

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: P837743

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-2LO-35-120-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: P837743
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-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

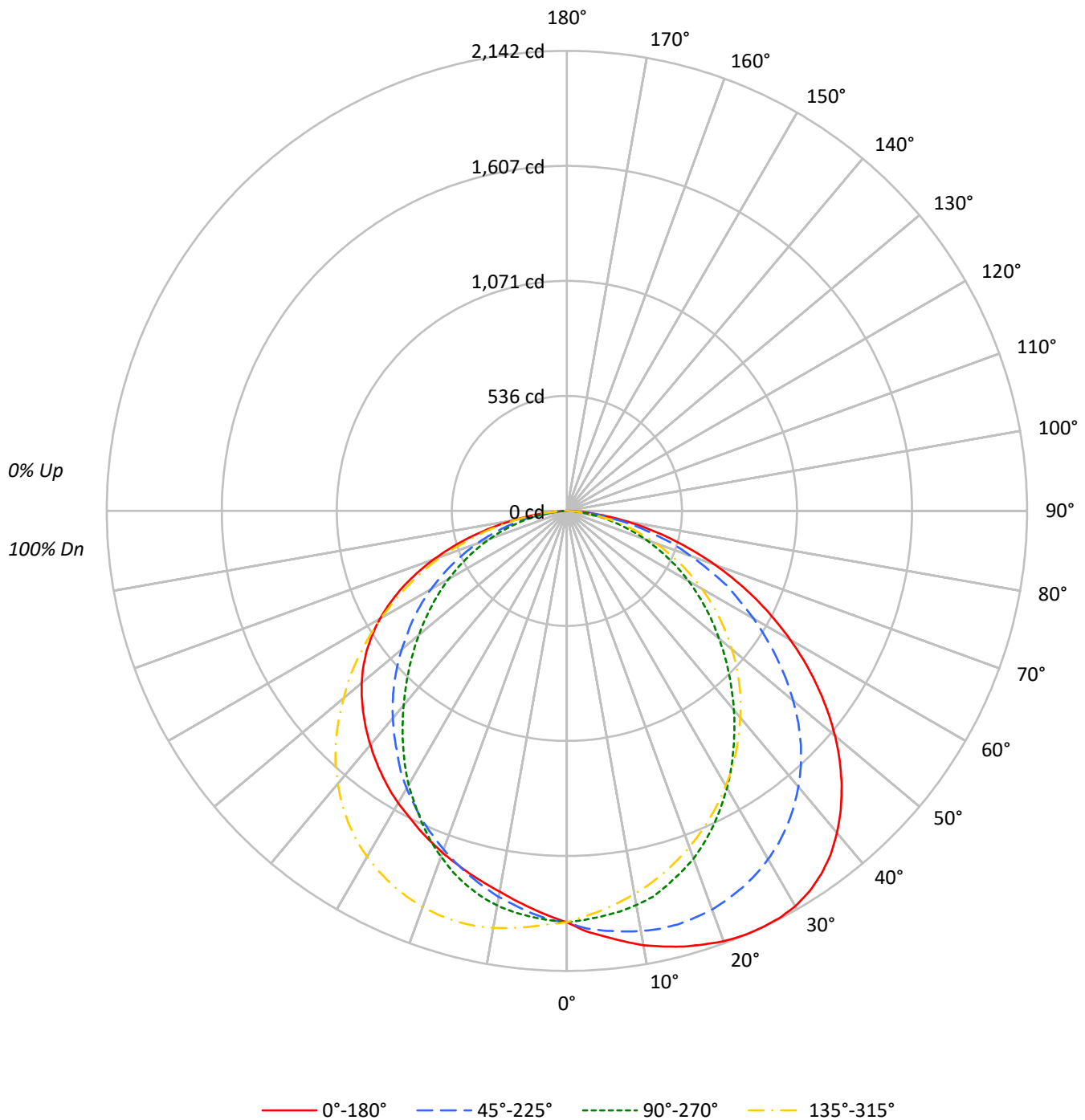
Lumens per Lamp: N/A
Luminaire Lumens: 5619.8 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	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°	5155	5155	5155	5155
5°	5372	5118	5021	5126
10°	5611	5091	4919	5099
15°	5852	5026	4871	5028
20°	6107	4935	4849	4907
25°	6360	4797	4849	4748
30°	6606	4630	4882	4579
35°	6781	4440	4930	4370
40°	6871	4249	4999	4153
45°	6885	4055	5096	3953
50°	6820	3870	5220	3767
55°	6678	3698	5337	3595
60°	6469	3518	5408	3427
65°	6180	3312	5380	3235
70°	5773	3069	5189	3013
75°	5193	2737	4762	2722
80°	4404	2292	4003	2326
85°	3063	1516	2538	1559

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	3.2
10°-20°	526.6	9.4
20°-30°	807.1	14.4
30°-40°	981.4	17.5
40°-50°	1020.2	18.2
50°-60°	921.5	16.4
60°-70°	700.6	12.5
70°-80°	390.6	7.0
80°-90°	89.9	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°	1515.6	27.0
0°-40°	2496.9	44.4
0°-60°	4438.6	79.0
0°-90°	5619.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5619.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1916	1916	1916	1916	1916	
5°	1989	1894	1859	1898	1989	192
15°	2100	1804	1748	1805	2100	596
25°	2142	1616	1633	1599	2142	989
35°	2064	1352	1501	1330	2064	1289
45°	1809	1066	1339	1039	1809	1393
55°	1424	788	1138	766	1424	1271
65°	970	520	845	508	970	959
75°	500	263	458	262	500	531
85°	99	49	82	50	99	125
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°	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5
2.5°	1957.9	1929.3	1929.8	1954.8	1935.6	1945.0	1918.2	1928.4	1925.3	1927.5	1905.6
5°	1988.8	1957.9	1957.5	1978.9	1957.5	1961.5	1927.5	1934.2	1924.4	1918.2	1894.5
7.5°	2021.4	1990.5	1987.4	2006.2	1978.0	1974.9	1937.4	1937.4	1919.5	1903.9	1881.5
10°	2053.5	2021.8	2017.8	2032.1	1997.2	1987.0	1941.4	1934.2	1910.6	1887.3	1863.2
12.5°	2077.7	2045.5	2042.4	2051.3	2012.0	1993.2	1941.4	1927.5	1892.7	1860.1	1841.3
15°	2100.5	2067.4	2058.9	2063.4	2018.2	1993.2	1935.1	1913.7	1869.0	1826.1	1804.2
17.5°	2116.5	2084.8	2076.3	2075.9	2021.4	1985.6	1921.7	1892.2	1838.6	1786.8	1764.9
20°	2132.6	2100.9	2090.2	2082.1	2020.5	1975.4	1902.1	1862.3	1799.8	1741.7	1723.4
22.5°	2140.7	2108.1	2096.4	2084.4	2014.7	1956.6	1877.9	1827.5	1756.0	1686.7	1671.5
25°	2142.0	2108.5	2096.0	2078.6	2003.1	1934.2	1846.7	1785.5	1705.5	1628.6	1615.7
27.5°	2138.4	2101.8	2089.3	2068.3	1985.6	1907.0	1809.6	1737.6	1651.9	1567.0	1553.1
30°	2125.9	2088.8	2076.8	2049.5	1961.1	1873.5	1768.9	1684.5	1592.4	1502.2	1490.1
32.5°	2100.9	2064.7	2054.9	2027.6	1934.2	1834.6	1721.6	1627.3	1526.8	1440.5	1422.6
35°	2064.3	2028.1	2021.8	1993.2	1896.7	1788.1	1669.7	1564.7	1457.1	1369.0	1351.6
37.5°	2016.5	1986.1	1976.7	1948.5	1852.5	1735.4	1610.3	1496.8	1386.0	1291.3	1280.6
40°	1956.1	1927.5	1920.4	1895.4	1801.1	1676.9	1546.0	1426.7	1312.7	1224.7	1209.5
42.5°	1887.3	1860.5	1856.5	1830.6	1737.6	1612.1	1476.3	1353.8	1236.3	1151.4	1136.2
45°	1809.1	1783.2	1782.3	1757.8	1668.4	1540.2	1403.0	1280.1	1161.7	1073.7	1065.6
47.5°	1722.9	1699.7	1699.7	1676.9	1591.1	1461.1	1327.5	1203.3	1086.6	1008.9	994.6
50°	1629.1	1607.2	1600.5	1589.3	1505.8	1374.8	1247.9	1128.2	1012.5	938.3	924.5
52.5°	1529.0	1510.2	1514.7	1494.1	1413.3	1285.0	1167.5	1043.8	937.9	870.4	856.5
55°	1423.5	1396.7	1400.8	1393.2	1316.8	1192.5	1077.3	974.0	864.6	801.1	788.2
57.5°	1314.1	1279.2	1293.5	1289.1	1214.0	1097.8	994.6	895.0	791.7	733.2	720.7
60°	1201.9	1168.4	1183.2	1179.1	1108.5	1003.1	909.3	816.8	719.4	666.2	653.7
62.5°	1086.6	1055.8	1069.2	1066.1	1001.3	906.1	824.4	739.5	646.5	598.7	587.1
65°	970.5	941.0	953.0	950.8	890.9	818.6	737.2	659.5	573.3	531.7	520.1
67.5°	851.6	824.4	835.5	835.5	780.6	711.3	649.7	578.6	501.3	465.6	454.9
70°	733.7	708.2	718.0	717.1	670.7	614.4	561.2	497.7	428.5	399.0	390.1
72.5°	614.8	592.5	601.4	600.5	561.6	525.4	472.7	417.8	357.4	333.8	325.7
75°	499.5	478.5	487.0	486.1	454.4	420.4	385.2	339.6	287.7	271.2	263.2
77.5°	389.6	368.2	375.3	375.3	352.1	327.5	299.4	264.1	227.4	209.6	203.7
80°	284.2	273.9	270.3	270.8	255.1	239.0	224.7	190.8	164.0	151.9	147.9
82.5°	186.8	178.3	174.7	175.6	166.7	156.8	147.9	124.2	106.3	99.2	97.0
85°	99.2	92.9	89.8	92.0	90.3	84.9	80.4	64.3	53.2	50.5	49.1
87.5°	31.3	27.3	25.0	33.1	28.1	25.0	24.1	19.2	14.7	14.7	14.3
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5
2.5°	1912.8	1912.8	1895.4	1891.4	1889.6	1891.8	1874.4	1871.2	1896.3	1887.8	1868.6
5°	1897.6	1896.7	1872.1	1867.7	1867.7	1865.0	1845.3	1840.9	1865.9	1858.7	1837.7
7.5°	1878.8	1876.2	1847.1	1844.0	1839.5	1837.7	1815.8	1812.7	1834.2	1829.7	1810.0
10°	1856.1	1853.4	1819.0	1816.7	1811.8	1808.2	1787.7	1785.5	1807.4	1800.2	1784.6
12.5°	1826.1	1821.2	1785.9	1783.7	1779.6	1778.3	1758.2	1757.3	1781.4	1774.3	1757.8
15°	1786.8	1782.8	1743.5	1744.4	1744.8	1744.8	1728.7	1727.8	1751.5	1748.4	1730.5
17.5°	1743.5	1738.1	1700.6	1703.2	1706.4	1709.9	1697.4	1699.7	1724.7	1720.7	1704.6
20°	1694.3	1688.9	1652.3	1659.9	1666.6	1673.8	1665.7	1672.0	1695.2	1693.4	1681.4
22.5°	1639.4	1634.0	1600.0	1611.6	1622.8	1636.2	1632.6	1639.8	1664.4	1663.9	1653.2
25°	1572.3	1573.7	1543.7	1558.0	1576.8	1595.6	1596.9	1608.5	1635.8	1633.1	1623.3
27.5°	1509.8	1511.6	1479.8	1504.0	1529.0	1553.1	1558.9	1575.0	1602.7	1600.5	1592.0
30°	1444.1	1446.3	1415.5	1448.6	1478.9	1508.4	1520.9	1542.8	1571.0	1571.0	1562.1
32.5°	1375.7	1379.8	1347.6	1391.8	1427.1	1461.5	1483.4	1506.2	1538.4	1537.5	1529.9
35°	1305.6	1310.1	1280.6	1336.9	1372.2	1414.2	1441.4	1471.8	1500.4	1500.8	1495.0
37.5°	1234.1	1239.5	1212.6	1274.3	1314.5	1364.1	1399.0	1429.3	1461.1	1462.9	1457.5
40°	1163.0	1168.9	1145.6	1205.0	1256.0	1311.4	1351.6	1387.3	1422.2	1423.1	1419.5
42.5°	1092.0	1098.3	1080.8	1138.9	1196.6	1256.0	1303.3	1344.0	1379.8	1382.0	1378.0
45°	1022.8	1028.1	1015.6	1079.0	1134.5	1199.2	1253.8	1299.8	1336.0	1339.1	1337.8
47.5°	953.9	958.9	947.7	1005.8	1069.7	1138.5	1201.5	1252.4	1290.8	1294.4	1293.5
50°	886.5	890.5	878.4	939.2	1002.6	1075.9	1141.6	1200.6	1243.5	1247.0	1246.6
52.5°	819.5	823.5	813.2	877.1	934.7	1012.0	1083.5	1147.4	1189.9	1195.2	1196.1
55°	754.7	756.5	748.4	809.6	865.5	946.3	1028.6	1090.7	1133.1	1137.6	1140.3
57.5°	689.9	690.3	683.6	742.2	795.8	878.4	964.7	1029.9	1070.1	1074.6	1078.6
60°	625.5	625.1	617.5	674.2	725.6	807.4	897.2	962.0	1000.9	1004.9	1010.2
62.5°	561.6	560.3	553.6	605.9	654.1	735.0	825.3	887.8	924.9	927.6	934.7
65°	498.2	496.9	490.6	538.9	582.6	659.9	748.4	807.8	841.3	844.9	843.6
67.5°	435.6	433.0	428.0	471.4	511.2	582.6	667.5	724.3	752.0	755.1	763.6
70°	373.1	370.0	358.8	404.8	439.7	503.6	582.6	633.1	656.4	659.5	658.2
72.5°	311.4	308.3	296.2	338.7	368.2	424.0	494.6	536.6	556.7	559.4	559.4
75°	251.6	249.8	242.2	274.3	298.9	344.5	404.4	439.2	454.9	458.0	457.1
77.5°	193.9	192.6	185.0	212.7	231.9	265.9	314.1	341.4	353.0	356.6	364.2
80°	139.0	138.5	126.4	153.7	162.2	190.8	226.1	247.1	253.3	258.3	263.6
82.5°	88.9	89.4	77.3	100.5	104.1	122.4	144.3	157.3	161.7	165.8	169.8
85°	43.3	45.1	38.4	53.2	53.6	63.0	72.4	77.3	79.1	82.2	85.8
87.5°	11.2	13.0	7.1	15.2	13.4	17.4	20.1	21.4	21.0	23.2	24.6
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°	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5
2.5°	1874.8	1889.1	1882.0	1905.2	1914.1	1899.8	1924.9	1925.3	1907.4	1928.4	1940.1
5°	1845.8	1860.5	1856.1	1880.2	1891.4	1878.8	1909.2	1915.0	1897.6	1921.3	1940.1
7.5°	1816.3	1833.7	1827.9	1852.5	1865.9	1856.1	1888.7	1898.1	1884.6	1910.6	1935.6
10°	1790.8	1805.6	1799.3	1825.2	1836.8	1828.8	1861.0	1878.4	1865.9	1897.6	1927.5
12.5°	1765.8	1777.9	1770.7	1792.2	1803.3	1793.1	1832.4	1848.5	1839.5	1872.6	1911.0
15°	1733.6	1747.0	1737.2	1756.4	1764.9	1756.0	1788.1	1815.8	1804.7	1840.9	1883.3
17.5°	1709.1	1716.6	1703.2	1718.4	1723.4	1711.3	1743.9	1771.2	1763.1	1802.4	1851.6
20°	1681.8	1688.1	1669.3	1677.8	1677.3	1662.1	1692.1	1718.9	1713.5	1756.9	1812.7
22.5°	1651.4	1654.5	1632.6	1634.4	1633.5	1608.5	1635.3	1662.6	1660.4	1704.1	1766.7
25°	1619.2	1619.7	1591.5	1590.6	1580.8	1551.3	1575.0	1605.8	1599.1	1646.5	1712.2
27.5°	1587.5	1583.1	1549.1	1541.1	1525.4	1490.1	1511.1	1538.8	1534.8	1581.3	1654.1
30°	1553.6	1547.8	1506.2	1491.5	1468.7	1428.0	1445.4	1471.3	1473.6	1514.2	1590.6
32.5°	1521.4	1506.6	1460.6	1439.2	1410.6	1363.2	1372.6	1399.0	1402.5	1443.6	1522.3
35°	1479.8	1470.0	1413.3	1376.6	1348.5	1296.6	1306.5	1324.8	1330.2	1370.4	1450.3
37.5°	1440.5	1424.9	1364.6	1319.9	1283.7	1229.2	1231.9	1250.6	1256.0	1296.6	1375.7
40°	1399.9	1377.5	1312.7	1260.5	1218.9	1161.7	1158.6	1178.2	1182.3	1222.0	1293.5
42.5°	1356.5	1329.7	1256.9	1199.7	1151.9	1093.8	1087.5	1104.5	1109.0	1147.9	1218.0
45°	1312.7	1280.6	1199.7	1137.1	1084.9	1025.4	1019.2	1032.1	1038.8	1075.5	1142.9
47.5°	1266.3	1228.7	1140.7	1071.0	1016.9	957.5	949.9	962.9	968.2	1004.4	1068.3
50°	1217.6	1172.0	1079.9	1003.1	949.5	890.9	879.8	895.0	899.9	933.8	996.4
52.5°	1163.9	1113.5	1015.2	934.7	881.1	825.3	811.9	826.6	832.4	865.5	923.1
55°	1107.2	1052.7	949.9	871.7	813.6	759.1	748.0	753.8	766.3	797.6	851.2
57.5°	1043.3	989.2	881.1	801.6	745.7	693.5	684.1	689.4	701.0	731.4	779.7
60°	975.4	918.2	811.0	731.4	677.4	627.8	619.3	624.2	636.7	664.4	709.1
62.5°	908.4	844.0	738.6	659.5	610.3	564.3	562.1	560.3	571.9	598.7	638.0
65°	827.0	765.4	663.1	588.0	543.3	501.8	492.8	496.9	508.0	532.6	573.7
67.5°	739.9	684.1	585.8	516.5	476.7	439.7	432.1	433.9	445.5	466.9	502.7
70°	647.4	598.3	506.7	444.6	411.1	376.2	371.3	371.7	382.9	401.7	433.0
72.5°	550.5	506.2	426.7	373.5	345.8	320.8	316.3	311.0	321.3	337.3	364.2
75°	451.7	412.9	347.2	303.8	281.9	260.9	256.9	251.6	261.8	275.7	296.7
77.5°	352.1	320.8	269.9	236.4	219.4	203.7	200.2	194.4	204.6	214.9	231.4
80°	254.7	231.9	201.5	166.2	160.4	150.1	146.6	140.3	150.1	156.8	169.3
82.5°	164.4	149.2	131.8	107.2	106.3	98.7	97.0	89.8	98.7	102.8	112.1
85°	83.1	76.0	71.5	54.5	56.3	51.4	50.9	43.3	50.5	52.3	57.6
87.5°	23.7	25.0	22.3	13.4	17.0	16.1	16.1	11.6	16.1	16.1	18.3
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: P837743

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-2LO-35-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5	1915.5
2.5°	1917.3	1924.9	1926.6	1926.2	1931.1	1957.9	1949.0	1957.9
5°	1921.7	1938.7	1943.2	1949.4	1957.5	1987.9	1978.0	1988.8
7.5°	1924.4	1949.9	1959.7	1971.8	1984.7	2018.7	2010.7	2021.4
10°	1924.4	1957.5	1971.8	1991.9	2009.3	2048.6	2041.0	2053.5
12.5°	1916.4	1958.8	1978.9	2007.1	2029.4	2071.9	2068.7	2077.7
15°	1899.8	1952.1	1979.8	2016.0	2043.7	2091.1	2089.7	2100.5
17.5°	1877.5	1940.5	1974.0	2019.6	2054.4	2107.6	2110.7	2116.5
20°	1849.4	1918.6	1962.4	2018.2	2062.0	2120.6	2124.6	2132.6
22.5°	1812.3	1892.2	1945.0	2012.4	2062.9	2125.9	2133.1	2140.7
25°	1768.5	1860.5	1922.2	2001.3	2058.5	2125.5	2135.3	2142.0
27.5°	1718.4	1819.4	1893.1	1983.4	2045.9	2118.3	2130.4	2138.4
30°	1660.4	1775.6	1860.1	1960.2	2029.0	2104.9	2117.9	2125.9
32.5°	1600.5	1727.4	1820.8	1930.2	2004.4	2083.5	2094.7	2100.9
35°	1535.2	1668.8	1773.4	1891.8	1972.7	2049.1	2057.6	2064.3
37.5°	1464.2	1605.4	1719.3	1848.5	1928.0	2001.3	2008.9	2016.5
40°	1390.9	1538.8	1658.6	1795.3	1874.8	1942.7	1950.8	1956.1
42.5°	1317.2	1465.1	1593.8	1732.7	1811.8	1877.1	1882.0	1887.3
45°	1242.6	1388.7	1520.9	1663.5	1741.7	1802.9	1804.7	1809.1
47.5°	1166.6	1309.6	1441.0	1584.4	1661.7	1717.5	1719.3	1722.9
50°	1090.2	1230.5	1355.6	1499.1	1574.6	1633.5	1625.5	1629.1
52.5°	1015.2	1147.4	1275.2	1407.0	1481.6	1533.9	1536.1	1529.0
55°	941.4	1066.1	1183.6	1310.5	1381.5	1422.2	1420.9	1423.5
57.5°	866.8	983.9	1091.6	1207.7	1277.0	1315.4	1323.5	1314.1
60°	790.9	900.8	997.3	1102.3	1169.3	1201.5	1210.9	1201.9
62.5°	715.3	816.3	903.9	995.5	1057.6	1097.4	1096.5	1086.6
65°	639.8	731.4	809.6	887.4	941.4	981.2	979.4	970.5
67.5°	570.1	645.6	715.8	778.8	825.7	853.0	862.3	851.6
70°	493.3	558.5	620.2	670.7	709.5	734.1	743.0	733.7
72.5°	416.4	471.8	515.2	563.9	593.8	614.4	623.7	614.8
75°	340.5	386.0	421.3	459.3	480.3	497.7	508.5	499.5
77.5°	266.7	302.0	330.2	357.9	382.0	386.0	395.4	389.6
80°	196.6	222.1	242.6	260.9	278.4	280.2	287.7	284.2
82.5°	130.9	147.9	153.3	172.5	183.6	181.9	189.4	186.8
85°	69.3	79.5	88.9	94.7	101.0	95.2	101.9	99.2
87.5°	23.2	24.6	21.4	30.4	33.5	28.6	32.6	31.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)