

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: P590315

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590315
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-50-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2759.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

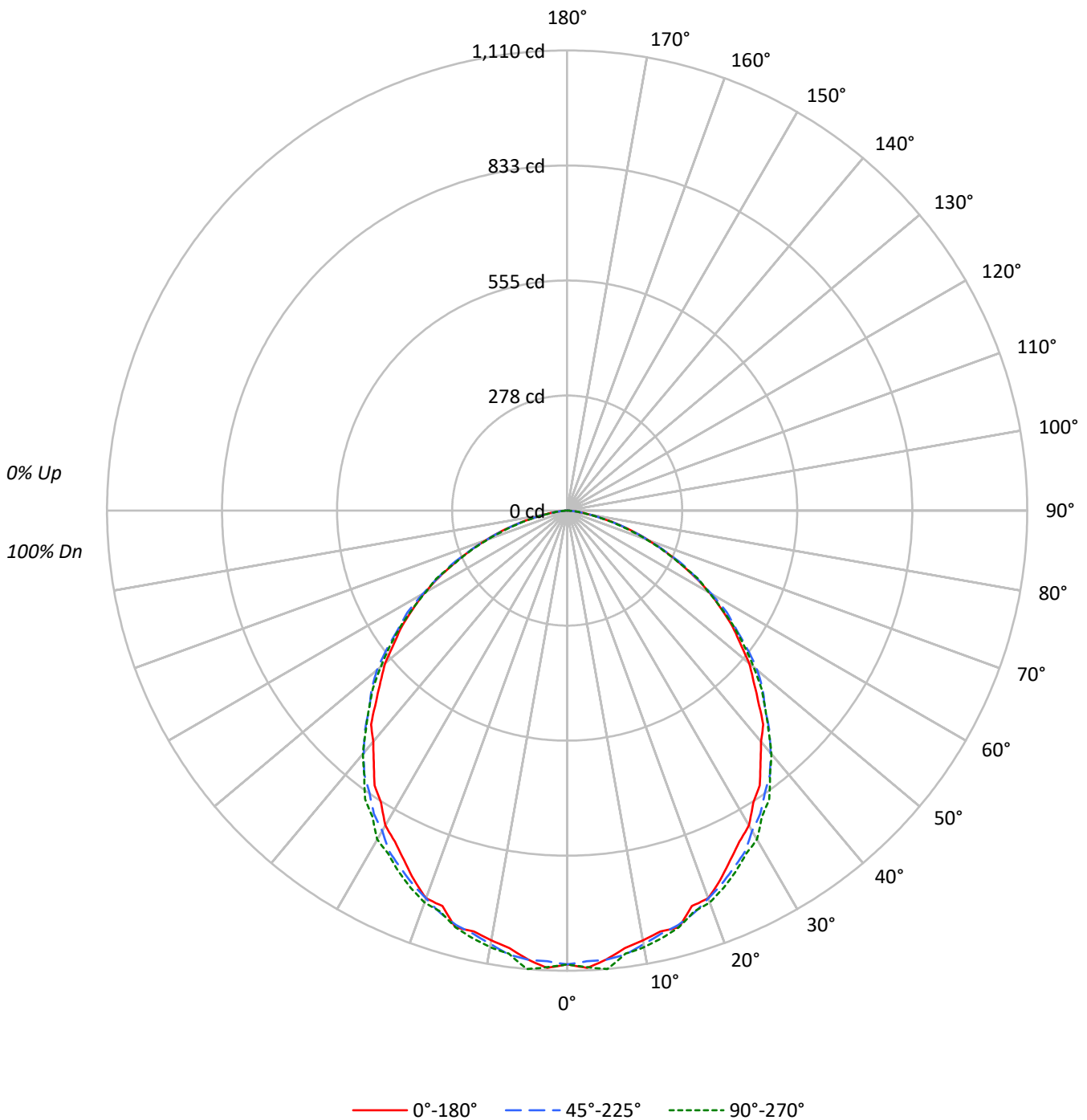
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	2946	2946	2946
5°	2936	2937	2999
10°	2876	2902	2922
15°	2899	2884	2900
20°	2850	2850	2881
25°	2763	2823	2854
30°	2725	2773	2846
35°	2661	2730	2792
40°	2557	2680	2692
45°	2480	2568	2572
50°	2398	2506	2459
55°	2285	2329	2313
60°	2137	2158	2119
65°	1905	1954	1892
70°	1635	1640	1595
75°	1294	1291	1241
80°	868	843	810
85°	472	466	435

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2634 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.0	3.7
10°-20°	291.8	10.6
20°-30°	437.2	15.8
30°-40°	518.2	18.8
40°-50°	519.2	18.8
50°-60°	440.7	16.0
60°-70°	297.1	10.8
70°-80°	130.6	4.7
80°-90°	21.2	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°	832.0	30.2
0°-40°	1350.3	48.9
0°-60°	2310.1	83.7
0°-90°	2759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1095	1095	1095	1095	1095	
5°	1087	1084	1087	1084	1110	102
15°	1041	1029	1035	1040	1041	290
25°	930	936	951	963	961	430
35°	810	812	831	850	850	503
45°	652	664	675	692	676	504
55°	487	484	496	493	493	433
65°	299	295	307	295	297	298
75°	124	122	124	116	119	133
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1094.7	1094.7	1094.7	1094.7	1094.7
2.5°	1104.2	1095.8	1088.1	1097.1	1102.6
5°	1086.9	1084.4	1087.4	1084.1	1110.2
7.5°	1064.6	1074.3	1080.0	1076.5	1078.0
10°	1052.7	1049.3	1061.9	1070.7	1069.4
12.5°	1040.0	1045.1	1045.8	1055.3	1056.1
15°	1040.7	1028.7	1035.1	1040.4	1040.8
17.5°	1000.3	1013.3	1017.7	1030.0	1014.7
20°	995.3	985.9	995.3	1007.9	1005.9
22.5°	964.9	954.3	974.7	985.9	985.2
25°	930.5	935.5	950.8	963.3	961.3
27.5°	900.2	906.1	927.9	945.0	934.0
30°	876.9	873.9	892.3	907.6	916.0
32.5°	835.2	845.9	867.4	882.5	874.5
35°	809.9	812.3	831.1	850.3	849.8
37.5°	765.7	776.8	803.3	808.6	803.7
40°	727.9	739.1	763.0	768.8	766.4
42.5°	700.1	702.1	722.5	729.2	718.6
45°	651.6	663.7	674.8	692.2	675.8
47.5°	610.3	616.0	639.7	644.4	635.8
50°	572.9	574.8	598.7	592.9	587.3
52.5°	525.8	534.1	547.6	546.4	539.8
55°	487.1	483.8	496.5	493.1	493.0
57.5°	440.6	446.2	456.7	451.3	442.7
60°	397.0	397.2	401.0	394.9	393.8
62.5°	348.6	350.2	351.1	343.6	355.8
65°	299.2	295.3	306.9	295.1	297.1
67.5°	253.9	255.8	254.7	247.4	250.2
70°	207.8	210.3	208.5	200.1	202.7
72.5°	165.7	162.5	164.5	154.1	158.9
75°	124.5	122.0	124.2	115.5	119.4
77.5°	84.8	86.8	85.4	80.7	83.4
80°	56.0	54.4	54.4	51.7	52.3
82.5°	32.7	31.1	30.7	29.8	31.1
85°	15.3	14.8	15.1	14.7	14.1
87.5°	5.5	5.7	5.7	5.4	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)