

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: P561756

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561756
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-LD4-2STD-35-UNV-82-96-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5124.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

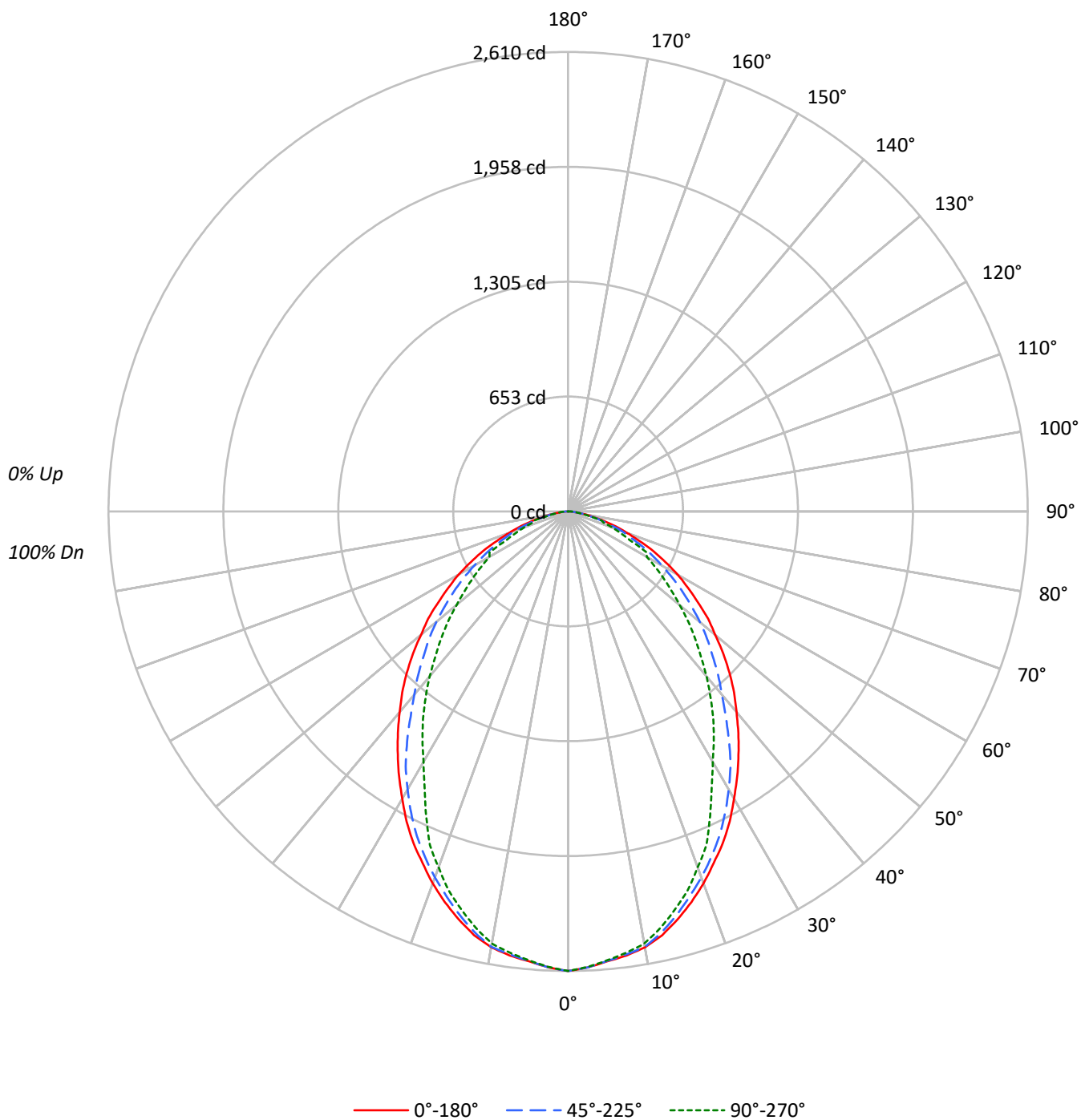
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561756

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P561756

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		92
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		74
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		67
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		51
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		48
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		44
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7024	7024	7024
5°	6928	6920	6912
10°	6868	6860	6810
15°	6683	6616	6523
20°	6438	6334	6161
25°	6173	6039	5662
30°	5851	5663	5101
35°	5541	5234	4718
40°	5226	4770	4293
45°	4926	4410	3881
50°	4560	4093	3461
55°	4219	3709	3100
60°	3865	3313	2777
65°	3401	2901	2459
70°	2802	2541	2089
75°	2227	1945	2039
80°	1497	1402	1309
85°	932	1118	1303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4926 cd/sqm

TEST NUMBER: P561756

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.0	4.7
10°-20°	666.8	13.0
20°-30°	923.1	18.0
30°-40°	984.3	19.2
40°-50°	898.0	17.5
50°-60°	703.5	13.7
60°-70°	458.5	8.9
70°-80°	203.1	4.0
80°-90°	43.6	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°	1832.9	35.8
0°-40°	2817.2	55.0
0°-60°	4418.7	86.2
0°-90°	5124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2610	2610	2610	2610	2610	
5°	2565	2562	2562	2559	2559	243
15°	2399	2399	2375	2351	2342	674
25°	2079	2067	2034	1961	1907	954
35°	1687	1675	1593	1472	1436	1055
45°	1294	1267	1159	1062	1020	997
55°	899	872	791	697	661	807
65°	534	504	456	465	386	526
75°	214	199	187	178	196	230
85°	30	33	36	39	42	42
90°	0	0	0	0	0	

TEST NUMBER: P561756

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2610.1	2610.1	2610.1	2610.1	2610.1
2.5°	2592.0	2592.0	2592.0	2589.0	2589.0
5°	2564.8	2561.8	2561.8	2558.8	2558.8
7.5°	2543.7	2540.7	2537.7	2534.7	2528.6
10°	2513.5	2513.5	2510.5	2495.4	2492.4
12.5°	2465.3	2462.2	2450.2	2429.0	2423.0
15°	2398.9	2398.9	2374.7	2350.6	2341.5
17.5°	2326.5	2323.4	2293.3	2269.1	2257.1
20°	2248.0	2242.0	2211.8	2172.6	2151.4
22.5°	2160.5	2160.5	2124.3	2073.0	2051.9
25°	2079.0	2067.0	2033.8	1961.3	1907.0
27.5°	1985.5	1967.4	1931.2	1828.6	1765.2
30°	1882.9	1873.8	1822.5	1689.8	1641.5
32.5°	1786.3	1771.2	1716.9	1578.1	1538.9
35°	1686.8	1674.7	1593.2	1472.5	1436.3
37.5°	1587.2	1572.1	1469.5	1372.9	1327.7
40°	1487.6	1469.5	1357.9	1270.3	1222.1
42.5°	1394.1	1369.9	1261.3	1167.8	1113.4
45°	1294.5	1267.3	1158.7	1062.1	1019.9
47.5°	1194.9	1170.8	1071.2	971.6	923.3
50°	1089.3	1068.2	977.7	878.1	826.8
52.5°	1001.8	968.6	881.1	781.5	739.3
55°	899.2	872.0	790.6	697.0	660.8
57.5°	805.7	778.5	703.1	615.6	585.4
60°	718.2	678.9	615.6	540.1	516.0
62.5°	621.6	591.4	537.1	473.7	503.9
65°	534.1	503.9	455.6	464.7	386.2
67.5°	437.5	422.4	380.2	338.0	325.9
70°	356.1	338.0	322.9	277.6	265.5
72.5°	283.6	265.5	244.4	220.3	211.2
75°	214.2	199.2	187.1	178.0	196.1
77.5°	147.9	141.8	132.8	123.7	120.7
80°	96.6	93.5	90.5	87.5	84.5
82.5°	57.3	57.3	57.3	57.3	57.3
85°	30.2	33.2	36.2	39.2	42.2
87.5°	18.1	18.1	21.1	24.1	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)