

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: P561749

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561749
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-82-86-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5987.0 lumens
Efficiency: N/A
Efficacy: 89.9 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

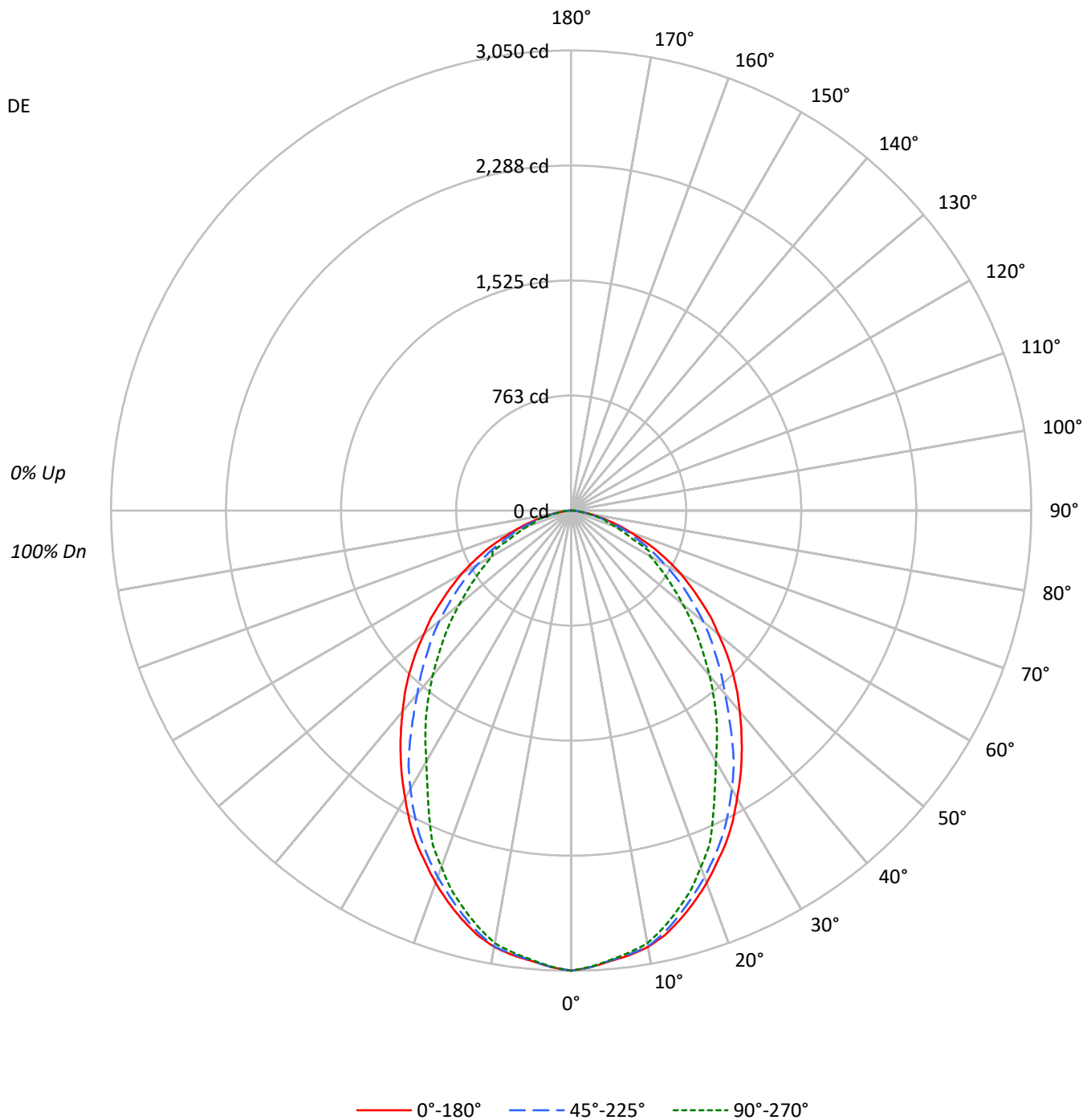
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561749

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561749

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-86-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°	8207	8207	8207
5°	8095	8086	8076
10°	8025	8015	7958
15°	7809	7730	7622
20°	7522	7401	7199
25°	7213	7056	6616
30°	6836	6617	5960
35°	6474	6115	5513
40°	6106	5573	5016
45°	5756	5152	4535
50°	5328	4782	4044
55°	4929	4334	3622
60°	4516	3871	3245
65°	3973	3390	2874
70°	3273	2968	2441
75°	2602	2273	2383
80°	1748	1640	1530
85°	1090	1306	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5756 cd/sqm



TEST NUMBER: P561749

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.9	4.7
10°-20°	779.1	13.0
20°-30°	1078.6	18.0
30°-40°	1150.1	19.2
40°-50°	1049.2	17.5
50°-60°	822.0	13.7
60°-70°	535.7	8.9
70°-80°	237.4	4.0
80°-90°	51.0	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°	2141.6	35.8
0°-40°	3291.7	55.0
0°-60°	5163.0	86.2
0°-90°	5987.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5987.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3050	3050	3050	3050	3050	
5°	2997	2993	2993	2990	2990	284
15°	2803	2803	2775	2746	2736	788
25°	2429	2415	2376	2292	2228	1115
35°	1971	1957	1862	1720	1678	1232
45°	1512	1481	1354	1241	1192	1165
55°	1051	1019	924	814	772	942
65°	624	589	532	543	451	615
75°	250	233	219	208	229	268
85°	35	39	42	46	49	49
90°	0	0	0	0	0	



TEST NUMBER: P561749

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3049.7	3049.7	3049.7	3049.7	3049.7
2.5°	3028.5	3028.5	3028.5	3025.0	3025.0
5°	2996.8	2993.3	2993.3	2989.8	2989.8
7.5°	2972.1	2968.6	2965.1	2961.6	2954.5
10°	2936.9	2936.9	2933.4	2915.7	2912.2
12.5°	2880.5	2876.9	2862.8	2838.2	2831.1
15°	2802.9	2802.9	2774.7	2746.5	2735.9
17.5°	2718.3	2714.8	2679.5	2651.3	2637.2
20°	2626.6	2619.6	2584.3	2538.5	2513.8
22.5°	2524.4	2524.4	2482.1	2422.1	2397.5
25°	2429.2	2415.1	2376.3	2291.7	2228.2
27.5°	2319.9	2298.7	2256.4	2136.6	2062.5
30°	2200.0	2189.4	2129.5	1974.4	1918.0
32.5°	2087.2	2069.6	2006.1	1843.9	1798.1
35°	1970.8	1956.7	1861.5	1720.5	1678.2
37.5°	1854.5	1836.9	1717.0	1604.2	1551.3
40°	1738.2	1717.0	1586.5	1484.3	1427.9
42.5°	1628.9	1600.7	1473.7	1364.4	1301.0
45°	1512.5	1480.8	1353.9	1241.0	1191.7
47.5°	1396.2	1368.0	1251.6	1135.3	1078.9
50°	1272.8	1248.1	1142.3	1026.0	966.0
52.5°	1170.5	1131.7	1029.5	913.1	863.8
55°	1050.6	1018.9	923.7	814.4	772.1
57.5°	941.4	909.6	821.5	719.2	684.0
60°	839.1	793.3	719.2	631.1	602.9
62.5°	726.3	691.0	627.6	553.5	588.8
65°	624.0	588.8	532.4	543.0	451.3
67.5°	511.2	493.6	444.2	394.9	380.8
70°	416.0	394.9	377.2	324.4	310.3
72.5°	331.4	310.3	285.6	257.4	246.8
75°	250.3	232.7	218.6	208.0	229.2
77.5°	172.8	165.7	155.1	144.6	141.0
80°	112.8	109.3	105.8	102.2	98.7
82.5°	67.0	67.0	67.0	67.0	67.0
85°	35.3	38.8	42.3	45.8	49.4
87.5°	21.2	21.2	24.7	28.2	31.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)