

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: P561747

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561747
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-82-85-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6055.0 lumens
Efficiency: N/A
Efficacy: 90.9 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

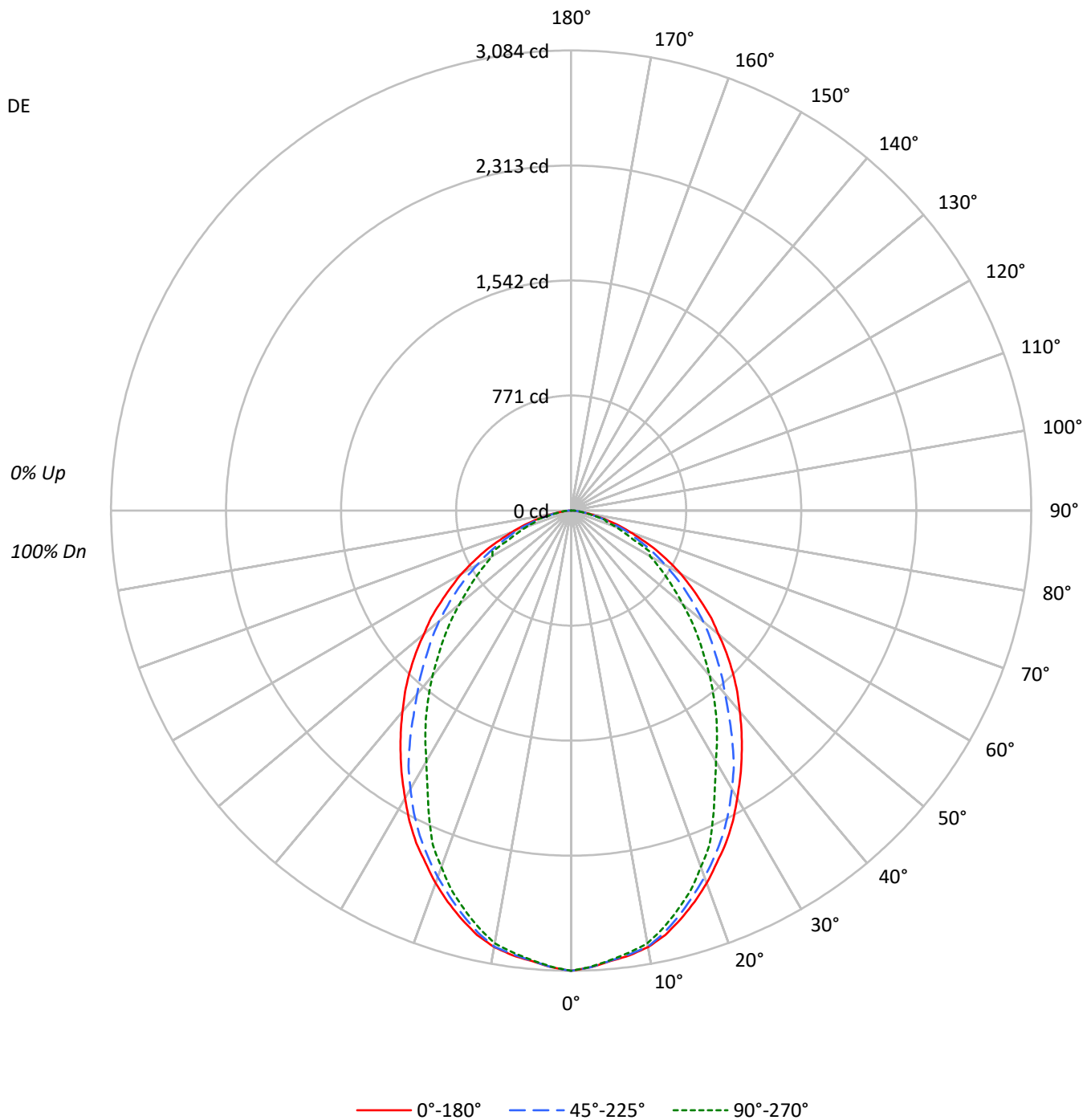
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561747

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561747

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-85-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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8300	8300	8300
5°	8187	8178	8168
10°	8116	8106	8048
15°	7897	7818	7709
20°	7607	7485	7280
25°	7295	7136	6691
30°	6914	6692	6027
35°	6548	6185	5576
40°	6175	5637	5073
45°	5821	5211	4587
50°	5389	4837	4090
55°	4985	4383	3664
60°	4567	3915	3281
65°	4018	3428	2906
70°	3311	3002	2469
75°	2633	2299	2410
80°	1768	1658	1547
85°	1102	1321	1541

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5821 cd/sqm



TEST NUMBER: P561747

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.1	4.7
10°-20°	787.9	13.0
20°-30°	1090.9	18.0
30°-40°	1163.2	19.2
40°-50°	1061.2	17.5
50°-60°	831.3	13.7
60°-70°	541.8	8.9
70°-80°	240.1	4.0
80°-90°	51.5	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°	2165.9	35.8
0°-40°	3329.1	55.0
0°-60°	5221.6	86.2
0°-90°	6055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3084	3084	3084	3084	3084	
5°	3031	3027	3027	3024	3024	288
15°	2835	2835	2806	2778	2767	797
25°	2457	2442	2403	2318	2254	1128
35°	1993	1979	1883	1740	1697	1246
45°	1530	1498	1369	1255	1205	1178
55°	1063	1030	934	824	781	953
65°	631	596	538	549	456	622
75°	253	235	221	210	232	271
85°	36	39	43	46	50	49
90°	0	0	0	0	0	



TEST NUMBER: P561747

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3084.3	3084.3	3084.3	3084.3	3084.3
2.5°	3062.9	3062.9	3062.9	3059.4	3059.4
5°	3030.9	3027.3	3027.3	3023.7	3023.7
7.5°	3005.9	3002.3	2998.8	2995.2	2988.1
10°	2970.2	2970.2	2966.7	2948.8	2945.3
12.5°	2913.2	2909.6	2895.4	2870.4	2863.3
15°	2834.7	2834.7	2806.2	2777.7	2767.0
17.5°	2749.2	2745.6	2709.9	2681.4	2667.1
20°	2656.5	2649.3	2613.7	2567.3	2542.3
22.5°	2553.0	2553.0	2510.3	2449.6	2424.7
25°	2456.8	2442.5	2403.3	2317.7	2253.5
27.5°	2346.2	2324.8	2282.1	2160.8	2085.9
30°	2225.0	2214.3	2153.7	1996.8	1939.7
32.5°	2110.9	2093.1	2028.9	1864.9	1818.5
35°	1993.2	1979.0	1882.7	1740.1	1697.3
37.5°	1875.6	1857.7	1736.5	1622.4	1568.9
40°	1757.9	1736.5	1604.6	1501.2	1444.1
42.5°	1647.4	1618.8	1490.5	1379.9	1315.7
45°	1529.7	1497.6	1369.2	1255.1	1205.2
47.5°	1412.0	1383.5	1265.8	1148.2	1091.1
50°	1287.2	1262.3	1155.3	1037.6	977.0
52.5°	1183.8	1144.6	1041.2	923.5	873.6
55°	1062.6	1030.5	934.2	823.7	780.9
57.5°	952.0	920.0	830.8	727.4	691.7
60°	848.6	802.3	727.4	638.3	609.7
62.5°	734.5	698.9	634.7	559.8	595.5
65°	631.1	595.5	538.4	549.1	456.4
67.5°	517.0	499.2	449.3	399.4	385.1
70°	420.8	399.4	381.5	328.0	313.8
72.5°	335.2	313.8	288.8	260.3	249.6
75°	253.2	235.3	221.1	210.4	231.8
77.5°	174.7	167.6	156.9	146.2	142.6
80°	114.1	110.5	107.0	103.4	99.8
82.5°	67.7	67.7	67.7	67.7	67.7
85°	35.7	39.2	42.8	46.4	49.9
87.5°	21.4	21.4	25.0	28.5	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)