

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: P590962

Luminaire Tested: FSR-24-2-LD4-4STD-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590962
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7917.0 lumens
Efficiency: N/A
Efficacy: 118.9 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

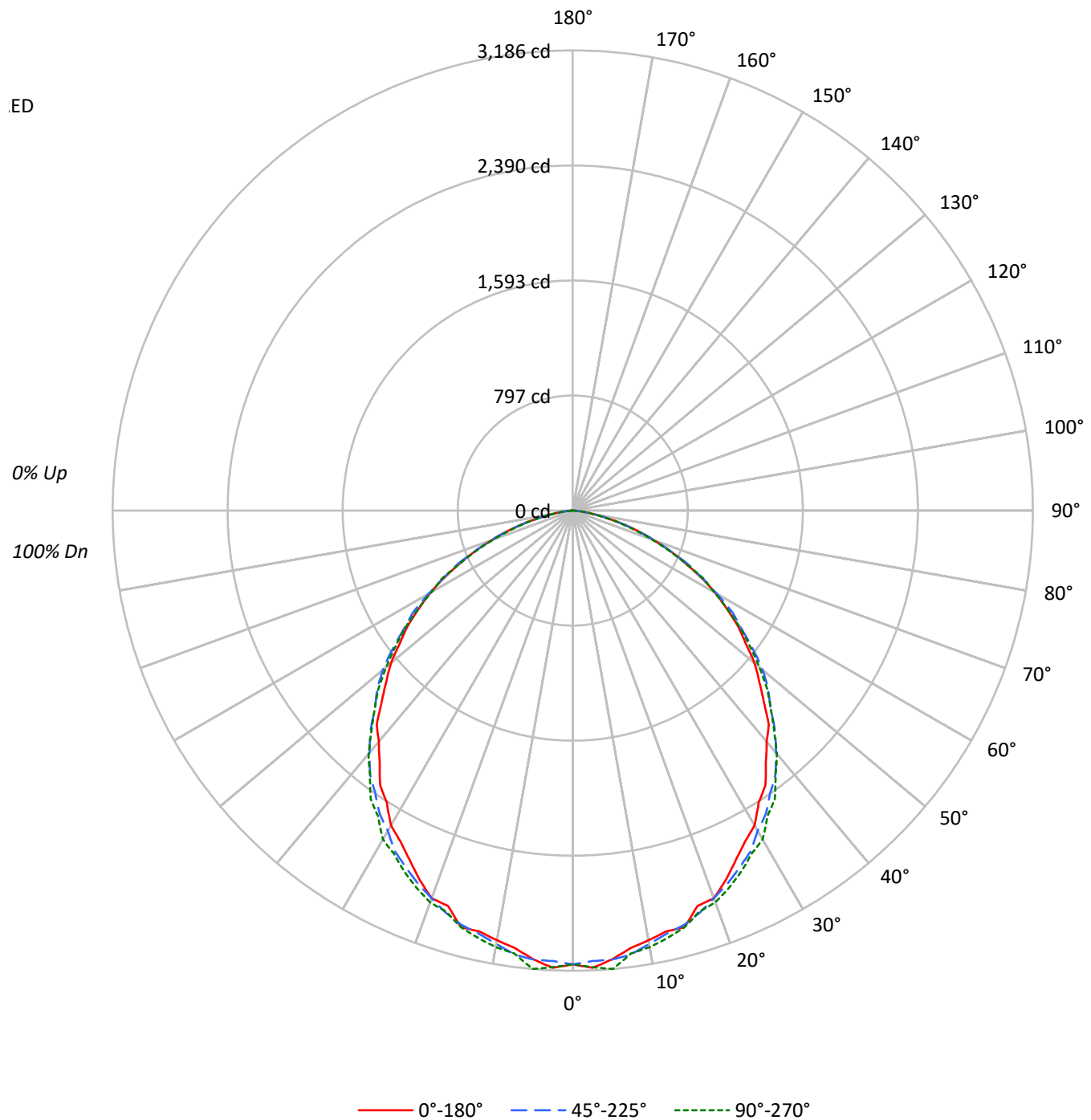
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
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°	8453	8453	8453
5°	8425	8428	8606
10°	8254	8326	8385
15°	8320	8274	8321
20°	8179	8179	8266
25°	7928	8101	8190
30°	7819	7956	8168
35°	7635	7834	8010
40°	7338	7691	7725
45°	7116	7369	7379
50°	6882	7193	7055
55°	6557	6685	6637
60°	6132	6192	6082
65°	5467	5606	5428
70°	4691	4707	4576
75°	3715	3707	3563
80°	2489	2421	2326
85°	1352	1340	1254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 7559 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.5	3.7
10°-20°	837.4	10.6
20°-30°	1254.7	15.8
30°-40°	1487.0	18.8
40°-50°	1489.8	18.8
50°-60°	1264.6	16.0
60°-70°	852.6	10.8
70°-80°	374.6	4.7
80°-90°	60.9	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°	2387.6	30.2
0°-40°	3874.6	48.9
0°-60°	6628.9	83.7
0°-90°	7917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3141	3141	3141	3141	3141	
5°	3119	3112	3120	3111	3186	294
15°	2986	2952	2970	2986	2987	832
25°	2670	2685	2728	2764	2758	1234
35°	2324	2331	2385	2440	2438	1443
45°	1870	1905	1936	1986	1939	1446
55°	1398	1388	1425	1415	1415	1243
65°	859	847	880	847	852	854
75°	357	350	356	331	343	383
85°	44	43	43	42	41	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3141.3	3141.3	3141.3	3141.3	3141.3
2.5°	3168.4	3144.5	3122.2	3148.2	3164.0
5°	3119.0	3111.7	3120.2	3110.8	3185.9
7.5°	3054.9	3082.9	3099.1	3088.9	3093.4
10°	3020.8	3011.1	3047.2	3072.3	3068.7
12.5°	2984.3	2998.9	3000.9	3028.1	3030.5
15°	2986.3	2951.9	2970.1	2985.5	2986.7
17.5°	2870.3	2907.6	2920.2	2955.5	2911.7
20°	2856.1	2829.0	2856.1	2892.2	2886.6
22.5°	2768.9	2738.5	2796.9	2829.0	2826.9
25°	2670.0	2684.6	2728.4	2764.1	2758.4
27.5°	2583.2	2600.2	2662.7	2711.7	2680.1
30°	2516.3	2507.7	2560.5	2604.3	2628.6
32.5°	2396.6	2427.4	2489.1	2532.5	2509.4
35°	2324.0	2330.9	2384.8	2440.0	2438.4
37.5°	2197.1	2229.1	2304.9	2320.4	2306.2
40°	2088.8	2120.8	2189.4	2206.0	2199.1
42.5°	2008.9	2014.5	2073.4	2092.4	2062.0
45°	1869.8	1904.6	1936.3	1986.2	1939.1
47.5°	1751.3	1767.5	1835.7	1849.1	1824.3
50°	1643.8	1649.5	1718.1	1701.4	1685.2
52.5°	1508.8	1532.7	1571.2	1568.0	1548.9
55°	1397.7	1388.3	1424.8	1415.1	1414.7
57.5°	1264.2	1280.4	1310.4	1295.0	1270.3
60°	1139.3	1139.7	1150.6	1133.2	1130.0
62.5°	1000.2	1005.0	1007.5	986.0	1020.9
65°	858.6	847.3	880.5	846.9	852.5
67.5°	728.4	734.1	730.9	709.8	717.9
70°	596.2	603.5	598.2	574.3	581.6
72.5°	475.3	466.4	472.1	442.1	455.9
75°	357.3	350.0	356.5	331.4	342.7
77.5°	243.4	249.0	245.0	231.6	239.3
80°	160.6	156.2	156.2	148.4	150.1
82.5°	93.7	89.2	88.0	85.6	89.2
85°	43.8	42.6	43.4	42.2	40.6
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)