

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: P332947-830

Luminaire Tested: **SA4XXRDIP-C795D1035U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332947-830
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: SA4XXRDIP-C795D1035U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

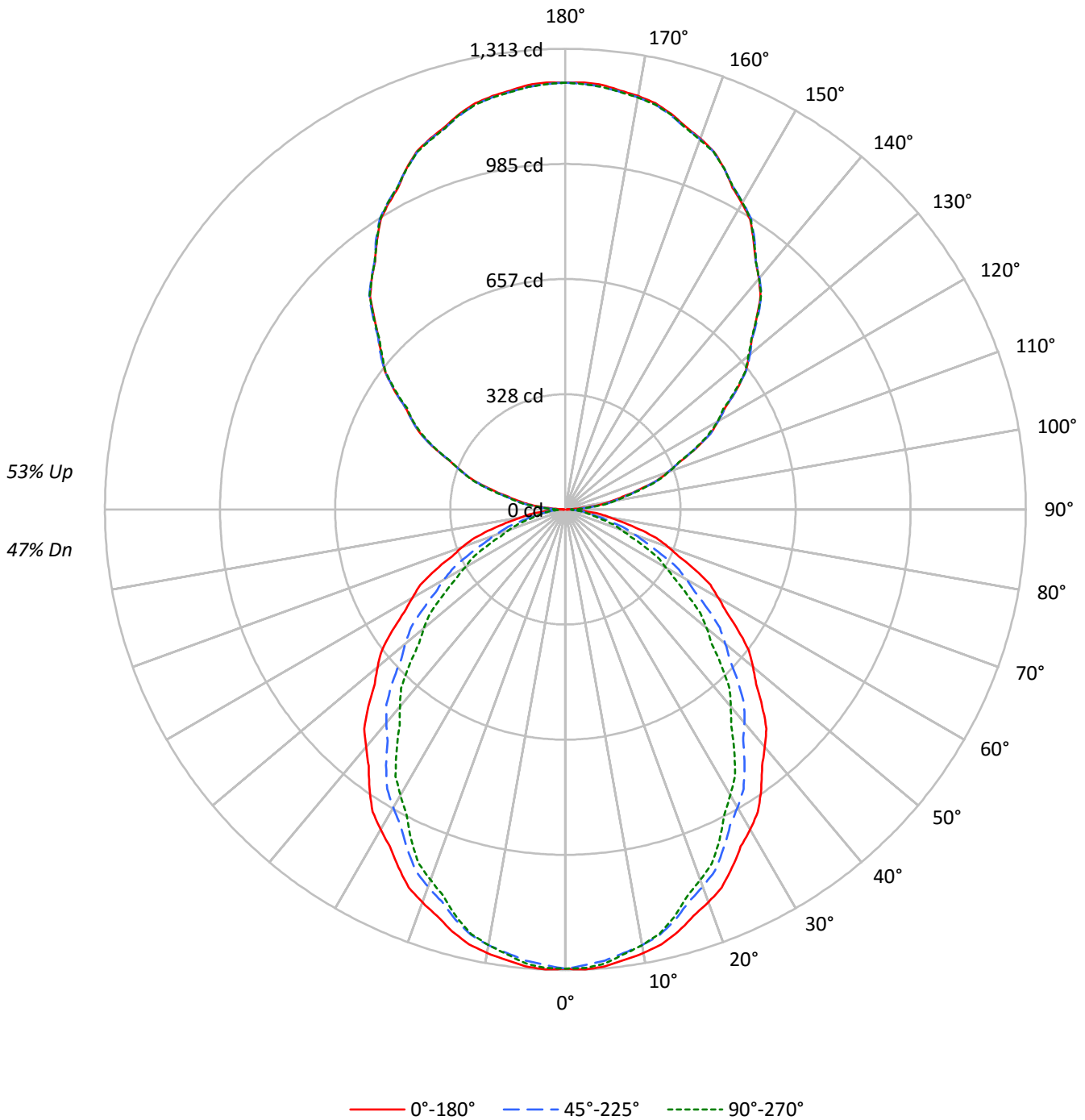
Lumens per Lamp: N/A
Luminaire Lumens: 6403.7 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 52
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	0
RCR																		
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	97	93	89	86	89	86	83	80	72	70	68	59	58	56	48	47	46	40
2	89	82	76	71	82	75	70	66	63	60	56	52	50	47	42	41	39	34
3	81	72	65	59	74	66	60	55	56	52	48	47	43	40	38	35	33	29
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	34	31	29	25
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	22	19
7	58	46	38	33	54	43	36	31	37	31	27	31	27	24	25	22	20	17
8	54	42	34	29	50	39	32	27	34	28	24	28	24	21	23	20	18	16
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10571	10571	10571
5°	10594	10464	10529
10°	10528	10339	10339
15°	10407	10122	10046
20°	10241	9836	9655
25°	10029	9502	9260
30°	9822	9149	8766
35°	9594	8784	8270
40°	9319	8368	7734
45°	9065	7955	7188
50°	8776	7479	6610
55°	8466	6984	5983
60°	8126	6442	5341
65°	7815	5765	4713
70°	7360	5016	4001
75°	6784	4161	3250
80°	5918	3166	2985
85°	5011	2881	2686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	1.9
10°-20°	343.0	5.4
20°-30°	495.3	7.7
30°-40°	561.4	8.8
40°-50°	542.1	8.5
50°-60°	450.8	7.0
60°-70°	311.3	4.9
70°-80°	157.8	2.5
80°-90°	44.1	0.7
90°-100°	80.2	1.3
100°-110°	237.7	3.7
110°-120°	403.4	6.3
120°-130°	531.9	8.3
130°-140°	597.4	9.3
140°-150°	587.0	9.2
150°-160°	493.7	7.7
160°-170°	328.5	5.1
170°-180°	115.0	1.8
0°-30°	961.2	15.0
0°-40°	1522.6	23.8
0°-60°	2515.6	39.3
0°-90°	3028.7	47.3
90°-120°	721.3	11.3
90°-150°	2437.7	38.1
90°-180°	3375.0	52.7
0°-180°	6403.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1307	1303	1291	1301	1299	124
15°	1245	1235	1211	1209	1202	351
25°	1126	1106	1067	1050	1040	519
35°	974	940	891	858	839	608
45°	794	756	697	649	630	612
55°	602	560	496	446	425	538
65°	409	365	302	260	247	404
75°	218	180	133	111	104	230
85°	54	35	31	29	29	61
90°	3	13	21	26	28	6
95°	56	65	72	74	74	63
105°	219	220	224	227	230	233
115°	410	410	408	407	406	404
125°	597	597	596	595	593	532
135°	770	776	776	774	772	596
145°	936	940	941	940	937	586
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°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1312.6	1311.8	1311.1	1310.4	1309.7	1308.3	1306.4	1304.5	1302.5	1300.5	1302.5
5°	1307.3	1306.5	1305.5	1304.7	1303.7	1302.0	1299.3	1296.7	1293.9	1291.3	1293.5
7.5°	1295.5	1294.6	1293.6	1292.7	1291.8	1289.6	1286.1	1282.6	1279.1	1275.6	1277.1
10°	1284.3	1283.2	1282.0	1280.9	1279.8	1277.2	1273.3	1269.2	1265.3	1261.2	1262.1
12.5°	1269.8	1268.6	1267.2	1265.9	1264.7	1261.7	1257.0	1252.2	1247.5	1242.7	1243.3
15°	1245.2	1243.2	1241.1	1239.2	1237.2	1233.4	1227.8	1222.2	1216.6	1211.1	1210.6
17.5°	1215.3	1212.4	1209.5	1206.6	1203.7	1198.9	1192.2	1185.5	1178.8	1172.1	1170.9
20°	1192.0	1189.1	1186.3	1183.4	1180.4	1175.3	1167.6	1160.1	1152.4	1144.9	1143.1
22.5°	1166.4	1163.1	1159.9	1156.6	1153.4	1147.6	1139.5	1131.4	1123.3	1115.2	1112.6
25°	1125.9	1121.8	1117.9	1113.8	1109.8	1103.2	1094.1	1085.0	1075.8	1066.7	1062.9
27.5°	1083.4	1078.4	1073.3	1068.3	1063.2	1055.8	1046.0	1036.3	1026.5	1016.8	1012.1
30°	1053.7	1048.1	1042.5	1037.0	1031.4	1023.4	1013.0	1002.5	991.9	981.5	975.9
32.5°	1022.4	1016.2	1009.8	1003.5	997.3	988.7	977.9	967.0	956.2	945.4	939.0
35°	973.5	966.4	959.2	952.1	945.0	935.9	924.7	913.5	902.4	891.3	883.7
37.5°	921.1	913.8	906.4	899.1	891.7	881.9	869.6	857.2	844.9	832.5	824.1
40°	884.3	876.9	869.6	862.2	854.9	844.8	832.1	819.4	806.7	794.0	784.7
42.5°	848.9	841.2	833.6	825.9	818.1	807.7	794.5	781.2	768.0	754.7	745.2
45°	794.0	785.8	777.5	769.3	761.0	750.3	736.9	723.5	710.1	696.8	685.9
47.5°	737.3	728.8	720.3	711.7	703.2	692.0	678.2	664.2	650.4	636.4	625.1
50°	698.8	690.1	681.4	672.7	664.0	652.5	638.3	624.1	609.7	595.5	584.4
52.5°	659.5	651.0	642.4	634.0	625.5	613.9	599.3	584.7	570.0	555.4	544.1
55°	601.5	592.6	583.7	574.8	565.9	554.2	539.7	525.2	510.8	496.2	484.7
57.5°	544.2	534.9	525.7	516.4	507.1	495.3	481.1	466.8	452.6	438.3	426.6
60°	503.3	494.4	485.5	476.5	467.6	456.1	441.8	427.5	413.3	399.0	387.4
62.5°	466.4	457.1	447.9	438.6	429.3	417.4	402.7	388.1	373.5	358.9	348.2
65°	409.1	399.4	389.8	380.3	370.7	358.8	344.5	330.3	316.0	301.8	292.2
67.5°	349.5	340.4	331.1	322.0	312.7	301.6	288.3	275.1	261.8	248.6	240.3
70°	311.8	302.5	293.0	283.7	274.4	263.3	250.6	237.9	225.3	212.5	205.2
72.5°	271.7	263.3	254.8	246.3	237.8	227.6	215.7	203.6	191.6	179.6	173.3
75°	217.5	209.3	201.0	192.8	184.5	175.2	164.8	154.3	143.8	133.4	128.2
77.5°	162.6	155.6	148.6	141.7	134.6	126.9	118.5	110.0	101.5	93.0	90.0
80°	127.3	120.8	114.4	107.9	101.5	94.9	88.2	81.5	74.8	68.1	67.5
82.5°	96.9	91.0	85.0	79.1	73.1	68.2	64.5	60.6	56.7	53.0	52.4
85°	54.1	49.7	45.2	40.8	36.3	33.7	33.1	32.4	31.8	31.1	30.6
87.5°	19.0	18.0	17.1	16.1	15.2	14.7	14.9	15.1	15.2	15.4	15.5
90°	2.8	5.1	7.4	9.7	12.1	14.0	15.6	17.3	19.0	20.7	22.0
92.5°	20.2	22.8	25.4	28.0	30.6	32.6	33.7	34.9	36.1	37.2	38.0
95°	56.5	58.3	60.2	62.1	64.0	65.6	67.1	68.6	70.0	71.5	72.1
97.5°	98.6	100.1	101.6	103.1	104.6	106.2	107.9	109.6	111.4	113.1	113.9
100°	131.7	132.5	133.4	134.2	135.1	136.4	138.3	140.2	142.0	143.9	144.4
102.5°	166.4	166.6	167.0	167.3	167.7	168.7	170.4	172.1	173.8	175.6	176.2
105°	219.2	219.4	219.6	219.8	220.1	220.6	221.4	222.3	223.1	223.9	224.5
107.5°	274.8	274.9	275.2	275.5	275.7	275.9	276.1	276.2	276.3	276.4	277.0
110°	312.4	312.7	313.2	313.6	314.1	314.1	313.9	313.7	313.5	313.3	312.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	351.5	351.6	351.7	351.8	351.9	351.7	351.3	350.9	350.5	350.2	350.1
115°	410.2	410.2	410.2	410.2	410.2	410.0	409.5	409.2	408.7	408.3	408.1
117.5°	465.5	465.7	465.8	466.0	466.2	466.1	465.8	465.5	465.2	465.0	464.2
120°	502.4	503.2	504.1	504.9	505.8	505.9	505.2	504.5	504.0	503.3	502.3
122.5°	540.7	541.1	541.4	541.8	542.1	542.2	541.9	541.5	541.2	540.9	540.3
125°	597.4	597.4	597.4	597.4	597.4	597.3	597.1	596.9	596.6	596.4	596.1
127.5°	648.8	649.4	650.0	650.6	651.3	651.4	651.1	650.7	650.4	650.1	649.7
130°	684.9	685.5	686.2	686.7	687.4	687.7	687.7	687.7	687.7	687.7	687.3
132.5°	721.8	722.3	722.6	723.1	723.6	723.8	723.6	723.4	723.2	723.1	722.6
135°	770.5	771.8	773.0	774.3	775.5	776.2	776.2	776.2	776.2	776.2	775.7
137.5°	823.6	824.2	824.7	825.3	826.0	826.3	826.7	827.1	827.4	827.7	827.2
140°	858.9	859.3	859.8	860.2	860.6	860.8	860.8	860.8	860.8	860.8	860.6
142.5°	891.3	891.7	892.1	892.6	893.0	893.1	893.0	892.8	892.6	892.4	892.4
145°	936.0	936.9	937.7	938.6	939.4	939.9	940.2	940.4	940.6	940.8	940.6
147.5°	980.5	981.5	982.5	983.5	984.5	985.0	984.8	984.6	984.4	984.3	984.1
150°	1007.6	1008.4	1009.3	1010.1	1011.0	1011.3	1011.3	1011.3	1011.3	1011.3	1011.3
152.5°	1033.2	1033.7	1034.2	1034.7	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°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1304.5	1306.4	1308.3	1309.3	1309.1	1308.9	1308.7	1308.5
5°	1295.7	1298.0	1300.2	1301.1	1300.6	1300.2	1299.8	1299.3
7.5°	1278.5	1280.0	1281.4	1281.7	1281.0	1280.3	1279.6	1278.8
10°	1263.0	1263.9	1264.8	1264.8	1263.9	1263.0	1262.1	1261.2
12.5°	1243.9	1244.3	1244.9	1244.5	1243.3	1242.1	1240.8	1239.5
15°	1210.2	1209.8	1209.3	1208.3	1206.7	1205.1	1203.6	1202.0
17.5°	1169.7	1168.5	1167.2	1165.4	1163.0	1160.6	1158.3	1155.9
20°	1141.3	1139.5	1137.7	1135.5	1132.6	1129.6	1126.7	1123.9
22.5°	1109.9	1107.2	1104.6	1102.0	1099.7	1097.3	1095.0	1092.6
25°	1059.1	1055.4	1051.6	1048.6	1046.3	1044.1	1041.9	1039.6
27.5°	1007.4	1002.8	998.1	994.1	990.9	987.7	984.5	981.3
30°	970.3	964.8	959.2	954.6	951.1	947.5	944.0	940.4
32.5°	932.5	926.0	919.5	914.6	911.3	907.9	904.5	901.1
35°	876.1	868.6	861.0	855.2	851.2	847.2	843.1	839.1
37.5°	815.6	807.1	798.6	792.4	788.4	784.4	780.4	776.4
40°	775.3	765.9	756.6	749.9	745.9	741.9	737.9	733.9
42.5°	735.7	726.1	716.6	709.7	705.5	701.3	697.2	693.0
45°	675.0	664.0	653.1	645.6	641.6	637.6	633.6	629.6
47.5°	613.8	602.5	591.2	583.2	578.9	574.5	570.0	565.6
50°	573.3	562.1	550.9	543.3	539.0	534.8	530.6	526.3
52.5°	532.8	521.5	510.1	502.3	497.9	493.4	489.1	484.7
55°	473.1	461.5	450.0	442.1	437.8	433.6	429.3	425.1
57.5°	414.8	403.0	391.2	383.8	380.6	377.4	374.2	371.0
60°	375.9	364.3	352.7	345.1	341.6	338.0	334.4	330.8
62.5°	337.5	326.9	316.1	309.3	306.5	303.7	300.8	297.9
65°	282.6	273.1	263.4	257.3	254.7	251.9	249.3	246.7
67.5°	232.1	223.9	215.7	210.1	207.2	204.2	201.2	198.3
70°	197.8	190.5	183.1	178.3	176.2	173.9	171.6	169.5
72.5°	167.1	160.8	154.5	150.3	148.4	146.3	144.2	142.1
75°	123.1	118.0	112.8	109.6	108.3	107.0	105.6	104.2
77.5°	87.1	84.1	81.1	79.4	79.0	78.6	78.2	77.8
80°	66.8	66.2	65.5	65.0	64.8	64.6	64.4	64.2
82.5°	51.9	51.5	51.0	50.6	50.4	50.1	50.0	49.8
85°	30.2	29.8	29.3	29.0	29.0	29.0	29.0	29.0
87.5°	15.6	15.6	15.6	15.8	16.1	16.3	16.6	16.9
90°	23.2	24.5	25.7	26.6	27.0	27.4	27.8	28.2
92.5°	38.7	39.5	40.2	40.8	41.0	41.3	41.6	41.8
95°	72.8	73.4	74.0	74.4	74.4	74.4	74.4	74.4
97.5°	114.6	115.4	116.1	116.5	116.5	116.5	116.5	116.5
100°	144.8	145.2	145.6	145.8	145.8	145.8	145.8	145.8
102.5°	176.7	177.3	177.9	178.2	178.4	178.6	178.8	178.9
105°	225.2	225.8	226.4	227.1	227.6	228.3	228.9	229.5
107.5°	277.6	278.1	278.7	279.0	279.0	278.9	278.9	278.8
110°	312.5	312.0	311.6	311.7	312.4	312.9	313.6	314.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	350.0	349.9	349.9	349.9	350.0	350.1	350.2	350.3
115°	407.8	407.6	407.5	407.3	407.1	406.8	406.6	406.4
117.5°	463.5	462.8	462.1	461.6	461.1	460.7	460.2	459.9
120°	501.2	500.2	499.2	498.8	499.3	499.6	500.1	500.5
122.5°	539.5	538.9	538.1	537.3	536.6	535.8	535.1	534.3
125°	595.6	595.2	594.7	594.4	594.0	593.5	593.1	592.7
127.5°	649.2	648.8	648.4	648.0	647.7	647.3	647.1	646.7
130°	686.9	686.5	686.1	685.4	684.6	683.7	682.9	682.0
132.5°	722.3	721.8	721.4	721.0	720.7	720.4	720.0	719.7
135°	775.3	774.9	774.5	773.9	773.4	772.7	772.0	771.5
137.5°	826.6	826.0	825.6	825.3	825.5	825.6	825.7	825.9
140°	860.4	860.2	860.0	859.8	859.6	859.3	859.1	858.9
142.5°	892.3	892.3	892.3	892.2	892.2	892.1	892.1	892.0
145°	940.4	940.2	939.9	939.5	938.9	938.3	937.6	937.0
147.5°	983.9	983.7	983.5	983.4	983.2	983.0	982.8	982.6
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)