

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: P332604

Luminaire Tested: **SA4XXDIP-C795D810U835-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332604  
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: SA4XXDIP-C795D810U835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

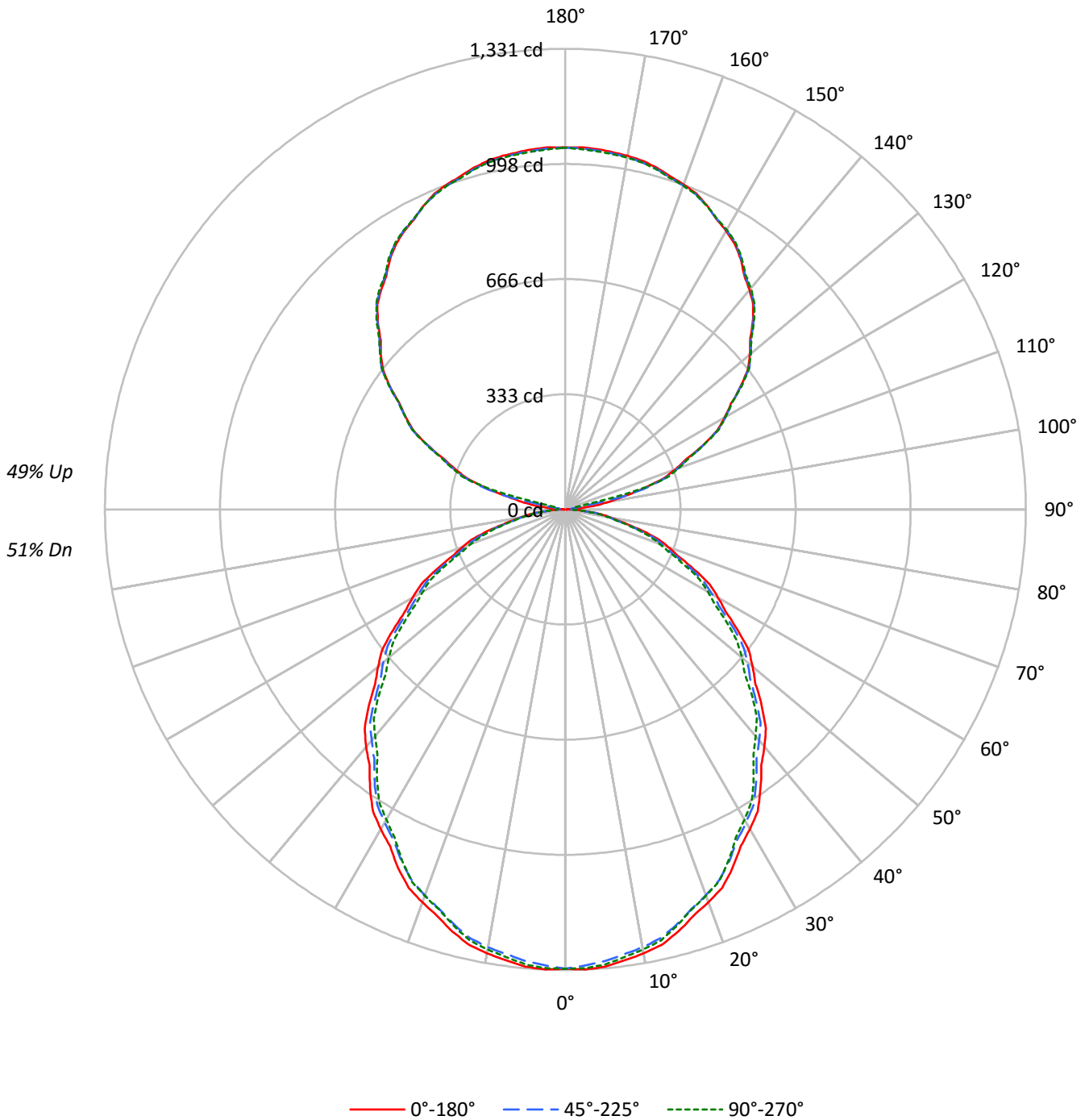
Lumens per Lamp: N/A  
Luminaire Lumens: 6643.2 lumens  
Efficiency: N/A  
Efficacy: 144.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 45.9  
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	51	
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	43	43	43	
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	42	41	36	36	36	36	
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31	31	31	31	
4	74	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	26	26	26	
5	68	57	49	43	63	53	45	40	45	40	35	38	34	31	32	29	26	23	23	23	23	
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20	20	20	20	
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18	18	18	18	
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	16	
9	50	38	31	25	46	36	29	24	31	25	22	27	22	19	22	19	16	14	14	14	14	
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13	13	13	13	

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

	0°	45°	90°
0°	10717	10717	10717
5°	10749	10619	10697
10°	10681	10533	10585
15°	10552	10384	10410
20°	10381	10198	10207
25°	10185	9986	9958
30°	9945	9737	9648
35°	9697	9477	9351
40°	9438	9180	9013
45°	9169	8889	8719
50°	8871	8629	8363
55°	8549	8294	8024
60°	8226	7918	7677
65°	7862	7559	7253
70°	7456	7081	6805
75°	6834	6503	6338
80°	6081	5835	5686
85°	5317	5122	5020



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.0	1.9
10°-20°	352.2	5.3
20°-30°	518.4	7.8
30°-40°	602.7	9.1
40°-50°	602.7	9.1
50°-60°	527.2	7.9
60°-70°	391.5	5.9
70°-80°	222.4	3.3
80°-90°	67.2	1.0
90°-100°	35.8	0.5
100°-110°	228.0	3.4
110°-120°	436.1	6.6
120°-130°	553.6	8.3
130°-140°	592.3	8.9
140°-150°	553.9	8.3
150°-160°	446.7	6.7
160°-170°	288.1	4.3
170°-180°	99.3	1.5
0°-30°	995.7	15.0
0°-40°	1598.4	24.1
0°-60°	2728.3	41.1
0°-90°	3409.5	51.3
90°-120°	699.8	10.5
90°-150°	2399.6	36.1
90°-180°	3234.0	48.7
0°-180°	6643.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1326	1322	1310	1321	1320	126
15°	1263	1258	1242	1248	1246	356
25°	1143	1136	1121	1122	1118	526
35°	984	976	962	954	949	615
45°	803	795	779	767	764	619
55°	607	604	589	577	570	544
65°	412	406	396	385	380	407
75°	219	214	208	204	203	233
85°	57	57	55	55	54	63
90°	2	11	17	22	24	5
95°	43	18	17	22	23	55
105°	235	240	244	249	223	246
115°	439	442	441	442	443	432
125°	618	621	619	622	622	551
135°	766	766	769	770	772	590
145°	884	886	886	887	888	552
155°	969	969	967	970	968	446
165°	1022	1018	1018	1024	1017	289
175°	1045	1041	1042	1048	1039	100
180°	1045	1045	1045	1045	1045	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5
2.5°	1330.9	1330.3	1329.7	1329.2	1328.6	1327.3	1325.2	1323.1	1321.0	1319.0	1320.8
5°	1326.4	1325.5	1324.5	1323.6	1322.6	1320.8	1318.2	1315.6	1313.0	1310.4	1313.0
7.5°	1314.1	1313.1	1312.2	1311.2	1310.3	1308.4	1305.5	1302.6	1299.7	1296.8	1298.9
10°	1303.0	1302.1	1301.1	1300.2	1299.2	1297.2	1294.1	1291.1	1288.0	1284.9	1286.8
12.5°	1288.5	1287.6	1286.6	1285.7	1284.8	1282.6	1279.4	1276.1	1272.9	1269.6	1271.7
15°	1262.6	1261.6	1260.7	1259.7	1258.8	1256.6	1253.0	1249.5	1245.9	1242.4	1243.8
17.5°	1231.3	1230.1	1228.9	1227.8	1226.6	1224.3	1221.0	1217.6	1214.2	1210.9	1211.8
20°	1208.3	1207.1	1206.0	1204.8	1203.6	1201.2	1197.7	1194.1	1190.6	1187.1	1187.8
22.5°	1183.7	1182.1	1180.5	1179.0	1177.4	1174.9	1171.3	1167.8	1164.2	1160.7	1162.0
25°	1143.4	1141.8	1140.1	1138.5	1136.8	1134.3	1131.0	1127.7	1124.4	1121.1	1121.3
27.5°	1097.5	1095.8	1094.1	1092.4	1090.7	1088.3	1085.2	1082.2	1079.1	1076.0	1075.4
30°	1066.9	1065.0	1063.1	1061.2	1059.3	1056.8	1053.7	1050.7	1047.6	1044.5	1043.6
32.5°	1034.5	1032.8	1031.1	1029.4	1027.7	1025.2	1022.0	1018.7	1015.5	1012.2	1011.1
35°	983.9	982.2	980.6	978.9	977.3	974.8	971.5	968.2	964.9	961.6	959.9
37.5°	930.5	929.0	927.5	926.0	924.4	921.9	918.4	914.8	911.3	907.7	905.9
40°	895.6	893.7	891.8	889.9	888.0	885.3	881.8	878.2	874.7	871.1	868.8
42.5°	858.2	857.0	855.9	854.8	853.6	851.1	847.2	843.3	839.3	835.4	832.7
45°	803.1	801.4	799.8	798.1	796.5	793.7	790.0	786.2	782.4	778.6	776.0
47.5°	745.4	744.3	743.2	742.0	740.9	738.6	735.1	731.6	728.1	724.6	721.6
50°	706.3	705.3	704.4	703.4	702.5	700.4	697.1	693.8	690.4	687.1	683.8
52.5°	668.0	666.9	665.7	664.6	663.4	661.1	657.6	654.1	650.6	647.1	644.2
55°	607.4	606.6	605.9	605.2	604.5	602.5	599.2	595.9	592.6	589.3	586.4
57.5°	549.5	548.7	547.9	547.1	546.3	544.2	541.0	537.7	534.5	531.2	528.5
60°	509.5	508.3	507.1	506.0	504.8	502.6	499.6	496.5	493.4	490.4	488.2
62.5°	470.4	469.4	468.4	467.4	466.4	464.3	461.0	457.7	454.5	451.2	449.3
65°	411.6	410.5	409.3	408.1	406.9	405.1	402.8	400.4	398.0	395.7	393.3
67.5°	352.5	351.4	350.3	349.2	348.2	346.5	344.2	341.9	339.7	337.4	335.1
70°	315.9	314.3	312.6	310.9	309.3	307.5	305.6	303.7	301.8	300.0	298.1
72.5°	276.8	275.1	273.5	271.8	270.1	268.6	267.1	265.5	264.0	262.5	261.0
75°	219.1	217.9	216.8	215.6	214.4	213.2	212.0	210.8	209.7	208.5	207.5
77.5°	164.0	163.5	163.0	162.5	161.9	161.2	160.1	159.1	158.0	157.0	156.7
80°	130.8	130.1	129.4	128.7	128.0	127.4	126.9	126.5	126.0	125.5	125.0
82.5°	98.5	98.2	97.8	97.5	97.2	97.0	96.9	96.8	96.7	96.6	96.3
85°	57.4	57.4	57.4	57.4	57.4	57.2	56.7	56.3	55.8	55.3	55.3
87.5°	22.6	22.8	23.0	23.2	23.4	23.5	23.6	23.7	23.8	23.9	24.1
90°	2.3	4.3	6.2	8.1	10.0	11.6	13.0	14.4	15.8	17.2	18.2
92.5°	9.9	10.0	10.1	10.2	10.3	11.0	12.4	13.8	15.2	16.6	17.6
95°	43.0	37.1	31.2	25.3	19.4	16.5	16.7	16.9	17.0	17.2	18.2
97.5°	91.3	95.0	98.7	102.4	106.1	98.2	78.8	59.4	40.0	20.6	20.7
100°	128.2	131.4	134.5	137.6	140.7	130.3	106.3	82.4	58.4	34.4	31.4
102.5°	169.5	171.8	174.1	176.4	178.7	178.3	175.1	172.0	168.9	165.8	133.9
105°	235.3	236.4	237.4	238.5	239.5	240.5	241.3	242.2	243.1	243.9	245.5
107.5°	296.5	297.0	297.5	298.1	298.6	299.4	300.6	301.8	303.0	304.2	304.9
110°	337.8	338.3	338.8	339.3	339.9	340.6	341.7	342.7	343.8	344.8	345.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	377.8	378.7	379.7	380.6	381.6	382.3	382.8	383.2	383.7	384.2	384.2
115°	439.4	439.9	440.5	441.0	441.5	441.7	441.5	441.3	441.2	441.0	441.3
117.5°	494.9	495.6	496.3	497.0	497.7	498.3	498.6	499.0	499.4	499.8	499.7
120°	532.5	533.2	533.9	534.6	535.2	535.5	535.3	535.2	535.0	534.8	535.2
122.5°	567.5	567.9	568.3	568.7	569.2	569.5	569.7	570.0	570.2	570.5	570.7
125°	617.7	618.4	619.1	619.8	620.5	620.6	620.3	620.0	619.6	619.3	619.8
127.5°	665.2	665.4	665.6	665.8	665.9	666.4	667.2	668.0	668.8	669.6	669.5
130°	695.9	696.1	696.2	696.4	696.6	696.9	697.4	698.0	698.5	699.0	699.2
132.5°	724.0	724.3	724.7	725.0	725.3	725.8	726.4	727.1	727.7	728.4	728.6
135°	766.3	766.1	765.9	765.7	765.6	765.8	766.5	767.2	767.9	768.6	768.9
137.5°	803.6	803.7	803.8	803.8	803.9	804.3	805.1	805.9	806.6	807.4	807.8
140°	828.0	828.4	828.7	829.1	829.4	829.8	830.1	830.5	830.8	831.1	831.7
142.5°	849.9	850.5	851.2	851.8	852.4	852.8	853.0	853.3	853.5	853.7	854.1
145°	883.5	884.1	884.6	885.1	885.6	885.9	885.9	885.9	885.9	885.9	886.1
147.5°	910.3	911.3	912.2	913.2	914.2	914.6	914.4	914.2	914.0	913.9	914.0
150°	929.7	930.4	931.1	931.8	932.4	932.7	932.5	932.4	932.2	932.0	932.0
152.5°	945.9	946.5	947.0	947.6	948.2	948.3	948.0	947.7	947.3	947.0	947.3
155°	968.8	968.9	969.1	969.3	969.5	969.3	968.8	968.2	967.7	967.2	967.9
157.5°	988.0	987.9	987.8	987.7	987.6	987.2	986.6	986.1	985.5	984.9	985.8
160°	999.3	998.7	998.2	997.7	997.2	996.8	996.7	996.5	996.3	996.1	997.2
162.5°	1009.3	1008.6	1007.9	1007.3	1006.6	1006.2	1006.0	1005.9	1005.7	1005.5	1006.6
165°	1021.9	1021.1	1020.2	1019.3	1018.5	1018.0	1018.0	1018.0	1018.0	1018.0	1019.4
167.5°	1031.9	1031.0	1030.1	1029.2	1028.3	1027.8	1027.7	1027.6	1027.5	1027.4	1028.9
170°	1037.6	1036.5	1035.5	1034.4	1033.4	1033.0	1033.1	1033.3	1033.5	1033.7	1035.0
172.5°	1041.3	1040.3	1039.2	1038.2	1037.2	1036.7	1036.9	1037.1	1037.2	1037.4	1038.8
175°	1045.4	1044.3	1043.3	1042.3	1041.2	1040.8	1041.0	1041.1	1041.3	1041.5	1043.0
177.5°	1047.3	1046.3	1045.3	1044.3	1043.4	1043.0	1043.3	1043.6	1043.9	1044.1	1045.2
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5
2.5°	1322.7	1324.6	1326.5	1327.4	1327.2	1327.0	1326.8	1326.6
5°	1315.6	1318.2	1320.8	1321.9	1321.4	1321.0	1320.5	1320.0
7.5°	1301.0	1303.1	1305.1	1306.0	1305.8	1305.5	1305.2	1304.9
10°	1288.7	1290.6	1292.5	1293.2	1292.7	1292.2	1291.8	1291.3
12.5°	1273.8	1275.8	1277.9	1278.6	1278.0	1277.3	1276.6	1276.0
15°	1245.2	1246.6	1248.0	1248.4	1247.7	1247.0	1246.3	1245.6
17.5°	1212.7	1213.6	1214.5	1214.7	1214.2	1213.7	1213.3	1212.8
20°	1188.5	1189.2	1189.9	1190.0	1189.5	1189.1	1188.6	1188.1
22.5°	1163.2	1164.5	1165.8	1166.0	1165.1	1164.3	1163.4	1162.6
25°	1121.6	1121.8	1122.1	1121.7	1120.8	1119.8	1118.9	1117.9
27.5°	1074.9	1074.3	1073.7	1072.9	1071.7	1070.5	1069.3	1068.1
30°	1042.6	1041.7	1040.7	1039.7	1038.5	1037.3	1036.1	1035.0
32.5°	1009.9	1008.8	1007.7	1006.5	1005.3	1004.1	1002.9	1001.8
35°	958.3	956.6	954.9	953.5	952.3	951.2	950.0	948.8
37.5°	904.1	902.3	900.6	898.9	897.3	895.8	894.2	892.6
40°	866.4	864.1	861.7	859.9	858.7	857.6	856.4	855.2
42.5°	829.9	827.2	824.4	822.7	821.9	821.1	820.3	819.5
45°	773.4	770.8	768.2	766.6	765.8	765.1	764.4	763.7
47.5°	718.7	715.8	712.8	710.5	708.7	706.9	705.1	703.3
50°	680.5	677.2	673.9	671.5	670.1	668.7	667.3	665.9
52.5°	641.3	638.3	635.4	633.1	631.3	629.5	627.7	625.9
55°	583.6	580.8	577.9	575.8	574.4	573.0	571.5	570.1
57.5°	525.8	523.1	520.4	518.4	517.0	515.6	514.3	512.9
60°	486.1	484.0	481.8	480.2	479.0	477.8	476.6	475.5
62.5°	447.3	445.4	443.5	441.9	440.7	439.5	438.4	437.2
65°	391.0	388.6	386.2	384.5	383.3	382.1	380.9	379.7
67.5°	332.9	330.6	328.3	327.0	326.7	326.4	326.0	325.7
70°	296.2	294.3	292.4	291.1	290.4	289.7	289.0	288.3
72.5°	259.5	258.0	256.5	255.4	254.6	253.9	253.2	252.5
75°	206.6	205.6	204.7	204.1	203.9	203.6	203.4	203.2
77.5°	156.4	156.1	155.9	155.4	154.8	154.2	153.6	153.0
80°	124.6	124.1	123.6	123.3	123.0	122.8	122.6	122.3
82.5°	96.0	95.7	95.4	95.2	95.0	94.7	94.5	94.2
85°	55.3	55.3	55.3	55.2	55.0	54.7	54.5	54.2
87.5°	24.3	24.5	24.7	24.8	24.9	25.0	25.0	25.1
90°	19.3	20.3	21.4	22.1	22.4	22.8	23.1	23.5
92.5°	18.7	19.7	20.7	21.3	21.4	21.4	21.5	21.6
95°	19.3	20.3	21.4	22.0	22.2	22.3	22.5	22.7
97.5°	20.9	21.0	21.1	21.2	21.4	21.5	21.7	21.9
100°	28.5	25.5	22.6	21.2	21.4	21.5	21.7	21.9
102.5°	102.0	70.2	38.3	22.4	22.4	22.4	22.5	22.5
105°	247.1	248.6	250.2	247.9	241.6	235.3	229.1	222.8
107.5°	305.7	306.4	307.2	307.9	308.6	309.2	309.9	310.6
110°	345.5	345.9	346.2	346.6	347.2	347.7	348.2	348.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	384.1	384.0	383.9	384.2	384.9	385.6	386.2	386.9
115°	441.7	442.0	442.4	442.6	442.6	442.6	442.6	442.6
117.5°	499.6	499.6	499.5	499.4	499.4	499.3	499.2	499.2
120°	535.5	535.9	536.2	536.2	535.9	535.5	535.2	534.8
122.5°	570.9	571.1	571.3	571.2	570.9	570.5	570.2	569.8
125°	620.3	620.8	621.3	621.7	621.9	622.0	622.2	622.4
127.5°	669.4	669.3	669.2	669.1	668.9	668.8	668.7	668.5
130°	699.4	699.5	699.7	699.8	699.8	699.8	699.8	699.8
132.5°	728.8	728.9	729.1	729.1	729.0	728.8	728.7	728.6
135°	769.3	769.6	770.0	770.3	770.7	771.0	771.4	771.7
137.5°	808.1	808.5	808.9	809.0	808.9	808.8	808.7	808.6
140°	832.2	832.7	833.2	833.6	833.8	833.9	834.1	834.3
142.5°	854.4	854.8	855.2	855.4	855.4	855.5	855.5	855.5
145°	886.2	886.4	886.6	886.8	887.2	887.5	887.9	888.2
147.5°	914.2	914.3	914.4	914.6	914.8	914.9	915.1	915.3
150°	932.0	932.0	932.0	932.1	932.3	932.4	932.6	932.8
152.5°	947.6	947.9	948.1	948.2	948.1	948.0	947.9	947.8
155°	968.6	969.3	970.0	970.1	969.5	969.0	968.5	968.0
157.5°	986.7	987.6	988.5	988.5	987.6	986.7	985.8	984.9
160°	998.2	999.3	1000.3	1000.3	999.3	998.2	997.2	996.1
162.5°	1007.6	1008.6	1009.7	1009.6	1008.4	1007.2	1006.1	1004.9
165°	1020.8	1022.2	1023.6	1023.5	1021.9	1020.4	1018.8	1017.2
167.5°	1030.5	1032.0	1033.5	1033.4	1031.7	1029.9	1028.2	1026.5
170°	1036.4	1037.8	1039.2	1039.0	1037.3	1035.6	1033.8	1032.1
172.5°	1040.2	1041.6	1043.0	1042.7	1040.9	1039.0	1037.1	1035.2
175°	1044.6	1046.2	1047.7	1047.5	1045.4	1043.3	1041.2	1039.1
177.5°	1046.4	1047.5	1048.6	1048.3	1046.6	1045.0	1043.3	1041.6
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4

(END OF REPORT)