

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: P590915

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590915
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-35-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7350.0 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

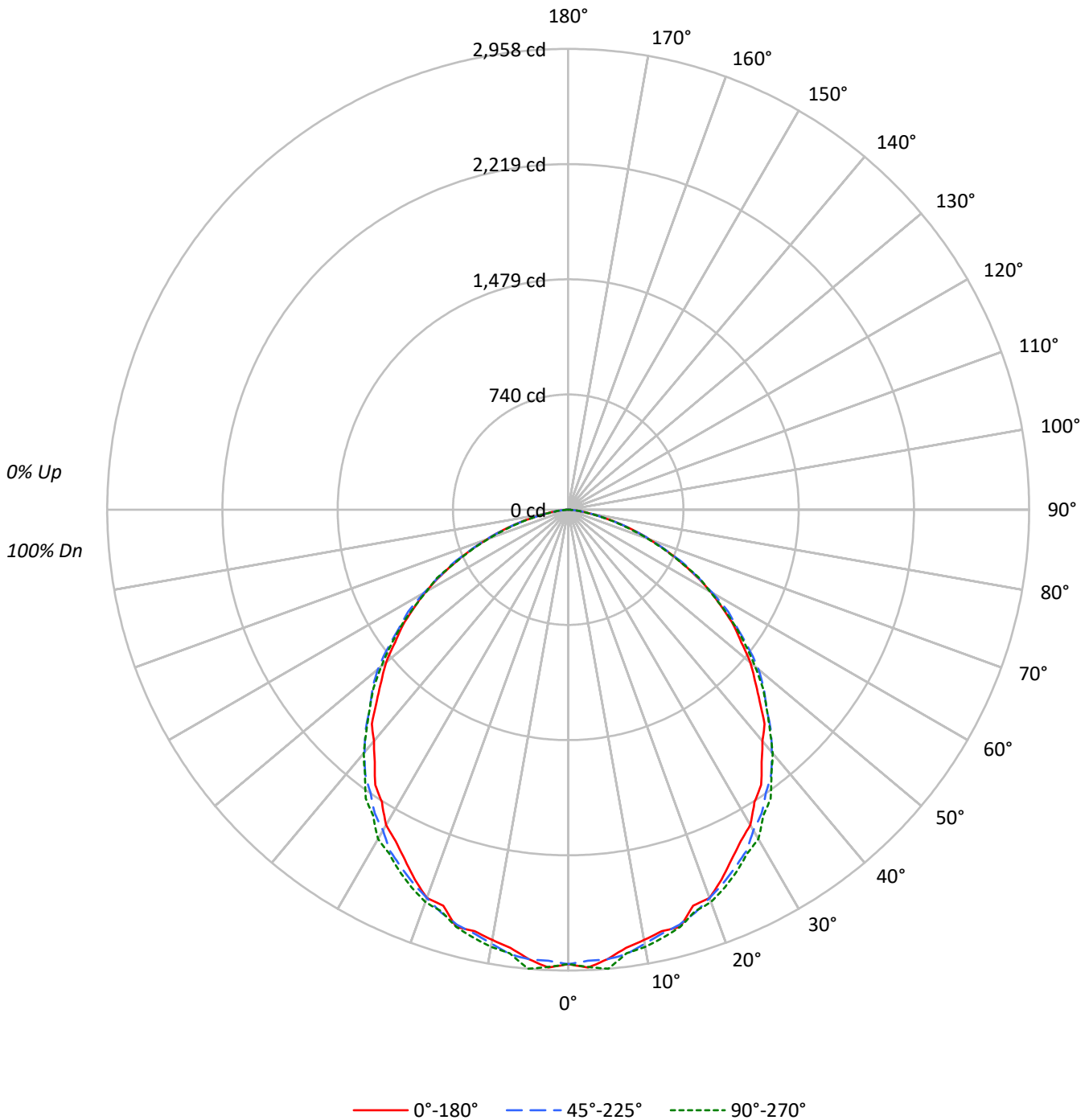
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86													86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73													73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62													62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53													53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46													46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41													41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36													36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32													32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29													29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7848	7848	7848
5°	7822	7825	7990
10°	7663	7730	7785
15°	7724	7682	7725
20°	7593	7593	7674
25°	7360	7521	7603
30°	7259	7386	7583
35°	7088	7273	7437
40°	6812	7140	7172
45°	6606	6841	6851
50°	6389	6677	6550
55°	6088	6206	6162
60°	5692	5749	5646
65°	5075	5205	5040
70°	4355	4370	4249
75°	3449	3441	3308
80°	2311	2247	2159
85°	1257	1244	1164

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7017 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.3	3.7
10°-20°	777.5	10.6
20°-30°	1164.8	15.8
30°-40°	1380.5	18.8
40°-50°	1383.1	18.8
50°-60°	1174.0	16.0
60°-70°	791.5	10.8
70°-80°	347.8	4.7
80°-90°	56.5	0.8
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°	2216.6	30.2
0°-40°	3597.1	48.9
0°-60°	6154.2	83.7
0°-90°	7350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7350.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2916	2916	2916	2916	2916	
5°	2896	2889	2897	2888	2958	273
15°	2772	2740	2757	2772	2773	772
25°	2479	2492	2533	2566	2561	1146
35°	2158	2164	2214	2265	2264	1340
45°	1736	1768	1798	1844	1800	1343
55°	1298	1289	1323	1314	1313	1154
65°	797	787	818	786	792	793
75°	332	325	331	308	318	355
85°	41	40	40	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2916.3	2916.3	2916.3	2916.3	2916.3
2.5°	2941.5	2919.3	2898.6	2922.7	2937.4
5°	2895.6	2888.8	2896.7	2888.1	2957.7
7.5°	2836.1	2862.1	2877.1	2867.7	2871.9
10°	2804.5	2795.4	2828.9	2852.3	2848.9
12.5°	2770.6	2784.1	2786.0	2811.2	2813.5
15°	2772.5	2740.5	2757.4	2771.7	2772.8
17.5°	2664.8	2699.4	2711.1	2743.8	2703.2
20°	2651.6	2626.4	2651.6	2685.1	2679.8
22.5°	2570.6	2542.4	2596.6	2626.4	2624.5
25°	2478.8	2492.3	2533.0	2566.1	2560.8
27.5°	2398.2	2414.0	2472.0	2517.5	2488.2
30°	2336.0	2328.1	2377.1	2417.8	2440.3
32.5°	2225.0	2253.6	2310.8	2351.1	2329.6
35°	2157.6	2164.0	2214.0	2265.3	2263.8
37.5°	2039.7	2069.5	2139.9	2154.2	2141.0
40°	1939.2	1968.9	2032.6	2048.0	2041.6
42.5°	1865.0	1870.3	1924.9	1942.6	1914.3
45°	1735.8	1768.2	1797.6	1843.9	1800.2
47.5°	1625.9	1641.0	1704.2	1716.6	1693.7
50°	1526.1	1531.4	1595.0	1579.6	1564.5
52.5°	1400.7	1422.9	1458.7	1455.7	1438.0
55°	1297.6	1288.9	1322.8	1313.7	1313.4
57.5°	1173.7	1188.7	1216.6	1202.3	1179.3
60°	1057.7	1058.1	1068.2	1052.0	1049.0
62.5°	928.5	933.1	935.3	915.4	947.7
65°	797.1	786.6	817.5	786.2	791.5
67.5°	676.3	681.5	678.5	658.9	666.5
70°	553.5	560.3	555.4	533.2	540.0
72.5°	441.3	433.0	438.3	410.4	423.2
75°	331.7	325.0	331.0	307.6	318.2
77.5°	225.9	231.2	227.4	215.0	222.2
80°	149.1	145.0	145.0	137.8	139.3
82.5°	87.0	82.8	81.7	79.4	82.8
85°	40.7	39.5	40.3	39.2	37.7
87.5°	14.7	15.1	15.1	14.3	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)