

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: P333006-930

Luminaire Tested: **SA4XXRDIP-C1195D1035U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P333006-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C1195D1035U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7297.5 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

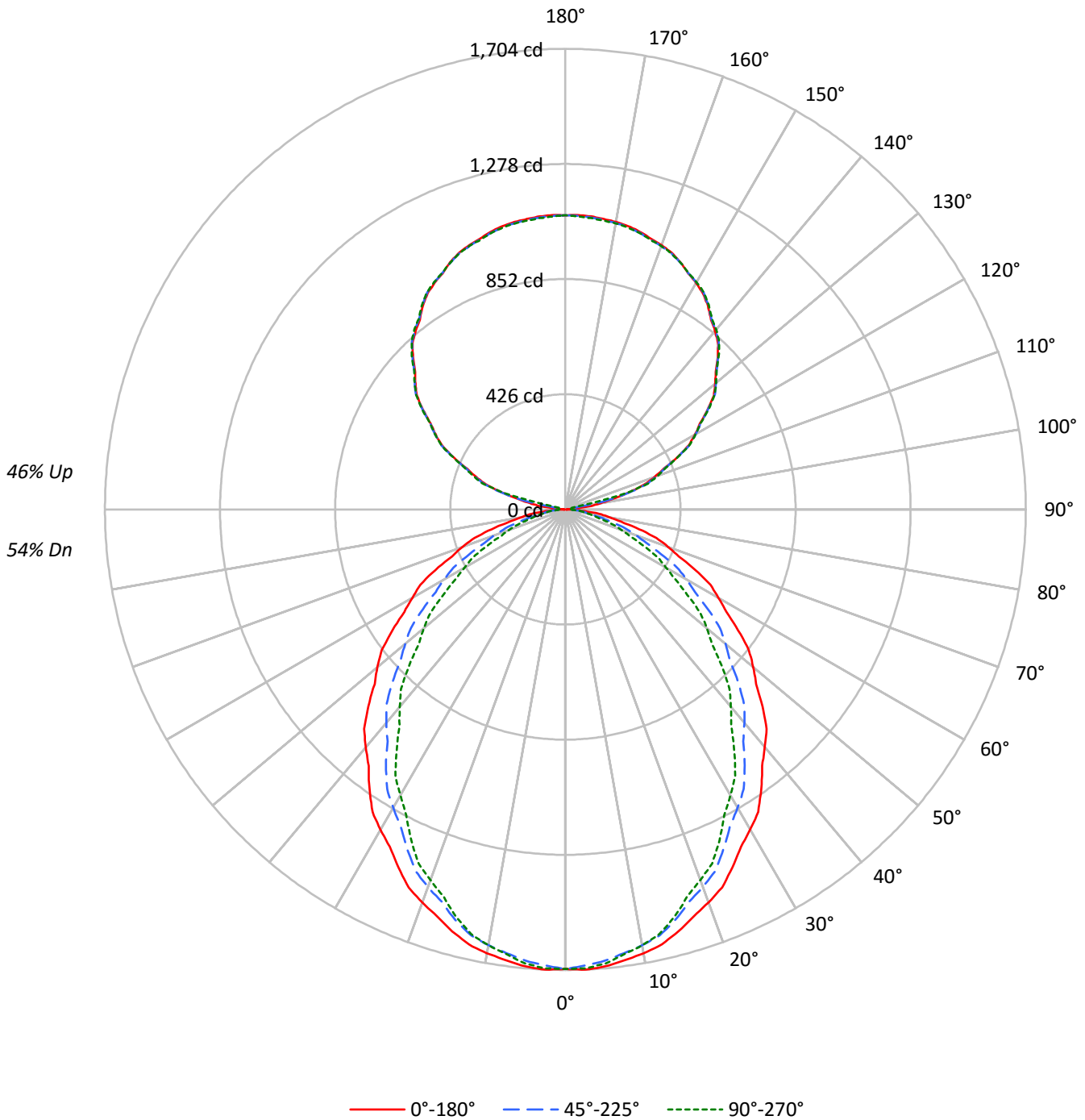
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54
1	99	95	91	87	92	88	85	82	75	73	71	64	62	61	53	52	51	46
2	90	83	77	72	84	77	72	68	66	62	59	56	54	51	47	45	43	39
3	83	73	66	60	76	68	62	57	59	54	50	50	47	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	38	35	32	29
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	33	37	32	29	31	28	25	22
7	59	47	39	34	55	44	37	32	39	33	29	33	29	26	28	25	22	20
8	55	43	35	30	51	40	33	29	35	30	26	31	26	23	26	23	20	18
9	51	39	32	27	48	37	30	26	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	25	21	26	22	19	22	19	17	15

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

	0°	45°	90°
0°	13726	13726	13726
5°	13757	13588	13674
10°	13671	13426	13426
15°	13514	13143	13046
20°	13298	12773	12538
25°	13023	12339	12026
30°	12755	11882	11384
35°	12458	11406	10738
40°	12101	10866	10043
45°	11772	10330	9334
50°	11396	9712	8584
55°	10994	9070	7769
60°	10551	8365	6936
65°	10147	7484	6117
70°	9557	6515	5193
75°	8812	5402	4223
80°	7685	4114	3873
85°	6512	3742	3492



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	2.2
10°-20°	445.4	6.1
20°-30°	643.1	8.8
30°-40°	729.0	10.0
40°-50°	704.0	9.6
50°-60°	585.4	8.0
60°-70°	404.2	5.5
70°-80°	204.9	2.8
80°-90°	55.7	0.8
90°-100°	37.2	0.5
100°-110°	237.3	3.3
110°-120°	453.9	6.2
120°-130°	576.3	7.9
130°-140°	616.6	8.4
140°-150°	576.6	7.9
150°-160°	464.9	6.4
160°-170°	299.9	4.1
170°-180°	103.4	1.4
0°-30°	1248.2	17.1
0°-40°	1977.3	27.1
0°-60°	3266.6	44.8
0°-90°	3931.4	53.9
90°-120°	728.5	10.0
90°-150°	2497.9	34.2
90°-180°	3366.0	46.1
0°-180°	7297.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1698	1692	1677	1689	1687	161
15°	1617	1604	1573	1570	1561	455
25°	1462	1437	1385	1364	1350	673
35°	1264	1221	1157	1114	1090	790
45°	1031	981	905	843	818	795
55°	781	727	644	579	552	698
65°	531	474	392	338	320	524
75°	282	234	173	144	135	298
85°	70	46	40	38	38	79
90°	2	11	18	23	24	5
95°	45	19	18	23	24	58
105°	245	250	254	259	232	256
115°	457	460	459	461	461	450
125°	643	646	645	647	648	574
135°	798	797	800	802	803	614
145°	920	922	922	923	924	574
155°	1008	1009	1007	1010	1008	465
165°	1064	1060	1060	1065	1059	300
175°	1088	1084	1084	1090	1082	104
180°	1088	1088	1088	1088	1088	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1704.4	1703.5	1702.6	1701.6	1700.7	1699.0	1696.5	1693.9	1691.3	1688.8	1691.3
5°	1697.6	1696.5	1695.3	1694.2	1693.1	1690.7	1687.3	1683.8	1680.3	1676.8	1679.7
7.5°	1682.3	1681.1	1679.8	1678.6	1677.4	1674.5	1670.1	1665.6	1661.0	1656.5	1658.4
10°	1667.7	1666.2	1664.8	1663.4	1661.9	1658.6	1653.4	1648.2	1643.0	1637.8	1638.9
12.5°	1648.9	1647.3	1645.6	1643.9	1642.3	1638.3	1632.2	1626.1	1619.9	1613.8	1614.5
15°	1616.9	1614.3	1611.8	1609.2	1606.5	1601.6	1594.4	1587.1	1579.9	1572.6	1572.1
17.5°	1578.2	1574.3	1570.6	1566.8	1563.1	1556.9	1548.2	1539.5	1530.8	1522.2	1520.5
20°	1547.9	1544.2	1540.4	1536.7	1532.9	1526.1	1516.3	1506.4	1496.6	1486.8	1484.4
22.5°	1514.6	1510.4	1506.2	1501.9	1497.7	1490.4	1479.8	1469.3	1458.7	1448.2	1444.7
25°	1462.0	1456.8	1451.6	1446.4	1441.2	1432.6	1420.8	1408.9	1397.1	1385.2	1380.3
27.5°	1406.8	1400.3	1393.8	1387.2	1380.6	1371.1	1358.4	1345.7	1333.0	1320.4	1314.3
30°	1368.3	1361.1	1353.8	1346.5	1339.4	1328.9	1315.3	1301.7	1288.2	1274.6	1267.3
32.5°	1327.6	1319.5	1311.3	1303.2	1295.0	1283.9	1269.8	1255.8	1241.7	1227.7	1219.3
35°	1264.1	1254.8	1245.6	1236.3	1227.1	1215.2	1200.8	1186.3	1171.8	1157.4	1147.5
37.5°	1196.2	1186.6	1177.0	1167.5	1158.0	1145.2	1129.2	1113.1	1097.1	1081.1	1070.1
40°	1148.3	1138.7	1129.2	1119.7	1110.0	1097.1	1080.6	1064.0	1047.6	1031.1	1019.0
42.5°	1102.4	1092.4	1082.4	1072.4	1062.4	1048.8	1031.6	1014.4	997.3	980.1	967.7
45°	1031.1	1020.3	1009.7	999.0	988.3	974.2	956.9	939.6	922.2	904.8	890.6
47.5°	957.4	946.3	935.3	924.2	913.2	898.6	880.6	862.5	844.5	826.5	811.7
50°	907.4	896.1	884.8	873.6	862.3	847.3	828.8	810.3	791.8	773.3	758.9
52.5°	856.4	845.3	834.3	823.2	812.2	797.1	778.2	759.2	740.2	721.2	706.5
55°	781.1	769.6	758.0	746.4	734.8	719.7	700.8	682.1	663.2	644.4	629.4
57.5°	706.6	694.6	682.6	670.6	658.5	643.3	624.8	606.2	587.7	569.2	553.9
60°	653.5	642.0	630.4	618.8	607.2	592.2	573.7	555.2	536.6	518.1	503.1
62.5°	605.6	593.6	581.6	569.6	557.5	542.0	523.0	504.0	485.0	466.1	452.2
65°	531.2	518.7	506.3	493.8	481.4	465.9	447.4	428.9	410.4	391.8	379.4
67.5°	453.8	441.9	430.0	418.1	406.2	391.6	374.4	357.3	340.1	322.9	312.2
70°	404.9	392.7	380.6	368.4	356.3	341.9	325.5	309.0	292.5	276.0	266.4
72.5°	352.8	341.9	330.8	319.8	308.8	295.5	280.0	264.4	248.8	233.3	225.1
75°	282.5	271.8	261.1	250.4	239.7	227.6	213.9	200.3	186.8	173.2	166.5
77.5°	211.2	202.1	193.0	183.9	174.8	164.8	153.8	142.8	131.8	120.8	116.9
80°	165.3	156.9	148.5	140.1	131.8	123.3	114.5	105.9	97.2	88.5	87.6
82.5°	125.8	118.1	110.4	102.6	95.0	88.6	83.6	78.7	73.7	68.7	68.1
85°	70.3	64.5	58.7	52.9	47.1	43.9	43.0	42.1	41.3	40.4	39.8
87.5°	24.5	23.0	21.5	20.1	18.6	17.9	18.0	18.0	18.1	18.2	18.2
90°	2.4	4.4	6.4	8.4	10.4	12.1	13.5	15.0	16.5	17.9	19.0
92.5°	10.3	10.4	10.4	10.6	10.7	11.5	12.9	14.3	15.8	17.3	18.3
95°	44.8	38.6	32.4	26.3	20.1	17.2	17.4	17.5	17.7	17.9	19.0
97.5°	95.1	98.9	102.7	106.6	110.4	102.2	82.0	61.9	41.7	21.5	21.6
100°	133.5	136.7	140.0	143.2	146.5	135.7	110.7	85.8	60.7	35.8	32.8
102.5°	176.4	178.9	181.2	183.6	186.0	185.6	182.3	179.0	175.8	172.5	139.3
105°	245.0	246.1	247.1	248.3	249.3	250.3	251.2	252.1	253.1	254.0	255.6
107.5°	308.6	309.2	309.7	310.2	310.8	311.7	312.9	314.1	315.4	316.6	317.4
110°	351.6	352.1	352.7	353.2	353.8	354.6	355.6	356.8	357.8	358.9	359.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	393.3	394.3	395.3	396.2	397.2	397.9	398.4	398.9	399.4	399.9	399.9
115°	457.4	458.0	458.5	459.0	459.6	459.7	459.6	459.4	459.2	459.0	459.4
117.5°	515.2	515.9	516.7	517.4	518.1	518.6	519.0	519.4	519.8	520.2	520.2
120°	554.2	555.0	555.7	556.4	557.2	557.4	557.3	557.1	556.8	556.7	557.1
122.5°	590.7	591.2	591.6	592.0	592.5	592.8	593.0	593.3	593.5	593.8	594.0
125°	642.9	643.7	644.4	645.1	645.9	646.0	645.7	645.3	645.0	644.6	645.1
127.5°	692.4	692.6	692.8	693.0	693.2	693.7	694.6	695.4	696.2	697.0	696.9
130°	724.4	724.6	724.7	724.9	725.0	725.5	726.0	726.5	727.1	727.7	727.8
132.5°	753.7	754.0	754.3	754.6	755.0	755.5	756.2	756.8	757.5	758.2	758.4
135°	797.6	797.4	797.3	797.0	796.9	797.1	797.9	798.6	799.3	800.1	800.4
137.5°	836.5	836.6	836.7	836.7	836.8	837.2	838.0	838.9	839.6	840.4	840.8
140°	861.9	862.3	862.7	863.0	863.3	863.7	864.1	864.5	864.8	865.2	865.7
142.5°	884.7	885.3	886.0	886.6	887.3	887.7	887.9	888.2	888.4	888.6	889.0
145°	919.7	920.2	920.8	921.3	921.9	922.1	922.1	922.1	922.1	922.1	922.3
147.5°	947.5	948.5	949.6	950.6	951.6	952.0	951.8	951.6	951.5	951.3	951.5
150°	967.7	968.4	969.1	969.9	970.6	970.9	970.7	970.5	970.4	970.1	970.1
152.5°	984.6	985.2	985.8	986.3	986.9	987.1	986.8	986.4	986.1	985.8	986.1
155°	1008.4	1008.6	1008.8	1008.9	1009.1	1008.9	1008.4	1007.9	1007.3	1006.8	1007.5
157.5°	1028.4	1028.3	1028.2	1028.1	1028.0	1027.6	1027.0	1026.4	1025.8	1025.2	1026.1
160°	1040.2	1039.6	1039.1	1038.5	1038.0	1037.6	1037.5	1037.2	1037.1	1036.9	1038.0
162.5°	1050.6	1049.9	1049.2	1048.5	1047.8	1047.4	1047.2	1047.0	1046.8	1046.7	1047.7
165°	1063.7	1062.8	1061.9	1061.0	1060.1	1059.6	1059.6	1059.6	1059.6	1059.6	1061.1
167.5°	1074.2	1073.3	1072.3	1071.4	1070.4	1069.9	1069.8	1069.7	1069.6	1069.4	1071.1
170°	1080.0	1079.0	1077.8	1076.8	1075.7	1075.2	1075.4	1075.6	1075.8	1076.0	1077.4
172.5°	1083.9	1082.9	1081.7	1080.7	1079.6	1079.1	1079.3	1079.5	1079.7	1079.9	1081.3
175°	1088.2	1087.1	1086.0	1084.9	1083.9	1083.4	1083.5	1083.8	1083.9	1084.1	1085.7
177.5°	1090.1	1089.1	1088.1	1087.1	1086.1	1085.7	1086.0	1086.3	1086.5	1086.9	1088.0
180°	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1693.9	1696.5	1699.0	1700.1	1699.9	1699.7	1699.4	1699.2
5°	1682.6	1685.5	1688.4	1689.5	1689.0	1688.4	1687.8	1687.3
7.5°	1660.2	1662.1	1663.9	1664.4	1663.5	1662.6	1661.6	1660.7
10°	1640.1	1641.2	1642.4	1642.4	1641.2	1640.1	1638.9	1637.8
12.5°	1615.2	1615.9	1616.6	1616.1	1614.5	1612.9	1611.3	1609.6
15°	1571.5	1570.9	1570.3	1569.0	1567.0	1565.0	1563.0	1561.0
17.5°	1518.9	1517.3	1515.6	1513.4	1510.3	1507.2	1504.1	1501.0
20°	1482.1	1479.8	1477.5	1474.5	1470.7	1467.0	1463.1	1459.4
22.5°	1441.3	1437.8	1434.4	1431.1	1428.0	1424.9	1421.9	1418.8
25°	1375.3	1370.4	1365.5	1361.6	1358.7	1355.8	1352.9	1350.1
27.5°	1308.2	1302.1	1296.1	1290.9	1286.8	1282.6	1278.5	1274.3
30°	1260.0	1252.9	1245.6	1239.7	1235.0	1230.4	1225.8	1221.2
32.5°	1210.9	1202.5	1194.1	1187.7	1183.3	1178.9	1174.5	1170.1
35°	1137.7	1127.9	1118.0	1110.5	1105.3	1100.1	1094.9	1089.6
37.5°	1059.1	1048.1	1037.1	1029.0	1023.8	1018.6	1013.4	1008.2
40°	1006.8	994.7	982.5	973.8	968.6	963.4	958.2	953.0
42.5°	955.3	942.9	930.5	921.6	916.2	910.8	905.3	899.8
45°	876.4	862.3	848.1	838.4	833.2	828.0	822.8	817.6
47.5°	797.0	782.4	767.7	757.4	751.7	746.0	740.2	734.5
50°	744.4	729.9	715.4	705.5	700.0	694.5	689.0	683.5
52.5°	691.9	677.2	662.4	652.2	646.5	640.8	635.0	629.3
55°	614.3	599.3	584.2	574.0	568.5	563.0	557.5	552.0
57.5°	538.7	523.3	508.1	498.4	494.2	490.0	485.8	481.7
60°	488.0	473.0	458.0	448.2	443.5	438.9	434.2	429.6
62.5°	438.3	424.4	410.5	401.7	398.0	394.4	390.6	386.9
65°	367.0	354.6	342.1	334.1	330.7	327.2	323.8	320.2
67.5°	301.5	290.7	280.1	272.8	269.0	265.1	261.3	257.5
70°	256.9	247.4	237.8	231.6	228.7	225.8	222.9	220.0
72.5°	217.0	208.8	200.6	195.3	192.6	190.0	187.3	184.6
75°	159.9	153.2	146.5	142.4	140.6	138.8	137.1	135.4
77.5°	113.1	109.2	105.3	103.1	102.6	102.1	101.6	101.0
80°	86.8	85.9	85.0	84.5	84.2	83.9	83.6	83.3
82.5°	67.5	66.9	66.2	65.7	65.5	65.1	64.9	64.6
85°	39.2	38.6	38.1	37.7	37.7	37.7	37.7	37.7
87.5°	18.1	18.1	18.1	18.3	18.6	18.8	19.2	19.5
90°	20.1	21.2	22.3	23.0	23.3	23.7	24.1	24.4
92.5°	19.4	20.5	21.6	22.2	22.3	22.3	22.4	22.5
95°	20.1	21.2	22.3	22.9	23.1	23.2	23.4	23.6
97.5°	21.7	21.9	21.9	22.1	22.3	22.4	22.6	22.8
100°	29.7	26.6	23.5	22.1	22.3	22.4	22.6	22.8
102.5°	106.2	73.1	39.9	23.3	23.3	23.4	23.4	23.5
105°	257.2	258.8	260.4	258.0	251.5	245.0	238.5	232.0
107.5°	318.2	319.0	319.8	320.5	321.2	321.9	322.6	323.3
110°	359.6	360.0	360.4	360.9	361.3	361.9	362.5	363.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	399.8	399.7	399.7	400.0	400.6	401.4	402.0	402.7
115°	459.7	460.2	460.5	460.6	460.6	460.6	460.6	460.6
117.5°	520.1	520.0	519.9	519.9	519.8	519.8	519.7	519.6
120°	557.4	557.7	558.2	558.2	557.7	557.4	557.1	556.7
122.5°	594.3	594.4	594.7	594.6	594.3	593.9	593.5	593.1
125°	645.7	646.2	646.8	647.1	647.3	647.5	647.7	647.8
127.5°	696.8	696.7	696.6	696.4	696.3	696.2	696.0	695.9
130°	728.0	728.1	728.3	728.5	728.5	728.5	728.5	728.5
132.5°	758.6	758.8	759.0	759.0	758.8	758.6	758.6	758.4
135°	800.8	801.1	801.5	801.8	802.3	802.6	802.9	803.3
137.5°	841.2	841.6	842.0	842.1	842.0	842.0	841.8	841.7
140°	866.3	866.8	867.3	867.7	867.9	868.0	868.2	868.5
142.5°	889.4	889.8	890.2	890.4	890.5	890.5	890.6	890.6
145°	922.5	922.7	922.8	923.2	923.5	923.8	924.2	924.5
147.5°	951.5	951.7	951.9	952.0	952.2	952.4	952.6	952.8
150°	970.1	970.1	970.1	970.2	970.5	970.6	970.8	970.9
152.5°	986.3	986.7	986.9	987.0	986.9	986.8	986.7	986.6
155°	1008.2	1008.9	1009.7	1009.7	1009.3	1008.7	1008.1	1007.6
157.5°	1027.0	1028.0	1028.9	1028.9	1028.0	1027.0	1026.1	1025.2
160°	1039.1	1040.2	1041.2	1041.2	1040.2	1039.1	1038.0	1036.9
162.5°	1048.8	1049.9	1051.0	1050.9	1049.7	1048.5	1047.3	1046.0
165°	1062.6	1064.0	1065.4	1065.4	1063.7	1062.1	1060.5	1058.8
167.5°	1072.6	1074.2	1075.8	1075.7	1073.9	1072.1	1070.2	1068.4
170°	1078.9	1080.3	1081.7	1081.6	1079.8	1078.0	1076.1	1074.3
172.5°	1082.8	1084.2	1085.7	1085.4	1083.5	1081.5	1079.5	1077.6
175°	1087.4	1089.0	1090.6	1090.3	1088.2	1086.0	1083.9	1081.7
177.5°	1089.2	1090.3	1091.5	1091.2	1089.5	1087.8	1086.0	1084.3
180°	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2

(END OF REPORT)