

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: P563547

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563547
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-LD4-3STD-40-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11022.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

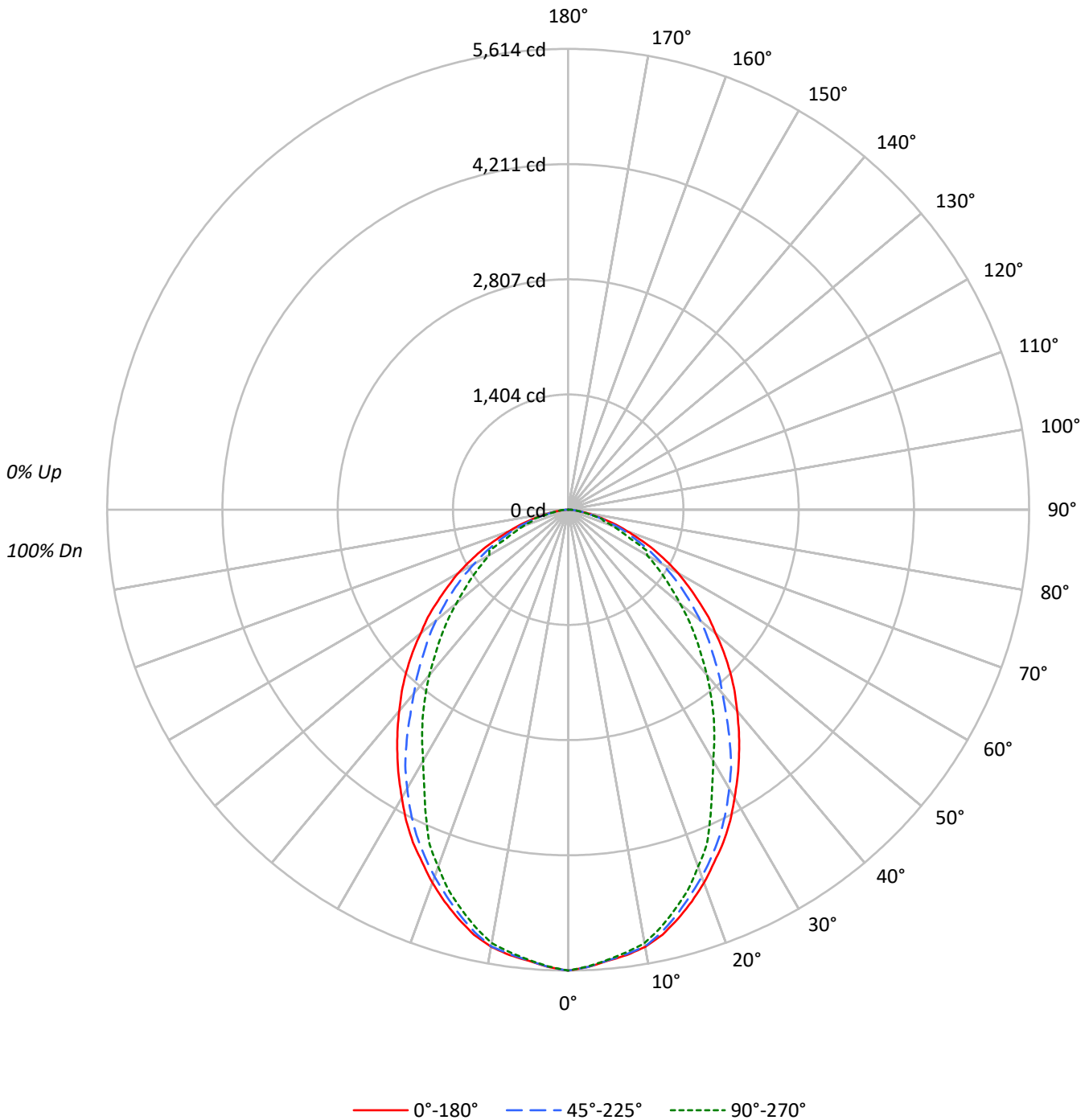
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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	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°	7554	7554	7554
5°	7452	7443	7434
10°	7387	7378	7325
15°	7188	7115	7016
20°	6924	6812	6626
25°	6639	6495	6090
30°	6293	6091	5486
35°	5960	5629	5075
40°	5620	5130	4617
45°	5298	4743	4175
50°	4905	4402	3723
55°	4537	3989	3335
60°	4157	3563	2987
65°	3658	3120	2645
70°	3013	2732	2247
75°	2396	2092	2193
80°	1609	1509	1408
85°	1002	1203	1403

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5298 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	522.6	4.7
10°-20°	1434.3	13.0
20°-30°	1985.7	18.0
30°-40°	2117.3	19.2
40°-50°	1931.6	17.5
50°-60°	1513.3	13.7
60°-70°	986.3	8.9
70°-80°	437.0	4.0
80°-90°	93.8	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°	3942.7	35.8
0°-40°	6060.0	55.0
0°-60°	9504.9	86.2
0°-90°	11022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5614	5614	5614	5614	5614	
5°	5517	5511	5511	5504	5504	524
15°	5160	5160	5108	5056	5037	1451
25°	4472	4446	4375	4219	4102	2053
35°	3628	3602	3427	3168	3090	2268
45°	2784	2726	2492	2285	2194	2145
55°	1934	1876	1701	1499	1422	1735
65°	1149	1084	980	1000	831	1132
75°	461	428	402	383	422	494
85°	65	71	78	84	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5614.5	5614.5	5614.5	5614.5	5614.5
2.5°	5575.5	5575.5	5575.5	5569.0	5569.0
5°	5517.1	5510.6	5510.6	5504.1	5504.1
7.5°	5471.7	5465.2	5458.7	5452.2	5439.2
10°	5406.8	5406.8	5400.3	5367.8	5361.3
12.5°	5302.9	5296.4	5270.5	5225.0	5212.0
15°	5160.1	5160.1	5108.2	5056.3	5036.8
17.5°	5004.3	4997.8	4932.9	4881.0	4855.0
20°	4835.6	4822.6	4757.7	4673.3	4627.9
22.5°	4647.3	4647.3	4569.5	4459.1	4413.7
25°	4472.1	4446.1	4374.7	4219.0	4102.1
27.5°	4270.9	4231.9	4154.1	3933.4	3797.1
30°	4050.2	4030.7	3920.4	3634.8	3530.9
32.5°	3842.5	3810.0	3693.2	3394.6	3310.3
35°	3628.3	3602.3	3427.1	3167.5	3089.6
37.5°	3414.1	3381.7	3161.0	2953.3	2855.9
40°	3199.9	3161.0	2920.8	2732.6	2628.7
42.5°	2998.7	2946.8	2713.1	2511.9	2395.1
45°	2784.5	2726.1	2492.4	2284.7	2193.9
47.5°	2570.3	2518.4	2304.2	2090.0	1986.2
50°	2343.1	2297.7	2103.0	1888.8	1778.5
52.5°	2154.9	2083.5	1895.3	1681.1	1590.2
55°	1934.2	1875.8	1700.6	1499.4	1421.5
57.5°	1733.0	1674.6	1512.3	1324.1	1259.2
60°	1544.8	1460.4	1324.1	1161.8	1109.9
62.5°	1337.1	1272.2	1155.3	1019.0	1083.9
65°	1148.9	1083.9	980.1	999.6	830.8
67.5°	941.2	908.7	817.8	727.0	701.0
70°	765.9	727.0	694.5	597.1	571.2
72.5°	610.1	571.2	525.7	473.8	454.3
75°	460.8	428.4	402.4	383.0	421.9
77.5°	318.0	305.1	285.6	266.1	259.6
80°	207.7	201.2	194.7	188.2	181.7
82.5°	123.3	123.3	123.3	123.3	123.3
85°	64.9	71.4	77.9	84.4	90.9
87.5°	38.9	38.9	45.4	51.9	58.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)