

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: P589954

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589954
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-35-UNV-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1387.0 lumens
Efficiency: N/A
Efficacy: 118.5 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

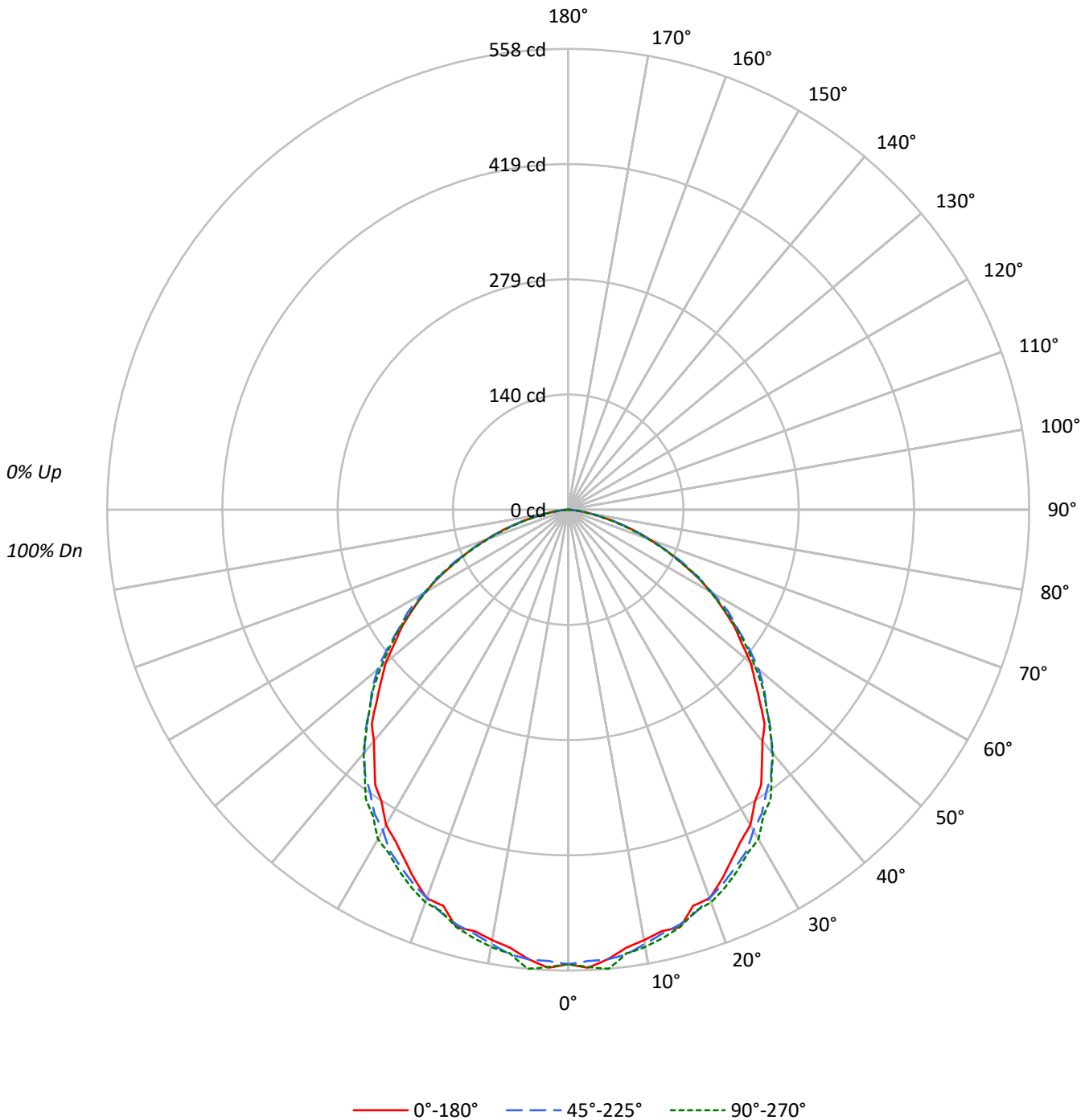
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1481	1481	1481
5°	1476	1477	1508
10°	1446	1459	1469
15°	1458	1450	1458
20°	1433	1433	1448
25°	1389	1419	1435
30°	1370	1394	1431
35°	1337	1373	1403
40°	1285	1348	1353
45°	1247	1291	1293
50°	1206	1260	1236
55°	1149	1171	1163
60°	1074	1085	1066
65°	958	982	951
70°	822	825	802
75°	651	650	624
80°	435	425	408
85°	238	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1324 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	3.7
10°-20°	146.7	10.6
20°-30°	219.8	15.8
30°-40°	260.5	18.8
40°-50°	261.0	18.8
50°-60°	221.5	16.0
60°-70°	149.4	10.8
70°-80°	65.6	4.7
80°-90°	10.7	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°	418.3	30.2
0°-40°	678.8	48.9
0°-60°	1161.3	83.7
0°-90°	1387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	546	545	547	545	558	52
15°	523	517	520	523	523	146
25°	468	470	478	484	483	216
35°	407	408	418	428	427	253
45°	328	334	339	348	340	253
55°	245	243	250	248	248	218
65°	150	148	154	148	149	150
75°	63	61	62	58	60	67
85°	8	8	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°	550.3	550.3	550.3	550.3	550.3
2.5°	555.1	550.9	547.0	551.5	554.3
5°	546.4	545.1	546.6	545.0	558.1
7.5°	535.2	540.1	542.9	541.2	541.9
10°	529.2	527.5	533.8	538.2	537.6
12.5°	522.8	525.4	525.7	530.5	530.9
15°	523.2	517.1	520.3	523.0	523.3
17.5°	502.9	509.4	511.6	517.8	510.1
20°	500.4	495.6	500.4	506.7	505.7
22.5°	485.1	479.8	490.0	495.6	495.3
25°	467.8	470.3	478.0	484.2	483.2
27.5°	452.6	455.5	466.5	475.1	469.5
30°	440.8	439.3	448.6	456.2	460.5
32.5°	419.9	425.3	436.1	443.7	439.6
35°	407.1	408.4	417.8	427.5	427.2
37.5°	384.9	390.5	403.8	406.5	404.0
40°	365.9	371.6	383.6	386.5	385.3
42.5°	351.9	352.9	363.2	366.6	361.2
45°	327.6	333.7	339.2	348.0	339.7
47.5°	306.8	309.7	321.6	323.9	319.6
50°	288.0	289.0	301.0	298.1	295.2
52.5°	264.3	268.5	275.3	274.7	271.4
55°	244.9	243.2	249.6	247.9	247.8
57.5°	221.5	224.3	229.6	226.9	222.5
60°	199.6	199.7	201.6	198.5	198.0
62.5°	175.2	176.1	176.5	172.7	178.8
65°	150.4	148.4	154.3	148.4	149.4
67.5°	127.6	128.6	128.0	124.3	125.8
70°	104.5	105.7	104.8	100.6	101.9
72.5°	83.3	81.7	82.7	77.5	79.9
75°	62.6	61.3	62.5	58.1	60.0
77.5°	42.6	43.6	42.9	40.6	41.9
80°	28.1	27.4	27.4	26.0	26.3
82.5°	16.4	15.6	15.4	15.0	15.6
85°	7.7	7.5	7.6	7.4	7.1
87.5°	2.8	2.8	2.8	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)