

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: P331551-840

Luminaire Tested: **S122DIW-S675D1440U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331551-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1440U840-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8535.6 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

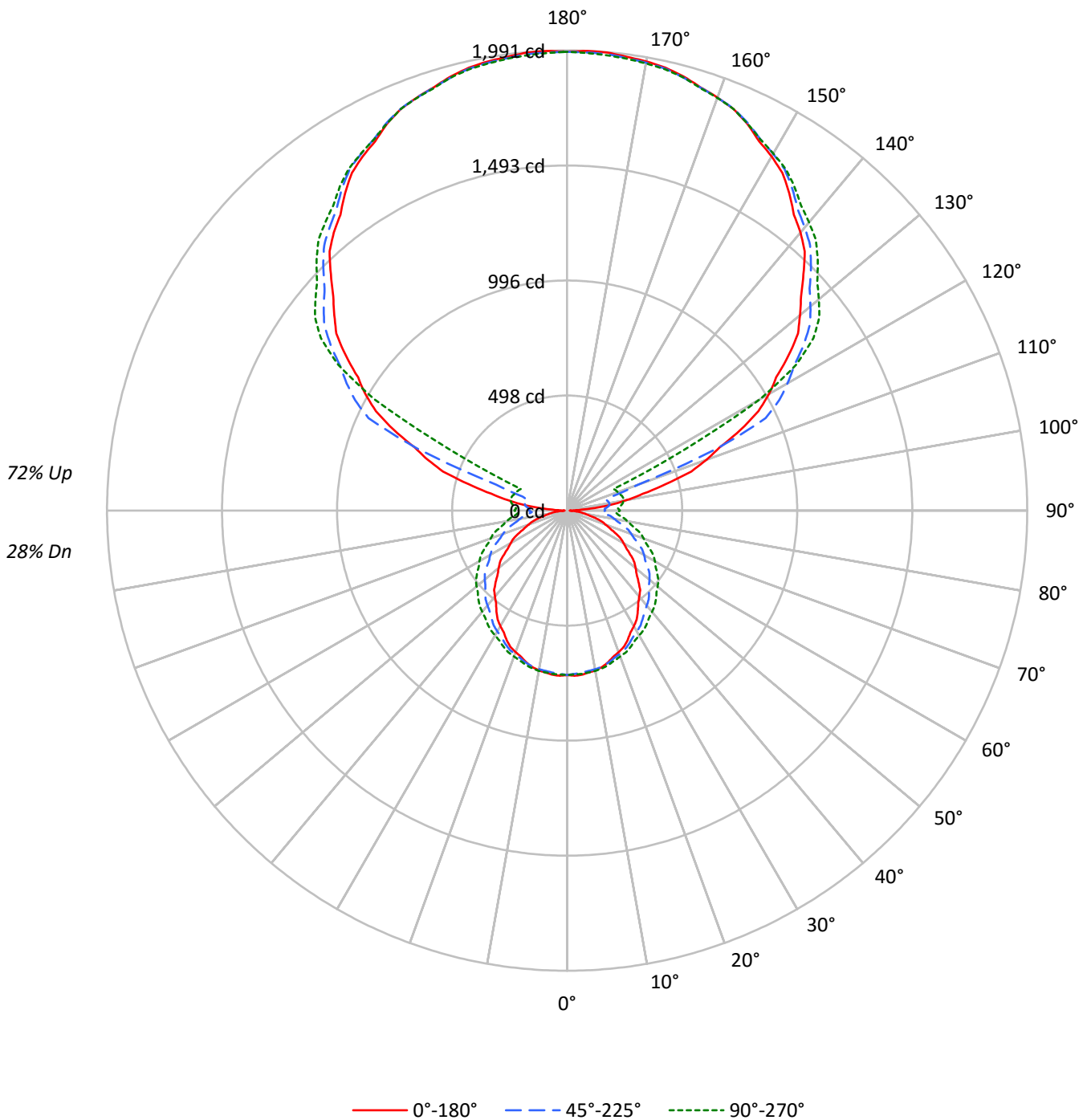
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	0.8
10°-20°	193.3	2.3
20°-30°	292.9	3.4
30°-40°	356.7	4.2
40°-50°	383.8	4.5
50°-60°	372.7	4.4
60°-70°	325.4	3.8
70°-80°	250.5	2.9
80°-90°	173.0	2.0
90°-100°	182.1	2.1
100°-110°	327.4	3.8
110°-120°	704.9	8.3
120°-130°	1102.6	12.9
130°-140°	1152.5	13.5
140°-150°	1061.3	12.4
150°-160°	851.5	10.0
160°-170°	548.7	6.4
170°-180°	188.9	2.2
0°-30°	553.6	6.5
0°-40°	910.3	10.7
0°-60°	1666.8	19.5
0°-90°	2415.9	28.3
90°-120°	1214.4	14.2
90°-150°	4530.7	53.1
90°-180°	6120.0	71.7
0°-180°	8535.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	12	87	165	211	228	11
95°	102	107	175	219	232	121
105°	442	492	176	226	245	472
115°	830	868	948	344	222	817
125°	1170	1191	1249	1285	1300	1043
135°	1446	1469	1492	1526	1534	1117
145°	1676	1676	1699	1714	1713	1048
155°	1846	1834	1850	1857	1847	850
165°	1945	1937	1940	1949	1940	549
175°	1989	1980	1982	1991	1978	189
180°	1985	1985	1985	1985	1985	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.5	34.8	49.2	63.5	78.0	92.7	107.9	123.0	138.3	153.4	163.0
90°	11.7	28.6	45.3	62.1	79.0	95.9	113.2	130.4	147.5	164.8	175.6
92.5°	38.5	50.6	62.6	74.6	86.7	100.4	115.8	131.2	146.6	162.0	171.8
95°	101.6	101.8	102.1	102.3	102.5	110.7	126.6	142.6	158.5	174.6	184.9
97.5°	192.5	172.4	152.3	132.2	112.1	111.2	129.6	147.9	166.3	184.7	194.4
100°	261.5	226.2	191.0	155.7	120.5	111.9	130.2	148.5	166.7	185.0	196.0
102.5°	336.5	335.0	333.5	331.9	330.4	313.2	280.2	247.3	214.4	181.5	193.1
105°	441.8	458.0	474.2	490.4	506.6	477.2	401.9	326.7	251.5	176.2	187.8
107.5°	563.1	576.1	589.2	602.2	615.2	575.2	482.1	389.0	296.0	202.9	207.0
110°	640.4	651.7	663.0	674.3	685.5	650.7	569.7	488.7	407.6	326.6	302.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	714.0	723.7	733.5	743.3	753.1	751.9	739.8	727.7	715.6	703.5	594.3
115°	830.0	837.9	845.9	853.8	861.7	874.8	893.1	911.5	929.8	948.1	807.1
117.5°	932.6	940.4	948.1	955.8	963.5	974.8	989.9	1004.9	1020.0	1034.9	1006.0
120°	1008.5	1014.2	1019.9	1025.6	1031.3	1041.6	1056.5	1071.5	1086.3	1101.3	1111.5
122.5°	1072.8	1078.2	1083.7	1089.0	1094.5	1104.6	1119.4	1134.4	1149.2	1164.1	1172.7
125°	1169.7	1173.9	1178.0	1182.1	1186.4	1195.1	1208.5	1221.9	1235.3	1248.7	1257.1
127.5°	1258.5	1262.8	1267.3	1271.6	1276.0	1283.3	1293.8	1304.2	1314.7	1325.1	1334.1
130°	1314.8	1319.7	1324.5	1329.5	1334.3	1340.9	1349.3	1357.6	1365.8	1374.2	1383.2
132.5°	1372.3	1376.3	1380.5	1384.6	1388.7	1394.4	1401.6	1408.9	1416.0	1423.3	1431.6
135°	1445.9	1451.0	1456.1	1461.3	1466.3	1471.5	1476.6	1481.8	1486.9	1492.2	1500.2
137.5°	1521.5	1525.0	1528.5	1532.1	1535.6	1539.4	1543.8	1548.0	1552.3	1556.5	1563.9
140°	1570.8	1573.2	1575.5	1577.8	1580.1	1583.3	1587.3	1591.2	1595.2	1599.2	1605.7
142.5°	1612.2	1614.3	1616.4	1618.4	1620.5	1623.6	1627.7	1631.8	1636.0	1640.0	1645.6
145°	1676.2	1675.8	1675.5	1675.2	1674.9	1677.4	1682.8	1688.3	1693.6	1699.1	1702.7
147.5°	1732.7	1731.5	1730.3	1729.1	1727.9	1729.9	1735.3	1740.7	1746.1	1751.4	1753.2
150°	1769.5	1767.3	1765.0	1762.8	1760.5	1762.0	1767.1	1772.2	1777.3	1782.4	1784.3
152.5°	1800.5	1798.1	1795.5	1793.0	1790.6	1791.7	1796.5	1801.4	1806.2	1811.1	1813.0
155°	1845.6	1842.7	1839.9	1836.9	1834.1	1834.6	1838.5	1842.3	1846.1	1849.9	1851.8
157.5°	1881.0	1878.6	1876.1	1873.7	1871.3	1871.4	1874.0	1876.7	1879.4	1882.1	1884.3
160°	1901.6	1899.7	1897.8	1895.9	1894.0	1894.0	1895.9	1897.8	1899.7	1901.6	1903.5
162.5°	1920.0	1918.1	1916.2	1914.3	1912.4	1912.2	1913.9	1915.5	1917.2	1918.8	1921.1
165°	1944.7	1942.8	1940.9	1938.9	1937.0	1936.6	1937.5	1938.4	1939.4	1940.4	1942.7
167.5°	1963.1	1961.2	1959.2	1957.3	1955.4	1954.9	1955.8	1956.7	1957.6	1958.5	1960.8
170°	1973.5	1971.6	1969.6	1967.7	1965.8	1965.1	1965.8	1966.4	1967.0	1967.7	1969.9
172.5°	1980.3	1978.4	1976.5	1974.6	1972.7	1972.1	1972.7	1973.3	1974.0	1974.6	1976.8
175°	1989.2	1987.0	1984.8	1982.6	1980.3	1979.5	1980.1	1980.7	1981.5	1982.1	1984.3
177.5°	1990.6	1988.9	1987.1	1985.3	1983.5	1982.8	1983.0	1983.3	1983.5	1983.8	1985.6
180°	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	172.7	182.4	192.1	198.4	201.5	204.5	207.6	210.7
90°	186.3	197.1	207.8	214.9	218.3	221.7	225.1	228.4
92.5°	181.6	191.4	201.3	207.7	210.9	214.0	217.1	220.3
95°	195.2	205.5	215.8	222.2	224.6	227.0	229.4	231.9
97.5°	204.2	213.9	223.7	230.0	233.2	236.3	239.3	242.5
100°	207.0	218.0	229.0	236.2	239.3	242.5	245.6	248.8
102.5°	204.7	216.3	227.9	235.4	238.8	242.3	245.7	249.1
105°	199.3	210.9	222.4	230.0	233.9	237.6	241.5	245.2
107.5°	211.1	215.2	219.3	223.3	227.1	231.0	234.7	238.5
110°	277.4	252.9	228.2	217.8	221.7	225.5	229.2	233.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	485.2	376.2	267.0	214.3	217.8	221.4	224.9	228.4
115°	666.2	525.3	384.5	303.8	283.3	262.9	242.4	221.9
117.5°	977.0	948.1	919.1	868.0	794.9	721.6	648.4	575.3
120°	1121.8	1132.0	1142.3	1127.0	1086.5	1045.9	1005.3	964.8
122.5°	1181.1	1189.6	1198.2	1199.3	1193.2	1186.9	1180.7	1174.6
125°	1265.6	1273.9	1282.4	1288.1	1291.1	1294.1	1297.2	1300.2
127.5°	1343.0	1352.0	1360.9	1366.4	1368.7	1370.9	1373.1	1375.3
130°	1392.2	1401.2	1410.3	1415.5	1417.0	1418.6	1420.1	1421.6
132.5°	1439.9	1448.2	1456.5	1461.5	1463.0	1464.5	1466.0	1467.5
135°	1508.1	1516.1	1524.2	1528.7	1529.9	1531.2	1532.4	1533.5
137.5°	1571.2	1578.5	1585.9	1589.8	1590.2	1590.7	1591.2	1591.7
140°	1612.2	1618.8	1625.4	1628.5	1628.3	1628.1	1627.8	1627.6
142.5°	1651.1	1656.7	1662.2	1664.9	1664.5	1664.1	1663.7	1663.2
145°	1706.4	1709.9	1713.5	1715.2	1714.6	1714.2	1713.7	1713.3
147.5°	1755.0	1757.0	1758.8	1759.3	1758.5	1757.7	1756.9	1756.2
150°	1786.2	1788.2	1790.1	1790.2	1788.7	1787.1	1785.4	1783.8
152.5°	1814.9	1816.8	1818.8	1818.7	1816.5	1814.5	1812.4	1810.3
155°	1853.7	1855.6	1857.5	1857.2	1854.7	1852.2	1849.6	1847.0
157.5°	1886.4	1888.5	1890.8	1890.6	1888.1	1885.6	1883.1	1880.7
160°	1905.4	1907.3	1909.3	1909.1	1906.9	1904.6	1902.4	1900.2
162.5°	1923.2	1925.4	1927.5	1927.2	1924.5	1921.8	1919.0	1916.3
165°	1944.9	1947.1	1949.3	1949.3	1947.1	1944.9	1942.7	1940.4
167.5°	1963.0	1965.2	1967.4	1967.1	1964.3	1961.4	1958.5	1955.6
170°	1972.2	1974.4	1976.6	1976.3	1973.5	1970.5	1967.7	1964.8
172.5°	1979.0	1981.3	1983.5	1983.2	1980.3	1977.4	1974.6	1971.7
175°	1986.5	1988.7	1990.9	1990.5	1987.3	1984.1	1981.0	1977.7
177.5°	1987.3	1989.1	1990.9	1990.6	1988.3	1986.1	1983.8	1981.5
180°	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9	1984.9

(END OF REPORT)