

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: P590036

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590036
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-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1433.0 lumens
Efficiency: N/A
Efficacy: 122.5 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

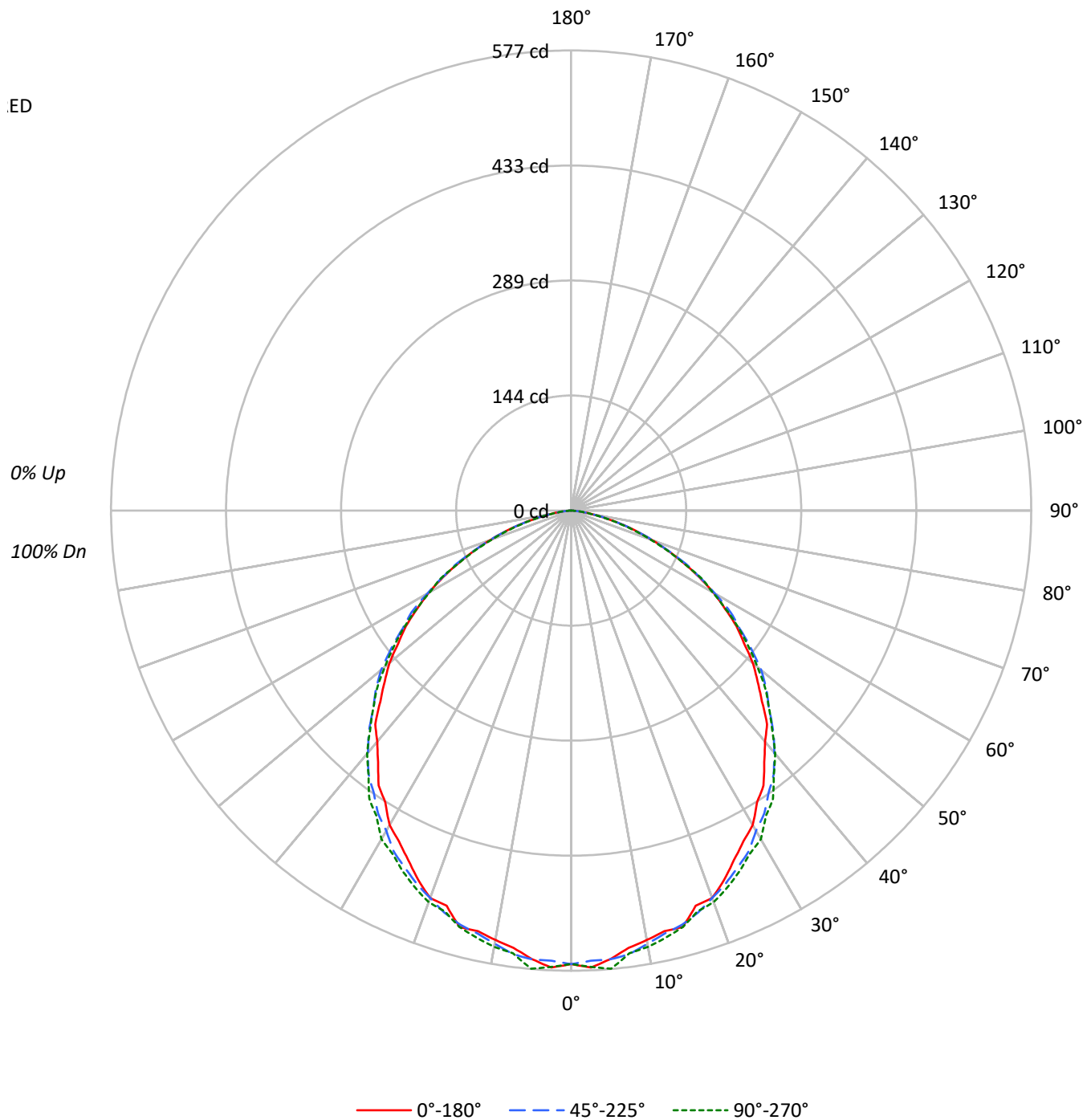
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590036

CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-93-97-EDD

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1530	1530	1530
5°	1525	1526	1558
10°	1494	1507	1518
15°	1506	1498	1506
20°	1481	1481	1496
25°	1435	1466	1483
30°	1415	1440	1478
35°	1382	1418	1450
40°	1328	1392	1398
45°	1288	1334	1336
50°	1245	1302	1277
55°	1187	1210	1202
60°	1110	1121	1101
65°	989	1015	982
70°	849	852	828
75°	673	671	645
80°	451	439	422
85°	244	244	225

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1368 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.5	3.7
10°-20°	151.6	10.6
20°-30°	227.1	15.8
30°-40°	269.2	18.8
40°-50°	269.7	18.8
50°-60°	228.9	16.0
60°-70°	154.3	10.8
70°-80°	67.8	4.7
80°-90°	11.0	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°	432.2	30.2
0°-40°	701.3	48.9
0°-60°	1199.9	83.7
0°-90°	1433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	569	569	569	569	569	
5°	564	563	565	563	577	53
15°	540	534	538	540	541	151
25°	483	486	494	500	499	223
35°	421	422	432	442	441	261
45°	338	345	350	360	351	262
55°	253	251	258	256	256	225
65°	155	153	159	153	154	155
75°	65	63	64	60	62	69
85°	8	8	8	8	7	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	568.6	568.6	568.6	568.6	568.6
2.5°	573.5	569.2	565.1	569.8	572.7
5°	564.5	563.2	564.8	563.1	576.7
7.5°	552.9	558.0	560.9	559.1	559.9
10°	546.8	545.0	551.5	556.1	555.4
12.5°	540.2	542.8	543.2	548.1	548.5
15°	540.5	534.3	537.6	540.4	540.6
17.5°	519.5	526.3	528.6	535.0	527.0
20°	517.0	512.1	517.0	523.5	522.5
22.5°	501.2	495.7	506.3	512.1	511.7
25°	483.3	485.9	493.8	500.3	499.3
27.5°	467.6	470.6	482.0	490.8	485.1
30°	455.4	453.9	463.5	471.4	475.8
32.5°	433.8	439.4	450.5	458.4	454.2
35°	420.7	421.9	431.7	441.6	441.4
37.5°	397.7	403.5	417.2	420.0	417.4
40°	378.1	383.9	396.3	399.3	398.0
42.5°	363.6	364.6	375.3	378.7	373.2
45°	338.4	344.7	350.5	359.5	351.0
47.5°	317.0	319.9	332.3	334.7	330.2
50°	297.5	298.6	311.0	308.0	305.0
52.5°	273.1	277.4	284.4	283.8	280.4
55°	253.0	251.3	257.9	256.1	256.1
57.5°	228.8	231.8	237.2	234.4	229.9
60°	206.2	206.3	208.3	205.1	204.5
62.5°	181.0	181.9	182.4	178.5	184.8
65°	155.4	153.4	159.4	153.3	154.3
67.5°	131.8	132.9	132.3	128.5	129.9
70°	107.9	109.2	108.3	104.0	105.3
72.5°	86.0	84.4	85.5	80.0	82.5
75°	64.7	63.4	64.5	60.0	62.0
77.5°	44.0	45.1	44.3	41.9	43.3
80°	29.1	28.3	28.3	26.9	27.2
82.5°	17.0	16.2	15.9	15.5	16.2
85°	7.9	7.7	7.9	7.6	7.3
87.5°	2.9	2.9	2.9	2.8	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)