

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: P838202

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90**

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: P838202
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-LD4-2LO-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

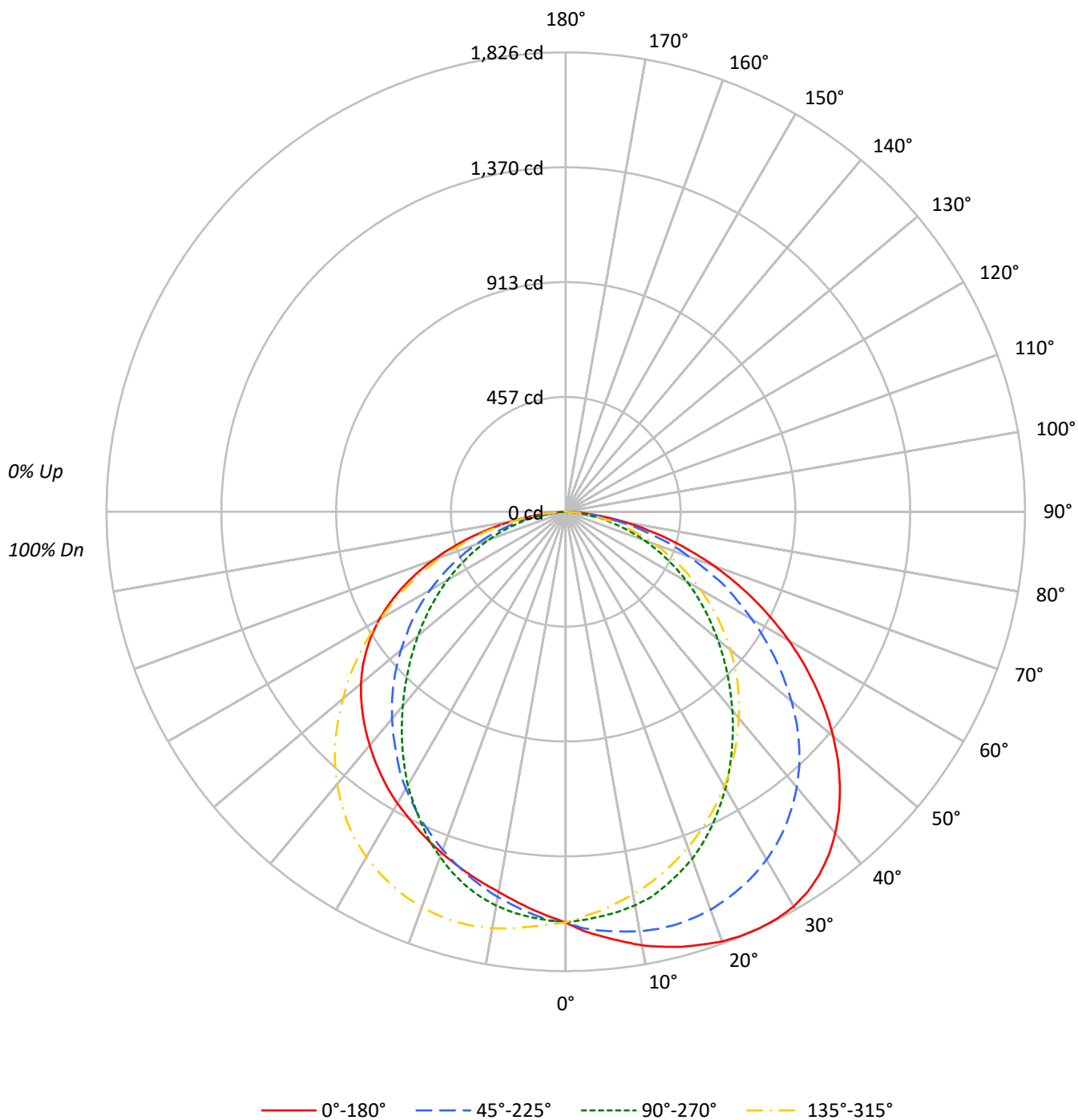
Lumens per Lamp: N/A
Luminaire Lumens: 4789.3 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-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	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°	2196	2196	2196	2196
5°	2289	2181	2140	2184
10°	2391	2169	2096	2173
15°	2494	2142	2076	2142
20°	2602	2103	2066	2091
25°	2710	2044	2066	2023
30°	2815	1973	2080	1951
35°	2890	1892	2101	1862
40°	2928	1811	2130	1770
45°	2934	1728	2171	1685
50°	2906	1649	2225	1605
55°	2846	1576	2274	1532
60°	2756	1499	2305	1460
65°	2633	1411	2293	1379
70°	2460	1308	2211	1284
75°	2213	1166	2029	1160
80°	1877	976	1705	991
85°	1304	647	1082	664

TEST NUMBER: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	3.2
10°-20°	448.8	9.4
20°-30°	687.8	14.4
30°-40°	836.3	17.5
40°-50°	869.4	18.2
50°-60°	785.4	16.4
60°-70°	597.1	12.5
70°-80°	332.9	7.0
80°-90°	76.6	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°	1291.6	27.0
0°-40°	2128.0	44.4
0°-60°	3782.8	79.0
0°-90°	4789.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4789.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1632	1632	1632	1632	1632	
5°	1695	1614	1584	1617	1695	163
15°	1790	1538	1490	1538	1790	508
25°	1826	1377	1392	1363	1826	843
35°	1759	1152	1279	1134	1759	1099
45°	1542	908	1141	885	1542	1187
55°	1213	672	970	653	1213	1083
65°	827	443	720	433	827	817
75°	426	224	390	223	426	452
85°	84	42	70	43	84	106
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4
2.5°	1668.6	1644.2	1644.6	1665.9	1649.6	1657.6	1634.7	1643.5	1640.8	1642.7	1624.1
5°	1694.9	1668.6	1668.2	1686.5	1668.2	1671.7	1642.7	1648.4	1640.0	1634.7	1614.5
7.5°	1722.7	1696.4	1693.7	1709.7	1685.7	1683.1	1651.1	1651.1	1635.9	1622.5	1603.5
10°	1750.1	1723.1	1719.6	1731.8	1702.1	1693.4	1654.5	1648.4	1628.2	1608.4	1587.9
12.5°	1770.7	1743.2	1740.6	1748.2	1714.7	1698.7	1654.5	1642.7	1613.0	1585.2	1569.2
15°	1790.1	1761.9	1754.7	1758.5	1720.0	1698.7	1649.2	1630.9	1592.8	1556.3	1537.6
17.5°	1803.8	1776.8	1769.5	1769.1	1722.7	1692.2	1637.8	1612.6	1566.9	1522.8	1504.1
20°	1817.5	1790.5	1781.3	1774.5	1721.9	1683.5	1621.0	1587.1	1533.8	1484.3	1468.7
22.5°	1824.3	1796.6	1786.7	1776.4	1717.0	1667.5	1600.4	1557.4	1496.5	1437.5	1424.5
25°	1825.5	1796.9	1786.3	1771.4	1707.1	1648.4	1573.8	1521.6	1453.5	1388.0	1376.9
27.5°	1822.4	1791.2	1780.6	1762.7	1692.2	1625.2	1542.2	1480.9	1407.8	1335.4	1323.6
30°	1811.8	1780.2	1769.9	1746.7	1671.3	1596.6	1507.5	1435.6	1357.1	1280.2	1269.9
32.5°	1790.5	1759.6	1751.2	1728.0	1648.4	1563.5	1467.2	1386.8	1301.1	1227.7	1212.4
35°	1759.2	1728.4	1723.1	1698.7	1616.4	1523.9	1423.0	1333.5	1241.7	1166.7	1151.9
37.5°	1718.5	1692.6	1684.6	1660.6	1578.7	1479.0	1372.4	1275.6	1181.2	1100.5	1091.3
40°	1667.1	1642.7	1636.6	1615.3	1535.0	1429.1	1317.5	1215.9	1118.8	1043.7	1030.8
42.5°	1608.4	1585.6	1582.2	1560.1	1480.9	1373.9	1258.1	1153.8	1053.6	981.3	968.3
45°	1541.8	1519.7	1519.0	1498.0	1421.9	1312.6	1195.7	1091.0	990.0	915.0	908.2
47.5°	1468.3	1448.5	1448.5	1429.1	1356.0	1245.2	1131.3	1025.5	926.1	859.8	847.6
50°	1388.3	1369.7	1364.0	1354.5	1283.3	1171.7	1063.5	961.5	862.9	799.7	787.8
52.5°	1303.1	1287.1	1290.9	1273.4	1204.4	1095.1	995.0	889.5	799.3	741.8	730.0
55°	1213.2	1190.3	1193.8	1187.3	1122.2	1016.3	918.1	830.1	736.8	682.8	671.7
57.5°	1119.9	1090.2	1102.4	1098.6	1034.6	935.6	847.6	762.7	674.8	624.9	614.2
60°	1024.3	995.8	1008.3	1004.9	944.7	854.9	774.9	696.1	613.1	567.8	557.1
62.5°	926.1	899.8	911.2	908.6	853.3	772.2	702.6	630.2	551.0	510.3	500.4
65°	827.1	801.9	812.2	810.3	759.3	697.6	628.3	562.0	488.5	453.1	443.2
67.5°	725.8	702.6	712.1	712.1	665.2	606.2	553.7	493.1	427.2	396.8	387.6
70°	625.3	603.5	611.9	611.2	571.6	523.6	478.3	424.2	365.2	340.0	332.4
72.5°	524.0	504.9	512.5	511.8	478.6	447.8	402.9	356.0	304.6	284.4	277.6
75°	425.7	407.8	415.1	414.3	387.3	358.3	328.2	289.4	245.2	231.1	224.3
77.5°	332.0	313.8	319.9	319.9	300.1	279.1	255.1	225.0	193.8	178.6	173.6
80°	242.2	233.4	230.4	230.8	217.4	203.7	191.5	162.6	139.7	129.5	126.0
82.5°	159.2	151.9	148.9	149.6	142.0	133.7	126.0	105.9	90.6	84.5	82.6
85°	84.5	79.2	76.5	78.4	76.9	72.3	68.5	54.8	45.3	43.0	41.9
87.5°	26.7	23.2	21.3	28.2	24.0	21.3	20.6	16.4	12.6	12.6	12.2
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: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4
2.5°	1630.1	1630.1	1615.3	1611.9	1610.3	1612.3	1597.4	1594.7	1616.1	1608.8	1592.4
5°	1617.2	1616.4	1595.5	1591.7	1591.7	1589.4	1572.6	1568.8	1590.2	1584.1	1566.2
7.5°	1601.2	1598.9	1574.2	1571.5	1567.7	1566.2	1547.5	1544.9	1563.1	1559.3	1542.6
10°	1581.8	1579.5	1550.2	1548.3	1544.1	1541.0	1523.5	1521.6	1540.3	1534.2	1520.9
12.5°	1556.3	1552.1	1522.0	1520.1	1516.7	1515.5	1498.4	1497.6	1518.2	1512.1	1498.0
15°	1522.8	1519.3	1485.8	1486.6	1487.0	1487.0	1473.3	1472.5	1492.7	1490.0	1474.8
17.5°	1485.8	1481.3	1449.3	1451.6	1454.2	1457.3	1446.6	1448.5	1469.8	1466.4	1452.7
20°	1443.9	1439.4	1408.1	1414.6	1420.3	1426.4	1419.6	1424.9	1444.7	1443.2	1432.9
22.5°	1397.1	1392.5	1363.6	1373.5	1383.0	1394.4	1391.4	1397.5	1418.4	1418.0	1408.9
25°	1340.0	1341.1	1315.6	1327.8	1343.8	1359.8	1360.9	1370.8	1394.1	1391.8	1383.4
27.5°	1286.7	1288.2	1261.2	1281.7	1303.1	1323.6	1328.6	1342.3	1365.9	1364.0	1356.7
30°	1230.7	1232.6	1206.3	1234.5	1260.4	1285.5	1296.2	1314.9	1338.8	1338.8	1331.2
32.5°	1172.4	1175.9	1148.5	1186.2	1216.2	1245.6	1264.2	1283.6	1311.0	1310.3	1303.8
35°	1112.7	1116.5	1091.3	1139.3	1169.4	1205.2	1228.4	1254.3	1278.7	1279.1	1274.1
37.5°	1051.7	1056.3	1033.5	1086.0	1120.3	1162.5	1192.2	1218.1	1245.2	1246.7	1242.1
40°	991.2	996.1	976.3	1027.0	1070.4	1117.6	1151.9	1182.3	1212.0	1212.8	1209.8
42.5°	930.6	936.0	921.1	970.6	1019.7	1070.4	1110.8	1145.4	1175.9	1177.8	1174.3
45°	871.6	876.2	865.5	919.6	966.8	1022.0	1068.5	1107.7	1138.6	1141.2	1140.1
47.5°	813.0	817.2	807.6	857.2	911.6	970.2	1023.9	1067.3	1100.1	1103.1	1102.4
50°	755.5	758.9	748.6	800.4	854.5	916.9	972.9	1023.2	1059.7	1062.8	1062.4
52.5°	698.4	701.8	693.0	747.5	796.6	862.5	923.4	977.9	1014.0	1018.6	1019.4
55°	643.1	644.7	637.8	690.0	737.6	806.5	876.6	929.5	965.7	969.5	971.8
57.5°	587.9	588.3	582.6	632.5	678.2	748.6	822.1	877.7	912.0	915.8	919.2
60°	533.1	532.7	526.2	574.6	618.4	688.1	764.6	819.8	853.0	856.4	861.0
62.5°	478.6	477.5	471.8	516.3	557.5	626.4	703.3	756.6	788.2	790.5	796.6
65°	424.6	423.4	418.1	459.2	496.5	562.4	637.8	688.5	717.0	720.1	718.9
67.5°	371.3	369.0	364.8	401.7	435.6	496.5	568.9	617.3	640.9	643.5	650.8
70°	318.0	315.3	305.8	345.0	374.7	429.1	496.5	539.6	559.4	562.0	560.9
72.5°	265.4	262.7	252.5	288.6	313.8	361.4	421.5	457.3	474.5	476.7	476.7
75°	214.4	212.9	206.4	233.8	254.7	293.6	344.6	374.3	387.6	390.3	389.5
77.5°	165.3	164.1	157.6	181.3	197.6	226.6	267.7	290.9	300.8	303.9	310.3
80°	118.4	118.0	107.8	131.0	138.2	162.6	192.7	210.6	215.9	220.1	224.7
82.5°	75.8	76.2	65.9	85.7	88.7	104.3	123.0	134.0	137.8	141.3	144.7
85°	36.9	38.5	32.7	45.3	45.7	53.7	61.7	65.9	67.4	70.1	73.1
87.5°	9.5	11.0	6.1	12.9	11.4	14.9	17.1	18.3	17.9	19.8	20.9
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: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4
2.5°	1597.8	1610.0	1603.9	1623.7	1631.3	1619.1	1640.4	1640.8	1625.6	1643.5	1653.4
5°	1573.0	1585.6	1581.8	1602.4	1611.9	1601.2	1627.1	1632.1	1617.2	1637.4	1653.4
7.5°	1547.9	1562.7	1557.8	1578.7	1590.2	1581.8	1609.6	1617.6	1606.2	1628.2	1649.6
10°	1526.2	1538.8	1533.4	1555.5	1565.4	1558.6	1586.0	1600.8	1590.2	1617.2	1642.7
12.5°	1504.9	1515.2	1509.1	1527.3	1536.9	1528.1	1561.6	1575.3	1567.7	1595.9	1628.6
15°	1477.5	1488.9	1480.5	1496.9	1504.1	1496.5	1523.9	1547.5	1538.0	1568.8	1605.0
17.5°	1456.5	1463.0	1451.6	1464.5	1468.7	1458.4	1486.2	1509.4	1502.6	1536.1	1578.0
20°	1433.3	1438.6	1422.6	1429.9	1429.5	1416.5	1442.0	1464.9	1460.3	1497.3	1544.9
22.5°	1407.4	1410.1	1391.4	1392.9	1392.2	1370.8	1393.7	1416.9	1415.0	1452.3	1505.6
25°	1380.0	1380.4	1356.4	1355.6	1347.2	1322.1	1342.3	1368.5	1362.8	1403.2	1459.2
27.5°	1352.9	1349.1	1320.2	1313.3	1300.0	1269.9	1287.8	1311.4	1308.0	1347.6	1409.7
30°	1324.0	1319.0	1283.6	1271.1	1251.6	1217.0	1231.8	1253.9	1255.8	1290.5	1355.6
32.5°	1296.6	1284.0	1244.8	1226.5	1202.1	1161.8	1169.8	1192.2	1195.3	1230.3	1297.3
35°	1261.2	1252.8	1204.4	1173.2	1149.2	1105.0	1113.4	1129.0	1133.6	1167.9	1236.0
37.5°	1227.7	1214.3	1162.9	1124.8	1094.0	1047.5	1049.8	1065.8	1070.4	1105.0	1172.4
40°	1193.0	1174.0	1118.8	1074.2	1038.8	990.0	987.4	1004.1	1007.6	1041.5	1102.4
42.5°	1156.1	1133.2	1071.2	1022.4	981.7	932.2	926.8	941.3	945.1	978.2	1038.0
45°	1118.8	1091.3	1022.4	969.1	924.6	873.9	868.6	879.6	885.3	916.6	974.1
47.5°	1079.1	1047.2	972.1	912.7	866.7	816.0	809.6	820.6	825.2	856.0	910.5
50°	1037.6	998.8	920.4	854.9	809.2	759.3	749.8	762.7	766.9	795.8	849.2
52.5°	991.9	948.9	865.1	796.6	750.9	703.3	691.9	704.5	709.4	737.6	786.7
55°	943.6	897.1	809.6	742.9	693.4	647.0	637.4	642.4	653.0	679.7	725.4
57.5°	889.1	843.1	750.9	683.1	635.5	591.0	583.0	587.6	597.5	623.3	664.5
60°	831.3	782.5	691.1	623.3	577.3	535.0	527.8	532.0	542.6	566.2	604.3
62.5°	774.1	719.3	629.4	562.0	520.2	480.9	479.0	477.5	487.4	510.3	543.8
65°	704.8	652.3	565.1	501.1	463.0	427.6	420.0	423.4	433.0	453.9	488.9
67.5°	630.6	583.0	499.2	440.2	406.3	374.7	368.2	369.7	379.6	397.9	428.4
70°	551.8	509.9	431.8	378.9	350.3	320.6	316.4	316.8	326.3	342.3	369.0
72.5°	469.1	431.4	363.7	318.3	294.7	273.4	269.6	265.0	273.8	287.5	310.3
75°	385.0	351.8	295.9	258.9	240.3	222.4	219.0	214.4	223.1	234.9	252.8
77.5°	300.1	273.4	230.0	201.4	187.0	173.6	170.6	165.6	174.4	183.2	197.2
80°	217.0	197.6	171.7	141.7	136.7	127.9	124.9	119.6	127.9	133.7	144.3
82.5°	140.1	127.2	112.3	91.4	90.6	84.2	82.6	76.5	84.2	87.6	95.6
85°	70.8	64.7	60.9	46.5	48.0	43.8	43.4	36.9	43.0	44.6	49.1
87.5°	20.2	21.3	19.0	11.4	14.5	13.7	13.7	9.9	13.7	13.7	15.6
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: P838202

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4
2.5°	1634.0	1640.4	1642.0	1641.6	1645.8	1668.6	1661.0	1668.6
5°	1637.8	1652.2	1656.0	1661.4	1668.2	1694.1	1685.7	1694.9
7.5°	1640.0	1661.8	1670.1	1680.4	1691.5	1720.4	1713.5	1722.7
10°	1640.0	1668.2	1680.4	1697.5	1712.4	1745.9	1739.4	1750.1
12.5°	1633.2	1669.4	1686.5	1710.5	1729.5	1765.7	1763.0	1770.7
15°	1619.1	1663.7	1687.3	1718.1	1741.7	1782.1	1780.9	1790.1
17.5°	1600.1	1653.8	1682.3	1721.2	1750.9	1796.2	1798.8	1803.8
20°	1576.1	1635.1	1672.4	1720.0	1757.3	1807.2	1810.6	1817.5
22.5°	1544.5	1612.6	1657.6	1715.1	1758.1	1811.8	1817.9	1824.3
25°	1507.2	1585.6	1638.1	1705.5	1754.3	1811.4	1819.8	1825.5
27.5°	1464.5	1550.6	1613.4	1690.3	1743.6	1805.3	1815.6	1822.4
30°	1415.0	1513.2	1585.2	1670.5	1729.2	1793.9	1804.9	1811.8
32.5°	1364.0	1472.1	1551.7	1645.0	1708.2	1775.6	1785.1	1790.5
35°	1308.4	1422.2	1511.3	1612.3	1681.2	1746.3	1753.5	1759.2
37.5°	1247.8	1368.2	1465.3	1575.3	1643.1	1705.5	1712.0	1718.5
40°	1185.4	1311.4	1413.5	1530.0	1597.8	1655.7	1662.5	1667.1
42.5°	1122.6	1248.6	1358.3	1476.7	1544.1	1599.7	1603.9	1608.4
45°	1059.0	1183.5	1296.2	1417.7	1484.3	1536.5	1538.0	1541.8
47.5°	994.2	1116.1	1228.0	1350.3	1416.1	1463.7	1465.3	1468.3
50°	929.1	1048.7	1155.3	1277.5	1341.9	1392.2	1385.3	1388.3
52.5°	865.1	977.9	1086.8	1199.1	1262.7	1307.2	1309.1	1303.1
55°	802.3	908.6	1008.7	1116.8	1177.4	1212.0	1210.9	1213.2
57.5°	738.7	838.5	930.3	1029.3	1088.3	1121.0	1127.9	1119.9
60°	674.0	767.7	849.9	939.4	996.5	1023.9	1031.9	1024.3
62.5°	609.6	695.7	770.3	848.4	901.3	935.2	934.5	926.1
65°	545.3	623.3	690.0	756.2	802.3	836.2	834.7	827.1
67.5°	485.9	550.2	610.0	663.7	703.7	726.9	734.9	725.8
70°	420.4	476.0	528.5	571.6	604.7	625.6	633.2	625.3
72.5°	354.9	402.1	439.0	480.6	506.1	523.6	531.6	524.0
75°	290.2	329.0	359.1	391.4	409.3	424.2	433.3	425.7
77.5°	227.3	257.4	281.4	305.0	325.6	329.0	337.0	332.0
80°	167.5	189.3	206.8	222.4	237.2	238.8	245.2	242.2
82.5°	111.6	126.0	130.6	147.0	156.5	155.0	161.5	159.2
85°	59.0	67.8	75.8	80.7	86.1	81.1	86.8	84.5
87.5°	19.8	20.9	18.3	25.9	28.6	24.4	27.8	26.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)