

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: P559080

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559080
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-35-UNV-93-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1367.0 lumens
Efficiency: N/A
Efficacy: 63.3 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

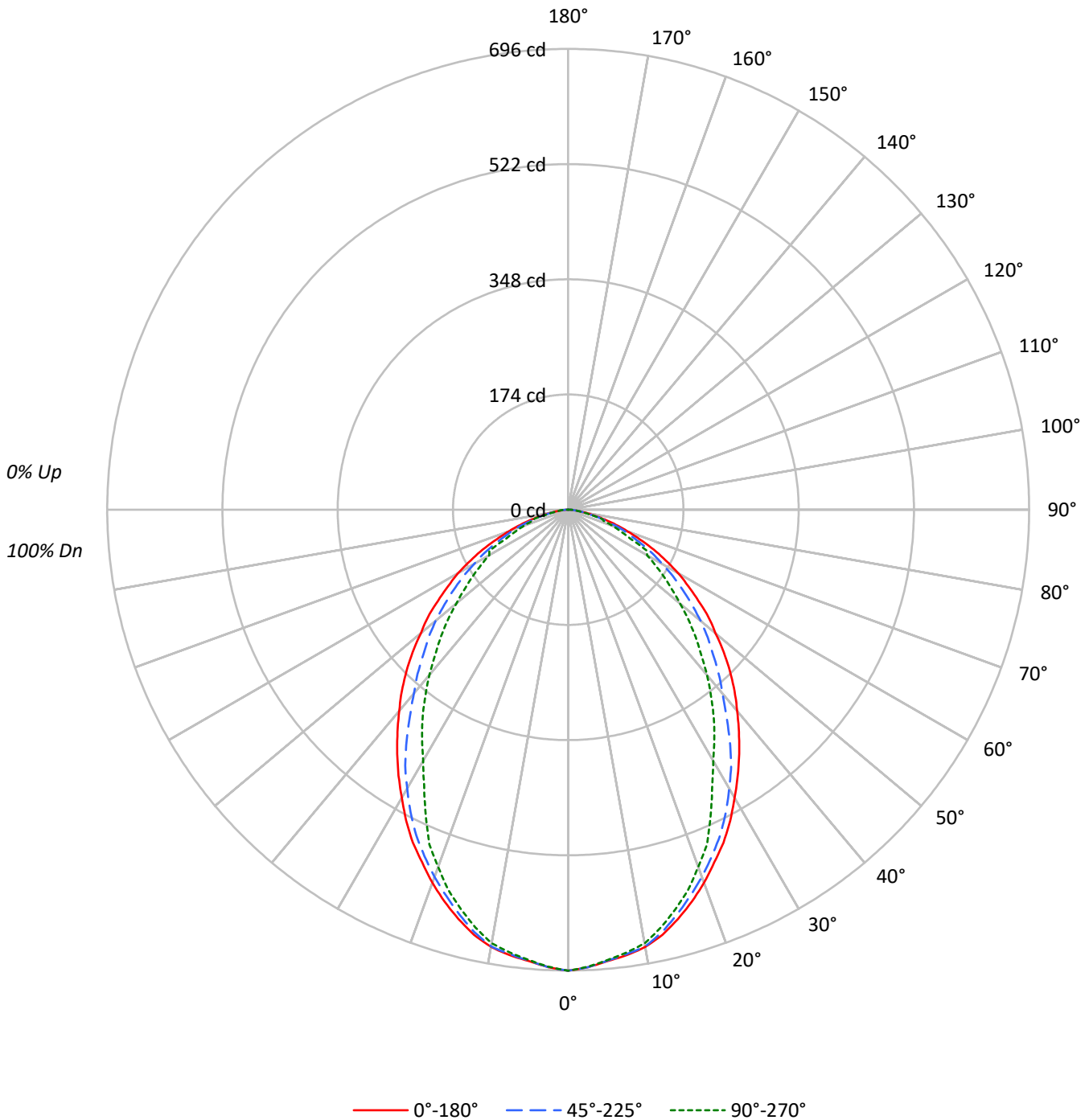
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7495	7495	7495
5°	7394	7385	7376
10°	7330	7321	7267
15°	7132	7059	6961
20°	6869	6759	6575
25°	6588	6444	6043
30°	6243	6043	5443
35°	5913	5585	5035
40°	5577	5091	4581
45°	5256	4705	4142
50°	4866	4367	3694
55°	4502	3958	3309
60°	4125	3535	2964
65°	3629	3097	2623
70°	2990	2710	2228
75°	2379	2075	2175
80°	1599	1500	1395
85°	1000	1198	1396

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5256 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	4.7
10°-20°	177.9	13.0
20°-30°	246.3	18.0
30°-40°	262.6	19.2
40°-50°	239.6	17.5
50°-60°	187.7	13.7
60°-70°	122.3	8.9
70°-80°	54.2	4.0
80°-90°	11.6	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°	489.0	35.8
0°-40°	751.6	55.0
0°-60°	1178.8	86.2
0°-90°	1367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1367.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	684	684	684	683	683	65
15°	640	640	634	627	625	180
25°	555	551	543	523	509	255
35°	450	447	425	393	383	281
45°	345	338	309	283	272	266
55°	240	233	211	186	176	215
65°	142	134	122	124	103	140
75°	57	53	50	48	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	696.3	696.3	696.3	696.3	696.3
2.5°	691.5	691.5	691.5	690.7	690.7
5°	684.3	683.5	683.5	682.6	682.6
7.5°	678.6	677.8	677.0	676.2	674.6
10°	670.6	670.6	669.8	665.7	664.9
12.5°	657.7	656.9	653.7	648.0	646.4
15°	640.0	640.0	633.5	627.1	624.7
17.5°	620.7	619.9	611.8	605.4	602.1
20°	599.7	598.1	590.1	579.6	574.0
22.5°	576.4	576.4	566.7	553.0	547.4
25°	554.7	551.4	542.6	523.3	508.8
27.5°	529.7	524.9	515.2	487.8	470.9
30°	502.3	499.9	486.2	450.8	437.9
32.5°	476.6	472.5	458.0	421.0	410.6
35°	450.0	446.8	425.0	392.8	383.2
37.5°	423.4	419.4	392.0	366.3	354.2
40°	396.9	392.0	362.3	338.9	326.0
42.5°	371.9	365.5	336.5	311.5	297.0
45°	345.3	338.1	309.1	283.4	272.1
47.5°	318.8	312.3	285.8	259.2	246.3
50°	290.6	285.0	260.8	234.3	220.6
52.5°	267.3	258.4	235.1	208.5	197.2
55°	239.9	232.6	210.9	186.0	176.3
57.5°	214.9	207.7	187.6	164.2	156.2
60°	191.6	181.1	164.2	144.1	137.7
62.5°	165.8	157.8	143.3	126.4	134.4
65°	142.5	134.4	121.6	124.0	103.0
67.5°	116.7	112.7	101.4	90.2	86.9
70°	95.0	90.2	86.1	74.1	70.8
72.5°	75.7	70.8	65.2	58.8	56.4
75°	57.2	53.1	49.9	47.5	52.3
77.5°	39.4	37.8	35.4	33.0	32.2
80°	25.8	25.0	24.2	23.3	22.5
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.8	4.8	5.6	6.4	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)