

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: P332228-840

Luminaire Tested: **S123DIW-S1165D1320U840-4F0-1E-UDD-A**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332228-840  
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-S1165D1320U840-4F0-1E-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: 10279.1 lumens  
Efficiency: N/A  
Efficacy: 134.9 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

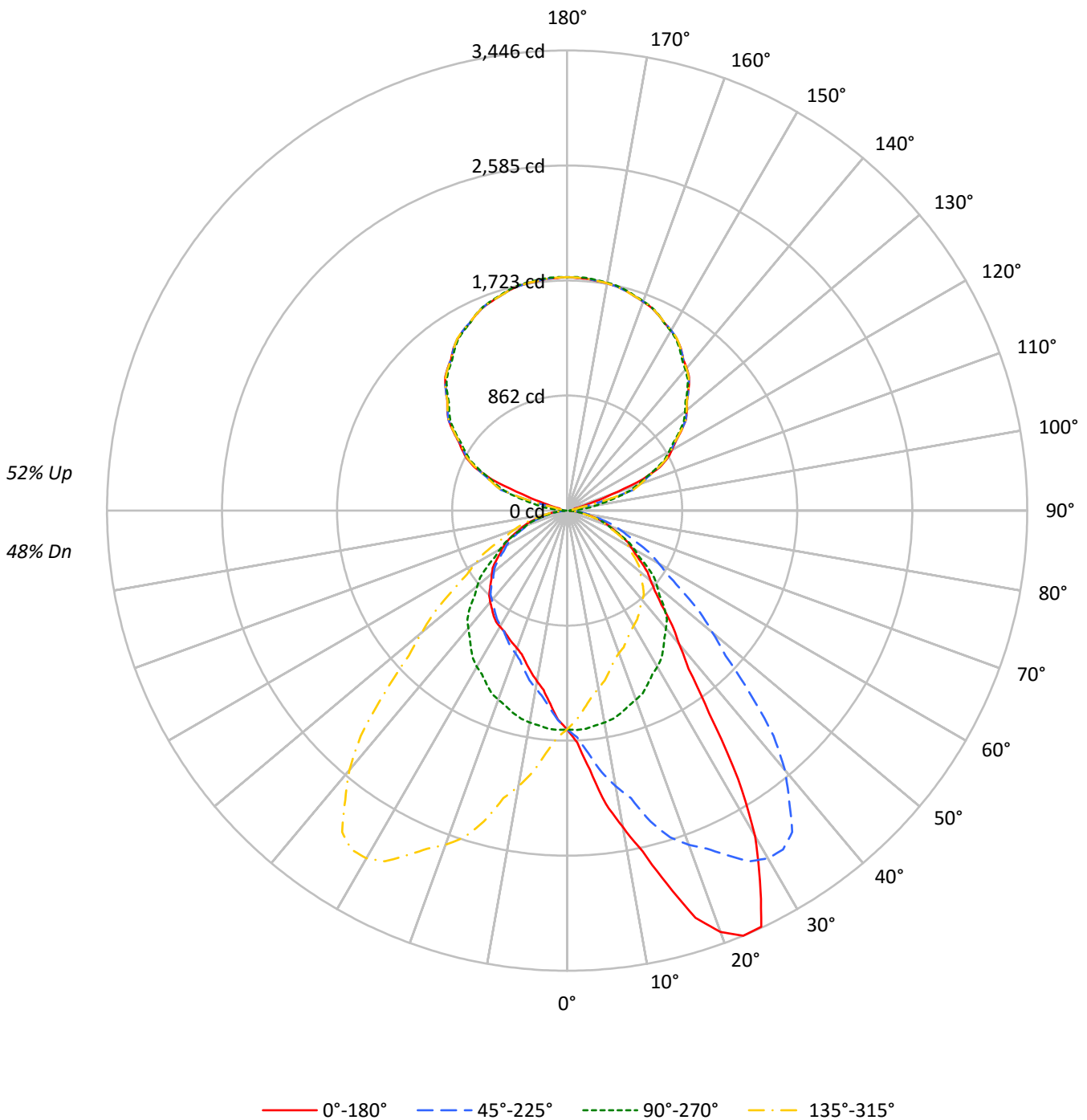
Input Watts (W): 76.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

### Luminous Intensity Polar Plot





TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**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	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					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°	17632	17632	17632	17632
5°	21028	17708	15693	17708
10°	26319	17618	14175	17618
15°	32282	17477	13196	17477
20°	38456	17255	12564	17255
25°	40834	16986	12423	16986
30°	34999	16789	12489	16789
35°	24341	16509	12620	16509
40°	18334	16183	12579	16183
45°	15224	15694	12420	15694
50°	13638	14699	12308	14699
55°	12748	13628	12153	13628
60°	11959	12508	12030	12508
65°	11240	11403	11645	11403
70°	10543	10140	11087	10140
75°	9441	8879	10168	8879
80°	8263	7277	8759	7277
85°	6472	5286	5891	5286



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.4	1.6
10°-20°	517.4	5.0
20°-30°	868.4	8.4
30°-40°	983.3	9.6
40°-50°	881.8	8.6
50°-60°	711.6	6.9
60°-70°	495.9	4.8
70°-80°	260.6	2.5
80°-90°	68.6	0.7
90°-100°	63.5	0.6
100°-110°	302.9	2.9
110°-120°	727.5	7.1
120°-130°	926.3	9.0
130°-140°	989.8	9.6
140°-150°	925.5	9.0
150°-160°	746.6	7.3
160°-170°	481.8	4.7
170°-180°	166.1	1.6
0°-30°	1547.2	15.1
0°-40°	2530.6	24.6
0°-60°	4124.0	40.1
0°-90°	4949.1	48.1
90°-120°	1093.9	10.6
90°-150°	3935.5	38.3
90°-180°	5330.0	51.9
0°-180°	10279.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1638	1638	1638	1638	1638	
5°	1946	1639	1452	1639	1946	202
15°	2897	1568	1184	1568	2897	836
25°	3438	1430	1046	1430	3438	1508
35°	1852	1256	960	1256	1852	1204
45°	1000	1031	816	1031	1000	791
55°	679	726	648	726	679	610
65°	441	448	457	448	441	439
75°	227	214	244	214	227	243
85°	52	43	48	43	52	63
90°	39	1	39	1	39	20
95°	49	79	49	79	49	41
105°	57	387	57	387	57	131
115°	764	726	764	726	764	706
125°	1044	1023	1044	1023	1044	932
135°	1287	1274	1287	1274	1287	992
145°	1484	1470	1484	1470	1484	926
155°	1617	1619	1617	1619	1617	745
165°	1704	1708	1704	1708	1704	481
175°	1741	1748	1741	1748	1741	166
180°	1748	1748	1748	1748	1748	



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1738.5	1737.2	1734.0	1736.6	1731.5	1724.4	1723.8	1717.5	1699.1	1697.8	1692.7
5°	1946.1	1939.7	1938.9	1938.1	1927.0	1912.0	1883.4	1881.0	1842.9	1823.8	1800.9
7.5°	2214.9	2218.3	2206.8	2196.6	2162.6	2140.2	2109.6	2070.4	2023.6	1976.1	1944.5
10°	2408.0	2434.2	2401.7	2379.4	2358.8	2319.9	2274.7	2218.3	2161.9	2096.1	2046.1
12.5°	2615.0	2627.9	2621.3	2600.4	2568.3	2509.1	2428.9	2366.9	2315.0	2205.3	2161.0
15°	2896.9	2945.4	2914.4	2843.0	2844.5	2788.1	2683.4	2568.3	2507.2	2411.2	2280.3
17.5°	3197.2	3203.3	3190.1	3130.6	3090.9	3013.4	2916.8	2806.4	2682.6	2566.5	2427.5
20°	3357.2	3352.4	3324.7	3293.8	3225.5	3165.2	3059.6	2936.6	2777.8	2663.6	2511.9
22.5°	3446.2	3438.2	3425.1	3399.1	3342.4	3277.5	3182.8	3048.4	2897.2	2739.8	2564.7
25°	3438.2	3448.5	3450.1	3442.9	3423.1	3384.3	3309.6	3202.5	3051.7	2849.3	2666.8
27.5°	3127.0	3141.7	3184.1	3221.7	3263.8	3306.6	3300.8	3247.7	3136.1	2961.3	2738.1
30°	2815.9	2784.2	2862.8	2962.0	3029.5	3148.5	3215.2	3219.1	3156.4	3006.5	2788.9
32.5°	2384.2	2419.1	2453.9	2576.0	2723.4	2857.1	2989.8	3096.7	3108.9	3009.0	2818.8
35°	1852.4	1896.1	1959.5	2023.1	2181.8	2318.3	2551.6	2754.8	2916.8	2938.2	2821.5
37.5°	1492.8	1514.3	1554.5	1618.1	1721.9	1883.9	2064.4	2321.2	2555.8	2730.3	2737.8
40°	1304.8	1311.1	1356.3	1404.8	1488.9	1622.2	1784.9	2012.0	2292.9	2536.6	2638.2
42.5°	1163.9	1177.8	1197.0	1243.5	1310.5	1410.9	1562.2	1749.7	2007.2	2287.6	2486.4
45°	1000.1	1015.9	1027.8	1058.7	1106.4	1173.9	1279.4	1450.9	1646.9	1936.5	2204.0
47.5°	891.8	893.0	901.9	925.2	957.7	1008.2	1082.9	1193.1	1373.0	1608.0	1882.6
50°	814.4	827.0	830.2	848.4	873.8	911.1	973.0	1066.7	1214.4	1420.7	1673.0
52.5°	759.7	763.6	772.4	785.6	807.8	836.9	890.5	963.8	1079.7	1255.6	1487.6
55°	679.3	679.3	688.1	698.4	711.1	737.3	773.1	827.0	915.1	1051.6	1243.6
57.5°	605.1	609.0	615.2	618.4	629.2	646.5	676.4	717.3	783.0	888.1	1040.9
60°	555.5	562.7	561.9	568.3	577.8	591.3	616.7	650.1	708.7	792.8	921.5
62.5°	512.4	511.9	511.8	519.4	528.9	541.8	558.3	587.1	637.0	711.7	821.1
65°	441.3	439.7	445.2	450.0	453.2	462.7	475.4	500.8	534.1	589.7	674.6
67.5°	378.1	373.5	376.5	378.1	383.5	390.9	402.8	418.6	445.0	489.7	553.7
70°	335.0	330.9	330.1	331.7	336.5	342.0	350.8	365.9	390.5	426.2	473.0
72.5°	290.4	287.8	287.6	291.1	293.4	297.0	303.2	317.0	336.5	363.3	407.0
75°	227.0	227.0	227.0	227.8	230.1	233.4	238.1	245.2	260.3	279.3	308.7
77.5°	170.2	170.0	169.1	168.8	172.4	173.8	174.9	181.6	190.0	202.9	224.3
80°	133.3	129.4	131.0	133.3	134.9	135.7	138.1	139.7	146.8	154.0	169.1
82.5°	99.1	95.7	96.0	99.7	100.0	100.8	103.2	105.4	108.1	114.6	122.7
85°	52.4	52.4	53.2	53.2	53.9	53.2	55.5	56.4	56.4	60.3	65.0
87.5°	26.9	25.4	26.0	26.5	25.8	26.2	26.6	27.0	27.4	27.8	27.7
90°	39.0	38.4	37.8	37.3	36.7	35.7	34.6	33.4	32.3	31.2	27.4
92.5°	43.1	42.7	42.4	42.1	41.7	40.6	38.8	37.0	35.0	33.2	30.4
95°	49.4	49.4	49.4	49.4	49.4	48.4	46.4	44.3	42.3	40.3	37.1
97.5°	53.5	53.2	52.9	52.6	52.3	51.0	48.8	46.5	44.1	41.8	62.6
100°	54.5	54.2	53.9	53.6	53.4	52.1	49.8	47.5	45.1	42.8	87.9
102.5°	55.5	55.0	54.5	54.0	53.5	56.9	63.9	71.1	78.3	85.4	134.6
105°	57.2	56.6	55.9	55.4	54.8	80.1	131.2	182.2	233.3	284.4	310.3
107.5°	179.5	217.9	256.4	295.0	333.5	371.4	408.9	446.4	483.7	521.2	517.2
110°	357.1	398.4	439.6	480.9	522.1	547.5	557.0	566.5	576.1	585.6	582.5



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	612.7	621.4	630.1	638.7	647.5	651.8	651.6	651.5	651.3	651.1	647.9
115°	763.6	762.3	761.2	760.0	758.9	756.9	754.0	751.1	748.2	745.4	742.8
117.5°	848.2	848.0	847.7	847.5	847.3	846.0	843.6	841.4	839.1	836.8	835.5
120°	906.4	906.4	906.4	906.4	906.4	905.2	902.9	900.6	898.3	896.0	895.1
122.5°	963.5	963.3	963.0	962.8	962.6	961.7	960.1	958.5	956.8	955.2	954.1
125°	1044.0	1043.4	1042.9	1042.3	1041.7	1041.1	1040.6	1040.0	1039.4	1038.8	1037.6
127.5°	1121.4	1122.0	1122.6	1123.2	1123.7	1123.6	1122.6	1121.7	1120.7	1119.8	1118.4
130°	1171.2	1171.8	1172.5	1173.0	1173.6	1173.3	1172.2	1170.9	1169.8	1168.6	1167.5
132.5°	1217.0	1217.8	1218.6	1219.4	1220.2	1220.0	1218.9	1217.7	1216.6	1215.4	1214.5
135°	1286.9	1287.7	1288.6	1289.4	1290.3	1290.3	1289.4	1288.6	1287.7	1286.9	1285.7
137.5°	1352.5	1353.1	1353.7	1354.2	1354.8	1354.4	1353.0	1351.7	1350.3	1348.9	1348.3
140°	1392.0	1392.6	1393.1	1393.7	1394.3	1394.0	1392.9	1391.7	1390.6	1389.4	1388.6
142.5°	1428.4	1429.2	1430.0	1430.8	1431.6	1431.6	1430.6	1429.7	1428.8	1427.8	1426.9
145°	1484.2	1484.2	1484.2	1484.2	1484.2	1483.9	1483.3	1482.8	1482.2	1481.6	1481.1
147.5°	1525.7	1527.1	1528.4	1529.7	1531.1	1531.5	1530.9	1530.2	1529.7	1529.1	1528.5
150°	1556.9	1557.8	1558.6	1559.5	1560.3	1560.5	1559.9	1559.3	1558.8	1558.2	1557.6
152.5°	1581.9	1583.2	1584.5	1585.8	1587.2	1587.3	1586.3	1585.2	1584.2	1583.2	1582.8
155°	1616.7	1618.4	1620.1	1621.8	1623.6	1623.8	1622.2	1620.8	1619.4	1617.9	1617.7
157.5°	1646.0	1648.2	1650.5	1652.7	1655.0	1655.3	1653.6	1651.8	1650.0	1648.3	1648.6
160°	1664.7	1666.7	1668.7	1670.7	1672.7	1672.9	1671.2	1669.4	1667.7	1666.0	1666.3
162.5°	1682.3	1684.2	1686.0	1687.7	1689.5	1689.4	1687.5	1685.5	1683.5	1681.5	1681.8
165°	1703.6	1705.7	1707.7	1709.7	1711.7	1711.6	1709.3	1707.0	1704.7	1702.3	1702.6
167.5°	1719.0	1721.3	1723.6	1725.9	1728.2	1728.2	1725.9	1723.6	1721.3	1719.0	1719.0
170°	1728.3	1730.6	1732.9	1735.3	1737.6	1737.6	1735.3	1732.9	1730.6	1728.3	1728.3
172.5°	1733.5	1736.1	1738.6	1741.1	1743.6	1743.8	1741.5	1739.2	1736.9	1734.5	1734.3
175°	1741.3	1743.6	1746.0	1748.3	1750.5	1750.7	1748.7	1746.7	1744.6	1742.6	1742.3
177.5°	1743.6	1746.0	1748.3	1750.6	1752.9	1753.1	1751.3	1749.4	1747.6	1745.8	1745.5
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1688.9	1683.8	1678.8	1669.9	1662.2	1651.4	1648.3	1644.5	1633.1	1623.0	1615.3
5°	1792.1	1773.0	1745.2	1719.9	1699.3	1671.5	1655.6	1638.9	1615.1	1593.7	1576.2
7.5°	1900.1	1862.6	1819.4	1772.7	1729.3	1687.4	1653.6	1623.4	1590.0	1558.4	1533.9
10°	1985.8	1931.8	1871.5	1806.4	1750.8	1696.9	1651.6	1611.9	1569.1	1531.8	1500.9
12.5°	2083.6	2003.6	1920.4	1841.3	1775.6	1700.7	1645.9	1595.5	1546.9	1502.0	1467.2
15°	2199.3	2097.7	1999.2	1890.6	1790.5	1696.9	1631.8	1568.3	1512.0	1465.9	1421.5
17.5°	2304.7	2189.6	2059.9	1927.6	1807.1	1696.0	1604.8	1533.1	1462.6	1406.2	1361.9
20°	2364.4	2233.4	2086.6	1949.2	1815.9	1692.1	1592.2	1506.4	1430.2	1370.7	1320.7
22.5°	2415.8	2262.6	2110.7	1963.9	1815.3	1681.9	1568.6	1480.4	1397.9	1339.6	1286.4
25°	2469.1	2285.8	2133.4	1961.2	1795.3	1657.2	1530.2	1430.2	1347.7	1279.4	1224.7
27.5°	2514.9	2284.2	2103.3	1918.1	1763.8	1625.5	1489.9	1382.6	1294.9	1220.8	1165.3
30°	2545.3	2287.3	2072.2	1889.0	1733.4	1590.5	1458.8	1350.8	1258.8	1183.4	1130.9
32.5°	2564.4	2285.4	2043.7	1848.4	1685.2	1558.7	1425.1	1313.3	1218.8	1144.7	1094.2
35°	2575.5	2271.5	1994.5	1764.3	1607.2	1484.2	1372.3	1256.4	1157.2	1088.1	1031.0
37.5°	2553.2	2242.1	1937.3	1683.3	1511.4	1390.2	1296.1	1197.3	1102.4	1026.4	977.1
40°	2518.3	2223.1	1892.9	1626.3	1445.3	1328.6	1248.5	1151.7	1057.9	985.7	939.7
42.5°	2451.6	2184.3	1844.0	1562.8	1376.7	1260.0	1186.2	1105.3	1016.7	948.9	902.9
45°	2289.0	2100.0	1770.7	1467.5	1275.5	1154.8	1089.7	1031.0	950.8	884.9	845.3
47.5°	2063.3	1973.3	1664.7	1367.1	1169.7	1053.7	986.0	938.8	880.2	827.0	788.9
50°	1906.4	1869.1	1592.9	1298.5	1099.2	985.7	920.7	877.8	835.8	782.5	747.6
52.5°	1725.5	1748.5	1509.1	1227.3	1027.5	915.9	854.6	820.6	782.4	738.7	708.3
55°	1470.7	1554.0	1364.3	1107.9	920.7	814.4	756.4	726.2	704.0	671.5	645.3
57.5°	1232.1	1338.2	1207.8	984.9	815.8	724.0	668.4	635.6	621.3	604.3	583.7
60°	1090.6	1195.3	1096.1	902.4	745.3	657.9	608.7	581.0	566.6	554.8	537.3
62.5°	964.1	1070.2	986.8	818.6	676.0	595.1	552.2	525.1	514.0	507.8	492.9
65°	790.5	881.8	826.2	688.1	577.0	505.5	466.7	447.7	437.3	434.9	425.5
67.5°	643.4	712.9	672.4	570.8	483.3	421.6	388.6	372.4	364.5	363.7	356.5
70°	546.8	611.9	581.0	488.9	413.5	365.1	336.5	322.2	317.5	316.7	312.8
72.5°	471.9	517.4	492.7	415.9	357.6	313.7	292.7	277.8	272.4	273.5	270.8
75°	349.2	383.3	369.1	315.9	269.0	240.4	223.0	213.5	208.7	211.2	207.9
77.5°	251.3	272.9	260.0	223.2	194.3	173.7	160.8	154.9	150.7	150.5	149.1
80°	189.7	202.4	195.2	173.0	149.3	131.8	121.4	117.4	115.1	114.3	113.5
82.5°	135.1	145.9	137.4	122.2	106.0	95.5	89.7	84.4	82.7	83.2	82.4
85°	68.3	72.2	69.1	59.5	53.2	48.4	45.2	42.8	41.3	42.1	40.5
87.5°	28.2	28.1	25.4	22.2	20.4	17.9	17.4	15.5	14.8	15.3	15.3
90°	23.6	19.9	16.2	12.8	10.0	7.1	4.1	1.3	4.1	7.1	10.0
92.5°	27.6	24.7	21.9	20.9	21.7	22.5	23.3	24.1	23.3	22.5	21.7
95°	33.9	30.7	27.6	31.9	43.7	55.5	67.4	79.2	67.4	55.5	43.7
97.5°	83.4	104.1	124.9	137.9	143.3	148.6	153.9	159.2	153.9	148.6	143.3
100°	132.9	177.9	222.9	242.6	236.7	231.0	225.2	219.4	225.2	231.0	236.7
102.5°	183.8	233.0	282.2	304.7	300.4	296.3	292.2	288.0	292.2	296.3	300.4
105°	336.3	362.2	388.3	399.6	396.5	393.3	390.1	387.0	390.1	393.3	396.5
107.5°	513.0	509.0	504.8	501.5	499.0	496.4	493.9	491.4	493.9	496.4	499.0
110°	579.3	576.1	572.9	570.2	567.8	565.5	563.3	561.0	563.3	565.5	567.8





TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	644.7	641.6	638.3	635.7	633.7	631.6	629.5	627.4	629.5	631.6	633.7
115°	740.1	737.5	735.0	732.8	731.0	729.3	727.6	725.9	727.6	729.3	731.0
117.5°	834.1	832.7	831.4	829.7	827.6	825.5	823.3	821.2	823.3	825.5	827.6
120°	894.2	893.3	892.5	890.8	888.2	885.6	883.0	880.4	883.0	885.6	888.2
122.5°	953.0	951.9	950.8	949.2	947.1	944.9	942.8	940.7	942.8	944.9	947.1
125°	1036.5	1035.3	1034.2	1032.5	1030.2	1027.8	1025.5	1023.2	1025.5	1027.8	1030.2
127.5°	1117.1	1115.7	1114.3	1112.5	1110.1	1107.8	1105.5	1103.2	1105.5	1107.8	1110.1
130°	1166.4	1165.2	1164.1	1162.4	1160.0	1157.7	1155.4	1153.1	1155.4	1157.7	1160.0
132.5°	1213.6	1212.6	1211.7	1210.1	1207.8	1205.5	1203.2	1200.8	1203.2	1205.5	1207.8
135°	1284.5	1283.3	1282.2	1280.8	1279.0	1277.3	1275.6	1273.8	1275.6	1277.3	1279.0
137.5°	1347.7	1347.0	1346.4	1344.9	1342.7	1340.6	1338.4	1336.2	1338.4	1340.6	1342.7
140°	1387.7	1386.8	1385.9	1384.6	1382.9	1381.2	1379.5	1377.8	1379.5	1381.2	1382.9
142.5°	1426.1	1425.2	1424.4	1423.1	1421.4	1419.7	1417.9	1416.1	1417.9	1419.7	1421.4
145°	1480.5	1479.9	1479.3	1478.0	1476.0	1474.0	1472.0	1470.0	1472.0	1474.0	1476.0
147.5°	1527.9	1527.4	1526.8	1525.9	1524.5	1523.2	1521.9	1520.6	1521.9	1523.2	1524.5
150°	1557.0	1556.5	1555.9	1555.2	1554.3	1553.5	1552.6	1551.8	1552.6	1553.5	1554.3
152.5°	1582.5	1582.2	1581.8	1581.3	1580.9	1580.5	1580.1	1579.7	1580.1	1580.5	1580.9
155°	1617.4	1617.1	1616.8	1616.9	1617.5	1618.1	1618.7	1619.2	1618.7	1618.1	1617.5
157.5°	1648.9	1649.2	1649.5	1649.6	1649.7	1649.8	1649.8	1649.9	1649.8	1649.8	1649.7
160°	1666.6	1666.9	1667.2	1667.4	1667.7	1668.0	1668.3	1668.6	1668.3	1668.0	1667.7
162.5°	1682.1	1682.4	1682.7	1683.2	1683.9	1684.8	1685.5	1686.3	1685.5	1684.8	1683.9
165°	1702.9	1703.2	1703.5	1704.0	1705.0	1705.8	1706.7	1707.6	1706.7	1705.8	1705.0
167.5°	1719.0	1719.0	1719.0	1719.5	1720.7	1721.8	1723.0	1724.1	1723.0	1721.8	1720.7
170°	1728.3	1728.3	1728.3	1728.9	1730.1	1731.2	1732.3	1733.5	1732.3	1731.2	1730.1
172.5°	1734.1	1733.8	1733.6	1734.2	1735.6	1737.0	1738.4	1739.8	1738.4	1737.0	1735.6
175°	1742.0	1741.7	1741.4	1742.0	1743.4	1744.9	1746.4	1747.8	1746.4	1744.9	1743.4
177.5°	1745.2	1745.0	1744.8	1745.2	1746.5	1747.6	1748.7	1749.9	1748.7	1747.6	1746.5
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1610.8	1606.4	1600.0	1590.5	1582.9	1570.8	1570.8	1572.8	1572.8	1572.2	1570.8
5°	1562.0	1550.0	1535.8	1519.1	1501.7	1484.2	1481.0	1474.6	1469.9	1466.7	1462.8
7.5°	1510.4	1489.2	1468.4	1445.1	1423.8	1406.2	1394.0	1383.8	1377.4	1370.4	1365.2
10°	1475.4	1449.3	1424.6	1400.1	1373.0	1351.6	1338.2	1328.6	1321.5	1315.1	1311.9
12.5°	1434.2	1404.2	1377.1	1353.7	1324.1	1302.1	1289.3	1284.8	1276.4	1263.0	1256.1
15°	1373.8	1346.0	1313.5	1277.8	1263.5	1236.6	1221.4	1214.4	1209.5	1199.2	1196.1
17.5°	1322.2	1285.9	1249.4	1222.7	1196.2	1174.3	1165.9	1157.0	1150.6	1142.3	1139.7
20°	1281.0	1248.5	1215.1	1186.6	1158.7	1135.0	1127.8	1121.5	1115.1	1111.2	1107.9
22.5°	1239.1	1206.6	1178.9	1152.3	1122.6	1107.0	1099.2	1092.3	1087.8	1085.1	1082.0
25°	1180.2	1151.7	1120.6	1096.8	1073.1	1062.7	1057.9	1054.0	1050.9	1046.8	1046.0
27.5°	1127.5	1096.4	1071.3	1049.0	1032.0	1023.4	1018.8	1016.8	1017.5	1019.0	1019.9
30°	1088.1	1059.6	1038.9	1019.9	1004.0	996.0	995.2	995.2	998.5	999.3	1000.8
32.5°	1052.0	1028.4	1007.8	989.4	977.3	971.9	974.9	974.9	977.4	979.6	982.4
35°	999.3	978.6	962.7	946.8	936.5	938.9	940.5	942.1	946.0	950.8	954.0
37.5°	948.9	931.0	914.4	902.1	897.4	901.6	905.4	908.8	913.3	917.1	920.2
40°	912.7	899.2	883.3	872.2	873.8	876.3	879.4	883.3	887.4	889.7	892.9
42.5°	879.1	864.9	852.9	843.6	845.9	848.9	850.8	852.9	857.5	861.8	863.6
45°	827.8	816.7	805.6	800.0	801.6	803.2	804.8	807.2	811.1	814.4	815.1
47.5°	770.2	762.4	755.0	749.5	752.0	751.4	753.6	758.6	759.8	761.7	766.2
50°	733.4	726.2	717.5	715.9	715.9	715.9	716.7	723.1	723.1	726.2	729.4
52.5°	692.8	688.1	682.6	679.7	678.4	678.4	681.8	685.0	686.2	690.6	693.9
55°	632.6	627.8	623.0	620.7	619.0	620.7	627.0	628.5	632.6	634.9	637.3
57.5°	569.9	566.2	562.4	561.1	560.8	562.9	566.3	571.1	572.1	579.4	583.0
60°	528.6	523.0	519.9	519.9	518.3	525.4	523.8	531.8	533.3	538.2	543.7
62.5°	486.0	478.6	477.4	477.4	479.6	481.6	483.8	487.4	491.4	497.5	501.8
65°	417.5	413.5	419.1	418.3	416.7	421.4	421.4	425.5	430.2	435.8	444.4
67.5°	352.5	350.5	350.9	350.9	353.4	356.1	358.3	361.7	367.5	373.3	379.1
70°	308.7	311.1	307.2	310.3	312.8	313.5	315.1	319.8	326.2	330.1	336.5
72.5°	266.2	266.0	266.5	267.8	270.1	271.6	273.2	278.6	285.6	288.9	294.0
75°	204.8	204.0	206.3	206.3	210.4	211.9	213.5	215.9	222.3	227.0	231.0
77.5°	149.6	150.5	150.0	152.7	151.6	151.9	156.8	159.3	159.9	169.3	171.3
80°	112.7	114.3	115.1	115.8	116.6	115.1	120.7	123.0	123.0	128.6	132.5
82.5°	81.0	81.9	84.0	84.7	84.9	86.5	86.9	88.8	90.7	93.0	98.3
85°	40.5	42.8	43.6	42.8	43.6	42.1	44.4	45.2	46.0	46.0	46.0
87.5°	15.2	16.6	16.7	18.1	18.2	19.6	19.8	18.8	19.0	21.1	18.8
90°	12.8	16.2	19.9	23.6	27.4	31.2	32.3	33.4	34.6	35.7	36.7
92.5°	20.9	21.9	24.7	27.6	30.4	33.2	35.0	37.0	38.8	40.6	41.7
95°	31.9	27.6	30.7	33.9	37.1	40.3	42.3	44.3	46.4	48.4	49.4
97.5°	137.9	124.9	104.1	83.4	62.6	41.8	44.1	46.5	48.8	51.0	52.3
100°	242.6	222.9	177.9	132.9	87.9	42.8	45.1	47.5	49.8	52.1	53.4
102.5°	304.7	282.2	233.0	183.8	134.6	85.4	78.3	71.1	63.9	56.9	53.5
105°	399.6	388.3	362.2	336.3	310.3	284.4	233.3	182.2	131.2	80.1	54.8
107.5°	501.5	504.8	509.0	513.0	517.2	521.2	483.7	446.4	408.9	371.4	333.5
110°	570.2	572.9	576.1	579.3	582.5	585.6	576.1	566.5	557.0	547.5	522.1



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	635.7	638.3	641.6	644.7	647.9	651.1	651.3	651.5	651.6	651.8	647.5
115°	732.8	735.0	737.5	740.1	742.8	745.4	748.2	751.1	754.0	756.9	758.9
117.5°	829.7	831.4	832.7	834.1	835.5	836.8	839.1	841.4	843.6	846.0	847.3
120°	890.8	892.5	893.3	894.2	895.1	896.0	898.3	900.6	902.9	905.2	906.4
122.5°	949.2	950.8	951.9	953.0	954.1	955.2	956.8	958.5	960.1	961.7	962.6
125°	1032.5	1034.2	1035.3	1036.5	1037.6	1038.8	1039.4	1040.0	1040.6	1041.1	1041.7
127.5°	1112.5	1114.3	1115.7	1117.1	1118.4	1119.8	1120.7	1121.7	1122.6	1123.6	1123.7
130°	1162.4	1164.1	1165.2	1166.4	1167.5	1168.6	1169.8	1170.9	1172.2	1173.3	1173.6
132.5°	1210.1	1211.7	1212.6	1213.6	1214.5	1215.4	1216.6	1217.7	1218.9	1220.0	1220.2
135°	1280.8	1282.2	1283.3	1284.5	1285.7	1286.9	1287.7	1288.6	1289.4	1290.3	1290.3
137.5°	1344.9	1346.4	1347.0	1347.7	1348.3	1348.9	1350.3	1351.7	1353.0	1354.4	1354.8
140°	1384.6	1385.9	1386.8	1387.7	1388.6	1389.4	1390.6	1391.7	1392.9	1394.0	1394.3
142.5°	1423.1	1424.4	1425.2	1426.1	1426.9	1427.8	1428.8	1429.7	1430.6	1431.6	1431.6
145°	1478.0	1479.3	1479.9	1480.5	1481.1	1481.6	1482.2	1482.8	1483.3	1483.9	1484.2
147.5°	1525.9	1526.8	1527.4	1527.9	1528.5	1529.1	1529.7	1530.2	1530.9	1531.5	1531.1
150°	1555.2	1555.9	1556.5	1557.0	1557.6	1558.2	1558.8	1559.3	1559.9	1560.5	1560.3
152.5°	1581.3	1581.8	1582.2	1582.5	1582.8	1583.2	1584.2	1585.2	1586.3	1587.3	1587.2
155°	1616.9	1616.8	1617.1	1617.4	1617.7	1617.9	1619.4	1620.8	1622.2	1623.8	1623.6
157.5°	1649.6	1649.5	1649.2	1648.9	1648.6	1648.3	1650.0	1651.8	1653.6	1655.3	1655.0
160°	1667.4	1667.2	1666.9	1666.6	1666.3	1666.0	1667.7	1669.4	1671.2	1672.9	1672.7
162.5°	1683.2	1682.7	1682.4	1682.1	1681.8	1681.5	1683.5	1685.5	1687.5	1689.4	1689.5
165°	1704.0	1703.5	1703.2	1702.9	1702.6	1702.3	1704.7	1707.0	1709.3	1711.6	1711.7
167.5°	1719.5	1719.0	1719.0	1719.0	1719.0	1719.0	1721.3	1723.6	1725.9	1728.2	1728.2
170°	1728.9	1728.3	1728.3	1728.3	1728.3	1728.3	1730.6	1732.9	1735.3	1737.6	1737.6
172.5°	1734.2	1733.6	1733.8	1734.1	1734.3	1734.5	1736.9	1739.2	1741.5	1743.8	1743.6
175°	1742.0	1741.4	1741.7	1742.0	1742.3	1742.6	1744.6	1746.7	1748.7	1750.7	1750.5
177.5°	1745.2	1744.8	1745.0	1745.2	1745.5	1745.8	1747.6	1749.4	1751.3	1753.1	1752.9
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1566.4	1565.8	1570.2	1567.0	1570.2	1565.8	1566.4	1570.8	1572.2	1572.8	1572.8
5°	1457.9	1460.4	1452.4	1452.4	1452.4	1460.4	1457.9	1462.8	1466.7	1469.9	1474.6
7.5°	1361.5	1358.0	1358.3	1354.0	1358.3	1358.0	1361.5	1365.2	1370.4	1377.4	1383.8
10°	1302.4	1297.7	1296.1	1296.9	1296.1	1297.7	1302.4	1311.9	1315.1	1321.5	1328.6
12.5°	1253.5	1252.5	1242.1	1242.2	1242.1	1252.5	1253.5	1256.1	1263.0	1276.4	1284.8
15°	1196.1	1181.0	1179.4	1184.2	1179.4	1181.0	1196.1	1196.1	1199.2	1209.5	1214.4
17.5°	1138.4	1130.5	1130.9	1128.6	1130.9	1130.5	1138.4	1139.7	1142.3	1150.6	1157.0
20°	1107.9	1103.2	1102.4	1096.8	1102.4	1103.2	1107.9	1107.9	1111.2	1115.1	1121.5
22.5°	1080.1	1078.4	1078.9	1072.8	1078.9	1078.4	1080.1	1082.0	1085.1	1087.8	1092.3
25°	1045.3	1049.2	1046.0	1046.0	1046.0	1049.2	1045.3	1046.0	1046.8	1050.9	1054.0
27.5°	1021.8	1021.6	1020.1	1020.1	1020.1	1021.6	1021.8	1019.9	1019.0	1017.5	1016.8
30°	1004.0	1003.2	1004.8	1004.8	1004.8	1003.2	1004.0	1000.8	999.3	998.5	995.2
32.5°	986.2	987.3	987.6	988.3	987.6	987.3	986.2	982.4	979.6	977.4	974.9
35°	958.8	959.6	961.9	960.4	961.9	959.6	958.8	954.0	950.8	946.0	942.1
37.5°	921.6	925.2	924.4	925.7	924.4	925.2	921.6	920.2	917.1	913.3	908.8
40°	893.6	896.1	895.2	895.2	895.2	896.1	893.6	892.9	889.7	887.4	883.3
42.5°	865.2	866.9	864.7	863.5	864.7	866.9	865.2	863.6	861.8	857.5	852.9
45°	818.3	816.7	819.1	815.9	819.1	816.7	818.3	815.1	814.4	811.1	807.2
47.5°	765.9	767.5	768.1	770.5	768.1	767.5	765.9	766.2	761.7	759.8	758.6
50°	730.9	735.7	735.7	735.0	735.7	735.7	730.9	729.4	726.2	723.1	723.1
52.5°	696.7	698.9	702.1	702.0	702.1	698.9	696.7	693.9	690.6	686.2	685.0
55°	643.7	645.3	646.8	647.6	646.8	645.3	643.7	637.3	634.9	632.6	628.5
57.5°	588.8	588.1	591.9	593.0	591.9	588.1	588.8	583.0	579.4	572.1	571.1
60°	550.0	550.0	556.3	558.8	556.3	550.0	550.0	543.7	538.2	533.3	531.8
62.5°	508.8	511.3	517.7	514.3	517.7	511.3	508.8	501.8	497.5	491.4	487.4
65°	448.4	454.7	453.9	457.2	453.9	454.7	448.4	444.4	435.8	430.2	425.5
67.5°	385.4	389.4	395.1	395.6	395.1	389.4	385.4	379.1	373.3	367.5	361.7
70°	342.8	346.8	350.0	352.3	350.0	346.8	342.8	336.5	330.1	326.2	319.8
72.5°	301.6	303.7	311.2	307.9	311.2	303.7	301.6	294.0	288.9	285.6	278.6
75°	236.5	242.1	246.8	244.5	246.8	242.1	236.5	231.0	227.0	222.3	215.9
77.5°	174.9	180.5	182.7	180.7	182.7	180.5	174.9	171.3	169.3	159.9	159.3
80°	138.1	137.3	142.1	141.3	142.1	137.3	138.1	132.5	128.6	123.0	123.0
82.5°	101.3	100.5	102.7	103.2	102.7	100.5	101.3	98.3	93.0	90.7	88.8
85°	49.2	51.6	48.4	47.7	48.4	51.6	49.2	46.0	46.0	46.0	45.2
87.5°	18.9	19.0	18.5	18.0	18.5	19.0	18.9	18.8	21.1	19.0	18.8
90°	37.3	37.8	38.4	39.0	38.4	37.8	37.3	36.7	35.7	34.6	33.4
92.5°	42.1	42.4	42.7	43.1	42.7	42.4	42.1	41.7	40.6	38.8	37.0
95°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	48.4	46.4	44.3
97.5°	52.6	52.9	53.2	53.5	53.2	52.9	52.6	52.3	51.0	48.8	46.5
100°	53.6	53.9	54.2	54.5	54.2	53.9	53.6	53.4	52.1	49.8	47.5
102.5°	54.0	54.5	55.0	55.5	55.0	54.5	54.0	53.5	56.9	63.9	71.1
105°	55.4	55.9	56.6	57.2	56.6	55.9	55.4	54.8	80.1	131.2	182.2
107.5°	295.0	256.4	217.9	179.5	217.9	256.4	295.0	333.5	371.4	408.9	446.4
110°	480.9	439.6	398.4	357.1	398.4	439.6	480.9	522.1	547.5	557.0	566.5



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	638.7	630.1	621.4	612.7	621.4	630.1	638.7	647.5	651.8	651.6	651.5
115°	760.0	761.2	762.3	763.6	762.3	761.2	760.0	758.9	756.9	754.0	751.1
117.5°	847.5	847.7	848.0	848.2	848.0	847.7	847.5	847.3	846.0	843.6	841.4
120°	906.4	906.4	906.4	906.4	906.4	906.4	906.4	906.4	905.2	902.9	900.6
122.5°	962.8	963.0	963.3	963.5	963.3	963.0	962.8	962.6	961.7	960.1	958.5
125°	1042.3	1042.9	1043.4	1044.0	1043.4	1042.9	1042.3	1041.7	1041.1	1040.6	1040.0
127.5°	1123.2	1122.6	1122.0	1121.4	1122.0	1122.6	1123.2	1123.7	1123.6	1122.6	1121.7
130°	1173.0	1172.5	1171.8	1171.2	1171.8	1172.5	1173.0	1173.6	1173.3	1172.2	1170.9
132.5°	1219.4	1218.6	1217.8	1217.0	1217.8	1218.6	1219.4	1220.2	1220.0	1218.9	1217.7
135°	1289.4	1288.6	1287.7	1286.9	1287.7	1288.6	1289.4	1290.3	1290.3	1289.4	1288.6
137.5°	1354.2	1353.7	1353.1	1352.5	1353.1	1353.7	1354.2	1354.8	1354.4	1353.0	1351.7
140°	1393.7	1393.1	1392.6	1392.0	1392.6	1393.1	1393.7	1394.3	1394.0	1392.9	1391.7
142.5°	1430.8	1430.0	1429.2	1428.4	1429.2	1430.0	1430.8	1431.6	1431.6	1430.6	1429.7
145°	1484.2	1484.2	1484.2	1484.2	1484.2	1484.2	1484.2	1484.2	1483.9	1483.3	1482.8
147.5°	1529.7	1528.4	1527.1	1525.7	1527.1	1528.4	1529.7	1531.1	1531.5	1530.9	1530.2
150°	1559.5	1558.6	1557.8	1556.9	1557.8	1558.6	1559.5	1560.3	1560.5	1559.9	1559.3
152.5°	1585.8	1584.5	1583.2	1581.9	1583.2	1584.5	1585.8	1587.2	1587.3	1586.3	1585.2
155°	1621.8	1620.1	1618.4	1616.7	1618.4	1620.1	1621.8	1623.6	1623.8	1622.2	1620.8
157.5°	1652.7	1650.5	1648.2	1646.0	1648.2	1650.5	1652.7	1655.0	1655.3	1653.6	1651.8
160°	1670.7	1668.7	1666.7	1664.7	1666.7	1668.7	1670.7	1672.7	1672.9	1671.2	1669.4
162.5°	1687.7	1686.0	1684.2	1682.3	1684.2	1686.0	1687.7	1689.5	1689.4	1687.5	1685.5
165°	1709.7	1707.7	1705.7	1703.6	1705.7	1707.7	1709.7	1711.7	1711.6	1709.3	1707.0
167.5°	1725.9	1723.6	1721.3	1719.0	1721.3	1723.6	1725.9	1728.2	1728.2	1725.9	1723.6
170°	1735.3	1732.9	1730.6	1728.3	1730.6	1732.9	1735.3	1737.6	1737.6	1735.3	1732.9
172.5°	1741.1	1738.6	1736.1	1733.5	1736.1	1738.6	1741.1	1743.6	1743.8	1741.5	1739.2
175°	1748.3	1746.0	1743.6	1741.3	1743.6	1746.0	1748.3	1750.5	1750.7	1748.7	1746.7
177.5°	1750.6	1748.3	1746.0	1743.6	1746.0	1748.3	1750.6	1752.9	1753.1	1751.3	1749.4
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1570.8	1570.8	1582.9	1590.5	1600.0	1606.4	1610.8	1615.3	1623.0	1633.1	1644.5
5°	1481.0	1484.2	1501.7	1519.1	1535.8	1550.0	1562.0	1576.2	1593.7	1615.1	1638.9
7.5°	1394.0	1406.2	1423.8	1445.1	1468.4	1489.2	1510.4	1533.9	1558.4	1590.0	1623.4
10°	1338.2	1351.6	1373.0	1400.1	1424.6	1449.3	1475.4	1500.9	1531.8	1569.1	1611.9
12.5°	1289.3	1302.1	1324.1	1353.7	1377.1	1404.2	1434.2	1467.2	1502.0	1546.9	1595.5
15°	1221.4	1236.6	1263.5	1277.8	1313.5	1346.0	1373.8	1421.5	1465.9	1512.0	1568.3
17.5°	1165.9	1174.3	1196.2	1222.7	1249.4	1285.9	1322.2	1361.9	1406.2	1462.6	1533.1
20°	1127.8	1135.0	1158.7	1186.6	1215.1	1248.5	1281.0	1320.7	1370.7	1430.2	1506.4
22.5°	1099.2	1107.0	1122.6	1152.3	1178.9	1206.6	1239.1	1286.4	1339.6	1397.9	1480.4
25°	1057.9	1062.7	1073.1	1096.8	1120.6	1151.7	1180.2	1224.7	1279.4	1347.7	1430.2
27.5°	1018.8	1023.4	1032.0	1049.0	1071.3	1096.4	1127.5	1165.3	1220.8	1294.9	1382.6
30°	995.2	996.0	1004.0	1019.9	1038.9	1059.6	1088.1	1130.9	1183.4	1258.8	1350.8
32.5°	974.9	971.9	977.3	989.4	1007.8	1028.4	1052.0	1094.2	1144.7	1218.8	1313.3
35°	940.5	938.9	936.5	946.8	962.7	978.6	999.3	1031.0	1088.1	1157.2	1256.4
37.5°	905.4	901.6	897.4	902.1	914.4	931.0	948.9	977.1	1026.4	1102.4	1197.3
40°	879.4	876.3	873.8	872.2	883.3	899.2	912.7	939.7	985.7	1057.9	1151.7
42.5°	850.8	848.9	845.9	843.6	852.9	864.9	879.1	902.9	948.9	1016.7	1105.3
45°	804.8	803.2	801.6	800.0	805.6	816.7	827.8	845.3	884.9	950.8	1031.0
47.5°	753.6	751.4	752.0	749.5	755.0	762.4	770.2	788.9	827.0	880.2	938.8
50°	716.7	715.9	715.9	715.9	717.5	726.2	733.4	747.6	782.5	835.8	877.8
52.5°	681.8	678.4	678.4	679.7	682.6	688.1	692.8	708.3	738.7	782.4	820.6
55°	627.0	620.7	619.0	620.7	623.0	627.8	632.6	645.3	671.5	704.0	726.2
57.5°	566.3	562.9	560.8	561.1	562.4	566.2	569.9	583.7	604.3	621.3	635.6
60°	523.8	525.4	518.3	519.9	519.9	523.0	528.6	537.3	554.8	566.6	581.0
62.5°	483.8	481.6	479.6	477.4	477.4	478.6	486.0	492.9	507.8	514.0	525.1
65°	421.4	421.4	416.7	418.3	419.1	413.5	417.5	425.5	434.9	437.3	447.7
67.5°	358.3	356.1	353.4	350.9	350.9	350.5	352.5	356.5	363.7	364.5	372.4
70°	315.1	313.5	312.8	310.3	307.2	311.1	308.7	312.8	316.7	317.5	322.2
72.5°	273.2	271.6	270.1	267.8	266.5	266.0	266.2	270.8	273.5	272.4	277.8
75°	213.5	211.9	210.4	206.3	206.3	204.0	204.8	207.9	211.2	208.7	213.5
77.5°	156.8	151.9	151.6	152.7	150.0	150.5	149.6	149.1	150.5	150.7	154.9
80°	120.7	115.1	116.6	115.8	115.1	114.3	112.7	113.5	114.3	115.1	117.4
82.5°	86.9	86.5	84.9	84.7	84.0	81.9	81.0	82.4	83.2	82.7	84.4
85°	44.4	42.1	43.6	42.8	43.6	42.8	40.5	40.5	42.1	41.3	42.8
87.5°	19.8	19.6	18.2	18.1	16.7	16.6	15.2	15.3	15.3	14.8	15.5
90°	32.3	31.2	27.4	23.6	19.9	16.2	12.8	10.0	7.1	4.1	1.3
92.5°	35.0	33.2	30.4	27.6	24.7	21.9	20.9	21.7	22.5	23.3	24.1
95°	42.3	40.3	37.1	33.9	30.7	27.6	31.9	43.7	55.5	67.4	79.2
97.5°	44.1	41.8	62.6	83.4	104.1	124.9	137.9	143.3	148.6	153.9	159.2
100°	45.1	42.8	87.9	132.9	177.9	222.9	242.6	236.7	231.0	225.2	219.4
102.5°	78.3	85.4	134.6	183.8	233.0	282.2	304.7	300.4	296.3	292.2	288.0
105°	233.3	284.4	310.3	336.3	362.2	388.3	399.6	396.5	393.3	390.1	387.0
107.5°	483.7	521.2	517.2	513.0	509.0	504.8	501.5	499.0	496.4	493.9	491.4
110°	576.1	585.6	582.5	579.3	576.1	572.9	570.2	567.8	565.5	563.3	561.0



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	651.3	651.1	647.9	644.7	641.6	638.3	635.7	633.7	631.6	629.5	627.4
115°	748.2	745.4	742.8	740.1	737.5	735.0	732.8	731.0	729.3	727.6	725.9
117.5°	839.1	836.8	835.5	834.1	832.7	831.4	829.7	827.6	825.5	823.3	821.2
120°	898.3	896.0	895.1	894.2	893.3	892.5	890.8	888.2	885.6	883.0	880.4
122.5°	956.8	955.2	954.1	953.0	951.9	950.8	949.2	947.1	944.9	942.8	940.7
125°	1039.4	1038.8	1037.6	1036.5	1035.3	1034.2	1032.5	1030.2	1027.8	1025.5	1023.2
127.5°	1120.7	1119.8	1118.4	1117.1	1115.7	1114.3	1112.5	1110.1	1107.8	1105.5	1103.2
130°	1169.8	1168.6	1167.5	1166.4	1165.2	1164.1	1162.4	1160.0	1157.7	1155.4	1153.1
132.5°	1216.6	1215.4	1214.5	1213.6	1212.6	1211.7	1210.1	1207.8	1205.5	1203.2	1200.8
135°	1287.7	1286.9	1285.7	1284.5	1283.3	1282.2	1280.8	1279.0	1277.3	1275.6	1273.8
137.5°	1350.3	1348.9	1348.3	1347.7	1347.0	1346.4	1344.9	1342.7	1340.6	1338.4	1336.2
140°	1390.6	1389.4	1388.6	1387.7	1386.8	1385.9	1384.6	1382.9	1381.2	1379.5	1377.8
142.5°	1428.8	1427.8	1426.9	1426.1	1425.2	1424.4	1423.1	1421.4	1419.7	1417.9	1416.1
145°	1482.2	1481.6	1481.1	1480.5	1479.9	1479.3	1478.0	1476.0	1474.0	1472.0	1470.0
147.5°	1529.7	1529.1	1528.5	1527.9	1527.4	1526.8	1525.9	1524.5	1523.2	1521.9	1520.6
150°	1558.8	1558.2	1557.6	1557.0	1556.5	1555.9	1555.2	1554.3	1553.5	1552.6	1551.8
152.5°	1584.2	1583.2	1582.8	1582.5	1582.2	1581.8	1581.3	1580.9	1580.5	1580.1	1579.7
155°	1619.4	1617.9	1617.7	1617.4	1617.1	1616.8	1616.9	1617.5	1618.1	1618.7	1619.2
157.5°	1650.0	1648.3	1648.6	1648.9	1649.2	1649.5	1649.6	1649.7	1649.8	1649.8	1649.9
160°	1667.7	1666.0	1666.3	1666.6	1666.9	1667.2	1667.4	1667.7	1668.0	1668.3	1668.6
162.5°	1683.5	1681.5	1681.8	1682.1	1682.4	1682.7	1683.2	1683.9	1684.8	1685.5	1686.3
165°	1704.7	1702.3	1702.6	1702.9	1703.2	1703.5	1704.0	1705.0	1705.8	1706.7	1707.6
167.5°	1721.3	1719.0	1719.0	1719.0	1719.0	1719.0	1719.5	1720.7	1721.8	1723.0	1724.1
170°	1730.6	1728.3	1728.3	1728.3	1728.3	1728.3	1728.9	1730.1	1731.2	1732.3	1733.5
172.5°	1736.9	1734.5	1734.3	1734.1	1733.8	1733.6	1734.2	1735.6	1737.0	1738.4	1739.8
175°	1744.6	1742.6	1742.3	1742.0	1741.7	1741.4	1742.0	1743.4	1744.9	1746.4	1747.8
177.5°	1747.6	1745.8	1745.5	1745.2	1745.0	1744.8	1745.2	1746.5	1747.6	1748.7	1749.9
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1648.3	1651.4	1662.2	1669.9	1678.8	1683.8	1688.9	1692.7	1697.8	1699.1	1717.5
5°	1655.6	1671.5	1699.3	1719.9	1745.2	1773.0	1792.1	1800.9	1823.8	1842.9	1881.0
7.5°	1653.6	1687.4	1729.3	1772.7	1819.4	1862.6	1900.1	1944.5	1976.1	2023.6	2070.4
10°	1651.6	1696.9	1750.8	1806.4	1871.5	1931.8	1985.8	2046.1	2096.1	2161.9	2218.3
12.5°	1645.9	1700.7	1775.6	1841.3	1920.4	2003.6	2083.6	2161.0	2205.3	2315.0	2366.9
15°	1631.8	1696.9	1790.5	1890.6	1999.2	2097.7	2199.3	2280.3	2411.2	2507.2	2568.3
17.5°	1604.8	1696.0	1807.1	1927.6	2059.9	2189.6	2304.7	2427.5	2566.5	2682.6	2806.4
20°	1592.2	1692.1	1815.9	1949.2	2086.6	2233.4	2364.4	2511.9	2663.6	2777.8	2936.6
22.5°	1568.6	1681.9	1815.3	1963.9	2110.7	2262.6	2415.8	2564.7	2739.8	2897.2	3048.4
25°	1530.2	1657.2	1795.3	1961.2	2133.4	2285.8	2469.1	2666.8	2849.3	3051.7	3202.5
27.5°	1489.9	1625.5	1763.8	1918.1	2103.3	2284.2	2514.9	2738.1	2961.3	3136.1	3247.7
30°	1458.8	1590.5	1733.4	1889.0	2072.2	2287.3	2545.3	2788.9	3006.5	3156.4	3219.1
32.5°	1425.1	1558.7	1685.2	1848.4	2043.7	2285.4	2564.4	2818.8	3009.0	3108.9	3096.7
35°	1372.3	1484.2	1607.2	1764.3	1994.5	2271.5	2575.5	2821.5	2938.2	2916.8	2754.8
37.5°	1296.1	1390.2	1511.4	1683.3	1937.3	2242.1	2553.2	2737.8	2730.3	2555.8	2321.2
40°	1248.5	1328.6	1445.3	1626.3	1892.9	2223.1	2518.3	2638.2	2536.6	2292.9	2012.0
42.5°	1186.2	1260.0	1376.7	1562.8	1844.0	2184.3	2451.6	2486.4	2287.6	2007.2	1749.7
45°	1089.7	1154.8	1275.5	1467.5	1770.7	2100.0	2289.0	2204.0	1936.5	1646.9	1450.9
47.5°	986.0	1053.7	1169.7	1367.1	1664.7	1973.3	2063.3	1882.6	1608.0	1373.0	1193.1
50°	920.7	985.7	1099.2	1298.5	1592.9	1869.1	1906.4	1673.0	1420.7	1214.4	1066.7
52.5°	854.6	915.9	1027.5	1227.3	1509.1	1748.5	1725.5	1487.6	1255.6	1079.7	963.8
55°	756.4	814.4	920.7	1107.9	1364.3	1554.0	1470.7	1243.6	1051.6	915.1	827.0
57.5°	668.4	724.0	815.8	984.9	1207.8	1338.2	1232.1	1040.9	888.1	783.0	717.3
60°	608.7	657.9	745.3	902.4	1096.1	1195.3	1090.6	921.5	792.8	708.7	650.1
62.5°	552.2	595.1	676.0	818.6	986.8	1070.2	964.1	821.1	711.7	637.0	587.1
65°	466.7	505.5	577.0	688.1	826.2	881.8	790.5	674.6	589.7	534.1	500.8
67.5°	388.6	421.6	483.3	570.8	672.4	712.9	643.4	553.7	489.7	445.0	418.6
70°	336.5	365.1	413.5	488.9	581.0	611.9	546.8	473.0	426.2	390.5	365.9
72.5°	292.7	313.7	357.6	415.9	492.7	517.4	471.9	407.0	363.3	336.5	317.0
75°	223.0	240.4	269.0	315.9	369.1	383.3	349.2	308.7	279.3	260.3	245.2
77.5°	160.8	173.7	194.3	223.2	260.0	272.9	251.3	224.3	202.9	190.0	181.6
80°	121.4	131.8	149.3	173.0	195.2	202.4	189.7	169.1	154.0	146.8	139.7
82.5°	89.7	95.5	106.0	122.2	137.4	145.9	135.1	122.7	114.6	108.1	105.4
85°	45.2	48.4	53.2	59.5	69.1	72.2	68.3	65.0	60.3	56.4	56.4
87.5°	17.4	17.9	20.4	22.2	25.4	28.1	28.2	27.7	27.8	27.4	27.0
90°	4.1	7.1	10.0	12.8	16.2	19.9	23.6	27.4	31.2	32.3	33.4
92.5°	23.3	22.5	21.7	20.9	21.9	24.7	27.6	30.4	33.2	35.0	37.0
95°	67.4	55.5	43.7	31.9	27.6	30.7	33.9	37.1	40.3	42.3	44.3
97.5°	153.9	148.6	143.3	137.9	124.9	104.1	83.4	62.6	41.8	44.1	46.5
100°	225.2	231.0	236.7	242.6	222.9	177.9	132.9	87.9	42.8	45.1	47.5
102.5°	292.2	296.3	300.4	304.7	282.2	233.0	183.8	134.6	85.4	78.3	71.1
105°	390.1	393.3	396.5	399.6	388.3	362.2	336.3	310.3	284.4	233.3	182.2
107.5°	493.9	496.4	499.0	501.5	504.8	509.0	513.0	517.2	521.2	483.7	446.4
110°	563.3	565.5	567.8	570.2	572.9	576.1	579.3	582.5	585.6	576.1	566.5





TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	629.5	631.6	633.7	635.7	638.3	641.6	644.7	647.9	651.1	651.3	651.5
115°	727.6	729.3	731.0	732.8	735.0	737.5	740.1	742.8	745.4	748.2	751.1
117.5°	823.3	825.5	827.6	829.7	831.4	832.7	834.1	835.5	836.8	839.1	841.4
120°	883.0	885.6	888.2	890.8	892.5	893.3	894.2	895.1	896.0	898.3	900.6
122.5°	942.8	944.9	947.1	949.2	950.8	951.9	953.0	954.1	955.2	956.8	958.5
125°	1025.5	1027.8	1030.2	1032.5	1034.2	1035.3	1036.5	1037.6	1038.8	1039.4	1040.0
127.5°	1105.5	1107.8	1110.1	1112.5	1114.3	1115.7	1117.1	1118.4	1119.8	1120.7	1121.7
130°	1155.4	1157.7	1160.0	1162.4	1164.1	1165.2	1166.4	1167.5	1168.6	1169.8	1170.9
132.5°	1203.2	1205.5	1207.8	1210.1	1211.7	1212.6	1213.6	1214.5	1215.4	1216.6	1217.7
135°	1275.6	1277.3	1279.0	1280.8	1282.2	1283.3	1284.5	1285.7	1286.9	1287.7	1288.6
137.5°	1338.4	1340.6	1342.7	1344.9	1346.4	1347.0	1347.7	1348.3	1348.9	1350.3	1351.7
140°	1379.5	1381.2	1382.9	1384.6	1385.9	1386.8	1387.7	1388.6	1389.4	1390.6	1391.7
142.5°	1417.9	1419.7	1421.4	1423.1	1424.4	1425.2	1426.1	1426.9	1427.8	1428.8	1429.7
145°	1472.0	1474.0	1476.0	1478.0	1479.3	1479.9	1480.5	1481.1	1481.6	1482.2	1482.8
147.5°	1521.9	1523.2	1524.5	1525.9	1526.8	1527.4	1527.9	1528.5	1529.1	1529.7	1530.2
150°	1552.6	1553.5	1554.3	1555.2	1555.9	1556.5	1557.0	1557.6	1558.2	1558.8	1559.3
152.5°	1580.1	1580.5	1580.9	1581.3	1581.8	1582.2	1582.5	1582.8	1583.2	1584.2	1585.2
155°	1618.7	1618.1	1617.5	1616.9	1616.8	1617.1	1617.4	1617.7	1617.9	1619.4	1620.8
157.5°	1649.8	1649.8	1649.7	1649.6	1649.5	1649.2	1648.9	1648.6	1648.3	1650.0	1651.8
160°	1668.3	1668.0	1667.7	1667.4	1667.2	1666.9	1666.6	1666.3	1666.0	1667.7	1669.4
162.5°	1685.5	1684.8	1683.9	1683.2	1682.7	1682.4	1682.1	1681.8	1681.5	1683.5	1685.5
165°	1706.7	1705.8	1705.0	1704.0	1703.5	1703.2	1702.9	1702.6	1702.3	1704.7	1707.0
167.5°	1723.0	1721.8	1720.7	1719.5	1719.0	1719.0	1719.0	1719.0	1719.0	1721.3	1723.6
170°	1732.3	1731.2	1730.1	1728.9	1728.3	1728.3	1728.3	1728.3	1728.3	1730.6	1732.9
172.5°	1738.4	1737.0	1735.6	1734.2	1733.6	1733.8	1734.1	1734.3	1734.5	1736.9	1739.2
175°	1746.4	1744.9	1743.4	1742.0	1741.4	1741.7	1742.0	1742.3	1742.6	1744.6	1746.7
177.5°	1748.7	1747.6	1746.5	1745.2	1744.8	1745.0	1745.2	1745.5	1745.8	1747.6	1749.4
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
0°	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1	1638.1
2.5°	1723.8	1724.4	1731.5	1736.6	1734.0	1737.2	1738.5
5°	1883.4	1912.0	1927.0	1938.1	1938.9	1939.7	1946.1
7.5°	2109.6	2140.2	2162.6	2196.6	2206.8	2218.3	2214.9
10°	2274.7	2319.9	2358.8	2379.4	2401.7	2434.2	2408.0
12.5°	2428.9	2509.1	2568.3	2600.4	2621.3	2627.9	2615.0
15°	2683.4	2788.1	2844.5	2843.0	2914.4	2945.4	2896.9
17.5°	2916.8	3013.4	3090.9	3130.6	3190.1	3203.3	3197.2
20°	3059.6	3165.2	3225.5	3293.8	3324.7	3352.4	3357.2
22.5°	3182.8	3277.5	3342.4	3399.1	3425.1	3438.2	3446.2
25°	3309.6	3384.3	3423.1	3442.9	3450.1	3448.5	3438.2
27.5°	3300.8	3306.6	3263.8	3221.7	3184.1	3141.7	3127.0
30°	3215.2	3148.5	3029.5	2962.0	2862.8	2784.2	2815.9
32.5°	2989.8	2857.1	2723.4	2576.0	2453.9	2419.1	2384.2
35°	2551.6	2318.3	2181.8	2023.1	1959.5	1896.1	1852.4
37.5°	2064.4	1883.9	1721.9	1618.1	1554.5	1514.3	1492.8
40°	1784.9	1622.2	1488.9	1404.8	1356.3	1311.1	1304.8
42.5°	1562.2	1410.9	1310.5	1243.5	1197.0	1177.8	1163.9
45°	1279.4	1173.9	1106.4	1058.7	1027.8	1015.9	1000.1
47.5°	1082.9	1008.2	957.7	925.2	901.9	893.0	891.8
50°	973.0	911.1	873.8	848.4	830.2	827.0	814.4
52.5°	890.5	836.9	807.8	785.6	772.4	763.6	759.7
55°	773.1	737.3	711.1	698.4	688.1	679.3	679.3
57.5°	676.4	646.5	629.2	618.4	615.2	609.0	605.1
60°	616.7	591.3	577.8	568.3	561.9	562.7	555.5
62.5°	558.3	541.8	528.9	519.4	511.8	511.9	512.4
65°	475.4	462.7	453.2	450.0	445.2	439.7	441.3
67.5°	402.8	390.9	383.5	378.1	376.5	373.5	378.1
70°	350.8	342.0	336.5	331.7	330.1	330.9	335.0
72.5°	303.2	297.0	293.4	291.1	287.6	287.8	290.4
75°	238.1	233.4	230.1	227.8	227.0	227.0	227.0
77.5°	174.9	173.8	172.4	168.8	169.1	170.0	170.2
80°	138.1	135.7	134.9	133.3	131.0	129.4	133.3
82.5°	103.2	100.8	100.0	99.7	96.0	95.7	99.1
85°	55.5	53.2	53.9	53.2	53.2	52.4	52.4
87.5°	26.6	26.2	25.8	26.5	26.0	25.4	26.9
90°	34.6	35.7	36.7	37.3	37.8	38.4	39.0
92.5°	38.8	40.6	41.7	42.1	42.4	42.7	43.1
95°	46.4	48.4	49.4	49.4	49.4	49.4	49.4
97.5°	48.8	51.0	52.3	52.6	52.9	53.2	53.5
100°	49.8	52.1	53.4	53.6	53.9	54.2	54.5
102.5°	63.9	56.9	53.5	54.0	54.5	55.0	55.5
105°	131.2	80.1	54.8	55.4	55.9	56.6	57.2
107.5°	408.9	371.4	333.5	295.0	256.4	217.9	179.5
110°	557.0	547.5	522.1	480.9	439.6	398.4	357.1



TEST NUMBER: P332228-840

CATALOG NUMBER: S123DIW-S1165D1320U840-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
112.5°	651.6	651.8	647.5	638.7	630.1	621.4	612.7
115°	754.0	756.9	758.9	760.0	761.2	762.3	763.6
117.5°	843.6	846.0	847.3	847.5	847.7	848.0	848.2
120°	902.9	905.2	906.4	906.4	906.4	906.4	906.4
122.5°	960.1	961.7	962.6	962.8	963.0	963.3	963.5
125°	1040.6	1041.1	1041.7	1042.3	1042.9	1043.4	1044.0
127.5°	1122.6	1123.6	1123.7	1123.2	1122.6	1122.0	1121.4
130°	1172.2	1173.3	1173.6	1173.0	1172.5	1171.8	1171.2
132.5°	1218.9	1220.0	1220.2	1219.4	1218.6	1217.8	1217.0
135°	1289.4	1290.3	1290.3	1289.4	1288.6	1287.7	1286.9
137.5°	1353.0	1354.4	1354.8	1354.2	1353.7	1353.1	1352.5
140°	1392.9	1394.0	1394.3	1393.7	1393.1	1392.6	1392.0
142.5°	1430.6	1431.6	1431.6	1430.8	1430.0	1429.2	1428.4
145°	1483.3	1483.9	1484.2	1484.2	1484.2	1484.2	1484.2
147.5°	1530.9	1531.5	1531.1	1529.7	1528.4	1527.1	1525.7
150°	1559.9	1560.5	1560.3	1559.5	1558.6	1557.8	1556.9
152.5°	1586.3	1587.3	1587.2	1585.8	1584.5	1583.2	1581.9
155°	1622.2	1623.8	1623.6	1621.8	1620.1	1618.4	1616.7
157.5°	1653.6	1655.3	1655.0	1652.7	1650.5	1648.2	1646.0
160°	1671.2	1672.9	1672.7	1670.7	1668.7	1666.7	1664.7
162.5°	1687.5	1689.4	1689.5	1687.7	1686.0	1684.2	1682.3
165°	1709.3	1711.6	1711.7	1709.7	1707.7	1705.7	1703.6
167.5°	1725.9	1728.2	1728.2	1725.9	1723.6	1721.3	1719.0
170°	1735.3	1737.6	1737.6	1735.3	1732.9	1730.6	1728.3
172.5°	1741.5	1743.8	1743.6	1741.1	1738.6	1736.1	1733.5
175°	1748.7	1750.7	1750.5	1748.3	1746.0	1743.6	1741.3
177.5°	1751.3	1753.1	1752.9	1750.6	1748.3	1746.0	1743.6
180°	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8	1747.8

(END OF REPORT)