

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: P590773

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590773
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-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9833.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

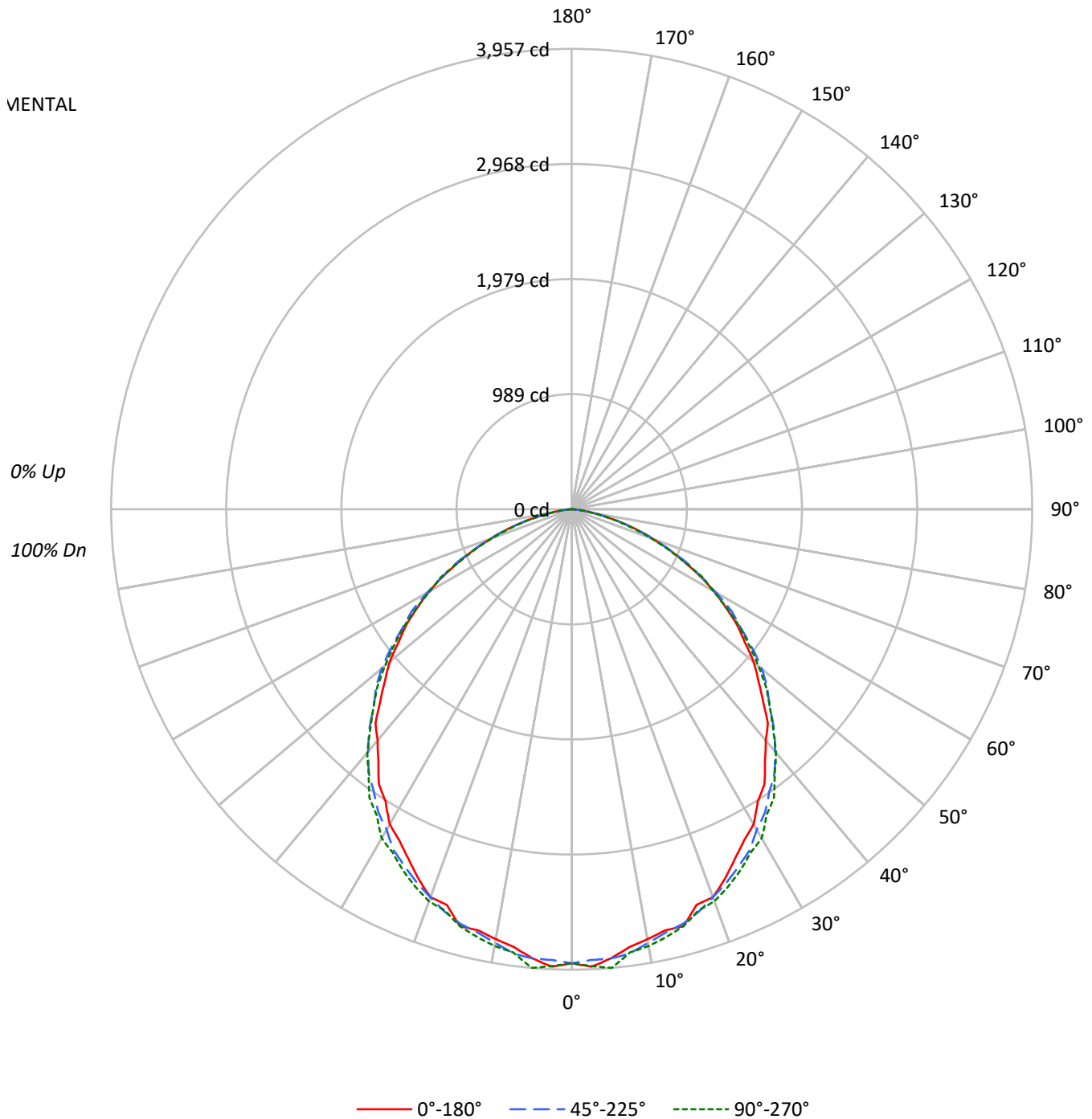
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10499	10499	10499
5°	10464	10468	10689
10°	10252	10341	10414
15°	10333	10277	10335
20°	10159	10159	10267
25°	9846	10062	10172
30°	9711	9881	10145
35°	9482	9730	9949
40°	9113	9552	9595
45°	8838	9152	9165
50°	8547	8933	8763
55°	8144	8302	8244
60°	7615	7691	7553
65°	6790	6963	6742
70°	5826	5846	5684
75°	4614	4604	4426
80°	3092	3005	2889
85°	1680	1664	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.0	3.7
10°-20°	1040.1	10.6
20°-30°	1558.3	15.8
30°-40°	1846.9	18.8
40°-50°	1850.3	18.8
50°-60°	1570.6	16.0
60°-70°	1058.9	10.8
70°-80°	465.3	4.7
80°-90°	75.6	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°	2965.4	30.2
0°-40°	4812.3	48.9
0°-60°	8233.2	83.7
0°-90°	9833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3902	3902	3902	3902	3902	
5°	3874	3865	3875	3864	3957	365
15°	3709	3666	3689	3708	3710	1033
25°	3316	3334	3389	3433	3426	1533
35°	2886	2895	2962	3030	3028	1792
45°	2322	2366	2405	2467	2408	1796
55°	1736	1724	1770	1758	1757	1544
65°	1066	1052	1094	1052	1059	1061
75°	444	435	443	412	426	476
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3901.5	3901.5	3901.5	3901.5	3901.5
2.5°	3935.2	3905.5	3877.8	3910.0	3929.7
5°	3873.8	3864.7	3875.3	3863.7	3956.9
7.5°	3794.2	3828.9	3849.1	3836.5	3842.0
10°	3751.9	3739.8	3784.6	3815.8	3811.3
12.5°	3706.5	3724.7	3727.2	3760.9	3764.0
15°	3709.1	3666.2	3688.9	3708.0	3709.6
17.5°	3565.0	3611.3	3626.9	3670.8	3616.4
20°	3547.4	3513.6	3547.4	3592.2	3585.1
22.5°	3439.1	3401.3	3473.8	3513.6	3511.1
25°	3316.1	3334.3	3388.7	3433.0	3426.0
27.5°	3208.3	3229.5	3307.1	3368.0	3328.7
30°	3125.2	3114.6	3180.1	3234.5	3264.8
32.5°	2976.6	3014.9	3091.5	3145.4	3116.7
35°	2886.4	2895.0	2962.0	3030.5	3028.5
37.5°	2728.8	2768.6	2862.8	2881.9	2864.3
40°	2594.3	2634.1	2719.2	2739.9	2731.3
42.5°	2495.0	2502.1	2575.1	2598.8	2561.0
45°	2322.3	2365.6	2404.9	2466.8	2408.4
47.5°	2175.2	2195.3	2279.9	2296.6	2265.8
50°	2041.7	2048.7	2133.9	2113.2	2093.1
52.5°	1873.9	1903.6	1951.5	1947.5	1923.8
55°	1735.9	1724.3	1769.6	1757.6	1757.1
57.5°	1570.2	1590.3	1627.6	1608.4	1577.7
60°	1415.0	1415.5	1429.1	1407.5	1403.4
62.5°	1242.2	1248.3	1251.3	1224.6	1267.9
65°	1066.4	1052.3	1093.6	1051.8	1058.9
67.5°	904.7	911.8	907.7	881.5	891.6
70°	740.5	749.6	743.0	713.3	722.4
72.5°	590.4	579.3	586.4	549.1	566.2
75°	443.8	434.7	442.8	411.6	425.7
77.5°	302.2	309.3	304.3	287.6	297.2
80°	199.5	193.9	193.9	184.4	186.4
82.5°	116.4	110.8	109.3	106.3	110.8
85°	54.4	52.9	53.9	52.4	50.4
87.5°	19.6	20.1	20.1	19.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)