

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: P559842

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559842
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-LD4-1LO-35-UNV-93-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 936.0 lumens
Efficiency: N/A
Efficacy: 80.0 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

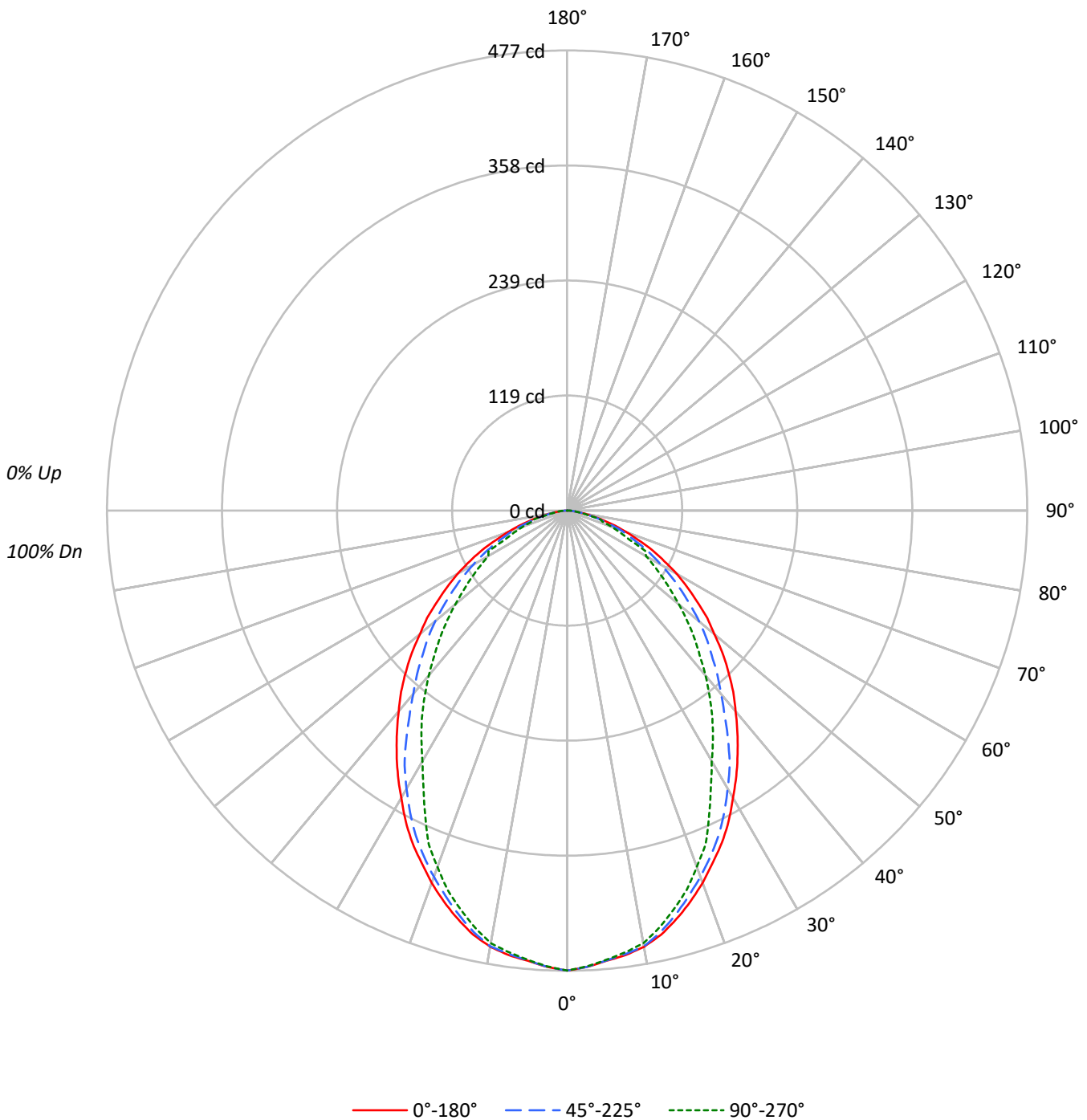
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2566	2566	2566
5°	2531	2528	2525
10°	2509	2506	2488
15°	2442	2417	2383
20°	2352	2314	2251
25°	2255	2206	2069
30°	2137	2069	1864
35°	2024	1912	1724
40°	1909	1742	1568
45°	1800	1611	1418
50°	1666	1495	1264
55°	1542	1355	1133
60°	1412	1210	1015
65°	1243	1060	899
70°	1023	928	763
75°	813	711	744
80°	545	511	477
85°	340	408	475

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1800 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	4.7
10°-20°	121.8	13.0
20°-30°	168.6	18.0
30°-40°	179.8	19.2
40°-50°	164.0	17.5
50°-60°	128.5	13.7
60°-70°	83.7	8.9
70°-80°	37.1	4.0
80°-90°	8.0	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°	334.8	35.8
0°-40°	514.6	55.0
0°-60°	807.2	86.2
0°-90°	936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	468	468	468	467	467	44
15°	438	438	434	429	428	123
25°	380	378	372	358	348	174
35°	308	306	291	269	262	193
45°	236	232	212	194	186	182
55°	164	159	144	127	121	147
65°	98	92	83	85	71	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.8	476.8	476.8	476.8	476.8
2.5°	473.5	473.5	473.5	472.9	472.9
5°	468.5	468.0	468.0	467.4	467.4
7.5°	464.7	464.1	463.6	463.0	461.9
10°	459.1	459.1	458.6	455.8	455.3
12.5°	450.3	449.8	447.6	443.7	442.6
15°	438.2	438.2	433.8	429.4	427.7
17.5°	425.0	424.4	418.9	414.5	412.3
20°	410.6	409.5	404.0	396.9	393.0
22.5°	394.7	394.7	388.0	378.7	374.8
25°	379.8	377.6	371.5	358.3	348.4
27.5°	362.7	359.4	352.8	334.0	322.5
30°	343.9	342.3	332.9	308.7	299.9
32.5°	326.3	323.6	313.6	288.3	281.1
35°	308.1	305.9	291.0	269.0	262.4
37.5°	289.9	287.2	268.4	250.8	242.5
40°	271.7	268.4	248.0	232.1	223.2
42.5°	254.7	250.2	230.4	213.3	203.4
45°	236.5	231.5	211.7	194.0	186.3
47.5°	218.3	213.9	195.7	177.5	168.7
50°	199.0	195.1	178.6	160.4	151.0
52.5°	183.0	176.9	160.9	142.8	135.0
55°	164.3	159.3	144.4	127.3	120.7
57.5°	147.2	142.2	128.4	112.4	106.9
60°	131.2	124.0	112.4	98.7	94.3
62.5°	113.5	108.0	98.1	86.5	92.0
65°	97.6	92.0	83.2	84.9	70.6
67.5°	79.9	77.2	69.5	61.7	59.5
70°	65.0	61.7	59.0	50.7	48.5
72.5°	51.8	48.5	44.6	40.2	38.6
75°	39.1	36.4	34.2	32.5	35.8
77.5°	27.0	25.9	24.3	22.6	22.0
80°	17.6	17.1	16.5	16.0	15.4
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)