

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: P589987

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589987
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-40-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1386.0 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

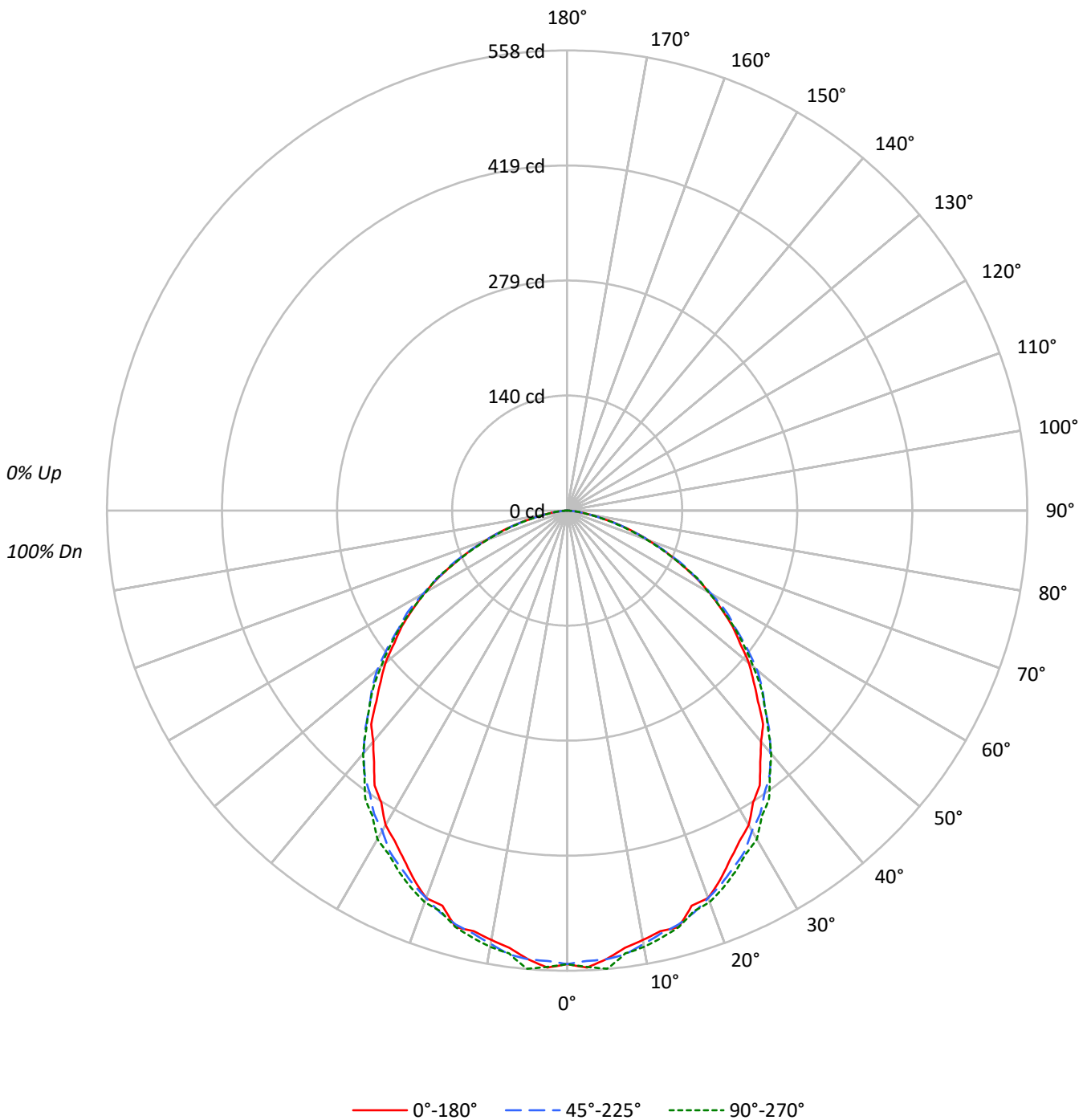
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1480	1480	1480
5°	1475	1475	1506
10°	1445	1458	1468
15°	1456	1449	1457
20°	1432	1432	1447
25°	1388	1418	1434
30°	1369	1393	1430
35°	1337	1372	1402
40°	1285	1346	1352
45°	1246	1290	1292
50°	1205	1259	1235
55°	1148	1170	1162
60°	1074	1084	1065
65°	957	982	951
70°	821	824	801
75°	651	649	624
80°	435	423	408
85°	238	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1323 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.7	3.7
10°-20°	146.6	10.6
20°-30°	219.6	15.8
30°-40°	260.3	18.8
40°-50°	260.8	18.8
50°-60°	221.4	16.0
60°-70°	149.3	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°	418.0	30.2
0°-40°	678.3	48.9
0°-60°	1160.5	83.7
0°-90°	1386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	546	545	546	545	558	51
15°	523	517	520	523	523	146
25°	467	470	478	484	483	216
35°	407	408	418	427	427	253
45°	327	333	339	348	340	253
55°	245	243	249	248	248	218
65°	150	148	154	148	149	149
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°	549.9	549.9	549.9	549.9	549.9
2.5°	554.7	550.5	546.6	551.1	553.9
5°	546.0	544.7	546.2	544.6	557.7
7.5°	534.8	539.7	542.5	540.8	541.6
10°	528.8	527.1	533.5	537.9	537.2
12.5°	522.5	525.0	525.4	530.1	530.5
15°	522.8	516.8	520.0	522.7	522.9
17.5°	502.5	509.0	511.2	517.4	509.7
20°	500.0	495.3	500.0	506.3	505.3
22.5°	484.7	479.4	489.6	495.3	494.9
25°	467.4	470.0	477.6	483.9	482.9
27.5°	452.2	455.2	466.1	474.7	469.2
30°	440.5	439.0	448.3	455.9	460.2
32.5°	419.6	425.0	435.8	443.4	439.3
35°	406.9	408.1	417.5	427.2	426.9
37.5°	384.6	390.2	403.5	406.2	403.7
40°	365.7	371.3	383.3	386.2	385.0
42.5°	351.7	352.7	363.0	366.3	361.0
45°	327.3	333.4	339.0	347.7	339.5
47.5°	306.6	309.4	321.4	323.7	319.4
50°	287.8	288.8	300.8	297.9	295.0
52.5°	264.1	268.3	275.1	274.5	271.2
55°	244.7	243.0	249.4	247.7	247.7
57.5°	221.3	224.2	229.4	226.7	222.4
60°	199.5	199.5	201.4	198.4	197.8
62.5°	175.1	175.9	176.4	172.6	178.7
65°	150.3	148.3	154.2	148.3	149.3
67.5°	127.5	128.5	128.0	124.3	125.7
70°	104.4	105.7	104.7	100.5	101.8
72.5°	83.2	81.7	82.6	77.4	79.8
75°	62.6	61.3	62.4	58.0	60.0
77.5°	42.6	43.6	42.9	40.5	41.9
80°	28.1	27.3	27.3	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)