

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: P560110

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560110
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-LD4-1STD-40-UNV-93-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1240.0 lumens
Efficiency: N/A
Efficacy: 74.7 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

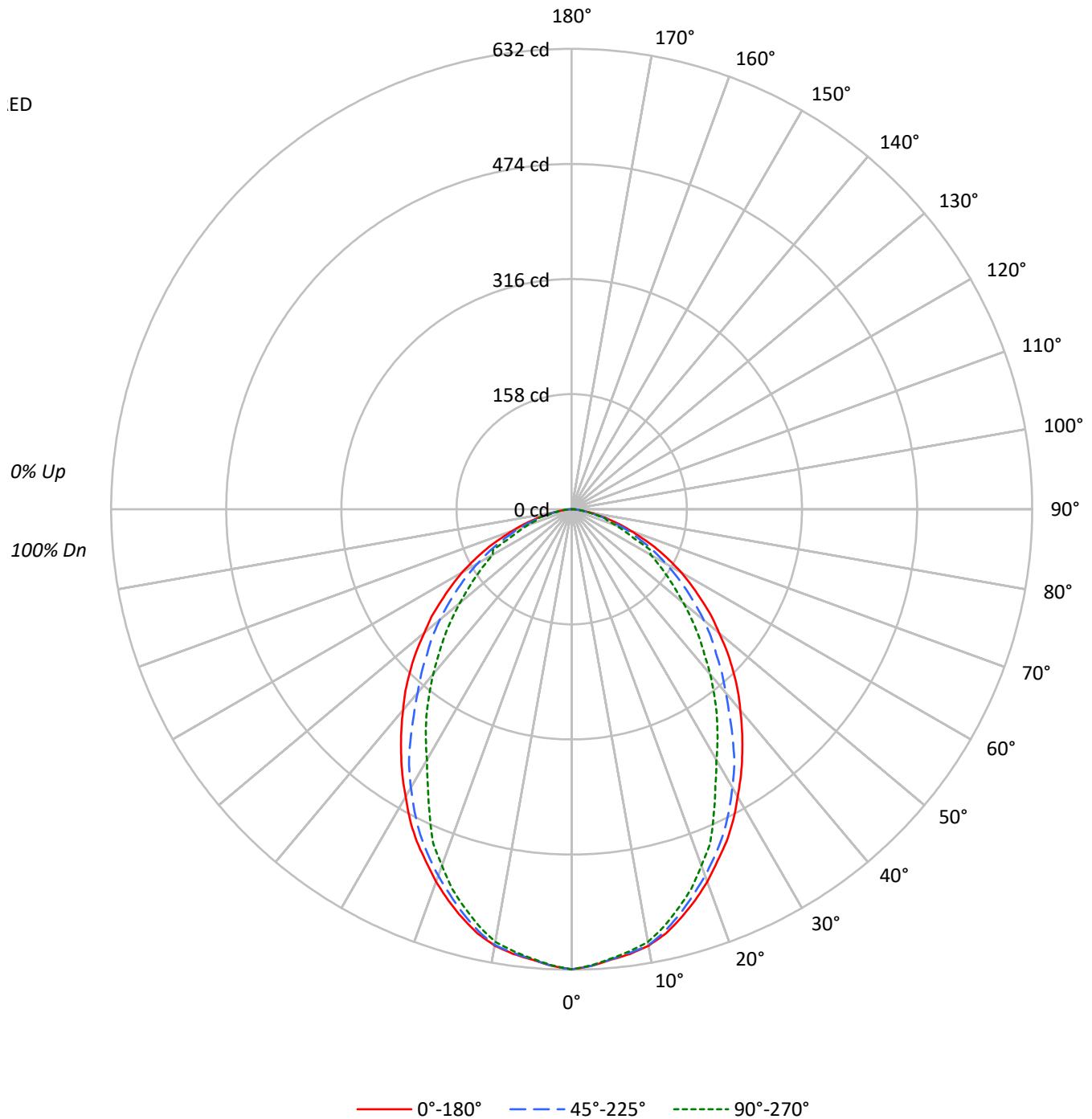
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3399	3399	3399
5°	3353	3350	3345
10°	3324	3320	3296
15°	3234	3202	3157
20°	3116	3066	2982
25°	2988	2923	2741
30°	2832	2741	2468
35°	2682	2533	2284
40°	2529	2309	2077
45°	2385	2134	1878
50°	2207	1981	1675
55°	2042	1795	1500
60°	1871	1604	1344
65°	1645	1405	1191
70°	1356	1229	1012
75°	1077	942	988
80°	725	679	632
85°	451	543	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2385 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.8	4.7
10°-20°	161.4	13.0
20°-30°	223.4	18.0
30°-40°	238.2	19.2
40°-50°	217.3	17.5
50°-60°	170.2	13.7
60°-70°	111.0	8.9
70°-80°	49.2	4.0
80°-90°	10.6	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°	443.6	35.8
0°-40°	681.8	55.0
0°-60°	1069.3	86.2
0°-90°	1240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	621	620	620	619	619	59
15°	580	580	575	569	567	163
25°	503	500	492	475	462	231
35°	408	405	386	356	348	255
45°	313	307	280	257	247	241
55°	218	211	191	169	160	195
65°	129	122	110	112	94	127
75°	52	48	45	43	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	631.6	631.6	631.6	631.6	631.6
2.5°	627.3	627.3	627.3	626.5	626.5
5°	620.7	620.0	620.0	619.2	619.2
7.5°	615.6	614.8	614.1	613.4	611.9
10°	608.3	608.3	607.5	603.9	603.2
12.5°	596.6	595.9	592.9	587.8	586.4
15°	580.5	580.5	574.7	568.8	566.6
17.5°	563.0	562.3	555.0	549.1	546.2
20°	544.0	542.6	535.3	525.8	520.6
22.5°	522.8	522.8	514.1	501.7	496.5
25°	503.1	500.2	492.2	474.6	461.5
27.5°	480.5	476.1	467.3	442.5	427.2
30°	455.7	453.5	441.1	408.9	397.2
32.5°	432.3	428.6	415.5	381.9	372.4
35°	408.2	405.3	385.6	356.3	347.6
37.5°	384.1	380.4	355.6	332.2	321.3
40°	360.0	355.6	328.6	307.4	295.7
42.5°	337.4	331.5	305.2	282.6	269.5
45°	313.3	306.7	280.4	257.0	246.8
47.5°	289.2	283.3	259.2	235.1	223.4
50°	263.6	258.5	236.6	212.5	200.1
52.5°	242.4	234.4	213.2	189.1	178.9
55°	217.6	211.0	191.3	168.7	159.9
57.5°	195.0	188.4	170.1	149.0	141.7
60°	173.8	164.3	149.0	130.7	124.9
62.5°	150.4	143.1	130.0	114.6	121.9
65°	129.2	121.9	110.3	112.5	93.5
67.5°	105.9	102.2	92.0	81.8	78.9
70°	86.2	81.8	78.1	67.2	64.3
72.5°	68.6	64.3	59.1	53.3	51.1
75°	51.8	48.2	45.3	43.1	47.5
77.5°	35.8	34.3	32.1	29.9	29.2
80°	23.4	22.6	21.9	21.2	20.4
82.5°	13.9	13.9	13.9	13.9	13.9
85°	7.3	8.0	8.8	9.5	10.2
87.5°	4.4	4.4	5.1	5.8	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)