

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: P562678

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562678
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-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4573.0 lumens
Efficiency: N/A
Efficacy: 97.7 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

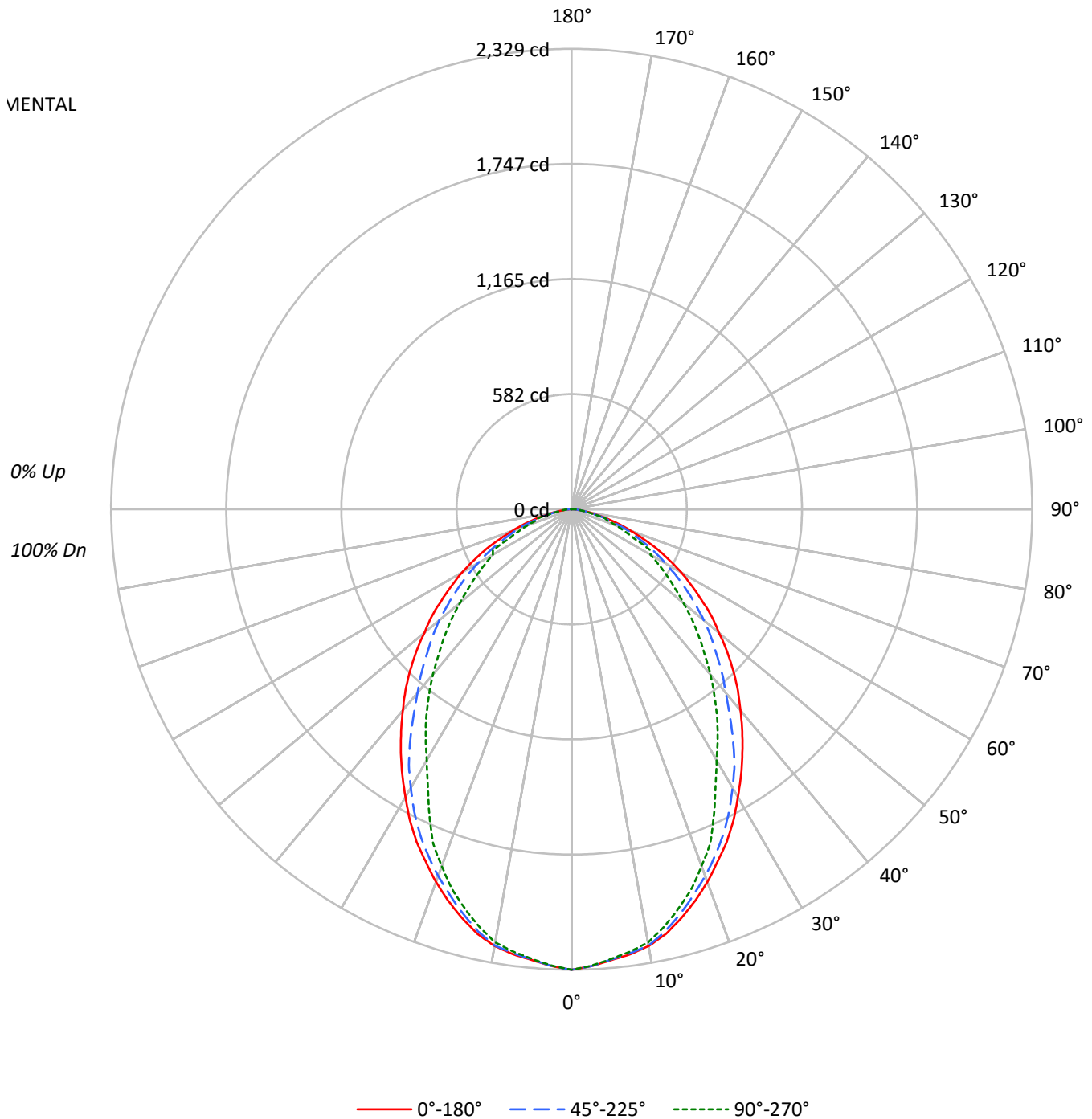
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3134	3134	3134
5°	3092	3088	3084
10°	3065	3061	3039
15°	2982	2952	2911
20°	2873	2826	2749
25°	2755	2695	2527
30°	2611	2527	2276
35°	2473	2336	2106
40°	2332	2128	1916
45°	2198	1968	1732
50°	2035	1826	1545
55°	1882	1655	1384
60°	1725	1478	1239
65°	1518	1294	1097
70°	1250	1133	932
75°	994	868	910
80°	668	626	584
85°	415	499	582

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2198 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.8	4.7
10°-20°	595.1	13.0
20°-30°	823.9	18.0
30°-40°	878.5	19.2
40°-50°	801.4	17.5
50°-60°	627.9	13.7
60°-70°	409.2	8.9
70°-80°	181.3	4.0
80°-90°	38.9	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°	1635.8	35.8
0°-40°	2514.3	55.0
0°-60°	3943.6	86.2
0°-90°	4573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2329	2329	2329	2329	2329	
5°	2289	2286	2286	2284	2284	217
15°	2141	2141	2119	2098	2090	602
25°	1856	1845	1815	1750	1702	852
35°	1505	1495	1422	1314	1282	941
45°	1155	1131	1034	948	910	890
55°	802	778	706	622	590	720
65°	477	450	407	415	345	470
75°	191	178	167	159	175	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2329.4	2329.4	2329.4	2329.4	2329.4
2.5°	2313.3	2313.3	2313.3	2310.6	2310.6
5°	2289.0	2286.3	2286.3	2283.6	2283.6
7.5°	2270.2	2267.5	2264.8	2262.1	2256.7
10°	2243.2	2243.2	2240.6	2227.1	2224.4
12.5°	2200.2	2197.5	2186.7	2167.8	2162.5
15°	2140.9	2140.9	2119.4	2097.8	2089.8
17.5°	2076.3	2073.6	2046.7	2025.1	2014.3
20°	2006.3	2000.9	1974.0	1938.9	1920.1
22.5°	1928.2	1928.2	1895.9	1850.1	1831.2
25°	1855.5	1844.7	1815.1	1750.4	1702.0
27.5°	1772.0	1755.8	1723.5	1631.9	1575.4
30°	1680.4	1672.3	1626.6	1508.1	1465.0
32.5°	1594.2	1580.8	1532.3	1408.4	1373.4
35°	1505.4	1494.6	1421.9	1314.2	1281.9
37.5°	1416.5	1403.0	1311.5	1225.3	1184.9
40°	1327.6	1311.5	1211.8	1133.7	1090.7
42.5°	1244.2	1222.6	1125.7	1042.2	993.7
45°	1155.3	1131.1	1034.1	947.9	910.2
47.5°	1066.4	1044.9	956.0	867.1	824.1
50°	972.2	953.3	872.5	783.7	737.9
52.5°	894.1	864.4	786.3	697.5	659.8
55°	802.5	778.3	705.6	622.1	589.8
57.5°	719.0	694.8	627.5	549.4	522.4
60°	640.9	605.9	549.4	482.0	460.5
62.5°	554.8	527.8	479.3	422.8	449.7
65°	476.7	449.7	406.6	414.7	344.7
67.5°	390.5	377.0	339.3	301.6	290.8
70°	317.8	301.6	288.1	247.8	237.0
72.5°	253.1	237.0	218.1	196.6	188.5
75°	191.2	177.7	167.0	158.9	175.0
77.5°	132.0	126.6	118.5	110.4	107.7
80°	86.2	83.5	80.8	78.1	75.4
82.5°	51.2	51.2	51.2	51.2	51.2
85°	26.9	29.6	32.3	35.0	37.7
87.5°	16.2	16.2	18.9	21.5	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)