

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: P838043

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-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: P838043
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

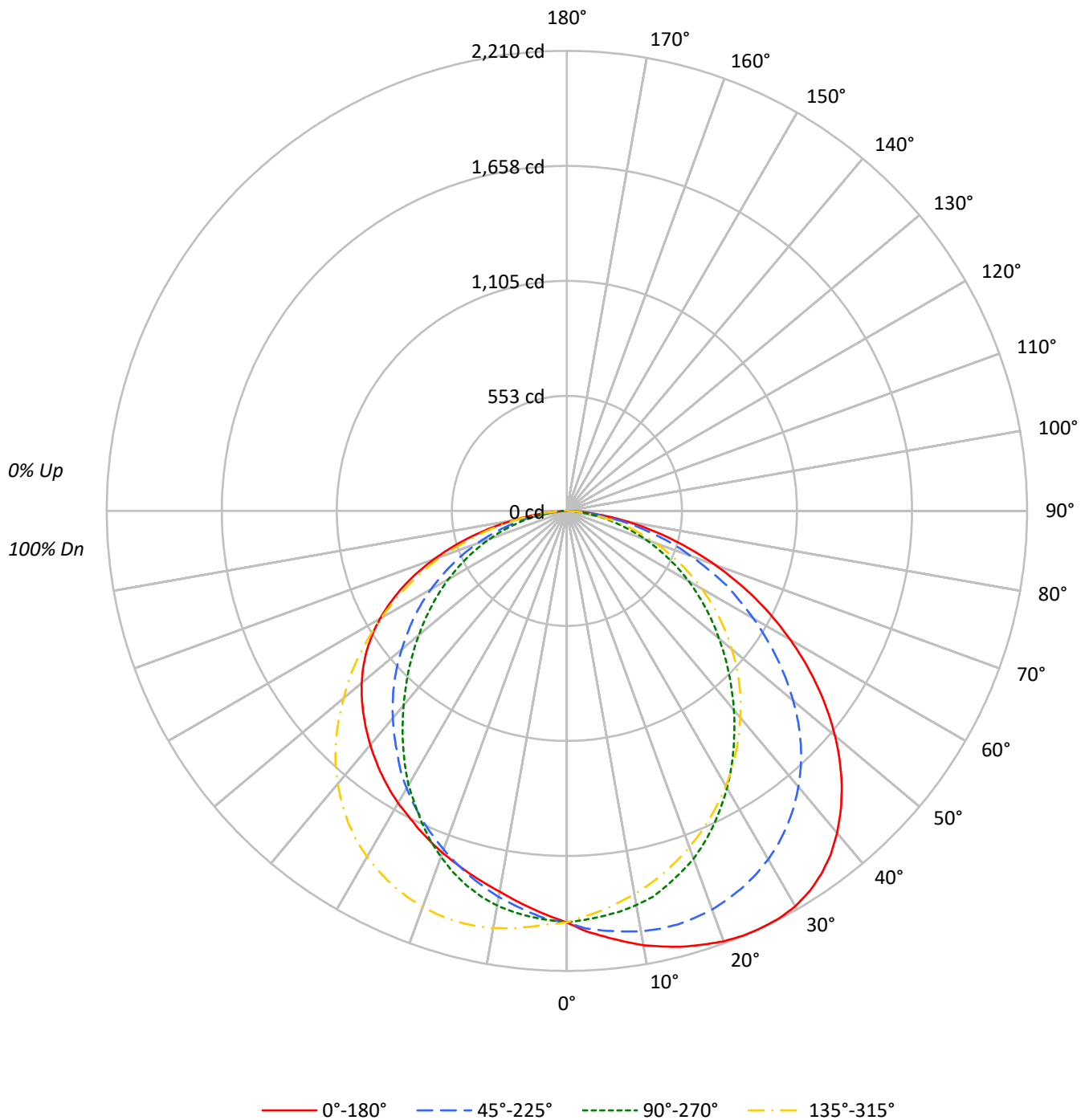
Lumens per Lamp: N/A
Luminaire Lumens: 5798.8 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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

TEST NUMBER: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-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
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°	2659	2659	2659	2659
5°	2772	2640	2591	2645
10°	2895	2627	2538	2630
15°	3019	2593	2513	2594
20°	3151	2546	2502	2532
25°	3281	2475	2502	2450
30°	3408	2389	2518	2362
35°	3499	2291	2544	2254
40°	3545	2192	2579	2143
45°	3552	2092	2629	2040
50°	3519	1997	2694	1944
55°	3446	1908	2753	1855
60°	3337	1815	2790	1768
65°	3188	1709	2776	1669
70°	2978	1583	2677	1554
75°	2680	1412	2457	1405
80°	2272	1182	2065	1200
85°	1581	783	1309	804

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.7	3.2
10°-20°	543.4	9.4
20°-30°	832.8	14.4
30°-40°	1012.6	17.5
40°-50°	1052.7	18.2
50°-60°	950.9	16.4
60°-70°	722.9	12.5
70°-80°	403.0	7.0
80°-90°	92.8	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°	1563.9	27.0
0°-40°	2576.5	44.4
0°-60°	4580.1	79.0
0°-90°	5798.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5798.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1976	1976	1976	1976	1976	
5°	2052	1955	1918	1958	2052	198
15°	2167	1862	1804	1862	2167	615
25°	2210	1667	1685	1650	2210	1021
35°	2130	1395	1549	1372	2130	1330
45°	1867	1100	1382	1072	1867	1437
55°	1469	813	1174	791	1469	1311
65°	1001	537	872	524	1001	990
75°	516	272	473	270	516	548
85°	102	51	85	52	102	129
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5
2.5°	2020.3	1990.8	1991.3	2017.1	1997.3	2006.9	1979.3	1989.9	1986.7	1989.0	1966.4
5°	2052.1	2020.3	2019.9	2042.0	2019.9	2024.0	1989.0	1995.9	1985.7	1979.3	1954.8
7.5°	2085.8	2054.0	2050.7	2070.1	2041.1	2037.8	1999.1	1999.1	1980.7	1964.5	1941.5
10°	2119.0	2086.2	2082.1	2096.8	2060.9	2050.3	2003.3	1995.9	1971.4	1947.5	1922.6
12.5°	2143.9	2110.7	2107.5	2116.7	2076.1	2056.7	2003.3	1989.0	1953.0	1919.3	1900.0
15°	2167.4	2133.3	2124.5	2129.1	2082.6	2056.7	1996.8	1974.7	1928.6	1884.3	1861.7
17.5°	2184.0	2151.3	2142.5	2142.0	2085.8	2048.9	1983.0	1952.5	1897.2	1843.7	1821.1
20°	2200.6	2167.8	2156.8	2148.5	2084.9	2038.3	1962.7	1921.7	1857.1	1797.2	1778.3
22.5°	2208.9	2175.2	2163.2	2150.8	2078.9	2018.9	1937.8	1885.7	1811.9	1740.5	1724.8
25°	2210.3	2175.7	2162.8	2144.8	2066.9	1995.9	1905.5	1842.3	1759.8	1680.5	1667.2
27.5°	2206.6	2168.8	2155.9	2134.2	2048.9	1967.8	1867.2	1793.0	1704.5	1616.9	1602.6
30°	2193.7	2155.4	2143.0	2114.8	2023.5	1933.2	1825.3	1738.2	1643.2	1550.0	1537.6
32.5°	2167.8	2130.5	2120.4	2092.2	1995.9	1893.1	1776.4	1679.1	1575.4	1486.4	1468.0
35°	2130.0	2092.7	2086.2	2056.7	1957.2	1845.1	1722.9	1614.6	1503.5	1412.7	1394.7
37.5°	2080.7	2049.4	2039.7	2010.6	1911.5	1790.7	1661.6	1544.5	1430.2	1332.4	1321.4
40°	2018.5	1989.0	1981.6	1955.8	1858.5	1730.3	1595.2	1472.1	1354.6	1263.7	1248.1
42.5°	1947.5	1919.8	1915.7	1888.9	1793.0	1663.5	1523.3	1397.0	1275.7	1188.1	1172.4
45°	1866.8	1840.0	1839.1	1813.8	1721.6	1589.2	1447.7	1320.9	1198.7	1107.9	1099.6
47.5°	1777.8	1753.8	1753.8	1730.3	1641.8	1507.6	1369.8	1241.6	1121.3	1041.0	1026.3
50°	1681.0	1658.4	1651.5	1639.9	1553.7	1418.6	1287.7	1164.1	1044.7	968.2	953.9
52.5°	1577.7	1558.3	1563.0	1541.7	1458.3	1326.0	1204.7	1077.0	967.7	898.1	883.8
55°	1468.9	1441.2	1445.4	1437.5	1358.7	1230.5	1111.6	1005.1	892.1	826.7	813.3
57.5°	1355.9	1320.0	1334.7	1330.1	1252.7	1132.8	1026.3	923.5	817.0	756.6	743.7
60°	1240.2	1205.6	1220.9	1216.7	1143.9	1035.1	938.2	842.8	742.3	687.4	674.5
62.5°	1121.3	1089.5	1103.3	1100.1	1033.2	935.0	850.6	763.0	667.1	617.8	605.8
65°	1001.4	971.0	983.4	981.1	919.3	844.6	760.7	680.5	591.5	548.6	536.7
67.5°	878.8	850.6	862.2	862.2	805.5	734.0	670.4	597.1	517.3	480.4	469.3
70°	757.0	730.8	740.9	740.0	692.0	633.9	579.1	513.6	442.1	411.7	402.5
72.5°	634.4	611.4	620.6	619.6	579.5	542.2	487.8	431.1	368.8	344.4	336.1
75°	515.5	493.8	502.5	501.6	468.9	433.8	397.4	350.4	296.9	279.9	271.6
77.5°	402.0	379.9	387.3	387.3	363.3	337.9	308.9	272.5	234.7	216.2	210.2
80°	293.2	282.6	278.9	279.4	263.3	246.7	231.9	196.9	169.2	156.8	152.6
82.5°	192.7	184.0	180.3	181.2	172.0	161.8	152.6	128.2	109.7	102.4	100.0
85°	102.4	95.9	92.7	95.0	93.1	87.6	83.0	66.4	54.9	52.1	50.7
87.5°	32.3	28.1	25.8	34.1	29.0	25.8	24.9	19.8	15.2	15.2	14.8
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: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5
2.5°	1973.7	1973.7	1955.8	1951.6	1949.8	1952.1	1934.1	1930.9	1956.7	1947.9	1928.1
5°	1958.1	1957.2	1931.8	1927.2	1927.2	1924.4	1904.1	1899.5	1925.3	1918.0	1896.3
7.5°	1938.7	1935.9	1906.0	1902.7	1898.1	1896.3	1873.7	1870.5	1892.6	1888.0	1867.7
10°	1915.2	1912.4	1876.9	1874.6	1869.6	1865.9	1844.7	1842.3	1864.9	1857.6	1841.4
12.5°	1884.3	1879.2	1842.8	1840.5	1836.4	1835.0	1814.2	1813.3	1838.2	1830.8	1813.8
15°	1843.7	1839.6	1799.0	1799.9	1800.4	1800.4	1783.8	1782.9	1807.3	1804.1	1785.6
17.5°	1799.0	1793.5	1754.8	1757.5	1760.7	1764.4	1751.5	1753.8	1779.6	1775.5	1758.9
20°	1748.3	1742.8	1705.0	1712.8	1719.7	1727.1	1718.8	1725.2	1749.2	1747.4	1734.9
22.5°	1691.6	1686.1	1651.0	1663.0	1674.5	1688.4	1684.7	1692.0	1717.4	1716.9	1705.9
25°	1622.4	1623.8	1592.9	1607.7	1627.0	1646.4	1647.8	1659.8	1687.9	1685.1	1675.0
27.5°	1557.9	1559.7	1527.0	1551.9	1577.7	1602.6	1608.6	1625.2	1653.8	1651.5	1642.7
30°	1490.1	1492.4	1460.6	1494.7	1526.1	1556.5	1569.4	1592.0	1621.0	1621.0	1611.8
32.5°	1419.6	1423.7	1390.5	1436.2	1472.6	1508.1	1530.7	1554.2	1587.4	1586.5	1578.6
35°	1347.2	1351.8	1321.4	1379.5	1415.9	1459.2	1487.3	1518.7	1548.2	1548.7	1542.7
37.5°	1273.4	1278.9	1251.3	1314.9	1356.4	1407.6	1443.5	1474.9	1507.6	1509.5	1503.9
40°	1200.1	1206.1	1182.1	1243.4	1296.0	1353.2	1394.7	1431.6	1467.5	1468.4	1464.8
42.5°	1126.8	1133.3	1115.3	1175.2	1234.7	1296.0	1344.9	1386.8	1423.7	1426.0	1421.9
45°	1055.3	1060.9	1048.0	1113.4	1170.6	1237.5	1293.7	1341.2	1378.5	1381.8	1380.4
47.5°	984.3	989.4	977.9	1037.8	1103.8	1174.8	1239.8	1292.3	1332.0	1335.7	1334.7
50°	914.7	918.9	906.4	969.1	1034.6	1110.2	1178.0	1238.8	1283.1	1286.8	1286.3
52.5°	845.6	849.7	839.1	905.0	964.5	1044.3	1118.0	1184.0	1227.8	1233.3	1234.2
55°	778.7	780.6	772.3	835.4	893.1	976.5	1061.3	1125.4	1169.2	1173.8	1176.6
57.5°	711.9	712.3	705.4	765.8	821.1	906.4	995.4	1062.7	1104.2	1108.8	1113.0
60°	645.5	645.0	637.2	695.7	748.7	833.1	925.8	992.6	1032.7	1036.9	1042.4
62.5°	579.5	578.2	571.2	625.2	675.0	758.4	851.6	916.1	954.4	957.1	964.5
65°	514.1	512.7	506.2	556.0	601.2	681.0	772.3	833.6	868.2	871.8	870.5
67.5°	449.5	446.8	441.7	486.4	527.4	601.2	688.8	747.4	775.9	779.2	787.9
70°	385.0	381.7	370.2	417.7	453.7	519.6	601.2	653.3	677.3	680.5	679.1
72.5°	321.4	318.1	305.7	349.5	379.9	437.5	510.4	553.7	574.5	577.2	577.2
75°	259.6	257.7	249.9	283.1	308.4	355.5	417.2	453.2	469.3	472.6	471.7
77.5°	200.1	198.7	190.9	219.5	239.3	274.3	324.1	352.2	364.2	367.9	375.8
80°	143.4	142.9	130.5	158.6	167.4	196.9	233.3	255.0	261.4	266.5	272.0
82.5°	91.7	92.2	79.8	103.7	107.4	126.3	148.9	162.3	166.9	171.0	175.2
85°	44.7	46.6	39.7	54.9	55.3	65.0	74.7	79.8	81.6	84.8	88.5
87.5°	11.5	13.4	7.4	15.7	13.8	18.0	20.7	22.1	21.7	24.0	25.4
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: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5
2.5°	1934.6	1949.3	1941.9	1965.9	1975.1	1960.4	1986.2	1986.7	1968.2	1989.9	2001.9
5°	1904.6	1919.8	1915.2	1940.1	1951.6	1938.7	1970.1	1976.1	1958.1	1982.5	2001.9
7.5°	1874.2	1892.1	1886.1	1911.5	1925.3	1915.2	1948.9	1958.5	1944.7	1971.4	1997.3
10°	1847.9	1863.1	1856.6	1883.4	1895.4	1887.1	1920.3	1938.2	1925.3	1958.1	1989.0
12.5°	1822.1	1834.5	1827.1	1849.3	1860.8	1850.2	1890.8	1907.4	1898.1	1932.3	1971.9
15°	1788.9	1802.7	1792.6	1812.4	1821.1	1811.9	1845.1	1873.7	1862.2	1899.5	1943.3
17.5°	1763.5	1771.3	1757.5	1773.2	1778.3	1765.8	1799.5	1827.6	1819.3	1859.9	1910.6
20°	1735.4	1741.8	1722.5	1731.2	1730.8	1715.1	1746.0	1773.7	1768.1	1812.8	1870.5
22.5°	1704.0	1707.3	1684.7	1686.5	1685.6	1659.8	1687.4	1715.6	1713.3	1758.4	1823.0
25°	1670.8	1671.3	1642.3	1641.3	1631.2	1600.8	1625.2	1657.0	1650.1	1699.0	1766.7
27.5°	1638.1	1633.5	1598.5	1590.2	1574.0	1537.6	1559.3	1587.9	1583.7	1631.7	1706.8
30°	1603.1	1597.1	1554.2	1539.0	1515.5	1473.5	1491.5	1518.2	1520.5	1562.5	1641.3
32.5°	1569.9	1554.7	1507.2	1485.0	1455.5	1406.7	1416.3	1443.5	1447.2	1489.6	1570.8
35°	1527.0	1516.8	1458.3	1420.5	1391.4	1338.0	1348.1	1367.0	1372.5	1414.0	1496.6
37.5°	1486.4	1470.3	1408.0	1361.9	1324.6	1268.3	1271.1	1290.5	1296.0	1338.0	1419.6
40°	1444.5	1421.4	1354.6	1300.6	1257.7	1198.7	1195.5	1215.8	1219.9	1261.0	1334.7
42.5°	1399.7	1372.1	1296.9	1237.9	1188.6	1128.6	1122.2	1139.7	1144.3	1184.4	1256.8
45°	1354.6	1321.4	1237.9	1173.4	1119.4	1058.1	1051.7	1065.0	1071.9	1109.7	1179.4
47.5°	1306.6	1267.9	1177.1	1105.1	1049.3	988.0	980.2	993.6	999.1	1036.4	1102.4
50°	1256.4	1209.3	1114.4	1035.1	979.7	919.3	907.8	923.5	928.6	963.6	1028.1
52.5°	1201.0	1148.9	1047.5	964.5	909.2	851.6	837.7	852.9	858.9	893.1	952.5
55°	1142.5	1086.2	980.2	899.5	839.6	783.3	771.8	777.8	790.7	823.0	878.3
57.5°	1076.5	1020.8	909.2	827.1	769.5	715.5	705.9	711.4	723.4	754.7	804.5
60°	1006.5	947.5	836.8	754.7	698.9	647.8	639.0	644.1	657.0	685.6	731.7
62.5°	937.3	870.9	762.1	680.5	629.8	582.3	580.0	578.2	590.1	617.8	658.4
65°	853.4	789.8	684.2	606.7	560.6	517.8	508.5	512.7	524.2	549.6	592.0
67.5°	763.5	705.9	604.4	533.0	491.9	453.7	445.8	447.7	459.7	481.8	518.7
70°	668.1	617.3	522.8	458.7	424.2	388.2	383.1	383.6	395.1	414.5	446.8
72.5°	568.0	522.4	440.3	385.4	356.9	331.0	326.4	320.9	331.5	348.1	375.8
75°	466.1	426.0	358.2	313.5	290.9	269.3	265.1	259.6	270.2	284.5	306.1
77.5°	363.3	331.0	278.5	243.9	226.4	210.2	206.5	200.6	211.2	221.8	238.8
80°	262.8	239.3	207.9	171.5	165.5	154.9	151.2	144.8	154.9	161.8	174.7
82.5°	169.7	154.0	136.0	110.7	109.7	101.9	100.0	92.7	101.9	106.0	115.7
85°	85.8	78.4	73.8	56.2	58.1	53.0	52.6	44.7	52.1	53.9	59.5
87.5°	24.4	25.8	23.1	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

TEST NUMBER: P838043

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-20-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5	1976.5
2.5°	1978.4	1986.2	1988.0	1987.6	1992.7	2020.3	2011.1	2020.3
5°	1983.0	2000.5	2005.1	2011.6	2019.9	2051.2	2041.1	2052.1
7.5°	1985.7	2012.0	2022.2	2034.6	2048.0	2083.0	2074.7	2085.8
10°	1985.7	2019.9	2034.6	2055.4	2073.3	2113.9	2106.1	2119.0
12.5°	1977.4	2021.2	2042.0	2071.0	2094.1	2137.9	2134.7	2143.9
15°	1960.4	2014.3	2042.9	2080.3	2108.8	2157.7	2156.3	2167.4
17.5°	1937.3	2002.3	2036.9	2083.9	2119.9	2174.8	2178.0	2184.0
20°	1908.3	1979.7	2024.9	2082.6	2127.7	2188.1	2192.3	2200.6
22.5°	1870.0	1952.5	2006.9	2076.6	2128.7	2193.7	2201.0	2208.9
25°	1824.8	1919.8	1983.4	2065.0	2124.1	2193.2	2203.4	2210.3
27.5°	1773.2	1877.4	1953.5	2046.6	2111.1	2185.8	2198.3	2206.6
30°	1713.3	1832.2	1919.3	2022.6	2093.6	2172.0	2185.4	2193.7
32.5°	1651.5	1782.4	1878.8	1991.7	2068.3	2149.9	2161.4	2167.8
35°	1584.2	1722.0	1829.9	1952.1	2035.5	2114.4	2123.1	2130.0
37.5°	1510.9	1656.5	1774.1	1907.4	1989.4	2065.0	2072.9	2080.7
40°	1435.2	1587.9	1711.4	1852.5	1934.6	2004.6	2012.9	2018.5
42.5°	1359.2	1511.8	1644.6	1787.9	1869.6	1936.9	1941.9	1947.5
45°	1282.2	1432.9	1569.4	1716.5	1797.2	1860.3	1862.2	1866.8
47.5°	1203.8	1351.3	1486.9	1634.9	1714.6	1772.3	1774.1	1777.8
50°	1125.0	1269.7	1398.8	1546.8	1624.7	1685.6	1677.3	1681.0
52.5°	1047.5	1184.0	1315.8	1451.8	1528.8	1582.8	1585.1	1577.7
55°	971.4	1100.1	1221.3	1352.3	1425.6	1467.5	1466.1	1468.9
57.5°	894.4	1015.2	1126.3	1246.2	1317.7	1357.3	1365.6	1355.9
60°	816.1	929.5	1029.1	1137.4	1206.6	1239.8	1249.4	1240.2
62.5°	738.1	842.3	932.7	1027.2	1091.3	1132.3	1131.4	1121.3
65°	660.2	754.7	835.4	915.6	971.4	1012.5	1010.6	1001.4
67.5°	588.3	666.2	738.6	803.6	852.0	880.1	889.8	878.8
70°	509.0	576.3	639.9	692.0	732.1	757.5	766.7	757.0
72.5°	429.7	486.9	531.6	581.8	612.7	633.9	643.6	634.4
75°	351.3	398.3	434.8	474.0	495.6	513.6	524.7	515.5
77.5°	275.2	311.7	340.7	369.3	394.2	398.3	408.0	402.0
80°	202.9	229.1	250.3	269.3	287.2	289.1	296.9	293.2
82.5°	135.1	152.6	158.1	178.0	189.5	187.6	195.5	192.7
85°	71.5	82.1	91.7	97.7	104.2	98.2	105.1	102.4
87.5°	24.0	25.4	22.1	31.4	34.6	29.5	33.7	32.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)