

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: P561123

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561123
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-12-4-LD4-1LO-50-UNV-93-85-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2502.0 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

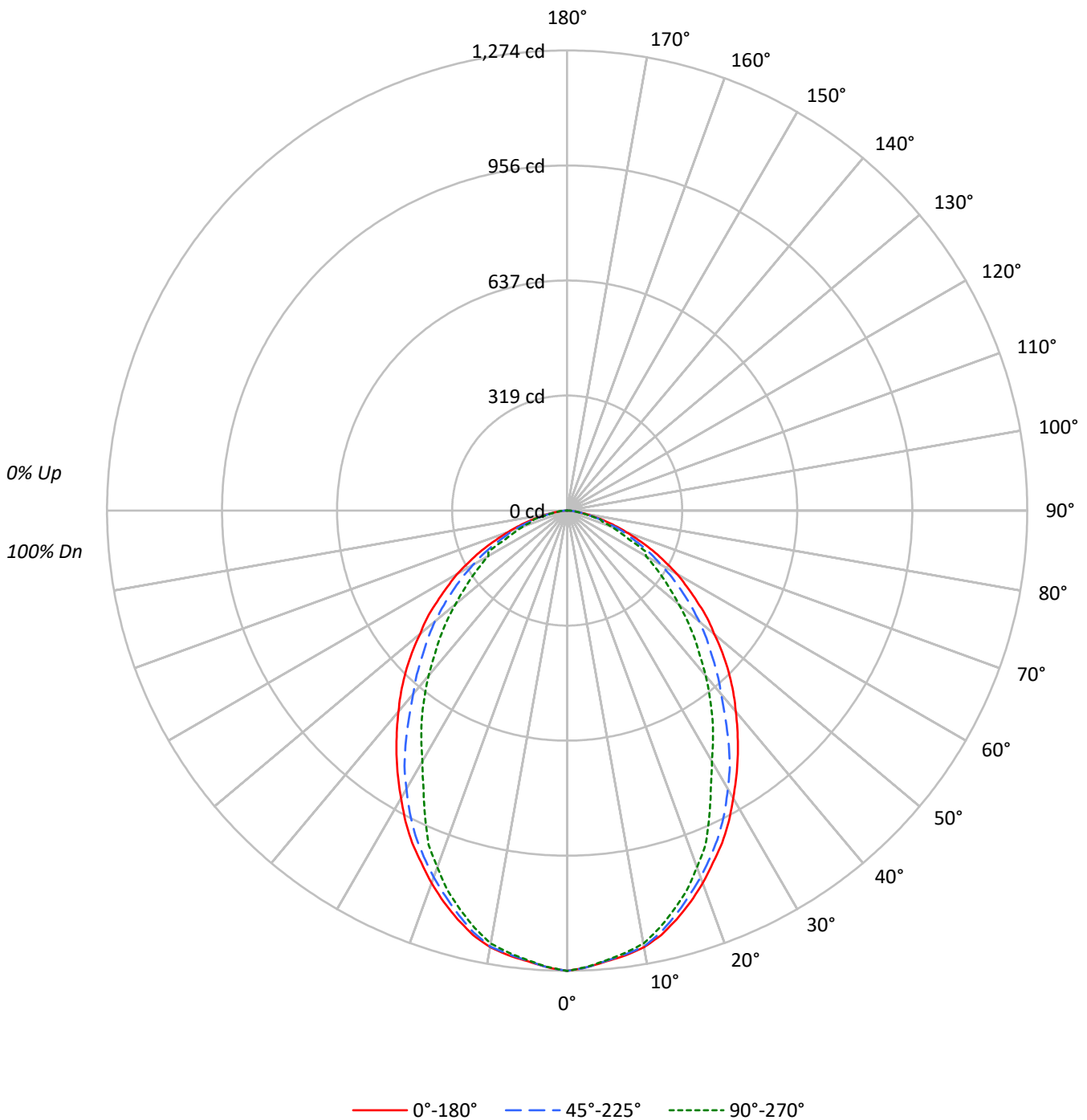
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561123

CATALOG NUMBER: FSR-12-4-LD4-1LO-50-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561123

CATALOG NUMBER: FSR-12-4-LD4-1LO-50-UNV-93-85-EDD

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°	3430	3430	3430
5°	3383	3379	3375
10°	3354	3350	3325
15°	3263	3231	3185
20°	3143	3093	3008
25°	3014	2949	2765
30°	2857	2765	2490
35°	2706	2556	2304
40°	2552	2329	2096
45°	2406	2153	1895
50°	2227	1999	1690
55°	2060	1811	1514
60°	1887	1618	1356
65°	1661	1417	1201
70°	1368	1241	1020
75°	1088	950	996
80°	730	685	640
85°	454	546	636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2406 cd/sqm



TEST NUMBER: P561123

CATALOG NUMBER: FSR-12-4-LD4-1LO-50-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.6	4.7
10°-20°	325.6	13.0
20°-30°	450.8	18.0
30°-40°	480.6	19.2
40°-50°	438.5	17.5
50°-60°	343.5	13.7
60°-70°	223.9	8.9
70°-80°	99.2	4.0
80°-90°	21.3	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°	895.0	35.8
0°-40°	1375.6	55.0
0°-60°	2157.6	86.2
0°-90°	2502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1252	1251	1251	1249	1249	119
15°	1171	1171	1160	1148	1143	329
25°	1015	1009	993	958	931	466
35°	824	818	778	719	701	515
45°	632	619	566	519	498	487
55°	439	426	386	340	323	394
65°	261	246	222	227	189	257
75°	105	97	91	87	96	112
85°	15	16	18	19	21	20
90°	0	0	0	0	0	



TEST NUMBER: P561123

CATALOG NUMBER: FSR-12-4-LD4-1LO-50-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1274.5	1274.5	1274.5	1274.5	1274.5
2.5°	1265.6	1265.6	1265.6	1264.2	1264.2
5°	1252.4	1250.9	1250.9	1249.4	1249.4
7.5°	1242.1	1240.6	1239.1	1237.7	1234.7
10°	1227.3	1227.3	1225.9	1218.5	1217.0
12.5°	1203.8	1202.3	1196.4	1186.1	1183.1
15°	1171.3	1171.3	1159.6	1147.8	1143.4
17.5°	1136.0	1134.5	1119.8	1108.0	1102.1
20°	1097.7	1094.7	1080.0	1060.8	1050.5
22.5°	1054.9	1054.9	1037.3	1012.2	1001.9
25°	1015.2	1009.3	993.1	957.7	931.2
27.5°	969.5	960.7	943.0	892.9	861.9
30°	919.4	915.0	889.9	825.1	801.5
32.5°	872.2	864.9	838.4	770.6	751.4
35°	823.6	817.7	778.0	719.0	701.3
37.5°	775.0	767.6	717.5	670.4	648.3
40°	726.4	717.5	663.0	620.3	596.7
42.5°	680.7	668.9	615.9	570.2	543.7
45°	632.1	618.8	565.8	518.6	498.0
47.5°	583.5	571.7	523.1	474.4	450.9
50°	531.9	521.6	477.4	428.8	403.7
52.5°	489.2	473.0	430.2	381.6	361.0
55°	439.1	425.8	386.0	340.4	322.7
57.5°	393.4	380.1	343.3	300.6	285.8
60°	350.7	331.5	300.6	263.7	252.0
62.5°	303.5	288.8	262.3	231.3	246.1
65°	260.8	246.1	222.5	226.9	188.6
67.5°	213.6	206.3	185.6	165.0	159.1
70°	173.9	165.0	157.7	135.6	129.7
72.5°	138.5	129.7	119.3	107.6	103.1
75°	104.6	97.2	91.4	86.9	95.8
77.5°	72.2	69.2	64.8	60.4	58.9
80°	47.1	45.7	44.2	42.7	41.3
82.5°	28.0	28.0	28.0	28.0	28.0
85°	14.7	16.2	17.7	19.2	20.6
87.5°	8.8	8.8	10.3	11.8	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)