

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: P590923

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590923
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-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 7195.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

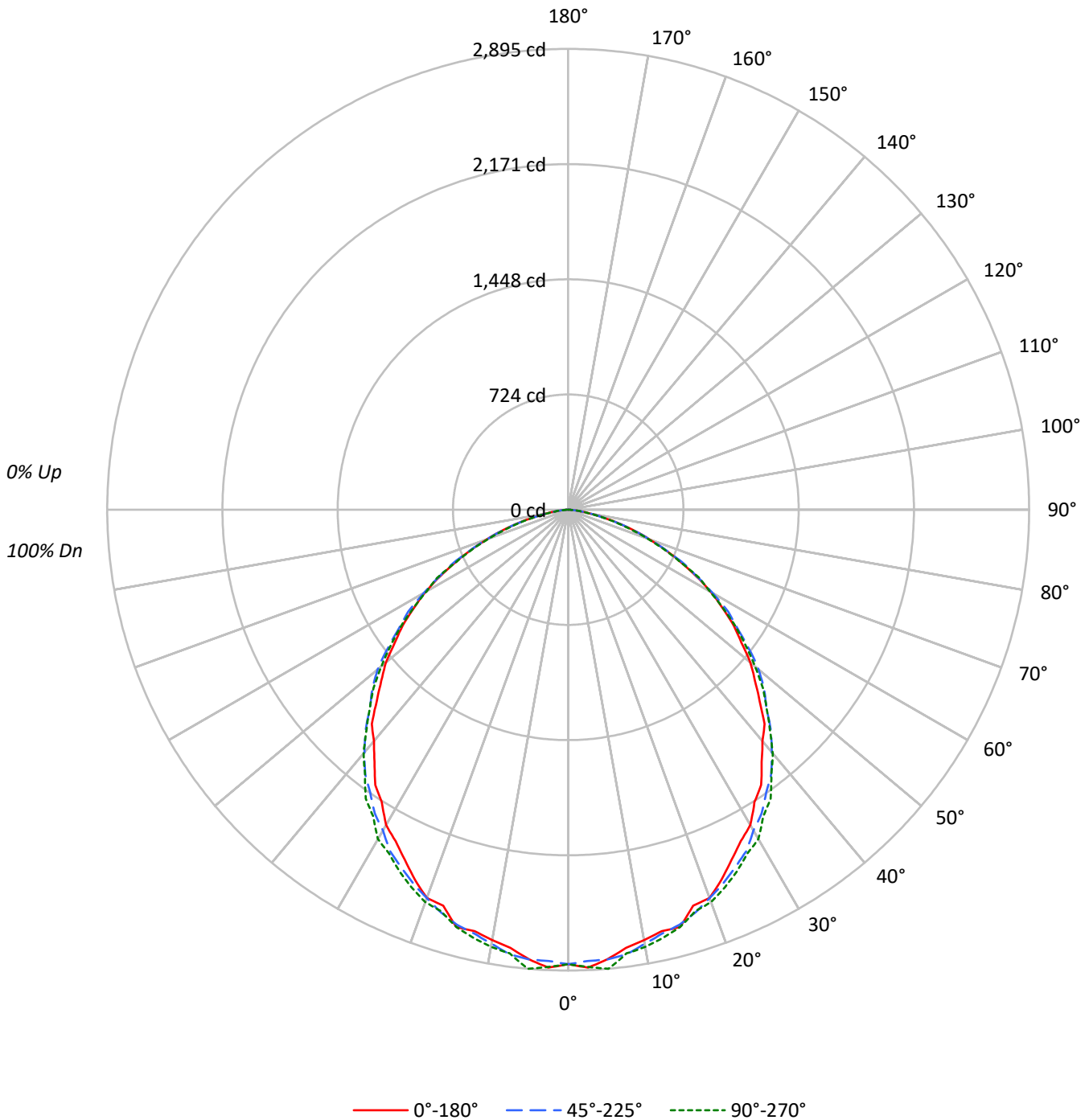
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7682	7682	7682
5°	7657	7660	7821
10°	7502	7567	7620
15°	7561	7520	7562
20°	7433	7433	7512
25°	7205	7362	7443
30°	7106	7231	7423
35°	6938	7120	7280
40°	6668	6989	7020
45°	6467	6697	6707
50°	6254	6537	6412
55°	5959	6075	6032
60°	5572	5628	5527
65°	4968	5095	4933
70°	4263	4278	4159
75°	3376	3369	3239
80°	2263	2199	2114
85°	1229	1216	1139

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6869 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.5	3.7
10°-20°	761.1	10.6
20°-30°	1140.2	15.8
30°-40°	1351.4	18.8
40°-50°	1353.9	18.8
50°-60°	1149.2	16.0
60°-70°	774.8	10.8
70°-80°	340.5	4.7
80°-90°	55.3	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°	2169.8	30.2
0°-40°	3521.3	48.9
0°-60°	6024.4	83.7
0°-90°	7195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2855	2855	2855	2855	2855	
5°	2834	2828	2836	2827	2895	267
15°	2714	2683	2699	2713	2714	756
25°	2426	2440	2480	2512	2507	1122
35°	2112	2118	2167	2218	2216	1311
45°	1699	1731	1760	1805	1762	1314
55°	1270	1262	1295	1286	1286	1130
65°	780	770	800	770	775	776
75°	325	318	324	301	312	348
85°	40	39	39	38	37	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2854.8	2854.8	2854.8	2854.8	2854.8
2.5°	2879.5	2857.7	2837.5	2861.1	2875.4
5°	2834.5	2827.9	2835.6	2827.1	2895.3
7.5°	2776.3	2801.7	2816.5	2807.2	2811.3
10°	2745.3	2736.5	2769.3	2792.1	2788.8
12.5°	2712.1	2725.4	2727.3	2752.0	2754.2
15°	2714.0	2682.7	2699.2	2713.3	2714.4
17.5°	2608.6	2642.5	2653.9	2686.0	2646.2
20°	2595.7	2571.0	2595.7	2628.5	2623.3
22.5°	2516.4	2488.8	2541.9	2571.0	2569.1
25°	2426.5	2439.8	2479.6	2512.0	2506.8
27.5°	2347.6	2363.1	2419.8	2464.4	2435.7
30°	2286.8	2279.0	2327.0	2366.8	2388.9
32.5°	2178.0	2206.1	2262.1	2301.5	2280.5
35°	2112.1	2118.3	2167.4	2217.5	2216.0
37.5°	1996.7	2025.8	2094.7	2108.8	2095.9
40°	1898.3	1927.4	1989.7	2004.8	1998.5
42.5°	1825.7	1830.8	1884.3	1901.6	1874.0
45°	1699.2	1730.9	1759.7	1805.0	1762.3
47.5°	1591.6	1606.4	1668.3	1680.4	1658.0
50°	1493.9	1499.1	1561.4	1546.3	1531.5
52.5°	1371.2	1392.9	1428.0	1425.0	1407.7
55°	1270.2	1261.7	1294.9	1286.0	1285.7
57.5°	1148.9	1163.7	1190.9	1176.9	1154.5
60°	1035.4	1035.8	1045.7	1029.9	1026.9
62.5°	909.0	913.4	915.6	896.1	927.8
65°	780.3	770.0	800.2	769.6	774.8
67.5°	662.0	667.2	664.2	645.0	652.4
70°	541.8	548.5	543.7	521.9	528.6
72.5°	432.0	423.9	429.0	401.8	414.3
75°	324.7	318.1	324.0	301.1	311.5
77.5°	221.2	226.3	222.6	210.5	217.5
80°	146.0	141.9	141.9	134.9	136.4
82.5°	85.1	81.1	80.0	77.8	81.1
85°	39.8	38.7	39.4	38.3	36.9
87.5°	14.4	14.7	14.7	14.0	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)