

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: P837919

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-3HI-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: P837919
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-3HI-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

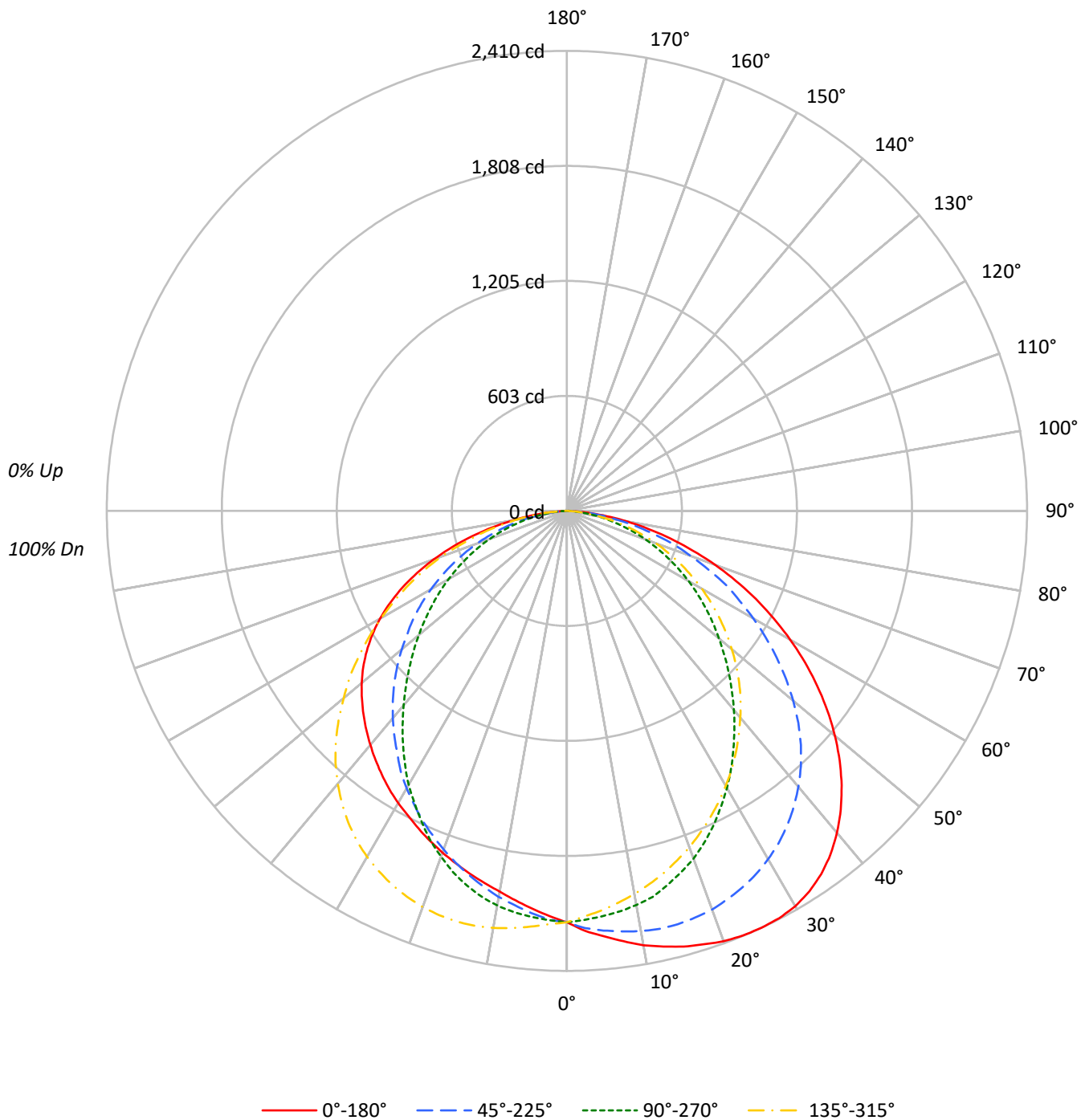
Lumens per Lamp: N/A
Luminaire Lumens: 6322.5 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66
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	30	10	50	30	10
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	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	5799	5799	5799	5799
5°	6044	5757	5649	5767
10°	6313	5728	5534	5736
15°	6583	5655	5480	5657
20°	6871	5552	5456	5521
25°	7155	5397	5455	5342
30°	7432	5209	5492	5152
35°	7629	4995	5547	4916
40°	7731	4780	5624	4672
45°	7746	4563	5734	4448
50°	7673	4354	5874	4238
55°	7514	4160	6004	4045
60°	7277	3958	6084	3855
65°	6952	3726	6053	3640
70°	6494	3452	5838	3389
75°	5843	3079	5358	3063
80°	4954	2579	4503	2617
85°	3446	1707	2856	1754

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.6	3.2
10°-20°	592.5	9.4
20°-30°	908.0	14.4
30°-40°	1104.1	17.5
40°-50°	1147.8	18.2
50°-60°	1036.8	16.4
60°-70°	788.2	12.5
70°-80°	439.4	7.0
80°-90°	101.2	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°	1705.1	27.0
0°-40°	2809.2	44.4
0°-60°	4993.7	79.0
0°-90°	6322.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6322.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2155	2155	2155	2155	2155	
5°	2238	2131	2091	2135	2238	216
15°	2363	2030	1967	2030	2363	670
25°	2410	1818	1837	1799	2410	1113
35°	2322	1521	1688	1496	2322	1451
45°	2035	1199	1507	1169	2035	1567
55°	1602	887	1280	862	1602	1430
65°	1092	585	951	572	1092	1079
75°	562	296	515	295	562	597
85°	112	55	92	57	112	141
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°	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0
2.5°	2202.8	2170.6	2171.1	2199.3	2177.6	2188.2	2158.0	2169.6	2166.1	2168.6	2144.0
5°	2237.5	2202.8	2202.3	2226.4	2202.3	2206.8	2168.6	2176.1	2165.1	2158.0	2131.4
7.5°	2274.2	2239.5	2236.0	2257.1	2225.4	2221.9	2179.7	2179.7	2159.5	2142.0	2116.8
10°	2310.4	2274.7	2270.1	2286.2	2247.0	2235.4	2184.2	2176.1	2149.5	2123.4	2096.2
12.5°	2337.5	2301.3	2297.8	2307.8	2263.6	2242.5	2184.2	2168.6	2129.4	2092.7	2071.6
15°	2363.1	2325.9	2316.4	2321.4	2270.6	2242.5	2177.1	2153.0	2102.7	2054.5	2029.9
17.5°	2381.2	2345.5	2336.0	2335.5	2274.2	2233.9	2162.1	2128.9	2068.6	2010.2	1985.6
20°	2399.3	2363.6	2351.6	2342.5	2273.2	2222.4	2139.9	2095.2	2024.8	1959.5	1938.9
22.5°	2408.4	2371.7	2358.6	2345.0	2266.6	2201.3	2112.8	2056.0	1975.6	1897.6	1880.6
25°	2409.9	2372.2	2358.1	2338.5	2253.5	2176.1	2077.6	2008.7	1918.8	1832.3	1817.7
27.5°	2405.9	2364.6	2350.6	2326.9	2233.9	2145.5	2035.9	1955.0	1858.4	1762.9	1747.3
30°	2391.8	2350.1	2336.5	2305.8	2206.3	2107.8	1990.1	1895.1	1791.6	1690.0	1676.5
32.5°	2363.6	2322.9	2311.9	2281.2	2176.1	2064.0	1936.9	1830.8	1717.7	1620.7	1600.6
35°	2322.4	2281.7	2274.7	2242.5	2133.9	2011.8	1878.5	1760.4	1639.3	1540.2	1520.6
37.5°	2268.6	2234.4	2223.9	2192.2	2084.1	1952.4	1811.7	1684.0	1559.3	1452.8	1440.7
40°	2200.8	2168.6	2160.5	2132.4	2026.3	1886.6	1739.3	1605.1	1476.9	1377.9	1360.8
42.5°	2123.4	2093.2	2088.7	2059.5	1955.0	1813.7	1660.9	1523.1	1390.9	1295.4	1278.3
45°	2035.4	2006.2	2005.2	1977.6	1877.0	1732.8	1578.4	1440.2	1307.0	1208.0	1198.9
47.5°	1938.4	1912.2	1912.2	1886.6	1790.1	1643.8	1493.5	1353.7	1222.5	1135.1	1119.0
50°	1832.8	1808.2	1800.6	1788.1	1694.1	1546.8	1404.0	1269.3	1139.1	1055.6	1040.1
52.5°	1720.2	1699.1	1704.1	1681.0	1590.0	1445.7	1313.5	1174.3	1055.1	979.2	963.7
55°	1601.6	1571.4	1575.9	1567.4	1481.4	1341.7	1212.0	1095.9	972.7	901.3	886.7
57.5°	1478.4	1439.2	1455.3	1450.3	1365.8	1235.1	1119.0	1006.9	890.8	824.9	810.8
60°	1352.2	1314.5	1331.1	1326.6	1247.2	1128.5	1023.0	918.9	809.3	749.5	735.4
62.5°	1222.5	1187.8	1202.9	1199.4	1126.5	1019.4	927.5	831.9	727.4	673.6	660.5
65°	1091.8	1058.7	1072.2	1069.7	1002.4	920.9	829.4	742.0	644.9	598.2	585.1
67.5°	958.1	927.5	940.0	940.0	878.2	800.3	730.9	651.0	564.0	523.8	511.7
70°	825.4	796.8	807.8	806.8	754.5	691.2	631.4	560.0	482.1	448.9	438.8
72.5°	691.7	666.6	676.6	675.6	631.9	591.2	531.8	470.0	402.1	375.5	366.5
75°	562.0	538.4	547.9	546.9	511.2	473.0	433.3	382.0	323.7	305.1	296.1
77.5°	438.3	414.2	422.3	422.3	396.1	368.5	336.8	297.1	255.9	235.8	229.2
80°	319.7	308.1	304.1	304.6	287.0	268.9	252.9	214.6	184.5	170.9	166.4
82.5°	210.1	200.6	196.6	197.6	187.5	176.4	166.4	139.7	119.6	111.6	109.1
85°	111.6	104.6	101.0	103.6	101.5	95.5	90.5	72.4	59.8	56.8	55.3
87.5°	35.2	30.7	28.2	37.2	31.7	28.2	27.1	21.6	16.6	16.6	16.1
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°	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0
2.5°	2152.0	2152.0	2132.4	2127.9	2125.9	2128.4	2108.8	2105.3	2133.4	2123.9	2102.2
5°	2134.9	2133.9	2106.3	2101.2	2101.2	2098.2	2076.1	2071.1	2099.2	2091.2	2067.6
7.5°	2113.8	2110.8	2078.1	2074.6	2069.6	2067.6	2042.9	2039.4	2063.5	2058.5	2036.4
10°	2088.2	2085.1	2046.4	2043.9	2038.4	2034.4	2011.3	2008.7	2033.4	2025.3	2007.7
12.5°	2054.5	2049.0	2009.2	2006.7	2002.2	2000.7	1978.1	1977.1	2004.2	1996.2	1977.6
15°	2010.2	2005.7	1961.5	1962.5	1963.0	1963.0	1944.9	1943.9	1970.5	1967.0	1946.9
17.5°	1961.5	1955.5	1913.2	1916.2	1919.8	1923.8	1909.7	1912.2	1940.4	1935.8	1917.8
20°	1906.2	1900.2	1858.9	1867.5	1875.0	1883.1	1874.0	1881.1	1907.2	1905.2	1891.6
22.5°	1844.4	1838.3	1800.1	1813.2	1825.8	1840.8	1836.8	1844.9	1872.5	1872.0	1859.9
25°	1769.0	1770.5	1736.8	1752.9	1774.0	1795.1	1796.6	1809.7	1840.3	1837.3	1826.3
27.5°	1698.6	1700.6	1664.9	1692.0	1720.2	1747.3	1753.9	1772.0	1803.1	1800.6	1791.1
30°	1624.7	1627.2	1592.5	1629.7	1663.9	1697.1	1711.1	1735.8	1767.4	1767.4	1757.4
32.5°	1547.8	1552.3	1516.1	1565.9	1605.6	1644.3	1668.9	1694.6	1730.8	1729.7	1721.2
35°	1468.9	1473.9	1440.7	1504.0	1543.8	1591.0	1621.7	1655.9	1688.0	1688.5	1682.0
37.5°	1388.4	1394.5	1364.3	1433.7	1478.9	1534.7	1573.9	1608.1	1643.8	1645.8	1639.8
40°	1308.5	1315.0	1288.9	1355.7	1413.1	1475.4	1520.6	1560.8	1600.1	1601.1	1597.0
42.5°	1228.6	1235.6	1216.0	1281.3	1346.2	1413.1	1466.3	1512.1	1552.3	1554.8	1550.3
45°	1150.7	1156.7	1142.6	1214.0	1276.3	1349.2	1410.5	1462.3	1503.0	1506.6	1505.0
47.5°	1073.2	1078.8	1066.2	1131.5	1203.4	1280.8	1351.7	1409.0	1452.3	1456.3	1455.3
50°	997.3	1001.9	988.3	1056.6	1128.0	1210.5	1284.4	1350.7	1399.0	1403.0	1402.5
52.5°	921.9	926.5	914.9	986.8	1051.6	1138.6	1219.0	1290.9	1338.7	1344.7	1345.7
55°	849.0	851.0	842.0	910.9	973.7	1064.7	1157.2	1227.1	1274.8	1279.8	1282.9
57.5°	776.1	776.7	769.1	835.0	895.3	988.3	1085.3	1158.7	1203.9	1209.0	1213.5
60°	703.8	703.3	694.7	758.6	816.4	908.4	1009.4	1082.3	1126.0	1130.5	1136.6
62.5°	631.9	630.4	622.8	681.6	735.9	826.9	928.5	998.8	1040.6	1043.6	1051.6
65°	560.5	559.0	552.0	606.2	655.5	742.5	842.0	908.9	946.6	950.6	949.1
67.5°	490.1	487.1	481.6	530.3	575.1	655.5	751.0	814.9	846.0	849.5	859.1
70°	419.7	416.2	403.7	455.4	494.6	566.5	655.5	712.3	738.4	742.0	740.5
72.5°	350.4	346.9	333.3	381.0	414.2	477.1	556.5	603.7	626.3	629.4	629.4
75°	283.0	281.0	272.5	308.6	336.3	387.6	454.9	494.1	511.7	515.3	514.2
77.5°	218.2	216.7	208.1	239.3	260.9	299.1	353.4	384.1	397.1	401.1	409.7
80°	156.3	155.8	142.3	172.9	182.5	214.6	254.4	278.0	285.0	290.6	296.6
82.5°	100.0	100.5	87.0	113.1	117.1	137.7	162.4	176.9	182.0	186.5	191.0
85°	48.8	50.8	43.2	59.8	60.3	70.9	81.4	87.0	89.0	92.5	96.5
87.5°	12.6	14.6	8.0	17.1	15.1	19.6	22.6	24.1	23.6	26.1	27.6
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°	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0
2.5°	2109.3	2125.4	2117.3	2143.5	2153.5	2137.4	2165.6	2166.1	2146.0	2169.6	2182.7
5°	2076.6	2093.2	2088.2	2115.3	2127.9	2113.8	2148.0	2154.5	2134.9	2161.6	2182.7
7.5°	2043.4	2063.0	2056.5	2084.1	2099.2	2088.2	2124.9	2135.4	2120.3	2149.5	2177.6
10°	2014.8	2031.4	2024.3	2053.5	2066.5	2057.5	2093.7	2113.3	2099.2	2134.9	2168.6
12.5°	1986.6	2000.2	1992.1	2016.3	2028.8	2017.3	2061.5	2079.6	2069.6	2106.8	2150.0
15°	1950.4	1965.5	1954.4	1976.1	1985.6	1975.6	2011.8	2042.9	2030.4	2071.1	2118.8
17.5°	1922.8	1931.3	1916.2	1933.3	1938.9	1925.3	1962.0	1992.7	1983.6	2027.8	2083.1
20°	1892.1	1899.2	1878.0	1887.6	1887.1	1870.0	1903.7	1933.8	1927.8	1976.6	2039.4
22.5°	1857.9	1861.5	1836.8	1838.8	1837.8	1809.7	1839.8	1870.5	1868.0	1917.2	1987.6
25°	1821.7	1822.2	1790.6	1789.6	1778.5	1745.3	1772.0	1806.7	1799.1	1852.4	1926.3
27.5°	1786.0	1781.0	1742.8	1733.8	1716.2	1676.5	1700.1	1731.3	1726.7	1779.0	1860.9
30°	1747.8	1741.3	1694.6	1678.0	1652.3	1606.6	1626.2	1655.3	1657.9	1703.6	1789.6
32.5°	1711.6	1695.1	1643.3	1619.2	1587.0	1533.7	1544.3	1573.9	1577.9	1624.2	1712.7
35°	1664.9	1653.8	1590.0	1548.8	1517.1	1458.8	1469.9	1490.5	1496.5	1541.7	1631.7
37.5°	1620.7	1603.1	1535.2	1484.9	1444.2	1382.9	1385.9	1407.0	1413.1	1458.8	1547.8
40°	1574.9	1549.8	1476.9	1418.1	1371.3	1307.0	1303.5	1325.6	1330.1	1374.8	1455.3
42.5°	1526.2	1496.0	1414.1	1349.7	1295.9	1230.6	1223.5	1242.6	1247.7	1291.4	1370.3
45°	1476.9	1440.7	1349.7	1279.3	1220.5	1153.7	1146.6	1161.2	1168.7	1210.0	1285.9
47.5°	1424.6	1382.4	1283.4	1204.9	1144.1	1077.3	1068.7	1083.3	1089.3	1130.0	1201.9
50°	1369.8	1318.5	1215.0	1128.5	1068.2	1002.4	989.8	1006.9	1012.4	1050.6	1121.0
52.5°	1309.5	1252.7	1142.1	1051.6	991.3	928.5	913.4	930.0	936.5	973.7	1038.6
55°	1245.7	1184.3	1068.7	980.7	915.4	854.1	841.5	848.0	862.1	897.3	957.6
57.5°	1173.8	1112.9	991.3	901.8	839.0	780.2	769.6	775.6	788.7	822.9	877.2
60°	1097.4	1033.0	912.4	822.9	762.1	706.3	696.7	702.3	716.3	747.5	797.8
62.5°	1022.0	949.6	830.9	742.0	686.7	634.9	632.4	630.4	643.4	673.6	717.8
65°	930.5	861.1	746.0	661.5	611.3	564.5	554.5	559.0	571.6	599.2	645.5
67.5°	832.4	769.6	659.0	581.1	536.4	494.6	486.1	488.1	501.2	525.3	565.5
70°	728.4	673.1	570.0	500.2	462.5	423.3	417.7	418.2	430.8	451.9	487.1
72.5°	619.3	569.5	480.1	420.2	389.1	360.9	355.9	349.9	361.4	379.5	409.7
75°	508.2	464.5	390.6	341.8	317.2	293.6	289.0	283.0	294.6	310.2	333.8
77.5°	396.1	360.9	303.6	265.9	246.8	229.2	225.2	218.7	230.2	241.8	260.4
80°	286.5	260.9	226.7	187.0	180.5	168.9	164.9	157.8	168.9	176.4	190.5
82.5°	185.0	167.9	148.3	120.6	119.6	111.1	109.1	101.0	111.1	115.6	126.2
85°	93.5	85.5	80.4	61.3	63.3	57.8	57.3	48.8	56.8	58.8	64.8
87.5°	26.6	28.2	25.1	15.1	19.1	18.1	18.1	13.1	18.1	18.1	20.6
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: P837919

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-3HI-50-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0	2155.0
2.5°	2157.0	2165.6	2167.6	2167.1	2172.6	2202.8	2192.7	2202.8
5°	2162.1	2181.2	2186.2	2193.2	2202.3	2236.5	2225.4	2237.5
7.5°	2165.1	2193.7	2204.8	2218.4	2232.9	2271.1	2262.1	2274.2
10°	2165.1	2202.3	2218.4	2241.0	2260.6	2304.8	2296.3	2310.4
12.5°	2156.0	2203.8	2226.4	2258.1	2283.2	2331.0	2327.4	2337.5
15°	2137.4	2196.2	2227.4	2268.1	2299.3	2352.6	2351.1	2363.1
17.5°	2112.3	2183.2	2220.9	2272.1	2311.4	2371.2	2374.7	2381.2
20°	2080.6	2158.5	2207.8	2270.6	2319.9	2385.8	2390.3	2399.3
22.5°	2038.9	2128.9	2188.2	2264.1	2320.9	2391.8	2399.8	2408.4
25°	1989.6	2093.2	2162.6	2251.5	2315.9	2391.3	2402.3	2409.9
27.5°	1933.3	2046.9	2129.9	2231.4	2301.8	2383.2	2396.8	2405.9
30°	1868.0	1997.7	2092.7	2205.3	2282.7	2368.2	2382.7	2391.8
32.5°	1800.6	1943.4	2048.5	2171.6	2255.1	2344.0	2356.6	2363.6
35°	1727.2	1877.5	1995.2	2128.4	2219.4	2305.3	2314.9	2322.4
37.5°	1647.3	1806.2	1934.3	2079.6	2169.1	2251.5	2260.1	2268.6
40°	1564.9	1731.3	1866.0	2019.8	2109.3	2185.7	2194.7	2200.8
42.5°	1481.9	1648.3	1793.1	1949.4	2038.4	2111.8	2117.3	2123.4
45°	1398.0	1562.4	1711.1	1871.5	1959.5	2028.3	2030.4	2035.4
47.5°	1312.5	1473.4	1621.2	1782.5	1869.5	1932.3	1934.3	1938.4
50°	1226.6	1384.4	1525.2	1686.5	1771.5	1837.8	1828.8	1832.8
52.5°	1142.1	1290.9	1434.7	1583.0	1666.9	1725.7	1728.2	1720.2
55°	1059.2	1199.4	1331.6	1474.4	1554.3	1600.1	1598.5	1601.6
57.5°	975.2	1106.9	1228.1	1358.8	1436.7	1479.9	1489.0	1478.4
60°	889.8	1013.4	1122.0	1240.1	1315.5	1351.7	1362.3	1352.2
62.5°	804.8	918.4	1016.9	1120.0	1189.9	1234.6	1233.6	1222.5
65°	719.8	822.9	910.9	998.3	1059.2	1103.9	1101.9	1091.8
67.5°	641.4	726.4	805.3	876.2	929.0	959.6	970.2	958.1
70°	555.0	628.4	697.7	754.5	798.3	825.9	836.0	825.4
72.5°	468.5	530.8	579.6	634.4	668.1	691.2	701.8	691.7
75°	383.0	434.3	474.0	516.8	540.4	560.0	572.1	562.0
77.5°	300.1	339.8	371.5	402.7	429.8	434.3	444.9	438.3
80°	221.2	249.8	273.0	293.6	313.2	315.2	323.7	319.7
82.5°	147.3	166.4	172.4	194.0	206.6	204.6	213.1	210.1
85°	77.9	89.5	100.0	106.6	113.6	107.1	114.6	111.6
87.5°	26.1	27.6	24.1	34.2	37.7	32.2	36.7	35.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)