

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: P562920

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562920
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-24-4-LD4-2STD-35-UNV-93-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5525.0 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

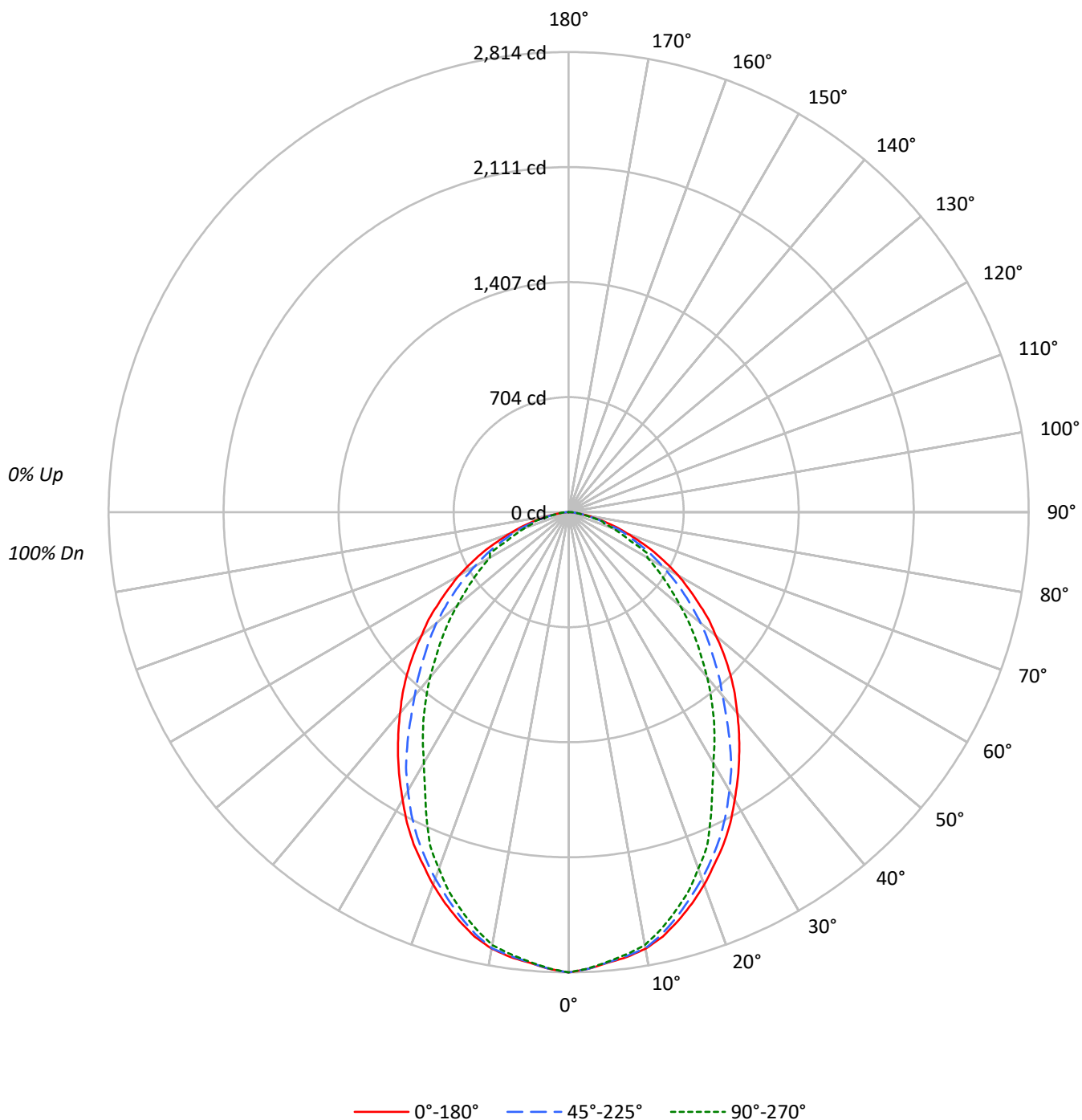
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20
RC	80					70					50					30					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°	3787	3787	3787
5°	3735	3731	3727
10°	3703	3698	3672
15°	3603	3567	3517
20°	3471	3415	3322
25°	3328	3256	3053
30°	3154	3053	2750
35°	2987	2822	2544
40°	2817	2572	2314
45°	2656	2377	2093
50°	2458	2207	1866
55°	2274	2000	1671
60°	2084	1786	1497
65°	1833	1564	1326
70°	1510	1369	1126
75°	1201	1049	1099
80°	807	756	706
85°	502	602	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2656 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.0	4.7
10°-20°	719.0	13.0
20°-30°	995.4	18.0
30°-40°	1061.4	19.2
40°-50°	968.3	17.5
50°-60°	758.6	13.7
60°-70°	494.4	8.9
70°-80°	219.0	4.0
80°-90°	47.0	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°	1976.3	35.8
0°-40°	3037.7	55.0
0°-60°	4764.5	86.2
0°-90°	5525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2814	2814	2814	2814	2814	
5°	2766	2762	2762	2759	2759	263
15°	2587	2587	2561	2535	2525	727
25°	2242	2229	2193	2115	2056	1029
35°	1819	1806	1718	1588	1549	1137
45°	1396	1366	1249	1145	1100	1075
55°	970	940	852	752	712	870
65°	576	543	491	501	416	568
75°	231	215	202	192	212	248
85°	32	36	39	42	46	45
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2814.4	2814.4	2814.4	2814.4	2814.4
2.5°	2794.8	2794.8	2794.8	2791.6	2791.6
5°	2765.6	2762.3	2762.3	2759.1	2759.1
7.5°	2742.8	2739.5	2736.3	2733.0	2726.5
10°	2710.2	2710.2	2707.0	2690.7	2687.5
12.5°	2658.2	2654.9	2641.9	2619.1	2612.6
15°	2586.6	2586.6	2560.6	2534.6	2524.8
17.5°	2508.5	2505.3	2472.7	2446.7	2433.7
20°	2423.9	2417.4	2384.9	2342.6	2319.8
22.5°	2329.6	2329.6	2290.5	2235.2	2212.4
25°	2241.7	2228.7	2192.9	2114.8	2056.3
27.5°	2140.9	2121.3	2082.3	1971.7	1903.4
30°	2030.2	2020.5	1965.2	1822.0	1770.0
32.5°	1926.1	1909.9	1851.3	1701.6	1659.3
35°	1818.8	1805.7	1717.9	1587.8	1548.7
37.5°	1711.4	1695.1	1584.5	1480.4	1431.6
40°	1604.0	1584.5	1464.1	1369.8	1317.7
42.5°	1503.2	1477.1	1360.0	1259.1	1200.6
45°	1395.8	1366.5	1249.4	1145.3	1099.7
47.5°	1288.4	1262.4	1155.0	1047.7	995.6
50°	1174.5	1151.8	1054.2	946.8	891.5
52.5°	1080.2	1044.4	950.1	842.7	797.1
55°	969.6	940.3	852.4	751.6	712.5
57.5°	868.7	839.4	758.1	663.7	631.2
60°	774.4	732.1	663.7	582.4	556.4
62.5°	670.2	637.7	579.1	510.8	543.4
65°	575.9	543.4	491.3	501.1	416.5
67.5°	471.8	455.5	410.0	364.4	351.4
70°	383.9	364.4	348.1	299.3	286.3
72.5°	305.8	286.3	263.5	237.5	227.8
75°	231.0	214.7	201.7	192.0	211.5
77.5°	159.4	152.9	143.2	133.4	130.1
80°	104.1	100.9	97.6	94.4	91.1
82.5°	61.8	61.8	61.8	61.8	61.8
85°	32.5	35.8	39.0	42.3	45.6
87.5°	19.5	19.5	22.8	26.0	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)