

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: NEO-RAY

Report Number: P332228

Luminaire Tested: **S123DIW-S1165D1320U835-4F0-1E-UDD-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332228
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1165D1320U835-4F0-1E-UDD-A
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, ASYMMETRIC DIFFUSER
UPLIGHT 1320 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10178.7 lumens
Efficiency: N/A
Efficacy: 133.6 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.49
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

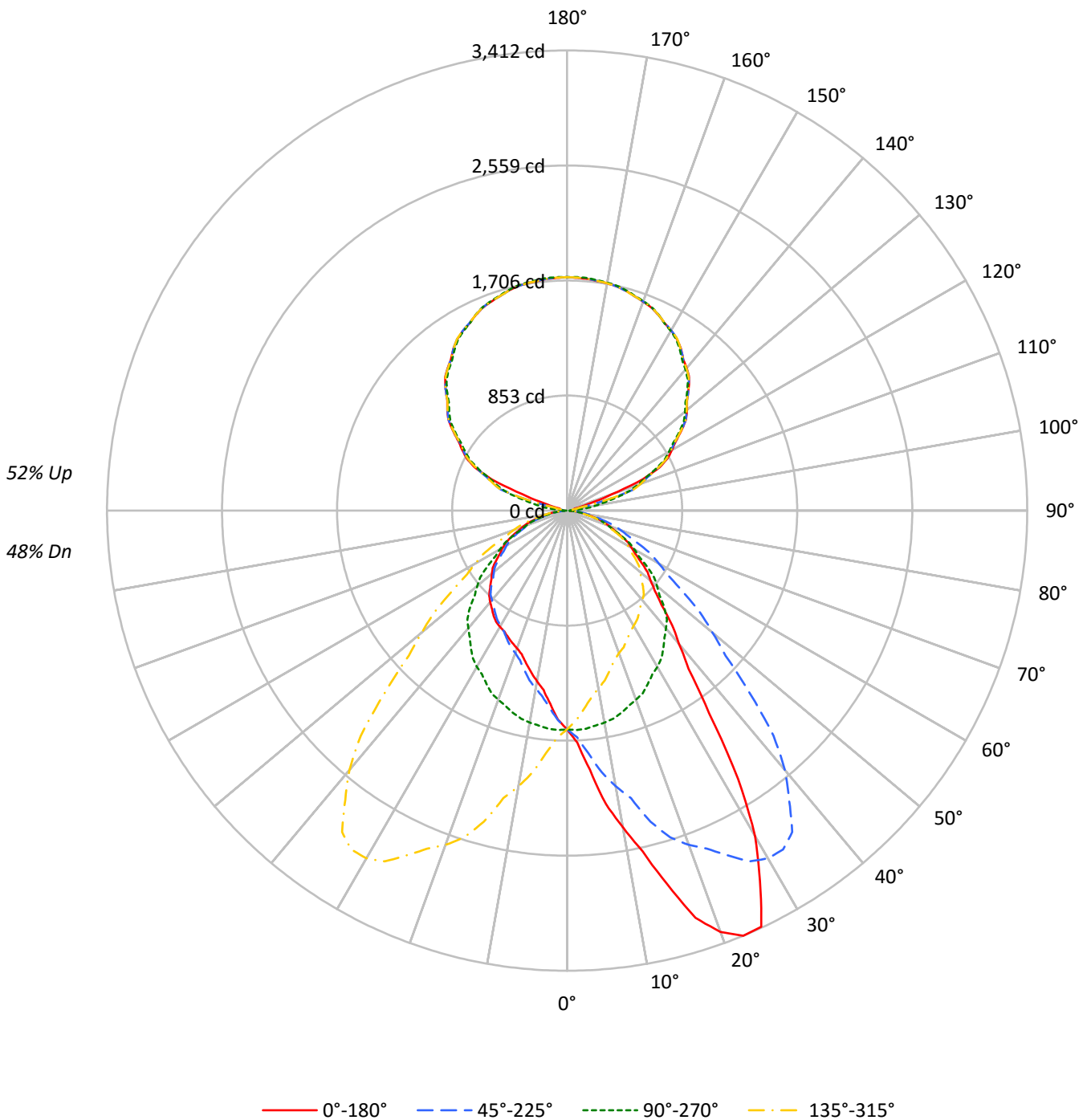
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	98	93	90	86	90	86	83	80	73	70	68	60	58	57	49	47	46	41
2	89	82	76	71	82	76	70	66	64	60	57	53	50	48	43	41	40	35
3	81	72	65	59	75	67	60	55	56	52	48	47	44	41	38	36	34	30
4	75	64	56	50	68	59	52	47	50	45	41	42	38	35	34	32	29	26
5	68	57	49	43	63	53	46	41	45	40	35	38	34	31	31	28	26	22
6	63	51	43	37	58	48	40	35	41	35	31	34	30	27	28	25	23	20
7	58	46	38	33	54	43	36	31	37	31	27	31	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	28	24	21	24	20	18	16
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17460	17460	17460	17460
5°	20822	17535	15540	17535
10°	26063	17446	14036	17446
15°	31967	17306	13067	17306
20°	38080	17087	12441	17087
25°	40435	16820	12302	16820
30°	34657	16625	12367	16625
35°	24103	16348	12496	16348
40°	18156	16024	12456	16024
45°	15075	15541	12298	15541
50°	13504	14555	12188	14555
55°	12624	13495	12035	13495
60°	11842	12385	11911	12385
65°	11130	11291	11530	11291
70°	10439	10043	10980	10043
75°	9349	8792	10069	8792
80°	8182	7209	8672	7209
85°	6410	5236	5829	5236



TEST NUMBER: P332228

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.8	1.6
10°-20°	512.4	5.0
20°-30°	859.9	8.4
30°-40°	973.7	9.6
40°-50°	873.2	8.6
50°-60°	704.7	6.9
60°-70°	491.0	4.8
70°-80°	258.1	2.5
80°-90°	68.0	0.7
90°-100°	62.9	0.6
100°-110°	299.9	2.9
110°-120°	720.3	7.1
120°-130°	917.3	9.0
130°-140°	980.1	9.6
140°-150°	916.5	9.0
150°-160°	739.3	7.3
160°-170°	477.1	4.7
170°-180°	164.4	1.6
0°-30°	1532.1	15.1
0°-40°	2505.8	24.6
0°-60°	4083.7	40.1
0°-90°	4900.8	48.1
90°-120°	1083.2	10.6
90°-150°	3897.1	38.3
90°-180°	5278.0	51.9
0°-180°	10178.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1622	1622	1622	1622	1622	
5°	1927	1623	1438	1623	1927	200
15°	2869	1553	1173	1553	2869	828
25°	3405	1416	1036	1416	3405	1493
35°	1834	1244	951	1244	1834	1192
45°	990	1021	808	1021	990	784
55°	673	719	641	719	673	604
65°	437	443	453	443	437	435
75°	225	211	242	211	225	241
85°	52	42	47	42	52	62
90°	39	1	39	1	39	20
95°	49	78	49	78	49	41
105°	57	383	57	383	57	129
115°	756	719	756	719	756	699
125°	1034	1013	1034	1013	1034	923
135°	1274	1261	1274	1261	1274	983
145°	1470	1456	1470	1456	1470	917
155°	1601	1603	1601	1603	1601	738
165°	1687	1691	1687	1691	1687	476
175°	1724	1731	1724	1731	1724	164
180°	1731	1731	1731	1731	1731	



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1721.5	1720.2	1717.1	1719.6	1714.6	1707.6	1707.0	1700.7	1682.5	1681.2	1676.2
5°	1927.1	1920.8	1920.0	1919.2	1908.2	1893.3	1865.0	1862.6	1824.9	1806.0	1783.3
7.5°	2193.3	2196.6	2185.2	2175.1	2141.5	2119.3	2089.0	2050.2	2003.8	1956.8	1925.5
10°	2384.5	2410.4	2378.2	2356.2	2335.8	2297.2	2252.5	2196.6	2140.8	2075.6	2026.1
12.5°	2589.5	2602.2	2595.7	2575.0	2543.2	2484.6	2405.2	2343.8	2292.4	2183.8	2139.9
15°	2868.6	2916.6	2885.9	2815.2	2816.7	2760.9	2657.2	2543.2	2482.7	2387.6	2258.0
17.5°	3166.0	3172.0	3158.9	3100.0	3060.7	2984.0	2888.3	2779.0	2656.4	2541.4	2403.8
20°	3324.4	3319.7	3292.2	3261.6	3194.0	3134.3	3029.7	2907.9	2750.7	2637.6	2487.4
22.5°	3412.5	3404.6	3391.6	3365.9	3309.7	3245.5	3151.7	3018.6	2868.9	2713.0	2539.6
25°	3404.6	3414.8	3416.4	3409.3	3389.7	3351.2	3277.3	3171.2	3021.9	2821.5	2640.7
27.5°	3096.5	3111.0	3153.0	3190.2	3231.9	3274.3	3268.6	3216.0	3105.5	2932.4	2711.4
30°	2788.4	2757.0	2834.8	2933.1	2999.9	3117.7	3183.8	3187.7	3125.6	2977.1	2761.7
32.5°	2360.9	2395.5	2429.9	2550.8	2696.8	2829.2	2960.6	3066.4	3078.5	2979.6	2791.3
35°	1834.3	1877.6	1940.4	2003.3	2160.5	2295.7	2526.7	2727.9	2888.3	2909.5	2793.9
37.5°	1478.2	1499.5	1539.3	1602.3	1705.1	1865.5	2044.2	2298.5	2530.8	2703.6	2711.1
40°	1292.1	1298.3	1343.1	1391.1	1474.4	1606.4	1767.5	1992.3	2270.5	2511.8	2612.4
42.5°	1152.5	1166.3	1185.3	1231.4	1297.7	1397.1	1546.9	1732.6	1987.6	2265.3	2462.1
45°	990.3	1006.0	1017.8	1048.4	1095.6	1162.4	1266.9	1436.7	1630.8	1917.6	2182.5
47.5°	883.1	884.3	893.1	916.2	948.3	998.4	1072.3	1181.4	1359.6	1592.3	1864.2
50°	806.4	818.9	822.1	840.1	865.3	902.2	963.5	1056.3	1202.5	1406.8	1656.7
52.5°	752.3	756.1	764.9	777.9	799.9	828.7	881.8	954.4	1069.2	1243.3	1473.1
55°	672.7	672.7	681.4	691.6	704.2	730.1	765.5	818.9	906.2	1041.3	1231.5
57.5°	599.2	603.1	609.2	612.4	623.1	640.2	669.8	710.3	775.4	879.4	1030.7
60°	550.1	557.2	556.4	562.7	572.2	585.5	610.7	643.7	701.8	785.1	912.5
62.5°	507.4	506.9	506.8	514.3	523.7	536.5	552.8	581.4	630.8	704.7	813.1
65°	437.0	435.4	440.9	445.6	448.8	458.2	470.8	495.9	528.9	583.9	668.0
67.5°	374.4	369.9	372.8	374.4	379.8	387.1	398.9	414.5	440.7	484.9	548.3
70°	331.7	327.7	326.9	328.5	333.2	338.7	347.4	362.3	386.7	422.0	468.4
72.5°	287.6	285.0	284.8	288.3	290.5	294.1	300.2	313.9	333.2	359.8	403.0
75°	224.8	224.8	224.8	225.6	227.9	231.1	235.8	242.8	257.8	276.6	305.7
77.5°	168.5	168.3	167.4	167.2	170.7	172.1	173.2	179.8	188.1	200.9	222.1
80°	132.0	128.1	129.7	132.0	133.6	134.4	136.8	138.3	145.4	152.5	167.4
82.5°	98.1	94.8	95.1	98.7	99.0	99.8	102.2	104.4	107.0	113.5	121.5
85°	51.9	51.9	52.7	52.7	53.4	52.7	55.0	55.8	55.8	59.7	64.4
87.5°	26.6	25.2	25.7	26.2	25.5	25.9	26.3	26.7	27.1	27.5	27.4
90°	38.6	38.0	37.4	36.9	36.3	35.4	34.3	33.1	32.0	30.9	27.1
92.5°	42.7	42.3	42.0	41.7	41.3	40.2	38.4	36.6	34.7	32.9	30.1
95°	48.9	48.9	48.9	48.9	48.9	47.9	45.9	43.9	41.9	39.9	36.7
97.5°	53.0	52.7	52.4	52.1	51.8	50.5	48.3	46.0	43.7	41.4	62.0
100°	54.0	53.7	53.4	53.1	52.9	51.6	49.3	47.0	44.7	42.4	87.0
102.5°	55.0	54.5	54.0	53.5	53.0	56.3	63.3	70.4	77.5	84.6	133.3
105°	56.6	56.0	55.4	54.9	54.3	79.3	129.9	180.4	231.0	281.6	307.3
107.5°	177.7	215.8	253.9	292.1	330.2	367.8	404.9	442.0	479.0	516.1	512.1
110°	353.6	394.5	435.3	476.2	517.0	542.2	551.6	561.0	570.5	579.9	576.8



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	606.7	615.3	623.9	632.5	641.2	645.4	645.2	645.1	644.9	644.7	641.6
115°	756.1	754.9	753.8	752.6	751.5	749.5	746.6	743.8	740.9	738.1	735.5
117.5°	839.9	839.7	839.4	839.2	839.0	837.7	835.4	833.2	830.9	828.6	827.3
120°	897.5	897.5	897.5	897.5	897.5	896.4	894.1	891.8	889.5	887.2	886.4
122.5°	954.1	953.9	953.6	953.4	953.2	952.3	950.7	949.1	947.5	945.9	944.8
125°	1033.8	1033.2	1032.7	1032.1	1031.5	1030.9	1030.4	1029.8	1029.2	1028.7	1027.5
127.5°	1110.4	1111.0	1111.6	1112.2	1112.7	1112.6	1111.6	1110.7	1109.8	1108.9	1107.5
130°	1159.8	1160.4	1161.0	1161.5	1162.1	1161.8	1160.7	1159.5	1158.4	1157.2	1156.1
132.5°	1205.1	1205.9	1206.7	1207.5	1208.3	1208.1	1207.0	1205.8	1204.7	1203.5	1202.6
135°	1274.3	1275.1	1276.0	1276.8	1277.7	1277.7	1276.8	1276.0	1275.1	1274.3	1273.1
137.5°	1339.3	1339.9	1340.5	1341.0	1341.6	1341.2	1339.8	1338.5	1337.1	1335.7	1335.1
140°	1378.4	1379.0	1379.5	1380.1	1380.7	1380.4	1379.3	1378.1	1377.0	1375.8	1375.0
142.5°	1414.4	1415.2	1416.0	1416.8	1417.6	1417.6	1416.6	1415.7	1414.8	1413.9	1413.0
145°	1469.7	1469.7	1469.7	1469.7	1469.7	1469.4	1468.8	1468.3	1467.7	1467.1	1466.6
147.5°	1510.8	1512.2	1513.5	1514.8	1516.1	1516.5	1515.9	1515.3	1514.8	1514.2	1513.6
150°	1541.7	1542.6	1543.4	1544.3	1545.1	1545.3	1544.7	1544.1	1543.6	1543.0	1542.4
152.5°	1566.4	1567.7	1569.0	1570.3	1571.7	1571.8	1570.8	1569.7	1568.7	1567.7	1567.3
155°	1600.9	1602.6	1604.3	1606.0	1607.7	1607.9	1606.4	1605.0	1603.6	1602.1	1601.9
157.5°	1629.9	1632.1	1634.4	1636.6	1638.8	1639.1	1637.4	1635.7	1633.9	1632.2	1632.5
160°	1648.4	1650.4	1652.4	1654.4	1656.4	1656.6	1654.9	1653.1	1651.4	1649.7	1650.0
162.5°	1665.9	1667.7	1669.5	1671.2	1673.0	1672.9	1671.0	1669.0	1667.1	1665.1	1665.4
165°	1687.0	1689.0	1691.0	1693.0	1695.0	1694.9	1692.6	1690.3	1688.0	1685.7	1686.0
167.5°	1702.2	1704.5	1706.8	1709.0	1711.3	1711.3	1709.0	1706.8	1704.5	1702.2	1702.2
170°	1711.4	1713.7	1716.0	1718.3	1720.6	1720.6	1718.3	1716.0	1713.7	1711.4	1711.4
172.5°	1716.6	1719.1	1721.6	1724.1	1726.6	1726.8	1724.5	1722.2	1719.9	1717.6	1717.4
175°	1724.3	1726.6	1728.9	1731.2	1733.4	1733.6	1731.6	1729.6	1727.6	1725.6	1725.3
177.5°	1726.6	1728.9	1731.2	1733.5	1735.8	1736.0	1734.2	1732.3	1730.5	1728.7	1728.4
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1672.4	1667.4	1662.4	1653.6	1646.0	1635.3	1632.2	1628.4	1617.1	1607.1	1599.5
5°	1774.6	1755.7	1728.2	1703.1	1682.7	1655.2	1639.4	1622.9	1599.3	1578.1	1560.8
7.5°	1881.5	1844.4	1801.6	1755.4	1712.4	1670.9	1637.4	1607.5	1574.5	1543.2	1518.9
10°	1966.4	1912.9	1853.2	1788.8	1733.7	1680.3	1635.5	1596.2	1553.8	1516.8	1486.2
12.5°	2063.2	1984.0	1901.6	1823.3	1758.3	1684.1	1629.8	1579.9	1531.8	1487.3	1452.9
15°	2177.8	2077.2	1979.7	1872.1	1773.0	1680.3	1615.9	1553.0	1497.2	1451.6	1407.6
17.5°	2282.2	2168.2	2039.8	1908.8	1789.4	1679.4	1589.1	1518.1	1448.3	1392.5	1348.6
20°	2341.3	2211.6	2066.2	1930.2	1798.2	1675.6	1576.6	1491.7	1416.2	1357.3	1307.8
22.5°	2392.2	2240.5	2090.1	1944.7	1797.6	1665.5	1553.3	1465.9	1384.2	1326.5	1273.8
25°	2445.0	2263.5	2112.6	1942.0	1777.8	1641.0	1515.3	1416.2	1334.5	1266.9	1212.7
27.5°	2490.3	2261.9	2082.8	1899.4	1746.6	1609.6	1475.3	1369.1	1282.3	1208.9	1153.9
30°	2520.4	2265.0	2052.0	1870.5	1716.5	1575.0	1444.5	1337.6	1246.5	1171.8	1119.9
32.5°	2539.3	2263.1	2023.7	1830.3	1668.7	1543.5	1411.2	1300.5	1206.9	1133.5	1083.5
35°	2550.3	2249.3	1975.0	1747.1	1591.5	1469.7	1358.9	1244.1	1145.9	1077.5	1020.9
37.5°	2528.3	2220.2	1918.4	1666.9	1496.6	1376.6	1283.4	1185.6	1091.6	1016.4	967.6
40°	2493.7	2201.4	1874.4	1610.4	1431.2	1315.6	1236.3	1140.4	1047.6	976.1	930.5
42.5°	2427.7	2163.0	1826.0	1547.5	1363.3	1247.7	1174.6	1094.5	1006.8	939.6	894.1
45°	2266.6	2079.5	1753.4	1453.2	1263.0	1143.5	1079.1	1020.9	941.5	876.3	837.0
47.5°	2043.1	1954.0	1648.4	1353.7	1158.3	1043.4	976.4	929.6	871.6	818.9	781.2
50°	1887.8	1850.8	1577.3	1285.8	1088.5	976.1	911.7	869.2	827.6	774.9	740.3
52.5°	1708.6	1731.4	1494.4	1215.3	1017.5	907.0	846.3	812.6	774.8	731.5	701.4
55°	1456.3	1538.8	1351.0	1097.1	911.7	806.4	749.0	719.1	697.1	664.9	639.0
57.5°	1220.1	1325.1	1196.0	975.3	807.8	716.9	661.9	629.4	615.2	598.4	578.0
60°	1079.9	1183.6	1085.4	893.6	738.0	651.5	602.8	575.3	561.1	549.4	532.1
62.5°	954.7	1059.7	977.2	810.6	669.4	589.3	546.8	520.0	509.0	502.8	488.1
65°	782.8	873.2	818.1	681.4	571.4	500.6	462.1	443.3	433.0	430.7	421.3
67.5°	637.1	705.9	665.8	565.2	478.6	417.5	384.8	368.8	360.9	360.1	353.0
70°	541.5	605.9	575.3	484.1	409.5	361.5	333.2	319.1	314.4	313.6	309.7
72.5°	467.3	512.3	487.9	411.8	354.1	310.6	289.8	275.1	269.7	270.8	268.2
75°	345.8	379.6	365.5	312.8	266.4	238.1	220.8	211.4	206.7	209.1	205.9
77.5°	248.8	270.2	257.5	221.0	192.4	172.0	159.2	153.4	149.2	149.0	147.6
80°	187.8	200.4	193.3	171.3	147.8	130.5	120.2	116.3	114.0	113.2	112.4
82.5°	133.8	144.5	136.1	121.0	105.0	94.6	88.8	83.6	81.9	82.4	81.6
85°	67.6	71.5	68.4	58.9	52.7	47.9	44.8	42.4	40.9	41.7	40.1
87.5°	27.9	27.8	25.2	22.0	20.2	17.7	17.2	15.3	14.7	15.2	15.2
90°	23.4	19.7	16.0	12.7	9.9	7.0	4.1	1.3	4.1	7.0	9.9
92.5°	27.3	24.5	21.7	20.7	21.5	22.3	23.1	23.9	23.1	22.3	21.5
95°	33.6	30.4	27.3	31.6	43.3	55.0	66.7	78.4	66.7	55.0	43.3
97.5°	82.6	103.1	123.7	136.6	141.9	147.1	152.4	157.6	152.4	147.1	141.9
100°	131.6	176.2	220.7	240.2	234.4	228.7	223.0	217.3	223.0	228.7	234.4
102.5°	182.0	230.7	279.4	301.7	297.5	293.4	289.3	285.2	289.3	293.4	297.5
105°	333.0	358.7	384.5	395.7	392.6	389.5	386.3	383.2	386.3	389.5	392.6
107.5°	508.0	504.0	499.9	496.6	494.1	491.6	489.1	486.6	489.1	491.6	494.1
110°	573.6	570.5	567.3	564.6	562.3	560.0	557.8	555.5	557.8	560.0	562.3



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	638.4	635.3	632.1	629.5	627.5	625.4	623.4	621.3	623.4	625.4	627.5
115°	732.9	730.3	727.8	725.6	723.9	722.2	720.5	718.8	720.5	722.2	723.9
117.5°	826.0	824.6	823.3	821.6	819.5	817.4	815.3	813.2	815.3	817.4	819.5
120°	885.5	884.6	883.8	882.1	879.5	876.9	874.4	871.8	874.4	876.9	879.5
122.5°	943.7	942.6	941.5	939.9	937.8	935.7	933.6	931.5	933.6	935.7	937.8
125°	1026.4	1025.2	1024.1	1022.4	1020.1	1017.8	1015.5	1013.2	1015.5	1017.8	1020.1
127.5°	1106.2	1104.8	1103.4	1101.6	1099.3	1097.0	1094.7	1092.4	1094.7	1097.0	1099.3
130°	1155.0	1153.8	1152.7	1151.0	1148.7	1146.4	1144.1	1141.8	1144.1	1146.4	1148.7
132.5°	1201.7	1200.8	1199.9	1198.3	1196.0	1193.7	1191.4	1189.1	1191.4	1193.7	1196.0
135°	1272.0	1270.8	1269.7	1268.3	1266.5	1264.8	1263.1	1261.4	1263.1	1264.8	1266.5
137.5°	1334.5	1333.8	1333.2	1331.8	1329.6	1327.5	1325.3	1323.1	1325.3	1327.5	1329.6
140°	1374.1	1373.3	1372.4	1371.1	1369.4	1367.7	1366.0	1364.3	1366.0	1367.7	1369.4
142.5°	1412.2	1411.3	1410.5	1409.2	1407.5	1405.8	1404.0	1402.3	1404.0	1405.8	1407.5
145°	1466.0	1465.4	1464.8	1463.6	1461.6	1459.6	1457.6	1455.6	1457.6	1459.6	1461.6
147.5°	1513.0	1512.5	1511.9	1511.0	1509.6	1508.3	1507.0	1505.7	1507.0	1508.3	1509.6
150°	1541.8	1541.3	1540.7	1540.0	1539.1	1538.3	1537.4	1536.6	1537.4	1538.3	1539.1
152.5°	1567.0	1566.7	1566.3	1565.9	1565.5	1565.1	1564.7	1564.3	1564.7	1565.1	1565.5
155°	1601.6	1601.3	1601.0	1601.1	1601.7	1602.3	1602.9	1603.4	1602.9	1602.3	1601.7
157.5°	1632.8	1633.1	1633.4	1633.5	1633.6	1633.7	1633.7	1633.8	1633.7	1633.7	1633.6
160°	1650.3	1650.6	1650.9	1651.1	1651.4	1651.7	1652.0	1652.3	1652.0	1651.7	1651.4
162.5°	1665.7	1666.0	1666.3	1666.8	1667.5	1668.3	1669.0	1669.8	1669.0	1668.3	1667.5
165°	1686.3	1686.6	1686.9	1687.4	1688.3	1689.1	1690.0	1690.9	1690.0	1689.1	1688.3
167.5°	1702.2	1702.2	1702.2	1702.7	1703.9	1705.0	1706.2	1707.3	1706.2	1705.0	1703.9
170°	1711.4	1711.4	1711.4	1712.0	1713.2	1714.3	1715.4	1716.6	1715.4	1714.3	1713.2
172.5°	1717.2	1716.9	1716.7	1717.3	1718.6	1720.0	1721.4	1722.8	1721.4	1720.0	1718.6
175°	1725.0	1724.7	1724.4	1725.0	1726.4	1727.9	1729.3	1730.7	1729.3	1727.9	1726.4
177.5°	1728.2	1728.0	1727.8	1728.2	1729.4	1730.5	1731.6	1732.8	1731.6	1730.5	1729.4
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1595.1	1590.7	1584.4	1575.0	1567.4	1555.5	1555.5	1557.4	1557.4	1556.8	1555.5
5°	1546.7	1534.9	1520.8	1504.3	1487.0	1469.7	1466.5	1460.2	1455.5	1452.4	1448.5
7.5°	1495.6	1474.7	1454.1	1431.0	1409.9	1392.5	1380.4	1370.3	1363.9	1357.0	1351.9
10°	1461.0	1435.1	1410.7	1386.4	1359.6	1338.4	1325.1	1315.6	1308.6	1302.3	1299.1
12.5°	1420.2	1390.5	1363.6	1340.5	1311.2	1289.4	1276.7	1272.2	1263.9	1250.7	1243.8
15°	1360.4	1332.9	1300.7	1265.3	1251.2	1224.5	1209.5	1202.5	1197.7	1187.5	1184.4
17.5°	1309.3	1273.3	1237.2	1210.8	1184.5	1162.8	1154.5	1145.7	1139.4	1131.1	1128.6
20°	1268.5	1236.3	1203.2	1175.0	1147.4	1123.9	1116.8	1110.5	1104.2	1100.3	1097.1
22.5°	1227.0	1194.8	1167.4	1141.0	1111.6	1096.2	1088.5	1081.6	1077.2	1074.5	1071.4
25°	1168.7	1140.4	1109.7	1086.1	1062.6	1052.3	1047.6	1043.7	1040.6	1036.6	1035.8
27.5°	1116.5	1085.7	1060.8	1038.8	1021.9	1013.4	1008.8	1006.9	1007.6	1009.0	1009.9
30°	1077.5	1049.2	1028.8	1009.9	994.2	986.3	985.5	985.5	988.7	989.5	991.0
32.5°	1041.7	1018.4	998.0	979.7	967.8	962.4	965.4	965.4	967.9	970.0	972.8
35°	989.5	969.0	953.3	937.6	927.4	929.7	931.3	932.9	936.8	941.5	944.7
37.5°	939.6	921.9	905.5	893.3	888.6	892.8	896.6	899.9	904.4	908.1	911.2
40°	903.8	890.4	874.7	863.7	865.3	867.7	870.8	874.7	878.7	881.0	884.2
42.5°	870.5	856.5	844.6	835.4	837.6	840.6	842.5	844.6	849.1	853.4	855.2
45°	819.7	808.7	797.7	792.2	793.8	795.4	796.9	799.3	803.2	806.4	807.1
47.5°	762.7	755.0	747.6	742.2	744.7	744.1	746.2	751.2	752.4	754.3	758.7
50°	726.2	719.1	710.5	708.9	708.9	708.9	709.7	716.0	716.0	719.1	722.3
52.5°	686.0	681.4	675.9	673.1	671.8	671.8	675.1	678.3	679.5	683.9	687.1
55°	626.4	621.7	616.9	614.6	613.0	614.6	620.9	622.4	626.4	628.7	631.1
57.5°	564.3	560.7	556.9	555.6	555.3	557.4	560.8	565.5	566.5	573.7	577.3
60°	523.4	517.9	514.8	514.8	513.2	520.3	518.7	526.6	528.1	532.9	538.4
62.5°	481.3	473.9	472.7	472.7	474.9	476.9	479.1	482.6	486.6	492.6	496.9
65°	413.4	409.5	415.0	414.2	412.6	417.3	417.3	421.3	426.0	431.5	440.1
67.5°	349.1	347.1	347.5	347.5	349.9	352.6	354.8	358.2	363.9	369.7	375.4
70°	305.7	308.1	304.2	307.3	309.7	310.4	312.0	316.7	323.0	326.9	333.2
72.5°	263.6	263.4	263.9	265.2	267.5	268.9	270.5	275.9	282.8	286.1	291.1
75°	202.8	202.0	204.3	204.3	208.3	209.8	211.4	213.8	220.1	224.8	228.7
77.5°	148.1	149.0	148.5	151.2	150.1	150.4	155.3	157.7	158.3	167.6	169.6
80°	111.6	113.2	114.0	114.7	115.5	114.0	119.5	121.8	121.8	127.3	131.2
82.5°	80.2	81.1	83.2	83.9	84.1	85.7	86.1	87.9	89.8	92.1	97.3
85°	40.1	42.4	43.2	42.4	43.2	41.7	44.0	44.8	45.6	45.6	45.6
87.5°	15.1	16.4	16.5	17.9	18.0	19.4	19.6	18.6	18.8	20.9	18.6
90°	12.7	16.0	19.7	23.4	27.1	30.9	32.0	33.1	34.3	35.4	36.3
92.5°	20.7	21.7	24.5	27.3	30.1	32.9	34.7	36.6	38.4	40.2	41.3
95°	31.6	27.3	30.4	33.6	36.7	39.9	41.9	43.9	45.9	47.9	48.9
97.5°	136.6	123.7	103.1	82.6	62.0	41.4	43.7	46.0	48.3	50.5	51.8
100°	240.2	220.7	176.2	131.6	87.0	42.4	44.7	47.0	49.3	51.6	52.9
102.5°	301.7	279.4	230.7	182.0	133.3	84.6	77.5	70.4	63.3	56.3	53.0
105°	395.7	384.5	358.7	333.0	307.3	281.6	231.0	180.4	129.9	79.3	54.3
107.5°	496.6	499.9	504.0	508.0	512.1	516.1	479.0	442.0	404.9	367.8	330.2
110°	564.6	567.3	570.5	573.6	576.8	579.9	570.5	561.0	551.6	542.2	517.0



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	629.5	632.1	635.3	638.4	641.6	644.7	644.9	645.1	645.2	645.4	641.2
115°	725.6	727.8	730.3	732.9	735.5	738.1	740.9	743.8	746.6	749.5	751.5
117.5°	821.6	823.3	824.6	826.0	827.3	828.6	830.9	833.2	835.4	837.7	839.0
120°	882.1	883.8	884.6	885.5	886.4	887.2	889.5	891.8	894.1	896.4	897.5
122.5°	939.9	941.5	942.6	943.7	944.8	945.9	947.5	949.1	950.7	952.3	953.2
125°	1022.4	1024.1	1025.2	1026.4	1027.5	1028.7	1029.2	1029.8	1030.4	1030.9	1031.5
127.5°	1101.6	1103.4	1104.8	1106.2	1107.5	1108.9	1109.8	1110.7	1111.6	1112.6	1112.7
130°	1151.0	1152.7	1153.8	1155.0	1156.1	1157.2	1158.4	1159.5	1160.7	1161.8	1162.1
132.5°	1198.3	1199.9	1200.8	1201.7	1202.6	1203.5	1204.7	1205.8	1207.0	1208.1	1208.3
135°	1268.3	1269.7	1270.8	1272.0	1273.1	1274.3	1275.1	1276.0	1276.8	1277.7	1277.7
137.5°	1331.8	1333.2	1333.8	1334.5	1335.1	1335.7	1337.1	1338.5	1339.8	1341.2	1341.6
140°	1371.1	1372.4	1373.3	1374.1	1375.0	1375.8	1377.0	1378.1	1379.3	1380.4	1380.7
142.5°	1409.2	1410.5	1411.3	1412.2	1413.0	1413.9	1414.8	1415.7	1416.6	1417.6	1417.6
145°	1463.6	1464.8	1465.4	1466.0	1466.6	1467.1	1467.7	1468.3	1468.8	1469.4	1469.7
147.5°	1511.0	1511.9	1512.5	1513.0	1513.6	1514.2	1514.8	1515.3	1515.9	1516.5	1516.1
150°	1540.0	1540.7	1541.3	1541.8	1542.4	1543.0	1543.6	1544.1	1544.7	1545.3	1545.1
152.5°	1565.9	1566.3	1566.7	1567.0	1567.3	1567.7	1568.7	1569.7	1570.8	1571.8	1571.7
155°	1601.1	1601.0	1601.3	1601.6	1601.9	1602.1	1603.6	1605.0	1606.4	1607.9	1607.7
157.5°	1633.5	1633.4	1633.1	1632.8	1632.5	1632.2	1633.9	1635.7	1637.4	1639.1	1638.8
160°	1651.1	1650.9	1650.6	1650.3	1650.0	1649.7	1651.4	1653.1	1654.9	1656.6	1656.4
162.5°	1666.8	1666.3	1666.0	1665.7	1665.4	1665.1	1667.1	1669.0	1671.0	1672.9	1673.0
165°	1687.4	1686.9	1686.6	1686.3	1686.0	1685.7	1688.0	1690.3	1692.6	1694.9	1695.0
167.5°	1702.7	1702.2	1702.2	1702.2	1702.2	1702.2	1704.5	1706.8	1709.0	1711.3	1711.3
170°	1712.0	1711.4	1711.4	1711.4	1711.4	1711.4	1713.7	1716.0	1718.3	1720.6	1720.6
172.5°	1717.3	1716.7	1716.9	1717.2	1717.4	1717.6	1719.9	1722.2	1724.5	1726.8	1726.6
175°	1725.0	1724.4	1724.7	1725.0	1725.3	1725.6	1727.6	1729.6	1731.6	1733.6	1733.4
177.5°	1728.2	1727.8	1728.0	1728.2	1728.4	1728.7	1730.5	1732.3	1734.2	1736.0	1735.8
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1551.1	1550.5	1554.9	1551.7	1554.9	1550.5	1551.1	1555.5	1556.8	1557.4	1557.4
5°	1443.7	1446.1	1438.2	1438.2	1438.2	1446.1	1443.7	1448.5	1452.4	1455.5	1460.2
7.5°	1348.2	1344.7	1345.0	1340.8	1345.0	1344.7	1348.2	1351.9	1357.0	1363.9	1370.3
10°	1289.7	1285.0	1283.4	1284.2	1283.4	1285.0	1289.7	1299.1	1302.3	1308.6	1315.6
12.5°	1241.3	1240.3	1230.0	1230.1	1230.0	1240.3	1241.3	1243.8	1250.7	1263.9	1272.2
15°	1184.4	1169.5	1167.9	1172.6	1167.9	1169.5	1184.4	1184.4	1187.5	1197.7	1202.5
17.5°	1127.3	1119.5	1119.9	1117.6	1119.9	1119.5	1127.3	1128.6	1131.1	1139.4	1145.7
20°	1097.1	1092.4	1091.6	1086.1	1091.6	1092.4	1097.1	1097.1	1100.3	1104.2	1110.5
22.5°	1069.5	1067.9	1068.4	1062.3	1068.4	1067.9	1069.5	1071.4	1074.5	1077.2	1081.6
25°	1035.1	1039.0	1035.8	1035.8	1035.8	1039.0	1035.1	1035.8	1036.6	1040.6	1043.7
27.5°	1011.8	1011.6	1010.1	1010.1	1010.1	1011.6	1011.8	1009.9	1009.0	1007.6	1006.9
30°	994.2	993.4	995.0	995.0	995.0	993.4	994.2	991.0	989.5	988.7	985.5
32.5°	976.6	977.7	978.0	978.6	978.0	977.7	976.6	972.8	970.0	967.9	965.4
35°	949.4	950.2	952.5	951.0	952.5	950.2	949.4	944.7	941.5	936.8	932.9
37.5°	912.6	916.2	915.4	916.7	915.4	916.2	912.6	911.2	908.1	904.4	899.9
40°	884.9	887.3	886.5	886.5	886.5	887.3	884.9	884.2	881.0	878.7	874.7
42.5°	856.7	858.4	856.3	855.1	856.3	858.4	856.7	855.2	853.4	849.1	844.6
45°	810.3	808.7	811.1	807.9	811.1	808.7	810.3	807.1	806.4	803.2	799.3
47.5°	758.4	760.0	760.6	763.0	760.6	760.0	758.4	758.7	754.3	752.4	751.2
50°	723.8	728.5	728.5	727.8	728.5	728.5	723.8	722.3	719.1	716.0	716.0
52.5°	689.9	692.1	695.2	695.1	695.2	692.1	689.9	687.1	683.9	679.5	678.3
55°	637.4	639.0	640.5	641.3	640.5	639.0	637.4	631.1	628.7	626.4	622.4
57.5°	583.0	582.4	586.1	587.2	586.1	582.4	583.0	577.3	573.7	566.5	565.5
60°	544.6	544.6	550.9	553.3	550.9	544.6	544.6	538.4	532.9	528.1	526.6
62.5°	503.8	506.3	512.6	509.3	512.6	506.3	503.8	496.9	492.6	486.6	482.6
65°	444.0	450.3	449.5	452.7	449.5	450.3	444.0	440.1	431.5	426.0	421.3
67.5°	381.6	385.6	391.2	391.7	391.2	385.6	381.6	375.4	369.7	363.9	358.2
70°	339.5	343.4	346.6	348.9	346.6	343.4	339.5	333.2	326.9	323.0	316.7
72.5°	298.7	300.7	308.2	304.9	308.2	300.7	298.7	291.1	286.1	282.8	275.9
75°	234.2	239.7	244.4	242.1	244.4	239.7	234.2	228.7	224.8	220.1	213.8
77.5°	173.2	178.7	180.9	178.9	180.9	178.7	173.2	169.6	167.6	158.3	157.7
80°	136.8	136.0	140.7	139.9	140.7	136.0	136.8	131.2	127.3	121.8	121.8
82.5°	100.3	99.5	101.7	102.2	101.7	99.5	100.3	97.3	92.1	89.8	87.9
85°	48.7	51.1	47.9	47.2	47.9	51.1	48.7	45.6	45.6	45.6	44.8
87.5°	18.7	18.8	18.3	17.8	18.3	18.8	18.7	18.6	20.9	18.8	18.6
90°	36.9	37.4	38.0	38.6	38.0	37.4	36.9	36.3	35.4	34.3	33.1
92.5°	41.7	42.0	42.3	42.7	42.3	42.0	41.7	41.3	40.2	38.4	36.6
95°	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	47.9	45.9	43.9
97.5°	52.1	52.4	52.7	53.0	52.7	52.4	52.1	51.8	50.5	48.3	46.0
100°	53.1	53.4	53.7	54.0	53.7	53.4	53.1	52.9	51.6	49.3	47.0
102.5°	53.5	54.0	54.5	55.0	54.5	54.0	53.5	53.0	56.3	63.3	70.4
105°	54.9	55.4	56.0	56.6	56.0	55.4	54.9	54.3	79.3	129.9	180.4
107.5°	292.1	253.9	215.8	177.7	215.8	253.9	292.1	330.2	367.8	404.9	442.0
110°	476.2	435.3	394.5	353.6	394.5	435.3	476.2	517.0	542.2	551.6	561.0



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	632.5	623.9	615.3	606.7	615.3	623.9	632.5	641.2	645.4	645.2	645.1
115°	752.6	753.8	754.9	756.1	754.9	753.8	752.6	751.5	749.5	746.6	743.8
117.5°	839.2	839.4	839.7	839.9	839.7	839.4	839.2	839.0	837.7	835.4	833.2
120°	897.5	897.5	897.5	897.5	897.5	897.5	897.5	897.5	896.4	894.1	891.8
122.5°	953.4	953.6	953.9	954.1	953.9	953.6	953.4	953.2	952.3	950.7	949.1
125°	1032.1	1032.7	1033.2	1033.8	1033.2	1032.7	1032.1	1031.5	1030.9	1030.4	1029.8
127.5°	1112.2	1111.6	1111.0	1110.4	1111.0	1111.6	1112.2	1112.7	1112.6	1111.6	1110.7
130°	1161.5	1161.0	1160.4	1159.8	1160.4	1161.0	1161.5	1162.1	1161.8	1160.7	1159.5
132.5°	1207.5	1206.7	1205.9	1205.1	1205.9	1206.7	1207.5	1208.3	1208.1	1207.0	1205.8
135°	1276.8	1276.0	1275.1	1274.3	1275.1	1276.0	1276.8	1277.7	1277.7	1276.8	1276.0
137.5°	1341.0	1340.5	1339.9	1339.3	1339.9	1340.5	1341.0	1341.6	1341.2	1339.8	1338.5
140°	1380.1	1379.5	1379.0	1378.4	1379.0	1379.5	1380.1	1380.7	1380.4	1379.3	1378.1
142.5°	1416.8	1416.0	1415.2	1414.4	1415.2	1416.0	1416.8	1417.6	1417.6	1416.6	1415.7
145°	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.4	1468.8	1468.3
147.5°	1514.8	1513.5	1512.2	1510.8	1512.2	1513.5	1514.8	1516.1	1516.5	1515.9	1515.3
150°	1544.3	1543.4	1542.6	1541.7	1542.6	1543.4	1544.3	1545.1	1545.3	1544.7	1544.1
152.5°	1570.3	1569.0	1567.7	1566.4	1567.7	1569.0	1570.3	1571.7	1571.8	1570.8	1569.7
155°	1606.0	1604.3	1602.6	1600.9	1602.6	1604.3	1606.0	1607.7	1607.9	1606.4	1605.0
157.5°	1636.6	1634.4	1632.1	1629.9	1632.1	1634.4	1636.6	1638.8	1639.1	1637.4	1635.7
160°	1654.4	1652.4	1650.4	1648.4	1650.4	1652.4	1654.4	1656.4	1656.6	1654.9	1653.1
162.5°	1671.2	1669.5	1667.7	1665.9	1667.7	1669.5	1671.2	1673.0	1672.9	1671.0	1669.0
165°	1693.0	1691.0	1689.0	1687.0	1689.0	1691.0	1693.0	1695.0	1694.9	1692.6	1690.3
167.5°	1709.0	1706.8	1704.5	1702.2	1704.5	1706.8	1709.0	1711.3	1711.3	1709.0	1706.8
170°	1718.3	1716.0	1713.7	1711.4	1713.7	1716.0	1718.3	1720.6	1720.6	1718.3	1716.0
172.5°	1724.1	1721.6	1719.1	1716.6	1719.1	1721.6	1724.1	1726.6	1726.8	1724.5	1722.2
175°	1731.2	1728.9	1726.6	1724.3	1726.6	1728.9	1731.2	1733.4	1733.6	1731.6	1729.6
177.5°	1733.5	1731.2	1728.9	1726.6	1728.9	1731.2	1733.5	1735.8	1736.0	1734.2	1732.3
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1555.5	1555.5	1567.4	1575.0	1584.4	1590.7	1595.1	1599.5	1607.1	1617.1	1628.4
5°	1466.5	1469.7	1487.0	1504.3	1520.8	1534.9	1546.7	1560.8	1578.1	1599.3	1622.9
7.5°	1380.4	1392.5	1409.9	1431.0	1454.1	1474.7	1495.6	1518.9	1543.2	1574.5	1607.5
10°	1325.1	1338.4	1359.6	1386.4	1410.7	1435.1	1461.0	1486.2	1516.8	1553.8	1596.2
12.5°	1276.7	1289.4	1311.2	1340.5	1363.6	1390.5	1420.2	1452.9	1487.3	1531.8	1579.9
15°	1209.5	1224.5	1251.2	1265.3	1300.7	1332.9	1360.4	1407.6	1451.6	1497.2	1553.0
17.5°	1154.5	1162.8	1184.5	1210.8	1237.2	1273.3	1309.3	1348.6	1392.5	1448.3	1518.1
20°	1116.8	1123.9	1147.4	1175.0	1203.2	1236.3	1268.5	1307.8	1357.3	1416.2	1491.7
22.5°	1088.5	1096.2	1111.6	1141.0	1167.4	1194.8	1227.0	1273.8	1326.5	1384.2	1465.9
25°	1047.6	1052.3	1062.6	1086.1	1109.7	1140.4	1168.7	1212.7	1266.9	1334.5	1416.2
27.5°	1008.8	1013.4	1021.9	1038.8	1060.8	1085.7	1116.5	1153.9	1208.9	1282.3	1369.1
30°	985.5	986.3	994.2	1009.9	1028.8	1049.2	1077.5	1119.9	1171.8	1246.5	1337.6
32.5°	965.4	962.4	967.8	979.7	998.0	1018.4	1041.7	1083.5	1133.5	1206.9	1300.5
35°	931.3	929.7	927.4	937.6	953.3	969.0	989.5	1020.9	1077.5	1145.9	1244.1
37.5°	896.6	892.8	888.6	893.3	905.5	921.9	939.6	967.6	1016.4	1091.6	1185.6
40°	870.8	867.7	865.3	863.7	874.7	890.4	903.8	930.5	976.1	1047.6	1140.4
42.5°	842.5	840.6	837.6	835.4	844.6	856.5	870.5	894.1	939.6	1006.8	1094.5
45°	796.9	795.4	793.8	792.2	797.7	808.7	819.7	837.0	876.3	941.5	1020.9
47.5°	746.2	744.1	744.7	742.2	747.6	755.0	762.7	781.2	818.9	871.6	929.6
50°	709.7	708.9	708.9	708.9	710.5	719.1	726.2	740.3	774.9	827.6	869.2
52.5°	675.1	671.8	671.8	673.1	675.9	681.4	686.0	701.4	731.5	774.8	812.6
55°	620.9	614.6	613.0	614.6	616.9	621.7	626.4	639.0	664.9	697.1	719.1
57.5°	560.8	557.4	555.3	555.6	556.9	560.7	564.3	578.0	598.4	615.2	629.4
60°	518.7	520.3	513.2	514.8	514.8	517.9	523.4	532.1	549.4	561.1	575.3
62.5°	479.1	476.9	474.9	472.7	472.7	473.9	481.3	488.1	502.8	509.0	520.0
65°	417.3	417.3	412.6	414.2	415.0	409.5	413.4	421.3	430.7	433.0	443.3
67.5°	354.8	352.6	349.9	347.5	347.5	347.1	349.1	353.0	360.1	360.9	368.8
70°	312.0	310.4	309.7	307.3	304.2	308.1	305.7	309.7	313.6	314.4	319.1
72.5°	270.5	268.9	267.5	265.2	263.9	263.4	263.6	268.2	270.8	269.7	275.1
75°	211.4	209.8	208.3	204.3	204.3	202.0	202.8	205.9	209.1	206.7	211.4
77.5°	155.3	150.4	150.1	151.2	148.5	149.0	148.1	147.6	149.0	149.2	153.4
80°	119.5	114.0	115.5	114.7	114.0	113.2	111.6	112.4	113.2	114.0	116.3
82.5°	86.1	85.7	84.1	83.9	83.2	81.1	80.2	81.6	82.4	81.9	83.6
85°	44.0	41.7	43.2	42.4	43.2	42.4	40.1	40.1	41.7	40.9	42.4
87.5°	19.6	19.4	18.0	17.9	16.5	16.4	15.1	15.2	15.2	14.7	15.3
90°	32.0	30.9	27.1	23.4	19.7	16.0	12.7	9.9	7.0	4.1	1.3
92.5°	34.7	32.9	30.1	27.3	24.5	21.7	20.7	21.5	22.3	23.1	23.9
95°	41.9	39.9	36.7	33.6	30.4	27.3	31.6	43.3	55.0	66.7	78.4
97.5°	43.7	41.4	62.0	82.6	103.1	123.7	136.6	141.9	147.1	152.4	157.6
100°	44.7	42.4	87.0	131.6	176.2	220.7	240.2	234.4	228.7	223.0	217.3
102.5°	77.5	84.6	133.3	182.0	230.7	279.4	301.7	297.5	293.4	289.3	285.2
105°	231.0	281.6	307.3	333.0	358.7	384.5	395.7	392.6	389.5	386.3	383.2
107.5°	479.0	516.1	512.1	508.0	504.0	499.9	496.6	494.1	491.6	489.1	486.6
110°	570.5	579.9	576.8	573.6	570.5	567.3	564.6	562.3	560.0	557.8	555.5



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	644.9	644.7	641.6	638.4	635.3	632.1	629.5	627.5	625.4	623.4	621.3
115°	740.9	738.1	735.5	732.9	730.3	727.8	725.6	723.9	722.2	720.5	718.8
117.5°	830.9	828.6	827.3	826.0	824.6	823.3	821.6	819.5	817.4	815.3	813.2
120°	889.5	887.2	886.4	885.5	884.6	883.8	882.1	879.5	876.9	874.4	871.8
122.5°	947.5	945.9	944.8	943.7	942.6	941.5	939.9	937.8	935.7	933.6	931.5
125°	1029.2	1028.7	1027.5	1026.4	1025.2	1024.1	1022.4	1020.1	1017.8	1015.5	1013.2
127.5°	1109.8	1108.9	1107.5	1106.2	1104.8	1103.4	1101.6	1099.3	1097.0	1094.7	1092.4
130°	1158.4	1157.2	1156.1	1155.0	1153.8	1152.7	1151.0	1148.7	1146.4	1144.1	1141.8
132.5°	1204.7	1203.5	1202.6	1201.7	1200.8	1199.9	1198.3	1196.0	1193.7	1191.4	1189.1
135°	1275.1	1274.3	1273.1	1272.0	1270.8	1269.7	1268.3	1266.5	1264.8	1263.1	1261.4
137.5°	1337.1	1335.7	1335.1	1334.5	1333.8	1333.2	1331.8	1329.6	1327.5	1325.3	1323.1
140°	1377.0	1375.8	1375.0	1374.1	1373.3	1372.4	1371.1	1369.4	1367.7	1366.0	1364.3
142.5°	1414.8	1413.9	1413.0	1412.2	1411.3	1410.5	1409.2	1407.5	1405.8	1404.0	1402.3
145°	1467.7	1467.1	1466.6	1466.0	1465.4	1464.8	1463.6	1461.6	1459.6	1457.6	1455.6
147.5°	1514.8	1514.2	1513.6	1513.0	1512.5	1511.9	1511.0	1509.6	1508.3	1507.0	1505.7
150°	1543.6	1543.0	1542.4	1541.8	1541.3	1540.7	1540.0	1539.1	1538.3	1537.4	1536.6
152.5°	1568.7	1567.7	1567.3	1567.0	1566.7	1566.3	1565.9	1565.5	1565.1	1564.7	1564.3
155°	1603.6	1602.1	1601.9	1601.6	1601.3	1601.0	1601.1	1601.7	1602.3	1602.9	1603.4
157.5°	1633.9	1632.2	1632.5	1632.8	1633.1	1633.4	1633.5	1633.6	1633.7	1633.7	1633.8
160°	1651.4	1649.7	1650.0	1650.3	1650.6	1650.9	1651.1	1651.4	1651.7	1652.0	1652.3
162.5°	1667.1	1665.1	1665.4	1665.7	1666.0	1666.3	1666.8	1667.5	1668.3	1669.0	1669.8
165°	1688.0	1685.7	1686.0	1686.3	1686.6	1686.9	1687.4	1688.3	1689.1	1690.0	1690.9
167.5°	1704.5	1702.2	1702.2	1702.2	1702.2	1702.2	1702.7	1703.9	1705.0	1706.2	1707.3
170°	1713.7	1711.4	1711.4	1711.4	1711.4	1711.4	1712.0	1713.2	1714.3	1715.4	1716.6
172.5°	1719.9	1717.6	1717.4	1717.2	1716.9	1716.7	1717.3	1718.6	1720.0	1721.4	1722.8
175°	1727.6	1725.6	1725.3	1725.0	1724.7	1724.4	1725.0	1726.4	1727.9	1729.3	1730.7
177.5°	1730.5	1728.7	1728.4	1728.2	1728.0	1727.8	1728.2	1729.4	1730.5	1731.6	1732.8
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1632.2	1635.3	1646.0	1653.6	1662.4	1667.4	1672.4	1676.2	1681.2	1682.5	1700.7
5°	1639.4	1655.2	1682.7	1703.1	1728.2	1755.7	1774.6	1783.3	1806.0	1824.9	1862.6
7.5°	1637.4	1670.9	1712.4	1755.4	1801.6	1844.4	1881.5	1925.5	1956.8	2003.8	2050.2
10°	1635.5	1680.3	1733.7	1788.8	1853.2	1912.9	1966.4	2026.1	2075.6	2140.8	2196.6
12.5°	1629.8	1684.1	1758.3	1823.3	1901.6	1984.0	2063.2	2139.9	2183.8	2292.4	2343.8
15°	1615.9	1680.3	1773.0	1872.1	1979.7	2077.2	2177.8	2258.0	2387.6	2482.7	2543.2
17.5°	1589.1	1679.4	1789.4	1908.8	2039.8	2168.2	2282.2	2403.8	2541.4	2656.4	2779.0
20°	1576.6	1675.6	1798.2	1930.2	2066.2	2211.6	2341.3	2487.4	2637.6	2750.7	2907.9
22.5°	1553.3	1665.5	1797.6	1944.7	2090.1	2240.5	2392.2	2539.6	2713.0	2868.9	3018.6
25°	1515.3	1641.0	1777.8	1942.0	2112.6	2263.5	2445.0	2640.7	2821.5	3021.9	3171.2
27.5°	1475.3	1609.6	1746.6	1899.4	2082.8	2261.9	2490.3	2711.4	2932.4	3105.5	3216.0
30°	1444.5	1575.0	1716.5	1870.5	2052.0	2265.0	2520.4	2761.7	2977.1	3125.6	3187.7
32.5°	1411.2	1543.5	1668.7	1830.3	2023.7	2263.1	2539.3	2791.3	2979.6	3078.5	3066.4
35°	1358.9	1469.7	1591.5	1747.1	1975.0	2249.3	2550.3	2793.9	2909.5	2888.3	2727.9
37.5°	1283.4	1376.6	1496.6	1666.9	1918.4	2220.2	2528.3	2711.1	2703.6	2530.8	2298.5
40°	1236.3	1315.6	1431.2	1610.4	1874.4	2201.4	2493.7	2612.4	2511.8	2270.5	1992.3
42.5°	1174.6	1247.7	1363.3	1547.5	1826.0	2163.0	2427.7	2462.1	2265.3	1987.6	1732.6
45°	1079.1	1143.5	1263.0	1453.2	1753.4	2079.5	2266.6	2182.5	1917.6	1630.8	1436.7
47.5°	976.4	1043.4	1158.3	1353.7	1648.4	1954.0	2043.1	1864.2	1592.3	1359.6	1181.4
50°	911.7	976.1	1088.5	1285.8	1577.3	1850.8	1887.8	1656.7	1406.8	1202.5	1056.3
52.5°	846.3	907.0	1017.5	1215.3	1494.4	1731.4	1708.6	1473.1	1243.3	1069.2	954.4
55°	749.0	806.4	911.7	1097.1	1351.0	1538.8	1456.3	1231.5	1041.3	906.2	818.9
57.5°	661.9	716.9	807.8	975.3	1196.0	1325.1	1220.1	1030.7	879.4	775.4	710.3
60°	602.8	651.5	738.0	893.6	1085.4	1183.6	1079.9	912.5	785.1	701.8	643.7
62.5°	546.8	589.3	669.4	810.6	977.2	1059.7	954.7	813.1	704.7	630.8	581.4
65°	462.1	500.6	571.4	681.4	818.1	873.2	782.8	668.0	583.9	528.9	495.9
67.5°	384.8	417.5	478.6	565.2	665.8	705.9	637.1	548.3	484.9	440.7	414.5
70°	333.2	361.5	409.5	484.1	575.3	605.9	541.5	468.4	422.0	386.7	362.3
72.5°	289.8	310.6	354.1	411.8	487.9	512.3	467.3	403.0	359.8	333.2	313.9
75°	220.8	238.1	266.4	312.8	365.5	379.6	345.8	305.7	276.6	257.8	242.8
77.5°	159.2	172.0	192.4	221.0	257.5	270.2	248.8	222.1	200.9	188.1	179.8
80°	120.2	130.5	147.8	171.3	193.3	200.4	187.8	167.4	152.5	145.4	138.3
82.5°	88.8	94.6	105.0	121.0	136.1	144.5	133.8	121.5	113.5	107.0	104.4
85°	44.8	47.9	52.7	58.9	68.4	71.5	67.6	64.4	59.7	55.8	55.8
87.5°	17.2	17.7	20.2	22.0	25.2	27.8	27.9	27.4	27.5	27.1	26.7
90°	4.1	7.0	9.9	12.7	16.0	19.7	23.4	27.1	30.9	32.0	33.1
92.5°	23.1	22.3	21.5	20.7	21.7	24.5	27.3	30.1	32.9	34.7	36.6
95°	66.7	55.0	43.3	31.6	27.3	30.4	33.6	36.7	39.9	41.9	43.9
97.5°	152.4	147.1	141.9	136.6	123.7	103.1	82.6	62.0	41.4	43.7	46.0
100°	223.0	228.7	234.4	240.2	220.7	176.2	131.6	87.0	42.4	44.7	47.0
102.5°	289.3	293.4	297.5	301.7	279.4	230.7	182.0	133.3	84.6	77.5	70.4
105°	386.3	389.5	392.6	395.7	384.5	358.7	333.0	307.3	281.6	231.0	180.4
107.5°	489.1	491.6	494.1	496.6	499.9	504.0	508.0	512.1	516.1	479.0	442.0
110°	557.8	560.0	562.3	564.6	567.3	570.5	573.6	576.8	579.9	570.5	561.0



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	623.4	625.4	627.5	629.5	632.1	635.3	638.4	641.6	644.7	644.9	645.1
115°	720.5	722.2	723.9	725.6	727.8	730.3	732.9	735.5	738.1	740.9	743.8
117.5°	815.3	817.4	819.5	821.6	823.3	824.6	826.0	827.3	828.6	830.9	833.2
120°	874.4	876.9	879.5	882.1	883.8	884.6	885.5	886.4	887.2	889.5	891.8
122.5°	933.6	935.7	937.8	939.9	941.5	942.6	943.7	944.8	945.9	947.5	949.1
125°	1015.5	1017.8	1020.1	1022.4	1024.1	1025.2	1026.4	1027.5	1028.7	1029.2	1029.8
127.5°	1094.7	1097.0	1099.3	1101.6	1103.4	1104.8	1106.2	1107.5	1108.9	1109.8	1110.7
130°	1144.1	1146.4	1148.7	1151.0	1152.7	1153.8	1155.0	1156.1	1157.2	1158.4	1159.5
132.5°	1191.4	1193.7	1196.0	1198.3	1199.9	1200.8	1201.7	1202.6	1203.5	1204.7	1205.8
135°	1263.1	1264.8	1266.5	1268.3	1269.7	1270.8	1272.0	1273.1	1274.3	1275.1	1276.0
137.5°	1325.3	1327.5	1329.6	1331.8	1333.2	1333.8	1334.5	1335.1	1335.7	1337.1	1338.5
140°	1366.0	1367.7	1369.4	1371.1	1372.4	1373.3	1374.1	1375.0	1375.8	1377.0	1378.1
142.5°	1404.0	1405.8	1407.5	1409.2	1410.5	1411.3	1412.2	1413.0	1413.9	1414.8	1415.7
145°	1457.6	1459.6	1461.6	1463.6	1464.8	1465.4	1466.0	1466.6	1467.1	1467.7	1468.3
147.5°	1507.0	1508.3	1509.6	1511.0	1511.9	1512.5	1513.0	1513.6	1514.2	1514.8	1515.3
150°	1537.4	1538.3	1539.1	1540.0	1540.7	1541.3	1541.8	1542.4	1543.0	1543.6	1544.1
152.5°	1564.7	1565.1	1565.5	1565.9	1566.3	1566.7	1567.0	1567.3	1567.7	1568.7	1569.7
155°	1602.9	1602.3	1601.7	1601.1	1601.0	1601.3	1601.6	1601.9	1602.1	1603.6	1605.0
157.5°	1633.7	1633.7	1633.6	1633.5	1633.4	1633.1	1632.8	1632.5	1632.2	1633.9	1635.7
160°	1652.0	1651.7	1651.4	1651.1	1650.9	1650.6	1650.3	1650.0	1649.7	1651.4	1653.1
162.5°	1669.0	1668.3	1667.5	1666.8	1666.3	1666.0	1665.7	1665.4	1665.1	1667.1	1669.0
165°	1690.0	1689.1	1688.3	1687.4	1686.9	1686.6	1686.3	1686.0	1685.7	1688.0	1690.3
167.5°	1706.2	1705.0	1703.9	1702.7	1702.2	1702.2	1702.2	1702.2	1702.2	1704.5	1706.8
170°	1715.4	1714.3	1713.2	1712.0	1711.4	1711.4	1711.4	1711.4	1711.4	1713.7	1716.0
172.5°	1721.4	1720.0	1718.6	1717.3	1716.7	1716.9	1717.2	1717.4	1717.6	1719.9	1722.2
175°	1729.3	1727.9	1726.4	1725.0	1724.4	1724.7	1725.0	1725.3	1725.6	1727.6	1729.6
177.5°	1731.6	1730.5	1729.4	1728.2	1727.8	1728.0	1728.2	1728.4	1728.7	1730.5	1732.3
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1	1622.1
2.5°	1707.0	1707.6	1714.6	1719.6	1717.1	1720.2	1721.5
5°	1865.0	1893.3	1908.2	1919.2	1920.0	1920.8	1927.1
7.5°	2089.0	2119.3	2141.5	2175.1	2185.2	2196.6	2193.3
10°	2252.5	2297.2	2335.8	2356.2	2378.2	2410.4	2384.5
12.5°	2405.2	2484.6	2543.2	2575.0	2595.7	2602.2	2589.5
15°	2657.2	2760.9	2816.7	2815.2	2885.9	2916.6	2868.6
17.5°	2888.3	2984.0	3060.7	3100.0	3158.9	3172.0	3166.0
20°	3029.7	3134.3	3194.0	3261.6	3292.2	3319.7	3324.4
22.5°	3151.7	3245.5	3309.7	3365.9	3391.6	3404.6	3412.5
25°	3277.3	3351.2	3389.7	3409.3	3416.4	3414.8	3404.6
27.5°	3268.6	3274.3	3231.9	3190.2	3153.0	3111.0	3096.5
30°	3183.8	3117.7	2999.9	2933.1	2834.8	2757.0	2788.4
32.5°	2960.6	2829.2	2696.8	2550.8	2429.9	2395.5	2360.9
35°	2526.7	2295.7	2160.5	2003.3	1940.4	1877.6	1834.3
37.5°	2044.2	1865.5	1705.1	1602.3	1539.3	1499.5	1478.2
40°	1767.5	1606.4	1474.4	1391.1	1343.1	1298.3	1292.1
42.5°	1546.9	1397.1	1297.7	1231.4	1185.3	1166.3	1152.5
45°	1266.9	1162.4	1095.6	1048.4	1017.8	1006.0	990.3
47.5°	1072.3	998.4	948.3	916.2	893.1	884.3	883.1
50°	963.5	902.2	865.3	840.1	822.1	818.9	806.4
52.5°	881.8	828.7	799.9	777.9	764.9	756.1	752.3
55°	765.5	730.1	704.2	691.6	681.4	672.7	672.7
57.5°	669.8	640.2	623.1	612.4	609.2	603.1	599.2
60°	610.7	585.5	572.2	562.7	556.4	557.2	550.1
62.5°	552.8	536.5	523.7	514.3	506.8	506.9	507.4
65°	470.8	458.2	448.8	445.6	440.9	435.4	437.0
67.5°	398.9	387.1	379.8	374.4	372.8	369.9	374.4
70°	347.4	338.7	333.2	328.5	326.9	327.7	331.7
72.5°	300.2	294.1	290.5	288.3	284.8	285.0	287.6
75°	235.8	231.1	227.9	225.6	224.8	224.8	224.8
77.5°	173.2	172.1	170.7	167.2	167.4	168.3	168.5
80°	136.8	134.4	133.6	132.0	129.7	128.1	132.0
82.5°	102.2	99.8	99.0	98.7	95.1	94.8	98.1
85°	55.0	52.7	53.4	52.7	52.7	51.9	51.9
87.5°	26.3	25.9	25.5	26.2	25.7	25.2	26.6
90°	34.3	35.4	36.3	36.9	37.4	38.0	38.6
92.5°	38.4	40.2	41.3	41.7	42.0	42.3	42.7
95°	45.9	47.9	48.9	48.9	48.9	48.9	48.9
97.5°	48.3	50.5	51.8	52.1	52.4	52.7	53.0
100°	49.3	51.6	52.9	53.1	53.4	53.7	54.0
102.5°	63.3	56.3	53.0	53.5	54.0	54.5	55.0
105°	129.9	79.3	54.3	54.9	55.4	56.0	56.6
107.5°	404.9	367.8	330.2	292.1	253.9	215.8	177.7
110°	551.6	542.2	517.0	476.2	435.3	394.5	353.6



TEST NUMBER: P332228

CATALOG NUMBER: S123DIW-S1165D1320U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	645.2	645.4	641.2	632.5	623.9	615.3	606.7
115°	746.6	749.5	751.5	752.6	753.8	754.9	756.1
117.5°	835.4	837.7	839.0	839.2	839.4	839.7	839.9
120°	894.1	896.4	897.5	897.5	897.5	897.5	897.5
122.5°	950.7	952.3	953.2	953.4	953.6	953.9	954.1
125°	1030.4	1030.9	1031.5	1032.1	1032.7	1033.2	1033.8
127.5°	1111.6	1112.6	1112.7	1112.2	1111.6	1111.0	1110.4
130°	1160.7	1161.8	1162.1	1161.5	1161.0	1160.4	1159.8
132.5°	1207.0	1208.1	1208.3	1207.5	1206.7	1205.9	1205.1
135°	1276.8	1277.7	1277.7	1276.8	1276.0	1275.1	1274.3
137.5°	1339.8	1341.2	1341.6	1341.0	1340.5	1339.9	1339.3
140°	1379.3	1380.4	1380.7	1380.1	1379.5	1379.0	1378.4
142.5°	1416.6	1417.6	1417.6	1416.8	1416.0	1415.2	1414.4
145°	1468.8	1469.4	1469.7	1469.7	1469.7	1469.7	1469.7
147.5°	1515.9	1516.5	1516.1	1514.8	1513.5	1512.2	1510.8
150°	1544.7	1545.3	1545.1	1544.3	1543.4	1542.6	1541.7
152.5°	1570.8	1571.8	1571.7	1570.3	1569.0	1567.7	1566.4
155°	1606.4	1607.9	1607.7	1606.0	1604.3	1602.6	1600.9
157.5°	1637.4	1639.1	1638.8	1636.6	1634.4	1632.1	1629.9
160°	1654.9	1656.6	1656.4	1654.4	1652.4	1650.4	1648.4
162.5°	1671.0	1672.9	1673.0	1671.2	1669.5	1667.7	1665.9
165°	1692.6	1694.9	1695.0	1693.0	1691.0	1689.0	1687.0
167.5°	1709.0	1711.3	1711.3	1709.0	1706.8	1704.5	1702.2
170°	1718.3	1720.6	1720.6	1718.3	1716.0	1713.7	1711.4
172.5°	1724.5	1726.8	1726.6	1724.1	1721.6	1719.1	1716.6
175°	1731.6	1733.6	1733.4	1731.2	1728.9	1726.6	1724.3
177.5°	1734.2	1736.0	1735.8	1733.5	1731.2	1728.9	1726.6
180°	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7	1730.7

(END OF REPORT)