

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: P486961

Luminaire Tested: **ORLG-24-4-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: P486961  
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-LD4-2HI-27-120-EDD  
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

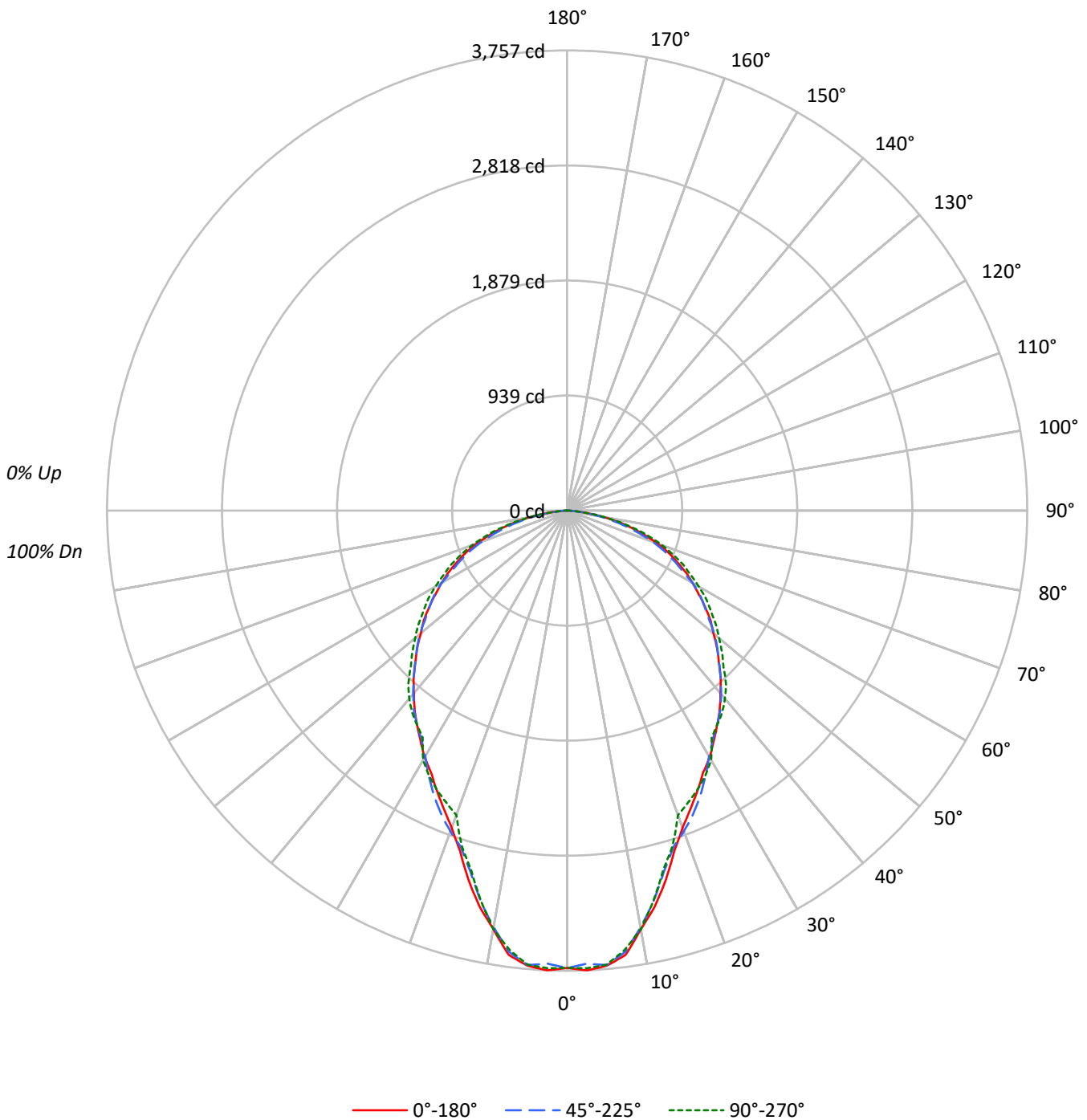
Lumens per Lamp: N/A  
Luminaire Lumens: 7985.0 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31					31			
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28					28			
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5024	5024	5024
5°	5038	5030	5024
10°	4740	4719	4738
15°	4344	4249	4225
20°	3945	3989	3787
25°	3741	3816	3736
30°	3614	3599	3653
35°	3508	3508	3508
40°	3420	3434	3519
45°	3336	3332	3436
50°	3264	3288	3390
55°	3229	3216	3361
60°	3187	3182	3344
65°	3146	3047	3326
70°	3086	2910	3238
75°	2857	2584	2998
80°	2317	2106	2377
85°	1468	1318	1289



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.8	4.3
10°-20°	867.0	10.9
20°-30°	1170.8	14.7
30°-40°	1340.8	16.8
40°-50°	1373.4	17.2
50°-60°	1246.2	15.6
60°-70°	972.6	12.2
70°-80°	551.6	6.9
80°-90°	115.8	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°	2384.6	29.9
0°-40°	3725.4	46.7
0°-60°	6345.0	79.5
0°-90°	7985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7985.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3734	3734	3734	3734	3734	
5°	3730	3687	3724	3732	3720	348
15°	3118	3128	3050	3066	3033	871
25°	2520	2553	2571	2509	2516	1163
35°	2136	2140	2136	2138	2136	1338
45°	1753	1767	1751	1823	1806	1356
55°	1377	1375	1371	1419	1433	1230
65°	988	967	957	1002	1045	979
75°	550	509	497	526	577	575
85°	95	85	85	80	84	126
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3733.7	3733.7	3733.7	3733.7	3733.7
2.5°	3757.0	3727.9	3702.7	3743.4	3739.5
5°	3729.8	3687.1	3724.0	3731.8	3720.1
7.5°	3658.0	3630.8	3632.8	3617.2	3615.3
10°	3469.7	3485.2	3454.1	3481.3	3467.7
12.5°	3308.5	3318.2	3263.9	3275.5	3260.0
15°	3118.2	3127.9	3050.3	3065.8	3032.8
17.5°	2910.5	2945.4	2881.4	2900.8	2865.8
20°	2755.1	2784.3	2786.2	2755.1	2644.5
22.5°	2632.8	2662.0	2685.2	2592.1	2580.4
25°	2520.2	2553.2	2570.7	2508.6	2516.3
27.5°	2407.6	2444.5	2444.5	2458.1	2440.6
30°	2326.1	2341.6	2316.3	2366.8	2351.3
32.5°	2229.0	2234.8	2213.4	2250.3	2196.0
35°	2135.8	2139.7	2135.8	2137.7	2135.8
37.5°	2046.5	2036.8	2054.2	2042.6	2079.5
40°	1947.4	1947.4	1955.2	1974.6	2003.7
42.5°	1856.2	1863.9	1854.2	1908.6	1920.3
45°	1753.3	1766.9	1751.3	1823.2	1805.7
47.5°	1660.1	1665.9	1662.0	1710.6	1714.4
50°	1559.1	1566.9	1570.8	1613.5	1619.3
52.5°	1475.6	1473.7	1460.1	1522.2	1531.9
55°	1376.6	1374.7	1370.8	1419.3	1432.9
57.5°	1275.6	1277.6	1287.3	1314.5	1347.5
60°	1184.4	1174.7	1182.4	1215.4	1242.6
62.5°	1091.2	1073.7	1056.2	1110.6	1135.8
65°	988.3	966.9	957.2	1001.9	1044.6
67.5°	893.1	858.2	852.4	883.4	933.9
70°	784.4	741.7	739.8	763.1	823.2
72.5°	664.0	627.1	617.4	648.5	702.9
75°	549.5	508.7	497.1	526.2	576.7
77.5°	425.2	392.2	384.4	400.0	440.7
80°	299.0	279.6	271.8	277.7	306.8
82.5°	188.3	174.7	170.9	168.9	184.5
85°	95.1	85.4	85.4	79.6	83.5
87.5°	29.1	27.2	25.2	19.4	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)