

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: P561827

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561827
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6589.0 lumens
Efficiency: N/A
Efficacy: 98.9 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

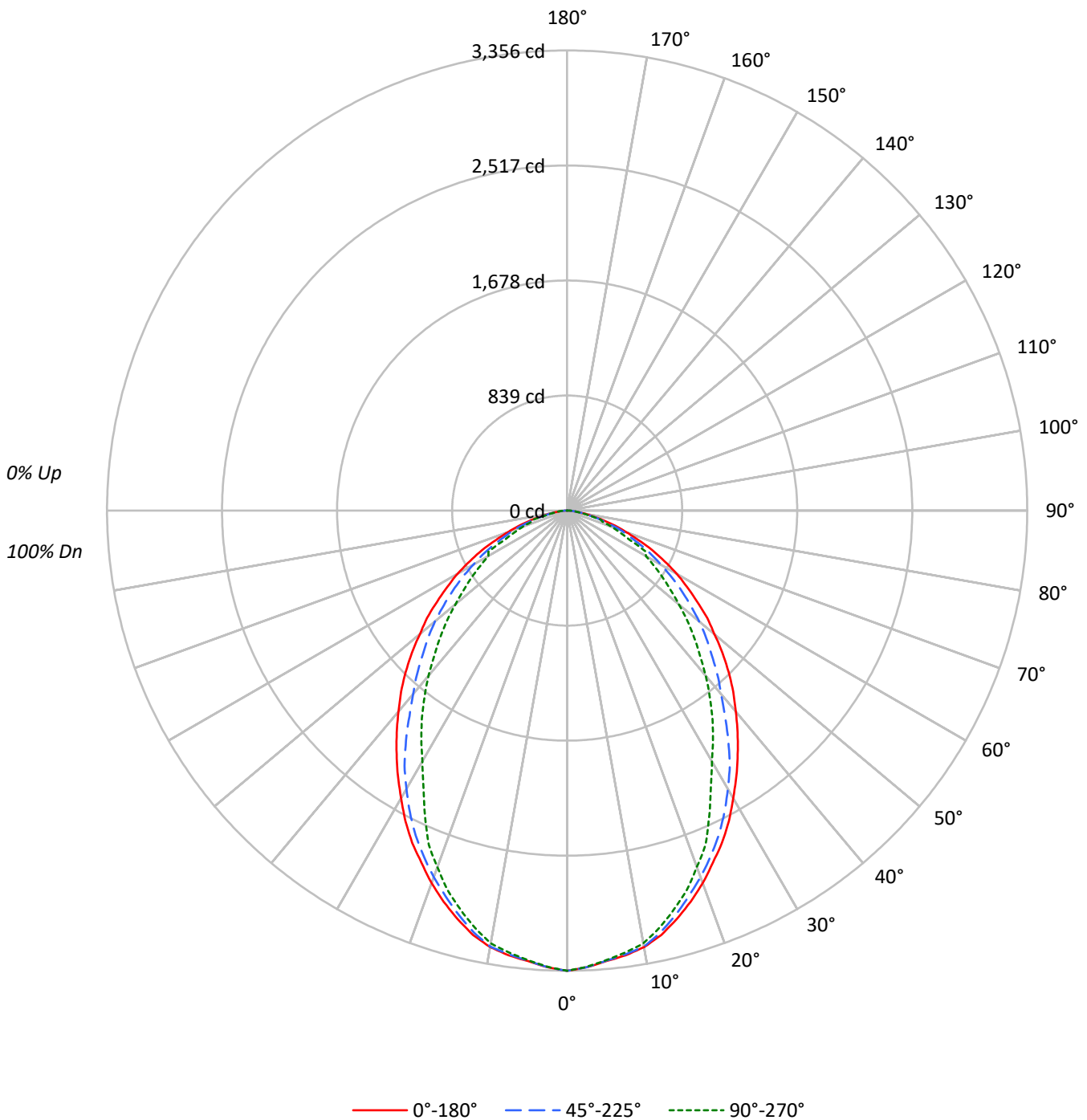
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561827

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561827

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-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°	9032	9032	9032
5°	8909	8899	8888
10°	8832	8821	8758
15°	8594	8507	8388
20°	8278	8145	7923
25°	7938	7765	7281
30°	7523	7282	6559
35°	7125	6730	6068
40°	6720	6134	5520
45°	6335	5670	4991
50°	5864	5263	4451
55°	5425	4769	3987
60°	4970	4260	3571
65°	4373	3731	3163
70°	3603	3267	2687
75°	2864	2502	2622
80°	1925	1804	1683
85°	1198	1439	1677

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6335 cd/sqm



TEST NUMBER: P561827

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.4	4.7
10°-20°	857.4	13.0
20°-30°	1187.1	18.0
30°-40°	1265.8	19.2
40°-50°	1154.7	17.5
50°-60°	904.7	13.7
60°-70°	589.6	8.9
70°-80°	261.2	4.0
80°-90°	56.1	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°	2356.9	35.8
0°-40°	3622.7	55.0
0°-60°	5682.1	86.2
0°-90°	6589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3356	3356	3356	3356	3356	
5°	3298	3294	3294	3290	3290	313
15°	3085	3085	3054	3023	3011	867
25°	2673	2658	2615	2522	2452	1227
35°	2169	2154	2049	1894	1847	1356
45°	1665	1630	1490	1366	1312	1282
55°	1156	1121	1017	896	850	1037
65°	687	648	586	598	497	677
75°	276	256	241	229	252	295
85°	39	43	47	50	54	54
90°	0	0	0	0	0	



TEST NUMBER: P561827

CATALOG NUMBER: FSR-12-4-LD4-2STD-40-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3356.3	3356.3	3356.3	3356.3	3356.3
2.5°	3333.1	3333.1	3333.1	3329.2	3329.2
5°	3298.1	3294.3	3294.3	3290.4	3290.4
7.5°	3271.0	3267.1	3263.2	3259.3	3251.6
10°	3232.2	3232.2	3228.3	3208.9	3205.0
12.5°	3170.1	3166.2	3150.7	3123.5	3115.8
15°	3084.7	3084.7	3053.7	3022.7	3011.0
17.5°	2991.6	2987.7	2948.9	2917.9	2902.4
20°	2890.7	2883.0	2844.2	2793.7	2766.6
22.5°	2778.2	2778.2	2731.6	2665.7	2638.5
25°	2673.4	2657.9	2615.2	2522.1	2452.3
27.5°	2553.2	2529.9	2483.3	2351.4	2269.9
30°	2421.2	2409.6	2343.6	2172.9	2110.8
32.5°	2297.1	2277.7	2207.8	2029.3	1978.9
35°	2169.0	2153.5	2048.7	1893.5	1847.0
37.5°	2041.0	2021.6	1889.6	1765.5	1707.3
40°	1912.9	1889.6	1746.1	1633.6	1571.5
42.5°	1792.6	1761.6	1621.9	1501.6	1431.8
45°	1664.6	1629.7	1490.0	1365.8	1311.5
47.5°	1536.5	1505.5	1377.5	1249.4	1187.3
50°	1400.7	1373.6	1257.2	1129.1	1063.2
52.5°	1288.2	1245.5	1133.0	1005.0	950.6
55°	1156.3	1121.4	1016.6	896.3	849.8
57.5°	1036.0	1001.1	904.1	791.6	752.8
60°	923.5	873.0	791.6	694.6	663.5
62.5°	799.3	760.5	690.7	609.2	648.0
65°	686.8	648.0	585.9	597.5	496.7
67.5°	562.6	543.2	488.9	434.6	419.1
70°	457.9	434.6	415.2	357.0	341.5
72.5°	364.7	341.5	314.3	283.3	271.6
75°	275.5	256.1	240.6	228.9	252.2
77.5°	190.1	182.4	170.7	159.1	155.2
80°	124.2	120.3	116.4	112.5	108.6
82.5°	73.7	73.7	73.7	73.7	73.7
85°	38.8	42.7	46.6	50.4	54.3
87.5°	23.3	23.3	27.2	31.0	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)