

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: P563666

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563666
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-35-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14603.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

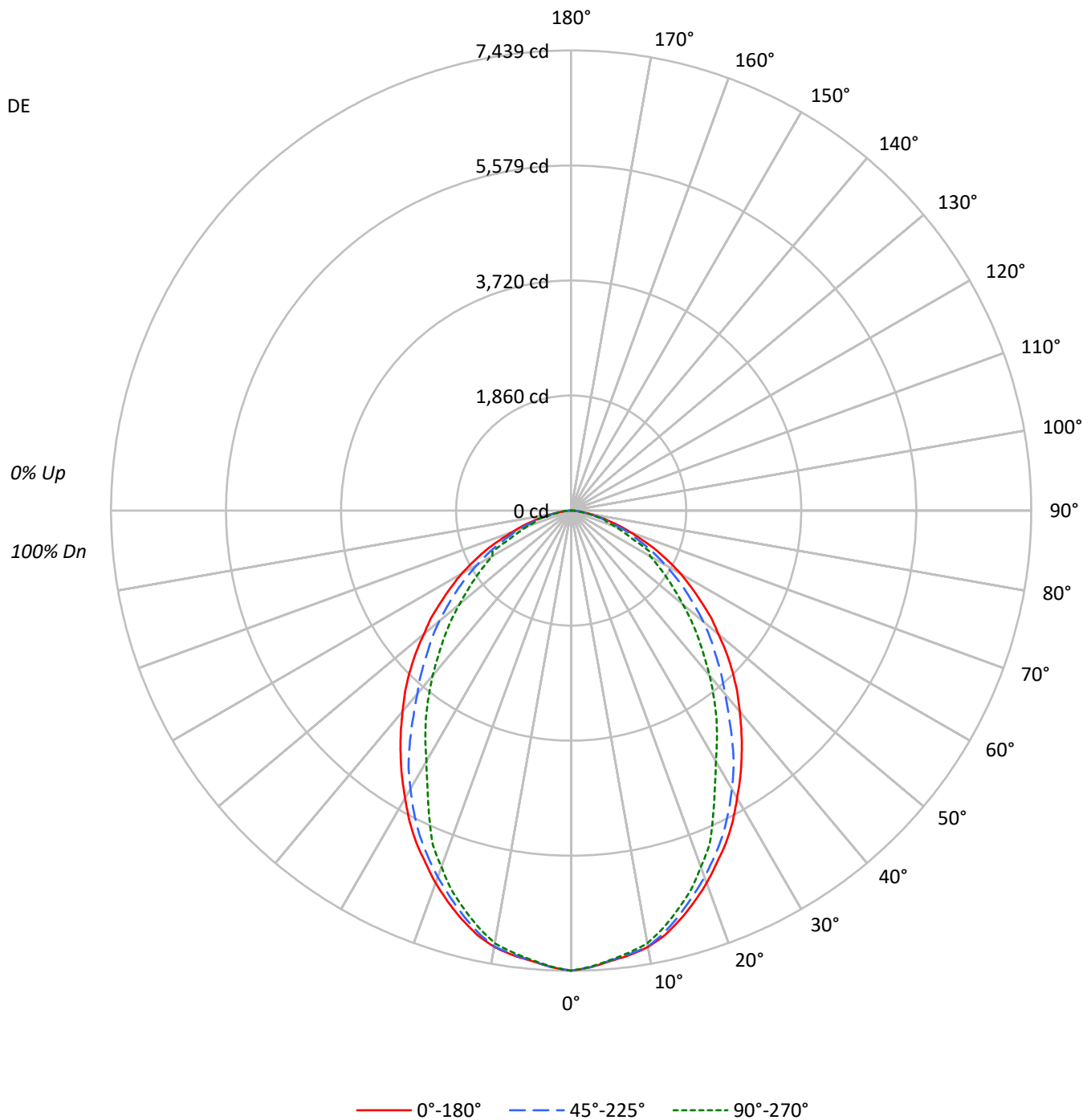
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563666

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-82-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563666

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-82-85-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	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°	10009	10009	10009
5°	9873	9861	9849
10°	9787	9775	9705
15°	9523	9427	9295
20°	9173	9025	8779
25°	8796	8605	8069
30°	8337	8070	7268
35°	7896	7458	6724
40°	7446	6797	6117
45°	7020	6283	5531
50°	6498	5832	4932
55°	6012	5285	4418
60°	5508	4721	3957
65°	4846	4134	3504
70°	3992	3620	2977
75°	3174	2772	2906
80°	2132	1999	1866
85°	1328	1593	1859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7020 cd/sqm



TEST NUMBER: P563666

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-82-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	692.4	4.7
10°-20°	1900.3	13.0
20°-30°	2630.9	18.0
30°-40°	2805.3	19.2
40°-50°	2559.2	17.5
50°-60°	2005.0	13.7
60°-70°	1306.7	8.9
70°-80°	579.0	4.0
80°-90°	124.3	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°	5223.6	35.8
0°-40°	8028.9	55.0
0°-60°	12593.0	86.2
0°-90°	14603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14603.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7439	7439	7439	7439	7439	
5°	7310	7301	7301	7292	7292	694
15°	6837	6837	6768	6699	6673	1922
25°	5925	5891	5796	5590	5435	2720
35°	4807	4773	4540	4197	4093	3005
45°	3689	3612	3302	3027	2907	2842
55°	2563	2485	2253	1986	1883	2299
65°	1522	1436	1298	1324	1101	1500
75°	611	568	533	507	559	654
85°	86	95	103	112	120	119
90°	0	0	0	0	0	



TEST NUMBER: P563666

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-82-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7438.6	7438.6	7438.6	7438.6	7438.6
2.5°	7387.0	7387.0	7387.0	7378.4	7378.4
5°	7309.6	7301.0	7301.0	7292.4	7292.4
7.5°	7249.4	7240.8	7232.2	7223.6	7206.4
10°	7163.4	7163.4	7154.8	7111.8	7103.2
12.5°	7025.8	7017.2	6982.8	6922.6	6905.4
15°	6836.6	6836.6	6767.8	6699.0	6673.2
17.5°	6630.2	6621.6	6535.6	6466.8	6432.4
20°	6406.6	6389.4	6303.4	6191.6	6131.4
22.5°	6157.2	6157.2	6054.1	5907.9	5847.7
25°	5925.1	5890.7	5796.1	5589.7	5434.9
27.5°	5658.5	5606.9	5503.7	5211.3	5030.7
30°	5366.1	5340.3	5194.1	4815.7	4678.1
32.5°	5090.9	5047.9	4893.1	4497.5	4385.7
35°	4807.1	4772.7	4540.5	4196.6	4093.4
37.5°	4523.3	4480.3	4188.0	3912.8	3783.8
40°	4239.6	4188.0	3869.8	3620.4	3482.8
42.5°	3973.0	3904.2	3594.6	3328.0	3173.2
45°	3689.2	3611.8	3302.2	3027.0	2906.6
47.5°	3405.4	3336.6	3052.8	2769.0	2631.4
50°	3104.4	3044.2	2786.2	2502.5	2356.3
52.5°	2855.0	2760.4	2511.1	2227.3	2106.9
55°	2562.7	2485.3	2253.1	1986.5	1883.3
57.5°	2296.1	2218.7	2003.7	1754.3	1668.3
60°	2046.7	1934.9	1754.3	1539.3	1470.5
62.5°	1771.5	1685.5	1530.7	1350.1	1436.1
65°	1522.1	1436.1	1298.5	1324.3	1100.7
67.5°	1246.9	1203.9	1083.5	963.1	928.7
70°	1014.7	963.1	920.1	791.2	756.8
72.5°	808.4	756.8	696.6	627.8	602.0
75°	610.6	567.6	533.2	507.4	559.0
77.5°	421.4	404.2	378.4	352.6	344.0
80°	275.2	266.6	258.0	249.4	240.8
82.5°	163.4	163.4	163.4	163.4	163.4
85°	86.0	94.6	103.2	111.8	120.4
87.5°	51.6	51.6	60.2	68.8	77.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)