

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: P559969

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559969
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-LD4-1LO-50-UNV-93-84-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1172.0 lumens
Efficiency: N/A
Efficacy: 100.2 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

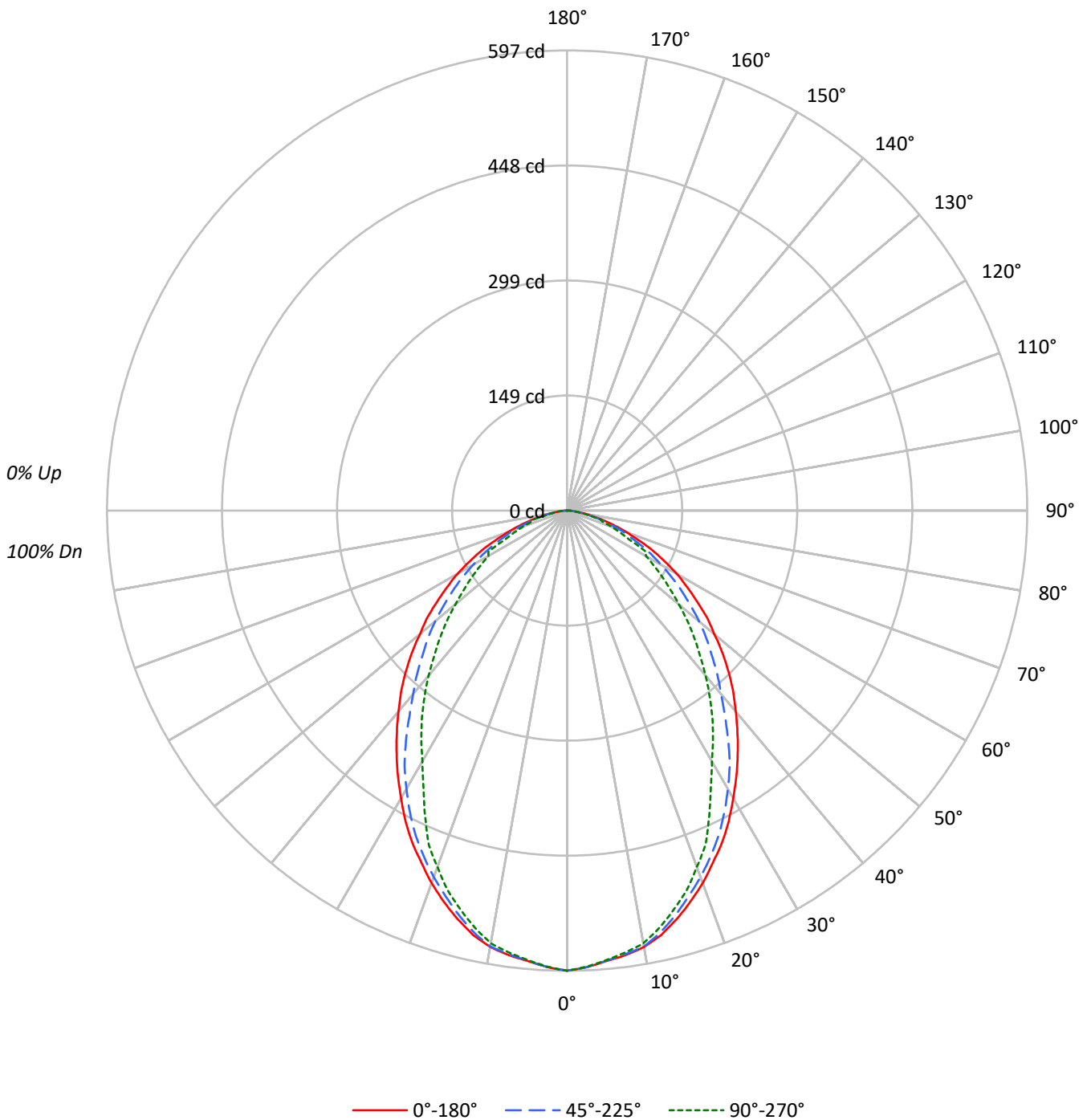
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3213	3213	3213
5°	3169	3166	3162
10°	3142	3138	3116
15°	3057	3027	2984
20°	2945	2897	2818
25°	2824	2763	2590
30°	2677	2591	2334
35°	2535	2394	2158
40°	2391	2182	1964
45°	2254	2017	1776
50°	2087	1872	1583
55°	1930	1696	1418
60°	1769	1516	1270
65°	1556	1327	1124
70°	1281	1161	955
75°	1019	890	934
80°	685	642	598
85°	426	513	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2254 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	4.7
10°-20°	152.5	13.0
20°-30°	211.1	18.0
30°-40°	225.1	19.2
40°-50°	205.4	17.5
50°-60°	160.9	13.7
60°-70°	104.9	8.9
70°-80°	46.5	4.0
80°-90°	10.0	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°	419.2	35.8
0°-40°	644.4	55.0
0°-60°	1010.7	86.2
0°-90°	1172.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1172.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	597	597	597	597	597	
5°	587	586	586	585	585	56
15°	549	549	543	538	536	154
25°	476	473	465	449	436	218
35°	386	383	364	337	328	241
45°	296	290	265	243	233	228
55°	206	200	181	159	151	184
65°	122	115	104	106	88	120
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	597.0	597.0	597.0	597.0	597.0
2.5°	592.9	592.9	592.9	592.2	592.2
5°	586.6	586.0	586.0	585.3	585.3
7.5°	581.8	581.1	580.4	579.7	578.4
10°	574.9	574.9	574.2	570.8	570.1
12.5°	563.9	563.2	560.4	555.6	554.2
15°	548.7	548.7	543.2	537.6	535.6
17.5°	532.1	531.4	524.5	519.0	516.3
20°	514.2	512.8	505.9	496.9	492.1
22.5°	494.2	494.2	485.9	474.2	469.3
25°	475.5	472.8	465.2	448.6	436.2
27.5°	454.1	450.0	441.7	418.2	403.8
30°	430.7	428.6	416.9	386.5	375.5
32.5°	408.6	405.1	392.7	361.0	352.0
35°	385.8	383.0	364.4	336.8	328.5
37.5°	363.0	359.6	336.1	314.0	303.7
40°	340.3	336.1	310.6	290.6	279.5
42.5°	318.9	313.3	288.5	267.1	254.7
45°	296.1	289.9	265.0	242.9	233.3
47.5°	273.3	267.8	245.0	222.2	211.2
50°	249.2	244.3	223.6	200.8	189.1
52.5°	229.1	221.5	201.5	178.8	169.1
55°	205.7	199.5	180.8	159.4	151.1
57.5°	184.3	178.1	160.8	140.8	133.9
60°	164.3	155.3	140.8	123.5	118.0
62.5°	142.2	135.3	122.9	108.4	115.3
65°	122.2	115.3	104.2	106.3	88.3
67.5°	100.1	96.6	87.0	77.3	74.5
70°	81.4	77.3	73.8	63.5	60.7
72.5°	64.9	60.7	55.9	50.4	48.3
75°	49.0	45.6	42.8	40.7	44.9
77.5°	33.8	32.4	30.4	28.3	27.6
80°	22.1	21.4	20.7	20.0	19.3
82.5°	13.1	13.1	13.1	13.1	13.1
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.1	4.1	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)