

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: P561893

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561893
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-50-UNV-93-86-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6625.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

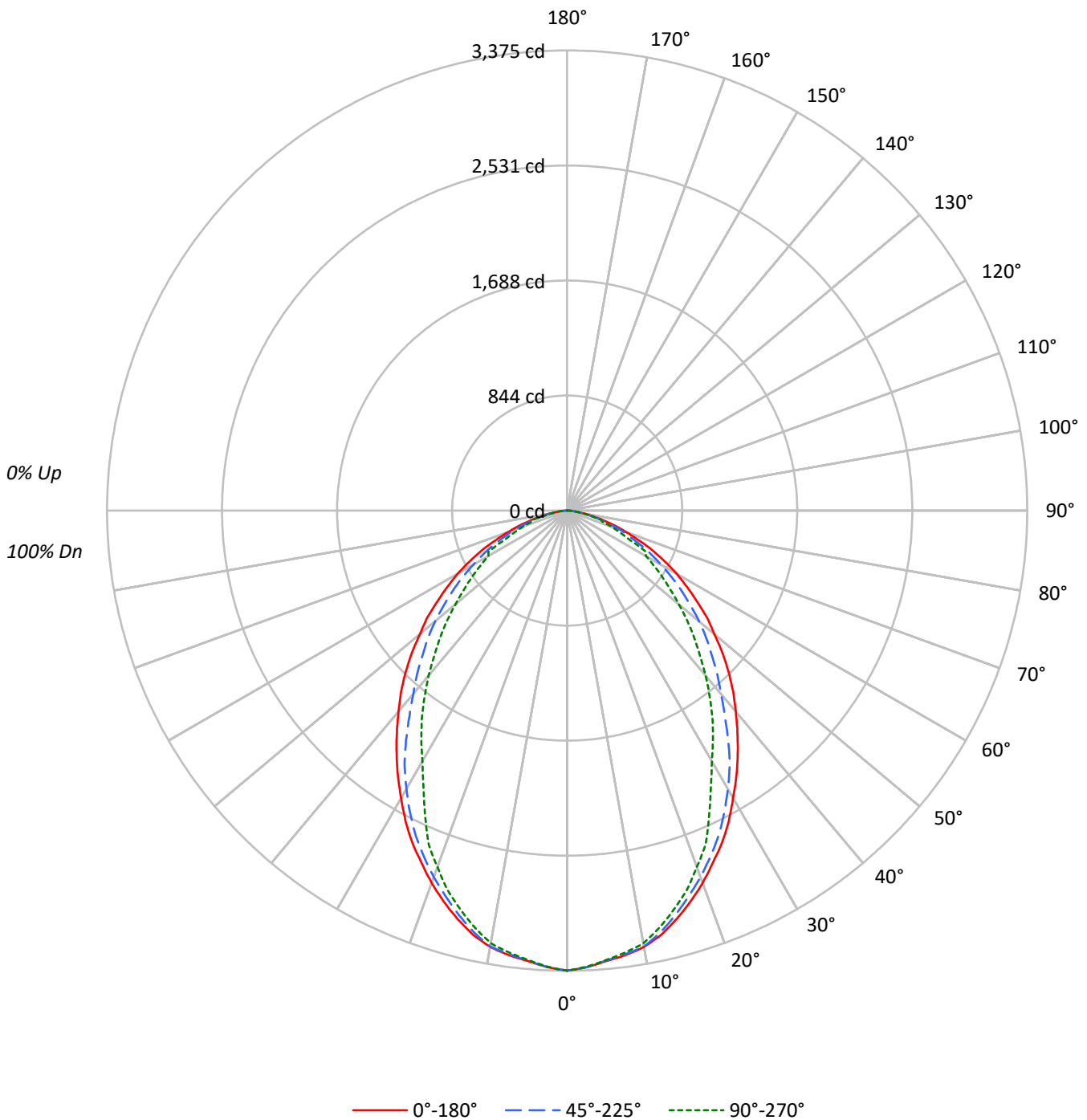
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				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°	9081	9081	9081
5°	8958	8947	8937
10°	8880	8869	8805
15°	8641	8554	8434
20°	8323	8189	7966
25°	7981	7807	7321
30°	7565	7322	6595
35°	7164	6767	6101
40°	6757	6167	5551
45°	6369	5701	5018
50°	5896	5292	4475
55°	5454	4796	4008
60°	4997	4283	3590
65°	4397	3751	3180
70°	3622	3284	2701
75°	2880	2515	2637
80°	1934	1813	1692
85°	1204	1445	1686

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.1	4.7
10°-20°	862.1	13.0
20°-30°	1193.6	18.0
30°-40°	1272.7	19.2
40°-50°	1161.0	17.5
50°-60°	909.6	13.7
60°-70°	592.8	8.9
70°-80°	262.7	4.0
80°-90°	56.4	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°	2369.8	35.8
0°-40°	3642.5	55.0
0°-60°	5713.1	86.2
0°-90°	6625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3375	3375	3375	3375	3375	
5°	3316	3312	3312	3308	3308	315
15°	3102	3102	3070	3039	3028	872
25°	2688	2672	2630	2536	2466	1234
35°	2181	2165	2060	1904	1857	1363
45°	1674	1639	1498	1373	1319	1289
55°	1163	1128	1022	901	854	1043
65°	690	652	589	601	499	681
75°	277	258	242	230	254	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3374.7	3374.7	3374.7	3374.7	3374.7
2.5°	3351.3	3351.3	3351.3	3347.4	3347.4
5°	3316.2	3312.3	3312.3	3308.4	3308.4
7.5°	3288.9	3285.0	3281.1	3277.2	3269.3
10°	3249.8	3249.8	3245.9	3226.4	3222.5
12.5°	3187.4	3183.5	3167.9	3140.6	3132.8
15°	3101.6	3101.6	3070.4	3039.2	3027.5
17.5°	3008.0	3004.1	2965.0	2933.8	2918.2
20°	2906.5	2898.7	2859.7	2809.0	2781.7
22.5°	2793.4	2793.4	2746.6	2680.2	2652.9
25°	2688.0	2672.4	2629.5	2535.9	2465.7
27.5°	2567.1	2543.7	2496.9	2364.2	2282.3
30°	2434.5	2422.8	2356.4	2184.8	2122.3
32.5°	2309.6	2290.1	2219.9	2040.4	1989.7
35°	2180.9	2165.3	2059.9	1903.9	1857.1
37.5°	2052.1	2032.6	1900.0	1775.1	1716.6
40°	1923.4	1900.0	1755.6	1642.5	1580.1
42.5°	1802.4	1771.2	1630.8	1509.8	1439.6
45°	1673.7	1638.6	1498.1	1373.3	1318.7
47.5°	1544.9	1513.7	1385.0	1256.2	1193.8
50°	1408.4	1381.1	1264.0	1135.3	1069.0
52.5°	1295.3	1252.3	1139.2	1010.5	955.8
55°	1162.6	1127.5	1022.2	901.2	854.4
57.5°	1041.7	1006.6	909.0	795.9	756.9
60°	928.5	877.8	795.9	698.3	667.1
62.5°	803.7	764.7	694.4	612.5	651.5
65°	690.5	651.5	589.1	600.8	499.4
67.5°	565.7	546.2	491.6	437.0	421.3
70°	460.4	437.0	417.4	358.9	343.3
72.5°	366.7	343.3	316.0	284.8	273.1
75°	277.0	257.5	241.9	230.2	253.6
77.5°	191.2	183.4	171.7	160.0	156.1
80°	124.8	120.9	117.0	113.1	109.2
82.5°	74.1	74.1	74.1	74.1	74.1
85°	39.0	42.9	46.8	50.7	54.6
87.5°	23.4	23.4	27.3	31.2	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)