

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: P562177

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562177
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-24-4-LD4-1LO-40-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2796.0 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

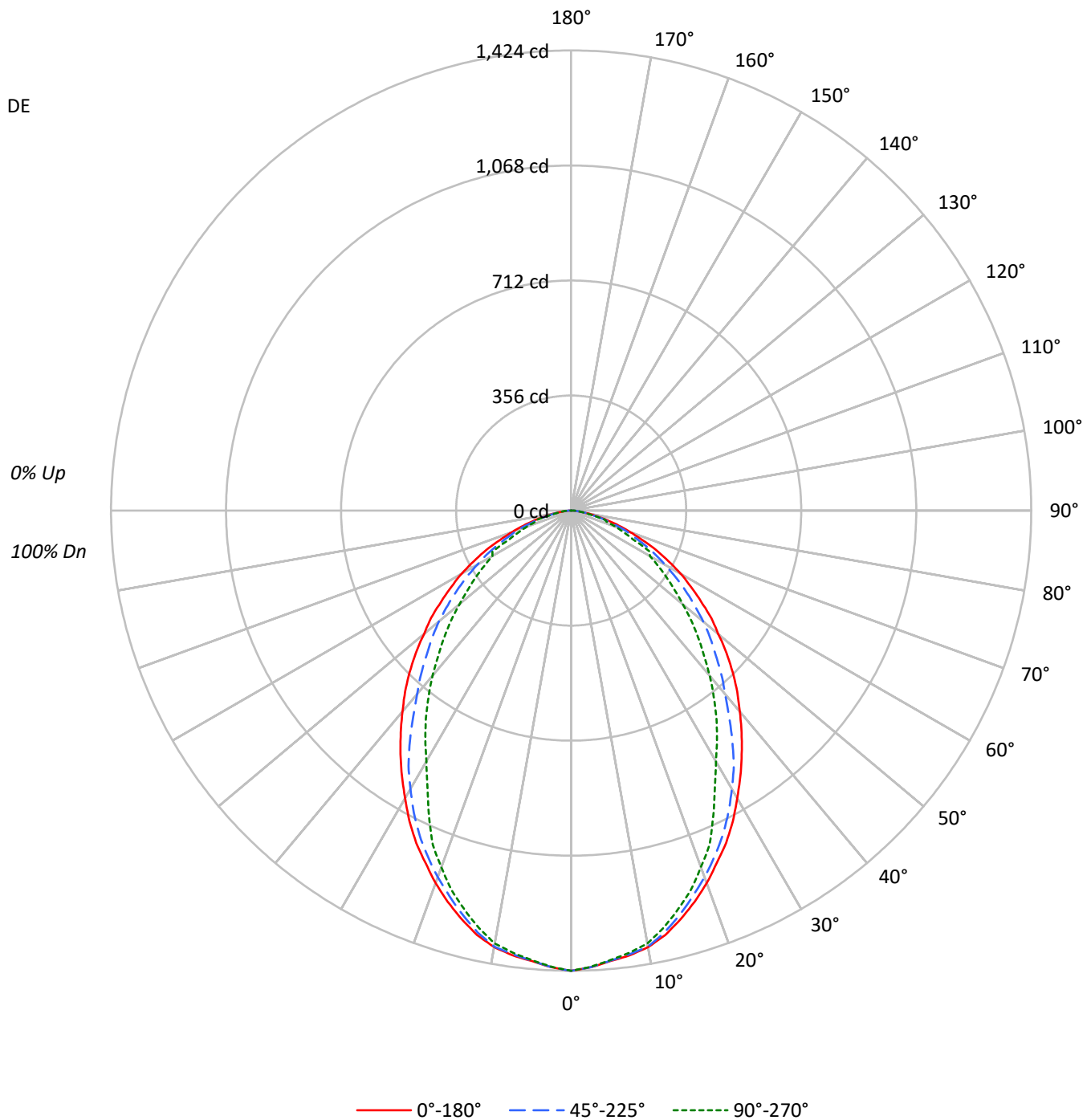
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562177

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562177

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-84-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1916	1916	1916
5°	1890	1888	1886
10°	1874	1872	1858
15°	1823	1805	1780
20°	1756	1728	1681
25°	1684	1648	1545
30°	1596	1545	1392
35°	1512	1428	1287
40°	1426	1301	1171
45°	1344	1203	1059
50°	1244	1117	944
55°	1151	1012	846
60°	1055	904	758
65°	928	791	671
70°	764	693	570
75°	608	531	556
80°	408	383	357
85°	255	306	357

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1344 cd/sqm



TEST NUMBER: P562177

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.6	4.7
10°-20°	363.9	13.0
20°-30°	503.7	18.0
30°-40°	537.1	19.2
40°-50°	490.0	17.5
50°-60°	383.9	13.7
60°-70°	250.2	8.9
70°-80°	110.8	4.0
80°-90°	23.8	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°	1000.2	35.8
0°-40°	1537.3	55.0
0°-60°	2411.2	86.2
0°-90°	2796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1424	1424	1424	1424	1424	
5°	1400	1398	1398	1396	1396	133
15°	1309	1309	1296	1283	1278	368
25°	1134	1128	1110	1070	1041	521
35°	920	914	869	804	784	575
45°	706	692	632	580	556	544
55°	491	476	431	380	361	440
65°	291	275	249	254	211	287
75°	117	109	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



TEST NUMBER: P562177

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1424.2	1424.2	1424.2	1424.2	1424.2
2.5°	1414.4	1414.4	1414.4	1412.7	1412.7
5°	1399.5	1397.9	1397.9	1396.3	1396.3
7.5°	1388.0	1386.4	1384.7	1383.1	1379.8
10°	1371.6	1371.6	1369.9	1361.7	1360.0
12.5°	1345.2	1343.6	1337.0	1325.5	1322.2
15°	1309.0	1309.0	1295.8	1282.6	1277.7
17.5°	1269.5	1267.8	1251.4	1238.2	1231.6
20°	1226.7	1223.4	1206.9	1185.5	1174.0
22.5°	1178.9	1178.9	1159.2	1131.2	1119.6
25°	1134.5	1127.9	1109.8	1070.2	1040.6
27.5°	1083.4	1073.5	1053.8	997.8	963.2
30°	1027.4	1022.5	994.5	922.1	895.7
32.5°	974.7	966.5	936.9	861.1	839.7
35°	920.4	913.8	869.4	803.5	783.7
37.5°	866.1	857.8	801.9	749.2	724.5
40°	811.7	801.9	740.9	693.2	666.8
42.5°	760.7	747.5	688.2	637.2	607.6
45°	706.4	691.5	632.3	579.6	556.5
47.5°	652.0	638.9	584.5	530.2	503.8
50°	594.4	582.9	533.5	479.1	451.1
52.5°	546.6	528.5	480.8	426.5	403.4
55°	490.7	475.8	431.4	380.3	360.6
57.5°	439.6	424.8	383.6	335.9	319.4
60°	391.9	370.5	335.9	294.7	281.6
62.5°	339.2	322.7	293.1	258.5	275.0
65°	291.4	275.0	248.6	253.6	210.8
67.5°	238.7	230.5	207.5	184.4	177.8
70°	194.3	184.4	176.2	151.5	144.9
72.5°	154.8	144.9	133.4	120.2	115.3
75°	116.9	108.7	102.1	97.1	107.0
77.5°	80.7	77.4	72.4	67.5	65.9
80°	52.7	51.0	49.4	47.7	46.1
82.5°	31.3	31.3	31.3	31.3	31.3
85°	16.5	18.1	19.8	21.4	23.1
87.5°	9.9	9.9	11.5	13.2	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)