

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: P563246

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563246
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-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12288.0 lumens
Efficiency: N/A
Efficacy: 94.8 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

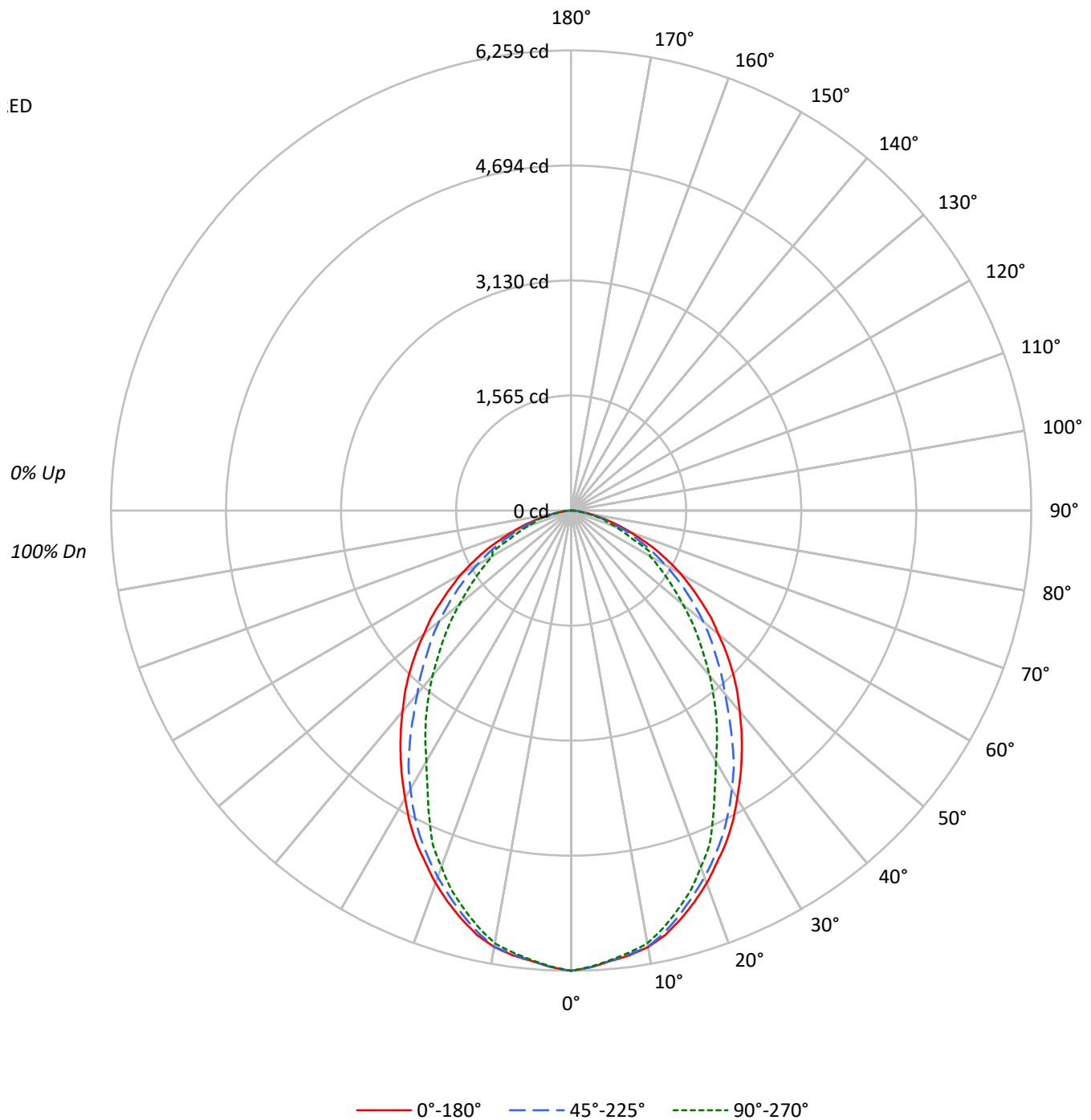
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8422	8422	8422
5°	8307	8298	8288
10°	8235	8225	8166
15°	8013	7933	7822
20°	7719	7595	7387
25°	7402	7241	6789
30°	7015	6790	6116
35°	6644	6276	5658
40°	6266	5719	5148
45°	5907	5287	4654
50°	5468	4908	4150
55°	5058	4447	3717
60°	4634	3972	3330
65°	4078	3479	2949
70°	3359	3046	2505
75°	2671	2332	2445
80°	1795	1682	1570
85°	1118	1340	1564

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5907 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	582.7	4.7
10°-20°	1599.1	13.0
20°-30°	2213.8	18.0
30°-40°	2360.6	19.2
40°-50°	2153.5	17.5
50°-60°	1687.1	13.7
60°-70°	1099.6	8.9
70°-80°	487.2	4.0
80°-90°	104.6	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°	4395.5	35.8
0°-40°	6756.1	55.0
0°-60°	10596.7	86.2
0°-90°	12288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6259	6259	6259	6259	6259	
5°	6151	6144	6144	6136	6136	584
15°	5753	5753	5695	5637	5615	1617
25°	4986	4957	4877	4704	4573	2289
35°	4045	4016	3821	3531	3444	2529
45°	3104	3039	2779	2547	2446	2391
55°	2156	2091	1896	1672	1585	1934
65°	1281	1208	1093	1114	926	1262
75°	514	478	449	427	470	551
85°	72	80	87	94	101	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6259.3	6259.3	6259.3	6259.3	6259.3
2.5°	6215.9	6215.9	6215.9	6208.7	6208.7
5°	6150.8	6143.6	6143.6	6136.3	6136.3
7.5°	6100.1	6092.9	6085.7	6078.4	6064.0
10°	6027.8	6027.8	6020.5	5984.4	5977.1
12.5°	5912.0	5904.8	5875.8	5825.2	5810.7
15°	5752.8	5752.8	5694.9	5637.0	5615.3
17.5°	5579.1	5571.9	5499.5	5441.6	5412.7
20°	5391.0	5376.5	5304.2	5210.1	5159.4
22.5°	5181.1	5181.1	5094.3	4971.3	4920.6
25°	4985.8	4956.8	4877.2	4703.6	4573.3
27.5°	4761.4	4718.0	4631.2	4385.2	4233.2
30°	4515.4	4493.7	4370.7	4052.3	3936.5
32.5°	4283.9	4247.7	4117.4	3784.6	3690.5
35°	4045.1	4016.1	3820.7	3531.3	3444.4
37.5°	3806.3	3770.1	3524.0	3292.5	3183.9
40°	3567.5	3524.0	3256.3	3046.5	2930.7
42.5°	3343.1	3285.3	3024.7	2800.4	2670.2
45°	3104.3	3039.2	2778.7	2547.2	2445.8
47.5°	2865.5	2807.7	2568.9	2330.1	2214.3
50°	2612.3	2561.6	2344.5	2105.7	1982.7
52.5°	2402.4	2322.8	2113.0	1874.2	1772.9
55°	2156.4	2091.3	1895.9	1671.6	1584.7
57.5°	1932.1	1866.9	1686.0	1476.2	1403.8
60°	1722.2	1628.2	1476.2	1295.3	1237.4
62.5°	1490.7	1418.3	1288.0	1136.1	1208.5
65°	1280.8	1208.5	1092.7	1114.4	926.2
67.5°	1049.3	1013.1	911.8	810.5	781.5
70°	853.9	810.5	774.3	665.7	636.8
72.5°	680.2	636.8	586.1	528.2	506.5
75°	513.8	477.6	448.6	426.9	470.4
77.5°	354.6	340.1	318.4	296.7	289.4
80°	231.6	224.3	217.1	209.9	202.6
82.5°	137.5	137.5	137.5	137.5	137.5
85°	72.4	79.6	86.8	94.1	101.3
87.5°	43.4	43.4	50.7	57.9	65.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)