

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: P837761

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-2LO-50-120-EDD**

Issue Date: 5/21/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P837761
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-2LO-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

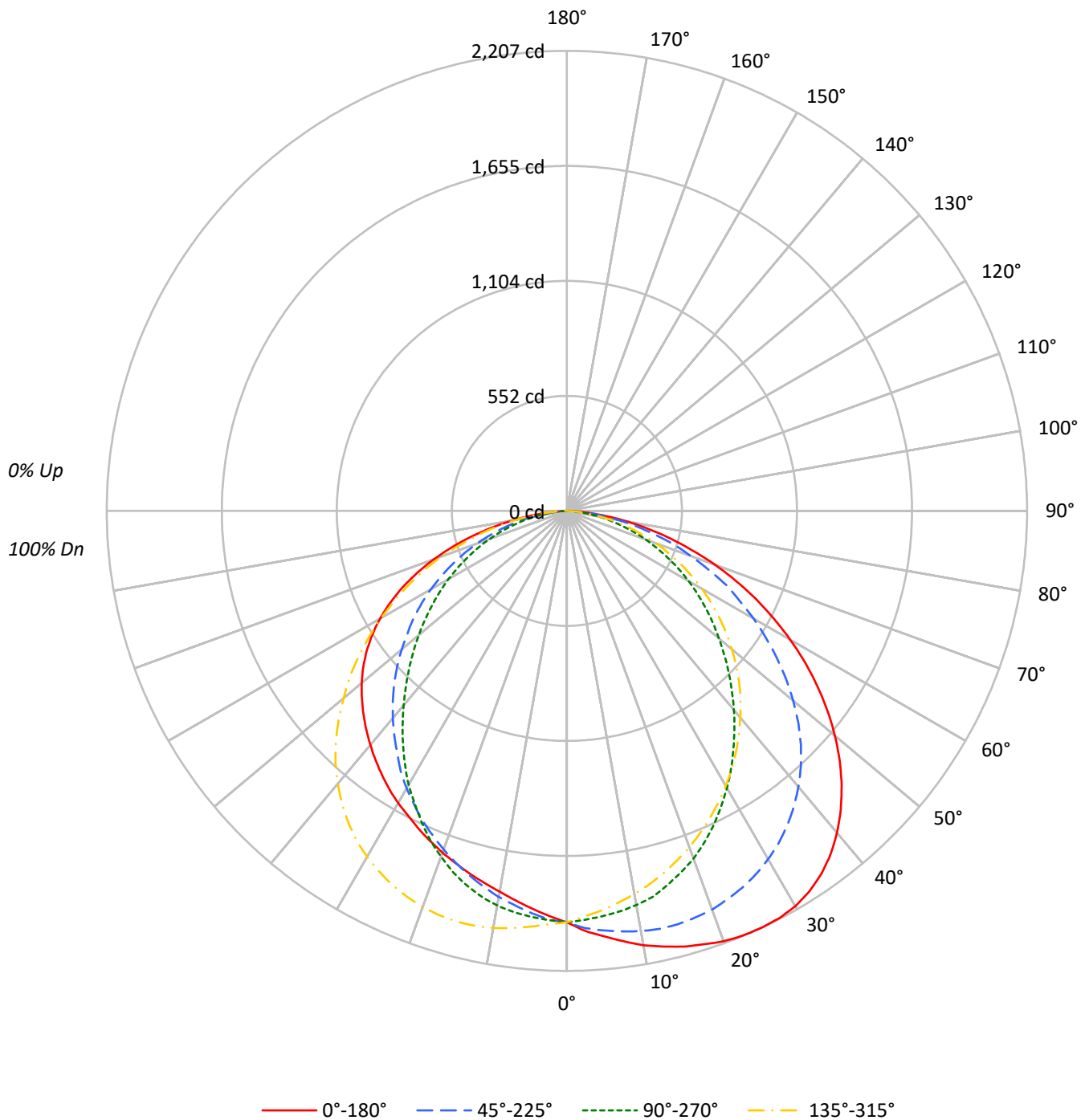
Lumens per Lamp: N/A
Luminaire Lumens: 5790.1 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: 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
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	89		90
2	99	91	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	88	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	74	62	53	47	59	52	46		57	51	46		56
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	47	38	32	59	46	38	32	45	37	32		43	37	32		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°	270°
0°	5311	5311	5311	5311
5°	5535	5273	5173	5281
10°	5781	5246	5068	5253
15°	6029	5179	5019	5180
20°	6292	5085	4996	5056
25°	6553	4942	4996	4892
30°	6806	4771	5029	4717
35°	6987	4575	5080	4502
40°	7080	4378	5151	4279
45°	7094	4178	5251	4073
50°	7026	3988	5379	3881
55°	6881	3810	5499	3704
60°	6664	3625	5572	3531
65°	6367	3412	5543	3333
70°	5947	3162	5346	3104
75°	5351	2819	4906	2805
80°	4537	2362	4124	2397
85°	3155	1562	2615	1606

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.4	3.2
10°-20°	542.6	9.4
20°-30°	831.5	14.4
30°-40°	1011.1	17.5
40°-50°	1051.1	18.2
50°-60°	949.5	16.4
60°-70°	721.8	12.5
70°-80°	402.4	7.0
80°-90°	92.7	1.6
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°	1561.5	27.0
0°-40°	2572.6	44.4
0°-60°	4573.1	79.0
0°-90°	5790.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5790.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1974	1974	1974	1974	1974	
5°	2049	1952	1915	1955	2049	198
15°	2164	1859	1801	1859	2164	614
25°	2207	1665	1683	1648	2207	1019
35°	2127	1393	1546	1370	2127	1328
45°	1864	1098	1380	1070	1864	1435
55°	1467	812	1172	790	1467	1309
65°	1000	536	870	523	1000	988
75°	515	271	472	270	515	547
85°	102	51	85	52	102	129
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5
2.5°	2017.3	1987.8	1988.3	2014.0	1994.2	2003.9	1976.3	1986.9	1983.7	1986.0	1963.4
5°	2049.0	2017.3	2016.8	2038.9	2016.8	2020.9	1986.0	1992.9	1982.7	1976.3	1951.9
7.5°	2082.6	2050.9	2047.6	2067.0	2038.0	2034.8	1996.1	1996.1	1977.7	1961.6	1938.5
10°	2115.8	2083.1	2078.9	2093.7	2057.8	2047.2	2000.2	1992.9	1968.5	1944.5	1919.7
12.5°	2140.6	2107.5	2104.3	2113.5	2073.0	2053.6	2000.2	1986.0	1950.0	1916.4	1897.1
15°	2164.1	2130.0	2121.3	2125.9	2079.4	2053.6	1993.8	1971.7	1925.6	1881.5	1858.9
17.5°	2180.7	2148.0	2139.3	2138.8	2082.6	2045.8	1980.0	1949.6	1894.3	1840.9	1818.4
20°	2197.3	2164.6	2153.5	2145.2	2081.7	2035.2	1959.7	1918.7	1854.3	1794.4	1775.6
22.5°	2205.5	2171.9	2160.0	2147.5	2075.7	2015.9	1934.9	1882.8	1809.2	1737.8	1722.2
25°	2206.9	2172.4	2159.5	2141.6	2063.8	1992.9	1902.6	1839.6	1757.2	1678.0	1664.6
27.5°	2203.2	2165.5	2152.6	2131.0	2045.8	1964.8	1864.4	1790.3	1701.9	1614.5	1600.2
30°	2190.3	2152.1	2139.7	2111.6	2020.5	1930.3	1822.5	1735.5	1640.7	1547.7	1535.3
32.5°	2164.6	2127.3	2117.2	2089.1	1992.9	1890.2	1773.7	1676.6	1573.0	1484.2	1465.8
35°	2126.8	2089.5	2083.1	2053.6	1954.2	1842.3	1720.3	1612.1	1501.2	1410.5	1392.6
37.5°	2077.6	2046.3	2036.6	2007.6	1908.6	1788.0	1659.1	1542.2	1428.0	1330.4	1319.4
40°	2015.4	1986.0	1978.6	1952.8	1855.7	1727.7	1592.8	1469.9	1352.5	1261.8	1246.2
42.5°	1944.5	1916.9	1912.8	1886.1	1790.3	1660.9	1521.0	1394.9	1273.8	1186.3	1170.7
45°	1864.0	1837.3	1836.3	1811.0	1719.0	1586.8	1445.5	1318.9	1196.9	1106.2	1097.9
47.5°	1775.1	1751.2	1751.2	1727.7	1639.3	1505.3	1367.7	1239.7	1119.6	1039.5	1024.7
50°	1678.4	1655.9	1649.0	1637.5	1551.4	1416.5	1285.8	1162.4	1043.2	966.7	952.5
52.5°	1575.3	1556.0	1560.6	1539.4	1456.1	1324.0	1202.9	1075.4	966.3	896.8	882.5
55°	1466.7	1439.1	1443.2	1435.4	1356.7	1228.7	1109.9	1003.6	890.8	825.4	812.1
57.5°	1353.9	1318.0	1332.7	1328.1	1250.8	1131.1	1024.7	922.1	815.7	755.4	742.5
60°	1238.3	1203.8	1219.0	1214.9	1142.1	1033.5	936.8	841.5	741.2	686.4	673.5
62.5°	1119.6	1087.8	1101.6	1098.4	1031.6	933.6	849.3	761.9	666.1	616.9	604.9
65°	999.9	969.5	981.9	979.6	917.9	843.4	759.6	679.5	590.6	547.8	535.8
67.5°	877.4	849.3	860.9	860.9	804.2	732.9	669.4	596.2	516.5	479.7	468.6
70°	755.9	729.7	739.8	738.9	691.0	633.0	578.2	512.8	441.5	411.1	401.9
72.5°	633.4	610.4	619.6	618.7	578.7	541.4	487.1	430.4	368.3	343.9	335.6
75°	514.7	493.0	501.8	500.9	468.2	433.2	396.8	349.9	296.5	279.4	271.1
77.5°	401.4	379.3	386.7	386.7	362.8	337.4	308.4	272.1	234.3	215.9	209.9
80°	292.8	282.2	278.5	279.0	262.9	246.3	231.6	196.6	168.9	156.5	152.4
82.5°	192.4	183.7	180.0	180.9	171.7	161.6	152.4	128.0	109.6	102.2	99.9
85°	102.2	95.8	92.5	94.8	93.0	87.5	82.9	66.3	54.8	52.0	50.6
87.5°	32.2	28.1	25.8	34.1	29.0	25.8	24.9	19.8	15.2	15.2	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5
2.5°	1970.8	1970.8	1952.8	1948.7	1946.8	1949.1	1931.2	1927.9	1953.7	1945.0	1925.2
5°	1955.1	1954.2	1928.9	1924.3	1924.3	1921.5	1901.2	1896.6	1922.4	1915.1	1893.4
7.5°	1935.8	1933.0	1903.1	1899.9	1895.3	1893.4	1870.9	1867.6	1889.7	1885.1	1864.9
10°	1912.3	1909.5	1874.1	1871.8	1866.7	1863.0	1841.9	1839.6	1862.1	1854.8	1838.6
12.5°	1881.5	1876.4	1840.0	1837.7	1833.6	1832.2	1811.5	1810.6	1835.4	1828.1	1811.0
15°	1840.9	1836.8	1796.3	1797.2	1797.7	1797.7	1781.1	1780.2	1804.6	1801.4	1782.9
17.5°	1796.3	1790.8	1752.1	1754.9	1758.1	1761.8	1748.9	1751.2	1777.0	1772.8	1756.2
20°	1745.7	1740.1	1702.4	1710.2	1717.1	1724.5	1716.2	1722.6	1746.6	1744.7	1732.3
22.5°	1689.0	1683.5	1648.5	1660.5	1672.0	1685.8	1682.1	1689.5	1714.8	1714.3	1703.3
25°	1620.0	1621.4	1590.5	1605.2	1624.6	1643.9	1645.3	1657.3	1685.3	1682.6	1672.5
27.5°	1555.5	1557.4	1524.7	1549.5	1575.3	1600.2	1606.2	1622.7	1651.3	1649.0	1640.2
30°	1487.9	1490.2	1458.4	1492.5	1523.8	1554.1	1567.0	1589.6	1618.6	1618.6	1609.4
32.5°	1417.4	1421.6	1388.4	1434.0	1470.4	1505.8	1528.4	1551.8	1585.0	1584.1	1576.2
35°	1345.1	1349.7	1319.4	1377.4	1413.7	1457.0	1485.1	1516.4	1545.9	1546.3	1540.3
37.5°	1271.5	1277.0	1249.4	1312.9	1354.4	1405.5	1441.4	1472.7	1505.3	1507.2	1501.7
40°	1198.3	1204.3	1180.3	1241.6	1294.0	1351.1	1392.6	1429.4	1465.3	1466.2	1462.5
42.5°	1125.1	1131.5	1113.6	1173.4	1232.8	1294.0	1342.8	1384.7	1421.6	1423.9	1419.7
45°	1053.7	1059.3	1046.4	1111.7	1168.8	1235.6	1291.7	1339.2	1376.4	1379.7	1378.3
47.5°	982.8	987.9	976.4	1036.2	1102.1	1173.0	1237.9	1290.4	1330.0	1333.6	1332.7
50°	913.3	917.5	905.0	967.7	1033.0	1108.5	1176.2	1237.0	1281.2	1284.8	1284.4
52.5°	844.3	848.4	837.8	903.7	963.1	1042.7	1116.4	1182.2	1225.9	1231.4	1232.4
55°	777.5	779.4	771.1	834.2	891.7	975.0	1059.7	1123.7	1167.4	1172.1	1174.8
57.5°	710.8	711.2	704.3	764.6	819.9	905.0	993.9	1061.1	1102.5	1107.1	1111.3
60°	644.5	644.0	636.2	694.7	747.6	831.9	924.4	991.1	1031.2	1035.3	1040.9
62.5°	578.7	577.3	570.4	624.2	674.0	757.3	850.3	914.7	952.9	955.7	963.1
65°	513.3	511.9	505.5	555.2	600.3	679.9	771.1	832.3	866.8	870.5	869.1
67.5°	448.8	446.1	441.0	485.7	526.6	600.3	687.8	746.2	774.8	778.0	786.7
70°	384.4	381.2	369.7	417.1	453.0	518.8	600.3	652.3	676.3	679.5	678.1
72.5°	320.9	317.6	305.2	348.9	379.3	436.9	509.6	552.9	573.6	576.4	576.4
75°	259.2	257.3	249.5	282.7	308.0	354.9	416.6	452.5	468.6	471.9	470.9
77.5°	199.8	198.4	190.6	219.1	238.9	273.9	323.6	351.7	363.7	367.4	375.2
80°	143.2	142.7	130.3	158.4	167.1	196.6	232.9	254.6	261.0	266.1	271.6
82.5°	91.6	92.1	79.6	103.6	107.3	126.1	148.7	162.0	166.6	170.8	174.9
85°	44.7	46.5	39.6	54.8	55.2	64.9	74.6	79.6	81.5	84.7	88.4
87.5°	11.5	13.4	7.4	15.7	13.8	18.0	20.7	22.1	21.6	23.9	25.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5
2.5°	1931.6	1946.4	1939.0	1962.9	1972.1	1957.4	1983.2	1983.7	1965.2	1986.9	1998.8
5°	1901.7	1916.9	1912.3	1937.2	1948.7	1935.8	1967.1	1973.1	1955.1	1979.5	1998.8
7.5°	1871.3	1889.3	1883.3	1908.6	1922.4	1912.3	1945.9	1955.6	1941.8	1968.5	1994.2
10°	1845.1	1860.3	1853.8	1880.5	1892.5	1884.2	1917.4	1935.3	1922.4	1955.1	1986.0
12.5°	1819.3	1831.7	1824.4	1846.5	1858.0	1847.4	1887.9	1904.5	1895.3	1929.3	1968.9
15°	1786.2	1800.0	1789.8	1809.6	1818.4	1809.2	1842.3	1870.9	1859.4	1896.6	1940.4
17.5°	1760.8	1768.7	1754.9	1770.5	1775.6	1763.1	1796.7	1824.8	1816.5	1857.1	1907.7
20°	1732.8	1739.2	1719.9	1728.6	1728.2	1712.5	1743.3	1771.0	1765.4	1810.1	1867.6
22.5°	1701.5	1704.7	1682.1	1684.0	1683.0	1657.3	1684.9	1713.0	1710.7	1755.8	1820.2
25°	1668.3	1668.8	1639.8	1638.8	1628.7	1598.3	1622.7	1654.5	1647.6	1696.4	1764.1
27.5°	1635.6	1631.0	1596.0	1587.8	1571.6	1535.3	1556.9	1585.4	1581.3	1629.2	1704.2
30°	1600.6	1594.7	1551.8	1536.7	1513.2	1471.3	1489.2	1515.9	1518.2	1560.1	1638.8
32.5°	1567.5	1552.3	1504.9	1482.8	1453.3	1404.5	1414.2	1441.4	1445.0	1487.4	1568.4
35°	1524.7	1514.6	1456.1	1418.3	1389.3	1335.9	1346.1	1364.9	1370.5	1411.9	1494.3
37.5°	1484.2	1468.1	1405.9	1359.9	1322.6	1266.4	1269.2	1288.5	1294.0	1335.9	1417.4
40°	1442.3	1419.3	1352.5	1298.6	1255.8	1196.9	1193.7	1213.9	1218.1	1259.1	1332.7
42.5°	1397.6	1370.0	1295.0	1236.0	1186.8	1126.9	1120.5	1138.0	1142.6	1182.6	1254.9
45°	1352.5	1319.4	1236.0	1171.6	1117.7	1056.5	1050.1	1063.4	1070.3	1108.1	1177.6
47.5°	1304.6	1266.0	1175.3	1103.5	1047.8	986.5	978.7	992.1	997.6	1034.9	1100.7
50°	1254.5	1207.5	1112.7	1033.5	978.2	917.9	906.4	922.1	927.1	962.1	1026.6
52.5°	1199.2	1147.2	1045.9	963.1	907.8	850.3	836.5	851.6	857.6	891.7	951.1
55°	1140.7	1084.6	978.7	898.1	838.3	782.1	770.6	776.6	789.5	821.7	877.0
57.5°	1074.9	1019.2	907.8	825.9	768.3	714.5	704.8	710.3	722.3	753.6	803.3
60°	1004.9	946.0	835.5	753.6	697.9	646.8	638.0	643.1	656.0	684.5	730.6
62.5°	935.9	869.6	761.0	679.5	628.8	581.4	579.1	577.3	589.2	616.9	657.4
65°	852.1	788.6	683.2	605.8	559.8	517.0	507.8	511.9	523.4	548.7	591.1
67.5°	762.3	704.8	603.5	532.2	491.2	453.0	445.2	447.0	459.0	481.1	517.9
70°	667.0	616.4	522.0	458.0	423.5	387.6	382.6	383.0	394.5	413.9	446.1
72.5°	567.2	521.6	439.6	384.9	356.3	330.5	325.9	320.4	331.0	347.6	375.2
75°	465.4	425.4	357.7	313.0	290.5	268.8	264.7	259.2	269.8	284.0	305.7
77.5°	362.8	330.5	278.1	243.5	226.0	209.9	206.2	200.3	210.8	221.4	238.5
80°	262.4	238.9	207.6	171.3	165.3	154.7	151.0	144.6	154.7	161.6	174.5
82.5°	169.4	153.8	135.8	110.5	109.6	101.7	99.9	92.5	101.7	105.9	115.5
85°	85.6	78.3	73.7	56.2	58.0	52.9	52.5	44.7	52.0	53.9	59.4
87.5°	24.4	25.8	23.0	13.8	17.5	16.6	16.6	12.0	16.6	16.6	18.9
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: P837761

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-2LO-50-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5	1973.5
2.5°	1975.4	1983.2	1985.0	1984.6	1989.6	2017.3	2008.1	2017.3
5°	1980.0	1997.5	2002.1	2008.5	2016.8	2048.1	2038.0	2049.0
7.5°	1982.7	2009.0	2019.1	2031.5	2044.9	2079.9	2071.6	2082.6
10°	1982.7	2016.8	2031.5	2052.2	2070.2	2110.7	2102.9	2115.8
12.5°	1974.4	2018.2	2038.9	2067.9	2090.9	2134.6	2131.4	2140.6
15°	1957.4	2011.3	2039.8	2077.1	2105.6	2154.4	2153.1	2164.1
17.5°	1934.4	1999.3	2033.8	2080.8	2116.7	2171.5	2174.7	2180.7
20°	1905.4	1976.7	2021.9	2079.4	2124.5	2184.8	2189.0	2197.3
22.5°	1867.2	1949.6	2003.9	2073.4	2125.4	2190.3	2197.7	2205.5
25°	1822.1	1916.9	1980.4	2061.9	2120.8	2189.9	2200.0	2206.9
27.5°	1770.5	1874.5	1950.5	2043.5	2107.9	2182.5	2195.0	2203.2
30°	1710.7	1829.4	1916.4	2019.6	2090.5	2168.7	2182.1	2190.3
32.5°	1649.0	1779.7	1875.9	1988.7	2065.1	2146.6	2158.1	2164.6
35°	1581.8	1719.4	1827.1	1949.1	2032.4	2111.2	2119.9	2126.8
37.5°	1508.6	1654.0	1771.4	1904.5	1986.4	2061.9	2069.7	2077.6
40°	1433.1	1585.4	1708.8	1849.7	1931.6	2001.6	2009.9	2015.4
42.5°	1357.1	1509.5	1642.1	1785.2	1866.7	1933.9	1939.0	1944.5
45°	1280.2	1430.8	1567.0	1713.9	1794.4	1857.5	1859.4	1864.0
47.5°	1202.0	1349.3	1484.6	1632.4	1712.0	1769.6	1771.4	1775.1
50°	1123.3	1267.8	1396.7	1544.5	1622.3	1683.0	1674.8	1678.4
52.5°	1045.9	1182.2	1313.8	1449.6	1526.5	1580.4	1582.7	1575.3
55°	970.0	1098.4	1219.5	1350.2	1423.4	1465.3	1463.9	1466.7
57.5°	893.1	1013.7	1124.6	1244.3	1315.7	1355.3	1363.6	1353.9
60°	814.8	928.1	1027.5	1135.7	1204.7	1237.9	1247.6	1238.3
62.5°	737.0	841.1	931.3	1025.7	1089.7	1130.6	1129.7	1119.6
65°	659.2	753.6	834.2	914.3	970.0	1010.9	1009.1	999.9
67.5°	587.4	665.2	737.5	802.4	850.7	878.8	888.5	877.4
70°	508.2	575.4	639.0	691.0	731.0	756.4	765.6	755.9
72.5°	429.0	486.1	530.8	581.0	611.8	633.0	642.6	633.4
75°	350.8	397.7	434.1	473.2	494.9	512.8	523.9	514.7
77.5°	274.8	311.2	340.2	368.7	393.6	397.7	407.4	401.4
80°	202.6	228.8	250.0	268.8	286.8	288.6	296.5	292.8
82.5°	134.9	152.4	157.9	177.7	189.2	187.4	195.2	192.4
85°	71.4	81.9	91.6	97.6	104.0	98.1	105.0	102.2
87.5°	23.9	25.3	22.1	31.3	34.5	29.5	33.6	32.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)