

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: P563877

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563877
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-LD4-4LO-35-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11318.0 lumens
Efficiency: N/A
Efficacy: 120.9 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

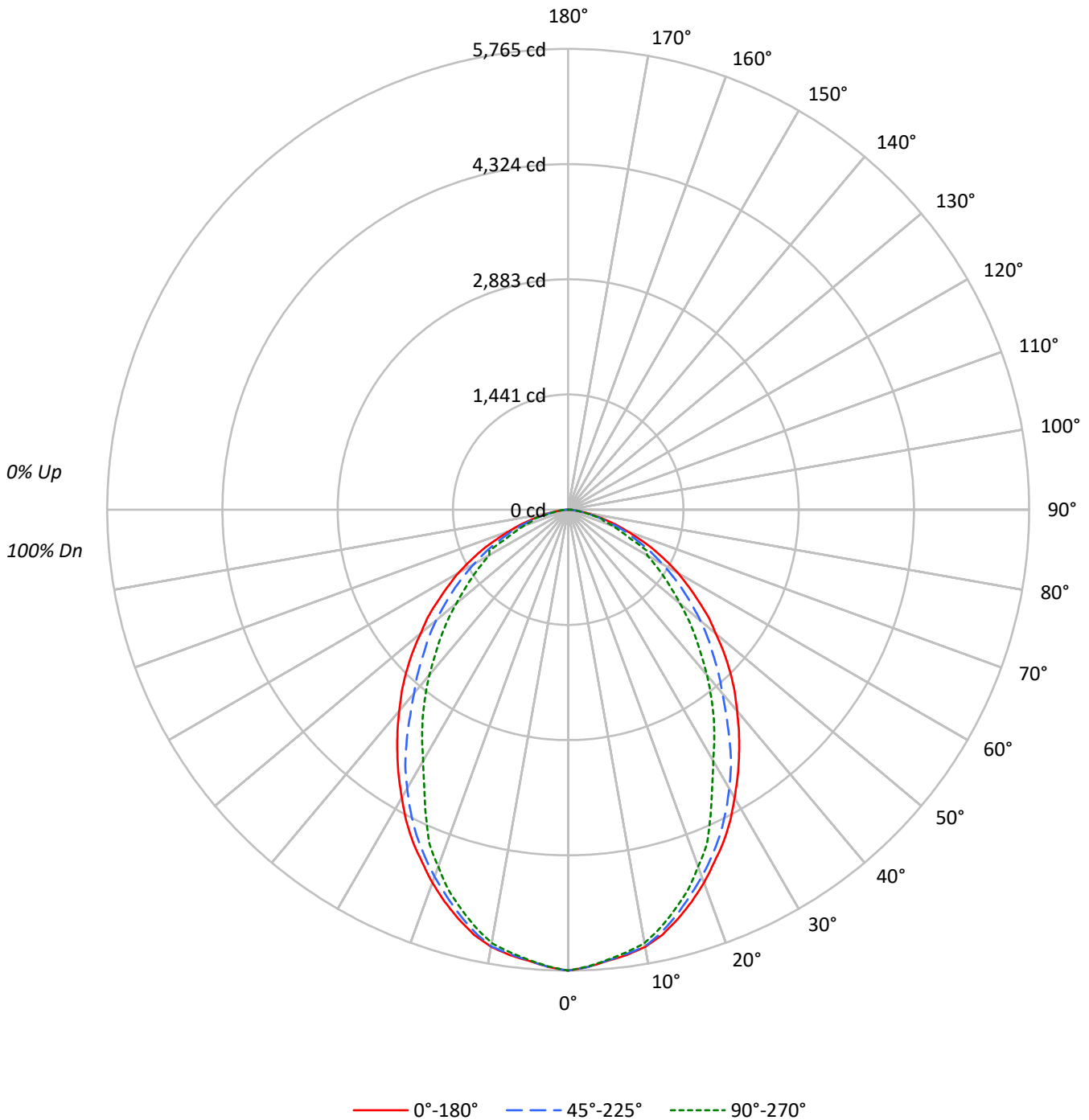
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563877

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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	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					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°	7757	7757	7757
5°	7652	7643	7634
10°	7585	7576	7522
15°	7381	7307	7204
20°	7110	6995	6804
25°	6818	6669	6254
30°	6462	6254	5633
35°	6120	5780	5211
40°	5771	5268	4741
45°	5441	4870	4287
50°	5036	4520	3823
55°	4659	4096	3424
60°	4269	3659	3067
65°	3756	3204	2716
70°	3094	2806	2307
75°	2460	2148	2252
80°	1653	1550	1446
85°	1030	1235	1440

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5441 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	536.7	4.7
10°-20°	1472.8	13.0
20°-30°	2039.0	18.0
30°-40°	2174.2	19.2
40°-50°	1983.5	17.5
50°-60°	1553.9	13.7
60°-70°	1012.8	8.9
70°-80°	448.7	4.0
80°-90°	96.3	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°	4048.5	35.8
0°-40°	6222.8	55.0
0°-60°	9760.2	86.2
0°-90°	11318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11318.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5765	5765	5765	5765	5765	
5°	5665	5659	5659	5652	5652	538
15°	5299	5299	5245	5192	5172	1490
25°	4592	4566	4492	4332	4212	2108
35°	3726	3699	3519	3252	3172	2329
45°	2859	2799	2559	2346	2253	2202
55°	1986	1926	1746	1540	1460	1781
65°	1180	1113	1006	1026	853	1163
75°	473	440	413	393	433	507
85°	67	73	80	87	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5765.2	5765.2	5765.2	5765.2	5765.2
2.5°	5725.2	5725.2	5725.2	5718.6	5718.6
5°	5665.3	5658.6	5658.6	5651.9	5651.9
7.5°	5618.6	5611.9	5605.3	5598.6	5585.3
10°	5552.0	5552.0	5545.3	5512.0	5505.3
12.5°	5445.3	5438.7	5412.0	5365.3	5352.0
15°	5298.7	5298.7	5245.4	5192.0	5172.1
17.5°	5138.7	5132.1	5065.4	5012.1	4985.4
20°	4965.4	4952.1	4885.5	4798.8	4752.2
22.5°	4772.2	4772.2	4692.2	4578.9	4532.2
25°	4592.2	4565.5	4492.2	4332.3	4212.3
27.5°	4385.6	4345.6	4265.6	4039.0	3899.0
30°	4159.0	4139.0	4025.7	3732.4	3625.8
32.5°	3945.7	3912.4	3792.4	3485.8	3399.2
35°	3725.7	3699.1	3519.1	3252.5	3172.5
37.5°	3505.8	3472.5	3245.9	3032.6	2932.6
40°	3285.9	3245.9	2999.3	2806.0	2699.3
42.5°	3079.2	3025.9	2786.0	2579.4	2459.4
45°	2859.3	2799.3	2559.4	2346.1	2252.8
47.5°	2639.3	2586.0	2366.1	2146.1	2039.5
50°	2406.1	2359.4	2159.5	1939.5	1826.2
52.5°	2212.8	2139.5	1946.2	1726.2	1632.9
55°	1986.2	1926.2	1746.2	1539.6	1459.6
57.5°	1779.6	1719.6	1552.9	1359.7	1293.0
60°	1586.3	1499.6	1359.7	1193.0	1139.7
62.5°	1373.0	1306.3	1186.4	1046.4	1113.1
65°	1179.7	1113.1	1006.4	1026.4	853.1
67.5°	966.4	933.1	839.8	746.5	719.8
70°	786.5	746.5	713.2	613.2	586.5
72.5°	626.5	586.5	539.9	486.5	466.6
75°	473.2	439.9	413.2	393.2	433.2
77.5°	326.6	313.3	293.3	273.3	266.6
80°	213.3	206.6	200.0	193.3	186.6
82.5°	126.6	126.6	126.6	126.6	126.6
85°	66.7	73.3	80.0	86.6	93.3
87.5°	40.0	40.0	46.7	53.3	60.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)