

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P487088

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-50-120-EDD-90**

Issue Date: 3/1/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P487088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35357)
Test Lab: INNOVATION CENTER
Issue Date: 3/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-89BC-LD4-5LO-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

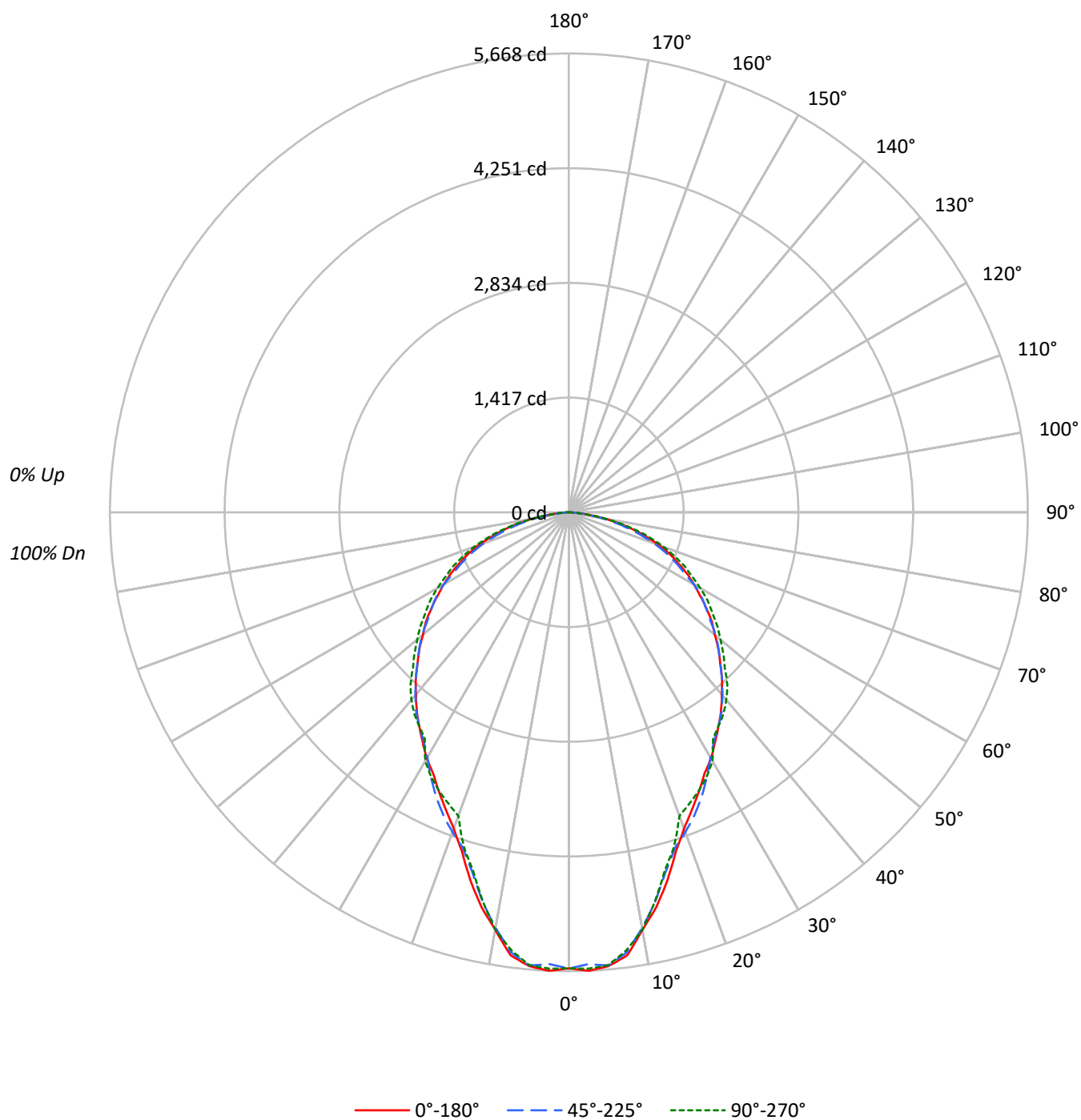
Lumens per Lamp: N/A
Luminaire Lumens: 12046.6 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
Input Voltage (V): NR
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: 25 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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84			
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31			
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28			
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7579	7579	7579
5°	7600	7588	7580
10°	7152	7120	7148
15°	6553	6410	6373
20°	5952	6019	5712
25°	5645	5758	5636
30°	5452	5429	5511
35°	5292	5292	5292
40°	5160	5181	5310
45°	5033	5028	5184
50°	4924	4960	5114
55°	4872	4851	5071
60°	4808	4800	5045
65°	4747	4598	5017
70°	4655	4390	4886
75°	4310	3898	4523
80°	3495	3178	3586
85°	2215	1990	1945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	523.2	4.3
10°-20°	1308.0	10.9
20°-30°	1766.4	14.7
30°-40°	2022.8	16.8
40°-50°	2072.0	17.2
50°-60°	1880.0	15.6
60°-70°	1467.3	12.2
70°-80°	832.2	6.9
80°-90°	174.7	1.5
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°	3597.5	29.9
0°-40°	5620.3	46.7
0°-60°	9572.3	79.5
0°-90°	12046.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12046.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5633	5633	5633	5633	5633	
5°	5627	5563	5618	5630	5612	526
15°	4704	4719	4602	4625	4575	1315
25°	3802	3852	3878	3785	3796	1754
35°	3222	3228	3222	3225	3222	2018
45°	2645	2666	2642	2750	2724	2045
55°	2077	2074	2068	2141	2162	1856
65°	1491	1459	1444	1512	1576	1478
75°	829	768	750	794	870	867
85°	144	129	129	120	126	190
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5632.9	5632.9	5632.9	5632.9	5632.9
2.5°	5668.0	5624.1	5586.0	5647.5	5641.7
5°	5627.0	5562.6	5618.2	5630.0	5612.4
7.5°	5518.7	5477.6	5480.6	5457.1	5454.2
10°	5234.5	5258.0	5211.1	5252.1	5231.6
12.5°	4991.4	5006.0	4924.0	4941.6	4918.2
15°	4704.3	4719.0	4601.8	4625.2	4575.4
17.5°	4390.9	4443.6	4347.0	4376.3	4323.5
20°	4156.6	4200.5	4203.4	4156.6	3989.6
22.5°	3972.0	4016.0	4051.1	3910.5	3892.9
25°	3802.1	3851.9	3878.3	3784.6	3796.3
27.5°	3632.2	3687.9	3687.9	3708.4	3682.0
30°	3509.2	3532.6	3494.6	3570.7	3547.3
32.5°	3362.7	3371.5	3339.3	3395.0	3312.9
35°	3222.1	3228.0	3222.1	3225.1	3222.1
37.5°	3087.4	3072.8	3099.1	3081.5	3137.2
40°	2938.0	2938.0	2949.7	2979.0	3023.0
42.5°	2800.3	2812.1	2797.4	2879.4	2897.0
45°	2645.1	2665.6	2642.2	2750.5	2724.2
47.5°	2504.5	2513.3	2507.4	2580.6	2586.5
50°	2352.2	2363.9	2369.7	2434.2	2443.0
52.5°	2226.2	2223.3	2202.8	2296.5	2311.2
55°	2076.8	2073.9	2068.0	2141.3	2161.8
57.5°	1924.5	1927.4	1942.1	1983.1	2032.9
60°	1786.8	1772.2	1783.9	1833.7	1874.7
62.5°	1646.2	1619.9	1593.5	1675.5	1713.6
65°	1491.0	1458.8	1444.1	1511.5	1575.9
67.5°	1347.4	1294.7	1285.9	1332.8	1409.0
70°	1183.4	1119.0	1116.0	1151.2	1242.0
72.5°	1001.8	946.1	931.5	978.4	1060.4
75°	829.0	767.5	749.9	793.8	870.0
77.5°	641.5	591.7	580.0	603.4	664.9
80°	451.1	421.8	410.1	418.9	462.8
82.5°	284.1	263.6	257.8	254.8	278.3
85°	143.5	128.9	128.9	120.1	126.0
87.5°	43.9	41.0	38.1	29.3	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)