

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: P590287

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590287
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-LD4-2LO-40-UNV-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2858.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

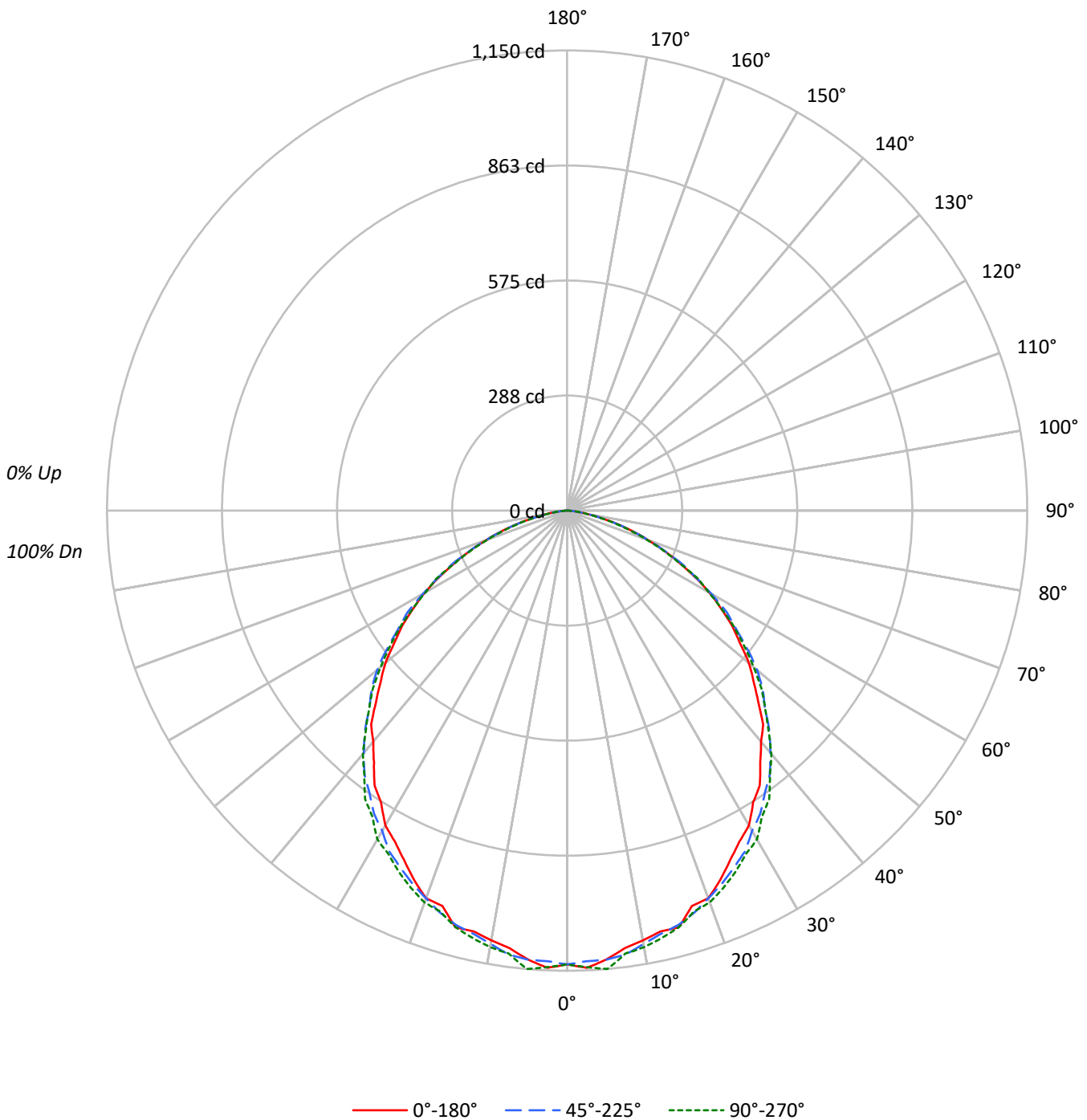
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3052	3052	3052
5°	3041	3043	3107
10°	2980	3006	3027
15°	3003	2987	3004
20°	2953	2953	2984
25°	2862	2924	2957
30°	2823	2872	2948
35°	2756	2828	2892
40°	2649	2776	2789
45°	2569	2660	2664
50°	2484	2596	2547
55°	2367	2413	2396
60°	2214	2236	2195
65°	1974	2024	1960
70°	1693	1699	1652
75°	1341	1338	1286
80°	899	874	840
85°	488	485	451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2729 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.7	3.7
10°-20°	302.3	10.6
20°-30°	452.9	15.8
30°-40°	536.8	18.8
40°-50°	537.8	18.8
50°-60°	456.5	16.0
60°-70°	307.8	10.8
70°-80°	135.2	4.7
80°-90°	22.0	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°	861.9	30.2
0°-40°	1398.7	48.9
0°-60°	2393.0	83.7
0°-90°	2858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1126	1123	1126	1123	1150	106
15°	1078	1066	1072	1078	1078	300
25°	964	969	985	998	996	446
35°	839	841	861	881	880	521
45°	675	688	699	717	700	522
55°	504	501	514	511	511	449
65°	310	306	318	306	308	308
75°	129	126	129	120	124	138
85°	16	15	16	15	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.0	1134.0	1134.0	1134.0	1134.0
2.5°	1143.8	1135.2	1127.1	1136.5	1142.2
5°	1125.9	1123.3	1126.4	1123.0	1150.1
7.5°	1102.8	1112.9	1118.8	1115.1	1116.7
10°	1090.5	1087.0	1100.0	1109.1	1107.8
12.5°	1077.3	1082.6	1083.3	1093.1	1094.0
15°	1078.1	1065.6	1072.2	1077.8	1078.2
17.5°	1036.2	1049.6	1054.2	1066.9	1051.1
20°	1031.1	1021.2	1031.1	1044.1	1042.0
22.5°	999.6	988.6	1009.7	1021.2	1020.5
25°	963.8	969.1	984.9	997.8	995.8
27.5°	932.5	938.7	961.2	978.9	967.5
30°	908.4	905.3	924.3	940.1	948.9
32.5°	865.2	876.3	898.5	914.2	905.9
35°	839.0	841.4	860.9	880.8	880.2
37.5°	793.1	804.7	832.1	837.6	832.5
40°	754.0	765.6	790.3	796.3	793.9
42.5°	725.2	727.2	748.5	755.4	744.4
45°	675.0	687.6	699.0	717.0	700.0
47.5°	632.2	638.1	662.7	667.5	658.6
50°	593.4	595.5	620.2	614.2	608.4
52.5°	544.7	553.3	567.2	566.0	559.2
55°	504.5	501.2	514.4	510.8	510.7
57.5°	456.4	462.2	473.1	467.5	458.6
60°	411.3	411.4	415.4	409.1	407.9
62.5°	361.1	362.8	363.7	355.9	368.5
65°	310.0	305.9	317.9	305.7	307.8
67.5°	263.0	265.0	263.8	256.2	259.2
70°	215.2	217.9	216.0	207.3	210.0
72.5°	171.6	168.4	170.4	159.6	164.6
75°	129.0	126.4	128.7	119.6	123.7
77.5°	87.8	89.9	88.4	83.6	86.4
80°	58.0	56.4	56.4	53.6	54.2
82.5°	33.8	32.2	31.8	30.9	32.2
85°	15.8	15.4	15.7	15.2	14.6
87.5°	5.7	5.9	5.9	5.6	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)