

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: P563786

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563786
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-LD4-4HI-50-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16291.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

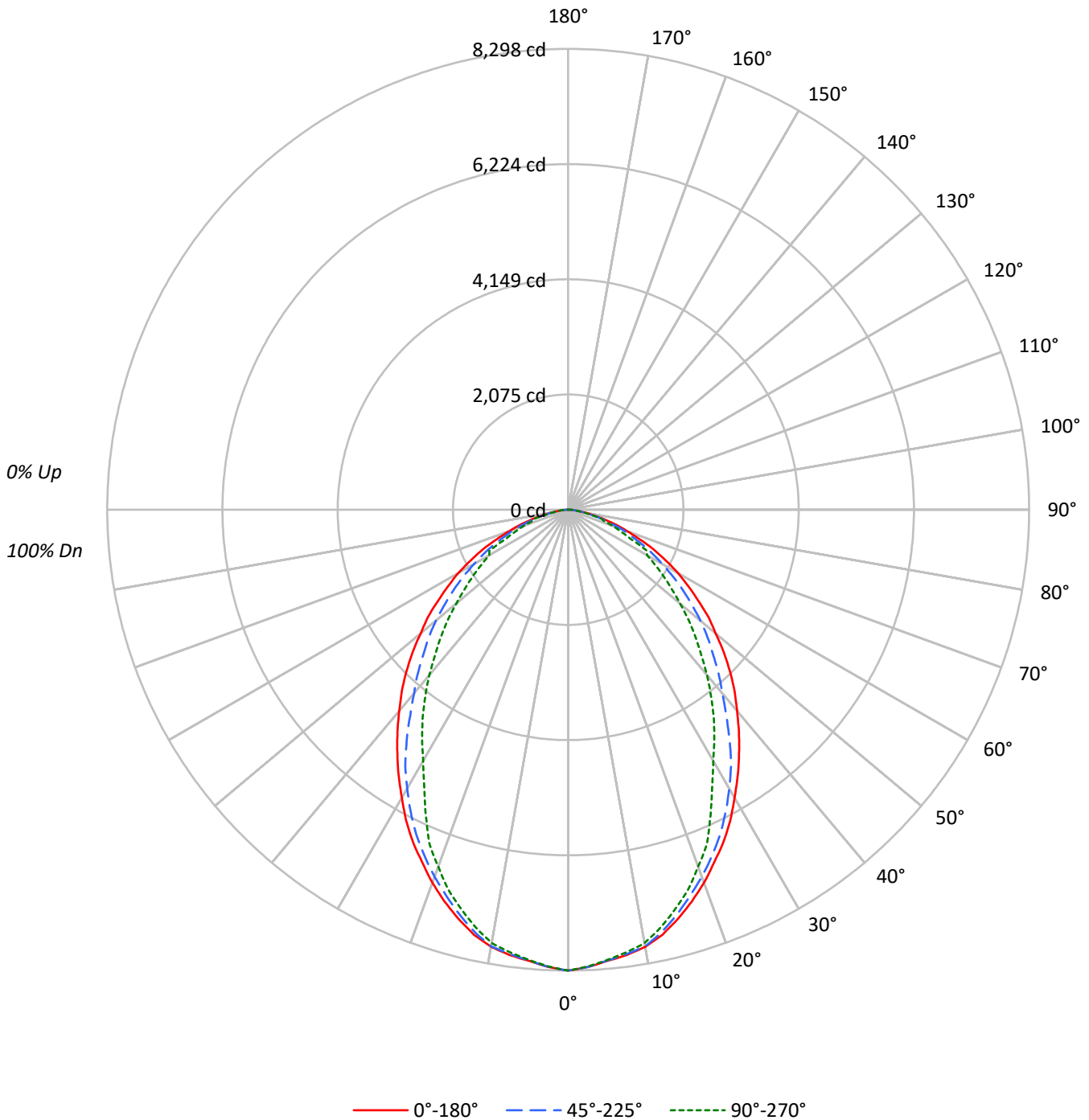
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563786

CATALOG NUMBER: FSR-24-4-LD4-4HI-50-UNV-81-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563786

CATALOG NUMBER: FSR-24-4-LD4-4HI-50-UNV-81-94-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°	11165	11165	11165
5°	11014	11001	10988
10°	10918	10905	10827
15°	10624	10517	10370
20°	10234	10069	9794
25°	9813	9599	9001
30°	9301	9003	8108
35°	8809	8320	7501
40°	8307	7583	6824
45°	7831	7010	6170
50°	7249	6506	5502
55°	6706	5896	4929
60°	6144	5267	4415
65°	5406	4612	3910
70°	4453	4038	3321
75°	3541	3092	3242
80°	2379	2230	2081
85°	1480	1777	2073

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7831 cd/sqm



TEST NUMBER: P563786

CATALOG NUMBER: FSR-24-4-LD4-4HI-50-UNV-81-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	772.5	4.7
10°-20°	2120.0	13.0
20°-30°	2935.0	18.0
30°-40°	3129.5	19.2
40°-50°	2855.0	17.5
50°-60°	2236.7	13.7
60°-70°	1457.8	8.9
70°-80°	645.8	4.0
80°-90°	138.7	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°	5827.4	35.8
0°-40°	8957.0	55.0
0°-60°	14048.7	86.2
0°-90°	16291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8298	8298	8298	8298	8298	
5°	8154	8145	8145	8135	8135	774
15°	7627	7627	7550	7473	7445	2144
25°	6610	6572	6466	6236	6063	3035
35°	5363	5324	5065	4682	4566	3353
45°	4116	4029	3684	3377	3243	3170
55°	2859	2772	2514	2216	2101	2564
65°	1698	1602	1449	1477	1228	1673
75°	681	633	595	566	624	730
85°	96	106	115	125	134	133
90°	0	0	0	0	0	



TEST NUMBER: P563786

CATALOG NUMBER: FSR-24-4-LD4-4HI-50-UNV-81-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8298.4	8298.4	8298.4	8298.4	8298.4
2.5°	8240.9	8240.9	8240.9	8231.3	8231.3
5°	8154.5	8144.9	8144.9	8135.3	8135.3
7.5°	8087.4	8077.8	8068.2	8058.6	8039.4
10°	7991.4	7991.4	7981.8	7933.9	7924.3
12.5°	7837.9	7828.3	7790.0	7722.8	7703.6
15°	7626.9	7626.9	7550.1	7473.4	7444.6
17.5°	7396.6	7387.0	7291.1	7214.3	7176.0
20°	7147.2	7128.0	7032.1	6907.4	6840.2
22.5°	6869.0	6869.0	6753.9	6590.8	6523.6
25°	6610.0	6571.6	6466.1	6235.8	6063.1
27.5°	6312.6	6255.0	6139.9	5813.7	5612.2
30°	5986.4	5957.6	5794.5	5372.4	5218.9
32.5°	5679.4	5631.4	5458.7	5017.4	4892.7
35°	5362.8	5324.4	5065.4	4681.7	4566.5
37.5°	5046.2	4998.2	4672.1	4365.1	4221.2
40°	4729.6	4672.1	4317.1	4038.9	3885.4
42.5°	4432.2	4355.5	4010.1	3712.7	3540.0
45°	4115.6	4029.3	3683.9	3376.9	3242.6
47.5°	3799.0	3722.3	3405.7	3089.1	2935.6
50°	3463.3	3396.1	3108.3	2791.7	2628.6
52.5°	3185.1	3079.5	2801.3	2484.7	2350.4
55°	2858.9	2772.5	2513.5	2216.1	2101.0
57.5°	2561.5	2475.1	2235.3	1957.1	1861.1
60°	2283.3	2158.5	1957.1	1717.2	1640.5
62.5°	1976.3	1880.3	1707.7	1506.2	1602.1
65°	1698.1	1602.1	1448.6	1477.4	1228.0
67.5°	1391.1	1343.1	1208.8	1074.5	1036.1
70°	1132.0	1074.5	1026.5	882.6	844.2
72.5°	901.8	844.2	777.1	700.3	671.5
75°	681.1	633.2	594.8	566.0	623.6
77.5°	470.1	450.9	422.1	393.3	383.7
80°	307.0	297.4	287.8	278.2	268.6
82.5°	182.3	182.3	182.3	182.3	182.3
85°	95.9	105.5	115.1	124.7	134.3
87.5°	57.6	57.6	67.2	76.7	86.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)