

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: P562748

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562748
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-LD4-2LO-40-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4903.0 lumens
Efficiency: N/A
Efficacy: 104.8 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

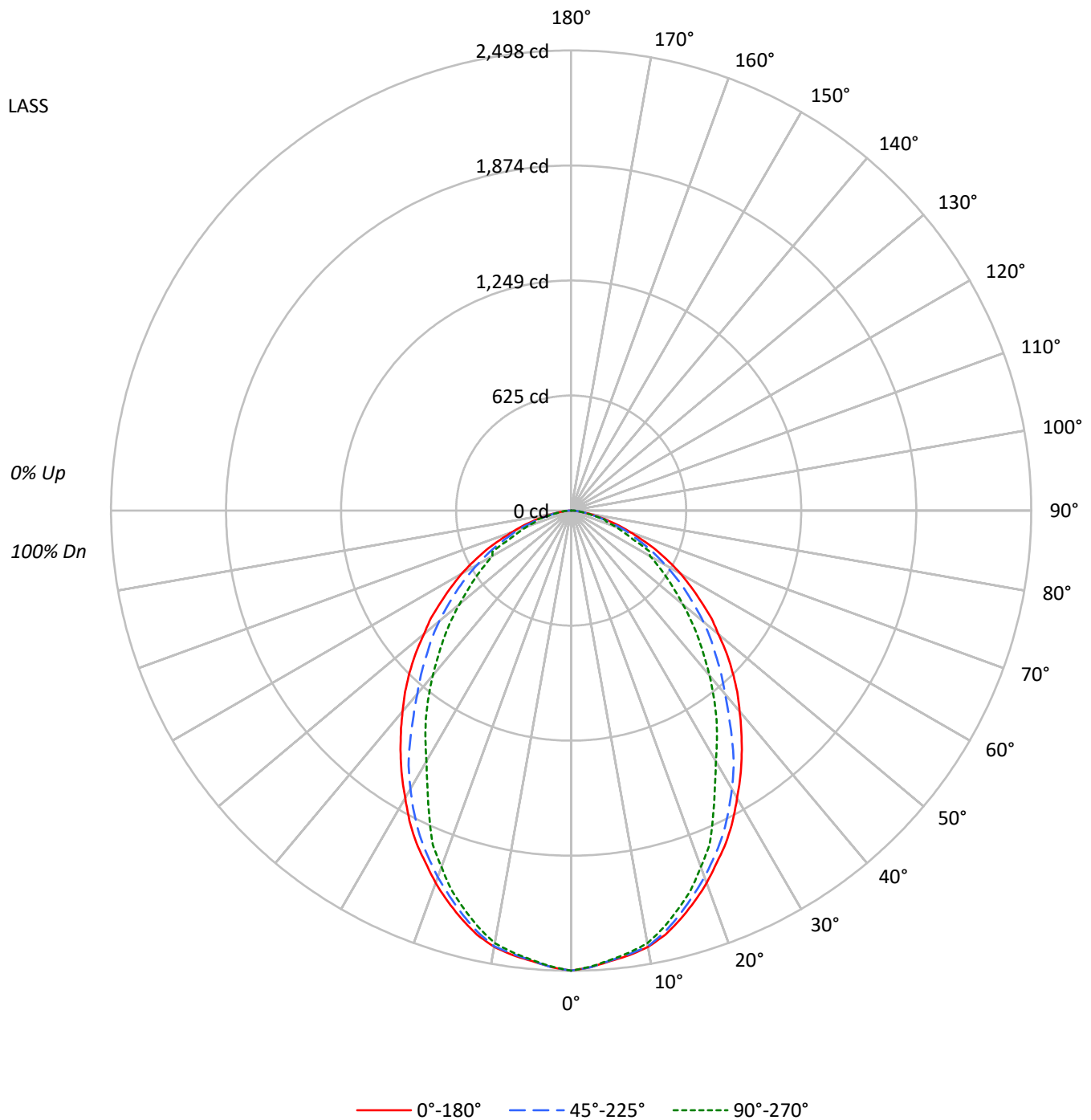
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562748

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-80-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562748

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-80-96-EDD-90

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																												
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°	3360	3360	3360
5°	3315	3311	3307
10°	3286	3282	3258
15°	3197	3165	3121
20°	3080	3030	2948
25°	2953	2889	2709
30°	2799	2709	2440
35°	2651	2504	2258
40°	2500	2282	2054
45°	2357	2110	1857
50°	2182	1958	1656
55°	2018	1775	1483
60°	1849	1585	1329
65°	1627	1388	1177
70°	1340	1215	1000
75°	1066	931	976
80°	716	671	626
85°	446	534	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2357 cd/sqm



TEST NUMBER: P562748

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-80-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.5	4.7
10°-20°	638.0	13.0
20°-30°	883.3	18.0
30°-40°	941.9	19.2
40°-50°	859.3	17.5
50°-60°	673.2	13.7
60°-70°	438.7	8.9
70°-80°	194.4	4.0
80°-90°	41.7	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°	1753.8	35.8
0°-40°	2695.7	55.0
0°-60°	4228.1	86.2
0°-90°	4903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4903.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2498	2498	2498	2498	2498	
5°	2454	2451	2451	2448	2448	233
15°	2295	2295	2272	2249	2241	645
25°	1989	1978	1946	1877	1825	913
35°	1614	1602	1524	1409	1374	1009
45°	1239	1213	1109	1016	976	954
55°	860	834	756	667	632	772
65°	511	482	436	445	370	504
75°	205	191	179	170	188	220
85°	29	32	35	38	40	40
90°	0	0	0	0	0	



TEST NUMBER: P562748

CATALOG NUMBER: FSR-24-4-LD4-2LO-40-UNV-80-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2497.5	2497.5	2497.5	2497.5	2497.5
2.5°	2480.2	2480.2	2480.2	2477.3	2477.3
5°	2454.2	2451.3	2451.3	2448.4	2448.4
7.5°	2434.0	2431.1	2428.2	2425.3	2419.6
10°	2405.1	2405.1	2402.2	2387.8	2384.9
12.5°	2358.9	2356.0	2344.5	2324.3	2318.5
15°	2295.4	2295.4	2272.3	2249.2	2240.6
17.5°	2226.1	2223.2	2194.4	2171.3	2159.7
20°	2151.0	2145.3	2116.4	2078.9	2058.7
22.5°	2067.3	2067.3	2032.7	1983.6	1963.4
25°	1989.4	1977.8	1946.0	1876.8	1824.8
27.5°	1899.8	1882.5	1847.9	1749.7	1689.1
30°	1801.7	1793.0	1743.9	1616.9	1570.7
32.5°	1709.3	1694.9	1642.9	1510.1	1472.5
35°	1614.0	1602.5	1524.5	1409.0	1374.4
37.5°	1518.7	1504.3	1406.1	1313.7	1270.4
40°	1423.4	1406.1	1299.3	1215.6	1169.4
42.5°	1333.9	1310.8	1206.9	1117.4	1065.4
45°	1238.7	1212.7	1108.7	1016.3	975.9
47.5°	1143.4	1120.3	1025.0	929.7	883.5
50°	1042.3	1022.1	935.5	840.2	791.1
52.5°	958.6	926.8	843.1	747.8	707.4
55°	860.4	834.4	756.5	667.0	632.3
57.5°	770.9	744.9	672.7	589.0	560.1
60°	687.2	649.6	589.0	516.8	493.7
62.5°	594.8	565.9	513.9	453.3	482.2
65°	511.1	482.2	436.0	444.6	369.6
67.5°	418.7	404.2	363.8	323.4	311.8
70°	340.7	323.4	308.9	265.6	254.1
72.5°	271.4	254.1	233.9	210.8	202.1
75°	205.0	190.6	179.0	170.4	187.7
77.5°	141.5	135.7	127.0	118.4	115.5
80°	92.4	89.5	86.6	83.7	80.8
82.5°	54.9	54.9	54.9	54.9	54.9
85°	28.9	31.8	34.6	37.5	40.4
87.5°	17.3	17.3	20.2	23.1	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)