

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: P562229

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562229
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-LD4-1LO-50-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2901.0 lumens
Efficiency: N/A
Efficacy: 124.0 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

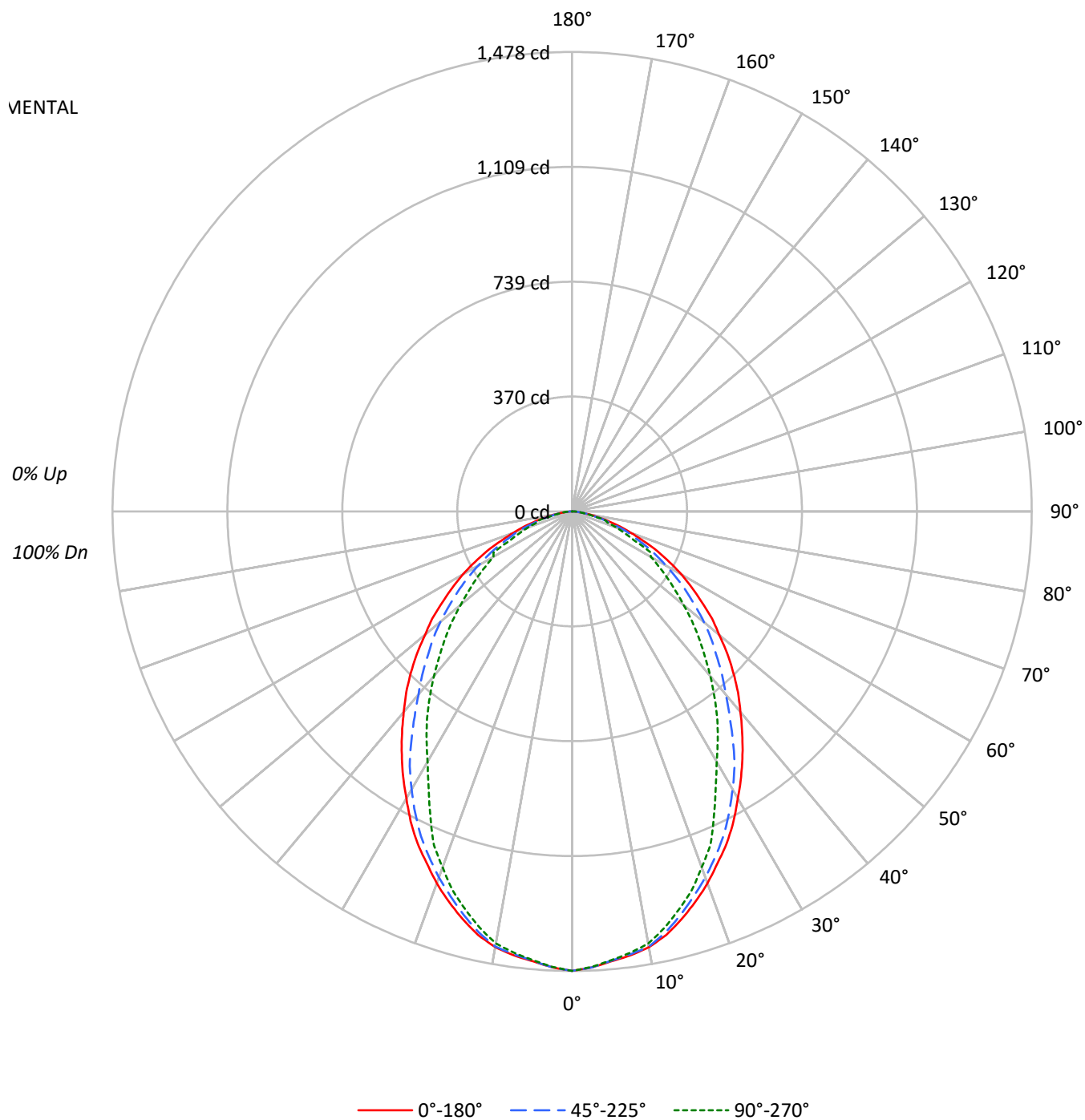
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1988	1988	1988
5°	1961	1959	1957
10°	1944	1942	1928
15°	1892	1873	1847
20°	1822	1793	1744
25°	1748	1709	1603
30°	1656	1603	1444
35°	1569	1482	1336
40°	1479	1350	1215
45°	1395	1248	1099
50°	1291	1159	980
55°	1194	1050	878
60°	1094	938	786
65°	963	821	696
70°	793	719	591
75°	631	551	577
80°	424	397	370
85°	264	316	369

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1395 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.6	4.7
10°-20°	377.5	13.0
20°-30°	522.6	18.0
30°-40°	557.3	19.2
40°-50°	508.4	17.5
50°-60°	398.3	13.7
60°-70°	259.6	8.9
70°-80°	115.0	4.0
80°-90°	24.7	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°	1037.7	35.8
0°-40°	1595.0	55.0
0°-60°	2501.7	86.2
0°-90°	2901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1452	1450	1450	1449	1449	138
15°	1358	1358	1344	1331	1326	382
25°	1177	1170	1151	1110	1080	540
35°	955	948	902	834	813	597
45°	733	718	656	601	577	565
55°	509	494	448	395	374	457
65°	302	285	258	263	219	298
75°	121	113	106	101	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1477.7	1477.7	1477.7	1477.7	1477.7
2.5°	1467.5	1467.5	1467.5	1465.8	1465.8
5°	1452.1	1450.4	1450.4	1448.7	1448.7
7.5°	1440.1	1438.4	1436.7	1435.0	1431.6
10°	1423.1	1423.1	1421.4	1412.8	1411.1
12.5°	1395.7	1394.0	1387.2	1375.2	1371.8
15°	1358.1	1358.1	1344.5	1330.8	1325.7
17.5°	1317.1	1315.4	1298.4	1284.7	1277.9
20°	1272.7	1269.3	1252.2	1230.0	1218.1
22.5°	1223.2	1223.2	1202.7	1173.6	1161.7
25°	1177.1	1170.2	1151.4	1110.4	1079.7
27.5°	1124.1	1113.9	1093.3	1035.3	999.4
30°	1066.0	1060.9	1031.8	956.7	929.3
32.5°	1011.3	1002.8	972.1	893.5	871.3
35°	955.0	948.1	902.0	833.7	813.2
37.5°	898.6	890.1	832.0	777.3	751.7
40°	842.2	832.0	768.8	719.2	691.9
42.5°	789.3	775.6	714.1	661.1	630.4
45°	732.9	717.5	656.0	601.3	577.4
47.5°	676.5	662.8	606.5	550.1	522.8
50°	616.7	604.8	553.5	497.1	468.1
52.5°	567.2	548.4	498.8	442.5	418.5
55°	509.1	493.7	447.6	394.6	374.1
57.5°	456.1	440.8	398.0	348.5	331.4
60°	406.6	384.4	348.5	305.8	292.1
62.5°	351.9	334.8	304.1	268.2	285.3
65°	302.4	285.3	258.0	263.1	218.7
67.5°	247.7	239.2	215.3	191.3	184.5
70°	201.6	191.3	182.8	157.2	150.3
72.5°	160.6	150.3	138.4	124.7	119.6
75°	121.3	112.8	105.9	100.8	111.0
77.5°	83.7	80.3	75.2	70.0	68.3
80°	54.7	53.0	51.3	49.5	47.8
82.5°	32.5	32.5	32.5	32.5	32.5
85°	17.1	18.8	20.5	22.2	23.9
87.5°	10.3	10.3	12.0	13.7	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)