

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: P332701-830

Luminaire Tested: **SA4XXDIP-C1195D1035U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332701-830  
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-C1195D1035U830-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP 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: 7960.1 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

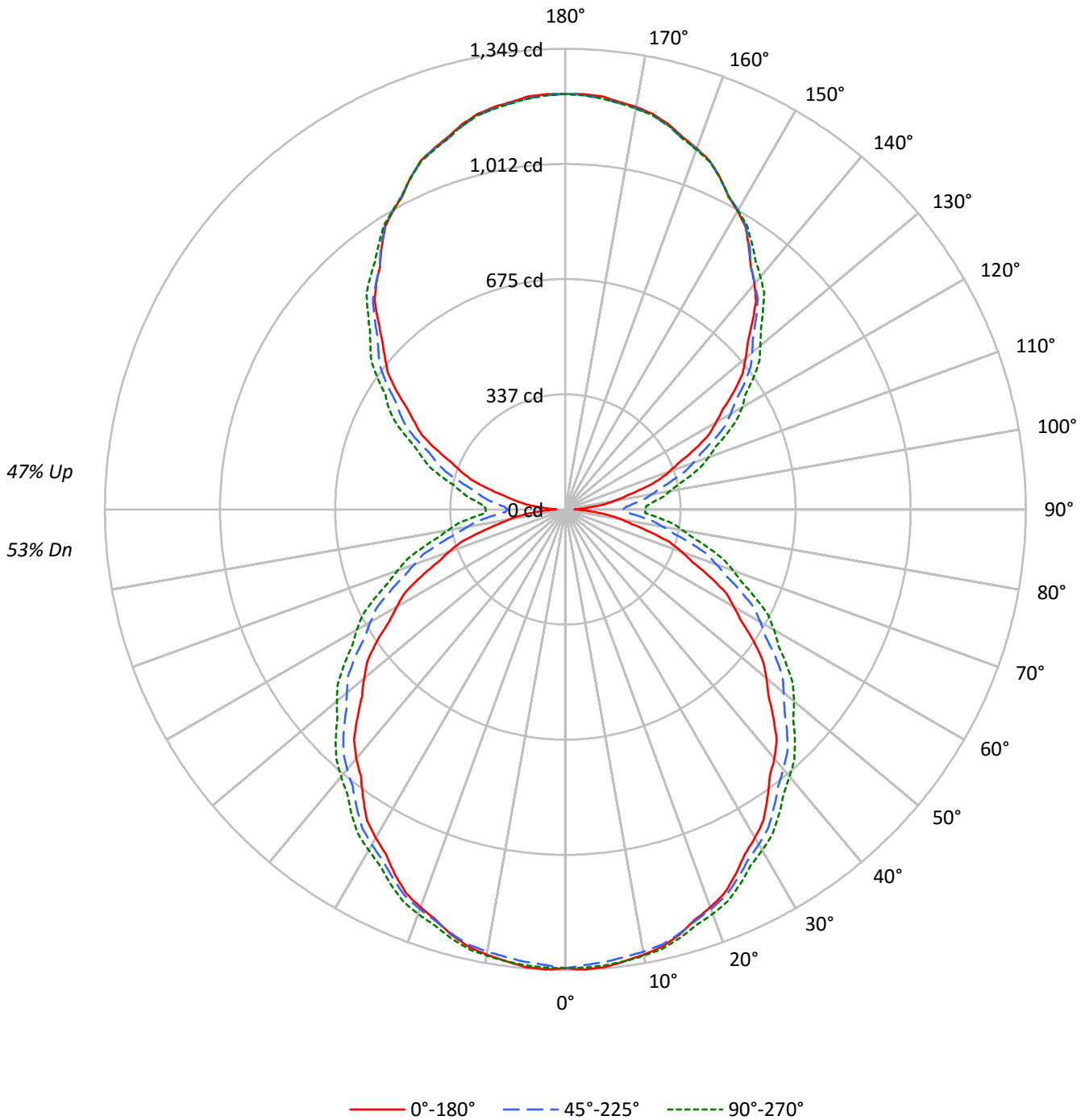
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	51	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	38	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	43	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	19	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	14	12

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

	0°	45°	90°
0°	10851	10851	10851
5°	10884	10604	10635
10°	10818	10431	10423
15°	10721	10231	10174
20°	10574	10009	9931
25°	10410	9760	9665
30°	10231	9513	9392
35°	10029	9259	9152
40°	9868	9019	8902
45°	9628	8797	8688
50°	9425	8541	8461
55°	9216	8300	8195
60°	8889	7992	7953
65°	8532	7663	7655
70°	8098	7286	7308
75°	7493	6872	6995
80°	6823	6474	6686
85°	5963	6123	6505



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.3	1.6
10°-20°	364.7	4.6
20°-30°	551.4	6.9
30°-40°	667.1	8.4
40°-50°	705.3	8.9
50°-60°	663.8	8.3
60°-70°	550.7	6.9
70°-80°	386.8	4.9
80°-90°	222.3	2.8
90°-100°	210.1	2.6
100°-110°	333.8	4.2
110°-120°	467.9	5.9
120°-130°	568.3	7.1
130°-140°	613.1	7.7
140°-150°	590.2	7.4
150°-160°	493.7	6.2
160°-170°	328.5	4.1
170°-180°	115.0	1.4
0°-30°	1043.3	13.1
0°-40°	1710.5	21.5
0°-60°	3079.5	38.7
0°-90°	4239.4	53.3
90°-120°	1011.8	12.7
90°-150°	2783.5	35.0
90°-180°	3721.0	46.7
0°-180°	7960.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1346	1341	1330	1342	1341	128
15°	1290	1291	1287	1300	1299	363
25°	1180	1189	1194	1209	1212	543
35°	1032	1050	1066	1086	1091	646
45°	861	890	918	943	951	665
55°	674	707	751	780	790	601
65°	467	515	566	602	616	462
75°	259	315	378	418	434	275
85°	80	143	211	254	271	85
90°	27	98	170	217	233	19
95°	76	135	202	244	260	78
105°	233	265	323	362	378	248
115°	419	435	479	510	521	414
125°	603	604	639	664	672	538
135°	774	779	790	811	818	599
145°	938	940	941	949	952	587
155°	1072	1072	1072	1075	1072	493
165°	1168	1165	1163	1168	1165	329
175°	1215	1210	1209	1215	1209	115
180°	1216	1216	1216	1216	1216	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1348.9	1348.0	1347.3	1346.4	1345.7	1344.2	1342.0	1339.9	1337.8	1335.6	1337.5
5°	1345.5	1344.5	1343.5	1342.6	1341.5	1339.8	1337.5	1335.1	1332.8	1330.5	1333.1
7.5°	1334.1	1333.5	1332.8	1332.3	1331.7	1330.4	1328.5	1326.5	1324.6	1322.7	1325.7
10°	1324.5	1324.1	1323.8	1323.4	1323.1	1322.1	1320.4	1318.8	1317.1	1315.4	1318.4
12.5°	1311.2	1311.2	1311.1	1311.0	1311.0	1310.3	1309.2	1308.1	1306.9	1305.8	1308.5
15°	1289.9	1290.2	1290.5	1290.8	1291.2	1290.8	1289.9	1288.8	1287.8	1286.9	1289.9
17.5°	1260.7	1261.7	1262.6	1263.7	1264.6	1265.1	1264.9	1264.6	1264.4	1264.2	1267.3
20°	1240.2	1241.1	1242.2	1243.2	1244.2	1244.8	1245.2	1245.6	1245.9	1246.2	1249.5
22.5°	1217.3	1218.5	1219.8	1221.1	1222.4	1223.3	1223.9	1224.6	1225.1	1225.7	1229.1
25°	1180.0	1181.9	1184.0	1186.0	1188.0	1189.5	1190.5	1191.5	1192.5	1193.5	1197.2
27.5°	1138.4	1141.4	1144.3	1147.3	1150.2	1152.4	1154.0	1155.6	1157.1	1158.6	1162.0
30°	1110.7	1113.4	1116.1	1118.8	1121.4	1124.0	1126.2	1128.6	1131.0	1133.3	1137.0
32.5°	1080.6	1083.8	1087.0	1090.2	1093.4	1096.4	1099.0	1101.6	1104.2	1106.8	1111.1
35°	1032.5	1036.5	1040.5	1044.5	1048.5	1052.2	1055.6	1058.9	1062.2	1065.5	1070.3
37.5°	984.0	988.6	993.3	997.9	1002.5	1006.8	1011.0	1015.1	1019.3	1023.4	1028.2
40°	952.7	957.1	961.4	965.7	970.1	974.6	979.3	984.0	988.6	993.3	998.3
42.5°	916.6	921.4	926.3	931.2	936.1	941.3	946.8	952.3	957.7	963.3	968.8
45°	860.9	867.2	873.6	880.0	886.3	892.7	899.0	905.4	911.7	918.1	923.8
47.5°	807.6	814.2	820.8	827.3	833.9	840.8	848.2	855.5	862.9	870.2	876.1
50°	769.1	776.5	783.8	791.2	798.5	805.9	813.2	820.6	827.9	835.3	842.0
52.5°	730.6	737.9	745.3	752.6	760.0	767.9	776.3	784.8	793.1	801.6	808.3
55°	674.3	681.3	688.3	695.3	702.4	710.9	721.0	730.9	741.0	751.0	757.7
57.5°	611.3	620.1	628.8	637.4	646.1	655.4	665.4	675.4	685.4	695.3	703.3
60°	570.4	579.1	587.8	596.5	605.2	615.1	626.1	637.2	648.2	659.2	666.9
62.5°	530.7	540.2	549.7	559.2	568.6	578.9	590.0	601.1	612.1	623.1	630.7
65°	466.6	477.3	488.0	498.7	509.3	520.4	531.8	543.2	554.5	565.9	574.3
67.5°	404.8	416.2	427.6	438.9	450.3	462.1	474.3	486.4	498.6	510.9	519.3
70°	362.7	374.1	385.5	396.8	408.2	420.3	432.9	445.6	458.4	471.1	480.1
72.5°	321.8	333.4	345.1	356.7	368.3	380.9	394.5	407.9	421.4	435.0	443.7
75°	258.9	271.3	283.6	296.0	308.4	321.6	335.6	349.7	363.7	377.8	387.1
77.5°	200.2	213.3	226.4	239.5	252.6	266.6	281.3	296.0	310.7	325.4	334.9
80°	164.1	177.4	190.8	204.2	217.5	231.6	246.3	261.1	275.8	290.5	300.5
82.5°	127.9	141.9	155.8	169.7	183.6	197.9	212.6	227.3	242.0	256.7	267.0
85°	79.7	93.8	107.8	121.9	135.9	150.5	165.5	180.6	195.7	210.8	220.7
87.5°	45.1	59.2	73.3	87.5	101.5	116.1	131.1	146.1	161.1	176.0	186.0
90°	26.9	42.6	58.2	73.9	89.6	105.5	121.5	137.6	153.6	169.7	180.7
92.5°	43.0	57.7	72.4	87.0	101.7	116.8	132.3	147.9	163.4	179.0	189.3
95°	76.0	89.0	101.9	114.8	127.7	141.8	156.9	172.1	187.3	202.5	212.1
97.5°	116.3	127.3	138.4	149.4	160.3	173.5	188.8	204.1	219.4	234.7	244.2
100°	148.3	157.8	167.3	176.8	186.4	198.6	213.6	228.5	243.4	258.4	267.8
102.5°	182.9	190.9	198.8	206.8	214.7	225.9	240.4	255.0	269.4	283.9	293.2
105°	232.7	239.7	246.6	253.4	260.3	270.4	283.6	296.8	310.0	323.2	332.2
107.5°	287.9	293.7	299.4	305.2	310.9	319.7	331.5	343.4	355.2	367.0	375.8
110°	324.4	329.5	334.6	339.7	344.8	353.1	364.6	376.1	387.6	399.1	406.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	362.3	366.6	370.8	375.0	379.3	386.7	397.6	408.3	419.1	429.9	437.2
115°	419.2	422.3	425.3	428.2	431.2	437.9	448.2	458.5	468.7	479.0	486.2
117.5°	474.2	476.2	478.2	480.1	482.1	488.0	497.7	507.3	517.0	526.6	532.9
120°	509.9	511.7	513.6	515.4	517.3	522.7	531.8	540.8	550.0	559.0	564.7
122.5°	548.3	548.8	549.3	549.9	550.4	555.2	564.0	572.9	581.7	590.6	596.6
125°	603.4	603.0	602.8	602.4	602.1	606.0	614.2	622.3	630.5	638.6	644.5
127.5°	654.5	654.8	655.1	655.3	655.6	658.8	665.0	671.0	677.1	683.2	688.8
130°	689.4	689.7	690.0	690.3	690.6	693.4	698.7	704.1	709.5	714.8	720.4
132.5°	726.3	726.4	726.5	726.7	726.8	728.9	733.0	737.2	741.2	745.4	750.7
135°	773.5	774.8	776.0	777.3	778.5	780.3	782.7	785.0	787.3	789.7	794.7
137.5°	826.6	826.8	827.1	827.4	827.6	828.4	829.9	831.4	832.8	834.3	838.7
140°	862.0	862.0	862.1	862.2	862.2	862.5	862.8	863.2	863.5	863.8	868.0
142.5°	893.2	893.4	893.8	894.2	894.5	894.5	894.1	893.8	893.4	893.1	896.8
145°	937.5	938.1	938.6	939.1	939.6	939.9	940.2	940.4	940.6	940.8	942.5
147.5°	982.0	982.7	983.4	984.0	984.7	985.0	984.8	984.6	984.4	984.3	984.4
150°	1009.1	1009.6	1010.1	1010.6	1011.1	1011.3	1011.3	1011.3	1011.3	1011.3	1011.3
152.5°	1033.5	1033.9	1034.3	1034.8	1035.2	1035.5	1035.7	1035.9	1036.0	1036.1	1036.7
155°	1072.5	1072.5	1072.5	1072.5	1072.5	1072.4	1072.1	1072.0	1071.8	1071.6	1072.4
157.5°	1105.6	1105.2	1104.8	1104.5	1104.1	1103.9	1103.8	1103.8	1103.8	1103.7	1104.4
160°	1125.2	1124.9	1124.7	1124.5	1124.4	1124.2	1123.9	1123.7	1123.5	1123.3	1123.9
162.5°	1143.2	1142.7	1142.2	1141.6	1141.0	1140.7	1140.5	1140.3	1140.1	1139.8	1140.9
165°	1167.5	1166.9	1166.3	1165.6	1165.0	1164.5	1164.0	1163.7	1163.2	1162.8	1164.0
167.5°	1186.2	1185.2	1184.4	1183.6	1182.6	1182.2	1182.2	1182.3	1182.3	1182.4	1183.6
170°	1196.7	1195.6	1194.6	1193.5	1192.5	1192.0	1192.3	1192.5	1192.7	1192.9	1194.2
172.5°	1204.2	1203.3	1202.5	1201.6	1200.7	1200.2	1200.3	1200.3	1200.4	1200.4	1201.8
175°	1214.6	1213.5	1212.5	1211.4	1210.4	1209.8	1209.6	1209.3	1209.1	1208.9	1210.4
177.5°	1218.0	1217.1	1216.3	1215.4	1214.6	1214.2	1214.2	1214.2	1214.2	1214.2	1215.3
180°	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1339.4	1341.2	1343.1	1343.9	1343.6	1343.3	1343.1	1342.8
5°	1335.9	1338.5	1341.1	1342.4	1342.0	1341.7	1341.3	1341.0
7.5°	1328.7	1331.7	1334.7	1336.1	1335.7	1335.4	1335.0	1334.7
10°	1321.4	1324.5	1327.5	1328.8	1328.5	1328.1	1327.8	1327.5
12.5°	1311.3	1314.0	1316.7	1318.1	1318.1	1318.0	1317.9	1317.9
15°	1292.9	1295.9	1298.8	1300.2	1299.9	1299.6	1299.2	1298.8
17.5°	1270.5	1273.5	1276.6	1278.0	1277.7	1277.4	1277.1	1276.9
20°	1252.9	1256.2	1259.6	1261.2	1261.2	1261.2	1261.2	1261.2
22.5°	1232.4	1235.8	1239.1	1241.0	1241.6	1242.1	1242.6	1243.2
25°	1200.9	1204.6	1208.2	1210.2	1210.6	1210.9	1211.3	1211.5
27.5°	1165.5	1168.8	1172.2	1174.1	1174.6	1175.0	1175.4	1175.7
30°	1140.7	1144.3	1148.0	1150.2	1150.8	1151.5	1152.2	1152.9
32.5°	1115.2	1119.5	1123.7	1126.1	1126.8	1127.5	1128.1	1128.8
35°	1075.0	1079.6	1084.3	1087.1	1088.2	1089.2	1090.1	1091.2
37.5°	1032.9	1037.6	1042.5	1045.4	1046.4	1047.4	1048.6	1049.6
40°	1003.3	1008.4	1013.4	1016.6	1017.9	1019.3	1020.6	1021.9
42.5°	974.3	979.9	985.4	988.7	989.9	990.9	991.9	993.1
45°	929.4	935.2	940.8	944.5	946.2	947.8	949.5	951.2
47.5°	882.0	887.9	893.8	897.7	899.8	901.7	903.7	905.8
50°	848.7	855.4	862.0	866.4	868.5	870.4	872.4	874.4
52.5°	815.0	821.7	828.3	832.7	834.7	836.7	838.7	840.7
55°	764.4	771.1	777.8	782.1	784.1	786.2	788.2	790.1
57.5°	711.2	719.3	727.2	732.1	734.0	735.8	737.7	739.6
60°	674.6	682.3	689.9	695.1	697.9	700.5	703.2	705.9
62.5°	638.5	646.2	653.8	659.0	661.8	664.4	667.0	669.8
65°	582.6	591.0	599.4	604.8	607.6	610.2	612.9	615.6
67.5°	527.8	536.3	544.8	550.4	553.0	555.5	558.2	560.8
70°	489.2	498.1	507.2	512.9	515.2	517.6	519.9	522.3
72.5°	452.5	461.3	470.0	475.7	478.3	480.9	483.5	486.2
75°	396.5	405.9	415.2	421.4	424.4	427.4	430.5	433.5
77.5°	344.4	353.9	363.4	369.8	373.0	376.2	379.4	382.6
80°	310.6	320.6	330.6	337.0	339.6	342.3	345.0	347.7
82.5°	277.4	287.7	297.9	304.6	307.6	310.5	313.4	316.3
85°	230.7	240.8	250.8	257.5	260.9	264.2	267.6	270.9
87.5°	196.0	205.9	215.8	222.3	225.4	228.4	231.4	234.4
90°	191.6	202.6	213.5	220.6	223.7	226.7	229.8	232.9
92.5°	199.4	209.6	219.8	226.3	229.2	232.1	235.1	238.0
95°	221.8	231.4	241.1	247.4	250.4	253.4	256.5	259.5
97.5°	253.7	263.3	272.8	279.0	281.8	284.7	287.6	290.5
100°	277.2	286.6	296.1	302.0	304.3	306.7	309.1	311.4
102.5°	302.7	312.0	321.3	327.3	330.2	332.9	335.7	338.5
105°	341.2	350.2	359.2	365.3	368.6	371.9	375.2	378.5
107.5°	384.7	393.4	402.3	407.8	410.2	412.6	414.9	417.4
110°	413.6	420.9	428.2	433.5	436.8	440.1	443.4	446.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	444.6	451.9	459.3	464.4	467.1	470.0	472.8	475.6
115°	493.3	500.5	507.7	512.3	514.4	516.5	518.7	520.8
117.5°	539.1	545.4	551.7	555.9	558.2	560.4	562.7	564.9
120°	570.3	575.9	581.5	586.0	589.1	592.1	595.2	598.3
122.5°	602.6	608.6	614.5	618.3	620.0	621.7	623.3	625.0
125°	650.4	656.4	662.3	666.1	667.7	669.3	670.9	672.5
127.5°	694.4	700.0	705.6	709.4	711.3	713.2	715.2	717.1
130°	726.0	731.6	737.3	740.6	741.8	742.9	744.1	745.3
132.5°	756.0	761.4	766.7	770.2	771.8	773.5	775.2	776.9
135°	799.6	804.5	809.5	812.6	814.0	815.3	816.7	818.1
137.5°	843.0	847.3	851.7	854.8	856.6	858.4	860.2	862.0
140°	872.1	876.3	880.4	883.2	884.7	886.1	887.6	889.0
142.5°	900.6	904.4	908.1	910.7	912.0	913.4	914.7	916.2
145°	944.4	946.2	948.0	949.2	950.0	950.6	951.4	952.1
147.5°	984.5	984.6	984.7	985.1	986.0	986.8	987.7	988.5
150°	1011.3	1011.3	1011.3	1011.3	1011.1	1010.8	1010.6	1010.4
152.5°	1037.2	1037.6	1038.2	1038.2	1037.6	1037.1	1036.5	1035.9
155°	1073.3	1074.0	1074.9	1074.9	1074.0	1073.3	1072.4	1071.6
157.5°	1104.9	1105.6	1106.3	1106.2	1105.5	1104.8	1104.1	1103.3
160°	1124.5	1125.2	1125.8	1125.6	1124.5	1123.5	1122.5	1121.4
162.5°	1142.1	1143.2	1144.3	1144.4	1143.4	1142.4	1141.3	1140.2
165°	1165.4	1166.6	1167.8	1168.0	1167.2	1166.4	1165.5	1164.7
167.5°	1184.9	1186.2	1187.4	1187.4	1186.1	1184.8	1183.5	1182.2
170°	1195.4	1196.7	1198.0	1197.8	1196.4	1194.9	1193.4	1191.9
172.5°	1203.2	1204.7	1206.2	1206.1	1204.7	1203.2	1201.7	1200.2
175°	1211.8	1213.3	1214.7	1214.7	1213.3	1211.8	1210.4	1208.9
177.5°	1216.5	1217.7	1218.9	1218.8	1217.5	1216.1	1214.7	1213.4
180°	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4	1216.4

(END OF REPORT)