

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: P559335

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559335
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-93-87-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1115.0 lumens
Efficiency: N/A
Efficacy: 95.3 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

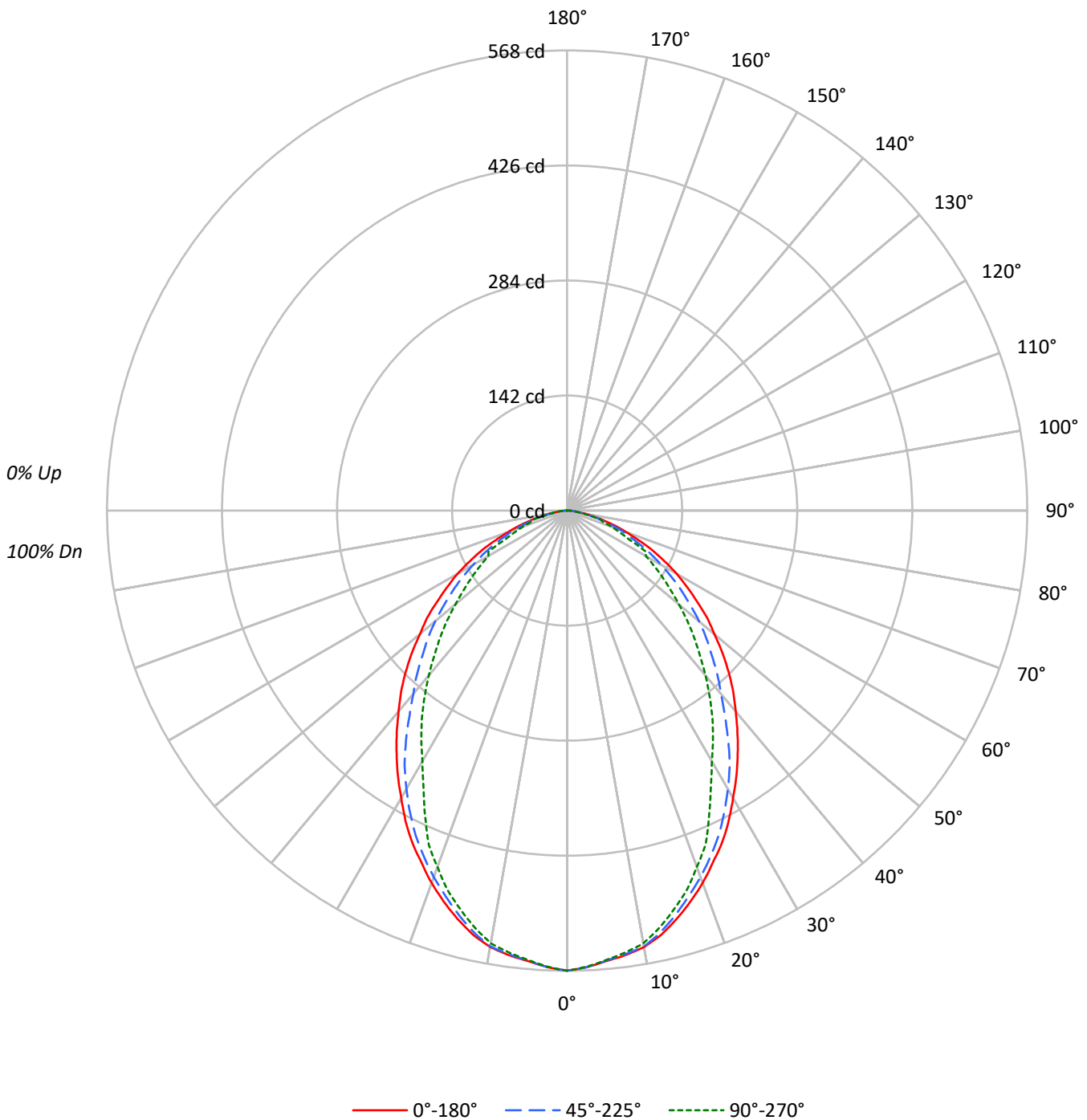
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6114	6114	6114
5°	6030	6024	6016
10°	5979	5971	5928
15°	5817	5759	5678
20°	5604	5513	5363
25°	5373	5257	4929
30°	5092	4929	4440
35°	4822	4556	4106
40°	4548	4152	3736
45°	4288	3838	3378
50°	3969	3562	3013
55°	3673	3228	2699
60°	3365	2883	2418
65°	2960	2524	2139
70°	2439	2212	1819
75°	1938	1693	1776
80°	1302	1221	1141
85°	815	976	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4288 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	4.7
10°-20°	145.1	13.0
20°-30°	200.9	18.0
30°-40°	214.2	19.2
40°-50°	195.4	17.5
50°-60°	153.1	13.7
60°-70°	99.8	8.9
70°-80°	44.2	4.0
80°-90°	9.5	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°	398.9	35.8
0°-40°	613.0	55.0
0°-60°	961.5	86.2
0°-90°	1115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	568	568	568	568	568	
5°	558	558	558	557	557	53
15°	522	522	517	512	510	147
25°	452	450	443	427	415	208
35°	367	364	347	320	312	229
45°	282	276	252	231	222	217
55°	196	190	172	152	144	176
65°	116	110	99	101	84	115
75°	47	43	41	39	43	50
85°	7	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	568.0	568.0	568.0	568.0	568.0
2.5°	564.0	564.0	564.0	563.4	563.4
5°	558.1	557.5	557.5	556.8	556.8
7.5°	553.5	552.9	552.2	551.6	550.2
10°	547.0	547.0	546.3	543.0	542.4
12.5°	536.4	535.8	533.2	528.6	527.3
15°	522.0	522.0	516.8	511.5	509.5
17.5°	506.2	505.6	499.0	493.8	491.1
20°	489.2	487.9	481.3	472.8	468.2
22.5°	470.1	470.1	462.3	451.1	446.5
25°	452.4	449.8	442.6	426.8	415.0
27.5°	432.0	428.1	420.2	397.9	384.1
30°	409.7	407.8	396.6	367.7	357.2
32.5°	388.7	385.4	373.6	343.4	334.9
35°	367.0	364.4	346.7	320.4	312.5
37.5°	345.4	342.1	319.8	298.8	288.9
40°	323.7	319.8	295.5	276.4	265.9
42.5°	303.4	298.1	274.5	254.1	242.3
45°	281.7	275.8	252.1	231.1	221.9
47.5°	260.0	254.8	233.1	211.4	200.9
50°	237.0	232.4	212.7	191.1	179.9
52.5°	218.0	210.8	191.7	170.1	160.9
55°	195.7	189.8	172.0	151.7	143.8
57.5°	175.3	169.4	153.0	133.9	127.4
60°	156.3	147.7	133.9	117.5	112.3
62.5°	135.3	128.7	116.9	103.1	109.7
65°	116.2	109.7	99.1	101.1	84.0
67.5°	95.2	91.9	82.7	73.5	70.9
70°	77.5	73.5	70.3	60.4	57.8
72.5°	61.7	57.8	53.2	47.9	46.0
75°	46.6	43.3	40.7	38.7	42.7
77.5°	32.2	30.9	28.9	26.9	26.3
80°	21.0	20.4	19.7	19.0	18.4
82.5°	12.5	12.5	12.5	12.5	12.5
85°	6.6	7.2	7.9	8.5	9.2
87.5°	3.9	3.9	4.6	5.3	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)