

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: P590467

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590467
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-LD4-3HI-40-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6829.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

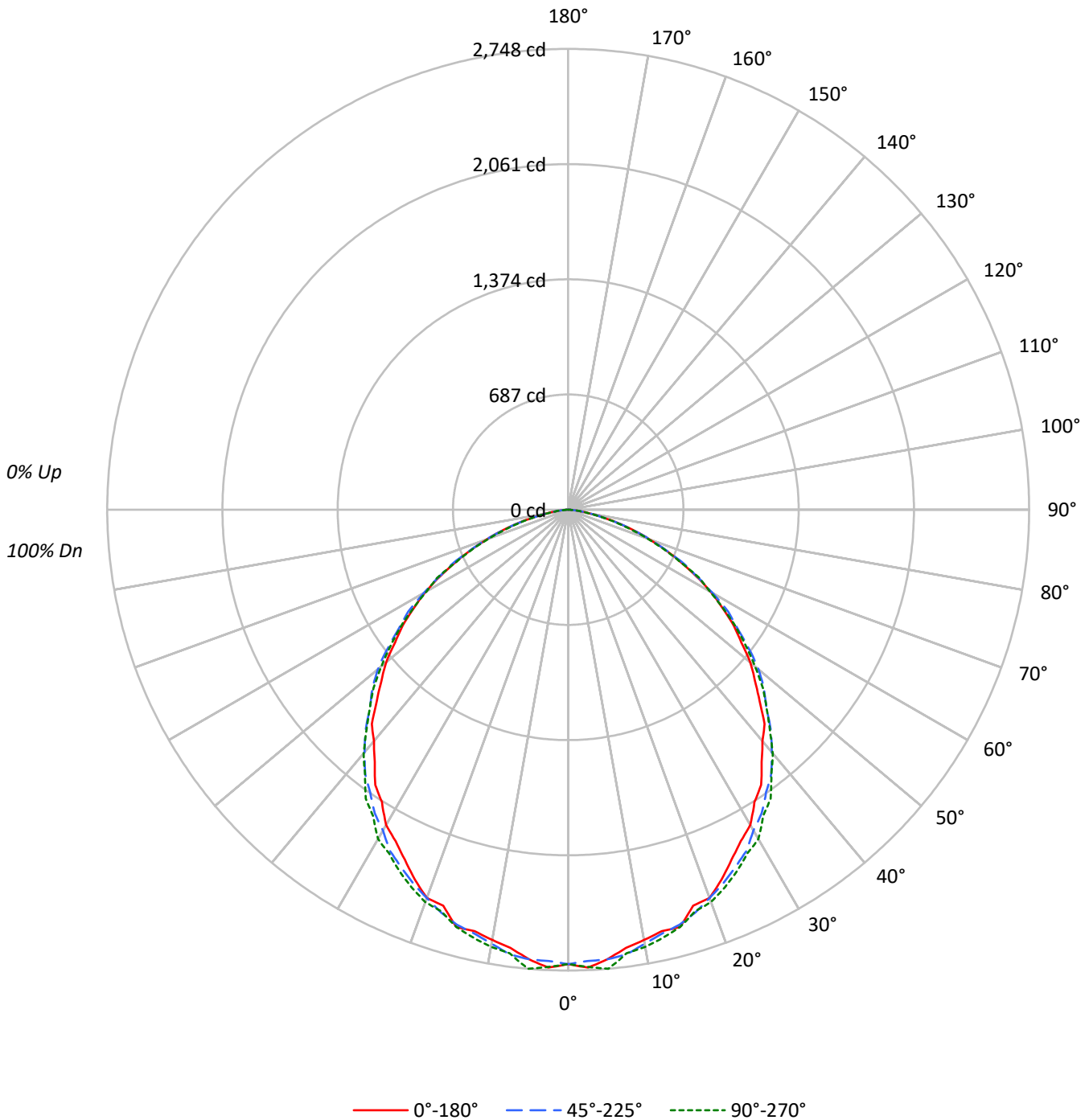
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7291	7291	7291
5°	7267	7270	7423
10°	7120	7182	7233
15°	7176	7137	7177
20°	7055	7055	7130
25°	6838	6988	7065
30°	6744	6863	7045
35°	6585	6758	6910
40°	6329	6634	6663
45°	6138	6356	6365
50°	5936	6204	6085
55°	5656	5766	5725
60°	5289	5342	5246
65°	4716	4836	4683
70°	4046	4060	3947
75°	3204	3197	3073
80°	2146	2087	2005
85°	1167	1155	1081

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6520 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.9	3.7
10°-20°	722.4	10.6
20°-30°	1082.2	15.8
30°-40°	1282.7	18.8
40°-50°	1285.0	18.8
50°-60°	1090.8	16.0
60°-70°	735.4	10.8
70°-80°	323.1	4.7
80°-90°	52.5	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°	2059.5	30.2
0°-40°	3342.1	48.9
0°-60°	5718.0	83.7
0°-90°	6829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2710	2710	2710	2710	2710	
5°	2690	2684	2691	2683	2748	254
15°	2576	2546	2562	2575	2576	718
25°	2303	2316	2353	2384	2379	1065
35°	2005	2011	2057	2105	2103	1245
45°	1613	1643	1670	1713	1673	1248
55°	1206	1198	1229	1221	1220	1072
65°	741	731	760	730	735	737
75°	308	302	308	286	296	330
85°	38	37	37	36	35	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2709.6	2709.6	2709.6	2709.6	2709.6
2.5°	2733.0	2712.4	2693.1	2715.5	2729.2
5°	2690.3	2684.0	2691.4	2683.3	2748.1
7.5°	2635.1	2659.2	2673.2	2664.4	2668.3
10°	2605.7	2597.3	2628.4	2650.1	2647.0
12.5°	2574.2	2586.8	2588.5	2612.0	2614.1
15°	2575.9	2546.2	2561.9	2575.2	2576.3
17.5°	2475.9	2508.1	2518.9	2549.3	2511.6
20°	2463.6	2440.2	2463.6	2494.8	2489.9
22.5°	2388.4	2362.2	2412.6	2440.2	2438.4
25°	2303.1	2315.6	2353.4	2384.2	2379.3
27.5°	2228.2	2242.9	2296.8	2339.1	2311.8
30°	2170.5	2163.1	2208.6	2246.4	2267.4
32.5°	2067.3	2093.8	2147.0	2184.5	2164.5
35°	2004.6	2010.6	2057.1	2104.7	2103.3
37.5°	1895.1	1922.8	1988.2	2001.5	1989.2
40°	1801.7	1829.4	1888.5	1902.8	1896.9
42.5°	1732.8	1737.7	1788.4	1804.9	1778.6
45°	1612.8	1642.9	1670.2	1713.2	1672.6
47.5°	1510.6	1524.6	1583.4	1595.0	1573.6
50°	1417.9	1422.8	1482.0	1467.6	1453.6
52.5°	1301.4	1322.1	1355.3	1352.5	1336.1
55°	1205.6	1197.5	1229.0	1220.6	1220.3
57.5°	1090.5	1104.5	1130.4	1117.1	1095.7
60°	982.7	983.1	992.5	977.5	974.7
62.5°	862.7	866.9	869.0	850.5	880.6
65°	740.6	730.8	759.5	730.5	735.4
67.5°	628.3	633.2	630.4	612.2	619.2
70°	514.3	520.6	516.0	495.4	501.7
72.5°	410.0	402.3	407.2	381.3	393.2
75°	308.2	301.9	307.5	285.8	295.6
77.5°	209.9	214.8	211.3	199.8	206.4
80°	138.5	134.7	134.7	128.0	129.4
82.5°	80.8	77.0	75.9	73.8	77.0
85°	37.8	36.7	37.4	36.4	35.0
87.5°	13.6	14.0	14.0	13.3	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)