

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: P589986

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589986
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 1401.0 lumens
Efficiency: N/A
Efficacy: 119.7 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

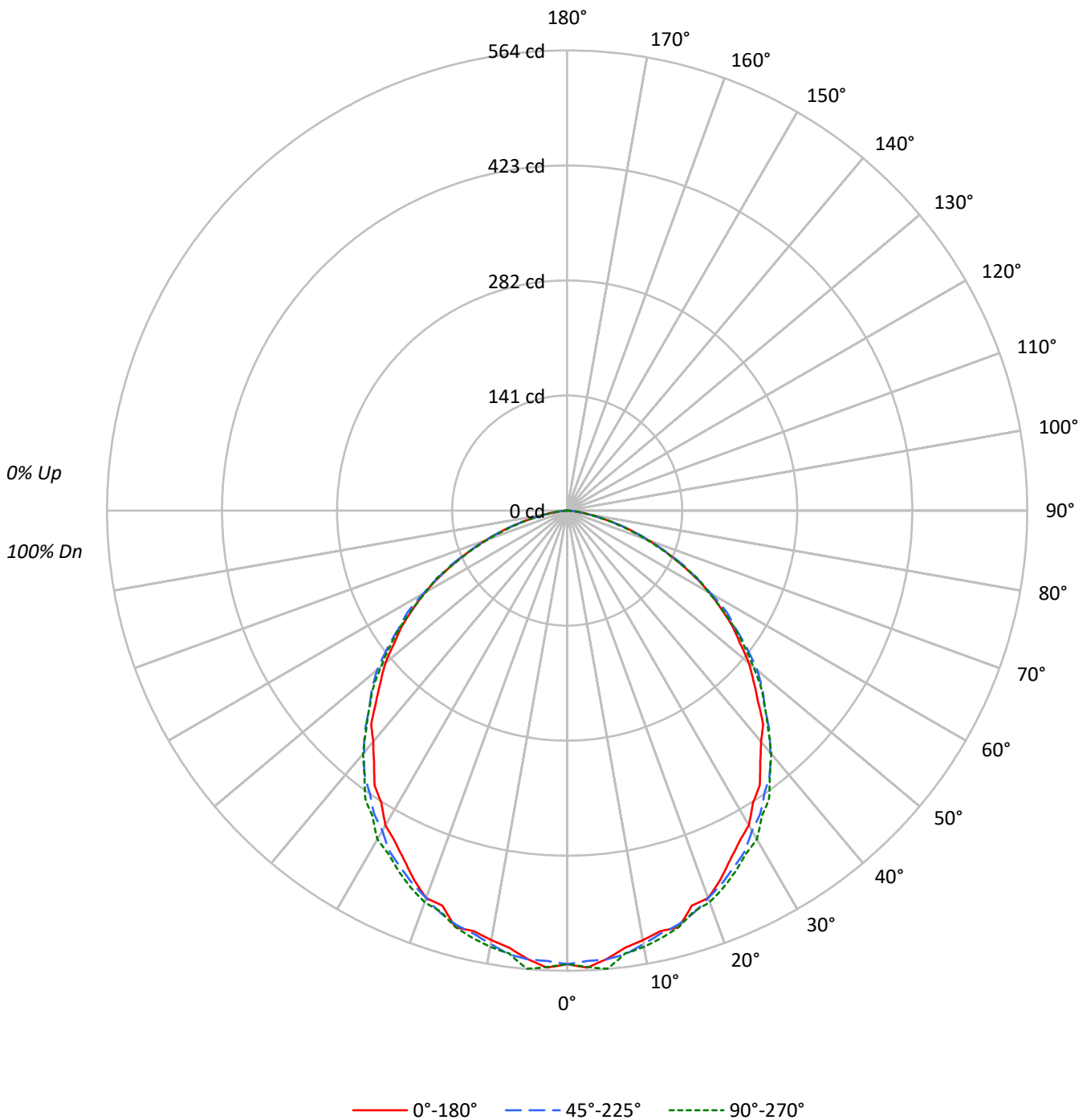
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1496	1496	1496
5°	1491	1491	1523
10°	1461	1473	1484
15°	1472	1464	1472
20°	1447	1447	1463
25°	1403	1434	1449
30°	1384	1408	1446
35°	1351	1386	1418
40°	1298	1361	1367
45°	1259	1304	1306
50°	1218	1273	1248
55°	1160	1183	1174
60°	1085	1096	1076
65°	967	992	961
70°	830	833	810
75°	657	656	630
80°	440	428	412
85°	241	238	222

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1338 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	3.7
10°-20°	148.2	10.6
20°-30°	222.0	15.8
30°-40°	263.2	18.8
40°-50°	263.6	18.8
50°-60°	223.8	16.0
60°-70°	150.9	10.8
70°-80°	66.3	4.7
80°-90°	10.8	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°	422.5	30.2
0°-40°	685.7	48.9
0°-60°	1173.1	83.7
0°-90°	1401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	556	556	556	556	556	
5°	552	551	552	550	564	52
15°	528	522	526	528	528	147
25°	472	475	483	489	488	218
35°	411	412	422	432	432	255
45°	331	337	343	352	343	256
55°	247	246	252	250	250	220
65°	152	150	156	150	151	151
75°	63	62	63	59	61	68
85°	8	8	8	8	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	555.9	555.9	555.9	555.9	555.9
2.5°	560.7	556.5	552.5	557.1	559.9
5°	551.9	550.6	552.1	550.5	563.8
7.5°	540.6	545.5	548.4	546.6	547.4
10°	534.6	532.8	539.2	543.7	543.0
12.5°	528.1	530.7	531.0	535.9	536.3
15°	528.5	522.4	525.6	528.3	528.5
17.5°	507.9	514.5	516.8	523.0	515.3
20°	505.4	500.6	505.4	511.8	510.8
22.5°	490.0	484.6	494.9	500.6	500.3
25°	472.5	475.1	482.8	489.1	488.1
27.5°	457.1	460.1	471.2	479.9	474.3
30°	445.3	443.8	453.1	460.9	465.2
32.5°	424.1	429.6	440.5	448.2	444.1
35°	411.3	412.5	422.0	431.8	431.5
37.5°	388.8	394.5	407.9	410.6	408.1
40°	369.6	375.3	387.4	390.4	389.2
42.5°	355.5	356.5	366.9	370.3	364.9
45°	330.9	337.0	342.6	351.5	343.1
47.5°	309.9	312.8	324.8	327.2	322.8
50°	290.9	291.9	304.0	301.1	298.2
52.5°	267.0	271.2	278.0	277.5	274.1
55°	247.3	245.7	252.1	250.4	250.3
57.5°	223.7	226.6	231.9	229.2	224.8
60°	201.6	201.7	203.6	200.5	200.0
62.5°	177.0	177.9	178.3	174.5	180.7
65°	151.9	149.9	155.8	149.9	150.9
67.5°	128.9	129.9	129.3	125.6	127.0
70°	105.5	106.8	105.9	101.6	102.9
72.5°	84.1	82.5	83.5	78.2	80.7
75°	63.2	61.9	63.1	58.6	60.6
77.5°	43.1	44.1	43.4	41.0	42.3
80°	28.4	27.6	27.6	26.3	26.6
82.5°	16.6	15.8	15.6	15.1	15.8
85°	7.8	7.5	7.7	7.5	7.2
87.5°	2.8	2.9	2.9	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)