

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: P484998

Luminaire Tested: **ORLG-12-4-INS-89BC-LD4-1LO-40-120-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: P484998  
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-12-4-INS-89BC-LD4-1LO-40-120-EDD-90  
Description: 1X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

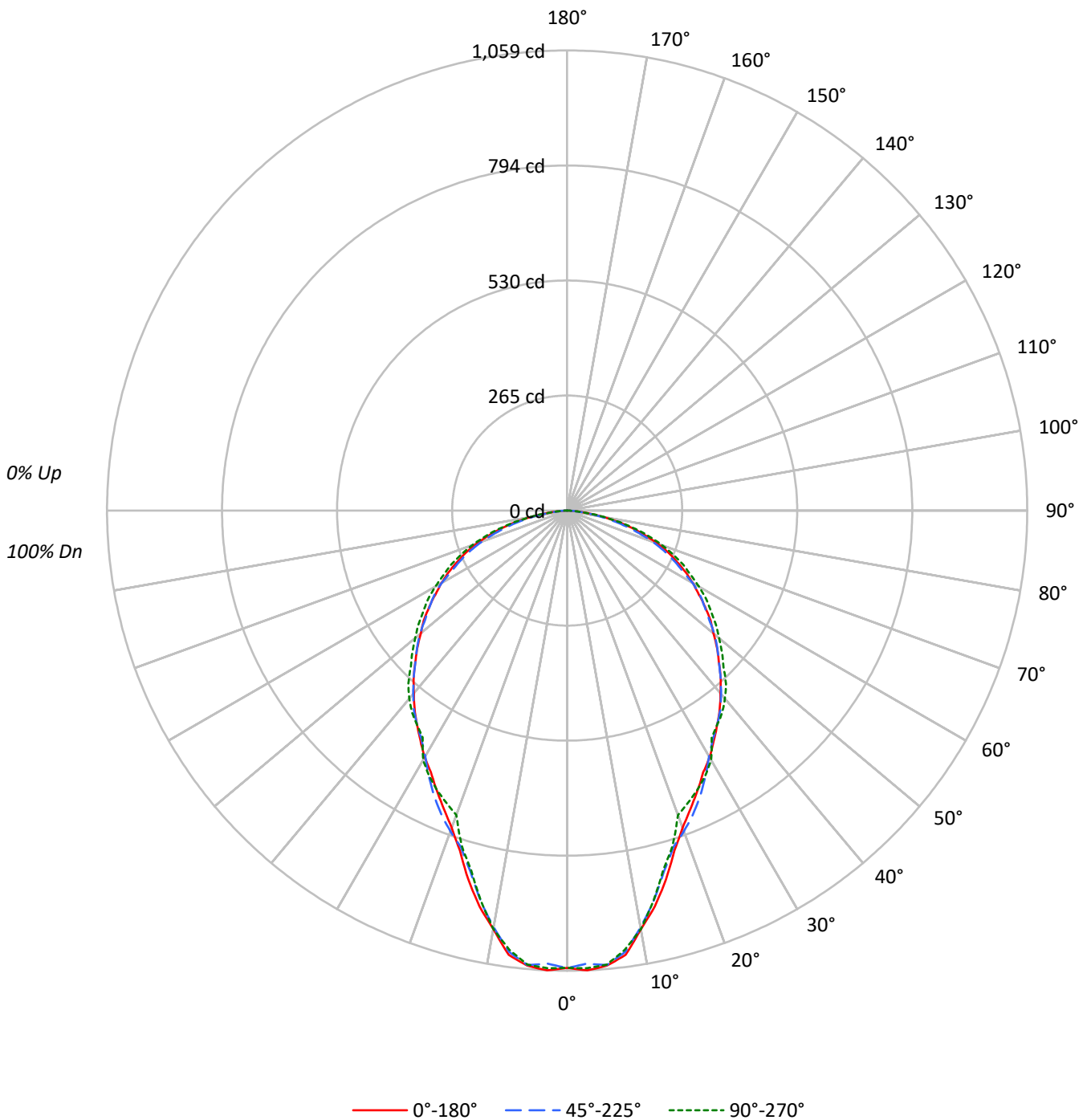
Lumens per Lamp: N/A  
Luminaire Lumens: 2250.8 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2832	2832	2832
5°	2840	2836	2833
10°	2672	2660	2671
15°	2449	2395	2382
20°	2224	2249	2135
25°	2109	2151	2106
30°	2037	2029	2060
35°	1978	1978	1978
40°	1928	1936	1984
45°	1881	1879	1937
50°	1840	1854	1911
55°	1820	1813	1895
60°	1797	1794	1885
65°	1774	1718	1875
70°	1740	1640	1826
75°	1611	1457	1690
80°	1306	1187	1340
85°	827	744	726



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.7	4.3
10°-20°	244.4	10.9
20°-30°	330.0	14.7
30°-40°	377.9	16.8
40°-50°	387.1	17.2
50°-60°	351.3	15.6
60°-70°	274.2	12.2
70°-80°	155.5	6.9
80°-90°	32.6	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°	672.2	29.9
0°-40°	1050.1	46.7
0°-60°	1788.5	79.5
0°-90°	2250.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2250.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1039	1050	1052	1049	98
15°	879	882	860	864	855	246
25°	710	720	725	707	709	328
35°	602	603	602	603	602	377
45°	494	498	494	514	509	382
55°	388	388	386	400	404	347
65°	279	273	270	282	294	276
75°	155	143	140	148	162	162
85°	27	24	24	22	24	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1052.5	1052.5	1052.5	1052.5	1052.5
2.5°	1059.0	1050.8	1043.7	1055.2	1054.1
5°	1051.4	1039.3	1049.7	1051.9	1048.6
7.5°	1031.1	1023.4	1024.0	1019.6	1019.1
10°	978.0	982.4	973.6	981.3	977.5
12.5°	932.6	935.3	920.0	923.3	918.9
15°	879.0	881.7	859.8	864.2	854.9
17.5°	820.4	830.3	812.2	817.7	807.8
20°	776.6	784.8	785.4	776.6	745.4
22.5°	742.1	750.3	756.9	730.6	727.4
25°	710.4	719.7	724.6	707.1	709.3
27.5°	678.7	689.0	689.0	692.9	688.0
30°	655.7	660.0	652.9	667.2	662.8
32.5°	628.3	629.9	623.9	634.3	619.0
35°	602.0	603.1	602.0	602.6	602.0
37.5°	576.9	574.1	579.0	575.8	586.2
40°	548.9	548.9	551.1	556.6	564.8
42.5°	523.2	525.4	522.7	538.0	541.3
45°	494.2	498.0	493.7	513.9	509.0
47.5°	467.9	469.6	468.5	482.2	483.3
50°	439.5	441.7	442.8	454.8	456.4
52.5°	415.9	415.4	411.6	429.1	431.8
55°	388.0	387.5	386.4	400.1	403.9
57.5°	359.6	360.1	362.9	370.5	379.8
60°	333.9	331.1	333.3	342.6	350.3
62.5°	307.6	302.7	297.7	313.1	320.2
65°	278.6	272.6	269.8	282.4	294.4
67.5°	251.8	241.9	240.3	249.0	263.3
70°	221.1	209.1	208.5	215.1	232.1
72.5°	187.2	176.8	174.0	182.8	198.1
75°	154.9	143.4	140.1	148.3	162.5
77.5°	119.9	110.6	108.4	112.7	124.2
80°	84.3	78.8	76.6	78.3	86.5
82.5°	53.1	49.3	48.2	47.6	52.0
85°	26.8	24.1	24.1	22.4	23.5
87.5°	8.2	7.7	7.1	5.5	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)