

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: P559200

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559200
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-LD4-2HI-50-UNV-93-84-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1728.0 lumens
Efficiency: N/A
Efficacy: 80.0 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

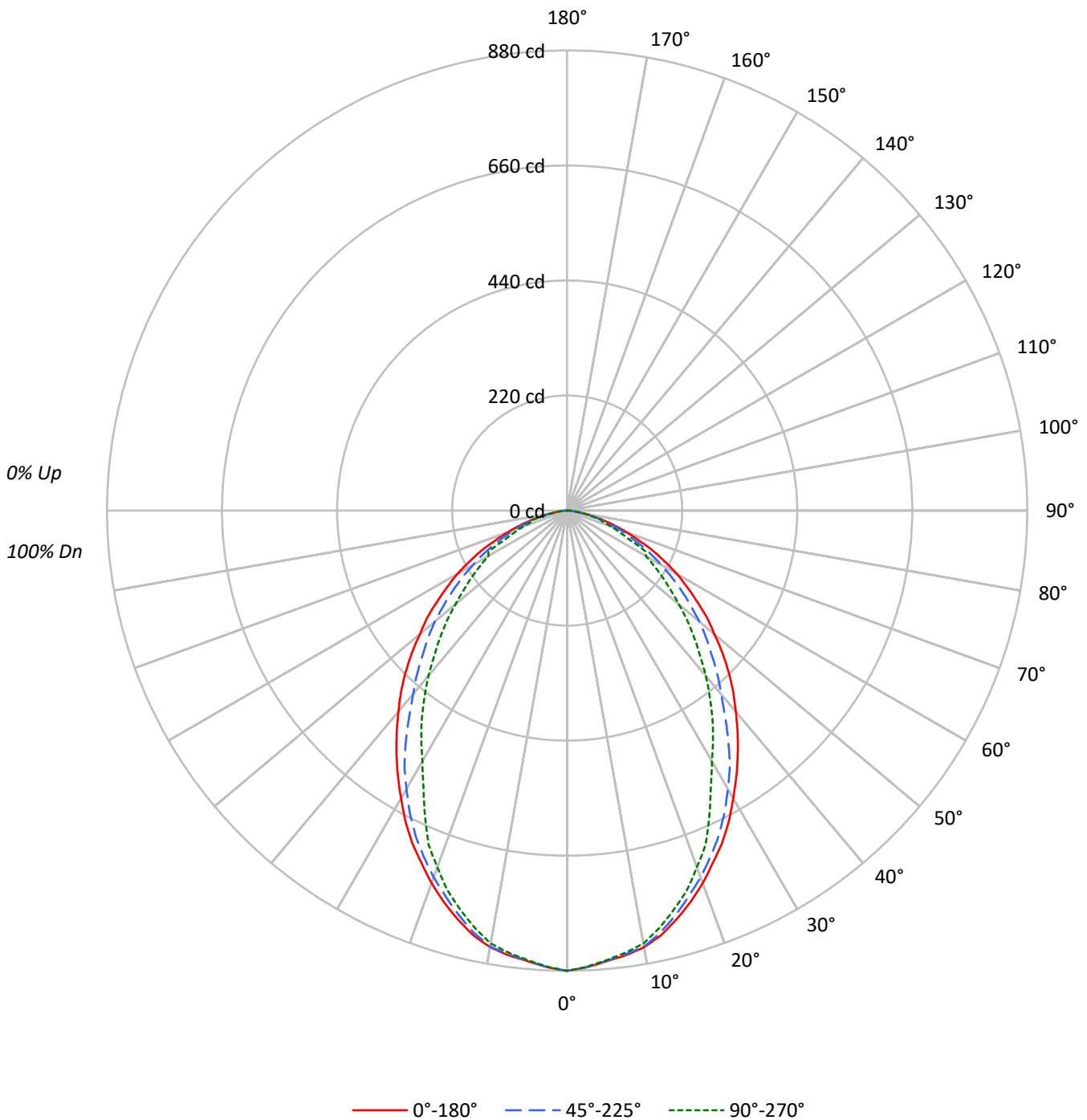
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9474	9474	9474
5°	9346	9334	9324
10°	9265	9253	9187
15°	9015	8924	8800
20°	8684	8544	8310
25°	8327	8146	7638
30°	7892	7639	6881
35°	7474	7060	6365
40°	7050	6434	5791
45°	6645	5949	5235
50°	6152	5521	4669
55°	5690	5003	4183
60°	5214	4469	3746
65°	4587	3915	3319
70°	3780	3427	2817
75°	3003	2624	2749
80°	2021	1891	1767
85°	1260	1507	1754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6645 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.9	4.7
10°-20°	224.9	13.0
20°-30°	311.3	18.0
30°-40°	332.0	19.2
40°-50°	302.8	17.5
50°-60°	237.2	13.7
60°-70°	154.6	8.9
70°-80°	68.5	4.0
80°-90°	14.7	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°	618.1	35.8
0°-40°	950.1	55.0
0°-60°	1490.2	86.2
0°-90°	1728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	880	880	880	880	880	
5°	865	864	864	863	863	82
15°	809	809	801	793	790	227
25°	701	697	686	661	643	322
35°	569	565	537	497	484	356
45°	436	427	391	358	344	336
55°	303	294	267	235	223	272
65°	180	170	154	157	130	178
75°	72	67	63	60	66	77
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	880.2	880.2	880.2	880.2	880.2
2.5°	874.1	874.1	874.1	873.1	873.1
5°	865.0	863.9	863.9	862.9	862.9
7.5°	857.8	856.8	855.8	854.8	852.7
10°	847.7	847.7	846.6	841.6	840.5
12.5°	831.4	830.4	826.3	819.2	817.1
15°	809.0	809.0	800.8	792.7	789.7
17.5°	784.6	783.5	773.4	765.2	761.2
20°	758.1	756.1	745.9	732.7	725.5
22.5°	728.6	728.6	716.4	699.1	692.0
25°	701.1	697.1	685.9	661.4	643.1
27.5°	669.6	663.5	651.3	616.7	595.3
30°	635.0	631.9	614.6	569.9	553.6
32.5°	602.4	597.3	579.0	532.2	519.0
35°	568.8	564.8	537.3	496.6	484.4
37.5°	535.3	530.2	495.6	463.0	447.7
40°	501.7	495.6	457.9	428.4	412.1
42.5°	470.1	462.0	425.4	393.8	375.5
45°	436.5	427.4	390.8	358.2	343.9
47.5°	403.0	394.8	361.2	327.7	311.4
50°	367.4	360.2	329.7	296.1	278.8
52.5°	337.8	326.6	297.1	263.6	249.3
55°	303.2	294.1	266.6	235.1	222.9
57.5°	271.7	262.5	237.1	207.6	197.4
60°	242.2	229.0	207.6	182.1	174.0
62.5°	209.6	199.4	181.1	159.8	169.9
65°	180.1	169.9	153.7	156.7	130.3
67.5°	147.6	142.5	128.2	114.0	109.9
70°	120.1	114.0	108.9	93.6	89.5
72.5°	95.7	89.5	82.4	74.3	71.2
75°	72.2	67.2	63.1	60.0	66.1
77.5°	49.9	47.8	44.8	41.7	40.7
80°	32.6	31.5	30.5	29.5	28.5
82.5°	19.3	19.3	19.3	19.3	19.3
85°	10.2	11.2	12.2	13.2	14.2
87.5°	6.1	6.1	7.1	8.1	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)