

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: P590711

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590711
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9277.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

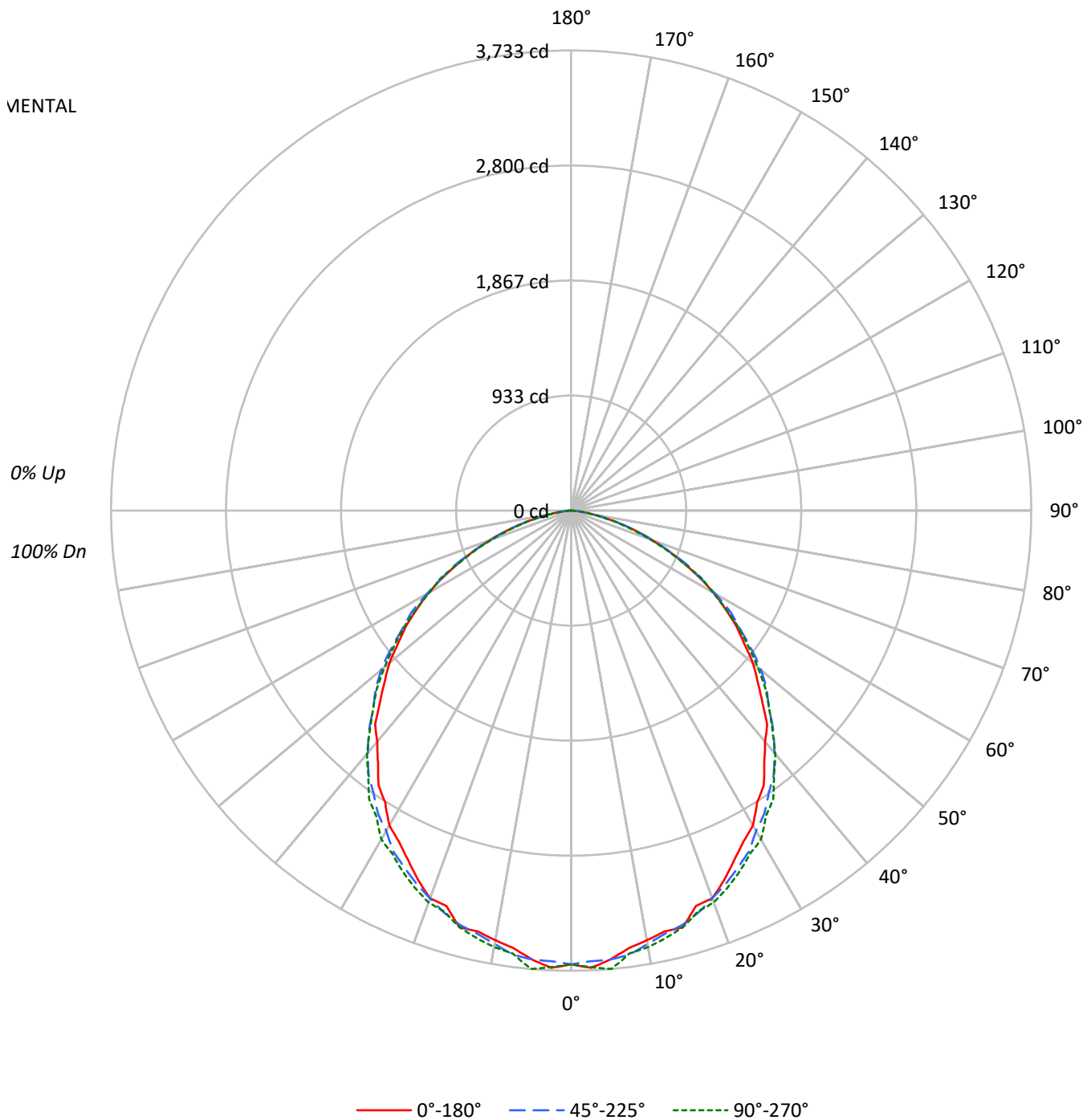
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	9905	9905	9905
5°	9872	9876	10084
10°	9672	9757	9825
15°	9749	9696	9750
20°	9584	9584	9686
25°	9289	9493	9597
30°	9162	9323	9571
35°	8946	9180	9386
40°	8598	9012	9052
45°	8338	8635	8647
50°	8064	8428	8267
55°	7683	7833	7777
60°	7185	7256	7126
65°	6406	6570	6361
70°	5497	5515	5362
75°	4353	4344	4175
80°	2916	2836	2724
85°	1584	1572	1467

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8857 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.2	3.7
10°-20°	981.3	10.6
20°-30°	1470.2	15.8
30°-40°	1742.5	18.8
40°-50°	1745.7	18.8
50°-60°	1481.8	16.0
60°-70°	999.0	10.8
70°-80°	439.0	4.7
80°-90°	71.3	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°	2797.7	30.2
0°-40°	4540.2	48.9
0°-60°	7767.7	83.7
0°-90°	9277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9277.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3681	3681	3681	3681	3681	
5°	3655	3646	3656	3645	3733	345
15°	3499	3459	3480	3498	3500	975
25°	3129	3146	3197	3239	3232	1446
35°	2723	2731	2794	2859	2857	1691
45°	2191	2232	2269	2327	2272	1695
55°	1638	1627	1670	1658	1658	1457
65°	1006	993	1032	992	999	1001
75°	419	410	418	388	402	449
85°	51	50	51	49	48	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3680.9	3680.9	3680.9	3680.9	3680.9
2.5°	3712.7	3684.7	3658.5	3689.0	3707.5
5°	3654.7	3646.2	3656.2	3645.2	3733.2
7.5°	3579.6	3612.4	3631.5	3619.6	3624.8
10°	3539.7	3528.3	3570.6	3600.1	3595.8
12.5°	3497.0	3514.1	3516.4	3548.3	3551.1
15°	3499.3	3458.9	3480.3	3498.4	3499.8
17.5°	3363.4	3407.1	3421.9	3463.2	3411.9
20°	3346.8	3314.9	3346.8	3389.1	3382.4
22.5°	3244.6	3208.9	3277.4	3314.9	3312.6
25°	3128.6	3145.7	3197.1	3238.9	3232.2
27.5°	3026.9	3046.9	3120.1	3177.6	3140.5
30°	2948.5	2938.5	3000.3	3051.6	3080.2
32.5°	2808.3	2844.4	2916.7	2967.5	2940.4
35°	2723.2	2731.3	2794.5	2859.2	2857.3
37.5°	2574.5	2612.0	2700.9	2719.0	2702.3
40°	2447.6	2485.1	2565.4	2584.9	2576.9
42.5°	2354.0	2360.6	2429.5	2451.9	2416.2
45°	2190.9	2231.8	2268.9	2327.3	2272.2
47.5°	2052.2	2071.2	2151.0	2166.7	2137.7
50°	1926.2	1932.9	2013.2	1993.7	1974.7
52.5°	1768.0	1796.0	1841.2	1837.4	1815.0
55°	1637.7	1626.8	1669.6	1658.2	1657.7
57.5°	1481.4	1500.4	1535.6	1517.5	1488.5
60°	1335.0	1335.5	1348.3	1327.9	1324.1
62.5°	1172.0	1177.7	1180.5	1155.4	1196.2
65°	1006.1	992.8	1031.8	992.3	999.0
67.5°	853.6	860.2	856.4	831.7	841.2
70°	698.6	707.2	701.0	673.0	681.5
72.5°	557.0	546.5	553.2	518.0	534.2
75°	418.7	410.1	417.8	388.3	401.6
77.5°	285.2	291.8	287.1	271.4	280.4
80°	188.2	183.0	183.0	173.9	175.8
82.5°	109.8	104.6	103.1	100.3	104.6
85°	51.3	49.9	50.9	49.4	47.5
87.5°	18.5	19.0	19.0	18.1	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)