

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: P559913

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559913
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-40-UNV-93-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 973.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

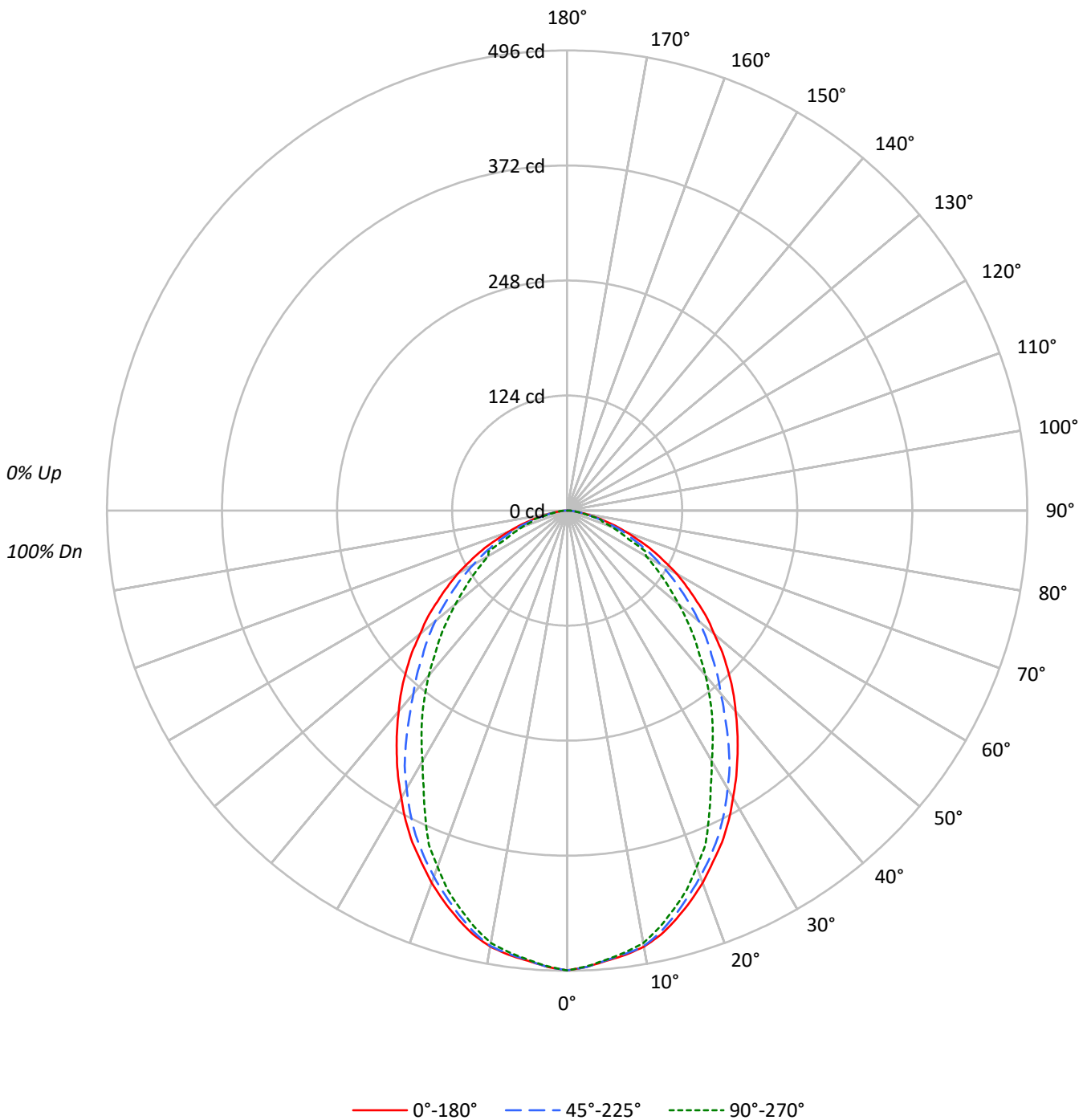
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2667	2667	2667
5°	2631	2628	2625
10°	2608	2605	2587
15°	2538	2512	2477
20°	2445	2405	2340
25°	2344	2293	2150
30°	2222	2151	1937
35°	2104	1987	1792
40°	1985	1811	1631
45°	1871	1674	1474
50°	1732	1554	1315
55°	1602	1408	1178
60°	1468	1258	1055
65°	1291	1102	933
70°	1064	965	793
75°	846	738	774
80°	567	533	496
85°	352	426	494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1871 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.1	4.7
10°-20°	126.6	13.0
20°-30°	175.3	18.0
30°-40°	186.9	19.2
40°-50°	170.5	17.5
50°-60°	133.6	13.7
60°-70°	87.1	8.9
70°-80°	38.6	4.0
80°-90°	8.3	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°	348.1	35.8
0°-40°	535.0	55.0
0°-60°	839.1	86.2
0°-90°	973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	496	496	496	496	496	
5°	487	486	486	486	486	46
15°	456	456	451	446	445	128
25°	395	392	386	372	362	181
35°	320	318	302	280	273	200
45°	246	241	220	202	194	189
55°	171	166	150	132	126	153
65°	101	96	86	88	73	100
75°	41	38	36	34	37	44
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	495.6	495.6	495.6	495.6	495.6
2.5°	492.2	492.2	492.2	491.6	491.6
5°	487.0	486.5	486.5	485.9	485.9
7.5°	483.0	482.5	481.9	481.3	480.2
10°	477.3	477.3	476.7	473.9	473.3
12.5°	468.1	467.6	465.3	461.3	460.1
15°	455.5	455.5	450.9	446.4	444.6
17.5°	441.8	441.2	435.5	430.9	428.6
20°	426.9	425.7	420.0	412.6	408.5
22.5°	410.3	410.3	403.4	393.6	389.6
25°	394.8	392.5	386.2	372.4	362.1
27.5°	377.0	373.6	366.7	347.2	335.2
30°	357.5	355.8	346.1	320.9	311.7
32.5°	339.2	336.3	326.0	299.7	292.2
35°	320.3	318.0	302.5	279.6	272.7
37.5°	301.4	298.5	279.0	260.7	252.1
40°	282.5	279.0	257.8	241.2	232.1
42.5°	264.7	260.1	239.5	221.7	211.4
45°	245.8	240.7	220.0	201.7	193.7
47.5°	226.9	222.3	203.4	184.5	175.3
50°	206.8	202.8	185.6	166.7	157.0
52.5°	190.2	183.9	167.3	148.4	140.4
55°	170.7	165.6	150.1	132.4	125.5
57.5°	153.0	147.8	133.5	116.9	111.2
60°	136.4	128.9	116.9	102.6	98.0
62.5°	118.0	112.3	102.0	90.0	95.7
65°	101.4	95.7	86.5	88.2	73.3
67.5°	83.1	80.2	72.2	64.2	61.9
70°	67.6	64.2	61.3	52.7	50.4
72.5°	53.9	50.4	46.4	41.8	40.1
75°	40.7	37.8	35.5	33.8	37.2
77.5°	28.1	26.9	25.2	23.5	22.9
80°	18.3	17.8	17.2	16.6	16.0
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.7	6.3	6.9	7.4	8.0
87.5°	3.4	3.4	4.0	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)