

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: P559332

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559332
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-12-1-LD4-2LO-40-UNV-93-86-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 968.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

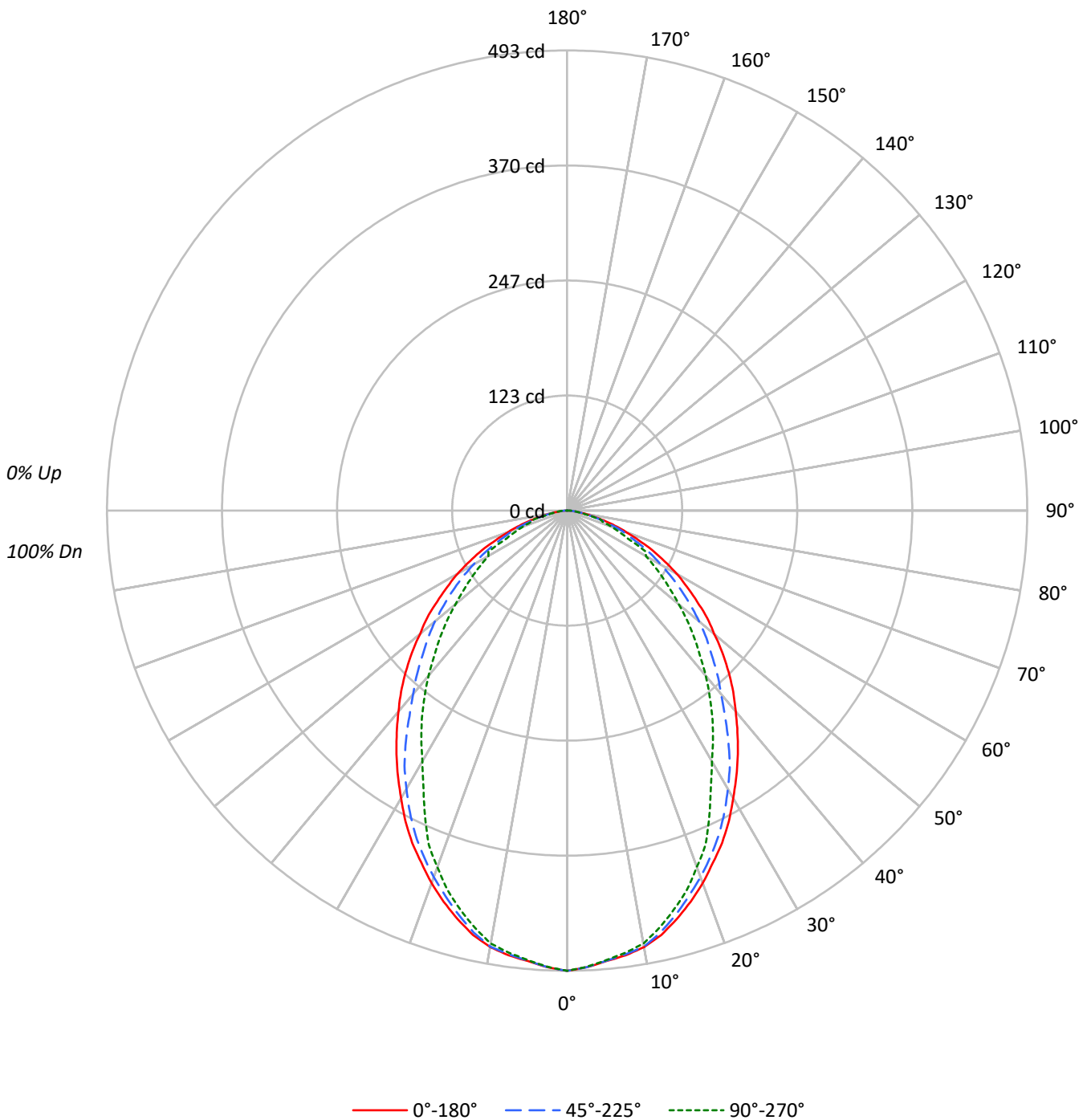
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5308	5308	5308
5°	5235	5230	5223
10°	5190	5184	5147
15°	5050	4999	4930
20°	4865	4786	4655
25°	4665	4563	4279
30°	4421	4279	3854
35°	4188	3955	3565
40°	3948	3604	3244
45°	3722	3332	2933
50°	3446	3093	2616
55°	3188	2804	2342
60°	2921	2504	2099
65°	2570	2193	1859
70°	2118	1920	1580
75°	1684	1468	1543
80°	1128	1060	992
85°	704	840	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3722 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	4.7
10°-20°	126.0	13.0
20°-30°	174.4	18.0
30°-40°	186.0	19.2
40°-50°	169.7	17.5
50°-60°	132.9	13.7
60°-70°	86.6	8.9
70°-80°	38.4	4.0
80°-90°	8.2	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°	346.3	35.8
0°-40°	532.2	55.0
0°-60°	834.8	86.2
0°-90°	968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	493	493	493	493	493	
5°	484	484	484	483	483	46
15°	453	453	449	444	442	127
25°	393	390	384	370	360	180
35°	319	316	301	278	271	199
45°	244	239	219	201	193	188
55°	170	165	149	132	125	152
65°	101	95	86	88	73	99
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°	493.1	493.1	493.1	493.1	493.1
2.5°	489.7	489.7	489.7	489.1	489.1
5°	484.5	484.0	484.0	483.4	483.4
7.5°	480.5	480.0	479.4	478.8	477.7
10°	474.8	474.8	474.3	471.4	470.9
12.5°	465.7	465.2	462.9	458.9	457.7
15°	453.2	453.2	448.6	444.1	442.4
17.5°	439.5	438.9	433.2	428.7	426.4
20°	424.7	423.5	417.8	410.4	406.4
22.5°	408.2	408.2	401.3	391.6	387.6
25°	392.8	390.5	384.2	370.5	360.3
27.5°	375.1	371.7	364.8	345.4	333.5
30°	355.7	354.0	344.3	319.2	310.1
32.5°	337.5	334.6	324.4	298.1	290.7
35°	318.7	316.4	301.0	278.2	271.3
37.5°	299.8	297.0	277.6	259.4	250.8
40°	281.0	277.6	256.5	240.0	230.9
42.5°	263.4	258.8	238.3	220.6	210.3
45°	244.5	239.4	218.9	200.7	192.7
47.5°	225.7	221.2	202.4	183.6	174.4
50°	205.8	201.8	184.7	165.9	156.2
52.5°	189.3	183.0	166.5	147.6	139.7
55°	169.9	164.7	149.4	131.7	124.8
57.5°	152.2	147.1	132.8	116.3	110.6
60°	135.7	128.3	116.3	102.0	97.5
62.5°	117.4	111.7	101.5	89.5	95.2
65°	100.9	95.2	86.1	87.8	73.0
67.5°	82.7	79.8	71.8	63.8	61.6
70°	67.3	63.8	61.0	52.4	50.2
72.5°	53.6	50.2	46.2	41.6	39.9
75°	40.5	37.6	35.3	33.6	37.1
77.5°	27.9	26.8	25.1	23.4	22.8
80°	18.2	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)