

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: P332829

Luminaire Tested: **S124DIW-S1020D1560U835-4F0-1E-UDD-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332829
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S1020D1560U835-4F0-1E-UDD-A
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, ASYMMETRIC DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10847.0 lumens
Efficiency: N/A
Efficacy: 141.6 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.23 / 1.41
Luminous Opening: Rectangular (W 4' x L: 0.33' x H: 0')
CIE Type: General Diffuse

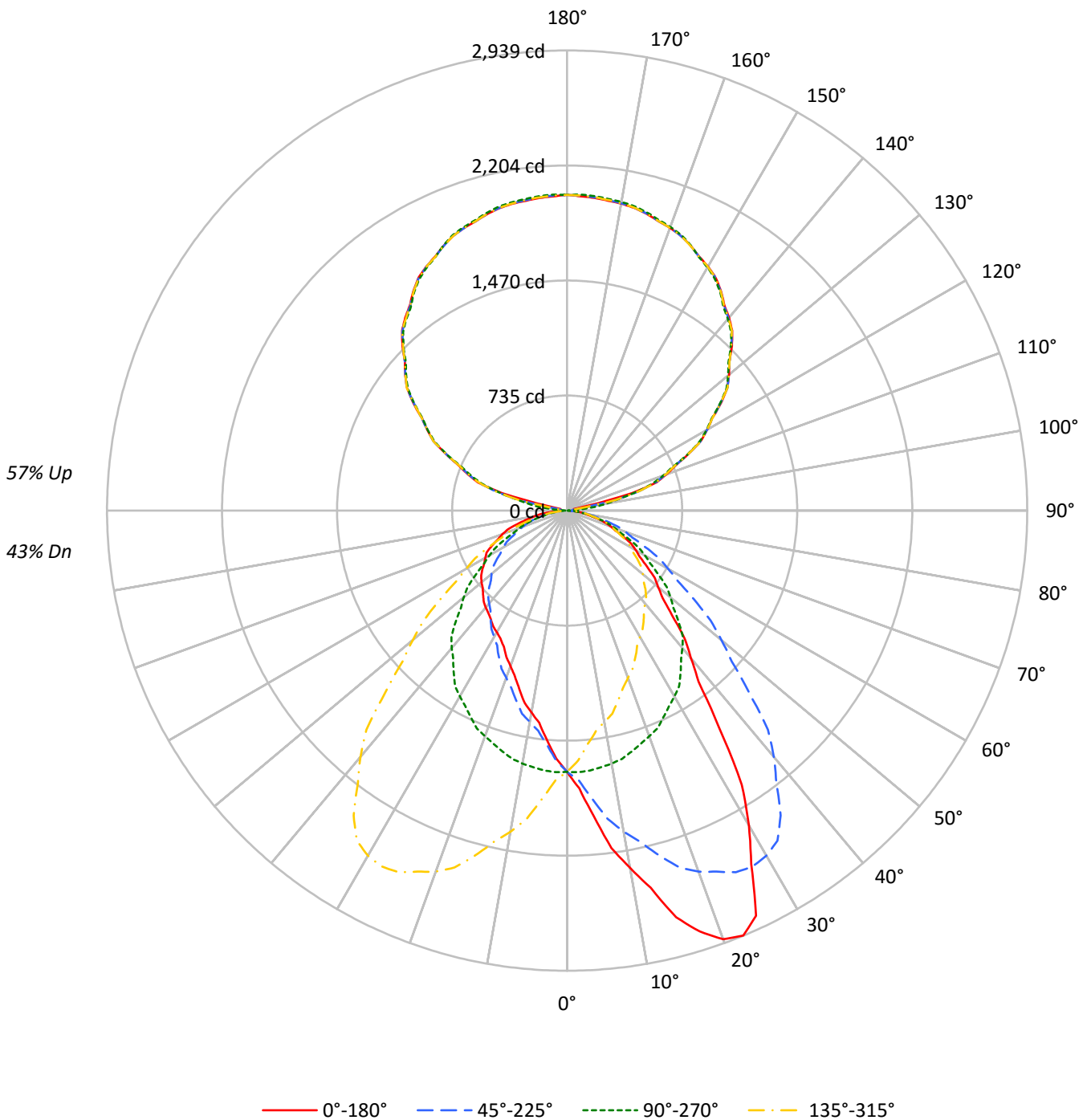
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43																												
1	96	92	88	85	88	84	81	78	70	67	65	56	55	53	44	43	42	36																												
2	88	81	75	70	80	74	69	64	61	58	54	50	47	45	39	37	36	31																												
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26																												
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	28	26	23																												
5	67	56	48	42	61	52	45	39	43	38	34	35	31	28	28	25	23	20																												
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	25	23	20	17																												
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15																												
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	21	18	16	14																												
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13																												
10	46	34	27	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11																												

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13472	13472	13472	13472
5°	15866	13507	11921	13507
10°	18996	13448	10733	13448
15°	22476	13312	9857	13312
20°	25027	13173	9075	13173
25°	25432	12968	8535	12968
30°	21640	12773	8364	12773
35°	16638	12454	8366	12454
40°	12968	12079	8524	12079
45°	10813	11515	8667	11515
50°	9516	10827	8960	10827
55°	8718	10003	9322	10003
60°	8170	9265	9755	9265
65°	7607	8437	10115	8437
70°	6951	7619	10346	7619
75°	6210	6706	10221	6706
80°	5207	5495	9898	5495
85°	3844	3974	9476	3974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	1.5
10°-20°	501.1	4.6
20°-30°	794.6	7.3
30°-40°	884.3	8.2
40°-50°	805.0	7.4
50°-60°	657.8	6.1
60°-70°	469.6	4.3
70°-80°	258.6	2.4
80°-90°	76.4	0.7
90°-100°	69.0	0.6
100°-110°	439.7	4.1
110°-120°	841.1	7.8
120°-130°	1067.8	9.8
130°-140°	1142.4	10.5
140°-150°	1068.3	9.8
150°-160°	861.5	7.9
160°-170°	555.6	5.1
170°-180°	191.5	1.8
0°-30°	1458.3	13.4
0°-40°	2342.7	21.6
0°-60°	3805.5	35.1
0°-90°	4610.1	42.5
90°-120°	1349.8	12.4
90°-150°	4628.2	42.7
90°-180°	6237.0	57.5
0°-180°	10847.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1669	1669	1669	1669	1669	
5°	1958	1667	1471	1667	1958	199
15°	2689	1593	1179	1593	2689	760
25°	2855	1456	958	1456	2855	1259
35°	1688	1264	849	1264	1688	1072
45°	947	1009	759	1009	947	746
55°	619	711	662	711	619	560
65°	398	442	530	442	398	394
75°	199	215	328	215	199	212
85°	42	43	102	43	42	52
90°	45	4	45	4	45	21
95°	44	83	44	83	44	35
105°	430	454	430	454	430	375
115°	854	848	854	848	854	845
125°	1200	1191	1200	1191	1200	1069
135°	1488	1478	1488	1478	1488	1146
145°	1713	1704	1713	1704	1713	1071
155°	1867	1868	1867	1868	1867	861
165°	1962	1971	1962	1971	1962	554
175°	2004	2016	2004	2016	2004	191
180°	2016	2016	2016	2016	2016	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1776.1	1775.6	1770.0	1768.9	1765.0	1760.1	1759.0	1750.1	1732.4	1724.1	1721.9
5°	1957.8	1971.6	1953.6	1950.2	1948.1	1925.3	1913.5	1899.7	1867.9	1849.2	1834.7
7.5°	2174.6	2176.2	2168.4	2162.0	2144.4	2124.5	2094.7	2062.9	2025.0	1985.6	1955.8
10°	2317.3	2322.8	2313.8	2312.4	2277.2	2255.0	2210.8	2173.5	2130.6	2082.9	2039.4
12.5°	2467.7	2459.9	2455.4	2425.8	2419.3	2378.9	2327.5	2289.1	2223.0	2168.1	2110.1
15°	2689.2	2674.0	2664.3	2623.5	2603.5	2547.5	2492.8	2450.7	2364.3	2282.0	2219.8
17.5°	2819.1	2834.4	2812.0	2795.2	2743.4	2704.1	2648.3	2559.8	2492.2	2390.0	2311.5
20°	2913.2	2914.5	2902.1	2884.8	2844.0	2794.3	2733.4	2636.6	2555.8	2454.1	2346.3
22.5°	2938.6	2938.9	2933.6	2917.4	2886.6	2846.2	2784.9	2704.1	2606.1	2495.6	2387.8
25°	2855.1	2852.3	2858.6	2876.5	2864.8	2852.3	2817.1	2756.9	2665.7	2548.8	2432.7
27.5°	2544.8	2563.9	2599.0	2643.3	2685.9	2718.4	2727.5	2715.2	2658.6	2562.5	2440.9
30°	2321.4	2344.9	2371.2	2415.4	2501.1	2550.2	2604.2	2644.9	2622.1	2545.4	2432.0
32.5°	2075.9	2081.7	2120.7	2171.0	2249.5	2343.9	2429.4	2512.2	2539.7	2499.5	2404.9
35°	1688.2	1697.8	1740.0	1789.8	1885.9	2001.3	2129.9	2244.7	2339.4	2377.4	2329.0
37.5°	1377.6	1405.4	1435.2	1488.7	1573.3	1677.2	1810.8	1959.3	2100.5	2195.0	2211.1
40°	1230.5	1247.8	1269.2	1310.0	1381.9	1484.2	1599.0	1769.1	1919.1	2054.6	2098.8
42.5°	1114.4	1124.5	1137.6	1174.5	1229.3	1331.0	1435.8	1585.4	1736.0	1898.0	1972.2
45°	947.1	957.5	979.6	1001.0	1042.5	1113.0	1210.5	1333.5	1484.9	1641.2	1778.0
47.5°	826.2	832.9	846.0	869.0	904.2	950.7	1030.0	1132.8	1273.1	1424.8	1570.6
50°	757.7	763.2	773.6	794.3	821.3	862.7	927.7	1023.8	1133.7	1286.5	1429.6
52.5°	703.5	705.7	713.3	727.4	748.8	783.7	837.0	916.5	1018.7	1154.9	1297.4
55°	619.4	622.2	629.1	639.5	658.1	680.2	721.0	780.5	869.7	987.9	1111.6
57.5°	550.3	552.2	558.0	562.0	577.4	595.4	626.7	669.2	736.8	837.0	947.5
60°	506.0	504.7	511.6	515.0	525.4	540.6	564.8	605.6	664.3	745.2	846.8
62.5°	462.9	461.0	466.8	471.3	477.3	490.3	510.0	542.0	589.7	662.8	750.6
65°	398.2	395.4	398.9	404.4	409.9	416.9	431.4	459.7	497.7	550.3	617.3
67.5°	333.2	336.1	336.7	339.4	342.6	352.0	362.0	382.0	408.8	450.9	507.7
70°	294.5	295.2	298.0	298.0	300.0	308.3	316.6	328.4	354.6	393.4	439.7
72.5°	255.8	258.7	257.6	259.8	261.3	266.8	272.9	284.1	306.5	335.3	374.4
75°	199.1	201.2	201.2	201.9	203.9	206.0	210.8	219.1	235.0	256.5	283.4
77.5°	145.2	145.5	146.4	148.9	148.9	152.2	155.8	162.5	170.3	185.0	201.4
80°	112.0	113.4	112.7	114.1	114.1	116.8	118.2	126.5	130.0	139.6	152.8
82.5°	82.1	83.5	83.4	85.3	86.4	87.0	88.9	92.2	95.7	104.2	109.6
85°	41.5	42.9	41.5	42.9	44.9	45.6	47.7	48.4	51.2	53.2	58.1
87.5°	21.2	22.7	22.6	23.0	24.0	24.3	24.4	23.5	25.3	25.4	27.1
90°	45.2	44.6	43.9	43.2	42.6	41.2	39.2	37.2	35.2	33.2	30.5
92.5°	41.6	41.5	41.4	41.2	41.1	40.0	38.0	36.0	34.0	32.0	29.3
95°	43.7	43.4	43.1	42.7	42.4	41.2	39.2	37.2	35.2	33.2	32.8
97.5°	42.2	41.9	41.6	41.2	40.9	40.6	40.4	40.2	40.0	39.8	77.2
100°	42.2	41.9	41.6	41.2	40.9	43.6	49.3	55.0	60.7	66.4	112.6
102.5°	43.4	43.4	43.3	43.2	43.2	73.9	135.3	196.8	258.2	319.7	325.7
105°	429.8	441.9	453.9	466.0	478.0	482.6	479.6	476.5	473.5	470.5	468.8
107.5°	599.0	597.7	596.4	595.2	593.9	592.5	591.1	589.6	588.1	586.6	584.3
110°	672.6	671.6	670.6	669.6	668.6	667.7	667.1	666.4	665.7	665.0	663.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	746.2	744.9	743.6	742.4	741.1	740.5	740.6	740.8	740.9	741.1	740.1
115°	853.6	853.6	853.6	853.6	853.6	853.2	852.5	851.9	851.2	850.5	850.9
117.5°	962.7	962.9	963.0	963.1	963.3	963.4	963.5	963.7	963.8	963.9	963.2
120°	1031.5	1032.2	1032.8	1033.5	1034.2	1034.2	1033.5	1032.8	1032.2	1031.5	1031.8
122.5°	1099.1	1099.7	1100.4	1101.1	1101.7	1101.9	1101.5	1101.1	1100.7	1100.3	1099.8
125°	1200.4	1200.1	1199.7	1199.4	1199.1	1198.4	1197.4	1196.4	1195.4	1194.4	1195.0
127.5°	1289.4	1289.6	1289.9	1290.2	1290.4	1290.7	1290.9	1291.1	1291.3	1291.5	1289.9
130°	1349.7	1349.7	1349.7	1349.7	1349.7	1349.5	1349.2	1348.9	1348.5	1348.2	1347.2
132.5°	1405.2	1405.5	1405.7	1406.0	1406.3	1406.2	1405.9	1405.6	1405.2	1404.9	1403.6
135°	1488.4	1487.8	1487.1	1486.4	1485.8	1485.1	1484.4	1483.7	1483.1	1482.4	1481.1
137.5°	1559.6	1559.8	1560.0	1560.2	1560.4	1560.2	1559.4	1558.7	1557.9	1557.2	1555.7
140°	1609.1	1608.7	1608.4	1608.1	1607.7	1607.1	1606.1	1605.1	1604.1	1603.0	1602.4
142.5°	1650.1	1650.0	1650.0	1649.9	1649.8	1649.4	1648.7	1648.0	1647.2	1646.5	1646.1
145°	1713.1	1712.5	1711.8	1711.1	1710.5	1709.9	1709.6	1709.3	1708.9	1708.6	1708.6
147.5°	1765.3	1765.0	1764.6	1764.3	1764.0	1763.7	1763.4	1763.1	1762.9	1762.6	1762.9
150°	1799.1	1798.8	1798.4	1798.1	1797.8	1797.6	1797.6	1797.6	1797.6	1797.6	1797.9
152.5°	1828.0	1828.2	1828.4	1828.6	1828.8	1828.7	1828.1	1827.6	1827.1	1826.5	1827.1
155°	1867.0	1868.0	1869.0	1870.0	1871.0	1870.8	1869.5	1868.1	1866.8	1865.4	1866.5
157.5°	1899.5	1901.3	1903.0	1904.8	1906.5	1906.5	1904.8	1903.0	1901.3	1899.5	1900.7
160°	1921.2	1923.3	1925.3	1927.3	1929.3	1929.3	1927.3	1925.3	1923.3	1921.2	1921.6
162.5°	1938.1	1940.4	1942.7	1945.0	1947.2	1947.4	1945.4	1943.4	1941.3	1939.3	1939.7
165°	1962.0	1965.0	1968.0	1971.0	1974.0	1974.2	1971.5	1968.8	1966.1	1963.5	1963.5
167.5°	1979.8	1983.1	1986.5	1989.8	1993.2	1993.4	1990.4	1987.5	1984.5	1981.6	1981.8
170°	1990.6	1994.0	1997.3	2000.7	2004.0	2004.4	2001.7	1999.0	1996.3	1993.6	1993.3
172.5°	1996.6	2000.3	2003.9	2007.5	2011.1	2011.6	2008.9	2006.2	2003.5	2000.9	2000.5
175°	2004.2	2008.2	2012.2	2016.2	2020.3	2020.8	2017.8	2014.7	2011.7	2008.7	2008.4
177.5°	2009.0	2012.2	2015.4	2018.7	2021.9	2022.4	2020.3	2018.1	2016.0	2013.8	2013.3
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1722.5	1714.7	1709.2	1704.8	1692.6	1685.4	1679.9	1672.1	1663.3	1653.9	1642.3
5°	1820.2	1796.7	1779.4	1753.2	1728.3	1707.5	1686.1	1666.7	1643.2	1617.7	1599.0
7.5°	1922.9	1888.0	1843.2	1804.3	1760.6	1722.6	1688.6	1653.7	1617.5	1582.4	1550.2
10°	1988.2	1943.3	1893.5	1834.7	1779.4	1730.3	1684.7	1640.5	1597.6	1554.7	1518.1
12.5°	2058.4	2002.4	1928.9	1860.2	1798.2	1732.6	1677.5	1623.3	1571.6	1526.5	1483.8
15°	2152.7	2071.8	1986.8	1894.9	1813.3	1736.6	1661.2	1592.8	1534.7	1475.2	1433.8
17.5°	2210.7	2110.6	2013.4	1917.3	1818.5	1721.8	1640.5	1561.5	1488.8	1429.8	1377.5
20°	2248.8	2149.3	2028.3	1932.2	1814.7	1715.1	1621.1	1533.3	1457.3	1394.4	1340.4
22.5°	2282.0	2167.0	2046.0	1919.5	1802.5	1696.9	1594.0	1505.7	1428.0	1361.7	1310.0
25°	2300.0	2167.9	2036.6	1910.8	1778.0	1652.9	1559.6	1455.9	1372.9	1303.1	1247.8
27.5°	2301.9	2160.7	2012.1	1872.3	1735.3	1618.8	1501.0	1408.3	1322.2	1248.4	1195.3
30°	2295.8	2148.6	1988.9	1837.5	1699.9	1573.4	1471.1	1370.2	1282.4	1209.1	1153.8
32.5°	2276.5	2123.1	1959.0	1798.8	1656.2	1532.5	1426.9	1330.9	1245.3	1173.1	1115.1
35°	2220.5	2069.1	1894.2	1727.6	1581.7	1456.6	1361.2	1263.7	1178.0	1109.5	1053.6
37.5°	2133.0	1996.1	1818.3	1645.9	1502.6	1376.9	1282.4	1194.3	1117.0	1047.5	990.1
40°	2056.6	1936.3	1758.0	1590.0	1435.2	1315.6	1227.1	1146.2	1069.5	1003.8	949.2
42.5°	1968.7	1863.9	1699.4	1521.4	1372.1	1252.0	1165.7	1093.1	1020.8	960.1	905.5
45°	1811.9	1742.8	1587.9	1423.4	1267.9	1154.5	1072.2	1008.6	947.8	888.3	842.7
47.5°	1631.6	1597.3	1467.0	1310.7	1163.1	1051.3	980.0	921.2	867.9	817.5	777.3
50°	1510.5	1493.9	1381.2	1230.5	1089.5	984.4	912.5	862.1	816.4	772.2	734.2
52.5°	1391.0	1390.5	1288.9	1150.9	1020.4	919.2	847.8	800.7	761.1	725.2	691.0
55°	1208.4	1227.8	1148.3	1025.2	908.4	817.1	752.8	710.7	683.0	653.3	627.7
57.5°	1040.7	1072.8	1007.2	898.8	801.4	717.3	661.3	629.6	600.2	582.2	563.6
60°	931.2	961.6	910.5	819.2	727.3	655.4	602.1	573.8	548.2	535.8	522.6
62.5°	833.9	861.0	823.1	738.5	658.7	589.5	544.6	517.4	500.1	486.5	477.8
65°	694.8	717.6	685.1	623.6	555.1	499.8	463.2	441.7	425.2	419.6	409.9
67.5°	561.6	582.4	564.8	512.5	457.6	415.8	387.1	366.5	356.7	351.9	345.0
70°	482.5	503.3	484.6	439.0	396.8	361.6	334.6	322.8	312.5	310.4	300.7
72.5°	415.6	429.7	411.1	375.4	339.3	309.6	288.7	276.4	271.0	267.3	262.0
75°	311.8	324.2	311.8	284.1	258.5	237.8	219.8	215.0	208.8	206.7	203.2
77.5°	220.7	231.4	221.9	204.6	185.5	169.5	159.8	153.6	152.2	148.6	150.3
80°	168.7	175.6	166.6	154.9	139.6	128.6	121.7	118.2	114.1	112.7	115.4
82.5°	121.1	124.2	119.6	111.7	100.4	93.2	88.5	84.5	83.6	83.9	83.9
85°	62.9	62.2	61.5	54.6	51.2	46.3	43.6	42.9	42.2	43.6	44.9
87.5°	26.6	26.6	25.5	22.7	20.3	17.9	16.6	15.3	16.6	17.9	19.2
90°	27.8	25.1	22.5	19.3	15.6	11.9	8.2	4.5	8.2	11.9	15.6
92.5°	26.6	23.9	21.2	19.8	19.6	19.4	19.2	19.0	19.2	19.4	19.6
95°	32.5	32.2	31.8	37.4	48.8	60.2	71.5	82.9	71.5	60.2	48.8
97.5°	114.6	152.0	189.4	204.6	197.5	190.3	183.2	176.1	183.2	190.3	197.5
100°	158.8	205.1	251.3	271.4	265.4	259.4	253.4	247.3	253.4	259.4	265.4
102.5°	331.8	337.8	343.8	344.6	340.2	335.8	331.4	326.9	331.4	335.8	340.2
105°	467.2	465.5	463.8	462.0	460.0	457.9	455.9	453.9	455.9	457.9	460.0
107.5°	582.1	579.8	577.5	575.9	574.9	573.9	572.9	571.8	572.9	573.9	574.9
110°	661.0	659.0	657.0	655.5	654.5	653.5	652.5	651.5	652.5	653.5	654.5



TEST NUMBER: P332829

CATALOG NUMBER: S124DIW-S1020D1560U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	739.2	738.2	737.3	735.9	734.1	732.3	730.5	728.7	730.5	732.3	734.1
115°	851.2	851.5	851.9	851.5	850.5	849.5	848.5	847.5	848.5	849.5	850.5
117.5°	962.5	961.7	961.0	960.0	958.6	957.3	955.9	954.6	955.9	957.3	958.6
120°	1032.2	1032.5	1032.8	1032.3	1031.0	1029.7	1028.3	1027.0	1028.3	1029.7	1031.0
122.5°	1099.3	1098.9	1098.4	1097.8	1096.9	1096.1	1095.3	1094.5	1095.3	1096.1	1096.9
125°	1195.7	1196.4	1197.0	1196.7	1195.4	1194.0	1192.7	1191.4	1192.7	1194.0	1195.4
127.5°	1288.4	1286.9	1285.3	1284.4	1284.0	1283.7	1283.4	1283.0	1283.4	1283.7	1284.0
130°	1346.2	1345.2	1344.2	1343.5	1343.2	1342.8	1342.5	1342.2	1342.5	1342.8	1343.2
132.5°	1402.3	1401.1	1399.8	1398.9	1398.3	1397.7	1397.0	1396.4	1397.0	1397.7	1398.3
135°	1479.7	1478.4	1477.0	1476.5	1476.9	1477.2	1477.5	1477.9	1477.5	1477.2	1476.9
137.5°	1554.3	1552.8	1551.3	1550.5	1550.4	1550.2	1550.1	1550.0	1550.1	1550.2	1550.4
140°	1601.7	1601.0	1600.4	1599.7	1599.0	1598.4	1597.7	1597.0	1597.7	1598.4	1599.0
142.5°	1645.7	1645.3	1644.9	1644.1	1642.9	1641.7	1640.4	1639.2	1640.4	1641.7	1642.9
145°	1708.6	1708.6	1708.6	1708.1	1707.1	1706.1	1705.1	1704.1	1705.1	1706.1	1707.1
147.5°	1763.3	1763.6	1763.9	1763.2	1761.3	1759.4	1757.5	1755.7	1757.5	1759.4	1761.3
150°	1798.3	1798.6	1798.9	1798.4	1797.1	1795.7	1794.4	1793.1	1794.4	1795.7	1797.1
152.5°	1827.7	1828.3	1829.0	1828.7	1827.6	1826.6	1825.5	1824.4	1825.5	1826.6	1827.6
155°	1867.5	1868.5	1869.5	1869.8	1869.5	1869.1	1868.8	1868.5	1868.8	1869.1	1869.5
157.5°	1901.8	1902.9	1904.1	1904.8	1905.0	1905.2	1905.4	1905.6	1905.4	1905.2	1905.0
160°	1921.9	1922.2	1922.6	1923.3	1924.3	1925.3	1926.3	1927.3	1926.3	1925.3	1924.3
162.5°	1940.0	1940.3	1940.7	1941.5	1942.8	1944.0	1945.3	1946.6	1945.3	1944.0	1942.8
165°	1963.5	1963.5	1963.5	1964.3	1966.0	1967.7	1969.3	1971.0	1969.3	1967.7	1966.0
167.5°	1982.0	1982.2	1982.4	1983.3	1985.1	1986.8	1988.6	1990.3	1988.6	1986.8	1985.1
170°	1993.0	1992.6	1992.3	1993.1	1995.1	1997.1	1999.2	2001.2	1999.2	1997.1	1995.1
172.5°	2000.2	1999.9	1999.5	2000.4	2002.4	2004.4	2006.4	2008.4	2006.4	2004.4	2002.4
175°	2008.0	2007.7	2007.4	2008.2	2010.2	2012.2	2014.2	2016.2	2014.2	2012.2	2010.2
177.5°	2012.8	2012.2	2011.7	2012.4	2014.2	2016.1	2018.0	2019.9	2018.0	2016.1	2014.2
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1636.7	1631.8	1624.6	1614.6	1606.3	1597.5	1595.3	1591.9	1598.6	1593.0	1591.4
5°	1583.1	1568.6	1549.9	1528.5	1516.0	1498.1	1494.6	1487.7	1480.8	1480.1	1473.2
7.5°	1526.3	1505.0	1480.5	1458.7	1438.5	1418.8	1406.0	1403.2	1393.0	1387.0	1380.1
10°	1489.8	1463.5	1435.2	1414.4	1390.9	1370.2	1355.7	1347.4	1340.4	1332.8	1325.9
12.5°	1446.6	1418.7	1395.3	1372.9	1345.0	1329.2	1305.3	1290.9	1289.6	1289.7	1271.7
15°	1396.4	1368.8	1332.8	1301.0	1285.8	1255.4	1242.3	1225.7	1215.3	1204.9	1196.7
17.5°	1339.1	1304.6	1276.6	1240.1	1211.0	1186.8	1169.6	1159.6	1144.0	1129.3	1118.7
20°	1303.1	1266.5	1236.7	1198.0	1166.2	1136.5	1122.0	1108.2	1096.4	1084.0	1072.2
22.5°	1266.6	1228.3	1191.9	1154.3	1124.8	1093.4	1079.4	1060.6	1049.4	1042.5	1030.7
25°	1209.1	1167.6	1126.1	1090.2	1059.8	1032.1	1013.5	998.9	986.5	981.0	973.4
27.5°	1146.6	1105.4	1065.3	1024.5	990.0	969.9	955.0	944.0	936.9	929.5	926.1
30°	1106.8	1063.9	1021.1	983.0	951.2	931.2	917.4	909.8	904.2	900.8	897.3
32.5°	1066.4	1024.1	979.0	944.3	915.8	898.0	887.5	879.9	877.1	875.9	874.6
35°	1001.7	958.8	917.4	886.3	859.3	852.4	843.4	839.2	837.9	842.7	844.8
37.5°	939.1	899.3	861.1	830.9	813.3	803.2	800.1	800.3	805.2	809.5	814.5
40°	898.7	860.0	824.0	797.8	781.2	775.0	773.6	777.0	782.6	787.4	792.9
42.5°	859.4	821.3	788.6	764.0	752.4	746.7	747.6	751.0	758.8	764.7	773.0
45°	798.5	766.7	734.9	714.8	705.1	706.5	706.5	712.7	720.3	729.3	738.3
47.5°	741.1	709.0	682.9	666.0	661.0	659.8	663.7	671.8	682.7	693.8	706.4
50°	702.4	671.9	649.1	633.9	628.4	630.5	636.0	643.6	656.7	670.6	683.7
52.5°	663.1	635.4	614.3	600.2	596.3	600.1	605.6	617.6	629.1	644.0	659.9
55°	602.1	578.6	562.0	551.7	550.3	552.4	558.6	571.7	588.3	607.0	622.2
57.5°	541.4	521.8	506.6	499.4	500.1	502.0	512.3	527.9	545.6	565.5	585.1
60°	500.5	482.5	470.1	464.6	465.2	469.4	481.8	496.4	518.5	537.8	558.6
62.5°	461.8	446.0	434.1	429.2	428.2	437.3	449.2	464.3	486.4	508.0	530.4
65°	399.6	387.1	377.5	374.7	376.8	383.7	398.9	418.9	437.6	460.4	483.9
67.5°	338.7	328.5	321.9	323.1	325.6	335.8	348.6	365.8	387.0	410.6	433.9
70°	300.0	290.3	284.8	285.5	289.7	302.1	313.2	330.4	353.3	377.5	396.8
72.5°	260.2	253.8	248.9	251.8	255.9	264.5	278.3	295.6	315.7	338.2	358.6
75°	199.8	199.8	197.0	199.1	205.3	213.6	224.0	242.0	262.0	280.0	296.6
77.5°	148.2	146.7	148.5	151.0	154.6	164.4	176.3	189.1	204.2	222.2	235.9
80°	113.4	114.1	117.5	121.7	123.1	130.7	143.1	154.9	166.6	181.8	194.9
82.5°	85.2	85.9	87.7	92.9	94.3	102.5	110.5	122.2	132.9	143.1	154.0
85°	46.3	46.3	49.8	51.8	55.3	60.8	65.7	72.6	82.3	89.2	99.5
87.5°	21.6	22.2	24.9	26.6	28.8	32.1	33.6	40.1	42.7	45.9	51.1
90°	19.3	22.5	25.1	27.8	30.5	33.2	35.2	37.2	39.2	41.2	42.6
92.5°	19.8	21.2	23.9	26.6	29.3	32.0	34.0	36.0	38.0	40.0	41.1
95°	37.4	31.8	32.2	32.5	32.8	33.2	35.2	37.2	39.2	41.2	42.4
97.5°	204.6	189.4	152.0	114.6	77.2	39.8	40.0	40.2	40.4	40.6	40.9
100°	271.4	251.3	205.1	158.8	112.6	66.4	60.7	55.0	49.3	43.6	40.9
102.5°	344.6	343.8	337.8	331.8	325.7	319.7	258.2	196.8	135.3	73.9	43.2
105°	462.0	463.8	465.5	467.2	468.8	470.5	473.5	476.5	479.6	482.6	478.0
107.5°	575.9	577.5	579.8	582.1	584.3	586.6	588.1	589.6	591.1	592.5	593.9
110°	655.5	657.0	659.0	661.0	663.0	665.0	665.7	666.4	667.1	667.7	668.6



TEST NUMBER: P332829

CATALOG NUMBER: S124DIW-S1020D1560U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	735.9	737.3	738.2	739.2	740.1	741.1	740.9	740.8	740.6	740.5	741.1
115°	851.5	851.9	851.5	851.2	850.9	850.5	851.2	851.9	852.5	853.2	853.6
117.5°	960.0	961.0	961.7	962.5	963.2	963.9	963.8	963.7	963.5	963.4	963.3
120°	1032.3	1032.8	1032.5	1032.2	1031.8	1031.5	1032.2	1032.8	1033.5	1034.2	1034.2
122.5°	1097.8	1098.4	1098.9	1099.3	1099.8	1100.3	1100.7	1101.1	1101.5	1101.9	1101.7
125°	1196.7	1197.0	1196.4	1195.7	1195.0	1194.4	1195.4	1196.4	1197.4	1198.4	1199.1
127.5°	1284.4	1285.3	1286.9	1288.4	1289.9	1291.5	1291.3	1291.1	1290.9	1290.7	1290.4
130°	1343.5	1344.2	1345.2	1346.2	1347.2	1348.2	1348.5	1348.9	1349.2	1349.5	1349.7
132.5°	1398.9	1399.8	1401.1	1402.3	1403.6	1404.9	1405.2	1405.6	1405.9	1406.2	1406.3
135°	1476.5	1477.0	1478.4	1479.7	1481.1	1482.4	1483.1	1483.7	1484.4	1485.1	1485.8
137.5°	1550.5	1551.3	1552.8	1554.3	1555.7	1557.2	1557.9	1558.7	1559.4	1560.2	1560.4
140°	1599.7	1600.4	1601.0	1601.7	1602.4	1603.0	1604.1	1605.1	1606.1	1607.1	1607.7
142.5°	1644.1	1644.9	1645.3	1645.7	1646.1	1646.5	1647.2	1648.0	1648.7	1649.4	1649.8
145°	1708.1	1708.6	1708.6	1708.6	1708.6	1708.6	1708.9	1709.3	1709.6	1709.9	1710.5
147.5°	1763.2	1763.9	1763.6	1763.3	1762.9	1762.6	1762.9	1763.1	1763.4	1763.7	1764.0
150°	1798.4	1798.9	1798.6	1798.3	1797.9	1797.6	1797.6	1797.6	1797.6	1797.6	1797.8
152.5°	1828.7	1829.0	1828.3	1827.7	1827.1	1826.5	1827.1	1827.6	1828.1	1828.7	1828.8
155°	1869.8	1869.5	1868.5	1867.5	1866.5	1865.4	1866.8	1868.1	1869.5	1870.8	1871.0
157.5°	1904.8	1904.1	1902.9	1901.8	1900.7	1899.5	1901.3	1903.0	1904.8	1906.5	1906.5
160°	1923.3	1922.6	1922.2	1921.9	1921.6	1921.2	1923.3	1925.3	1927.3	1929.3	1929.3
162.5°	1941.5	1940.7	1940.3	1940.0	1939.7	1939.3	1941.3	1943.4	1945.4	1947.4	1947.2
165°	1964.3	1963.5	1963.5	1963.5	1963.5	1963.5	1966.1	1968.8	1971.5	1974.2	1974.0
167.5°	1983.3	1982.4	1982.2	1982.0	1981.8	1981.6	1984.5	1987.5	1990.4	1993.4	1993.2
170°	1993.1	1992.3	1992.6	1993.0	1993.3	1993.6	1996.3	1999.0	2001.7	2004.4	2004.0
172.5°	2000.4	1999.5	1999.9	2000.2	2000.5	2000.9	2003.5	2006.2	2008.9	2011.6	2011.1
175°	2008.2	2007.4	2007.7	2008.0	2008.4	2008.7	2011.7	2014.7	2017.8	2020.8	2020.3
177.5°	2012.4	2011.7	2012.2	2012.8	2013.3	2013.8	2016.0	2018.1	2020.3	2022.4	2021.9
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



TEST NUMBER: P332829

CATALOG NUMBER: S124DIW-S1020D1560U835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1590.3	1589.2	1585.3	1584.8	1585.3	1589.2	1590.3	1591.4	1593.0	1598.6	1591.9
5°	1469.0	1465.6	1463.5	1471.1	1463.5	1465.6	1469.0	1473.2	1480.1	1480.8	1487.7
7.5°	1377.6	1374.9	1368.8	1366.9	1368.8	1374.9	1377.6	1380.1	1387.0	1393.0	1403.2
10°	1319.0	1316.2	1310.7	1309.3	1310.7	1316.2	1319.0	1325.9	1332.8	1340.4	1347.4
12.5°	1262.6	1257.1	1256.0	1257.3	1256.0	1257.1	1262.6	1271.7	1289.7	1289.6	1290.9
15°	1187.7	1184.9	1177.3	1179.4	1177.3	1184.9	1187.7	1196.7	1204.9	1215.3	1225.7
17.5°	1113.8	1110.5	1101.3	1109.4	1101.3	1110.5	1113.8	1118.7	1129.3	1144.0	1159.6
20°	1067.4	1061.8	1057.0	1056.3	1057.0	1061.8	1067.4	1072.2	1084.0	1096.4	1108.2
22.5°	1023.1	1018.2	1017.7	1013.2	1017.7	1018.2	1023.1	1030.7	1042.5	1049.4	1060.6
25°	967.8	963.0	961.6	958.2	961.6	963.0	967.8	973.4	981.0	986.5	998.9
27.5°	925.4	923.0	920.5	921.6	920.5	923.0	925.4	926.1	929.5	936.9	944.0
30°	899.4	898.7	897.3	897.3	897.3	898.7	899.4	897.3	900.8	904.2	909.8
32.5°	877.8	877.7	878.5	878.5	878.5	877.7	877.8	874.6	875.9	877.1	879.9
35°	847.5	849.6	851.0	848.9	851.0	849.6	847.5	844.8	842.7	837.9	839.2
37.5°	820.2	822.2	824.2	826.5	824.2	822.2	820.2	814.5	809.5	805.2	800.3
40°	799.1	804.0	805.4	808.8	805.4	804.0	799.1	792.9	787.4	782.6	777.0
42.5°	779.2	784.6	788.2	788.9	788.2	784.6	779.2	773.0	764.7	758.8	751.0
45°	748.7	754.2	759.1	759.1	759.1	754.2	748.7	738.3	729.3	720.3	712.7
47.5°	717.0	725.0	729.9	731.1	729.9	725.0	717.0	706.4	693.8	682.7	671.8
50°	695.5	705.1	710.0	713.4	710.0	705.1	695.5	683.7	670.6	656.7	643.6
52.5°	674.4	684.1	690.6	692.4	690.6	684.1	674.4	659.9	644.0	629.1	617.6
55°	638.1	651.9	659.5	662.3	659.5	651.9	638.1	622.2	607.0	588.3	571.7
57.5°	603.8	616.5	625.4	627.4	625.4	616.5	603.8	585.1	565.5	545.6	527.9
60°	577.2	591.1	602.1	604.2	602.1	591.1	577.2	558.6	537.8	518.5	496.4
62.5°	550.1	564.5	574.5	579.9	574.5	564.5	550.1	530.4	508.0	486.4	464.3
65°	503.3	517.8	527.5	529.5	527.5	517.8	503.3	483.9	460.4	437.6	418.9
67.5°	452.1	466.6	473.0	477.0	473.0	466.6	452.1	433.9	410.6	387.0	365.8
70°	416.2	427.9	434.8	438.3	434.8	427.9	416.2	396.8	377.5	353.3	330.4
72.5°	375.2	387.5	395.6	396.3	395.6	387.5	375.2	358.6	338.2	315.7	295.6
75°	312.5	323.5	327.7	327.7	327.7	323.5	312.5	296.6	280.0	262.0	242.0
77.5°	247.3	253.0	258.3	259.4	258.3	253.0	247.3	235.9	222.2	204.2	189.1
80°	205.3	208.8	212.9	212.9	212.9	208.8	205.3	194.9	181.8	166.6	154.9
82.5°	162.2	165.1	169.2	168.7	169.2	165.1	162.2	154.0	143.1	132.9	122.2
85°	98.2	104.4	103.7	102.3	103.7	104.4	98.2	99.5	89.2	82.3	72.6
87.5°	52.9	53.6	55.4	56.6	55.4	53.6	52.9	51.1	45.9	42.7	40.1
90°	43.2	43.9	44.6	45.2	44.6	43.9	43.2	42.6	41.2	39.2	37.2
92.5°	41.2	41.4	41.5	41.6	41.5	41.4	41.2	41.1	40.0	38.0	36.0
95°	42.7	43.1	43.4	43.7	43.4	43.1	42.7	42.4	41.2	39.2	37.2
97.5°	41.2	41.6	41.9	42.2	41.9	41.6	41.2	40.9	40.6	40.4	40.2
100°	41.2	41.6	41.9	42.2	41.9	41.6	41.2	40.9	43.6	49.3	55.0
102.5°	43.2	43.3	43.4	43.4	43.4	43.3	43.2	43.2	73.9	135.3	196.8
105°	466.0	453.9	441.9	429.8	441.9	453.9	466.0	478.0	482.6	479.6	476.5
107.5°	595.2	596.4	597.7	599.0	597.7	596.4	595.2	593.9	592.5	591.1	589.6
110°	669.6	670.6	671.6	672.6	671.6	670.6	669.6	668.6	667.7	667.1	666.4



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	742.4	743.6	744.9	746.2	744.9	743.6	742.4	741.1	740.5	740.6	740.8
115°	853.6	853.6	853.6	853.6	853.6	853.6	853.6	853.6	853.2	852.5	851.9
117.5°	963.1	963.0	962.9	962.7	962.9	963.0	963.1	963.3	963.4	963.5	963.7
120°	1033.5	1032.8	1032.2	1031.5	1032.2	1032.8	1033.5	1034.2	1034.2	1033.5	1032.8
122.5°	1101.1	1100.4	1099.7	1099.1	1099.7	1100.4	1101.1	1101.7	1101.9	1101.5	1101.1
125°	1199.4	1199.7	1200.1	1200.4	1200.1	1199.7	1199.4	1199.1	1198.4	1197.4	1196.4
127.5°	1290.2	1289.9	1289.6	1289.4	1289.6	1289.9	1290.2	1290.4	1290.7	1290.9	1291.1
130°	1349.7	1349.7	1349.7	1349.7	1349.7	1349.7	1349.7	1349.7	1349.5	1349.2	1348.9
132.5°	1406.0	1405.7	1405.5	1405.2	1405.5	1405.7	1406.0	1406.3	1406.2	1405.9	1405.6
135°	1486.4	1487.1	1487.8	1488.4	1487.8	1487.1	1486.4	1485.8	1485.1	1484.4	1483.7
137.5°	1560.2	1560.0	1559.8	1559.6	1559.8	1560.0	1560.2	1560.4	1560.2	1559.4	1558.7
140°	1608.1	1608.4	1608.7	1609.1	1608.7	1608.4	1608.1	1607.7	1607.1	1606.1	1605.1
142.5°	1649.9	1650.0	1650.0	1650.1	1650.0	1650.0	1649.9	1649.8	1649.4	1648.7	1648.0
145°	1711.1	1711.8	1712.5	1713.1	1712.5	1711.8	1711.1	1710.5	1709.9	1709.6	1709.3
147.5°	1764.3	1764.6	1765.0	1765.3	1765.0	1764.6	1764.3	1764.0	1763.7	1763.4	1763.1
150°	1798.1	1798.4	1798.8	1799.1	1798.8	1798.4	1798.1	1797.8	1797.6	1797.6	1797.6
152.5°	1828.6	1828.4	1828.2	1828.0	1828.2	1828.4	1828.6	1828.8	1828.7	1828.1	1827.6
155°	1870.0	1869.0	1868.0	1867.0	1868.0	1869.0	1870.0	1871.0	1870.8	1869.5	1868.1
157.5°	1904.8	1903.0	1901.3	1899.5	1901.3	1903.0	1904.8	1906.5	1906.5	1904.8	1903.0
160°	1927.3	1925.3	1923.3	1921.2	1923.3	1925.3	1927.3	1929.3	1929.3	1927.3	1925.3
162.5°	1945.0	1942.7	1940.4	1938.1	1940.4	1942.7	1945.0	1947.2	1947.4	1945.4	1943.4
165°	1971.0	1968.0	1965.0	1962.0	1965.0	1968.0	1971.0	1974.0	1974.2	1971.5	1968.8
167.5°	1989.8	1986.5	1983.1	1979.8	1983.1	1986.5	1989.8	1993.2	1993.4	1990.4	1987.5
170°	2000.7	1997.3	1994.0	1990.6	1994.0	1997.3	2000.7	2004.0	2004.4	2001.7	1999.0
172.5°	2007.5	2003.9	2000.3	1996.6	2000.3	2003.9	2007.5	2011.1	2011.6	2008.9	2006.2
175°	2016.2	2012.2	2008.2	2004.2	2008.2	2012.2	2016.2	2020.3	2020.8	2017.8	2014.7
177.5°	2018.7	2015.4	2012.2	2009.0	2012.2	2015.4	2018.7	2021.9	2022.4	2020.3	2018.1
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



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CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1595.3	1597.5	1606.3	1614.6	1624.6	1631.8	1636.7	1642.3	1653.9	1663.3	1672.1
5°	1494.6	1498.1	1516.0	1528.5	1549.9	1568.6	1583.1	1599.0	1617.7	1643.2	1666.7
7.5°	1406.0	1418.8	1438.5	1458.7	1480.5	1505.0	1526.3	1550.2	1582.4	1617.5	1653.7
10°	1355.7	1370.2	1390.9	1414.4	1435.2	1463.5	1489.8	1518.1	1554.7	1597.6	1640.5
12.5°	1305.3	1329.2	1345.0	1372.9	1395.3	1418.7	1446.6	1483.8	1526.5	1571.6	1623.3
15°	1242.3	1255.4	1285.8	1301.0	1332.8	1368.8	1396.4	1433.8	1475.2	1534.7	1592.8
17.5°	1169.6	1186.8	1211.0	1240.1	1276.6	1304.6	1339.1	1377.5	1429.8	1488.8	1561.5
20°	1122.0	1136.5	1166.2	1198.0	1236.7	1266.5	1303.1	1340.4	1394.4	1457.3	1533.3
22.5°	1079.4	1093.4	1124.8	1154.3	1191.9	1228.3	1266.6	1310.0	1361.7	1428.0	1505.7
25°	1013.5	1032.1	1059.8	1090.2	1126.1	1167.6	1209.1	1247.8	1303.1	1372.9	1455.9
27.5°	955.0	969.9	990.0	1024.5	1065.3	1105.4	1146.6	1195.3	1248.4	1322.2	1408.3
30°	917.4	931.2	951.2	983.0	1021.1	1063.9	1106.8	1153.8	1209.1	1282.4	1370.2
32.5°	887.5	898.0	915.8	944.3	979.0	1024.1	1066.4	1115.1	1173.1	1245.3	1330.9
35°	843.4	852.4	859.3	886.3	917.4	958.8	1001.7	1053.6	1109.5	1178.0	1263.7
37.5°	800.1	803.2	813.3	830.9	861.1	899.3	939.1	990.1	1047.5	1117.0	1194.3
40°	773.6	775.0	781.2	797.8	824.0	860.0	898.7	949.2	1003.8	1069.5	1146.2
42.5°	747.6	746.7	752.4	764.0	788.6	821.3	859.4	905.5	960.1	1020.8	1093.1
45°	706.5	706.5	705.1	714.8	734.9	766.7	798.5	842.7	888.3	947.8	1008.6
47.5°	663.7	659.8	661.0	666.0	682.9	709.0	741.1	777.3	817.5	867.9	921.2
50°	636.0	630.5	628.4	633.9	649.1	671.9	702.4	734.2	772.2	816.4	862.1
52.5°	605.6	600.1	596.3	600.2	614.3	635.4	663.1	691.0	725.2	761.1	800.7
55°	558.6	552.4	550.3	551.7	562.0	578.6	602.1	627.7	653.3	683.0	710.7
57.5°	512.3	502.0	500.1	499.4	506.6	521.8	541.4	563.6	582.2	600.2	629.6
60°	481.8	469.4	465.2	464.6	470.1	482.5	500.5	522.6	535.8	548.2	573.8
62.5°	449.2	437.3	428.2	429.2	434.1	446.0	461.8	477.8	486.5	500.1	517.4
65°	398.9	383.7	376.8	374.7	377.5	387.1	399.6	409.9	419.6	425.2	441.7
67.5°	348.6	335.8	325.6	323.1	321.9	328.5	338.7	345.0	351.9	356.7	366.5
70°	313.2	302.1	289.7	285.5	284.8	290.3	300.0	300.7	310.4	312.5	322.8
72.5°	278.3	264.5	255.9	251.8	248.9	253.8	260.2	262.0	267.3	271.0	276.4
75°	224.0	213.6	205.3	199.1	197.0	199.8	199.8	203.2	206.7	208.8	215.0
77.5°	176.3	164.4	154.6	151.0	148.5	146.7	148.2	150.3	148.6	152.2	153.6
80°	143.1	130.7	123.1	121.7	117.5	114.1	113.4	115.4	112.7	114.1	118.2
82.5°	110.5	102.5	94.3	92.9	87.7	85.9	85.2	83.9	83.9	83.6	84.5
85°	65.7	60.8	55.3	51.8	49.8	46.3	46.3	44.9	43.6	42.2	42.9
87.5°	33.6	32.1	28.8	26.6	24.9	22.2	21.6	19.2	17.9	16.6	15.3
90°	35.2	33.2	30.5	27.8	25.1	22.5	19.3	15.6	11.9	8.2	4.5
92.5°	34.0	32.0	29.3	26.6	23.9	21.2	19.8	19.6	19.4	19.2	19.0
95°	35.2	33.2	32.8	32.5	32.2	31.8	37.4	48.8	60.2	71.5	82.9
97.5°	40.0	39.8	77.2	114.6	152.0	189.4	204.6	197.5	190.3	183.2	176.1
100°	60.7	66.4	112.6	158.8	205.1	251.3	271.4	265.4	259.4	253.4	247.3
102.5°	258.2	319.7	325.7	331.8	337.8	343.8	344.6	340.2	335.8	331.4	326.9
105°	473.5	470.5	468.8	467.2	465.5	463.8	462.0	460.0	457.9	455.9	453.9
107.5°	588.1	586.6	584.3	582.1	579.8	577.5	575.9	574.9	573.9	572.9	571.8
110°	665.7	665.0	663.0	661.0	659.0	657.0	655.5	654.5	653.5	652.5	651.5



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CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	740.9	741.1	740.1	739.2	738.2	737.3	735.9	734.1	732.3	730.5	728.7
115°	851.2	850.5	850.9	851.2	851.5	851.9	851.5	850.5	849.5	848.5	847.5
117.5°	963.8	963.9	963.2	962.5	961.7	961.0	960.0	958.6	957.3	955.9	954.6
120°	1032.2	1031.5	1031.8	1032.2	1032.5	1032.8	1032.3	1031.0	1029.7	1028.3	1027.0
122.5°	1100.7	1100.3	1099.8	1099.3	1098.9	1098.4	1097.8	1096.9	1096.1	1095.3	1094.5
125°	1195.4	1194.4	1195.0	1195.7	1196.4	1197.0	1196.7	1195.4	1194.0	1192.7	1191.4
127.5°	1291.3	1291.5	1289.9	1288.4	1286.9	1285.3	1284.4	1284.0	1283.7	1283.4	1283.0
130°	1348.5	1348.2	1347.2	1346.2	1345.2	1344.2	1343.5	1343.2	1342.8	1342.5	1342.2
132.5°	1405.2	1404.9	1403.6	1402.3	1401.1	1399.8	1398.9	1398.3	1397.7	1397.0	1396.4
135°	1483.1	1482.4	1481.1	1479.7	1478.4	1477.0	1476.5	1476.9	1477.2	1477.5	1477.9
137.5°	1557.9	1557.2	1555.7	1554.3	1552.8	1551.3	1550.5	1550.4	1550.2	1550.1	1550.0
140°	1604.1	1603.0	1602.4	1601.7	1601.0	1600.4	1599.7	1599.0	1598.4	1597.7	1597.0
142.5°	1647.2	1646.5	1646.1	1645.7	1645.3	1644.9	1644.1	1642.9	1641.7	1640.4	1639.2
145°	1708.9	1708.6	1708.6	1708.6	1708.6	1708.6	1708.1	1707.1	1706.1	1705.1	1704.1
147.5°	1762.9	1762.6	1762.9	1763.3	1763.6	1763.9	1763.2	1761.3	1759.4	1757.5	1755.7
150°	1797.6	1797.6	1797.9	1798.3	1798.6	1798.9	1798.4	1797.1	1795.7	1794.4	1793.1
152.5°	1827.1	1826.5	1827.1	1827.7	1828.3	1829.0	1828.7	1827.6	1826.6	1825.5	1824.4
155°	1866.8	1865.4	1866.5	1867.5	1868.5	1869.5	1869.8	1869.5	1869.1	1868.8	1868.5
157.5°	1901.3	1899.5	1900.7	1901.8	1902.9	1904.1	1904.8	1905.0	1905.2	1905.4	1905.6
160°	1923.3	1921.2	1921.6	1921.9	1922.2	1922.6	1923.3	1924.3	1925.3	1926.3	1927.3
162.5°	1941.3	1939.3	1939.7	1940.0	1940.3	1940.7	1941.5	1942.8	1944.0	1945.3	1946.6
165°	1966.1	1963.5	1963.5	1963.5	1963.5	1963.5	1964.3	1966.0	1967.7	1969.3	1971.0
167.5°	1984.5	1981.6	1981.8	1982.0	1982.2	1982.4	1983.3	1985.1	1986.8	1988.6	1990.3
170°	1996.3	1993.6	1993.3	1993.0	1992.6	1992.3	1993.1	1995.1	1997.1	1999.2	2001.2
172.5°	2003.5	2000.9	2000.5	2000.2	1999.9	1999.5	2000.4	2002.4	2004.4	2006.4	2008.4
175°	2011.7	2008.7	2008.4	2008.0	2007.7	2007.4	2008.2	2010.2	2012.2	2014.2	2016.2
177.5°	2016.0	2013.8	2013.3	2012.8	2012.2	2011.7	2012.4	2014.2	2016.1	2018.0	2019.9
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



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CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1679.9	1685.4	1692.6	1704.8	1709.2	1714.7	1722.5	1721.9	1724.1	1732.4	1750.1
5°	1686.1	1707.5	1728.3	1753.2	1779.4	1796.7	1820.2	1834.7	1849.2	1867.9	1899.7
7.5°	1688.6	1722.6	1760.6	1804.3	1843.2	1888.0	1922.9	1955.8	1985.6	2025.0	2062.9
10°	1684.7	1730.3	1779.4	1834.7	1893.5	1943.3	1988.2	2039.4	2082.9	2130.6	2173.5
12.5°	1677.5	1732.6	1798.2	1860.2	1928.9	2002.4	2058.4	2110.1	2168.1	2223.0	2289.1
15°	1661.2	1736.6	1813.3	1894.9	1986.8	2071.8	2152.7	2219.8	2282.0	2364.3	2450.7
17.5°	1640.5	1721.8	1818.5	1917.3	2013.4	2110.6	2210.7	2311.5	2390.0	2492.2	2559.8
20°	1621.1	1715.1	1814.7	1932.2	2028.3	2149.3	2248.8	2346.3	2454.1	2555.8	2636.6
22.5°	1594.0	1696.9	1802.5	1919.5	2046.0	2167.0	2282.0	2387.8	2495.6	2606.1	2704.1
25°	1559.6	1652.9	1778.0	1910.8	2036.6	2167.9	2300.0	2432.7	2548.8	2665.7	2756.9
27.5°	1501.0	1618.8	1735.3	1872.3	2012.1	2160.7	2301.9	2440.9	2562.5	2658.6	2715.2
30°	1471.1	1573.4	1699.9	1837.5	1988.9	2148.6	2295.8	2432.0	2545.4	2622.1	2644.9
32.5°	1426.9	1532.5	1656.2	1798.8	1959.0	2123.1	2276.5	2404.9	2499.5	2539.7	2512.2
35°	1361.2	1456.6	1581.7	1727.6	1894.2	2069.1	2220.5	2329.0	2377.4	2339.4	2244.7
37.5°	1282.4	1376.9	1502.6	1645.9	1818.3	1996.1	2133.0	2211.1	2195.0	2100.5	1959.3
40°	1227.1	1315.6	1435.2	1590.0	1758.0	1936.3	2056.6	2098.8	2054.6	1919.1	1769.1
42.5°	1165.7	1252.0	1372.1	1521.4	1699.4	1863.9	1968.7	1972.2	1898.0	1736.0	1585.4
45°	1072.2	1154.5	1267.9	1423.4	1587.9	1742.8	1811.9	1778.0	1641.2	1484.9	1333.5
47.5°	980.0	1051.3	1163.1	1310.7	1467.0	1597.3	1631.6	1570.6	1424.8	1273.1	1132.8
50°	912.5	984.4	1089.5	1230.5	1381.2	1493.9	1510.5	1429.6	1286.5	1133.7	1023.8
52.5°	847.8	919.2	1020.4	1150.9	1288.9	1390.5	1391.0	1297.4	1154.9	1018.7	916.5
55°	752.8	817.1	908.4	1025.2	1148.3	1227.8	1208.4	1111.6	987.9	869.7	780.5
57.5°	661.3	717.3	801.4	898.8	1007.2	1072.8	1040.7	947.5	837.0	736.8	669.2
60°	602.1	655.4	727.3	819.2	910.5	961.6	931.2	846.8	745.2	664.3	605.6
62.5°	544.6	589.5	658.7	738.5	823.1	861.0	833.9	750.6	662.8	589.7	542.0
65°	463.2	499.8	555.1	623.6	685.1	717.6	694.8	617.3	550.3	497.7	459.7
67.5°	387.1	415.8	457.6	512.5	564.8	582.4	561.6	507.7	450.9	408.8	382.0
70°	334.6	361.6	396.8	439.0	484.6	503.3	482.5	439.7	393.4	354.6	328.4
72.5°	288.7	309.6	339.3	375.4	411.1	429.7	415.6	374.4	335.3	306.5	284.1
75°	219.8	237.8	258.5	284.1	311.8	324.2	311.8	283.4	256.5	235.0	219.1
77.5°	159.8	169.5	185.5	204.6	221.9	231.4	220.7	201.4	185.0	170.3	162.5
80°	121.7	128.6	139.6	154.9	166.6	175.6	168.7	152.8	139.6	130.0	126.5
82.5°	88.5	93.2	100.4	111.7	119.6	124.2	121.1	109.6	104.2	95.7	92.2
85°	43.6	46.3	51.2	54.6	61.5	62.2	62.9	58.1	53.2	51.2	48.4
87.5°	16.6	17.9	20.3	22.7	25.5	26.6	26.6	27.1	25.4	25.3	23.5
90°	8.2	11.9	15.6	19.3	22.5	25.1	27.8	30.5	33.2	35.2	37.2
92.5°	19.2	19.4	19.6	19.8	21.2	23.9	26.6	29.3	32.0	34.0	36.0
95°	71.5	60.2	48.8	37.4	31.8	32.2	32.5	32.8	33.2	35.2	37.2
97.5°	183.2	190.3	197.5	204.6	189.4	152.0	114.6	77.2	39.8	40.0	40.2
100°	253.4	259.4	265.4	271.4	251.3	205.1	158.8	112.6	66.4	60.7	55.0
102.5°	331.4	335.8	340.2	344.6	343.8	337.8	331.8	325.7	319.7	258.2	196.8
105°	455.9	457.9	460.0	462.0	463.8	465.5	467.2	468.8	470.5	473.5	476.5
107.5°	572.9	573.9	574.9	575.9	577.5	579.8	582.1	584.3	586.6	588.1	589.6
110°	652.5	653.5	654.5	655.5	657.0	659.0	661.0	663.0	665.0	665.7	666.4



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CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	730.5	732.3	734.1	735.9	737.3	738.2	739.2	740.1	741.1	740.9	740.8
115°	848.5	849.5	850.5	851.5	851.9	851.5	851.2	850.9	850.5	851.2	851.9
117.5°	955.9	957.3	958.6	960.0	961.0	961.7	962.5	963.2	963.9	963.8	963.7
120°	1028.3	1029.7	1031.0	1032.3	1032.8	1032.5	1032.2	1031.8	1031.5	1032.2	1032.8
122.5°	1095.3	1096.1	1096.9	1097.8	1098.4	1098.9	1099.3	1099.8	1100.3	1100.7	1101.1
125°	1192.7	1194.0	1195.4	1196.7	1197.0	1196.4	1195.7	1195.0	1194.4	1195.4	1196.4
127.5°	1283.4	1283.7	1284.0	1284.4	1285.3	1286.9	1288.4	1289.9	1291.5	1291.3	1291.1
130°	1342.5	1342.8	1343.2	1343.5	1344.2	1345.2	1346.2	1347.2	1348.2	1348.5	1348.9
132.5°	1397.0	1397.7	1398.3	1398.9	1399.8	1401.1	1402.3	1403.6	1404.9	1405.2	1405.6
135°	1477.5	1477.2	1476.9	1476.5	1477.0	1478.4	1479.7	1481.1	1482.4	1483.1	1483.7
137.5°	1550.1	1550.2	1550.4	1550.5	1551.3	1552.8	1554.3	1555.7	1557.2	1557.9	1558.7
140°	1597.7	1598.4	1599.0	1599.7	1600.4	1601.0	1601.7	1602.4	1603.0	1604.1	1605.1
142.5°	1640.4	1641.7	1642.9	1644.1	1644.9	1645.3	1645.7	1646.1	1646.5	1647.2	1648.0
145°	1705.1	1706.1	1707.1	1708.1	1708.6	1708.6	1708.6	1708.6	1708.6	1708.9	1709.3
147.5°	1757.5	1759.4	1761.3	1763.2	1763.9	1763.6	1763.3	1762.9	1762.6	1762.9	1763.1
150°	1794.4	1795.7	1797.1	1798.4	1798.9	1798.6	1798.3	1797.9	1797.6	1797.6	1797.6
152.5°	1825.5	1826.6	1827.6	1828.7	1829.0	1828.3	1827.7	1827.1	1826.5	1827.1	1827.6
155°	1868.8	1869.1	1869.5	1869.8	1869.5	1868.5	1867.5	1866.5	1865.4	1866.8	1868.1
157.5°	1905.4	1905.2	1905.0	1904.8	1904.1	1902.9	1901.8	1900.7	1899.5	1901.3	1903.0
160°	1926.3	1925.3	1924.3	1923.3	1922.6	1922.2	1921.9	1921.6	1921.2	1923.3	1925.3
162.5°	1945.3	1944.0	1942.8	1941.5	1940.7	1940.3	1940.0	1939.7	1939.3	1941.3	1943.4
165°	1969.3	1967.7	1966.0	1964.3	1963.5	1963.5	1963.5	1963.5	1963.5	1966.1	1968.8
167.5°	1988.6	1986.8	1985.1	1983.3	1982.4	1982.2	1982.0	1981.8	1981.6	1984.5	1987.5
170°	1999.2	1997.1	1995.1	1993.1	1992.3	1992.6	1993.0	1993.3	1993.6	1996.3	1999.0
172.5°	2006.4	2004.4	2002.4	2000.4	1999.5	1999.9	2000.2	2000.5	2000.9	2003.5	2006.2
175°	2014.2	2012.2	2010.2	2008.2	2007.4	2007.7	2008.0	2008.4	2008.7	2011.7	2014.7
177.5°	2018.0	2016.1	2014.2	2012.4	2011.7	2012.2	2012.8	2013.3	2013.8	2016.0	2018.1
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1759.0	1760.1	1765.0	1768.9	1770.0	1775.6	1776.1
5°	1913.5	1925.3	1948.1	1950.2	1953.6	1971.6	1957.8
7.5°	2094.7	2124.5	2144.4	2162.0	2168.4	2176.2	2174.6
10°	2210.8	2255.0	2277.2	2312.4	2313.8	2322.8	2317.3
12.5°	2327.5	2378.9	2419.3	2425.8	2455.4	2459.9	2467.7
15°	2492.8	2547.5	2603.5	2623.5	2664.3	2674.0	2689.2
17.5°	2648.3	2704.1	2743.4	2795.2	2812.0	2834.4	2819.1
20°	2733.4	2794.3	2844.0	2884.8	2902.1	2914.5	2913.2
22.5°	2784.9	2846.2	2886.6	2917.4	2933.6	2938.9	2938.6
25°	2817.1	2852.3	2864.8	2876.5	2858.6	2852.3	2855.1
27.5°	2727.5	2718.4	2685.9	2643.3	2599.0	2563.9	2544.8
30°	2604.2	2550.2	2501.1	2415.4	2371.2	2344.9	2321.4
32.5°	2429.4	2343.9	2249.5	2171.0	2120.7	2081.7	2075.9
35°	2129.9	2001.3	1885.9	1789.8	1740.0	1697.8	1688.2
37.5°	1810.8	1677.2	1573.3	1488.7	1435.2	1405.4	1377.6
40°	1599.0	1484.2	1381.9	1310.0	1269.2	1247.8	1230.5
42.5°	1435.8	1331.0	1229.3	1174.5	1137.6	1124.5	1114.4
45°	1210.5	1113.0	1042.5	1001.0	979.6	957.5	947.1
47.5°	1030.0	950.7	904.2	869.0	846.0	832.9	826.2
50°	927.7	862.7	821.3	794.3	773.6	763.2	757.7
52.5°	837.0	783.7	748.8	727.4	713.3	705.7	703.5
55°	721.0	680.2	658.1	639.5	629.1	622.2	619.4
57.5°	626.7	595.4	577.4	562.0	558.0	552.2	550.3
60°	564.8	540.6	525.4	515.0	511.6	504.7	506.0
62.5°	510.0	490.3	477.3	471.3	466.8	461.0	462.9
65°	431.4	416.9	409.9	404.4	398.9	395.4	398.2
67.5°	362.0	352.0	342.6	339.4	336.7	336.1	333.2
70°	316.6	308.3	300.0	298.0	298.0	295.2	294.5
72.5°	272.9	266.8	261.3	259.8	257.6	258.7	255.8
75°	210.8	206.0	203.9	201.9	201.2	201.2	199.1
77.5°	155.8	152.2	148.9	148.9	146.4	145.5	145.2
80°	118.2	116.8	114.1	114.1	112.7	113.4	112.0
82.5°	88.9	87.0	86.4	85.3	83.4	83.5	82.1
85°	47.7	45.6	44.9	42.9	41.5	42.9	41.5
87.5°	24.4	24.3	24.0	23.0	22.6	22.7	21.2
90°	39.2	41.2	42.6	43.2	43.9	44.6	45.2
92.5°	38.0	40.0	41.1	41.2	41.4	41.5	41.6
95°	39.2	41.2	42.4	42.7	43.1	43.4	43.7
97.5°	40.4	40.6	40.9	41.2	41.6	41.9	42.2
100°	49.3	43.6	40.9	41.2	41.6	41.9	42.2
102.5°	135.3	73.9	43.2	43.2	43.3	43.4	43.4
105°	479.6	482.6	478.0	466.0	453.9	441.9	429.8
107.5°	591.1	592.5	593.9	595.2	596.4	597.7	599.0
110°	667.1	667.7	668.6	669.6	670.6	671.6	672.6



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	740.6	740.5	741.1	742.4	743.6	744.9	746.2
115°	852.5	853.2	853.6	853.6	853.6	853.6	853.6
117.5°	963.5	963.4	963.3	963.1	963.0	962.9	962.7
120°	1033.5	1034.2	1034.2	1033.5	1032.8	1032.2	1031.5
122.5°	1101.5	1101.9	1101.7	1101.1	1100.4	1099.7	1099.1
125°	1197.4	1198.4	1199.1	1199.4	1199.7	1200.1	1200.4
127.5°	1290.9	1290.7	1290.4	1290.2	1289.9	1289.6	1289.4
130°	1349.2	1349.5	1349.7	1349.7	1349.7	1349.7	1349.7
132.5°	1405.9	1406.2	1406.3	1406.0	1405.7	1405.5	1405.2
135°	1484.4	1485.1	1485.8	1486.4	1487.1	1487.8	1488.4
137.5°	1559.4	1560.2	1560.4	1560.2	1560.0	1559.8	1559.6
140°	1606.1	1607.1	1607.7	1608.1	1608.4	1608.7	1609.1
142.5°	1648.7	1649.4	1649.8	1649.9	1650.0	1650.0	1650.1
145°	1709.6	1709.9	1710.5	1711.1	1711.8	1712.5	1713.1
147.5°	1763.4	1763.7	1764.0	1764.3	1764.6	1765.0	1765.3
150°	1797.6	1797.6	1797.8	1798.1	1798.4	1798.8	1799.1
152.5°	1828.1	1828.7	1828.8	1828.6	1828.4	1828.2	1828.0
155°	1869.5	1870.8	1871.0	1870.0	1869.0	1868.0	1867.0
157.5°	1904.8	1906.5	1906.5	1904.8	1903.0	1901.3	1899.5
160°	1927.3	1929.3	1929.3	1927.3	1925.3	1923.3	1921.2
162.5°	1945.4	1947.4	1947.2	1945.0	1942.7	1940.4	1938.1
165°	1971.5	1974.2	1974.0	1971.0	1968.0	1965.0	1962.0
167.5°	1990.4	1993.4	1993.2	1989.8	1986.5	1983.1	1979.8
170°	2001.7	2004.4	2004.0	2000.7	1997.3	1994.0	1990.6
172.5°	2008.9	2011.6	2011.1	2007.5	2003.9	2000.3	1996.6
175°	2017.8	2020.8	2020.3	2016.2	2012.2	2008.2	2004.2
177.5°	2020.3	2022.4	2021.9	2018.7	2015.4	2012.2	2009.0
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2

(END OF REPORT)