

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: P559338

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559338
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-93-94-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 1002.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

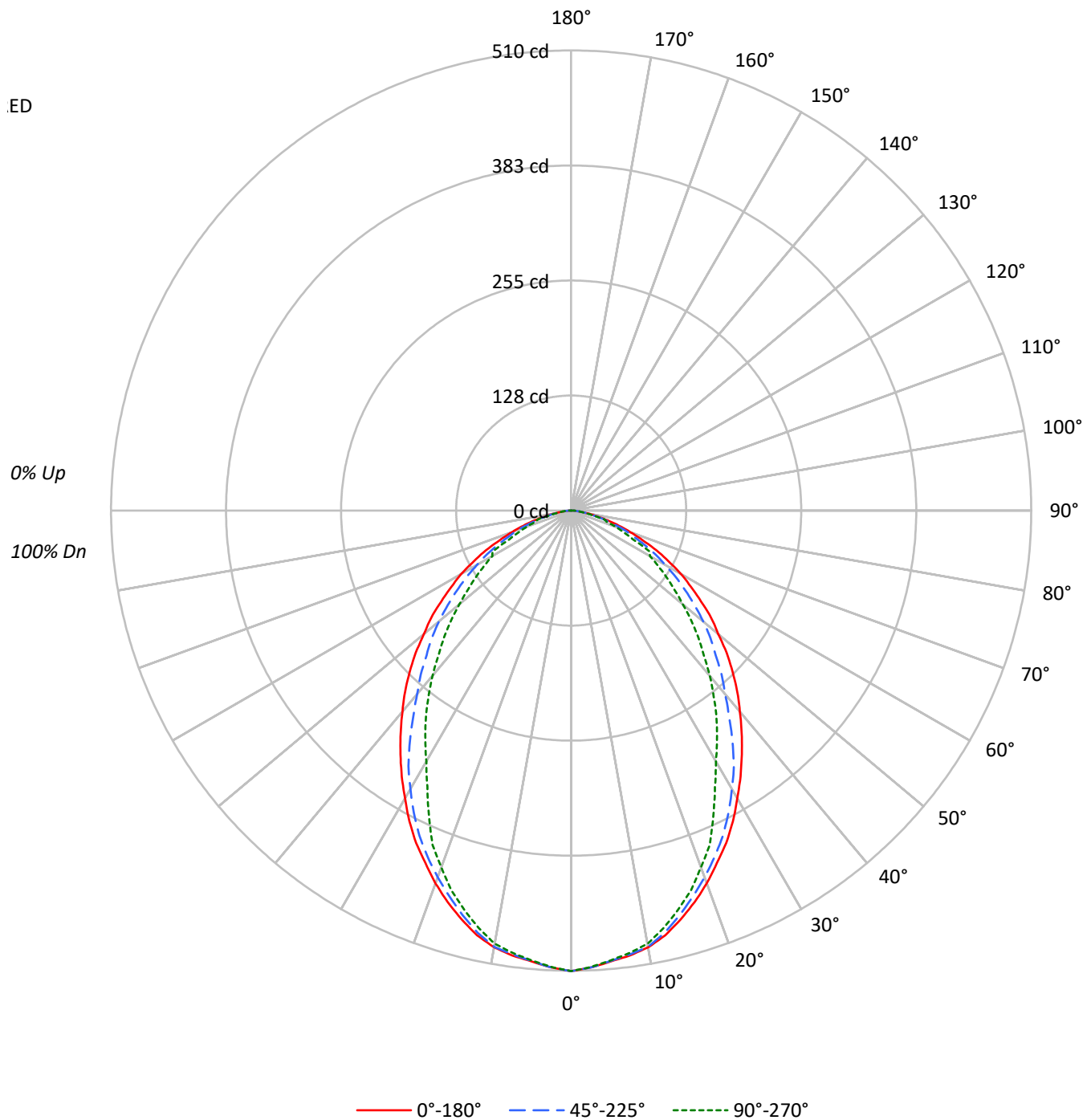
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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												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°	5494	5494	5494
5°	5420	5413	5407
10°	5372	5366	5327
15°	5227	5175	5103
20°	5035	4954	4819
25°	4829	4723	4429
30°	4576	4430	3990
35°	4334	4095	3691
40°	4088	3731	3358
45°	3853	3449	3035
50°	3567	3202	2708
55°	3299	2901	2425
60°	3023	2592	2172
65°	2659	2269	1923
70°	2190	1986	1633
75°	1743	1522	1597
80°	1172	1097	1023
85°	729	877	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.5	4.7
10°-20°	130.4	13.0
20°-30°	180.5	18.0
30°-40°	192.5	19.2
40°-50°	175.6	17.5
50°-60°	137.6	13.7
60°-70°	89.7	8.9
70°-80°	39.7	4.0
80°-90°	8.5	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°	358.4	35.8
0°-40°	550.9	55.0
0°-60°	864.1	86.2
0°-90°	1002.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1002.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	510	510	510	510	510	
5°	502	501	501	500	500	48
15°	469	469	464	460	458	132
25°	407	404	398	384	373	187
35°	330	328	312	288	281	206
45°	253	248	227	208	199	195
55°	176	170	155	136	129	158
65°	104	98	89	91	76	103
75°	42	39	37	35	38	45
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	510.4	510.4	510.4	510.4	510.4
2.5°	506.9	506.9	506.9	506.3	506.3
5°	501.6	501.0	501.0	500.4	500.4
7.5°	497.4	496.8	496.2	495.7	494.5
10°	491.5	491.5	490.9	488.0	487.4
12.5°	482.1	481.5	479.1	475.0	473.8
15°	469.1	469.1	464.4	459.7	457.9
17.5°	454.9	454.3	448.4	443.7	441.4
20°	439.6	438.4	432.5	424.8	420.7
22.5°	422.5	422.5	415.4	405.4	401.2
25°	406.6	404.2	397.7	383.5	372.9
27.5°	388.3	384.7	377.6	357.6	345.2
30°	368.2	366.4	356.4	330.4	321.0
32.5°	349.3	346.4	335.7	308.6	300.9
35°	329.8	327.5	311.6	288.0	280.9
37.5°	310.4	307.4	287.4	268.5	259.6
40°	290.9	287.4	265.5	248.4	239.0
42.5°	272.6	267.9	246.6	228.4	217.7
45°	253.1	247.8	226.6	207.7	199.4
47.5°	233.7	228.9	209.5	190.0	180.6
50°	213.0	208.9	191.2	171.7	161.7
52.5°	195.9	189.4	172.3	152.8	144.6
55°	175.8	170.5	154.6	136.3	129.2
57.5°	157.5	152.2	137.5	120.4	114.5
60°	140.4	132.8	120.4	105.6	100.9
62.5°	121.6	115.7	105.0	92.6	98.5
65°	104.4	98.5	89.1	90.9	75.5
67.5°	85.6	82.6	74.3	66.1	63.7
70°	69.6	66.1	63.1	54.3	51.9
72.5°	55.5	51.9	47.8	43.1	41.3
75°	41.9	38.9	36.6	34.8	38.4
77.5°	28.9	27.7	26.0	24.2	23.6
80°	18.9	18.3	17.7	17.1	16.5
82.5°	11.2	11.2	11.2	11.2	11.2
85°	5.9	6.5	7.1	7.7	8.3
87.5°	3.5	3.5	4.1	4.7	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)