

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: P590957

Luminaire Tested: FSR-24-2-LD4-4STD-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590957
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-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7899.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

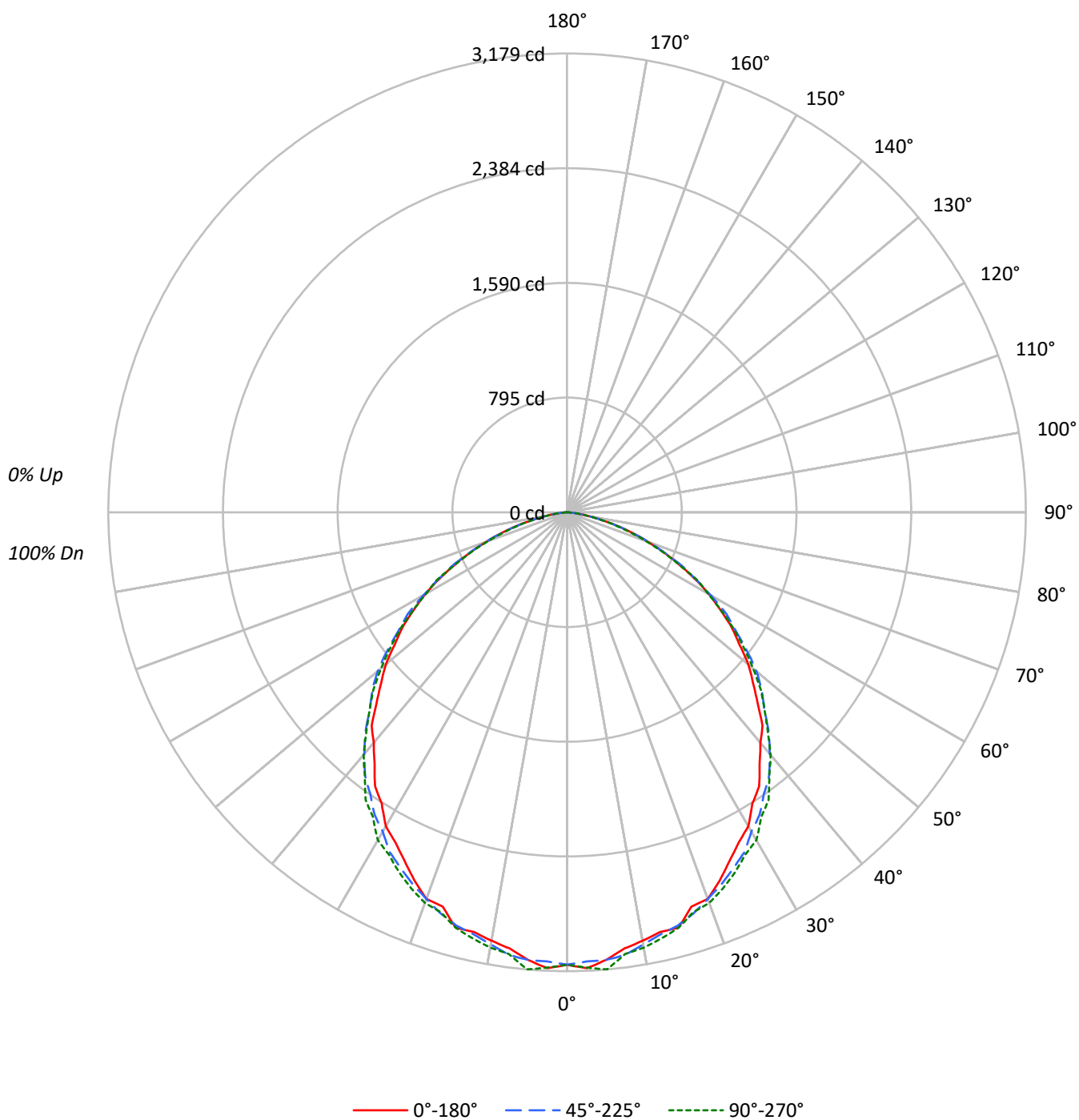
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	105	101	98		107	103	100	96		99	96	93		95	93	90		91	90	88
2	100	93	86	81		98	91	85	80		87	82	78		84	80	76		81	78	75
3	92	82	74	68		89	80	73	67		77	71	66		75	69	65		72	68	64
4	84	73	64	58		82	71	64	58		69	62	57		67	61	56		65	59	55
5	78	65	57	50		76	64	56	50		62	55	49		60	54	49		58	53	48
6	72	59	50	44		70	58	50	44		56	49	43		54	48	43		53	47	43
7	67	53	45	39		65	53	45	39		51	44	39		50	43	38		48	42	38
8	62	49	41	35		61	48	40	35		47	40	34		46	39	34		44	39	34
9	58	45	37	31		57	44	37	31		43	36	31		42	36	31		41	35	31
10	54	41	34	29		53	41	33	28		40	33	28		39	33	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8434	8434	8434
5°	8406	8409	8586
10°	8235	8307	8366
15°	8301	8256	8302
20°	8160	8160	8247
25°	7910	8083	8171
30°	7801	7938	8149
35°	7617	7817	7992
40°	7321	7673	7707
45°	7099	7352	7363
50°	6866	7176	7039
55°	6542	6670	6622
60°	6118	6178	6068
65°	5455	5594	5416
70°	4681	4696	4566
75°	3707	3698	3555
80°	2483	2414	2320
85°	1349	1337	1250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 7541 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.8	3.7
10°-20°	835.5	10.6
20°-30°	1251.8	15.8
30°-40°	1483.6	18.8
40°-50°	1486.4	18.8
50°-60°	1261.7	16.0
60°-70°	850.6	10.8
70°-80°	373.8	4.7
80°-90°	60.7	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°	2382.1	30.2
0°-40°	3865.8	48.9
0°-60°	6613.9	83.7
0°-90°	7899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3134	3134	3134	3134	3134	
5°	3112	3105	3113	3104	3179	293
15°	2980	2945	2963	2979	2980	830
25°	2664	2678	2722	2758	2752	1232
35°	2319	2326	2379	2434	2433	1440
45°	1866	1900	1932	1982	1935	1443
55°	1394	1385	1422	1412	1412	1240
65°	857	845	878	845	851	852
75°	356	349	356	331	342	382
85°	44	42	43	42	40	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3134.1	3134.1	3134.1	3134.1	3134.1
2.5°	3161.2	3137.4	3115.1	3141.0	3156.8
5°	3111.9	3104.6	3113.1	3103.8	3178.6
7.5°	3047.9	3075.9	3092.0	3081.9	3086.4
10°	3013.9	3004.2	3040.2	3065.3	3061.7
12.5°	2977.5	2992.1	2994.1	3021.2	3023.7
15°	2979.5	2945.1	2963.4	2978.7	2979.9
17.5°	2863.8	2901.0	2913.6	2948.8	2905.1
20°	2849.6	2822.5	2849.6	2885.7	2880.0
22.5°	2762.6	2732.3	2790.6	2822.5	2820.5
25°	2663.9	2678.5	2722.2	2757.8	2752.1
27.5°	2577.3	2594.3	2656.6	2705.6	2674.0
30°	2510.5	2502.0	2554.6	2598.3	2622.6
32.5°	2391.2	2421.9	2483.4	2526.7	2503.7
35°	2318.7	2325.6	2379.4	2434.5	2432.8
37.5°	2192.1	2224.0	2299.7	2315.1	2300.9
40°	2084.0	2116.0	2184.4	2201.0	2194.1
42.5°	2004.3	2010.0	2068.6	2087.7	2057.3
45°	1865.5	1900.3	1931.9	1981.6	1934.7
47.5°	1747.3	1763.5	1831.5	1844.9	1820.2
50°	1640.1	1645.8	1714.2	1697.6	1681.4
52.5°	1505.4	1529.2	1567.7	1564.4	1545.4
55°	1394.5	1385.2	1421.6	1411.9	1411.5
57.5°	1261.3	1277.5	1307.5	1292.1	1267.4
60°	1136.7	1137.1	1148.0	1130.6	1127.4
62.5°	997.9	1002.8	1005.2	983.7	1018.5
65°	856.7	845.3	878.5	844.9	850.6
67.5°	726.8	732.4	729.2	708.2	716.3
70°	594.9	602.1	596.9	573.0	580.3
72.5°	474.3	465.4	471.0	441.1	454.8
75°	356.5	349.2	355.7	330.6	341.9
77.5°	242.8	248.5	244.4	231.1	238.8
80°	160.2	155.8	155.8	148.1	149.7
82.5°	93.5	89.0	87.8	85.4	89.0
85°	43.7	42.5	43.3	42.1	40.5
87.5°	15.8	16.2	16.2	15.4	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)