

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: P485017

Luminaire Tested: **ORLG-12-4-INS-89BC-LD4-2HI-27-120-EDD**

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: P485017  
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-LD4-2HI-27-120-EDD  
Description: 1X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

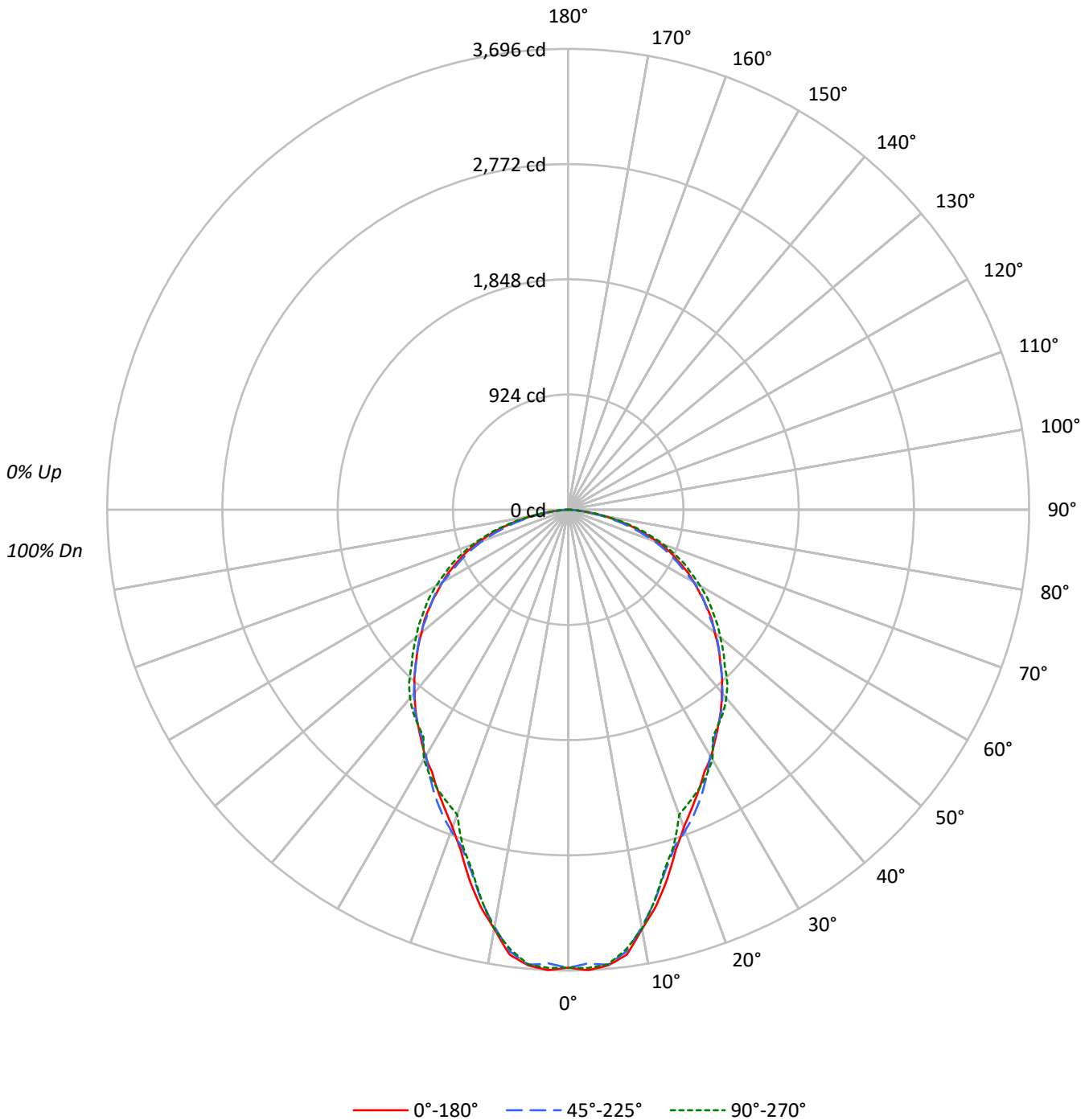
Lumens per Lamp: N/A  
Luminaire Lumens: 7855.0 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 88  
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

TEST NUMBER: P485017

CATALOG NUMBER: ORLG-12-4-INS-89BC-LD4-2HI-27-120-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P485017

CATALOG NUMBER: ORLG-12-4-INS-89BC-LD4-2HI-27-120-EDD

**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°	9884	9884	9884
5°	9911	9896	9886
10°	9327	9285	9321
15°	8546	8359	8311
20°	7761	7849	7450
25°	7361	7508	7350
30°	7110	7080	7187
35°	6902	6902	6902
40°	6730	6757	6924
45°	6564	6556	6760
50°	6421	6469	6669
55°	6353	6327	6613
60°	6271	6260	6579
65°	6190	5996	6543
70°	6071	5725	6371
75°	5620	5084	5898
80°	4558	4144	4677
85°	2890	2594	2535



TEST NUMBER: P485017

CATALOG NUMBER: ORLG-12-4-INS-89BC-LD4-2HI-27-120-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	341.1	4.3
10°-20°	852.9	10.9
20°-30°	1151.8	14.7
30°-40°	1319.0	16.8
40°-50°	1351.0	17.2
50°-60°	1225.9	15.6
60°-70°	956.8	12.2
70°-80°	542.7	6.9
80°-90°	113.9	1.4
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°	2345.8	29.9
0°-40°	3664.7	46.7
0°-60°	6241.7	79.5
0°-90°	7855.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7855.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3673	3673	3673	3673	3673	
5°	3669	3627	3663	3671	3660	343
15°	3068	3077	3001	3016	2983	857
25°	2479	2512	2529	2468	2475	1144
35°	2101	2105	2101	2103	2101	1316
45°	1725	1738	1723	1794	1776	1334
55°	1354	1352	1348	1396	1410	1210
65°	972	951	942	986	1028	963
75°	540	500	489	518	567	565
85°	94	84	84	78	82	124
90°	0	0	0	0	0	



TEST NUMBER: P485017

CATALOG NUMBER: ORLG-12-4-INS-89BC-LD4-2HI-27-120-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3672.9	3672.9	3672.9	3672.9	3672.9
2.5°	3695.9	3667.2	3642.4	3682.5	3678.7
5°	3669.1	3627.1	3663.4	3671.0	3659.6
7.5°	3598.4	3571.7	3573.6	3558.3	3556.4
10°	3413.2	3428.5	3397.9	3424.6	3411.3
12.5°	3254.6	3264.2	3210.7	3222.2	3206.9
15°	3067.5	3077.0	3000.6	3015.9	2983.4
17.5°	2863.1	2897.5	2834.4	2853.5	2819.2
20°	2710.3	2738.9	2740.9	2710.3	2601.4
22.5°	2590.0	2618.6	2641.5	2549.9	2538.4
25°	2479.2	2511.7	2528.8	2467.7	2475.4
27.5°	2368.4	2404.7	2404.7	2418.1	2400.9
30°	2288.2	2303.5	2278.6	2328.3	2313.0
32.5°	2192.7	2198.4	2177.4	2213.7	2160.2
35°	2101.0	2104.8	2101.0	2102.9	2101.0
37.5°	2013.1	2003.6	2020.8	2009.3	2045.6
40°	1915.7	1915.7	1923.4	1942.5	1971.1
42.5°	1826.0	1833.6	1824.1	1877.5	1889.0
45°	1724.7	1738.1	1722.8	1793.5	1776.3
47.5°	1633.1	1638.8	1635.0	1682.7	1686.5
50°	1533.7	1541.4	1545.2	1587.2	1592.9
52.5°	1451.6	1449.7	1436.3	1497.4	1507.0
55°	1354.2	1352.3	1348.5	1396.2	1409.6
57.5°	1254.9	1256.8	1266.3	1293.1	1325.5
60°	1165.1	1155.6	1163.2	1195.7	1222.4
62.5°	1073.4	1056.2	1039.0	1092.5	1117.4
65°	972.2	951.2	941.6	985.6	1027.6
67.5°	878.6	844.2	838.5	869.1	918.7
70°	771.6	729.6	727.7	750.6	809.8
72.5°	653.2	616.9	607.4	637.9	691.4
75°	540.5	500.4	489.0	517.6	567.3
77.5°	418.3	385.8	378.2	393.5	433.6
80°	294.1	275.0	267.4	273.1	301.8
82.5°	185.3	171.9	168.1	166.2	181.5
85°	93.6	84.0	84.0	78.3	82.1
87.5°	28.7	26.7	24.8	19.1	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)