

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: P562593

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562593
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-LD4-2HI-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9688.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

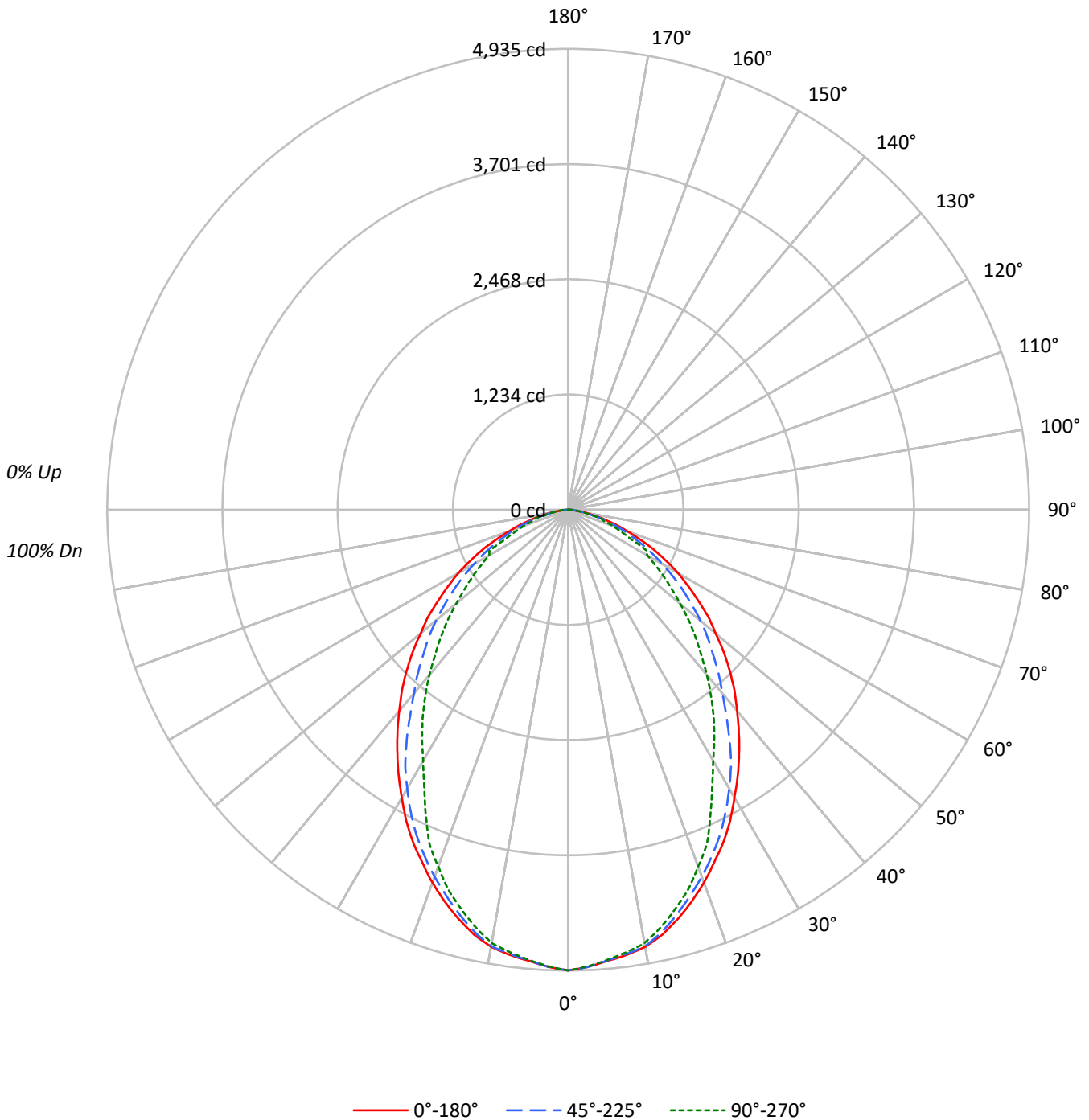
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562593

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562593

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-84-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	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°	6640	6640	6640
5°	6550	6542	6534
10°	6493	6485	6438
15°	6318	6254	6167
20°	6086	5988	5824
25°	5836	5709	5353
30°	5531	5354	4822
35°	5238	4948	4460
40°	4940	4509	4058
45°	4657	4169	3669
50°	4311	3869	3272
55°	3988	3506	2931
60°	3654	3132	2625
65°	3215	2743	2325
70°	2648	2401	1975
75°	2106	1839	1928
80°	1415	1327	1237
85°	881	1057	1233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4657 cd/sqm



TEST NUMBER: P562593

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.4	4.7
10°-20°	1260.7	13.0
20°-30°	1745.4	18.0
30°-40°	1861.1	19.2
40°-50°	1697.9	17.5
50°-60°	1330.1	13.7
60°-70°	866.9	8.9
70°-80°	384.1	4.0
80°-90°	82.5	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°	3465.5	35.8
0°-40°	5326.6	55.0
0°-60°	8354.5	86.2
0°-90°	9688.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9688.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4935	4935	4935	4935	4935	
5°	4849	4844	4844	4838	4838	460
15°	4536	4536	4490	4444	4427	1275
25°	3931	3908	3845	3708	3606	1805
35°	3189	3166	3012	2784	2716	1994
45°	2448	2396	2191	2008	1928	1885
55°	1700	1649	1495	1318	1249	1525
65°	1010	953	862	879	730	995
75°	405	376	354	337	371	434
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



TEST NUMBER: P562593

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4934.9	4934.9	4934.9	4934.9	4934.9
2.5°	4900.7	4900.7	4900.7	4895.0	4895.0
5°	4849.4	4843.7	4843.7	4838.0	4838.0
7.5°	4809.4	4803.7	4798.0	4792.3	4780.9
10°	4752.4	4752.4	4746.7	4718.1	4712.4
12.5°	4661.1	4655.4	4632.6	4592.6	4581.2
15°	4535.6	4535.6	4489.9	4444.3	4427.2
17.5°	4398.7	4393.0	4335.9	4290.3	4267.4
20°	4250.3	4238.9	4181.9	4107.7	4067.8
22.5°	4084.9	4084.9	4016.4	3919.4	3879.5
25°	3930.8	3908.0	3845.3	3708.3	3605.6
27.5°	3754.0	3719.7	3651.3	3457.3	3337.5
30°	3560.0	3542.9	3445.9	3194.9	3103.6
32.5°	3377.4	3348.9	3246.2	2983.8	2909.6
35°	3189.2	3166.3	3012.3	2784.1	2715.6
37.5°	3000.9	2972.4	2778.4	2595.8	2510.3
40°	2812.6	2778.4	2567.3	2401.9	2310.6
42.5°	2635.8	2590.1	2384.7	2207.9	2105.2
45°	2447.5	2396.2	2190.8	2008.2	1928.3
47.5°	2259.2	2213.6	2025.3	1837.1	1745.8
50°	2059.6	2019.6	1848.5	1660.2	1563.2
52.5°	1894.1	1831.3	1665.9	1477.6	1397.8
55°	1700.1	1648.8	1494.7	1317.9	1249.4
57.5°	1523.3	1471.9	1329.3	1163.8	1106.8
60°	1357.8	1283.7	1163.8	1021.2	975.6
62.5°	1175.3	1118.2	1015.5	895.7	952.8
65°	1009.8	952.8	861.5	878.6	730.3
67.5°	827.2	798.7	718.8	639.0	616.2
70°	673.2	639.0	610.4	524.9	502.1
72.5°	536.3	502.1	462.1	416.5	399.4
75°	405.1	376.5	353.7	336.6	370.8
77.5°	279.6	268.1	251.0	233.9	228.2
80°	182.6	176.9	171.2	165.4	159.7
82.5°	108.4	108.4	108.4	108.4	108.4
85°	57.1	62.8	68.5	74.2	79.9
87.5°	34.2	34.2	39.9	45.6	51.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)