

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: P590918

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590918
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-82-85-EDD
Description: 2X2 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: 7114.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

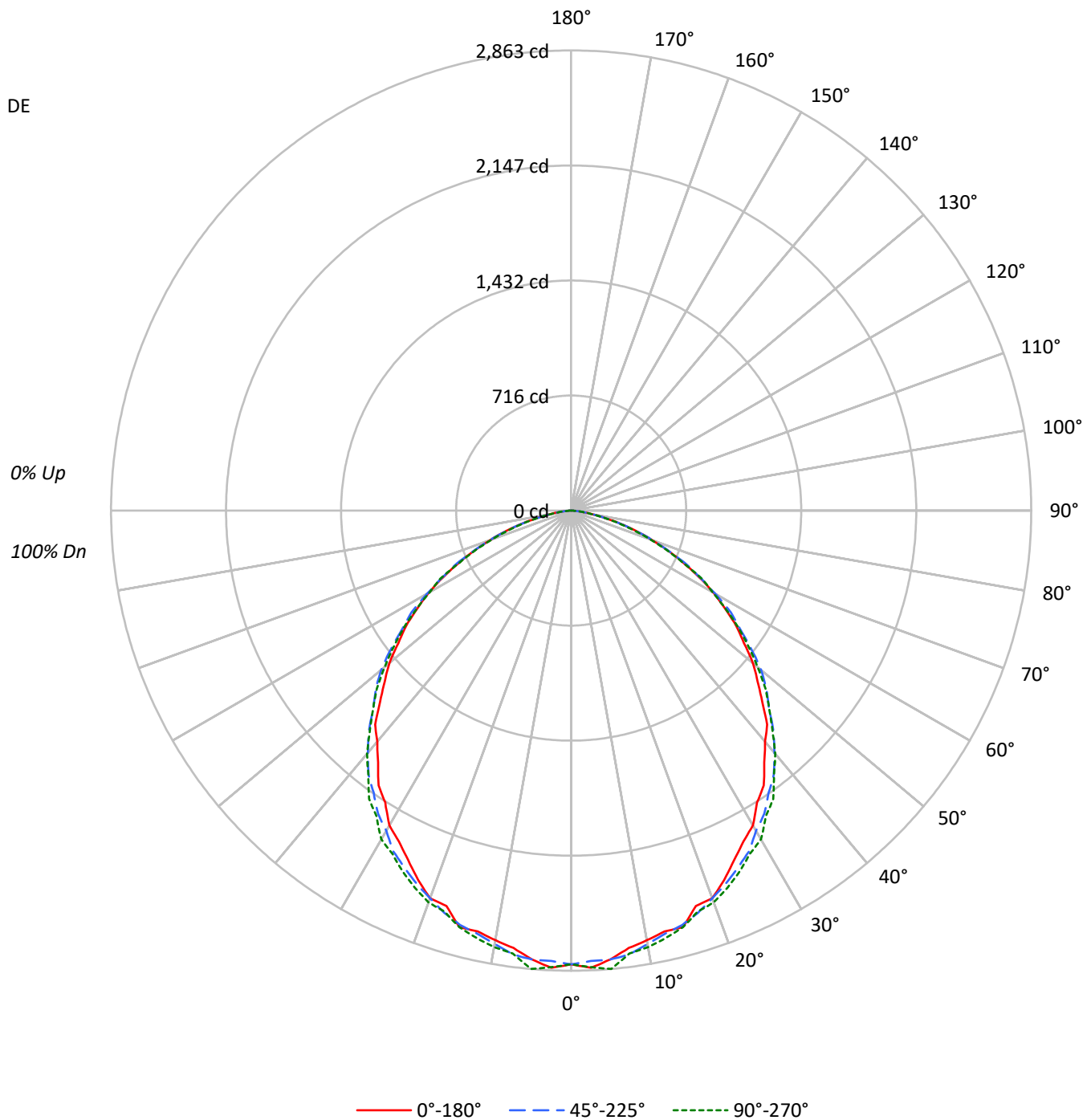
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7596	7596	7596
5°	7571	7574	7733
10°	7417	7482	7535
15°	7476	7435	7477
20°	7349	7349	7428
25°	7124	7279	7359
30°	7026	7149	7339
35°	6860	7040	7198
40°	6593	6911	6941
45°	6394	6621	6631
50°	6184	6463	6339
55°	5892	6007	5964
60°	5510	5564	5465
65°	4912	5038	4878
70°	4215	4230	4112
75°	3339	3331	3202
80°	2236	2174	2089
85°	1216	1204	1124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6792 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.5	3.7
10°-20°	752.5	10.6
20°-30°	1127.4	15.8
30°-40°	1336.2	18.8
40°-50°	1338.7	18.8
50°-60°	1136.3	16.0
60°-70°	766.1	10.8
70°-80°	336.6	4.7
80°-90°	54.7	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°	2145.4	30.2
0°-40°	3481.6	48.9
0°-60°	5956.6	83.7
0°-90°	7114.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7114.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2823	2823	2823	2823	2823	
5°	2803	2796	2804	2795	2863	264
15°	2683	2652	2669	2683	2684	748
25°	2399	2412	2452	2484	2479	1109
35°	2088	2094	2143	2192	2191	1297
45°	1680	1712	1740	1785	1742	1300
55°	1256	1248	1280	1272	1271	1117
65°	772	761	791	761	766	767
75°	321	314	320	298	308	344
85°	39	38	39	38	36	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2822.7	2822.7	2822.7	2822.7	2822.7
2.5°	2847.1	2825.6	2805.5	2828.9	2843.1
5°	2802.6	2796.1	2803.7	2795.3	2862.7
7.5°	2745.0	2770.2	2784.8	2775.6	2779.7
10°	2714.4	2705.7	2738.1	2760.7	2757.4
12.5°	2681.6	2694.7	2696.6	2721.0	2723.2
15°	2683.4	2652.5	2668.9	2682.7	2683.8
17.5°	2579.2	2612.7	2624.0	2655.7	2616.4
20°	2566.4	2542.0	2566.4	2598.9	2593.8
22.5°	2488.1	2460.8	2513.2	2542.0	2540.2
25°	2399.2	2412.3	2451.6	2483.7	2478.6
27.5°	2321.2	2336.5	2392.6	2436.7	2408.3
30°	2261.0	2253.4	2300.8	2340.1	2362.0
32.5°	2153.5	2181.2	2236.6	2275.6	2254.8
35°	2088.3	2094.5	2143.0	2192.5	2191.1
37.5°	1974.2	2003.0	2071.2	2085.0	2072.3
40°	1876.9	1905.7	1967.3	1982.2	1976.0
42.5°	1805.1	1810.2	1863.1	1880.2	1852.9
45°	1680.1	1711.5	1739.9	1784.7	1742.4
47.5°	1573.7	1588.3	1649.5	1661.5	1639.3
50°	1477.1	1482.2	1543.8	1528.9	1514.3
52.5°	1355.7	1377.3	1411.9	1409.0	1391.8
55°	1255.9	1247.5	1280.3	1271.6	1271.2
57.5°	1136.0	1150.6	1177.5	1163.7	1141.5
60°	1023.7	1024.1	1033.9	1018.3	1015.4
62.5°	898.7	903.1	905.3	886.0	917.3
65°	771.5	761.3	791.2	761.0	766.1
67.5°	654.5	659.7	656.7	637.8	645.1
70°	535.7	542.3	537.6	516.1	522.6
72.5°	427.1	419.1	424.2	397.2	409.6
75°	321.1	314.5	320.4	297.8	308.0
77.5°	218.7	223.8	220.1	208.1	215.0
80°	144.3	140.3	140.3	133.4	134.8
82.5°	84.2	80.2	79.1	76.9	80.2
85°	39.4	38.3	39.0	37.9	36.4
87.5°	14.2	14.6	14.6	13.8	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)