

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: P590609

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590609
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-LD4-3LO-50-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3799.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

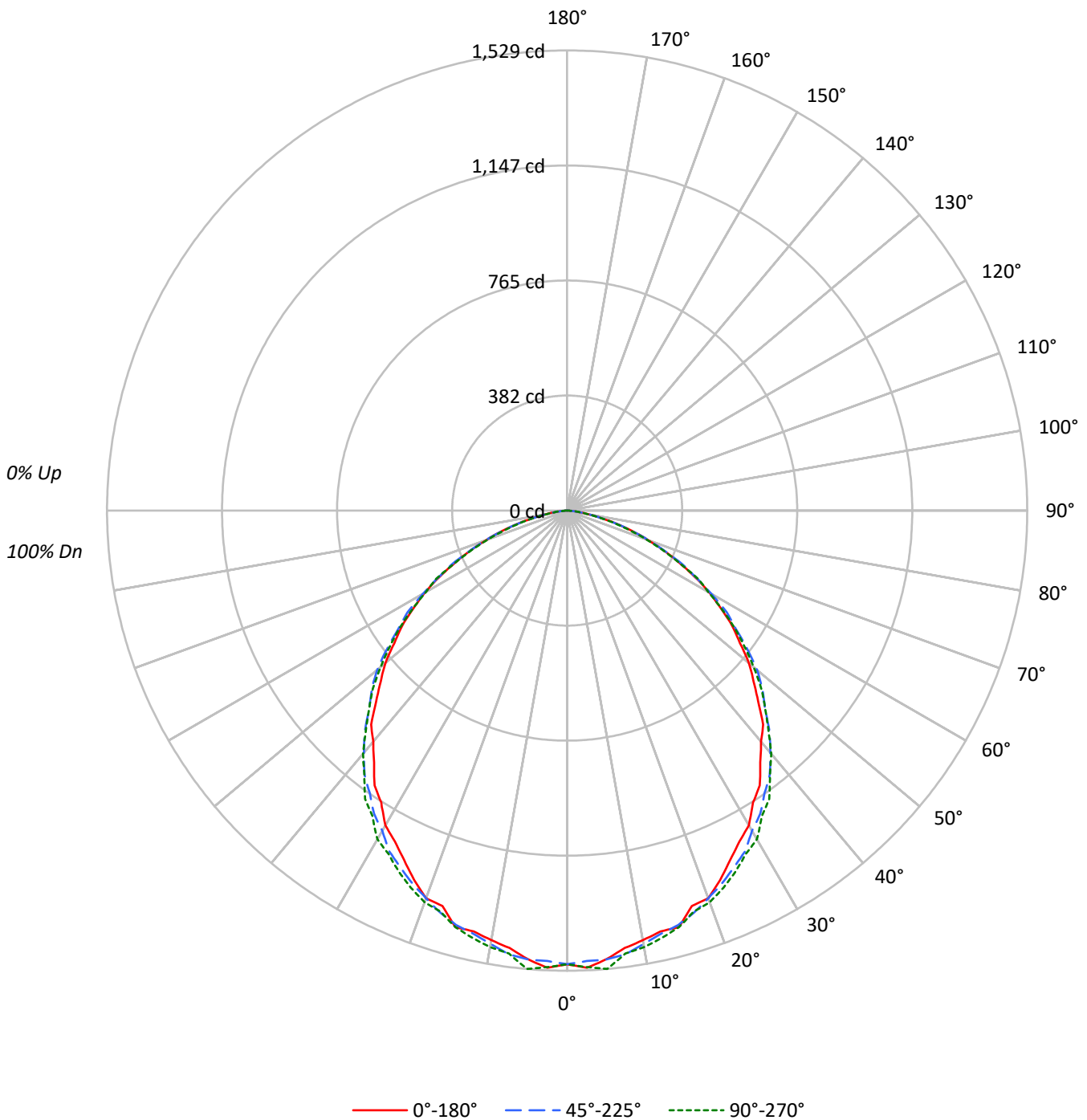
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4056	4056	4056
5°	4043	4044	4130
10°	3961	3995	4024
15°	3992	3970	3993
20°	3925	3925	3966
25°	3804	3887	3930
30°	3752	3818	3919
35°	3664	3759	3844
40°	3521	3691	3707
45°	3414	3536	3541
50°	3302	3451	3386
55°	3147	3208	3185
60°	2942	2971	2918
65°	2623	2690	2605
70°	2251	2259	2196
75°	1783	1779	1710
80°	1195	1161	1116
85°	648	642	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3627 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	3.7
10°-20°	401.8	10.6
20°-30°	602.0	15.8
30°-40°	713.5	18.8
40°-50°	714.9	18.8
50°-60°	606.8	16.0
60°-70°	409.1	10.8
70°-80°	179.8	4.7
80°-90°	29.2	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°	1145.7	30.2
0°-40°	1859.2	48.9
0°-60°	3180.9	83.7
0°-90°	3799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3799.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1507	1507	1507	1507	1507	
5°	1497	1493	1497	1493	1529	141
15°	1433	1416	1425	1433	1433	399
25°	1281	1288	1309	1326	1324	592
35°	1115	1118	1144	1171	1170	692
45°	897	914	929	953	930	694
55°	671	666	684	679	679	597
65°	412	407	422	406	409	410
75°	172	168	171	159	164	184
85°	21	20	21	20	20	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1507.3	1507.3	1507.3	1507.3	1507.3
2.5°	1520.4	1508.9	1498.2	1510.7	1518.2
5°	1496.6	1493.1	1497.2	1492.8	1528.8
7.5°	1465.9	1479.3	1487.1	1482.2	1484.4
10°	1449.5	1444.9	1462.2	1474.3	1472.5
12.5°	1432.0	1439.0	1440.0	1453.0	1454.2
15°	1433.0	1416.5	1425.2	1432.6	1433.2
17.5°	1377.3	1395.2	1401.3	1418.2	1397.2
20°	1370.5	1357.5	1370.5	1387.8	1385.1
22.5°	1328.7	1314.1	1342.1	1357.5	1356.5
25°	1281.2	1288.2	1309.2	1326.3	1323.6
27.5°	1239.5	1247.7	1277.7	1301.2	1286.1
30°	1207.4	1203.3	1228.6	1249.7	1261.3
32.5°	1150.0	1164.8	1194.4	1215.2	1204.1
35°	1115.2	1118.5	1144.4	1170.8	1170.1
37.5°	1054.3	1069.6	1106.0	1113.4	1106.6
40°	1002.3	1017.7	1050.6	1058.5	1055.2
42.5°	964.0	966.7	994.9	1004.1	989.5
45°	897.2	913.9	929.1	953.1	930.5
47.5°	840.4	848.2	880.9	887.3	875.4
50°	788.8	791.5	824.4	816.4	808.7
52.5°	724.0	735.5	754.0	752.4	743.3
55°	670.7	666.2	683.7	679.0	678.8
57.5°	606.6	614.4	628.8	621.4	609.6
60°	546.7	546.9	552.1	543.8	542.2
62.5°	479.9	482.3	483.4	473.1	489.9
65°	412.0	406.6	422.5	406.4	409.1
67.5°	349.5	352.3	350.7	340.6	344.5
70°	286.1	289.6	287.1	275.6	279.1
72.5°	228.1	223.8	226.5	212.1	218.8
75°	171.5	168.0	171.1	159.0	164.5
77.5°	116.8	119.5	117.6	111.1	114.8
80°	77.1	74.9	74.9	71.2	72.0
82.5°	45.0	42.8	42.2	41.1	42.8
85°	21.0	20.4	20.8	20.2	19.5
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)