

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: P561263

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561263
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3212.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

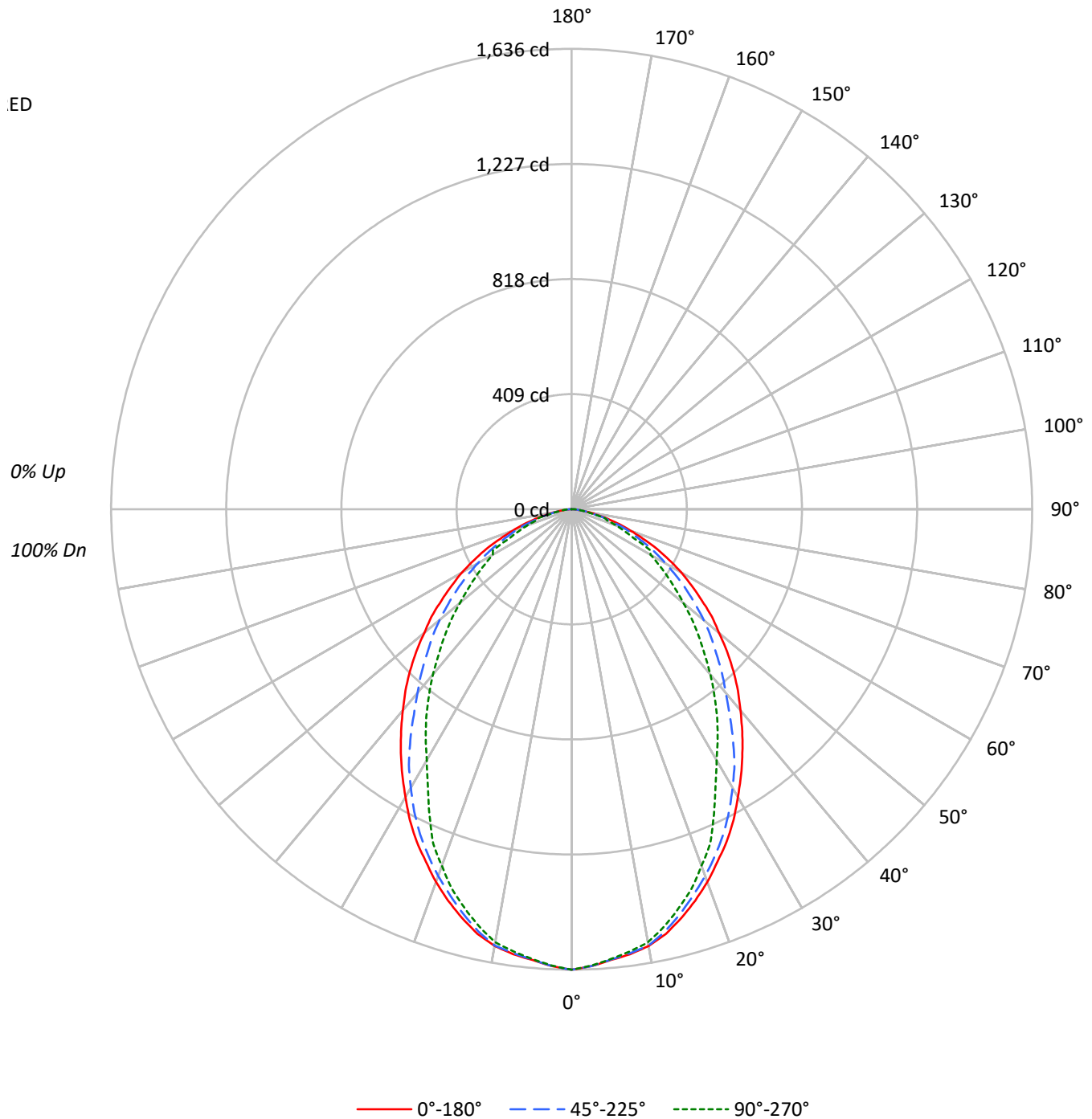
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561263

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561263

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD

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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4403	4403	4403
5°	4343	4338	4333
10°	4305	4300	4269
15°	4189	4147	4089
20°	4035	3970	3862
25°	3869	3785	3549
30°	3668	3550	3197
35°	3474	3281	2958
40°	3276	2990	2691
45°	3088	2764	2433
50°	2858	2565	2170
55°	2645	2325	1943
60°	2423	2077	1741
65°	2132	1819	1542
70°	1756	1592	1310
75°	1396	1220	1278
80°	938	879	821
85°	584	701	818

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3088 cd/sqm

TEST NUMBER: P561263

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.3	4.7
10°-20°	418.0	13.0
20°-30°	578.7	18.0
30°-40°	617.0	19.2
40°-50°	562.9	17.5
50°-60°	441.0	13.7
60°-70°	287.4	8.9
70°-80°	127.3	4.0
80°-90°	27.3	0.9
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°	1149.0	35.8
0°-40°	1766.0	55.0
0°-60°	2769.9	86.2
0°-90°	3212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3212.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1608	1606	1606	1604	1604	153
15°	1504	1504	1489	1474	1468	423
25°	1303	1296	1275	1230	1195	598
35°	1057	1050	999	923	900	661
45°	812	794	726	666	639	625
55°	564	547	496	437	414	506
65°	335	316	286	291	242	330
75°	134	125	117	112	123	144
85°	19	21	23	25	26	26
90°	0	0	0	0	0	



TEST NUMBER: P561263

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-93-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1636.1	1636.1	1636.1	1636.1	1636.1
2.5°	1624.8	1624.8	1624.8	1622.9	1622.9
5°	1607.8	1605.9	1605.9	1604.0	1604.0
7.5°	1594.5	1592.6	1590.8	1588.9	1585.1
10°	1575.6	1575.6	1573.7	1564.3	1562.4
12.5°	1545.4	1543.5	1535.9	1522.7	1518.9
15°	1503.7	1503.7	1488.6	1473.5	1467.8
17.5°	1458.3	1456.5	1437.5	1422.4	1414.8
20°	1409.2	1405.4	1386.5	1361.9	1348.6
22.5°	1354.3	1354.3	1331.6	1299.5	1286.2
25°	1303.2	1295.7	1274.9	1229.5	1195.4
27.5°	1244.6	1233.3	1210.6	1146.3	1106.5
30°	1180.3	1174.6	1142.5	1059.2	1029.0
32.5°	1119.8	1110.3	1076.3	989.3	964.7
35°	1057.4	1049.8	998.7	923.1	900.4
37.5°	994.9	985.5	921.2	860.6	832.3
40°	932.5	921.2	851.2	796.3	766.1
42.5°	873.9	858.7	790.6	732.0	698.0
45°	811.5	794.4	726.3	665.8	639.3
47.5°	749.0	733.9	671.5	609.1	578.8
50°	682.8	669.6	612.8	550.4	518.3
52.5°	628.0	607.2	552.3	489.9	463.4
55°	563.7	546.6	495.6	436.9	414.2
57.5°	505.0	488.0	440.7	385.9	367.0
60°	450.2	425.6	385.9	338.6	323.4
62.5°	389.6	370.7	336.7	297.0	315.9
65°	334.8	315.9	285.6	291.3	242.1
67.5°	274.3	264.8	238.3	211.8	204.3
70°	223.2	211.8	202.4	174.0	166.5
72.5°	177.8	166.5	153.2	138.1	132.4
75°	134.3	124.8	117.3	111.6	122.9
77.5°	92.7	88.9	83.2	77.6	75.7
80°	60.5	58.6	56.7	54.9	53.0
82.5°	35.9	35.9	35.9	35.9	35.9
85°	18.9	20.8	22.7	24.6	26.5
87.5°	11.3	11.3	13.2	15.1	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)