

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: P590031

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590031
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1453.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

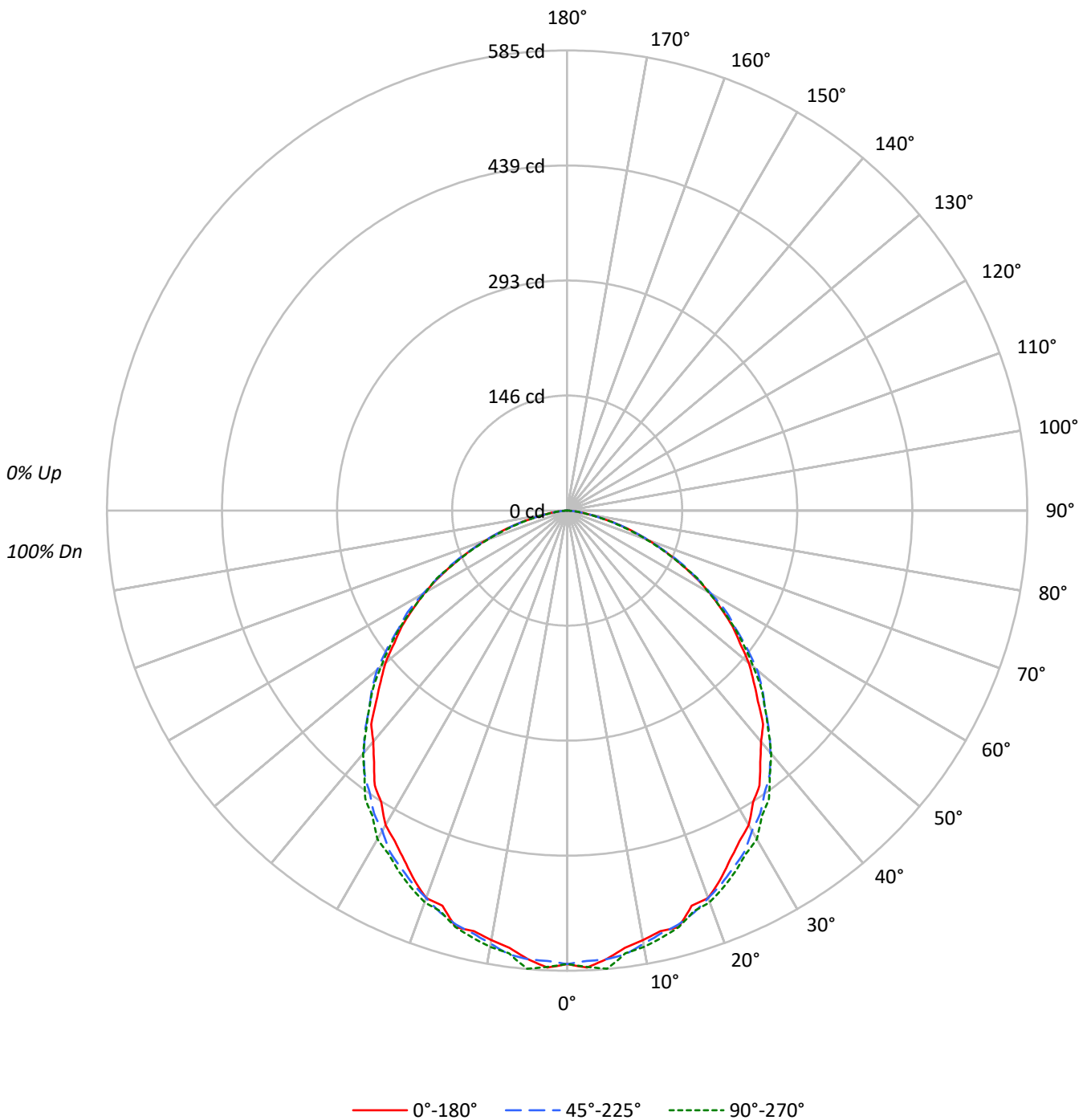
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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°	1551	1551	1551
5°	1546	1547	1579
10°	1515	1528	1539
15°	1527	1519	1527
20°	1501	1501	1517
25°	1455	1487	1503
30°	1435	1460	1499
35°	1401	1438	1470
40°	1346	1411	1418
45°	1306	1353	1354
50°	1263	1320	1295
55°	1203	1227	1218
60°	1125	1137	1116
65°	1004	1029	996
70°	861	864	840
75°	682	680	654
80°	457	445	426
85°	247	247	228

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1387 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	3.7
10°-20°	153.7	10.6
20°-30°	230.3	15.8
30°-40°	272.9	18.8
40°-50°	273.4	18.8
50°-60°	232.1	16.0
60°-70°	156.5	10.8
70°-80°	68.7	4.7
80°-90°	11.2	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°	438.2	30.2
0°-40°	711.1	48.9
0°-60°	1216.6	83.7
0°-90°	1453.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1453.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	572	571	573	571	585	54
15°	548	542	545	548	548	153
25°	490	493	501	507	506	227
35°	426	428	438	448	448	265
45°	343	350	355	364	356	265
55°	256	255	262	260	260	228
65°	158	156	162	155	156	157
75°	66	64	65	61	63	70
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°	576.5	576.5	576.5	576.5	576.5
2.5°	581.5	577.1	573.0	577.8	580.7
5°	572.4	571.1	572.6	570.9	584.7
7.5°	560.7	565.8	568.8	566.9	567.7
10°	554.4	552.6	559.2	563.9	563.2
12.5°	547.7	550.4	550.8	555.7	556.2
15°	548.1	541.8	545.1	547.9	548.2
17.5°	526.8	533.6	535.9	542.4	534.4
20°	524.2	519.2	524.2	530.8	529.8
22.5°	508.2	502.6	513.3	519.2	518.8
25°	490.0	492.7	500.7	507.3	506.2
27.5°	474.1	477.2	488.7	497.7	491.9
30°	461.8	460.2	469.9	478.0	482.4
32.5°	439.8	445.5	456.8	464.8	460.5
35°	426.5	427.8	437.7	447.8	447.5
37.5°	403.2	409.1	423.0	425.9	423.2
40°	383.3	389.2	401.8	404.9	403.6
42.5°	368.7	369.7	380.5	384.0	378.4
45°	343.2	349.6	355.4	364.5	355.9
47.5°	321.4	324.4	336.9	339.4	334.8
50°	301.7	302.7	315.3	312.3	309.3
52.5°	276.9	281.3	288.4	287.8	284.3
55°	256.5	254.8	261.5	259.7	259.6
57.5°	232.0	235.0	240.5	237.7	233.1
60°	209.1	209.2	211.2	208.0	207.4
62.5°	183.6	184.5	184.9	181.0	187.4
65°	157.6	155.5	161.6	155.4	156.5
67.5°	133.7	134.7	134.1	130.3	131.8
70°	109.4	110.8	109.8	105.4	106.7
72.5°	87.2	85.6	86.6	81.1	83.7
75°	65.6	64.2	65.4	60.8	62.9
77.5°	44.7	45.7	45.0	42.5	43.9
80°	29.5	28.7	28.7	27.2	27.5
82.5°	17.2	16.4	16.2	15.7	16.4
85°	8.0	7.8	8.0	7.7	7.4
87.5°	2.9	3.0	3.0	2.8	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)