

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: P590926

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590926
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-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7665.0 lumens
Efficiency: N/A
Efficacy: 115.1 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

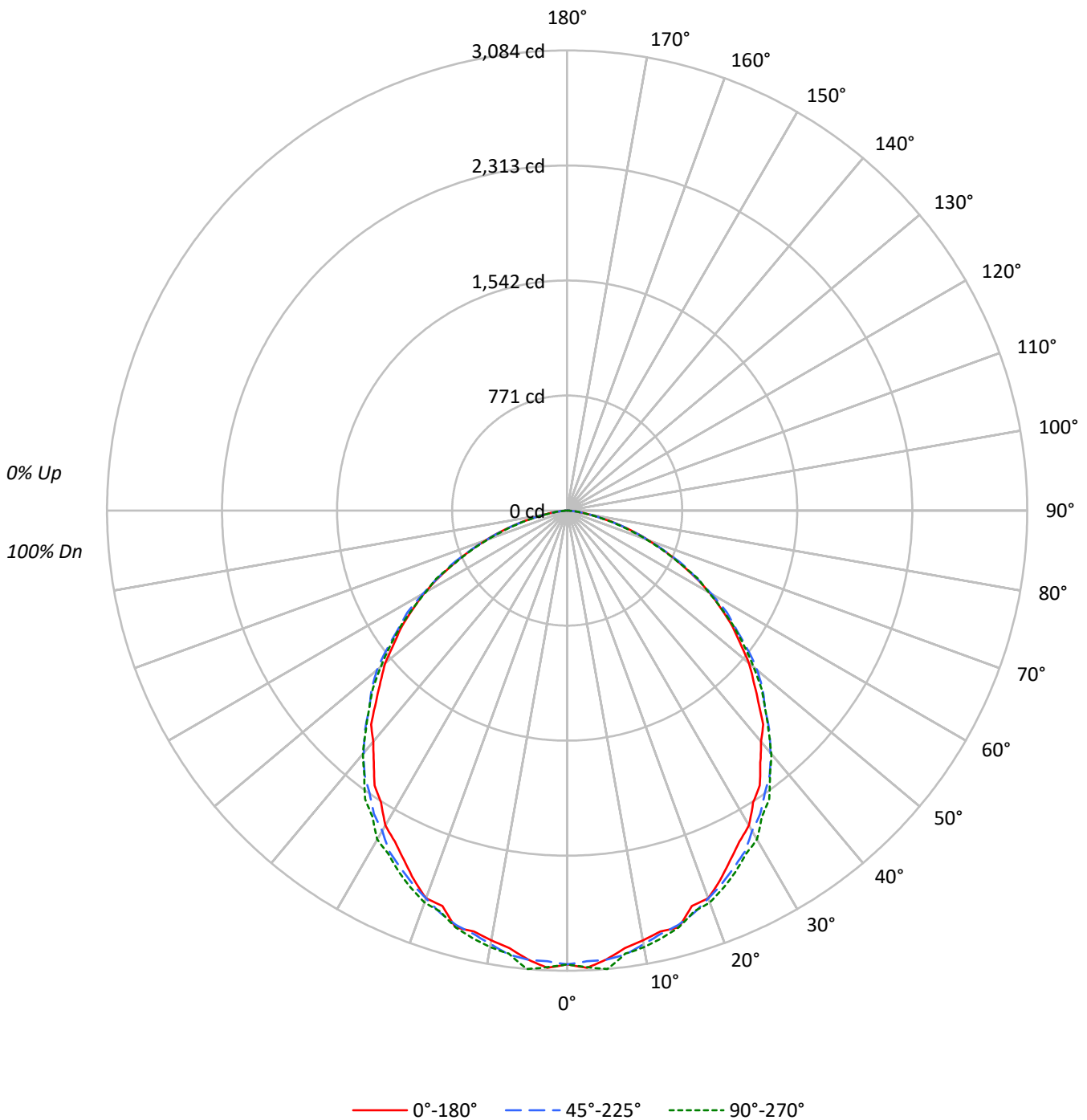
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8184	8184	8184
5°	8157	8160	8332
10°	7992	8061	8118
15°	8055	8011	8056
20°	7919	7919	8003
25°	7675	7843	7929
30°	7570	7703	7908
35°	7391	7585	7755
40°	7104	7446	7479
45°	6889	7134	7145
50°	6663	6964	6831
55°	6349	6472	6426
60°	5936	5996	5888
65°	5293	5428	5256
70°	4541	4557	4430
75°	3596	3589	3450
80°	2410	2343	2252
85°	1309	1297	1213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7318 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.1	3.7
10°-20°	810.8	10.6
20°-30°	1214.7	15.8
30°-40°	1439.7	18.8
40°-50°	1442.4	18.8
50°-60°	1224.3	16.0
60°-70°	825.4	10.8
70°-80°	362.7	4.7
80°-90°	58.9	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°	2311.6	30.2
0°-40°	3751.3	48.9
0°-60°	6417.9	83.7
0°-90°	7665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3041	3041	3041	3041	3041	
5°	3020	3013	3021	3012	3084	285
15°	2891	2858	2876	2890	2892	806
25°	2585	2599	2642	2676	2671	1195
35°	2250	2257	2309	2362	2361	1397
45°	1810	1844	1875	1923	1877	1400
55°	1353	1344	1380	1370	1370	1204
65°	831	820	852	820	825	827
75°	346	339	345	321	332	371
85°	42	41	42	41	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3041.3	3041.3	3041.3	3041.3	3041.3
2.5°	3067.6	3044.4	3022.8	3048.0	3063.3
5°	3019.7	3012.6	3020.9	3011.8	3084.5
7.5°	2957.6	2984.7	3000.4	2990.6	2994.9
10°	2924.7	2915.2	2950.2	2974.5	2971.0
12.5°	2889.3	2903.4	2905.4	2931.7	2934.1
15°	2891.3	2857.9	2875.6	2890.5	2891.7
17.5°	2779.0	2815.1	2827.3	2861.4	2819.0
20°	2765.2	2738.9	2765.2	2800.2	2794.7
22.5°	2680.8	2651.4	2707.9	2738.9	2737.0
25°	2585.0	2599.1	2641.5	2676.1	2670.6
27.5°	2501.0	2517.4	2577.9	2625.4	2594.8
30°	2436.2	2427.9	2479.0	2521.4	2544.9
32.5°	2320.3	2350.2	2409.9	2451.9	2429.5
35°	2250.0	2256.7	2308.9	2362.3	2360.8
37.5°	2127.1	2158.1	2231.6	2246.5	2232.8
40°	2022.3	2053.3	2119.7	2135.8	2129.1
42.5°	1944.9	1950.4	2007.4	2025.8	1996.4
45°	1810.2	1844.0	1874.6	1922.9	1877.4
47.5°	1695.6	1711.3	1777.3	1790.2	1766.3
50°	1591.5	1597.0	1663.4	1647.3	1631.6
52.5°	1460.8	1483.9	1521.2	1518.1	1499.6
55°	1353.2	1344.1	1379.5	1370.0	1369.7
57.5°	1224.0	1239.7	1268.7	1253.8	1229.9
60°	1103.0	1103.4	1114.0	1097.1	1094.0
62.5°	968.3	973.1	975.4	954.6	988.4
65°	831.3	820.3	852.5	819.9	825.4
67.5°	705.2	710.7	707.6	687.2	695.0
70°	577.2	584.3	579.2	556.0	563.1
72.5°	460.2	451.6	457.1	428.0	441.4
75°	345.9	338.9	345.2	320.8	331.8
77.5°	235.6	241.1	237.2	224.2	231.7
80°	155.5	151.2	151.2	143.7	145.3
82.5°	90.7	86.4	85.2	82.9	86.4
85°	42.4	41.2	42.0	40.8	39.3
87.5°	15.3	15.7	15.7	14.9	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)