

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: P560549

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560549
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2LO-50-UNV-93-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2272.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

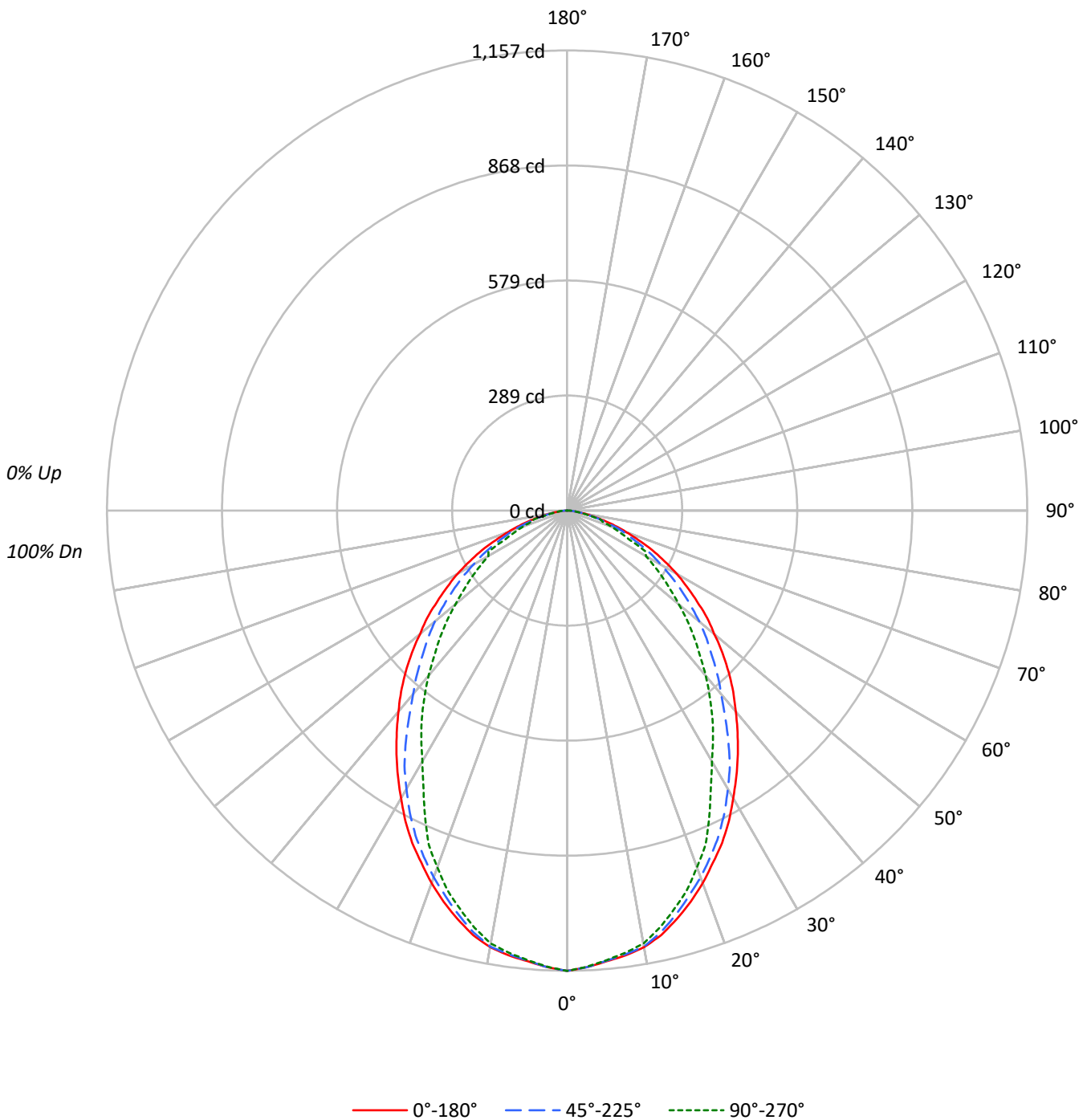
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6229	6229	6229
5°	6144	6137	6130
10°	6091	6084	6039
15°	5927	5867	5785
20°	5709	5617	5464
25°	5474	5355	5021
30°	5189	5022	4523
35°	4914	4641	4185
40°	4634	4230	3807
45°	4369	3911	3442
50°	4044	3630	3069
55°	3741	3289	2749
60°	3427	2937	2463
65°	3016	2572	2181
70°	2485	2253	1852
75°	1975	1726	1809
80°	1327	1243	1162
85°	827	994	1155

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4369 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.7	4.7
10°-20°	295.7	13.0
20°-30°	409.3	18.0
30°-40°	436.5	19.2
40°-50°	398.2	17.5
50°-60°	311.9	13.7
60°-70°	203.3	8.9
70°-80°	90.1	4.0
80°-90°	19.3	0.9
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°	812.7	35.8
0°-40°	1249.2	55.0
0°-60°	1959.3	86.2
0°-90°	2272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1157	1157	1157	1157	1157	
5°	1137	1136	1136	1135	1135	108
15°	1064	1064	1053	1042	1038	299
25°	922	916	902	870	846	423
35°	748	743	706	653	637	468
45°	574	562	514	471	452	442
55°	399	387	350	309	293	358
65°	237	223	202	206	171	233
75°	95	88	83	79	87	102
85°	13	15	16	17	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>1157.3</i>	<i>1157.3</i>	<i>1157.3</i>	<i>1157.3</i>	<i>1157.3</i>
2.5°	<i>1149.3</i>	1149.3	1149.3	1148.0	1148.0
5°	<i>1137.3</i>	1135.9	1135.9	1134.6	1134.6
7.5°	<i>1127.9</i>	1126.6	1125.2	1123.9	1121.2
10°	<i>1114.5</i>	1114.5	1113.2	1106.5	1105.1
12.5°	<i>1093.1</i>	1091.8	1086.4	1077.0	1074.4
15°	<i>1063.7</i>	1063.7	1053.0	1042.3	1038.2
17.5°	<i>1031.6</i>	1030.2	1016.8	1006.1	1000.8
20°	<i>996.8</i>	994.1	980.7	963.3	954.0
22.5°	<i>958.0</i>	958.0	941.9	919.2	909.8
25°	<i>921.8</i>	916.5	901.8	869.7	845.6
27.5°	<i>880.4</i>	872.3	856.3	810.8	782.7
30°	<i>834.9</i>	830.9	808.1	749.3	727.8
32.5°	<i>792.1</i>	785.4	761.3	699.7	682.4
35°	<i>747.9</i>	742.6	706.4	652.9	636.9
37.5°	<i>703.8</i>	697.1	651.6	608.8	588.7
40°	<i>659.6</i>	651.6	602.1	563.3	541.9
42.5°	<i>618.1</i>	607.4	559.3	517.8	493.7
45°	<i>574.0</i>	561.9	513.8	471.0	452.2
47.5°	<i>529.8</i>	519.1	475.0	430.8	409.4
50°	<i>483.0</i>	473.6	433.5	389.3	366.6
52.5°	<i>444.2</i>	429.5	390.7	346.5	327.8
55°	<i>398.7</i>	386.7	350.5	309.1	293.0
57.5°	<i>357.2</i>	345.2	311.7	272.9	259.6
60°	<i>318.4</i>	301.0	272.9	239.5	228.8
62.5°	<i>275.6</i>	262.2	238.2	210.1	223.4
65°	<i>236.8</i>	223.4	202.0	206.0	171.3
67.5°	<i>194.0</i>	187.3	168.6	149.9	144.5
70°	<i>157.9</i>	149.9	143.2	123.1	117.7
72.5°	<i>125.8</i>	117.7	108.4	97.7	93.7
75°	<i>95.0</i>	88.3	83.0	78.9	87.0
77.5°	<i>65.6</i>	62.9	58.9	54.9	53.5
80°	<i>42.8</i>	41.5	40.1	38.8	37.5
82.5°	<i>25.4</i>	25.4	25.4	25.4	25.4
85°	<i>13.4</i>	14.7	16.1	17.4	18.7
87.5°	<i>8.0</i>	8.0	9.4	10.7	12.0
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)