

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: P590027

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590027
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1380.0 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

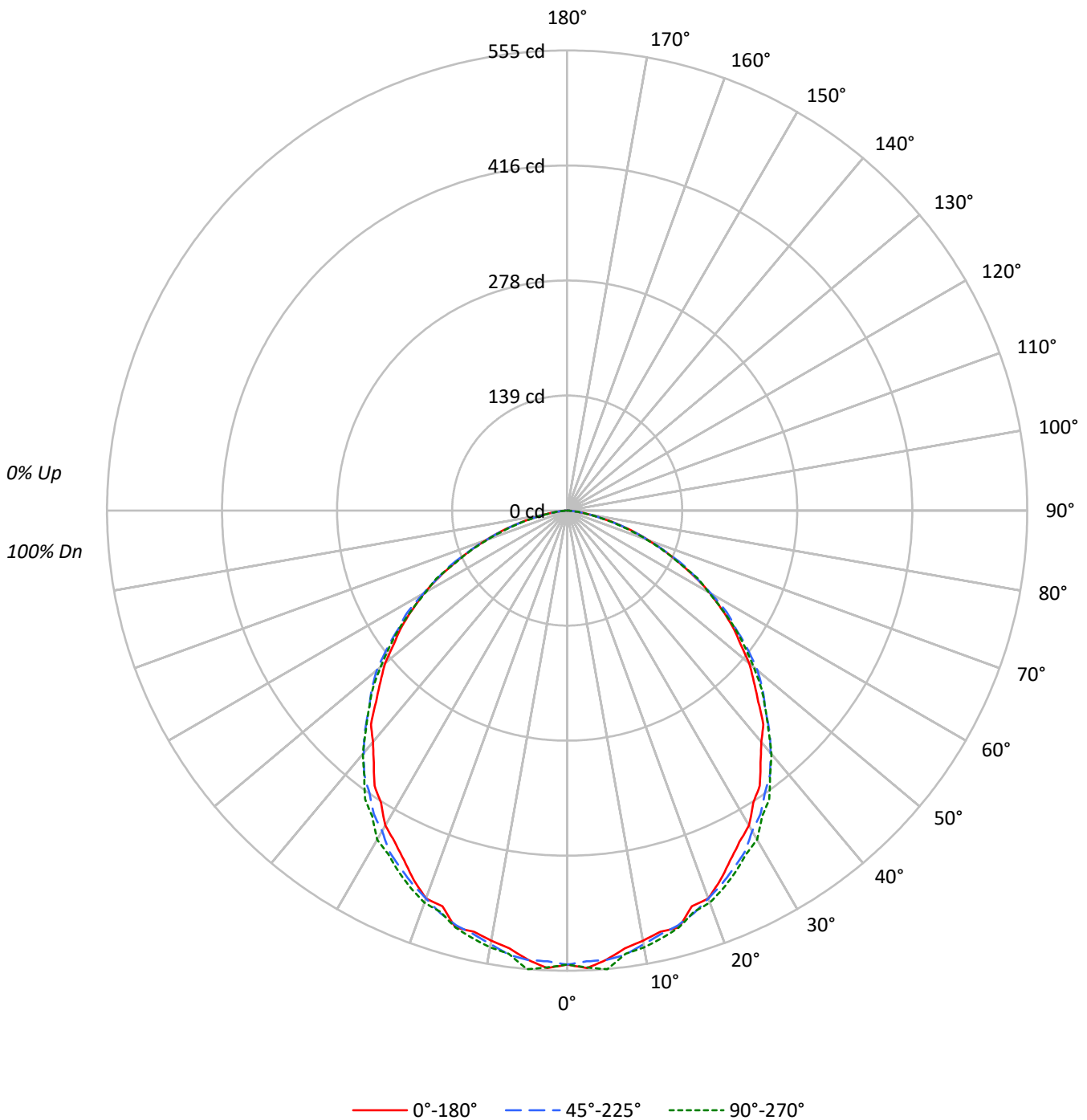
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1473	1473	1473
5°	1469	1469	1500
10°	1439	1451	1462
15°	1450	1442	1450
20°	1426	1426	1441
25°	1382	1412	1428
30°	1363	1387	1424
35°	1331	1366	1396
40°	1279	1340	1346
45°	1240	1284	1286
50°	1199	1254	1230
55°	1143	1165	1157
60°	1069	1080	1060
65°	953	977	946
70°	817	821	798
75°	648	646	621
80°	434	422	406
85°	235	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1318 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	3.7
10°-20°	146.0	10.6
20°-30°	218.7	15.8
30°-40°	259.2	18.8
40°-50°	259.7	18.8
50°-60°	220.4	16.0
60°-70°	148.6	10.8
70°-80°	65.3	4.7
80°-90°	10.6	0.8
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°	416.2	30.2
0°-40°	675.4	48.9
0°-60°	1155.5	83.7
0°-90°	1380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	544	542	544	542	555	51
15°	520	514	518	520	521	145
25°	465	468	476	482	481	215
35°	405	406	416	425	425	252
45°	326	332	338	346	338	252
55°	244	242	248	247	247	217
65°	150	148	154	148	149	149
75°	62	61	62	58	60	67
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	547.5	547.5	547.5	547.5	547.5
2.5°	552.3	548.1	544.2	548.8	551.5
5°	543.7	542.4	543.9	542.2	555.3
7.5°	532.5	537.4	540.2	538.4	539.2
10°	526.6	524.9	531.1	535.5	534.9
12.5°	520.2	522.7	523.1	527.8	528.2
15°	520.5	514.5	517.7	520.4	520.6
17.5°	500.3	506.8	509.0	515.2	507.5
20°	497.8	493.1	497.8	504.1	503.2
22.5°	482.6	477.3	487.5	493.1	492.8
25°	465.4	467.9	475.6	481.8	480.8
27.5°	450.3	453.2	464.1	472.7	467.2
30°	438.6	437.1	446.3	453.9	458.2
32.5°	417.7	423.1	433.9	441.4	437.4
35°	405.1	406.3	415.7	425.3	425.0
37.5°	383.0	388.6	401.8	404.5	402.0
40°	364.1	369.7	381.6	384.5	383.3
42.5°	350.2	351.2	361.4	364.7	359.4
45°	325.9	332.0	337.5	346.2	338.0
47.5°	305.3	308.1	320.0	322.3	318.0
50°	286.5	287.5	299.5	296.6	293.7
52.5°	263.0	267.2	273.9	273.3	270.0
55°	243.6	242.0	248.4	246.7	246.6
57.5°	220.4	223.2	228.4	225.7	221.4
60°	198.6	198.7	200.6	197.5	197.0
62.5°	174.3	175.2	175.6	171.9	177.9
65°	149.7	147.7	153.5	147.6	148.6
67.5°	127.0	128.0	127.4	123.7	125.1
70°	103.9	105.2	104.3	100.1	101.4
72.5°	82.9	81.3	82.3	77.1	79.5
75°	62.3	61.0	62.1	57.8	59.7
77.5°	42.4	43.4	42.7	40.4	41.7
80°	28.0	27.2	27.2	25.9	26.2
82.5°	16.3	15.6	15.3	14.9	15.6
85°	7.6	7.4	7.6	7.4	7.1
87.5°	2.8	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)