

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: P485717

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-3LO-35-120-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: P485717  
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-LD4-3LO-35-120-EDD  
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

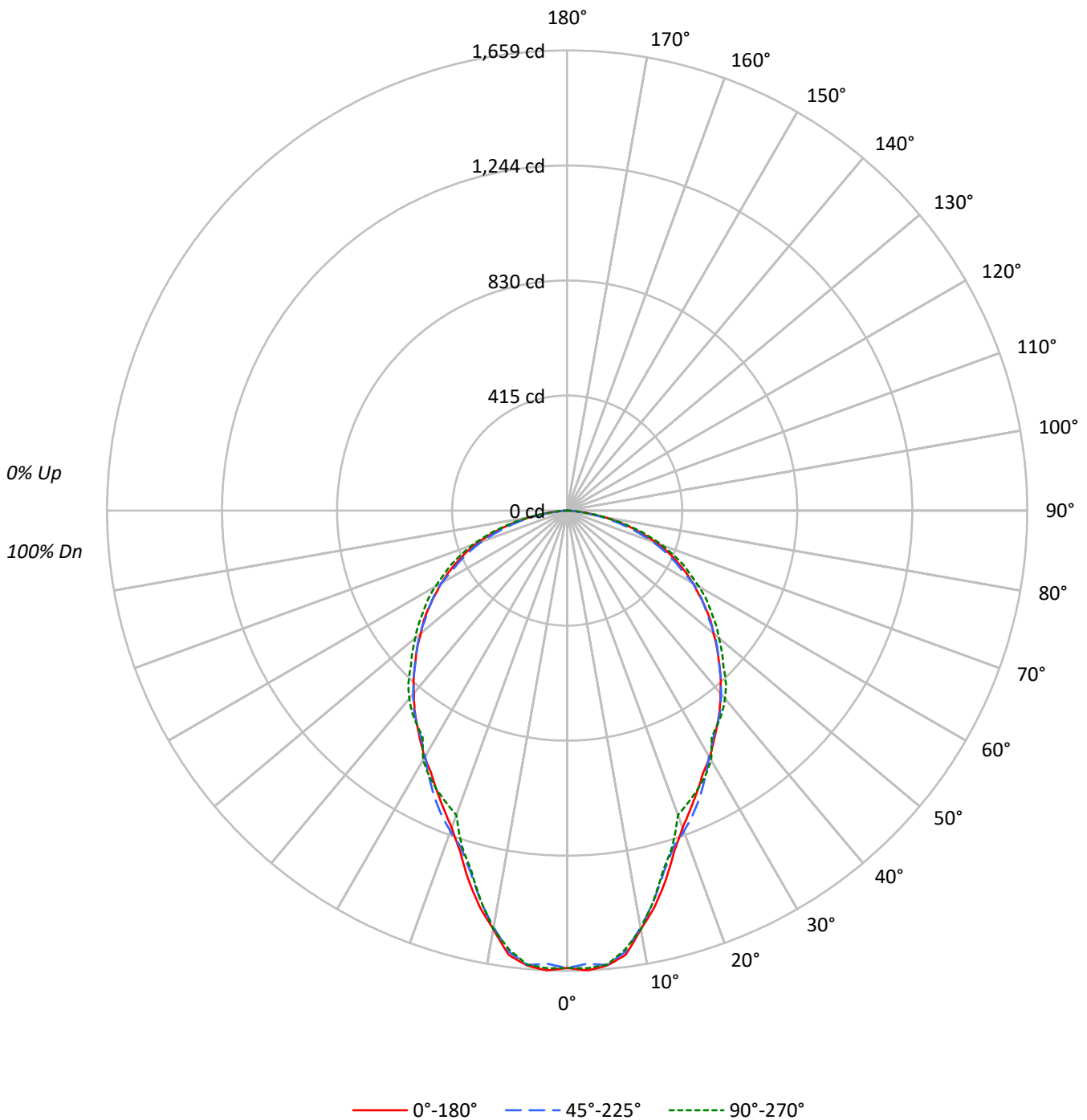
Lumens per Lamp: N/A  
Luminaire Lumens: 3526.4 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 35.1  
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°	4437	4437	4437
5°	4450	4442	4438
10°	4187	4168	4185
15°	3836	3753	3731
20°	3485	3524	3344
25°	3305	3371	3300
30°	3192	3179	3227
35°	3098	3098	3098
40°	3021	3033	3108
45°	2947	2943	3035
50°	2882	2904	2994
55°	2852	2840	2969
60°	2815	2810	2954
65°	2779	2691	2937
70°	2725	2570	2861
75°	2523	2282	2648
80°	2047	1860	2100
85°	1297	1164	1139



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.1	4.3
10°-20°	382.9	10.9
20°-30°	517.1	14.7
30°-40°	592.1	16.8
40°-50°	606.5	17.2
50°-60°	550.3	15.6
60°-70°	429.5	12.2
70°-80°	243.6	6.9
80°-90°	51.1	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°	1053.1	29.9
0°-40°	1645.2	46.7
0°-60°	2802.1	79.5
0°-90°	3526.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3526.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1647	1628	1645	1648	1643	154
15°	1377	1381	1347	1354	1339	385
25°	1113	1128	1135	1108	1111	514
35°	943	945	943	944	943	591
45°	774	780	773	805	797	599
55°	608	607	605	627	633	543
65°	436	427	423	442	461	433
75°	243	225	220	232	255	254
85°	42	38	38	35	37	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1648.9	1648.9	1648.9	1648.9	1648.9
2.5°	1659.2	1646.3	1635.2	1653.2	1651.5
5°	1647.2	1628.3	1644.6	1648.1	1642.9
7.5°	1615.5	1603.5	1604.3	1597.5	1596.6
10°	1532.3	1539.2	1525.4	1537.4	1531.4
12.5°	1461.1	1465.4	1441.4	1446.6	1439.7
15°	1377.1	1381.4	1347.1	1353.9	1339.4
17.5°	1285.3	1300.8	1272.5	1281.1	1265.6
20°	1216.8	1229.6	1230.5	1216.8	1167.9
22.5°	1162.7	1175.6	1185.9	1144.7	1139.6
25°	1113.0	1127.6	1135.3	1107.9	1111.3
27.5°	1063.3	1079.6	1079.6	1085.6	1077.8
30°	1027.2	1034.1	1023.0	1045.3	1038.4
32.5°	984.4	986.9	977.5	993.8	969.8
35°	943.2	944.9	943.2	944.1	943.2
37.5°	903.8	899.5	907.2	902.1	918.4
40°	860.0	860.0	863.5	872.0	884.9
42.5°	819.7	823.2	818.9	842.9	848.0
45°	774.3	780.3	773.4	805.2	797.4
47.5°	733.1	735.7	734.0	755.4	757.1
50°	688.5	692.0	693.7	712.6	715.1
52.5°	651.7	650.8	644.8	672.3	676.5
55°	607.9	607.1	605.4	626.8	632.8
57.5°	563.4	564.2	568.5	580.5	595.1
60°	523.1	518.8	522.2	536.8	548.8
62.5°	481.9	474.2	466.5	490.5	501.6
65°	436.5	427.0	422.7	442.5	461.3
67.5°	394.4	379.0	376.4	390.1	412.4
70°	346.4	327.6	326.7	337.0	363.6
72.5°	293.3	277.0	272.7	286.4	310.4
75°	242.7	224.7	219.5	232.4	254.7
77.5°	187.8	173.2	169.8	176.6	194.6
80°	132.1	123.5	120.0	122.6	135.5
82.5°	83.2	77.2	75.5	74.6	81.5
85°	42.0	37.7	37.7	35.2	36.9
87.5°	12.9	12.0	11.1	8.6	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)