

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: P331521

Luminaire Tested: **S122DIW-S485D1440U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331521
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-S485D1440U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 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: 7730.9 lumens
Efficiency: N/A
Efficacy: 127.6 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

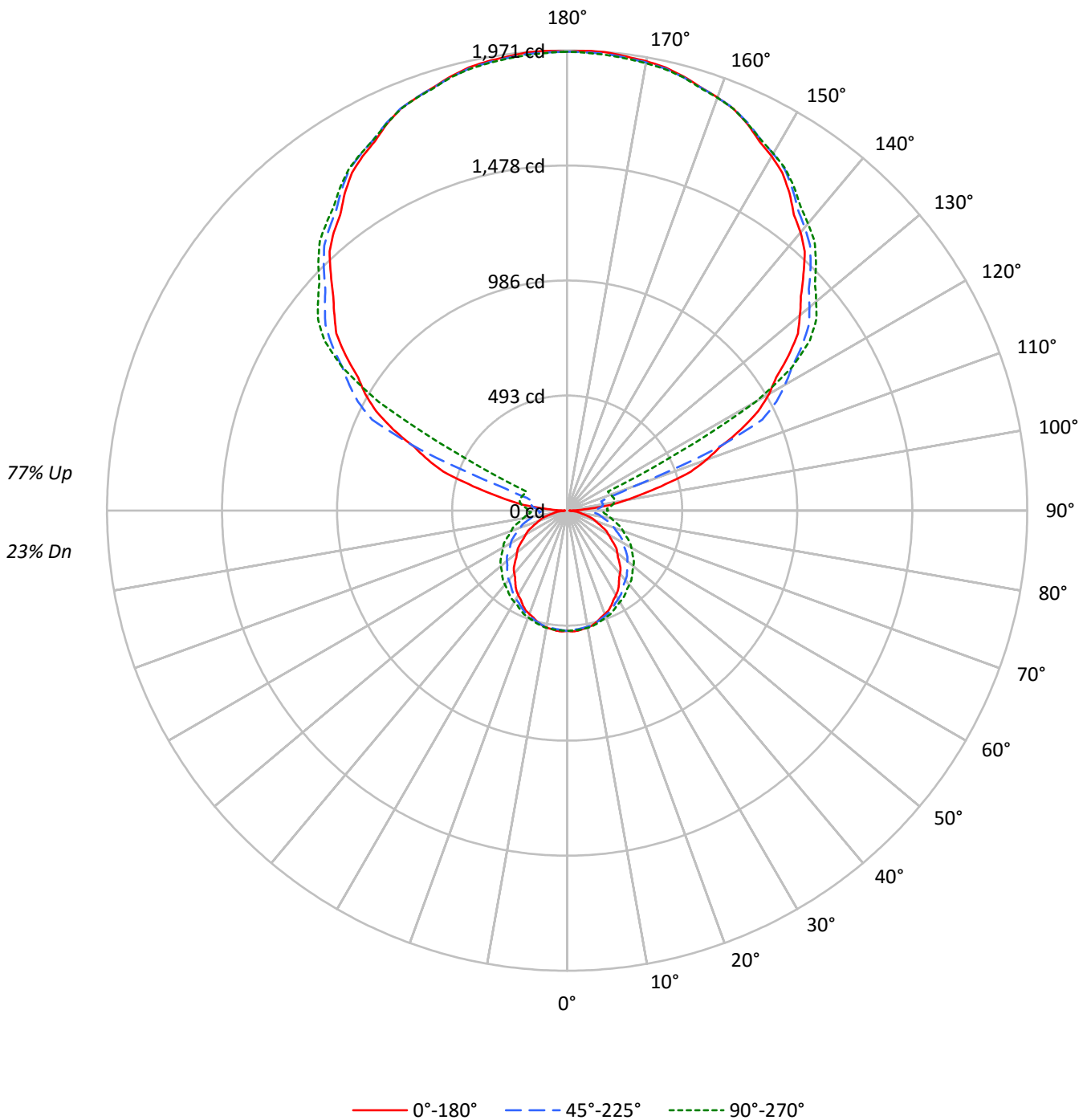
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23				
1	91	87	83	79	80	77	73	70	58	56	54	42	40	39	26	25	25	18				
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	23	21	20	14				
3	75	66	58	53	66	58	52	47	45	40	37	32	29	27	20	18	17	12				
4	68	58	50	44	60	51	45	40	39	35	31	28	25	23	18	16	14	10				
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12	8				
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7				
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9	6				
8	49	37	30	24	43	33	27	22	26	21	17	18	15	13	12	10	8	6				
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	8	5				
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7	5				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.6
10°-20°	140.0	1.8
20°-30°	212.2	2.7
30°-40°	258.4	3.3
40°-50°	278.0	3.6
50°-60°	270.0	3.5
60°-70°	235.8	3.0
70°-80°	181.5	2.3
80°-90°	126.7	1.6
90°-100°	149.5	1.9
100°-110°	301.7	3.9
110°-120°	683.2	8.8
120°-130°	1083.5	14.0
130°-140°	1137.8	14.7
140°-150°	1050.3	13.6
150°-160°	843.1	10.9
160°-170°	543.3	7.0
170°-180°	187.0	2.4
0°-30°	401.0	5.2
0°-40°	659.5	8.5
0°-60°	1207.5	15.6
0°-90°	1751.4	22.7
90°-120°	1134.4	14.7
90°-150°	4406.0	57.0
90°-180°	5979.0	77.3
0°-180°	7730.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	9	68	127	163	176	9
95°	98	90	141	175	184	118
105°	436	477	151	191	207	466
115°	821	855	922	316	192	808
125°	1158	1178	1227	1256	1268	1032
135°	1432	1454	1474	1503	1508	1105
145°	1660	1660	1682	1696	1694	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



TEST NUMBER: P331521

CATALOG NUMBER: S122DIW-S485D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.9	25.5	36.1	46.7	57.3	68.1	79.3	90.4	101.5	112.6	119.7
90°	8.9	22.0	35.1	48.2	61.3	74.4	87.6	100.7	113.9	127.0	135.2
92.5°	35.6	44.2	52.9	61.5	70.2	80.3	91.7	103.2	114.7	126.2	133.5
95°	98.4	95.8	93.2	90.5	87.9	92.7	104.8	117.0	129.2	141.4	149.2
97.5°	188.7	166.2	143.8	121.3	98.9	95.0	109.7	124.3	139.0	153.7	161.1
100°	257.0	219.8	182.6	145.5	108.3	97.1	111.8	126.4	141.1	155.8	164.4
102.5°	331.5	327.9	324.3	320.8	317.2	297.5	261.6	225.7	189.8	153.8	163.1
105°	436.1	450.4	464.7	479.0	493.3	461.6	383.9	306.3	228.6	151.0	160.3
107.5°	556.3	567.8	579.3	590.8	602.3	560.4	465.2	370.0	274.8	179.6	181.6
110°	633.0	643.0	653.0	662.9	672.9	636.2	553.0	469.8	386.6	303.4	277.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	705.9	714.5	723.2	731.9	740.5	737.4	722.6	707.8	692.9	678.1	568.1
115°	820.8	828.0	835.2	842.4	849.6	860.9	876.2	891.6	907.0	922.3	781.0
117.5°	922.7	929.9	937.1	944.3	951.5	961.3	973.6	986.0	998.3	1010.6	980.2
120°	997.8	1003.2	1008.6	1014.0	1019.4	1028.3	1040.6	1052.9	1065.3	1077.6	1086.0
122.5°	1061.5	1066.8	1072.0	1077.3	1082.6	1091.4	1103.8	1116.3	1128.7	1141.1	1147.9
125°	1157.8	1161.9	1166.0	1170.1	1174.2	1181.9	1193.2	1204.6	1215.9	1227.2	1233.9
127.5°	1245.7	1250.1	1254.4	1258.8	1263.2	1269.8	1278.6	1287.3	1296.1	1304.9	1312.2
130°	1301.4	1306.3	1311.2	1316.1	1321.0	1326.9	1333.9	1340.8	1347.8	1354.8	1362.2
132.5°	1358.3	1362.4	1366.6	1370.7	1374.8	1380.0	1386.2	1392.3	1398.5	1404.6	1411.5
135°	1431.5	1436.6	1441.6	1446.7	1451.7	1456.5	1461.0	1465.5	1470.0	1474.5	1481.2
137.5°	1506.3	1509.8	1513.3	1516.8	1520.4	1524.1	1528.0	1532.0	1535.9	1539.9	1546.1
140°	1555.3	1557.6	1560.0	1562.3	1564.7	1567.8	1571.6	1575.4	1579.2	1583.0	1588.5
142.5°	1596.2	1598.3	1600.4	1602.5	1604.7	1607.7	1611.8	1615.8	1619.9	1623.9	1628.6
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1685.7
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1736.1
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	126.8	133.9	141.0	145.7	147.9	150.2	152.4	154.7
90°	143.5	151.7	159.9	165.3	167.9	170.6	173.2	175.8
92.5°	140.9	148.2	155.5	160.4	162.7	165.1	167.5	169.8
95°	157.1	165.0	172.9	177.7	179.4	181.0	182.7	184.4
97.5°	168.5	175.9	183.3	188.2	190.5	192.9	195.2	197.5
100°	173.1	181.8	190.4	196.0	198.4	200.9	203.4	205.8
102.5°	172.4	181.7	191.0	197.0	199.7	202.4	205.2	207.9
105°	169.6	178.8	188.1	194.3	197.4	200.5	203.6	206.7
107.5°	183.6	185.7	187.7	190.3	193.4	196.5	199.5	202.6
110°	250.8	224.5	198.2	186.6	189.7	192.8	195.9	199.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	458.1	348.2	238.2	184.6	187.4	190.3	193.1	195.9
115°	639.6	498.3	356.9	275.8	254.8	233.9	213.0	192.1
117.5°	949.7	919.2	888.7	836.9	763.8	690.7	617.7	544.6
120°	1094.5	1102.9	1111.4	1095.2	1054.3	1013.5	972.6	931.8
122.5°	1154.7	1161.5	1168.3	1168.3	1161.6	1154.9	1148.2	1141.5
125°	1240.6	1247.3	1254.0	1258.5	1261.0	1263.4	1265.9	1268.3
127.5°	1319.5	1326.9	1334.2	1338.7	1340.4	1342.0	1343.7	1345.3
130°	1369.7	1377.1	1384.6	1388.8	1389.8	1390.9	1391.9	1392.9
132.5°	1418.3	1425.1	1431.9	1435.8	1436.9	1437.9	1438.9	1439.9
135°	1487.8	1494.5	1501.1	1504.8	1505.5	1506.2	1506.9	1507.6
137.5°	1552.2	1558.4	1564.5	1567.6	1567.7	1567.7	1567.8	1567.8
140°	1594.0	1599.5	1605.0	1607.5	1606.9	1606.3	1605.7	1605.1
142.5°	1633.4	1638.1	1642.8	1644.8	1644.1	1643.4	1642.6	1641.9
145°	1688.9	1692.1	1695.3	1696.6	1695.8	1695.1	1694.3	1693.6
147.5°	1737.8	1739.6	1741.4	1741.8	1740.9	1739.9	1739.0	1738.1
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)