

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: P559404

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559404
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-50-UNV-93-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1043.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

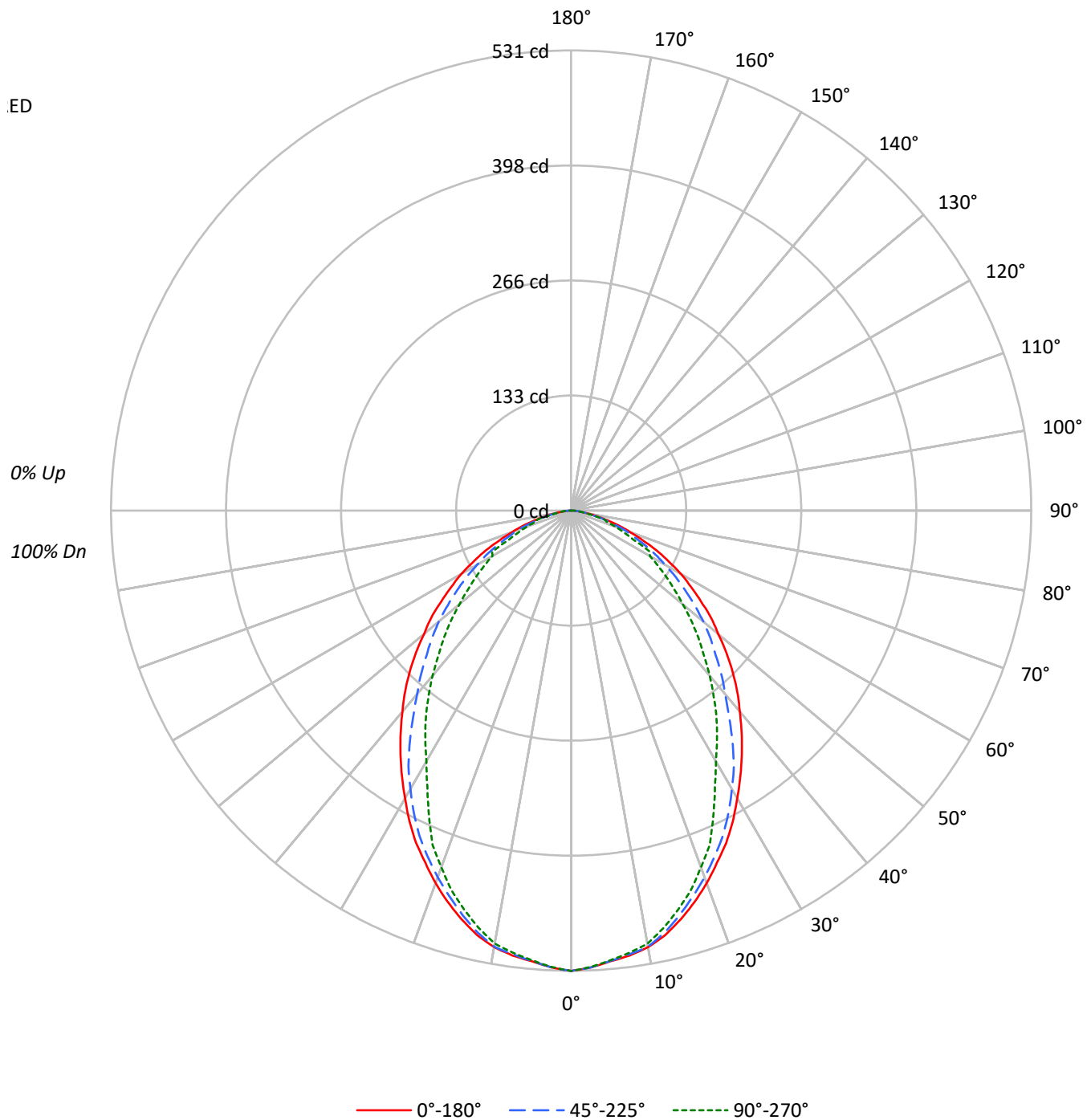
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5719	5719	5719
5°	5641	5635	5627
10°	5592	5585	5545
15°	5441	5387	5311
20°	5242	5157	5016
25°	5026	4917	4611
30°	4764	4611	4153
35°	4511	4261	3842
40°	4255	3884	3496
45°	4011	3591	3160
50°	3713	3332	2818
55°	3434	3019	2524
60°	3147	2697	2260
65°	2769	2361	2002
70°	2282	2068	1703
75°	1813	1585	1659
80°	1221	1141	1066
85°	753	914	1062

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4011 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	4.7
10°-20°	135.7	13.0
20°-30°	187.9	18.0
30°-40°	200.4	19.2
40°-50°	182.8	17.5
50°-60°	143.2	13.7
60°-70°	93.3	8.9
70°-80°	41.3	4.0
80°-90°	8.9	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°	373.1	35.8
0°-40°	573.5	55.0
0°-60°	899.4	86.2
0°-90°	1043.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1043.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	522	522	522	521	521	50
15°	488	488	483	478	477	137
25°	423	421	414	399	388	194
35°	343	341	324	300	292	215
45°	264	258	236	216	208	203
55°	183	178	161	142	134	164
65°	109	103	93	95	79	107
75°	44	40	38	36	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	531.3	531.3	531.3	531.3	531.3
2.5°	527.6	527.6	527.6	527.0	527.0
5°	522.1	521.5	521.5	520.8	520.8
7.5°	517.8	517.2	516.5	515.9	514.7
10°	511.6	511.6	511.0	508.0	507.3
12.5°	501.8	501.2	498.7	494.4	493.2
15°	488.3	488.3	483.4	478.5	476.6
17.5°	473.6	472.9	466.8	461.9	459.4
20°	457.6	456.4	450.2	442.2	437.9
22.5°	439.8	439.8	432.4	422.0	417.7
25°	423.2	420.7	414.0	399.2	388.2
27.5°	404.1	400.5	393.1	372.2	359.3
30°	383.3	381.4	371.0	344.0	334.1
32.5°	363.6	360.5	349.5	321.2	313.2
35°	343.3	340.9	324.3	299.7	292.4
37.5°	323.1	320.0	299.1	279.5	270.3
40°	302.8	299.1	276.4	258.6	248.8
42.5°	283.8	278.9	256.7	237.7	226.6
45°	263.5	258.0	235.9	216.2	207.6
47.5°	243.2	238.3	218.0	197.8	187.9
50°	221.7	217.4	199.0	178.7	168.3
52.5°	203.9	197.2	179.3	159.1	150.5
55°	183.0	177.5	160.9	141.9	134.5
57.5°	164.0	158.5	143.1	125.3	119.2
60°	146.2	138.2	125.3	109.9	105.0
62.5°	126.5	120.4	109.3	96.4	102.6
65°	108.7	102.6	92.7	94.6	78.6
67.5°	89.1	86.0	77.4	68.8	66.3
70°	72.5	68.8	65.7	56.5	54.1
72.5°	57.7	54.1	49.8	44.8	43.0
75°	43.6	40.5	38.1	36.2	39.9
77.5°	30.1	28.9	27.0	25.2	24.6
80°	19.7	19.0	18.4	17.8	17.2
82.5°	11.7	11.7	11.7	11.7	11.7
85°	6.1	6.8	7.4	8.0	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)