

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: P332704-935

Luminaire Tested: **SA4XXDIP-C1195D1035U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332704-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D1035U935-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7489.3 lumens  
Efficiency: N/A  
Efficacy: 112.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

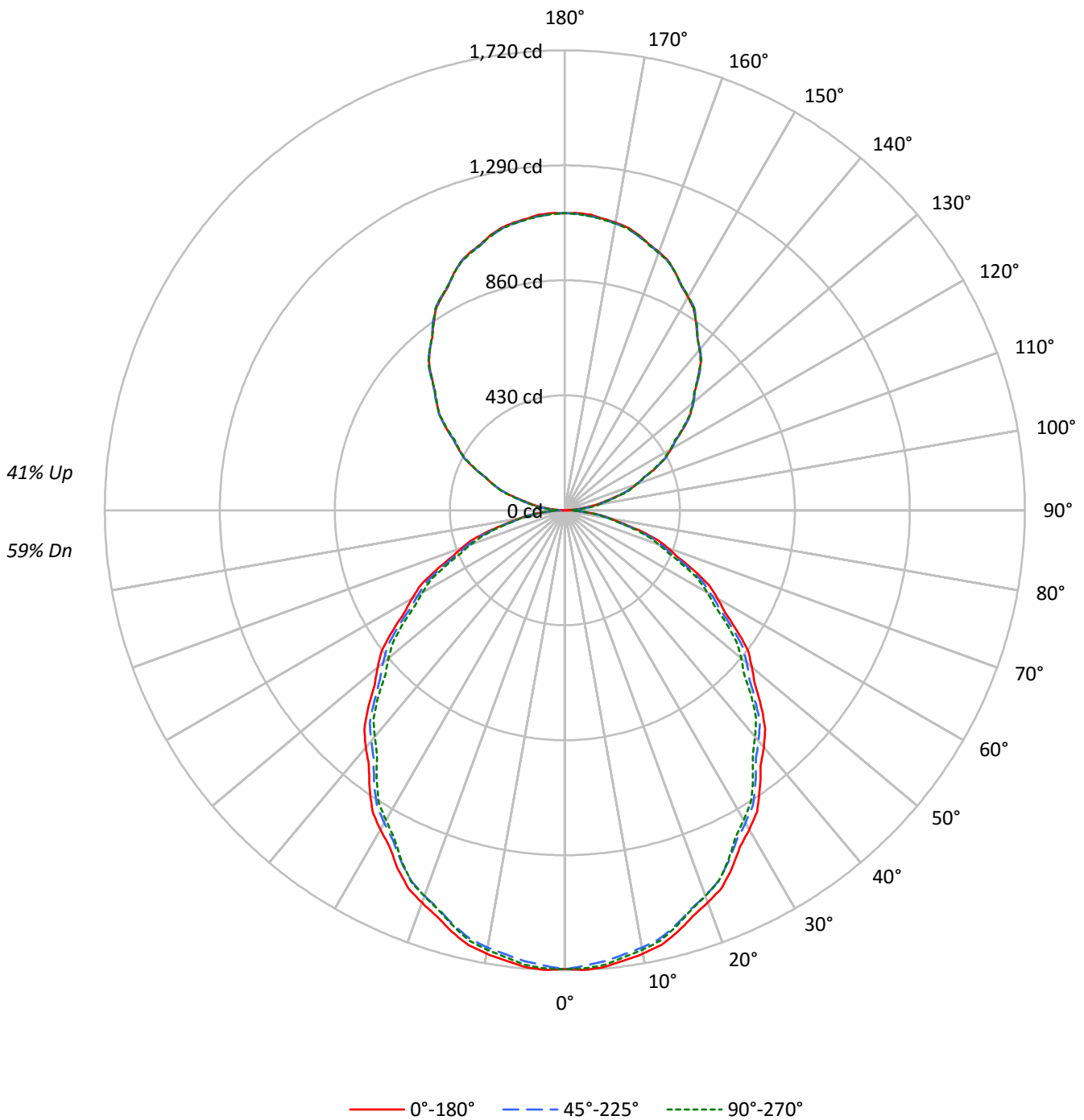
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59				
1	100	95	91	88	93	89	86	82	77	75	72	67	65	63	57	55	54	49				
2	91	83	77	72	84	78	72	68	68	64	60	58	55	53	50	48	46	41				
3	83	73	66	60	77	69	62	57	60	55	50	52	48	45	44	41	39	35				
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	33	30				
5	70	58	50	43	65	54	47	41	48	42	37	41	37	33	36	32	29	26				
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	29	26	23				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20				
8	55	43	35	29	51	40	33	28	36	30	26	31	26	23	27	23	20	18				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	16				
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13852	13852	13852
5°	13893	13726	13827
10°	13806	13615	13682
15°	13639	13422	13456
20°	13418	13181	13193
25°	13165	12908	12871
30°	12855	12585	12470
35°	12534	12249	12086
40°	12199	11866	11649
45°	11851	11490	11270
50°	11465	11154	10810
55°	11050	10719	10372
60°	10634	10233	9923
65°	10164	9769	9377
70°	9640	9151	8795
75°	8833	8406	8191
80°	7861	7541	7350
85°	6873	6623	6493



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.6	2.2
10°-20°	455.3	6.1
20°-30°	670.1	8.9
30°-40°	779.0	10.4
40°-50°	779.1	10.4
50°-60°	681.5	9.1
60°-70°	506.1	6.8
70°-80°	287.5	3.8
80°-90°	86.3	1.2
90°-100°	73.3	1.0
100°-110°	217.1	2.9
110°-120°	368.5	4.9
120°-130°	485.9	6.5
130°-140°	545.7	7.3
140°-150°	536.2	7.2
150°-160°	451.0	6.0
160°-170°	300.1	4.0
170°-180°	105.1	1.4
0°-30°	1287.0	17.2
0°-40°	2066.0	27.6
0°-60°	3526.5	47.1
0°-90°	4406.4	58.8
90°-120°	658.9	8.8
90°-150°	2226.8	29.7
90°-180°	3083.0	41.2
0°-180°	7489.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1716	1716	1716	1716	1716	
5°	1714	1708	1694	1708	1706	163
15°	1632	1626	1606	1613	1610	460
25°	1478	1468	1449	1450	1445	680
35°	1272	1262	1243	1233	1226	795
45°	1038	1028	1006	992	987	800
55°	785	780	762	746	737	703
65°	532	525	511	498	491	527
75°	283	276	270	264	263	301
85°	74	74	72	71	70	82
90°	3	12	19	24	26	7
95°	52	59	65	68	68	57
105°	200	201	205	207	210	213
115°	375	375	373	372	371	369
125°	546	546	545	543	541	486
135°	704	709	709	707	705	544
145°	855	858	859	858	856	535
155°	980	980	979	982	979	451
165°	1066	1064	1062	1067	1064	301
175°	1110	1105	1104	1110	1104	105
180°	1111	1111	1111	1111	1111	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8
2.5°	1720.2	1719.5	1718.7	1718.0	1717.3	1715.5	1712.9	1710.2	1707.5	1704.9	1707.3
5°	1714.4	1713.2	1712.0	1710.8	1709.6	1707.3	1703.9	1700.6	1697.2	1693.8	1697.2
7.5°	1698.5	1697.3	1696.1	1694.8	1693.6	1691.2	1687.4	1683.7	1680.0	1676.2	1679.0
10°	1684.2	1683.0	1681.8	1680.5	1679.3	1676.7	1672.8	1668.8	1664.8	1660.9	1663.3
12.5°	1665.5	1664.3	1663.0	1661.8	1660.6	1657.9	1653.7	1649.5	1645.3	1641.1	1643.7
15°	1631.9	1630.7	1629.5	1628.3	1627.0	1624.2	1619.5	1615.0	1610.4	1605.9	1607.7
17.5°	1591.6	1590.0	1588.5	1587.0	1585.4	1582.5	1578.1	1573.8	1569.5	1565.1	1566.3
20°	1561.9	1560.3	1558.8	1557.3	1555.7	1552.6	1548.1	1543.5	1539.0	1534.3	1535.2
22.5°	1529.9	1527.9	1526.0	1523.9	1521.9	1518.5	1514.0	1509.4	1504.9	1500.2	1501.9
25°	1478.0	1475.8	1473.7	1471.5	1469.4	1466.2	1461.9	1457.7	1453.4	1449.1	1449.4
27.5°	1418.6	1416.3	1414.2	1412.0	1409.8	1406.7	1402.7	1398.8	1394.8	1390.8	1390.1
30°	1379.0	1376.6	1374.1	1371.7	1369.2	1366.0	1362.0	1358.1	1354.1	1350.1	1348.9
32.5°	1337.2	1335.0	1332.8	1330.6	1328.4	1325.2	1320.9	1316.7	1312.5	1308.3	1306.8
35°	1271.8	1269.6	1267.5	1265.3	1263.2	1260.0	1255.7	1251.5	1247.2	1242.9	1240.7
37.5°	1202.7	1200.8	1198.9	1196.9	1194.9	1191.6	1187.1	1182.5	1177.8	1173.3	1171.0
40°	1157.6	1155.2	1152.7	1150.3	1147.9	1144.4	1139.8	1135.1	1130.6	1126.0	1122.9
42.5°	1109.2	1107.8	1106.3	1104.8	1103.4	1100.1	1095.0	1089.9	1084.9	1079.8	1076.2
45°	1038.0	1035.9	1033.7	1031.6	1029.5	1026.0	1021.1	1016.2	1011.2	1006.4	1003.1
47.5°	963.5	962.0	960.5	959.1	957.6	954.7	950.1	945.6	941.1	936.6	932.8
50°	912.9	911.7	910.4	909.2	908.0	905.3	901.0	896.7	892.4	888.1	883.9
52.5°	863.4	861.9	860.5	859.0	857.6	854.5	850.1	845.5	841.0	836.5	832.7
55°	785.1	784.1	783.3	782.3	781.4	778.8	774.5	770.3	765.9	761.6	758.0
57.5°	710.2	709.2	708.2	707.1	706.1	703.4	699.2	695.0	690.8	686.6	683.1
60°	658.6	657.0	655.5	654.0	652.5	649.7	645.8	641.8	637.7	633.8	631.0
62.5°	608.0	606.7	605.4	604.1	602.9	600.1	595.9	591.7	587.5	583.2	580.7
65°	532.1	530.5	529.0	527.4	526.0	523.7	520.6	517.5	514.5	511.4	508.4
67.5°	455.6	454.3	452.8	451.4	450.0	447.8	444.9	442.0	439.0	436.1	433.2
70°	408.4	406.2	404.1	401.9	399.8	397.5	395.0	392.6	390.1	387.7	385.3
72.5°	357.7	355.6	353.4	351.3	349.2	347.2	345.2	343.2	341.3	339.3	337.3
75°	283.2	281.7	280.2	278.6	277.1	275.6	274.1	272.5	271.0	269.5	268.3
77.5°	212.0	211.3	210.7	210.0	209.3	208.3	207.0	205.6	204.3	202.9	202.6
80°	169.1	168.2	167.3	166.3	165.5	164.7	164.1	163.4	162.8	162.2	161.6
82.5°	127.3	126.9	126.5	126.1	125.6	125.4	125.2	125.1	124.9	124.8	124.5
85°	74.2	74.2	74.2	74.2	74.2	74.0	73.4	72.8	72.1	71.5	71.5
87.5°	29.1	29.3	29.4	29.6	29.8	30.0	30.0	30.0	30.1	30.2	30.4
90°	2.6	4.6	6.8	8.9	11.0	12.8	14.3	15.8	17.4	18.9	20.1
92.5°	18.4	20.8	23.2	25.6	28.0	29.8	30.8	31.9	33.0	34.0	34.7
95°	51.6	53.3	55.0	56.7	58.5	59.9	61.3	62.7	64.0	65.3	65.9
97.5°	90.1	91.4	92.8	94.2	95.6	97.0	98.6	100.1	101.8	103.3	104.0
100°	120.3	121.1	121.8	122.6	123.4	124.6	126.3	128.0	129.8	131.5	131.9
102.5°	152.0	152.2	152.6	152.8	153.2	154.1	155.7	157.2	158.8	160.4	160.9
105°	200.3	200.4	200.6	200.8	201.0	201.5	202.2	203.0	203.8	204.6	205.1
107.5°	251.0	251.2	251.4	251.7	251.8	252.0	252.2	252.3	252.4	252.5	253.0
110°	285.3	285.7	286.1	286.5	286.9	287.0	286.7	286.5	286.4	286.2	285.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	321.1	321.2	321.2	321.3	321.4	321.2	320.9	320.6	320.2	319.9	319.8
115°	374.7	374.7	374.7	374.7	374.7	374.5	374.1	373.8	373.3	373.0	372.8
117.5°	425.2	425.4	425.5	425.7	425.9	425.8	425.5	425.2	425.0	424.7	424.0
120°	458.9	459.7	460.5	461.2	462.0	462.1	461.5	460.9	460.4	459.8	458.8
122.5°	494.0	494.3	494.6	494.9	495.2	495.2	495.0	494.6	494.4	494.1	493.5
125°	545.7	545.7	545.7	545.7	545.7	545.6	545.4	545.3	545.0	544.8	544.5
127.5°	592.6	593.2	593.7	594.3	595.0	595.0	594.8	594.4	594.2	593.8	593.5
130°	625.6	626.2	626.8	627.3	627.9	628.2	628.2	628.2	628.2	628.2	627.8
132.5°	659.4	659.8	660.1	660.6	661.0	661.2	661.0	660.8	660.6	660.6	660.1
135°	703.9	705.0	706.1	707.3	708.4	709.0	709.0	709.0	709.0	709.0	708.6
137.5°	752.3	752.9	753.4	753.9	754.5	754.8	755.2	755.5	755.8	756.1	755.6
140°	784.6	785.0	785.4	785.7	786.2	786.4	786.4	786.4	786.4	786.4	786.2
142.5°	814.2	814.6	814.9	815.4	815.7	815.8	815.7	815.5	815.4	815.2	815.2
145°	855.1	855.8	856.6	857.4	858.2	858.6	858.8	859.0	859.2	859.4	859.2
147.5°	895.7	896.6	897.5	898.5	899.3	899.7	899.6	899.4	899.2	899.1	899.0
150°	920.4	921.2	922.0	922.7	923.5	923.9	923.9	923.9	923.9	923.9	923.9
152.5°	943.8	944.3	944.7	945.2	945.6	945.9	946.1	946.2	946.4	946.5	947.0
155°	979.7	979.7	979.7	979.7	979.7	979.6	979.4	979.2	979.0	978.9	979.6
157.5°	1010.0	1009.6	1009.3	1008.9	1008.6	1008.4	1008.3	1008.3	1008.3	1008.2	1008.8
160°	1027.9	1027.6	1027.4	1027.3	1027.1	1026.9	1026.7	1026.5	1026.3	1026.1	1026.7
162.5°	1044.3	1043.9	1043.4	1042.8	1042.3	1042.0	1041.8	1041.6	1041.5	1041.2	1042.2
165°	1066.5	1065.9	1065.4	1064.8	1064.2	1063.8	1063.3	1063.0	1062.6	1062.2	1063.3
167.5°	1083.6	1082.7	1081.9	1081.2	1080.3	1080.0	1080.0	1080.0	1080.0	1080.1	1081.2
170°	1093.1	1092.2	1091.2	1090.3	1089.3	1088.9	1089.2	1089.3	1089.5	1089.7	1090.9
172.5°	1100.0	1099.2	1098.5	1097.6	1096.8	1096.4	1096.5	1096.5	1096.6	1096.6	1097.9
175°	1109.5	1108.5	1107.6	1106.6	1105.7	1105.1	1104.9	1104.7	1104.5	1104.3	1105.7
177.5°	1112.6	1111.8	1111.0	1110.3	1109.5	1109.1	1109.1	1109.1	1109.1	1109.1	1110.2
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8
2.5°	1709.7	1712.2	1714.6	1715.7	1715.5	1715.2	1714.9	1714.7
5°	1700.6	1703.9	1707.3	1708.7	1708.1	1707.4	1706.8	1706.2
7.5°	1681.6	1684.3	1687.0	1688.2	1687.8	1687.4	1687.0	1686.7
10°	1665.7	1668.2	1670.6	1671.5	1670.9	1670.3	1669.7	1669.0
12.5°	1646.4	1649.1	1651.8	1652.7	1651.8	1651.0	1650.1	1649.2
15°	1609.5	1611.4	1613.2	1613.6	1612.7	1611.8	1610.8	1610.0
17.5°	1567.5	1568.7	1569.8	1570.0	1569.4	1568.8	1568.2	1567.6
20°	1536.2	1537.1	1538.0	1538.2	1537.6	1537.0	1536.4	1535.7
22.5°	1503.6	1505.2	1506.8	1507.1	1506.1	1504.9	1503.8	1502.7
25°	1449.8	1450.0	1450.4	1449.8	1448.6	1447.4	1446.2	1445.0
27.5°	1389.3	1388.6	1387.8	1386.7	1385.2	1383.7	1382.2	1380.6
30°	1347.6	1346.4	1345.2	1343.8	1342.3	1340.8	1339.3	1337.7
32.5°	1305.4	1303.9	1302.4	1301.0	1299.4	1297.9	1296.4	1294.9
35°	1238.6	1236.5	1234.3	1232.5	1231.0	1229.4	1227.9	1226.4
37.5°	1168.6	1166.3	1164.0	1161.8	1159.9	1157.8	1155.8	1153.7
40°	1119.9	1116.8	1113.8	1111.5	1110.0	1108.5	1106.9	1105.4
42.5°	1072.7	1069.2	1065.7	1063.3	1062.3	1061.3	1060.2	1059.2
45°	999.7	996.3	993.0	990.8	989.9	988.9	988.1	987.1
47.5°	929.0	925.2	921.4	918.3	916.0	913.7	911.4	909.0
50°	879.6	875.3	871.1	868.0	866.2	864.4	862.5	860.7
52.5°	828.9	825.1	821.3	818.3	816.0	813.6	811.3	809.0
55°	754.3	750.7	747.0	744.2	742.4	740.6	738.7	736.9
57.5°	679.7	676.1	672.7	670.0	668.3	666.5	664.7	663.0
60°	628.3	625.6	622.8	620.7	619.1	617.6	616.1	614.6
62.5°	578.2	575.7	573.2	571.2	569.6	568.1	566.6	565.1
65°	505.3	502.3	499.2	497.0	495.4	493.9	492.3	490.9
67.5°	430.2	427.3	424.4	422.7	422.2	421.8	421.4	420.9
70°	382.8	380.4	377.9	376.3	375.3	374.4	373.5	372.6
72.5°	335.4	333.5	331.5	330.0	329.2	328.2	327.3	326.4
75°	267.0	265.8	264.6	263.8	263.6	263.2	262.9	262.6
77.5°	202.2	201.8	201.5	200.9	200.1	199.3	198.5	197.7
80°	161.0	160.4	159.8	159.4	159.0	158.7	158.4	158.1
82.5°	124.1	123.7	123.4	123.0	122.7	122.4	122.1	121.8
85°	71.5	71.5	71.5	71.4	71.0	70.7	70.4	70.1
87.5°	30.7	30.8	31.1	31.3	31.3	31.4	31.5	31.5
90°	21.2	22.4	23.5	24.3	24.6	25.1	25.4	25.7
92.5°	35.4	36.1	36.8	37.3	37.5	37.7	38.0	38.1
95°	66.5	67.1	67.6	67.9	67.9	67.9	67.9	67.9
97.5°	104.7	105.4	106.1	106.4	106.4	106.4	106.4	106.4
100°	132.2	132.6	133.0	133.2	133.2	133.2	133.2	133.2
102.5°	161.4	162.0	162.5	162.8	163.0	163.2	163.3	163.4
105°	205.7	206.3	206.8	207.4	207.9	208.5	209.1	209.7
107.5°	253.6	254.1	254.6	254.9	254.9	254.8	254.8	254.7
110°	285.4	285.0	284.6	284.7	285.3	285.9	286.5	287.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.7	319.6	319.6	319.6	319.7	319.8	319.9	320.0
115°	372.6	372.4	372.2	372.0	371.9	371.6	371.4	371.3
117.5°	423.4	422.8	422.1	421.6	421.2	420.9	420.4	420.1
120°	457.9	456.9	456.0	455.6	456.1	456.4	456.8	457.2
122.5°	492.8	492.2	491.5	490.9	490.2	489.5	488.8	488.1
125°	544.1	543.7	543.3	542.9	542.6	542.2	541.8	541.4
127.5°	593.1	592.7	592.3	591.9	591.7	591.3	591.1	590.7
130°	627.5	627.1	626.7	626.1	625.3	624.6	623.8	623.0
132.5°	659.8	659.4	659.0	658.7	658.3	658.1	657.7	657.5
135°	708.3	707.8	707.5	707.0	706.5	705.8	705.2	704.7
137.5°	755.1	754.6	754.1	753.9	754.1	754.1	754.2	754.4
140°	786.0	785.7	785.6	785.4	785.2	785.0	784.8	784.6
142.5°	815.1	815.1	815.1	815.0	815.0	814.9	814.9	814.9
145°	859.0	858.8	858.6	858.2	857.6	857.1	856.5	855.9
147.5°	898.8	898.6	898.5	898.3	898.1	897.9	897.8	897.6
150°	923.9	923.9	923.9	923.8	923.6	923.3	923.2	923.0
152.5°	947.4	947.9	948.4	948.4	947.9	947.4	946.8	946.3
155°	980.4	981.1	981.9	981.9	981.1	980.4	979.6	978.9
157.5°	1009.4	1010.0	1010.6	1010.5	1009.9	1009.2	1008.6	1007.9
160°	1027.3	1027.9	1028.4	1028.2	1027.3	1026.3	1025.4	1024.4
162.5°	1043.3	1044.3	1045.3	1045.4	1044.5	1043.5	1042.6	1041.6
165°	1064.5	1065.7	1066.8	1067.0	1066.3	1065.5	1064.7	1063.9
167.5°	1082.4	1083.6	1084.7	1084.7	1083.5	1082.3	1081.1	1080.0
170°	1092.0	1093.1	1094.3	1094.2	1092.9	1091.5	1090.2	1088.8
172.5°	1099.2	1100.4	1101.8	1101.7	1100.4	1099.1	1097.8	1096.4
175°	1107.0	1108.4	1109.7	1109.7	1108.4	1107.0	1105.7	1104.3
177.5°	1111.3	1112.3	1113.4	1113.4	1112.2	1110.9	1109.7	1108.5
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2

(END OF REPORT)