

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: P486971

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-2LO-20-120-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: P486971
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-LD4-2LO-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

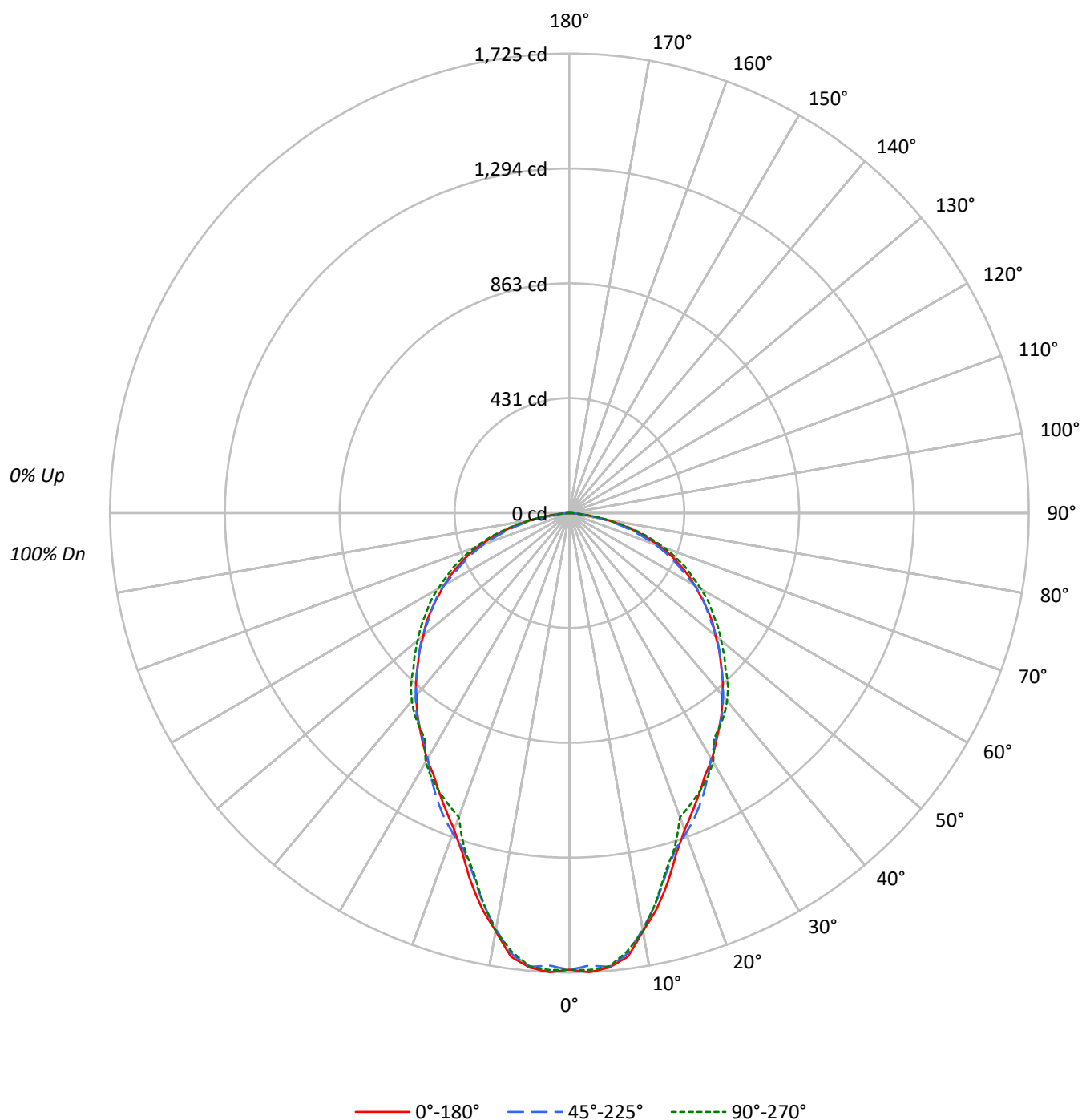
Lumens per Lamp: N/A
Luminaire Lumens: 3666.8 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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			
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°	2307	2307	2307
5°	2313	2310	2307
10°	2177	2167	2176
15°	1995	1951	1940
20°	1812	1832	1739
25°	1718	1753	1715
30°	1659	1653	1677
35°	1611	1611	1611
40°	1571	1577	1616
45°	1532	1530	1578
50°	1499	1510	1557
55°	1483	1477	1544
60°	1464	1461	1535
65°	1445	1400	1527
70°	1417	1336	1487
75°	1312	1187	1377
80°	1064	967	1092
85°	675	605	591



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.2	4.3
10°-20°	398.1	10.9
20°-30°	537.7	14.7
30°-40°	615.7	16.8
40°-50°	630.7	17.2
50°-60°	572.3	15.6
60°-70°	446.6	12.2
70°-80°	253.3	6.9
80°-90°	53.2	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°	1095.0	29.9
0°-40°	1710.8	46.7
0°-60°	2913.7	79.5
0°-90°	3666.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3666.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1715	1715	1715	1715	1715	
5°	1713	1693	1710	1714	1708	160
15°	1432	1436	1401	1408	1393	400
25°	1157	1172	1180	1152	1156	534
35°	981	983	981	982	981	614
45°	805	811	804	837	829	622
55°	632	631	630	652	658	565
65°	454	444	440	460	480	450
75°	252	234	228	242	265	264
85°	44	39	39	37	38	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1714.6	1714.6	1714.6	1714.6	1714.6
2.5°	1725.3	1711.9	1700.3	1719.0	1717.2
5°	1712.8	1693.2	1710.1	1713.7	1708.3
7.5°	1679.8	1667.3	1668.2	1661.1	1660.2
10°	1593.3	1600.4	1586.2	1598.7	1592.4
12.5°	1519.3	1523.8	1498.8	1504.1	1497.0
15°	1431.9	1436.4	1400.7	1407.9	1392.7
17.5°	1336.5	1352.6	1323.1	1332.1	1316.0
20°	1265.2	1278.6	1279.5	1265.2	1214.4
22.5°	1209.0	1222.4	1233.1	1190.3	1184.9
25°	1157.3	1172.5	1180.5	1152.0	1155.5
27.5°	1105.6	1122.5	1122.5	1128.8	1120.8
30°	1068.1	1075.3	1063.7	1086.9	1079.7
32.5°	1023.6	1026.2	1016.4	1033.4	1008.4
35°	980.8	982.6	980.8	981.7	980.8
37.5°	939.8	935.3	943.3	938.0	954.9
40°	894.3	894.3	897.9	906.8	920.1
42.5°	852.4	855.9	851.5	876.5	881.8
45°	805.1	811.4	804.2	837.2	829.2
47.5°	762.3	765.0	763.2	785.5	787.3
50°	716.0	719.5	721.3	740.9	743.6
52.5°	677.6	676.7	670.5	699.0	703.5
55°	632.2	631.3	629.5	651.8	658.0
57.5°	585.8	586.7	591.1	603.6	618.8
60°	543.9	539.4	543.0	558.1	570.6
62.5°	501.1	493.1	485.0	510.0	521.6
65°	453.8	444.0	439.6	460.1	479.7
67.5°	410.1	394.1	391.4	405.7	428.9
70°	360.2	340.6	339.7	350.4	378.0
72.5°	304.9	288.0	283.5	297.8	322.8
75°	252.3	233.6	228.3	241.6	264.8
77.5°	195.3	180.1	176.5	183.7	202.4
80°	137.3	128.4	124.8	127.5	140.9
82.5°	86.5	80.2	78.5	77.6	84.7
85°	43.7	39.2	39.2	36.6	38.3
87.5°	13.4	12.5	11.6	8.9	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)