

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: P834185

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834185
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

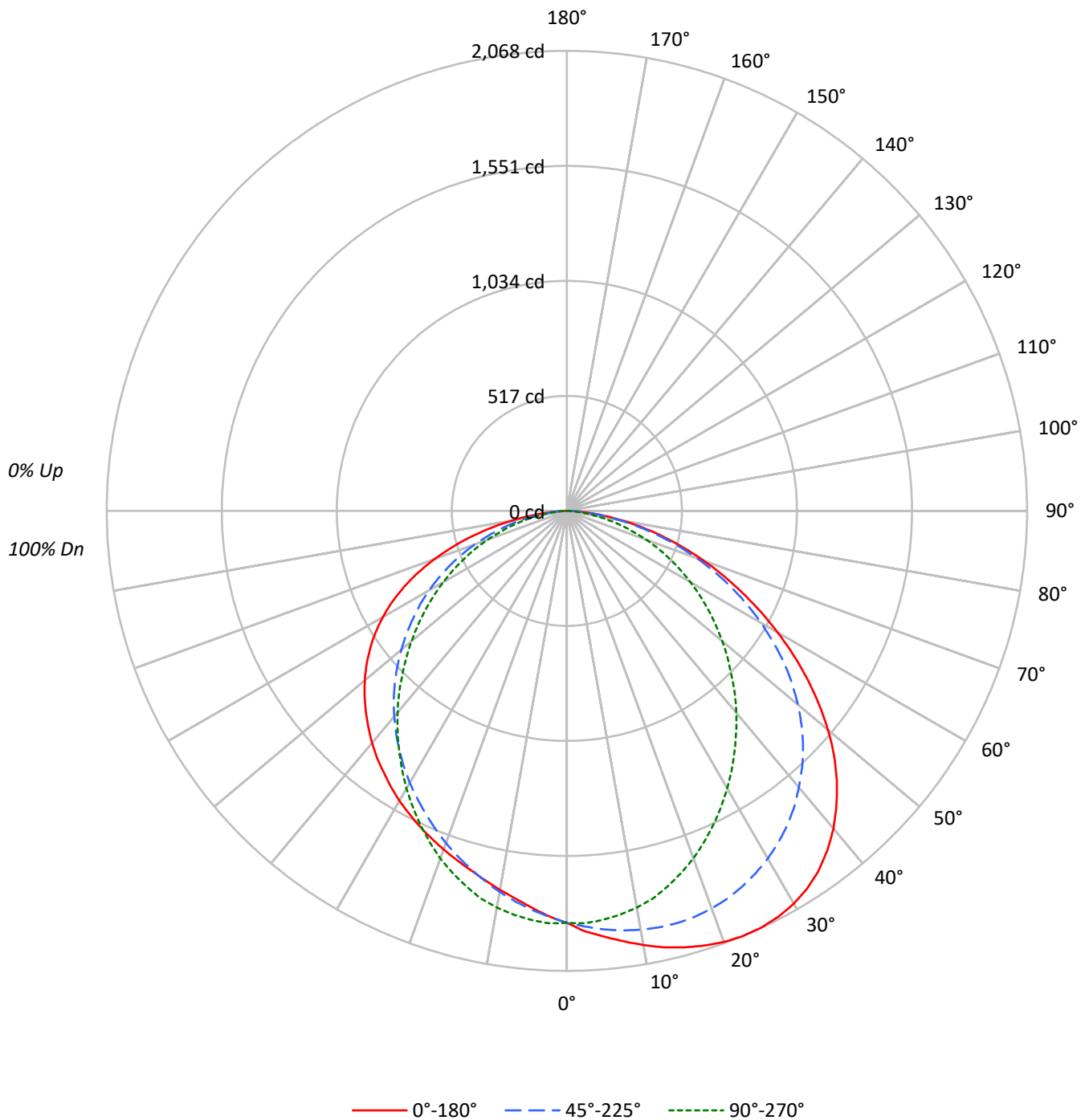
Lumens per Lamp: N/A
Luminaire Lumens: 5446.6 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): 120
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: 28.75 FT

TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4983	4983	4983
5°	5187	4985	4838
10°	5414	4948	4726
15°	5658	4869	4658
20°	5905	4761	4638
25°	6137	4623	4646
30°	6337	4478	4676
35°	6481	4319	4715
40°	6547	4158	4784
45°	6529	3983	4862
50°	6413	3816	4963
55°	6194	3640	5066
60°	5892	3453	5143
65°	5533	3242	5136
70°	5149	2990	4984
75°	4676	2626	4596
80°	4014	2157	3876
85°	3063	1476	2661

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.6	3.2
10°-20°	507.1	9.3
20°-30°	776.9	14.3
30°-40°	948.2	17.4
40°-50°	991.6	18.2
50°-60°	897.4	16.5
60°-70°	679.7	12.5
70°-80°	378.8	7.0
80°-90°	91.4	1.7
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°	1459.7	26.8
0°-40°	2407.8	44.2
0°-60°	4296.8	78.9
0°-90°	5446.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5446.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1852	1852	1852	1852	1852	
5°	1920	1888	1846	1800	1791	185
15°	2031	1918	1748	1666	1672	576
25°	2067	1864	1557	1502	1565	954
35°	1973	1726	1315	1313	1435	1232
45°	1716	1501	1047	1093	1278	1320
55°	1320	1192	776	844	1080	1178
65°	869	817	509	579	807	862
75°	450	425	253	302	442	477
85°	99	87	48	64	86	119
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6
2.5°	1892.5	1883.6	1876.3	1879.2	1880.8	1875.1	1870.2	1871.1	1866.2	1875.5	1853.7
5°	1920.4	1912.3	1903.8	1907.1	1903.8	1895.3	1888.5	1886.4	1873.5	1878.7	1856.5
7.5°	1951.6	1942.7	1930.1	1933.8	1926.9	1911.1	1902.2	1897.0	1877.1	1877.5	1852.8
10°	1981.5	1973.9	1956.9	1959.3	1946.7	1925.7	1911.5	1904.2	1876.3	1872.3	1846.8
12.5°	2009.5	1999.0	1980.7	1982.0	1963.7	1935.8	1917.6	1907.1	1870.7	1858.5	1833.4
15°	2030.9	2020.8	1999.0	1998.5	1975.1	1938.6	1918.0	1903.4	1857.3	1838.3	1812.0
17.5°	2049.1	2039.8	2012.7	2011.9	1983.6	1937.4	1912.7	1894.5	1837.9	1814.4	1785.3
20°	2062.1	2052.8	2022.4	2019.6	1985.6	1931.4	1901.8	1878.7	1812.4	1784.4	1752.1
22.5°	2068.2	2058.9	2024.5	2020.4	1980.7	1919.2	1886.0	1858.9	1783.2	1746.8	1713.2
25°	2066.9	2058.0	2019.2	2015.1	1971.4	1901.0	1863.8	1832.6	1746.4	1703.5	1670.3
27.5°	2056.8	2049.9	2009.1	2003.8	1954.4	1876.3	1836.7	1802.3	1705.5	1657.8	1621.7
30°	2039.4	2034.2	1990.9	1986.0	1933.4	1849.2	1805.1	1765.4	1661.4	1607.6	1571.2
32.5°	2011.5	2006.6	1962.9	1958.5	1905.1	1814.4	1768.3	1727.4	1613.2	1553.8	1517.3
35°	1973.0	1970.2	1927.7	1922.9	1868.6	1774.7	1725.8	1680.8	1563.1	1495.9	1461.1
37.5°	1922.5	1922.5	1881.6	1876.3	1823.3	1726.2	1678.0	1630.2	1506.4	1435.2	1400.8
40°	1863.8	1869.0	1827.3	1822.1	1770.7	1674.0	1621.3	1571.2	1445.3	1371.2	1337.6
42.5°	1793.4	1798.2	1763.4	1758.5	1710.4	1613.7	1564.7	1510.0	1381.3	1306.1	1271.3
45°	1715.6	1722.1	1691.0	1687.3	1642.4	1547.7	1500.7	1445.3	1314.6	1238.1	1204.1
47.5°	1629.0	1637.5	1610.4	1608.4	1566.7	1480.1	1431.1	1374.9	1244.5	1167.2	1135.3
50°	1531.9	1544.0	1521.8	1521.8	1484.5	1398.3	1355.8	1299.6	1171.7	1094.4	1062.8
52.5°	1427.9	1443.3	1426.7	1427.1	1396.7	1319.4	1275.3	1220.3	1095.6	1019.5	990.4
55°	1320.2	1335.2	1324.7	1326.3	1302.4	1232.0	1191.9	1137.3	1017.9	943.8	916.3
57.5°	1207.7	1223.9	1217.0	1220.3	1203.7	1140.5	1098.8	1051.1	937.8	864.5	841.0
60°	1094.8	1110.2	1106.5	1111.0	1100.5	1045.8	1007.8	958.4	857.2	786.8	766.2
62.5°	980.7	994.8	994.0	998.9	993.2	947.9	913.9	871.8	773.8	709.1	690.1
65°	869.0	881.1	880.3	885.5	884.3	847.9	817.1	778.7	690.5	631.0	614.4
67.5°	760.5	770.6	767.8	773.8	775.5	746.3	719.6	685.2	611.1	553.3	539.1
70°	654.4	661.3	657.7	661.7	665.4	643.5	620.9	590.5	526.6	475.6	463.8
72.5°	550.4	555.3	549.6	553.7	556.9	541.1	522.5	496.2	443.2	399.1	389.3
75°	449.7	456.5	444.8	448.8	451.3	435.5	424.6	403.1	357.4	323.4	316.9
77.5°	352.1	356.2	349.7	348.1	349.7	338.4	329.9	313.3	278.9	250.9	246.9
80°	259.0	261.5	255.0	253.4	254.6	246.5	240.0	227.9	203.6	182.5	180.9
82.5°	173.6	174.8	169.2	167.6	168.4	165.9	158.2	149.7	138.4	120.6	120.2
85°	99.2	99.2	95.1	93.5	94.3	90.3	87.4	83.0	78.5	66.4	67.2
87.5°	36.4	36.4	34.4	34.0	38.0	33.6	32.4	30.4	31.6	25.1	26.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6	1851.6
2.5°	1859.7	1855.7	1852.0	1839.5	1844.8	1831.8	1831.0	1826.1	1822.5	1815.6	1824.5
5°	1853.7	1845.6	1835.0	1820.1	1824.5	1809.1	1805.9	1800.2	1795.4	1786.5	1793.4
7.5°	1843.9	1830.6	1814.0	1795.0	1801.0	1782.0	1777.2	1771.1	1767.0	1756.5	1762.6
10°	1829.8	1810.8	1791.3	1768.3	1772.7	1752.1	1746.0	1739.5	1735.9	1726.6	1732.6
12.5°	1807.9	1784.9	1758.5	1733.5	1738.3	1718.9	1710.8	1703.9	1702.7	1695.0	1702.3
15°	1779.6	1747.6	1720.5	1693.8	1699.5	1676.8	1673.1	1666.3	1668.3	1663.0	1671.9
17.5°	1743.6	1706.7	1677.2	1648.5	1654.1	1635.1	1632.3	1629.0	1631.1	1630.2	1640.0
20°	1703.1	1662.6	1628.6	1600.3	1603.5	1588.6	1589.8	1589.0	1593.0	1597.5	1610.8
22.5°	1657.4	1611.6	1576.0	1546.9	1551.7	1538.8	1544.4	1546.1	1552.9	1563.1	1580.1
25°	1606.0	1557.0	1519.8	1492.2	1496.7	1488.2	1497.9	1501.9	1512.9	1529.9	1547.3
27.5°	1552.1	1500.3	1460.7	1434.4	1442.9	1434.4	1448.9	1457.0	1473.6	1492.2	1513.7
30°	1495.1	1441.2	1400.4	1376.9	1385.0	1377.3	1400.8	1411.7	1428.3	1453.8	1479.3
32.5°	1435.2	1378.5	1338.4	1320.2	1325.9	1324.7	1351.0	1363.1	1385.4	1414.5	1441.6
35°	1373.6	1314.6	1274.1	1258.7	1265.6	1267.2	1298.8	1312.9	1337.2	1372.4	1401.6
37.5°	1310.1	1249.8	1210.1	1197.6	1203.7	1209.7	1246.6	1260.7	1288.2	1326.7	1358.7
40°	1244.1	1183.8	1145.0	1134.9	1140.9	1147.4	1187.5	1206.9	1236.8	1278.5	1313.3
42.5°	1177.4	1117.0	1079.4	1072.1	1078.2	1090.7	1133.2	1151.5	1183.0	1229.2	1267.6
45°	1109.4	1046.6	1013.8	1008.2	1014.7	1029.2	1070.9	1092.8	1126.4	1176.9	1218.2
47.5°	1040.6	979.4	948.3	944.6	951.1	967.3	1013.4	1033.3	1068.9	1122.7	1167.2
50°	970.9	911.4	881.5	880.3	886.4	903.8	947.9	971.3	1008.2	1068.5	1114.2
52.5°	900.5	843.5	816.3	816.3	822.0	839.8	884.3	908.6	946.7	1010.2	1060.8
55°	830.1	775.9	750.0	752.0	760.1	775.5	818.8	844.3	882.7	948.7	1002.1
57.5°	759.7	708.3	684.8	687.6	695.3	710.7	753.2	781.9	816.7	885.1	939.8
60°	690.1	641.5	620.9	624.1	631.0	646.4	690.5	715.2	750.0	819.6	874.2
62.5°	619.6	575.5	556.1	560.1	566.2	581.6	623.3	647.2	681.6	750.0	805.0
65°	550.0	509.1	492.6	496.6	502.3	516.4	555.7	578.8	611.5	678.3	730.9
67.5°	481.2	444.0	430.2	434.3	438.7	452.1	484.5	509.6	540.3	603.9	653.6
70°	413.2	380.0	367.9	371.9	376.0	388.1	416.5	439.5	467.9	526.1	572.3
72.5°	346.0	313.7	307.6	311.2	314.5	325.0	352.1	370.3	395.0	446.8	486.5
75°	280.5	252.6	248.5	252.1	255.0	263.1	285.7	301.5	322.2	367.1	399.5
77.5°	217.3	193.9	192.2	195.1	197.9	203.6	221.4	238.0	254.2	287.4	316.1
80°	158.2	139.2	139.2	142.1	141.3	148.1	160.7	174.0	185.8	209.6	230.7
82.5°	104.4	89.4	91.5	93.5	94.7	97.5	105.2	115.3	122.6	137.2	151.0
85°	57.9	47.8	49.8	51.4	50.6	53.8	57.9	63.9	67.6	74.5	81.8
87.5°	21.5	17.8	18.2	19.4	20.2	21.9	21.9	25.5	25.9	26.7	28.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834185

CATALOG NUMBER: ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1851.6	1851.6	1851.6
2.5°	1807.5	1817.2	1824.5
5°	1776.4	1784.4	1790.9
7.5°	1746.0	1753.3	1758.9
10°	1717.3	1725.4	1729.4
12.5°	1687.7	1697.0	1700.3
15°	1658.6	1667.9	1671.9
17.5°	1628.6	1640.8	1645.2
20°	1600.7	1616.1	1619.7
22.5°	1572.4	1588.2	1592.6
25°	1541.6	1560.2	1564.7
27.5°	1508.8	1531.1	1535.5
30°	1476.0	1500.3	1504.8
32.5°	1440.8	1467.1	1471.2
35°	1404.0	1430.3	1435.2
37.5°	1363.1	1391.9	1401.6
40°	1320.6	1351.8	1361.9
42.5°	1276.1	1310.1	1320.6
45°	1228.3	1265.6	1277.7
47.5°	1180.2	1222.3	1232.8
50°	1128.0	1172.9	1185.4
52.5°	1073.3	1122.3	1134.9
55°	1016.7	1066.1	1079.8
57.5°	955.2	1006.2	1020.7
60°	890.8	941.8	955.6
62.5°	824.8	871.0	884.3
65°	751.2	794.5	806.6
67.5°	673.1	712.7	722.8
70°	590.1	624.5	633.4
72.5°	503.5	527.4	539.1
75°	414.0	433.1	442.0
77.5°	324.2	337.5	344.8
80°	236.4	244.1	250.1
82.5°	154.6	157.8	162.3
85°	83.4	83.4	86.2
87.5°	28.3	27.1	28.3
90°	0.0	0.0	0.0

(END OF REPORT)