

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: P559904

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559904
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-93-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 969.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

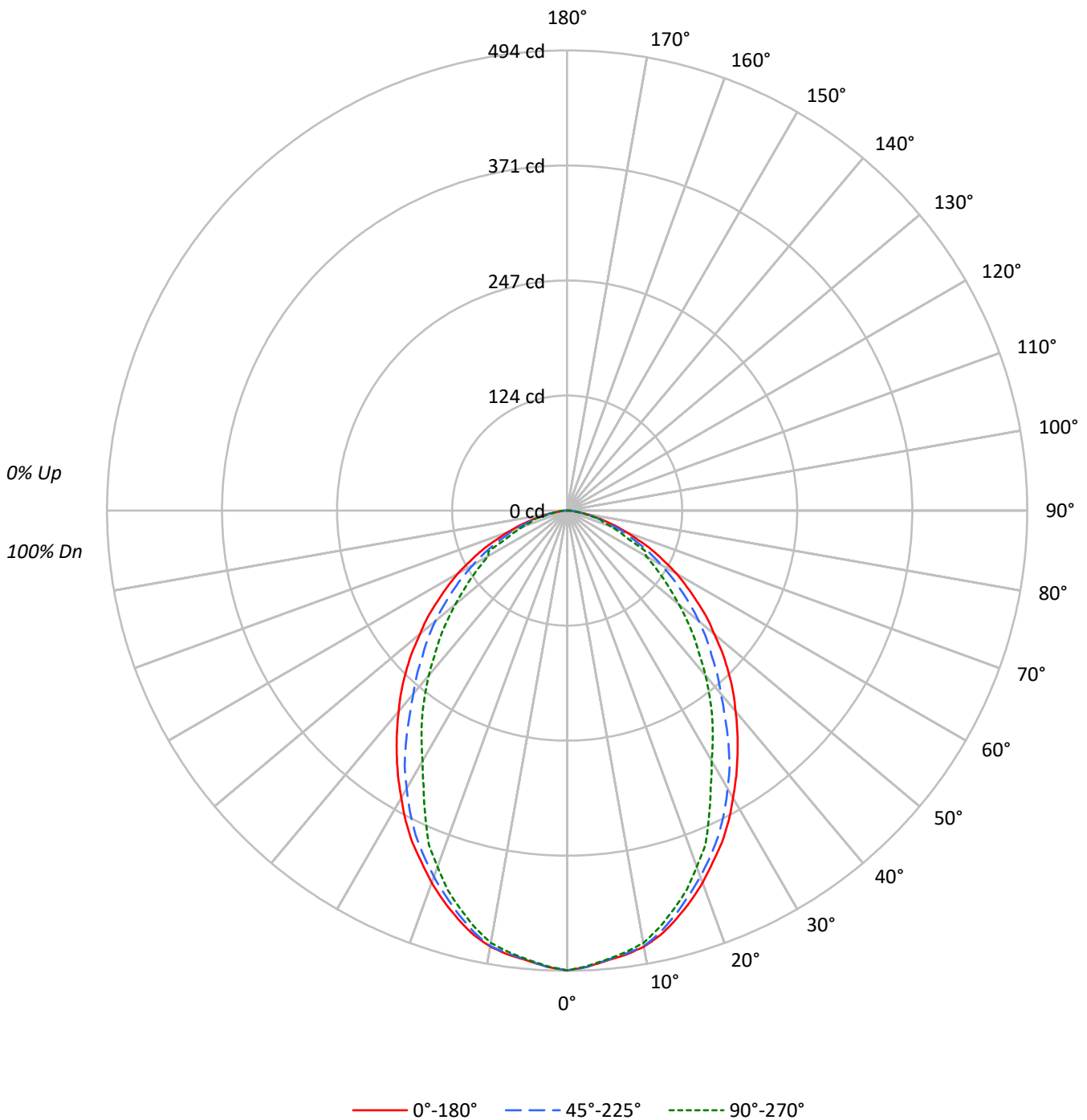
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2657	2657	2657
5°	2620	2618	2614
10°	2598	2595	2576
15°	2528	2502	2467
20°	2435	2396	2330
25°	2335	2284	2141
30°	2213	2142	1929
35°	2096	1980	1784
40°	1976	1804	1624
45°	1863	1668	1468
50°	1725	1548	1310
55°	1595	1403	1173
60°	1462	1253	1051
65°	1286	1098	930
70°	1059	961	790
75°	842	736	771
80°	567	530	496
85°	352	420	494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	4.7
10°-20°	126.1	13.0
20°-30°	174.6	18.0
30°-40°	186.1	19.2
40°-50°	169.8	17.5
50°-60°	133.0	13.7
60°-70°	86.7	8.9
70°-80°	38.4	4.0
80°-90°	8.2	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°	346.6	35.8
0°-40°	532.8	55.0
0°-60°	835.6	86.2
0°-90°	969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	969.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	494	494	494	494	494	
5°	485	484	484	484	484	46
15°	454	454	449	444	443	128
25°	393	391	385	371	361	181
35°	319	317	301	278	272	199
45°	245	240	219	201	193	189
55°	170	165	150	132	125	153
65°	101	95	86	88	73	100
75°	40	38	35	34	37	43
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°	493.6	493.6	493.6	493.6	493.6
2.5°	490.2	490.2	490.2	489.6	489.6
5°	485.0	484.5	484.5	483.9	483.9
7.5°	481.0	480.5	479.9	479.3	478.2
10°	475.3	475.3	474.8	471.9	471.3
12.5°	466.2	465.6	463.4	459.4	458.2
15°	453.7	453.7	449.1	444.5	442.8
17.5°	440.0	439.4	433.7	429.1	426.8
20°	425.1	424.0	418.3	410.9	406.9
22.5°	408.6	408.6	401.7	392.0	388.0
25°	393.2	390.9	384.6	370.9	360.6
27.5°	375.5	372.1	365.2	345.8	333.8
30°	356.1	354.4	344.7	319.6	310.4
32.5°	337.8	335.0	324.7	298.4	291.0
35°	319.0	316.7	301.3	278.5	271.6
37.5°	300.2	297.3	277.9	259.6	251.1
40°	281.3	277.9	256.8	240.2	231.1
42.5°	263.6	259.1	238.5	220.8	210.6
45°	244.8	239.7	219.1	200.9	192.9
47.5°	226.0	221.4	202.6	183.7	174.6
50°	206.0	202.0	184.9	166.1	156.4
52.5°	189.4	183.2	166.6	147.8	139.8
55°	170.0	164.9	149.5	131.8	125.0
57.5°	152.4	147.2	133.0	116.4	110.7
60°	135.8	128.4	116.4	102.1	97.6
62.5°	117.5	111.8	101.6	89.6	95.3
65°	101.0	95.3	86.2	87.9	73.0
67.5°	82.7	79.9	71.9	63.9	61.6
70°	67.3	63.9	61.1	52.5	50.2
72.5°	53.6	50.2	46.2	41.7	39.9
75°	40.5	37.7	35.4	33.7	37.1
77.5°	28.0	26.8	25.1	23.4	22.8
80°	18.3	17.7	17.1	16.5	16.0
82.5°	10.8	10.8	10.8	10.8	10.8
85°	5.7	6.3	6.8	7.4	8.0
87.5°	3.4	3.4	4.0	4.6	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)