

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: P562733

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562733
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-35-UNV-93-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5789.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

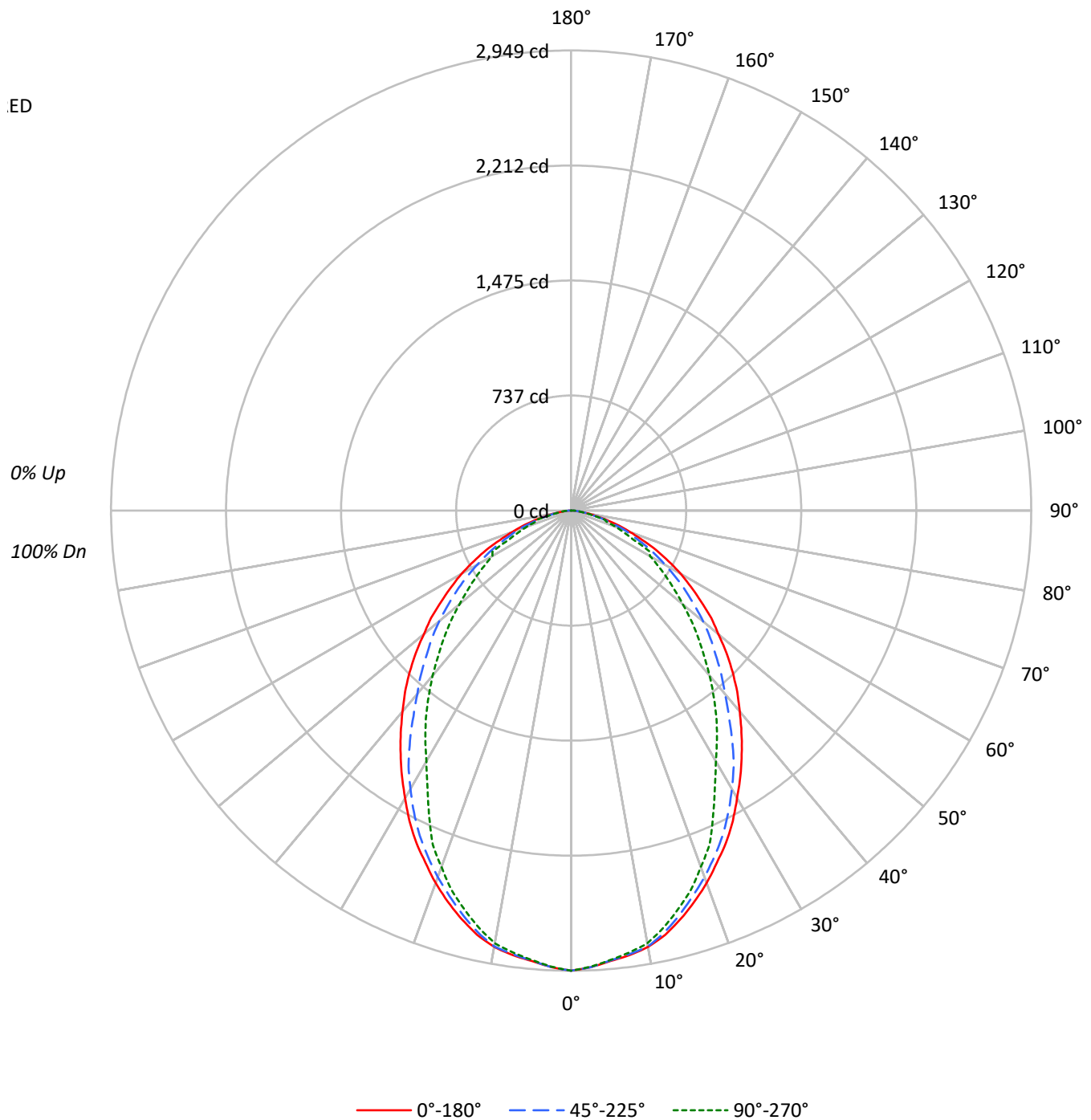
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3968	3968	3968
5°	3914	3909	3905
10°	3880	3875	3847
15°	3775	3737	3685
20°	3637	3578	3480
25°	3487	3411	3199
30°	3305	3199	2881
35°	3130	2957	2665
40°	2952	2695	2425
45°	2783	2491	2193
50°	2576	2312	1955
55°	2383	2095	1751
60°	2183	1871	1569
65°	1921	1639	1389
70°	1583	1435	1180
75°	1258	1099	1152
80°	845	793	740
85°	526	631	736

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2783 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.5	4.7
10°-20°	753.3	13.0
20°-30°	1042.9	18.0
30°-40°	1112.1	19.2
40°-50°	1014.5	17.5
50°-60°	794.8	13.7
60°-70°	518.0	8.9
70°-80°	229.5	4.0
80°-90°	49.3	0.9
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°	2070.8	35.8
0°-40°	3182.8	55.0
0°-60°	4992.2	86.2
0°-90°	5789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5789.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2898	2894	2894	2891	2891	275
15°	2710	2710	2683	2656	2645	762
25°	2349	2335	2298	2216	2154	1078
35°	1906	1892	1800	1664	1623	1191
45°	1462	1432	1309	1200	1152	1127
55°	1016	985	893	788	747	911
65°	603	569	515	525	436	595
75°	242	225	211	201	222	259
85°	34	38	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2948.8	2948.8	2948.8	2948.8	2948.8
2.5°	2928.4	2928.4	2928.4	2925.0	2925.0
5°	2897.7	2894.3	2894.3	2890.9	2890.9
7.5°	2873.8	2870.4	2867.0	2863.6	2856.8
10°	2839.7	2839.7	2836.3	2819.3	2815.9
12.5°	2785.2	2781.8	2768.2	2744.3	2737.5
15°	2710.2	2710.2	2682.9	2655.7	2645.4
17.5°	2628.4	2625.0	2590.9	2563.6	2550.0
20°	2539.8	2532.9	2498.8	2454.5	2430.7
22.5°	2440.9	2440.9	2400.0	2342.0	2318.2
25°	2348.8	2335.2	2297.7	2215.9	2154.5
27.5°	2243.2	2222.7	2181.8	2065.9	1994.3
30°	2127.3	2117.0	2059.1	1909.1	1854.5
32.5°	2018.2	2001.1	1939.8	1782.9	1738.6
35°	1905.7	1892.0	1800.0	1663.6	1622.7
37.5°	1793.2	1776.1	1660.2	1551.1	1500.0
40°	1680.7	1660.2	1534.1	1435.2	1380.7
42.5°	1575.0	1547.7	1425.0	1319.3	1257.9
45°	1462.5	1431.8	1309.1	1200.0	1152.3
47.5°	1350.0	1322.7	1210.2	1097.7	1043.2
50°	1230.7	1206.8	1104.5	992.0	934.1
52.5°	1131.8	1094.3	995.4	882.9	835.2
55°	1015.9	985.2	893.2	787.5	746.6
57.5°	910.2	879.5	794.3	695.4	661.4
60°	811.4	767.0	695.4	610.2	582.9
62.5°	702.3	668.2	606.8	535.2	569.3
65°	603.4	569.3	514.8	525.0	436.4
67.5°	494.3	477.3	429.5	381.8	368.2
70°	402.3	381.8	364.8	313.6	300.0
72.5°	320.5	300.0	276.1	248.9	238.6
75°	242.0	225.0	211.4	201.1	221.6
77.5°	167.0	160.2	150.0	139.8	136.4
80°	109.1	105.7	102.3	98.9	95.5
82.5°	64.8	64.8	64.8	64.8	64.8
85°	34.1	37.5	40.9	44.3	47.7
87.5°	20.5	20.5	23.9	27.3	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)