

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: P563194

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563194
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-LD4-3HI-50-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12862.0 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

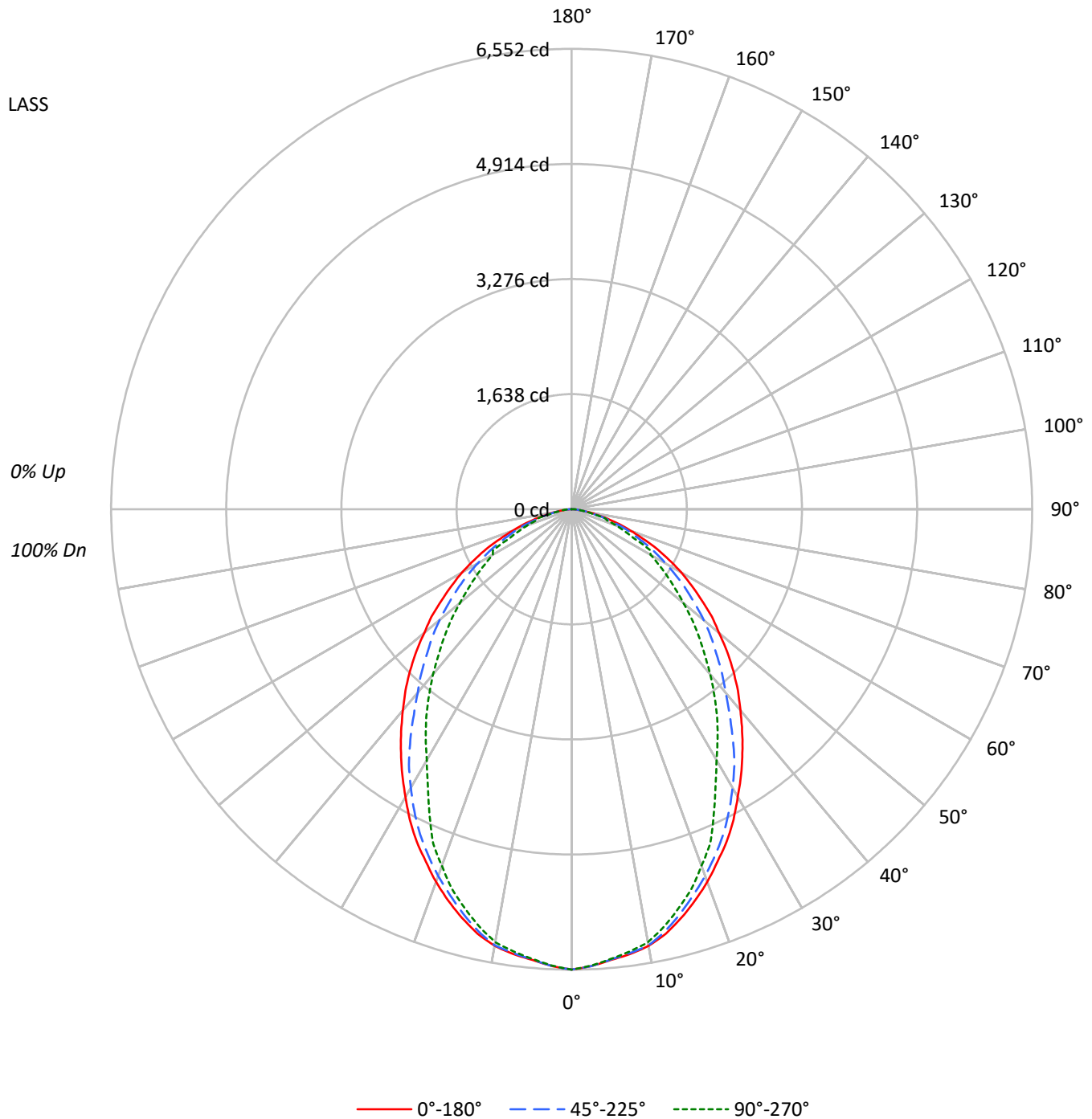
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8815	8815	8815
5°	8695	8685	8675
10°	8620	8610	8548
15°	8388	8303	8187
20°	8080	7949	7733
25°	7748	7579	7107
30°	7343	7108	6402
35°	6955	6569	5922
40°	6559	5987	5388
45°	6183	5534	4871
50°	5723	5137	4344
55°	5295	4655	3891
60°	4851	4158	3485
65°	4268	3641	3087
70°	3516	3188	2622
75°	2796	2441	2559
80°	1878	1760	1643
85°	1169	1403	1636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6183 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	609.9	4.7
10°-20°	1673.8	13.0
20°-30°	2317.2	18.0
30°-40°	2470.8	19.2
40°-50°	2254.1	17.5
50°-60°	1765.9	13.7
60°-70°	1150.9	8.9
70°-80°	509.9	4.0
80°-90°	109.5	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°	4600.8	35.8
0°-40°	7071.7	55.0
0°-60°	11091.7	86.2
0°-90°	12862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6552	6552	6552	6552	6552	
5°	6438	6430	6430	6423	6423	611
15°	6022	6022	5961	5900	5878	1693
25°	5219	5188	5105	4923	4787	2396
35°	4234	4204	3999	3696	3605	2647
45°	3249	3181	2908	2666	2560	2503
55°	2257	2189	1984	1750	1659	2024
65°	1341	1265	1144	1166	970	1321
75°	538	500	470	447	492	576
85°	76	83	91	98	106	105
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6551.7	6551.7	6551.7	6551.7	6551.7
2.5°	6506.3	6506.3	6506.3	6498.7	6498.7
5°	6438.1	6430.5	6430.5	6423.0	6423.0
7.5°	6385.1	6377.5	6369.9	6362.4	6347.2
10°	6309.4	6309.4	6301.8	6263.9	6256.3
12.5°	6188.2	6180.6	6150.3	6097.3	6082.1
15°	6021.5	6021.5	5960.9	5900.3	5877.6
17.5°	5839.8	5832.2	5756.4	5695.8	5665.5
20°	5642.8	5627.7	5551.9	5453.5	5400.4
22.5°	5423.2	5423.2	5332.3	5203.5	5150.5
25°	5218.7	5188.4	5105.0	4923.3	4786.9
27.5°	4983.9	4938.4	4847.5	4590.0	4430.9
30°	4726.3	4703.6	4574.9	4241.6	4120.4
32.5°	4484.0	4446.1	4309.8	3961.3	3862.9
35°	4234.0	4203.7	3999.2	3696.2	3605.3
37.5°	3984.1	3946.2	3688.7	3446.3	3332.7
40°	3734.1	3688.7	3408.4	3188.8	3067.6
42.5°	3499.3	3438.7	3166.0	2931.2	2794.9
45°	3249.4	3181.2	2908.5	2666.1	2560.1
47.5°	2999.4	2938.8	2688.9	2438.9	2317.7
50°	2734.3	2681.3	2454.1	2204.1	2075.3
52.5°	2514.7	2431.3	2211.7	1961.7	1855.7
55°	2257.1	2189.0	1984.5	1749.7	1658.8
57.5°	2022.3	1954.2	1764.8	1545.1	1469.4
60°	1802.7	1704.2	1545.1	1355.8	1295.2
62.5°	1560.3	1484.6	1348.2	1189.2	1264.9
65°	1340.6	1264.9	1143.7	1166.4	969.5
67.5°	1098.3	1060.4	954.4	848.3	818.0
70°	893.8	848.3	810.4	696.8	666.5
72.5°	712.0	666.5	613.5	552.9	530.2
75°	537.8	499.9	469.6	446.9	492.3
77.5°	371.1	356.0	333.3	310.5	303.0
80°	242.4	234.8	227.2	219.7	212.1
82.5°	143.9	143.9	143.9	143.9	143.9
85°	75.7	83.3	90.9	98.5	106.0
87.5°	45.4	45.4	53.0	60.6	68.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)