

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: P589967

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589967
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1415.0 lumens
Efficiency: N/A
Efficacy: 120.9 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

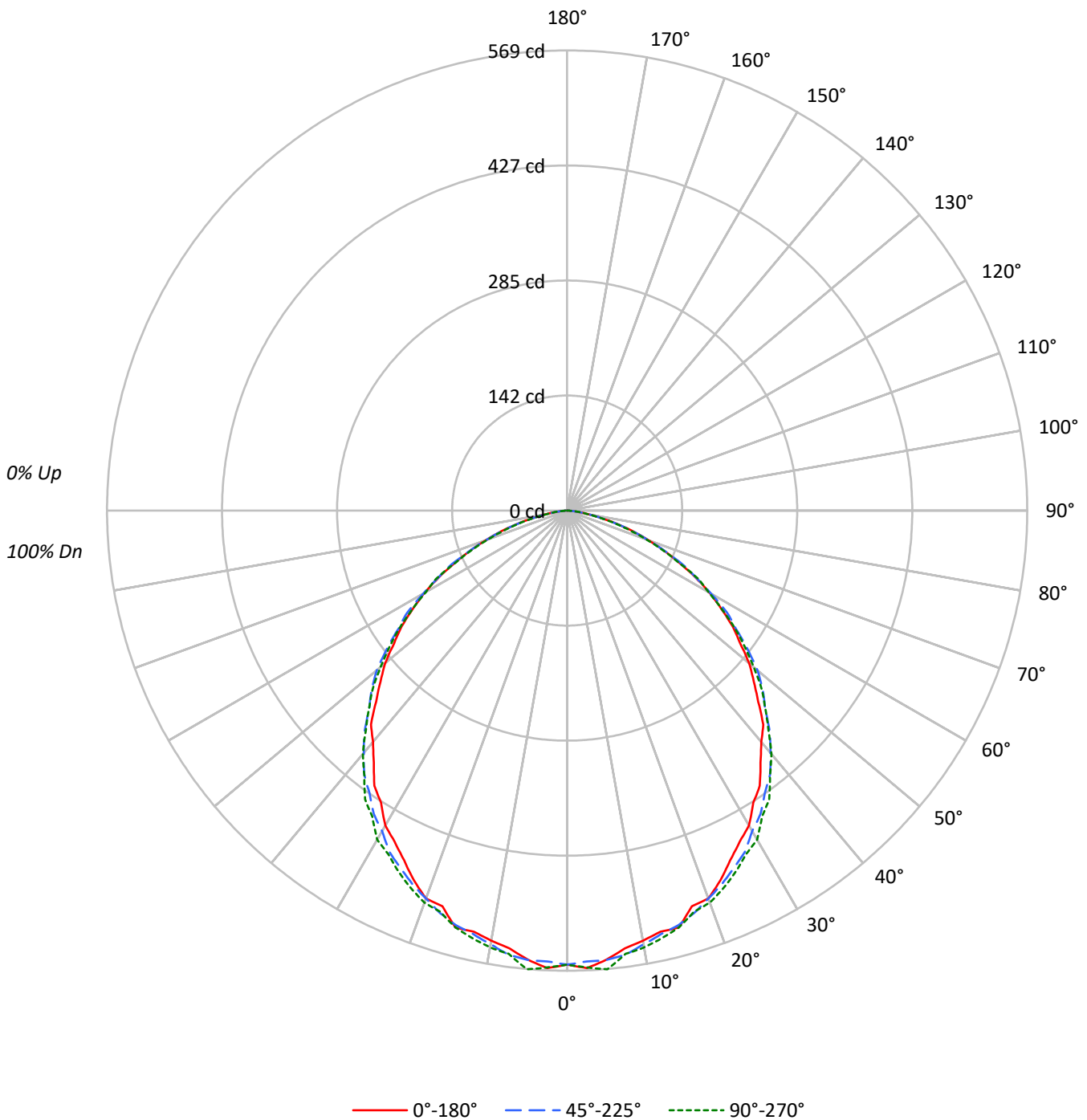
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1511	1511	1511
5°	1506	1506	1538
10°	1475	1488	1499
15°	1487	1479	1487
20°	1462	1462	1477
25°	1417	1448	1464
30°	1397	1422	1460
35°	1365	1400	1432
40°	1311	1375	1381
45°	1272	1317	1319
50°	1230	1286	1261
55°	1172	1195	1186
60°	1096	1107	1087
65°	977	1002	970
70°	839	841	818
75°	664	662	637
80°	445	432	415
85°	241	241	222

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1351 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	3.7
10°-20°	149.7	10.6
20°-30°	224.2	15.8
30°-40°	265.8	18.8
40°-50°	266.3	18.8
50°-60°	226.0	16.0
60°-70°	152.4	10.8
70°-80°	67.0	4.7
80°-90°	10.9	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°	426.7	30.2
0°-40°	692.5	48.9
0°-60°	1184.8	83.7
0°-90°	1415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	557	556	558	556	569	53
15°	534	528	531	534	534	149
25°	477	480	488	494	493	221
35°	415	417	426	436	436	258
45°	334	340	346	355	347	258
55°	250	248	255	253	253	222
65°	154	151	157	151	152	153
75°	64	63	64	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°	561.4	561.4	561.4	561.4	561.4
2.5°	566.3	562.0	558.0	562.7	565.5
5°	557.4	556.1	557.7	556.0	569.4
7.5°	546.0	551.0	553.9	552.1	552.9
10°	539.9	538.2	544.6	549.1	548.5
12.5°	533.4	536.0	536.4	541.2	541.6
15°	533.7	527.6	530.8	533.6	533.8
17.5°	513.0	519.7	521.9	528.2	520.4
20°	510.5	505.6	510.5	516.9	515.9
22.5°	494.9	489.5	499.9	505.6	505.3
25°	477.2	479.8	487.6	494.0	493.0
27.5°	461.7	464.7	475.9	484.7	479.0
30°	449.7	448.2	457.6	465.5	469.8
32.5°	428.3	433.9	444.9	452.6	448.5
35°	415.4	416.6	426.2	436.1	435.8
37.5°	392.7	398.4	412.0	414.7	412.2
40°	373.3	379.1	391.3	394.3	393.0
42.5°	359.0	360.1	370.6	374.0	368.5
45°	334.2	340.4	346.1	355.0	346.6
47.5°	313.0	315.9	328.1	330.5	326.1
50°	293.8	294.8	307.1	304.1	301.2
52.5°	269.7	273.9	280.8	280.2	276.8
55°	249.8	248.1	254.7	252.9	252.8
57.5°	226.0	228.9	234.2	231.5	227.0
60°	203.6	203.7	205.7	202.5	202.0
62.5°	178.8	179.6	180.1	176.2	182.5
65°	153.5	151.4	157.4	151.4	152.4
67.5°	130.2	131.2	130.6	126.9	128.3
70°	106.6	107.9	106.9	102.6	104.0
72.5°	85.0	83.4	84.4	79.0	81.5
75°	63.9	62.6	63.7	59.2	61.3
77.5°	43.5	44.5	43.8	41.4	42.8
80°	28.7	27.9	27.9	26.5	26.8
82.5°	16.7	15.9	15.7	15.3	15.9
85°	7.8	7.6	7.8	7.5	7.2
87.5°	2.8	2.9	2.9	2.8	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)