

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: P835345

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835345
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

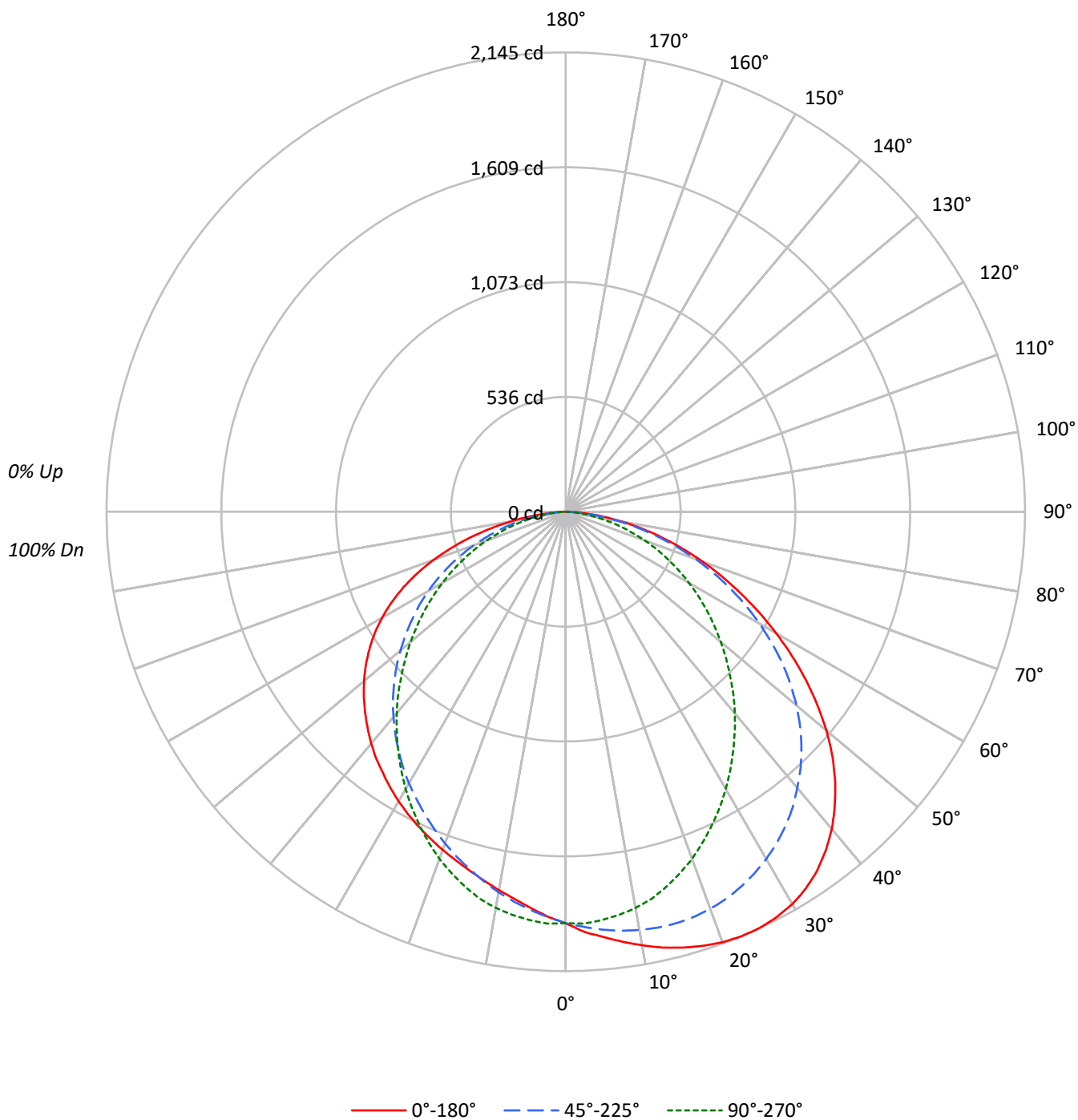
Lumens per Lamp: N/A
Luminaire Lumens: 5650.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5169	5169	5169
5°	5381	5172	5018
10°	5617	5133	4902
15°	5869	5051	4832
20°	6126	4939	4812
25°	6366	4796	4819
30°	6574	4646	4850
35°	6724	4480	4891
40°	6792	4314	4963
45°	6773	4132	5044
50°	6653	3958	5148
55°	6425	3776	5255
60°	6112	3581	5335
65°	5740	3363	5328
70°	5342	3102	5170
75°	4849	2724	4767
80°	4164	2238	4021
85°	3177	1528	2760

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.2	3.2
10°-20°	526.1	9.3
20°-30°	806.0	14.3
30°-40°	983.6	17.4
40°-50°	1028.6	18.2
50°-60°	930.9	16.5
60°-70°	705.0	12.5
70°-80°	392.9	7.0
80°-90°	94.8	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°	1514.2	26.8
0°-40°	2497.8	44.2
0°-60°	4457.3	78.9
0°-90°	5650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5650.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1921	1921	1921	1921	1921	
5°	1992	1959	1914	1868	1858	192
15°	2107	1990	1813	1728	1734	597
25°	2144	1933	1615	1558	1623	989
35°	2047	1790	1364	1362	1489	1278
45°	1780	1557	1086	1134	1325	1369
55°	1370	1236	805	876	1120	1222
65°	901	848	528	600	837	894
75°	466	440	262	313	458	495
85°	103	91	50	66	89	124
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8
2.5°	1963.2	1953.9	1946.4	1949.3	1951.0	1945.1	1940.1	1940.9	1935.9	1945.5	1922.9
5°	1992.1	1983.8	1974.9	1978.3	1974.9	1966.1	1959.0	1956.9	1943.4	1948.9	1925.8
7.5°	2024.5	2015.2	2002.2	2006.0	1998.9	1982.5	1973.3	1967.8	1947.2	1947.6	1922.0
10°	2055.5	2047.6	2029.9	2032.5	2019.4	1997.6	1982.9	1975.4	1946.4	1942.2	1915.7
12.5°	2084.5	2073.6	2054.7	2056.0	2037.1	2008.1	1989.2	1978.3	1940.5	1927.9	1901.9
15°	2106.8	2096.3	2073.6	2073.2	2048.8	2011.0	1989.6	1974.5	1926.7	1906.9	1879.6
17.5°	2125.7	2116.0	2087.9	2087.0	2057.6	2009.8	1984.2	1965.3	1906.5	1882.2	1851.9
20°	2139.1	2129.4	2097.9	2095.0	2059.7	2003.5	1972.8	1948.9	1880.1	1851.1	1817.5
22.5°	2145.4	2135.7	2100.0	2095.9	2054.7	1990.9	1956.5	1928.3	1849.8	1812.0	1777.2
25°	2144.1	2134.9	2094.6	2090.4	2045.0	1972.0	1933.4	1901.0	1811.6	1767.1	1732.7
27.5°	2133.6	2126.5	2084.1	2078.6	2027.4	1946.4	1905.2	1869.6	1769.2	1719.7	1682.3
30°	2115.6	2110.1	2065.2	2060.2	2005.6	1918.3	1872.5	1831.4	1723.5	1667.6	1629.8
32.5°	2086.6	2081.6	2036.2	2031.6	1976.2	1882.2	1834.3	1791.9	1673.5	1611.8	1574.0
35°	2046.7	2043.8	1999.7	1994.7	1938.4	1841.0	1790.2	1743.6	1621.4	1551.7	1515.6
37.5°	1994.2	1994.2	1951.8	1946.4	1891.4	1790.6	1740.7	1691.1	1562.7	1488.8	1453.1
40°	1933.4	1938.8	1895.6	1890.1	1836.8	1736.5	1681.9	1629.8	1499.3	1422.4	1387.6
42.5°	1860.3	1865.4	1829.3	1824.2	1774.3	1673.9	1623.1	1566.4	1432.9	1354.8	1318.7
45°	1779.7	1786.4	1754.1	1750.3	1703.7	1605.5	1556.8	1499.3	1363.6	1284.3	1249.0
47.5°	1689.9	1698.7	1670.6	1668.5	1625.2	1535.4	1484.6	1426.2	1291.0	1210.8	1177.7
50°	1589.1	1601.7	1578.6	1578.6	1540.0	1450.6	1406.5	1348.1	1215.4	1135.3	1102.5
52.5°	1481.2	1497.2	1479.9	1480.4	1448.9	1368.7	1322.9	1265.8	1136.5	1057.6	1027.4
55°	1369.5	1385.1	1374.1	1375.8	1351.1	1278.0	1236.4	1179.8	1055.9	979.1	950.5
57.5°	1252.8	1269.6	1262.5	1265.8	1248.6	1183.1	1139.9	1090.3	972.8	896.8	872.4
60°	1135.7	1151.6	1147.8	1152.5	1141.6	1084.9	1045.4	994.2	889.2	816.2	794.8
62.5°	1017.3	1032.0	1031.1	1036.2	1030.3	983.3	948.0	904.3	802.7	735.6	715.8
65°	901.4	914.0	913.2	918.6	917.4	879.6	847.7	807.8	716.3	654.5	637.3
67.5°	788.9	799.4	796.4	802.7	804.4	774.2	746.5	710.8	634.0	573.9	559.2
70°	678.9	686.0	682.2	686.4	690.2	667.5	644.0	612.5	546.2	493.3	481.1
72.5°	571.0	576.0	570.1	574.3	577.7	561.3	542.0	514.7	459.7	414.0	403.9
75°	466.4	473.6	461.4	465.6	468.1	451.7	440.4	418.2	370.7	335.5	328.7
77.5°	365.3	369.5	362.7	361.1	362.7	351.0	342.2	325.0	289.3	260.3	256.1
80°	268.7	271.2	264.5	262.8	264.1	255.7	249.0	236.4	211.2	189.3	187.7
82.5°	180.1	181.4	175.5	173.8	174.7	172.1	164.2	155.3	143.6	125.1	124.7
85°	102.9	102.9	98.7	97.0	97.8	93.6	90.7	86.1	81.4	68.9	69.7
87.5°	37.8	37.8	35.7	35.3	39.5	34.8	33.6	31.5	32.7	26.0	27.7
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: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8	1920.8
2.5°	1929.2	1925.0	1921.2	1908.2	1913.6	1900.2	1899.4	1894.3	1890.5	1883.4	1892.6
5°	1922.9	1914.5	1903.6	1888.0	1892.6	1876.7	1873.3	1867.5	1862.4	1853.2	1860.3
7.5°	1912.8	1898.9	1881.7	1862.0	1868.3	1848.6	1843.5	1837.2	1833.0	1822.1	1828.4
10°	1898.1	1878.4	1858.2	1834.3	1838.9	1817.5	1811.2	1804.5	1800.7	1791.0	1797.3
12.5°	1875.4	1851.5	1824.2	1798.2	1803.2	1783.1	1774.7	1767.5	1766.3	1758.3	1765.9
15°	1846.0	1812.9	1784.7	1757.0	1762.9	1739.4	1735.6	1728.5	1730.6	1725.1	1734.4
17.5°	1808.7	1770.5	1739.8	1710.0	1715.9	1696.2	1693.2	1689.9	1692.0	1691.1	1701.2
20°	1766.7	1724.7	1689.4	1660.1	1663.4	1647.9	1649.1	1648.3	1652.5	1657.1	1671.0
22.5°	1719.3	1671.8	1634.9	1604.6	1609.7	1596.2	1602.1	1603.8	1610.9	1621.4	1639.1
25°	1665.9	1615.1	1576.5	1548.0	1552.6	1543.8	1553.8	1558.0	1569.4	1587.0	1605.1
27.5°	1610.1	1556.4	1515.2	1487.9	1496.7	1487.9	1503.0	1511.4	1528.6	1548.0	1570.2
30°	1550.9	1495.1	1452.7	1428.3	1436.7	1428.7	1453.1	1464.4	1481.6	1508.1	1534.5
32.5°	1488.8	1430.0	1388.4	1369.5	1375.4	1374.1	1401.4	1414.0	1437.1	1467.3	1495.5
35°	1424.9	1363.6	1321.7	1305.7	1312.8	1314.5	1347.3	1362.0	1387.2	1423.7	1453.9
37.5°	1359.0	1296.5	1255.3	1242.3	1248.6	1254.9	1293.1	1307.8	1336.4	1376.2	1409.4
40°	1290.6	1228.0	1187.7	1177.2	1183.5	1190.3	1231.8	1252.0	1283.0	1326.3	1362.4
42.5°	1221.3	1158.8	1119.7	1112.2	1118.5	1131.5	1175.6	1194.5	1227.2	1275.1	1314.9
45°	1150.8	1085.7	1051.7	1045.8	1052.5	1067.7	1110.9	1133.6	1168.4	1220.9	1263.7
47.5°	1079.4	1016.0	983.7	979.9	986.6	1003.4	1051.3	1071.9	1108.8	1164.6	1210.8
50°	1007.2	945.5	914.4	913.2	919.5	937.5	983.3	1007.6	1045.8	1108.4	1155.8
52.5°	934.1	875.0	846.8	846.8	852.7	871.2	917.4	942.5	982.0	1047.9	1100.4
55°	861.1	804.8	778.0	780.1	788.5	804.4	849.3	875.8	915.7	984.1	1039.5
57.5°	788.0	734.7	710.4	713.3	721.3	737.2	781.3	811.1	847.2	918.2	974.9
60°	715.8	665.4	644.0	647.4	654.5	670.5	716.3	741.9	778.0	850.2	906.9
62.5°	642.8	597.0	576.9	581.1	587.4	603.3	646.6	671.3	707.0	778.0	835.1
65°	570.6	528.2	510.9	515.1	521.0	535.7	576.4	600.4	634.4	703.7	758.2
67.5°	499.2	460.6	446.3	450.5	455.1	469.0	502.6	528.6	560.5	626.4	678.0
70°	428.7	394.2	381.6	385.8	390.0	402.6	432.0	455.9	485.3	545.8	593.7
72.5°	359.0	325.4	319.1	322.9	326.2	337.1	365.3	384.2	409.8	463.5	504.6
75°	291.0	262.0	257.8	261.6	264.5	272.9	296.4	312.8	334.2	380.8	414.4
77.5°	225.5	201.1	199.4	202.4	205.3	211.2	229.7	246.9	263.7	298.1	327.9
80°	164.2	144.4	144.4	147.4	146.5	153.7	166.7	180.5	192.7	217.5	239.3
82.5°	108.3	92.8	94.9	97.0	98.2	101.2	109.2	119.7	127.2	142.3	156.6
85°	60.0	49.5	51.6	53.3	52.5	55.8	60.0	66.3	70.1	77.3	84.8
87.5°	22.3	18.5	18.9	20.2	21.0	22.7	22.7	26.5	26.9	27.7	29.4
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: P835345

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1920.8	1920.8	1920.8
2.5°	1875.0	1885.1	1892.6
5°	1842.7	1851.1	1857.8
7.5°	1811.2	1818.8	1824.6
10°	1781.4	1789.8	1794.0
12.5°	1750.7	1760.4	1763.8
15°	1720.5	1730.2	1734.4
17.5°	1689.4	1702.0	1706.7
20°	1660.5	1676.4	1680.2
22.5°	1631.1	1647.5	1652.1
25°	1599.2	1618.5	1623.1
27.5°	1565.2	1588.3	1592.9
30°	1531.2	1556.4	1561.0
32.5°	1494.6	1521.9	1526.1
35°	1456.4	1483.7	1488.8
37.5°	1414.0	1443.8	1453.9
40°	1369.9	1402.3	1412.8
42.5°	1323.8	1359.0	1369.9
45°	1274.2	1312.8	1325.4
47.5°	1224.3	1267.9	1278.8
50°	1170.1	1216.7	1229.7
52.5°	1113.4	1164.2	1177.2
55°	1054.6	1105.9	1120.1
57.5°	990.8	1043.7	1058.8
60°	924.1	977.0	991.2
62.5°	855.6	903.5	917.4
65°	779.2	824.1	836.7
67.5°	698.2	739.3	749.8
70°	612.1	647.8	657.1
72.5°	522.3	547.1	559.2
75°	429.5	449.2	458.5
77.5°	336.3	350.1	357.7
80°	245.2	253.2	259.5
82.5°	160.4	163.7	168.4
85°	86.5	86.5	89.4
87.5°	29.4	28.1	29.4
90°	0.0	0.0	0.0

(END OF REPORT)