

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: P487136

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6STD-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: P487136  
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-LD4-6STD-50-120-EDD-90  
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

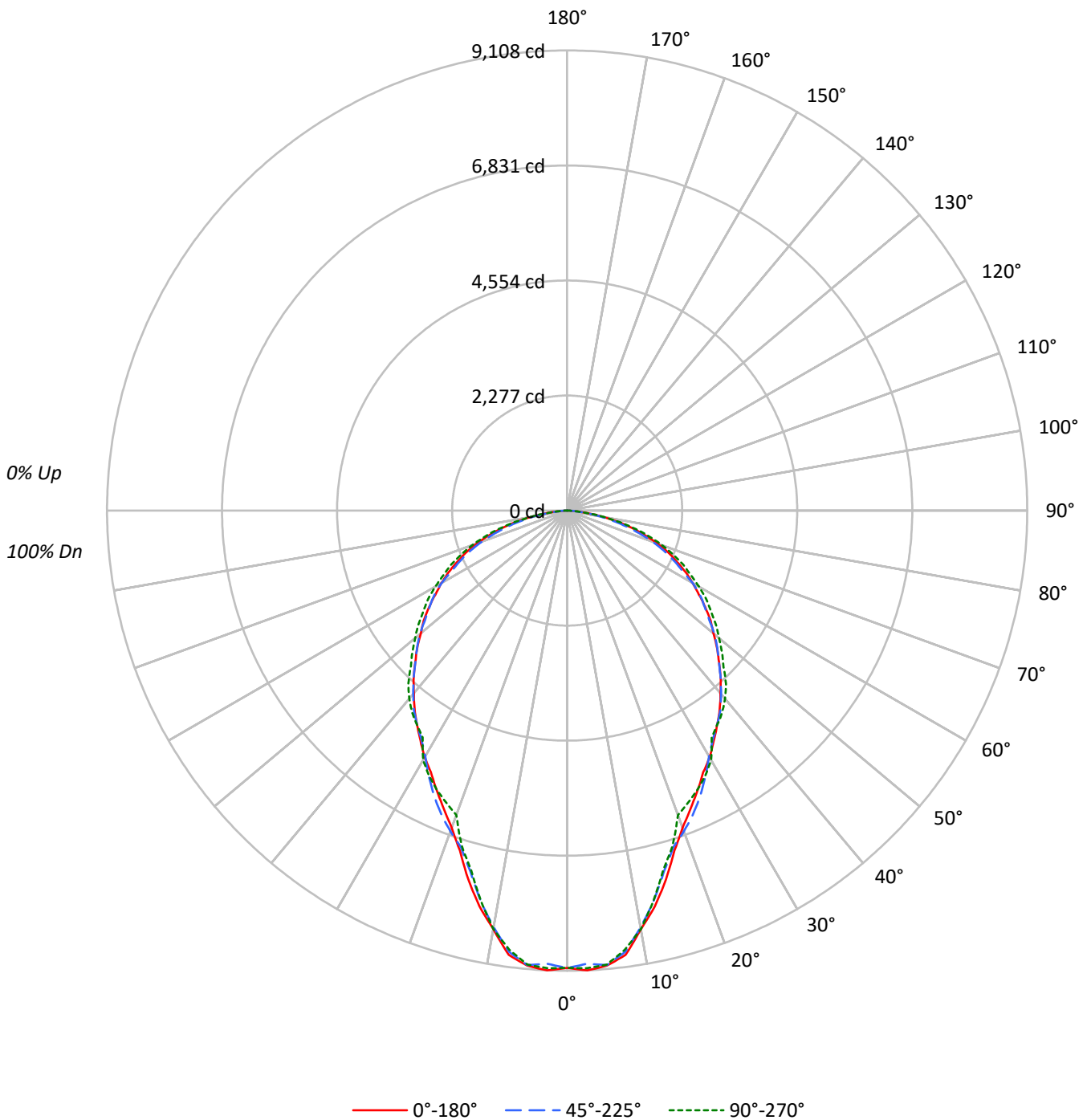
Lumens per Lamp: N/A  
Luminaire Lumens: 19358.9 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 199.8  
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°	12180	12180	12180
5°	12213	12194	12181
10°	11493	11441	11486
15°	10531	10301	10242
20°	9564	9672	9180
25°	9071	9253	9057
30°	8761	8725	8857
35°	8505	8505	8505
40°	8293	8326	8532
45°	8088	8079	8330
50°	7912	7971	8218
55°	7829	7796	8149
60°	7727	7714	8107
65°	7628	7388	8063
70°	7481	7056	7852
75°	6926	6265	7268
80°	5617	5106	5762
85°	3561	3197	3125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	840.7	4.3
10°-20°	2101.9	10.9
20°-30°	2838.6	14.7
30°-40°	3250.6	16.8
40°-50°	3329.7	17.2
50°-60°	3021.2	15.6
60°-70°	2358.0	12.2
70°-80°	1337.4	6.9
80°-90°	280.7	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°	5781.2	29.9
0°-40°	9031.9	46.7
0°-60°	15382.8	79.5
0°-90°	19358.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19358.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9052	9052	9052	9052	9052	
5°	9043	8939	9028	9047	9019	845
15°	7560	7583	7395	7433	7353	2113
25°	6110	6190	6232	6082	6101	2819
35°	5178	5187	5178	5183	5178	3244
45°	4251	4284	4246	4420	4378	3286
55°	3337	3333	3323	3441	3474	2983
65°	2396	2344	2321	2429	2532	2375
75°	1332	1233	1205	1276	1398	1394
85°	231	207	207	193	202	305
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	9052.1	9052.1	9052.1	9052.1	9052.1
2.5°	9108.5	9037.9	8976.7	9075.6	9066.2
5°	9042.6	8939.1	9028.5	9047.4	9019.1
7.5°	8868.5	8802.6	8807.3	8769.6	8764.9
10°	8411.9	8449.5	8374.2	8440.1	8407.2
12.5°	8021.2	8044.7	7912.9	7941.1	7903.5
15°	7559.9	7583.4	7395.1	7432.8	7352.7
17.5°	7056.2	7140.9	6985.6	7032.6	6947.9
20°	6679.6	6750.2	6754.9	6679.6	6411.3
22.5°	6383.0	6453.7	6510.1	6284.2	6255.9
25°	6110.0	6190.0	6232.4	6081.8	6100.6
27.5°	5837.0	5926.4	5926.4	5959.4	5917.0
30°	5639.3	5677.0	5615.8	5738.2	5700.5
32.5°	5403.9	5418.1	5366.3	5455.7	5323.9
35°	5178.0	5187.4	5178.0	5182.7	5178.0
37.5°	4961.5	4937.9	4980.3	4952.0	5041.5
40°	4721.4	4721.4	4740.2	4787.3	4857.9
42.5°	4500.1	4519.0	4495.4	4627.2	4655.5
45°	4250.7	4283.6	4245.9	4420.1	4377.8
47.5°	4024.7	4038.8	4029.4	4147.1	4156.5
50°	3779.9	3798.8	3808.2	3911.7	3925.9
52.5°	3577.5	3572.8	3539.9	3690.5	3714.0
55°	3337.4	3332.7	3323.3	3441.0	3474.0
57.5°	3092.7	3097.4	3120.9	3186.8	3266.8
60°	2871.4	2847.9	2866.7	2946.7	3012.6
62.5°	2645.5	2603.1	2560.7	2692.6	2753.7
65°	2396.0	2344.2	2320.7	2428.9	2532.5
67.5°	2165.3	2080.6	2066.5	2141.8	2264.2
70°	1901.7	1798.2	1793.5	1850.0	1995.9
72.5°	1609.9	1520.4	1496.9	1572.2	1704.0
75°	1332.2	1233.3	1205.1	1275.7	1398.1
77.5°	1030.9	950.9	932.0	969.7	1068.5
80°	724.9	677.8	659.0	673.1	743.7
82.5°	456.6	423.7	414.2	409.5	447.2
85°	230.7	207.1	207.1	193.0	202.4
87.5°	70.6	65.9	61.2	47.1	51.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)