

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: P590311

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590311
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-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2698.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

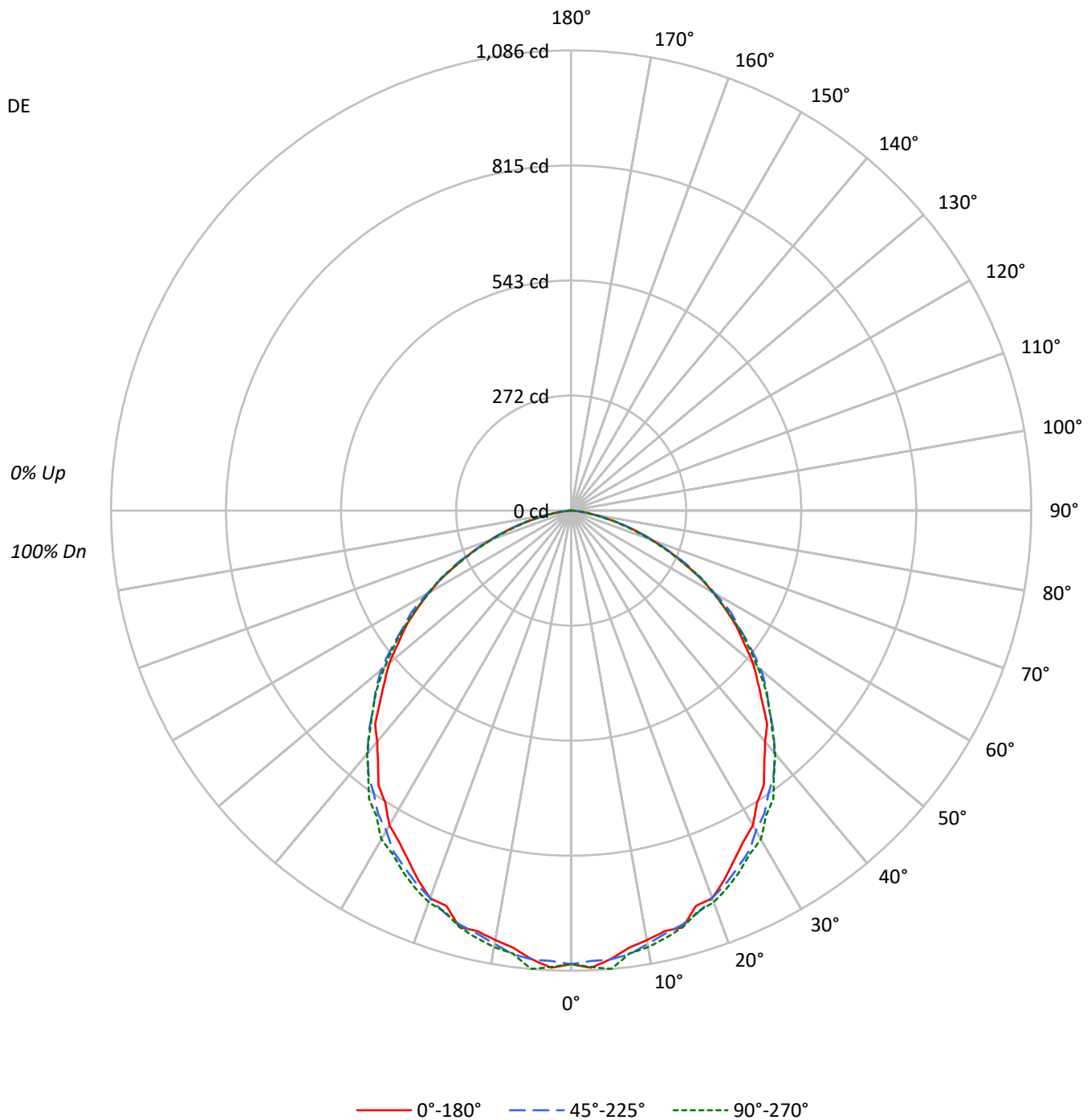
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2881	2881	2881
5°	2871	2872	2933
10°	2813	2837	2858
15°	2835	2820	2835
20°	2787	2787	2817
25°	2702	2761	2791
30°	2664	2711	2783
35°	2602	2670	2730
40°	2500	2621	2633
45°	2425	2511	2515
50°	2345	2451	2404
55°	2235	2278	2262
60°	2090	2110	2073
65°	1863	1911	1850
70°	1599	1604	1559
75°	1266	1263	1214
80°	848	824	792
85°	460	457	426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.7	3.7
10°-20°	285.4	10.6
20°-30°	427.6	15.8
30°-40°	506.7	18.8
40°-50°	507.7	18.8
50°-60°	431.0	16.0
60°-70°	290.5	10.8
70°-80°	127.7	4.7
80°-90°	20.7	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°	813.7	30.2
0°-40°	1320.4	48.9
0°-60°	2259.0	83.7
0°-90°	2698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1063	1060	1063	1060	1086	100
15°	1018	1006	1012	1017	1018	284
25°	910	915	930	942	940	421
35°	792	794	813	832	831	492
45°	637	649	660	677	661	493
55°	476	473	486	482	482	424
65°	293	289	300	289	290	291
75°	122	119	122	113	117	130
85°	15	14	15	14	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1070.5	1070.5	1070.5	1070.5	1070.5
2.5°	1079.8	1071.6	1064.0	1072.8	1078.2
5°	1062.9	1060.4	1063.3	1060.1	1085.7
7.5°	1041.1	1050.6	1056.1	1052.7	1054.2
10°	1029.4	1026.1	1038.4	1047.0	1045.8
12.5°	1017.0	1022.0	1022.7	1031.9	1032.8
15°	1017.7	1006.0	1012.2	1017.4	1017.8
17.5°	978.2	990.9	995.2	1007.2	992.3
20°	973.3	964.1	973.3	985.6	983.7
22.5°	943.6	933.2	953.2	964.1	963.4
25°	909.9	914.9	929.8	942.0	940.0
27.5°	880.3	886.1	907.4	924.1	913.3
30°	857.5	854.6	872.6	887.5	895.8
32.5°	816.7	827.2	848.2	863.0	855.2
35°	792.0	794.3	812.7	831.5	831.0
37.5°	748.7	759.6	785.5	790.7	785.9
40°	711.8	722.7	746.1	751.8	749.4
42.5°	684.6	686.5	706.6	713.1	702.7
45°	637.2	649.1	659.9	676.9	660.8
47.5°	596.8	602.4	625.6	630.1	621.7
50°	560.2	562.1	585.5	579.8	574.3
52.5°	514.2	522.3	535.5	534.4	527.9
55°	476.3	473.1	485.6	482.2	482.1
57.5°	430.8	436.4	446.6	441.3	432.9
60°	388.3	388.4	392.1	386.2	385.1
62.5°	340.8	342.5	343.3	336.0	347.9
65°	292.6	288.7	300.1	288.6	290.5
67.5°	248.2	250.2	249.1	241.9	244.6
70°	203.2	205.7	203.9	195.7	198.2
72.5°	162.0	159.0	160.9	150.7	155.4
75°	121.8	119.3	121.5	112.9	116.8
77.5°	82.9	84.9	83.5	78.9	81.5
80°	54.7	53.2	53.2	50.6	51.1
82.5°	31.9	30.4	30.0	29.2	30.4
85°	14.9	14.5	14.8	14.4	13.8
87.5°	5.4	5.5	5.5	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)