

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: P486978

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-2LO-40-120-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: P486978
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-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

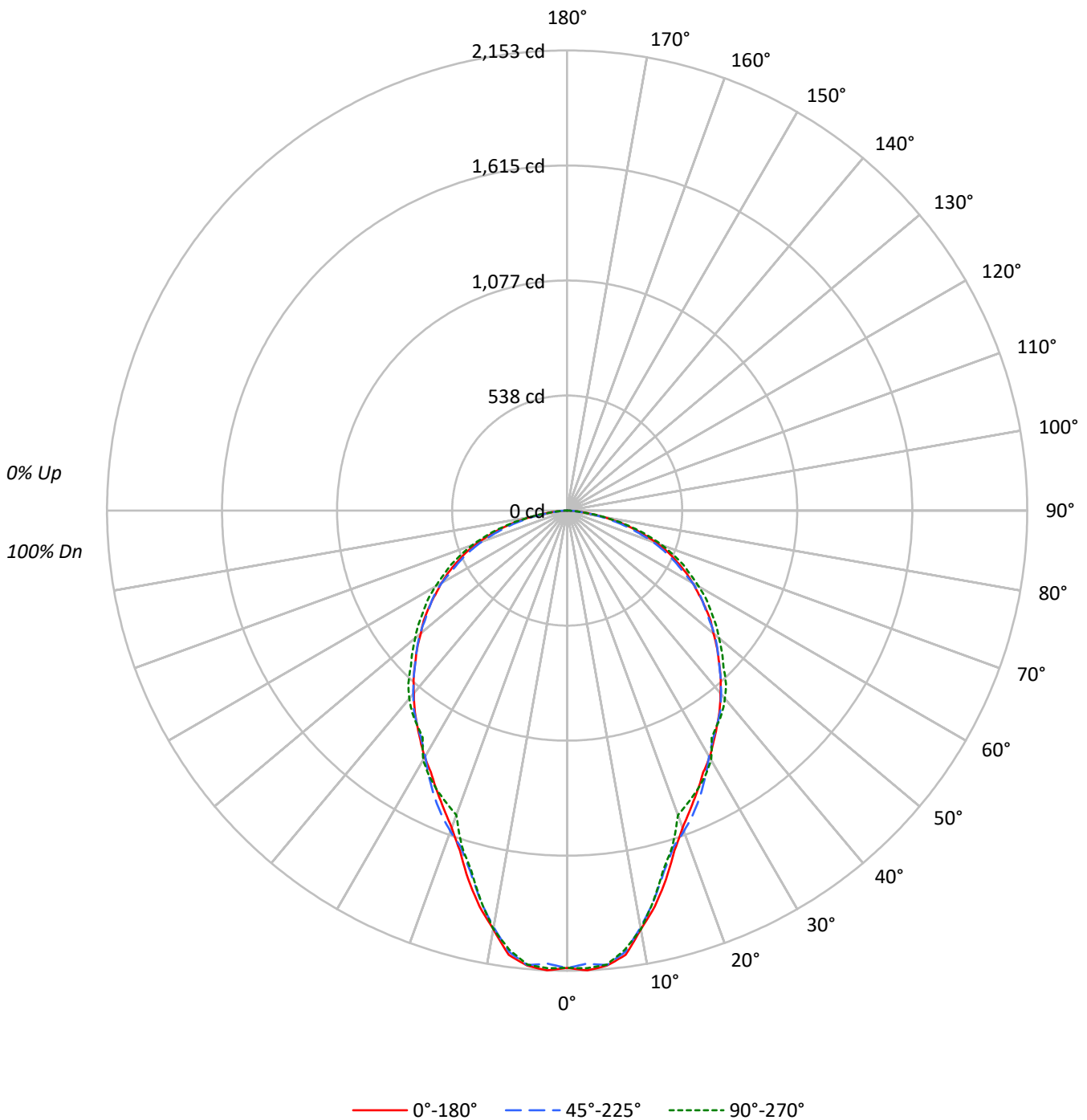
Lumens per Lamp: N/A
Luminaire Lumens: 4576.1 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2LO-40-120-EDD-90

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°	2879	2879	2879
5°	2887	2883	2880
10°	2717	2704	2715
15°	2489	2435	2421
20°	2261	2286	2170
25°	2144	2187	2141
30°	2071	2062	2094
35°	2010	2010	2010
40°	1960	1968	2017
45°	1912	1910	1969
50°	1870	1884	1942
55°	1851	1843	1926
60°	1827	1823	1916
65°	1803	1747	1906
70°	1768	1668	1856
75°	1637	1481	1718
80°	1328	1207	1362
85°	841	756	738



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.7	4.3
10°-20°	496.9	10.9
20°-30°	671.0	14.7
30°-40°	768.4	16.8
40°-50°	787.1	17.2
50°-60°	714.2	15.6
60°-70°	557.4	12.2
70°-80°	316.1	6.9
80°-90°	66.4	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°	1366.6	29.9
0°-40°	2135.0	46.7
0°-60°	3636.2	79.5
0°-90°	4576.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4576.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2140	2140	2140	2140	2140	
5°	2138	2113	2134	2139	2132	200
15°	1787	1793	1748	1757	1738	499
25°	1444	1463	1473	1438	1442	666
35°	1224	1226	1224	1225	1224	767
45°	1005	1013	1004	1045	1035	777
55°	789	788	786	813	821	705
65°	566	554	549	574	599	561
75°	315	292	285	302	330	329
85°	54	49	49	46	48	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2139.7	2139.7	2139.7	2139.7	2139.7
2.5°	2153.1	2136.4	2121.9	2145.3	2143.1
5°	2137.5	2113.0	2134.2	2138.6	2132.0
7.5°	2096.4	2080.8	2081.9	2073.0	2071.9
10°	1988.4	1997.3	1979.5	1995.1	1987.3
12.5°	1896.1	1901.6	1870.5	1877.1	1868.2
15°	1787.0	1792.6	1748.1	1757.0	1738.1
17.5°	1668.0	1688.0	1651.3	1662.4	1642.4
20°	1578.9	1595.6	1596.7	1578.9	1515.5
22.5°	1508.8	1525.5	1538.9	1485.5	1478.8
25°	1444.3	1463.2	1473.2	1437.6	1442.1
27.5°	1379.8	1400.9	1400.9	1408.7	1398.7
30°	1333.0	1341.9	1327.5	1356.4	1347.5
32.5°	1277.4	1280.7	1268.5	1289.6	1258.5
35°	1224.0	1226.2	1224.0	1225.1	1224.0
37.5°	1172.8	1167.2	1177.3	1170.6	1191.7
40°	1116.1	1116.1	1120.5	1131.6	1148.3
42.5°	1063.8	1068.2	1062.6	1093.8	1100.5
45°	1004.8	1012.6	1003.7	1044.8	1034.8
47.5°	951.4	954.7	952.5	980.3	982.5
50°	893.5	898.0	900.2	924.7	928.0
52.5°	845.7	844.5	836.8	872.4	877.9
55°	788.9	787.8	785.6	813.4	821.2
57.5°	731.1	732.2	737.7	753.3	772.2
60°	678.8	673.2	677.6	696.6	712.1
62.5°	625.3	615.3	605.3	636.5	650.9
65°	566.4	554.1	548.6	574.2	598.6
67.5°	511.8	491.8	488.5	506.3	535.2
70°	449.5	425.1	423.9	437.3	471.8
72.5°	380.5	359.4	353.8	371.6	402.8
75°	314.9	291.5	284.9	301.5	330.5
77.5°	243.7	224.8	220.3	229.2	252.6
80°	171.4	160.2	155.8	159.1	175.8
82.5°	107.9	100.1	97.9	96.8	105.7
85°	54.5	49.0	49.0	45.6	47.8
87.5°	16.7	15.6	14.5	11.1	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)