

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: P562656

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562656
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-50-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8572.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

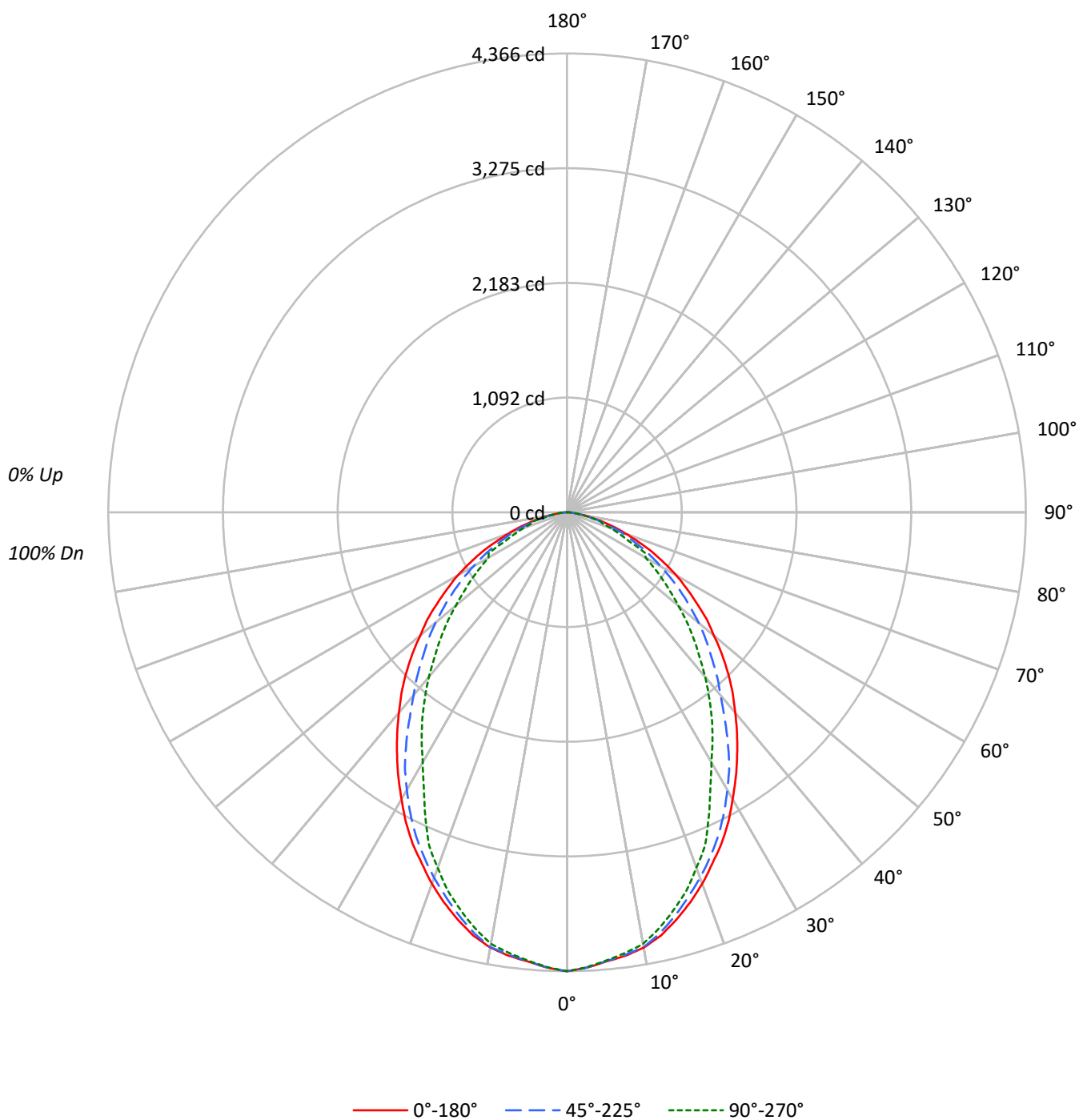
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562656

CATALOG NUMBER: FSR-24-4-LD4-2HI-50-UNV-93-84-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P562656

CATALOG NUMBER: FSR-24-4-LD4-2HI-50-UNV-93-84-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5875	5875	5875
5°	5795	5788	5782
10°	5745	5738	5697
15°	5590	5534	5456
20°	5385	5298	5153
25°	5163	5051	4736
30°	4894	4737	4266
35°	4635	4378	3947
40°	4371	3990	3591
45°	4121	3688	3247
50°	3814	3423	2895
55°	3529	3103	2593
60°	3233	2771	2323
65°	2845	2427	2057
70°	2343	2125	1747
75°	1863	1627	1706
80°	1251	1173	1095
85°	780	936	1091

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4121 cd/sqm

TEST NUMBER: P562656

CATALOG NUMBER: FSR-24-4-LD4-2HI-50-UNV-93-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.5	4.7
10°-20°	1115.5	13.0
20°-30°	1544.3	18.0
30°-40°	1646.7	19.2
40°-50°	1502.3	17.5
50°-60°	1176.9	13.7
60°-70°	767.0	8.9
70°-80°	339.8	4.0
80°-90°	73.0	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°	3066.3	35.8
0°-40°	4713.0	55.0
0°-60°	7392.2	86.2
0°-90°	8572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4366	4366	4366	4366	4366	
5°	4291	4286	4286	4281	4281	407
15°	4013	4013	3973	3932	3917	1128
25°	3478	3458	3402	3281	3190	1597
35°	2822	2802	2665	2463	2403	1764
45°	2166	2120	1938	1777	1706	1668
55°	1504	1459	1323	1166	1106	1349
65°	894	843	762	777	646	881
75°	358	333	313	298	328	384
85°	50	56	61	66	71	70
90°	0	0	0	0	0	

TEST NUMBER: P562656

CATALOG NUMBER: FSR-24-4-LD4-2HI-50-UNV-93-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4366.5	4366.5	4366.5	4366.5	4366.5
2.5°	4336.2	4336.2	4336.2	4331.1	4331.1
5°	4290.7	4285.7	4285.7	4280.6	4280.6
7.5°	4255.4	4250.4	4245.3	4240.3	4230.2
10°	4204.9	4204.9	4199.9	4174.6	4169.6
12.5°	4124.2	4119.1	4098.9	4063.6	4053.5
15°	4013.1	4013.1	3972.7	3932.3	3917.2
17.5°	3892.0	3886.9	3836.4	3796.0	3775.9
20°	3760.7	3750.6	3700.1	3634.5	3599.2
22.5°	3614.3	3614.3	3553.7	3467.9	3432.6
25°	3478.0	3457.8	3402.3	3281.2	3190.3
27.5°	3321.5	3291.3	3230.7	3059.0	2953.0
30°	3149.9	3134.8	3049.0	2826.8	2746.1
32.5°	2988.4	2963.1	2872.3	2640.1	2574.4
35°	2821.8	2801.6	2665.3	2463.4	2402.8
37.5°	2655.2	2630.0	2458.3	2296.8	2221.1
40°	2488.6	2458.3	2271.6	2125.2	2044.4
42.5°	2332.1	2291.8	2110.0	1953.6	1862.7
45°	2165.6	2120.1	1938.4	1776.9	1706.2
47.5°	1999.0	1958.6	1792.0	1625.4	1544.7
50°	1822.3	1787.0	1635.5	1468.9	1383.1
52.5°	1675.9	1620.4	1474.0	1307.4	1236.7
55°	1504.3	1458.9	1322.6	1166.1	1105.5
57.5°	1347.8	1302.4	1176.2	1029.8	979.3
60°	1201.4	1135.8	1029.8	903.6	863.2
62.5°	1039.9	989.4	898.5	792.5	843.0
65°	893.5	843.0	762.2	777.4	646.1
67.5°	732.0	706.7	636.0	565.4	545.2
70°	595.7	565.4	540.1	464.4	444.2
72.5°	474.5	444.2	408.9	368.5	353.4
75°	358.4	333.2	313.0	297.8	328.1
77.5°	247.3	237.3	222.1	207.0	201.9
80°	161.5	156.5	151.4	146.4	141.3
82.5°	95.9	95.9	95.9	95.9	95.9
85°	50.5	55.5	60.6	65.6	70.7
87.5°	30.3	30.3	35.3	40.4	45.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)