°	9638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3824	3824	3824	3824	3824	
5°	3797	3788	3798	3787	3878	358
15°	3636	3594	3616	3634	3636	1013
25°	3250	3268	3322	3365	3358	1503
35°	2829	2838	2903	2970	2968	1757
45°	2276	2319	2357	2418	2361	1761
55°	1702	1690	1735	1723	1722	1514
65°	1045	1031	1072	1031	1038	1040
75°	435	426	434	403	417	466
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°	3824.1	3824.1	3824.1	3824.1	3824.1
2.5°	3857.2	3828.1	3800.9	3832.5	3851.8
5°	3797.0	3788.1	3798.4	3787.1	3878.4
7.5°	3718.9	3753.0	3772.8	3760.4	3765.9
10°	3677.5	3665.6	3709.6	3740.2	3735.7
12.5°	3633.0	3650.8	3653.3	3686.4	3689.3
15°	3635.5	3593.5	3615.8	3634.5	3636.0
17.5°	3494.3	3539.7	3555.0	3598.0	3544.7
20°	3477.0	3443.9	3477.0	3521.0	3514.0
22.5°	3370.8	3333.8	3404.9	3443.9	3441.5
25°	3250.4	3268.1	3321.5	3364.9	3358.0
27.5°	3144.7	3165.4	3241.5	3301.2	3262.7
30°	3063.2	3052.9	3117.1	3170.4	3200.0
32.5°	2917.6	2955.1	3030.2	3083.0	3054.8
35°	2829.2	2837.6	2903.3	2970.4	2968.4
37.5°	2674.7	2713.7	2806.0	2824.8	2807.5
40°	2542.8	2581.8	2665.3	2685.5	2677.1
42.5°	2445.6	2452.5	2524.1	2547.3	2510.2
45°	2276.2	2318.7	2357.2	2417.9	2360.6
47.5°	2132.0	2151.8	2234.7	2251.0	2220.9
50°	2001.2	2008.1	2091.5	2071.3	2051.5
52.5°	1836.8	1865.9	1912.8	1908.8	1885.6
55°	1701.5	1690.1	1734.6	1722.7	1722.2
57.5°	1539.0	1558.8	1595.3	1576.6	1546.4
60°	1387.0	1387.4	1400.8	1379.5	1375.6
62.5°	1217.6	1223.5	1226.5	1200.3	1242.8
65°	1045.3	1031.4	1071.9	1031.0	1037.9
67.5°	886.8	893.7	889.7	864.1	873.9
70°	725.8	734.7	728.3	699.2	708.0
72.5°	578.7	567.8	574.7	538.2	555.0
75°	435.0	426.1	434.0	403.4	417.2
77.5°	296.3	303.2	298.2	281.9	291.3
80°	195.5	190.1	190.1	180.7	182.7
82.5°	114.1	108.6	107.1	104.2	108.6
85°	53.3	51.8	52.8	51.4	49.4
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)