

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: P559012

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559012
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-LD4-1STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 683.0 lumens
Efficiency: N/A
Efficacy: 82.3 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

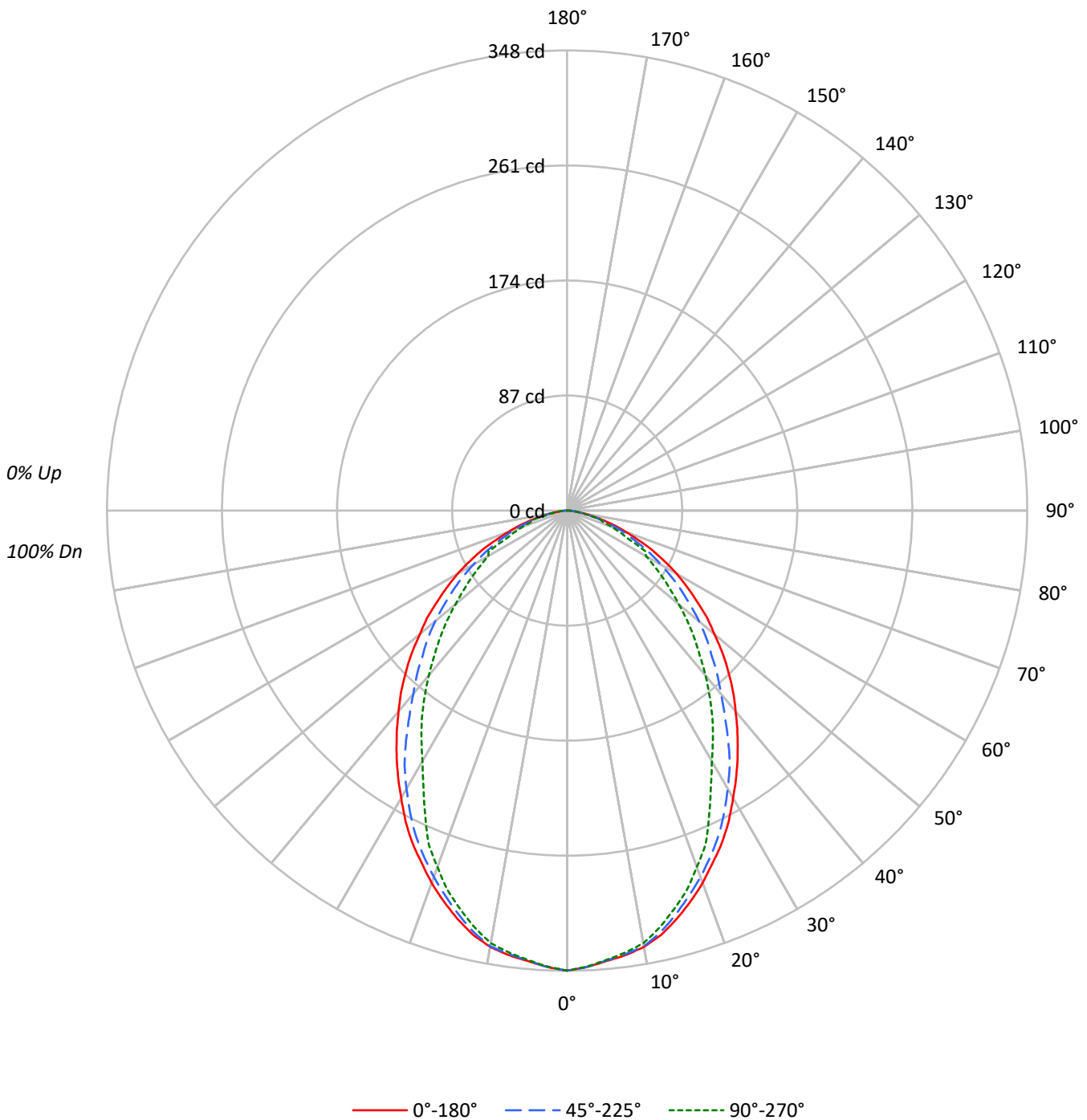
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	39	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°	3745	3745	3745
5°	3694	3690	3686
10°	3662	3657	3631
15°	3564	3527	3478
20°	3432	3377	3285
25°	3291	3220	3019
30°	3120	3019	2719
35°	2954	2791	2516
40°	2786	2543	2289
45°	2626	2350	2069
50°	2431	2182	1845
55°	2250	1978	1653
60°	2060	1767	1481
65°	1813	1546	1312
70°	1495	1353	1114
75°	1189	1036	1085
80°	800	750	700
85°	494	593	692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2626 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.4	4.7
10°-20°	88.9	13.0
20°-30°	123.0	18.0
30°-40°	131.2	19.2
40°-50°	119.7	17.5
50°-60°	93.8	13.7
60°-70°	61.1	8.9
70°-80°	27.1	4.0
80°-90°	5.8	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°	244.3	35.8
0°-40°	375.5	55.0
0°-60°	589.0	86.2
0°-90°	683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	348	348	348	348	348	
5°	342	342	342	341	341	32
15°	320	320	316	313	312	90
25°	277	276	271	261	254	127
35°	225	223	212	196	192	141
45°	172	169	154	142	136	133
55°	120	116	105	93	88	108
65°	71	67	61	62	52	70
75°	29	26	25	24	26	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	347.9	347.9	347.9	347.9	347.9
2.5°	345.5	345.5	345.5	345.1	345.1
5°	341.9	341.5	341.5	341.1	341.1
7.5°	339.1	338.7	338.3	337.9	337.1
10°	335.0	335.0	334.6	332.6	332.2
12.5°	328.6	328.2	326.6	323.8	323.0
15°	319.8	319.8	316.5	313.3	312.1
17.5°	310.1	309.7	305.7	302.5	300.9
20°	299.6	298.8	294.8	289.6	286.8
22.5°	288.0	288.0	283.2	276.3	273.5
25°	277.1	275.5	271.1	261.4	254.2
27.5°	264.7	262.2	257.4	243.7	235.3
30°	251.0	249.8	242.9	225.2	218.8
32.5°	238.1	236.1	228.9	210.4	205.1
35°	224.8	223.2	212.4	196.3	191.5
37.5°	211.6	209.6	195.9	183.0	177.0
40°	198.3	195.9	181.0	169.3	162.9
42.5°	185.8	182.6	168.1	155.7	148.4
45°	172.5	168.9	154.4	141.6	135.9
47.5°	159.3	156.1	142.8	129.5	123.1
50°	145.2	142.4	130.3	117.0	110.2
52.5°	133.5	129.1	117.4	104.2	98.5
55°	119.9	116.2	105.4	92.9	88.1
57.5°	107.4	103.8	93.7	82.1	78.0
60°	95.7	90.5	82.1	72.0	68.8
62.5°	82.9	78.8	71.6	63.1	67.2
65°	71.2	67.2	60.7	61.9	51.5
67.5°	58.3	56.3	50.7	45.0	43.4
70°	47.5	45.0	43.0	37.0	35.4
72.5°	37.8	35.4	32.6	29.4	28.2
75°	28.6	26.5	24.9	23.7	26.1
77.5°	19.7	18.9	17.7	16.5	16.1
80°	12.9	12.5	12.1	11.7	11.3
82.5°	7.6	7.6	7.6	7.6	7.6
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)