

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: P485630

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-1HI-30-120-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: P485630  
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-24-2-INS-89BC-LD4-1HI-30-120-EDD-90  
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

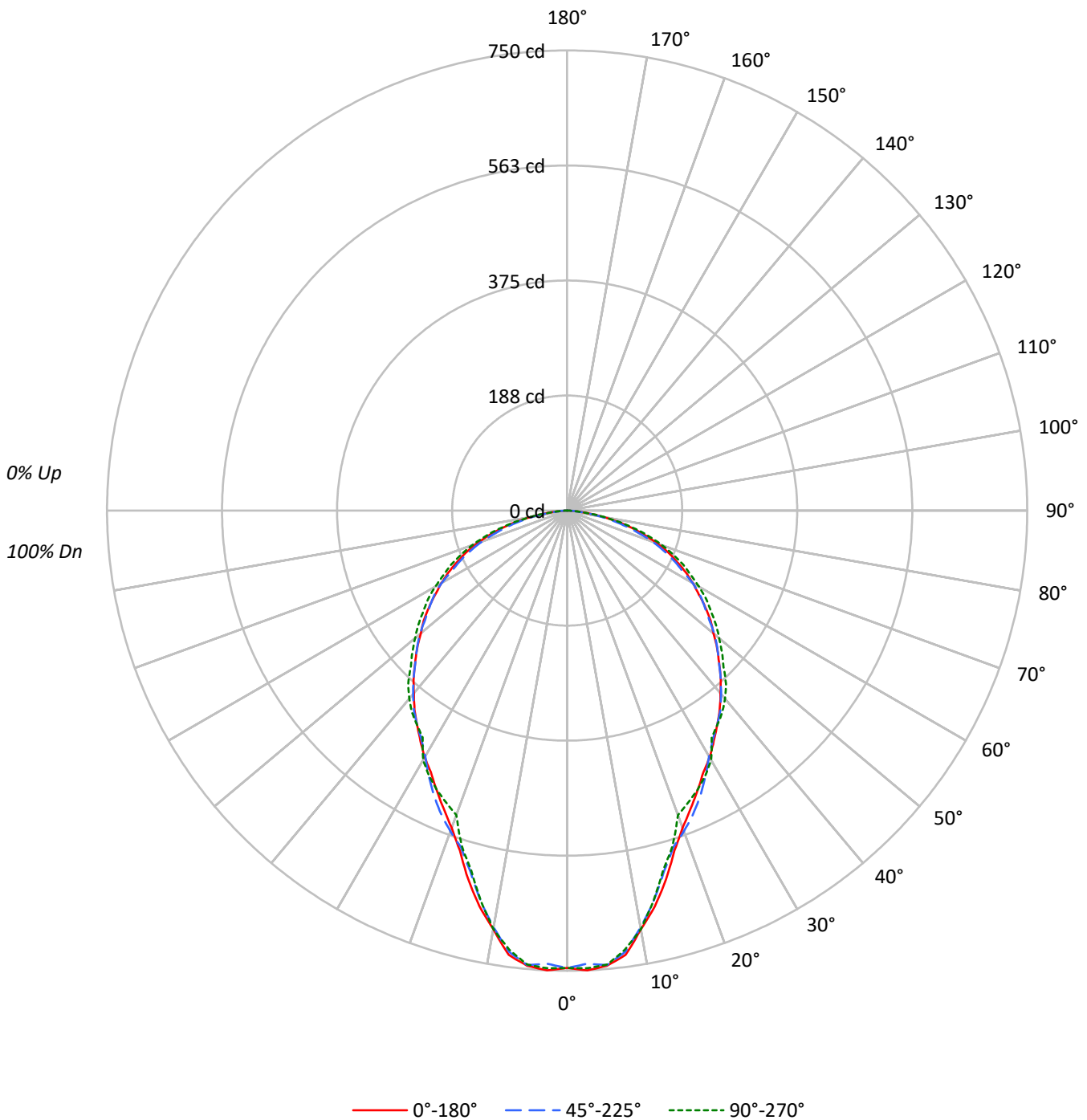
Lumens per Lamp: N/A  
Luminaire Lumens: 1594.3 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 22  
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°	2006	2006	2006
5°	2012	2008	2006
10°	1893	1885	1892
15°	1735	1697	1687
20°	1575	1593	1512
25°	1494	1524	1492
30°	1443	1437	1459
35°	1401	1401	1401
40°	1366	1371	1405
45°	1332	1331	1372
50°	1303	1313	1353
55°	1290	1284	1342
60°	1273	1271	1335
65°	1256	1217	1328
70°	1232	1162	1293
75°	1141	1031	1197
80°	925	841	950
85°	587	528	516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.2	4.3
10°-20°	173.1	10.9
20°-30°	233.8	14.7
30°-40°	267.7	16.8
40°-50°	274.2	17.2
50°-60°	248.8	15.6
60°-70°	194.2	12.2
70°-80°	110.2	6.9
80°-90°	23.1	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°	476.1	29.9
0°-40°	743.8	46.7
0°-60°	1266.8	79.5
0°-90°	1594.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1594.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	745	736	744	745	743	70
15°	623	624	609	612	606	174
25°	503	510	513	501	502	232
35°	426	427	426	427	426	267
45°	350	353	350	364	360	271
55°	275	274	274	283	286	246
65°	197	193	191	200	209	196
75°	110	102	99	105	115	115
85°	19	17	17	16	17	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	745.5	745.5	745.5	745.5	745.5
2.5°	750.1	744.3	739.3	747.4	746.6
5°	744.7	736.2	743.5	745.1	742.8
7.5°	730.4	724.9	725.3	722.2	721.8
10°	692.8	695.9	689.7	695.1	692.4
12.5°	660.6	662.5	651.7	654.0	650.9
15°	622.6	624.5	609.0	612.1	605.5
17.5°	581.1	588.1	575.3	579.2	572.2
20°	550.1	555.9	556.3	550.1	528.0
22.5°	525.7	531.5	536.1	517.5	515.2
25°	503.2	509.8	513.3	500.9	502.4
27.5°	480.7	488.1	488.1	490.8	487.3
30°	464.4	467.5	462.5	472.6	469.5
32.5°	445.0	446.2	441.9	449.3	438.5
35°	426.4	427.2	426.4	426.8	426.4
37.5°	408.6	406.7	410.2	407.8	415.2
40°	388.8	388.8	390.4	394.3	400.1
42.5°	370.6	372.2	370.2	381.1	383.4
45°	350.1	352.8	349.7	364.0	360.5
47.5°	331.5	332.6	331.8	341.5	342.3
50°	311.3	312.8	313.6	322.2	323.3
52.5°	294.6	294.2	291.5	303.9	305.9
55°	274.9	274.5	273.7	283.4	286.1
57.5°	254.7	255.1	257.0	262.4	269.0
60°	236.5	234.5	236.1	242.7	248.1
62.5°	217.9	214.4	210.9	221.7	226.8
65°	197.3	193.1	191.1	200.0	208.6
67.5°	178.3	171.3	170.2	176.4	186.5
70°	156.6	148.1	147.7	152.4	164.4
72.5°	132.6	125.2	123.3	129.5	140.3
75°	109.7	101.6	99.2	105.1	115.1
77.5°	84.9	78.3	76.8	79.9	88.0
80°	59.7	55.8	54.3	55.4	61.3
82.5°	37.6	34.9	34.1	33.7	36.8
85°	19.0	17.1	17.1	15.9	16.7
87.5°	5.8	5.4	5.0	3.9	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)