

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: P332947-935

Luminaire Tested: **SA4XXRDIP-C795D1035U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332947-935  
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: SA4XXRDIP-C795D1035U935-4F0-1E-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: 5849.6 lumens  
Efficiency: N/A  
Efficacy: 112.5 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

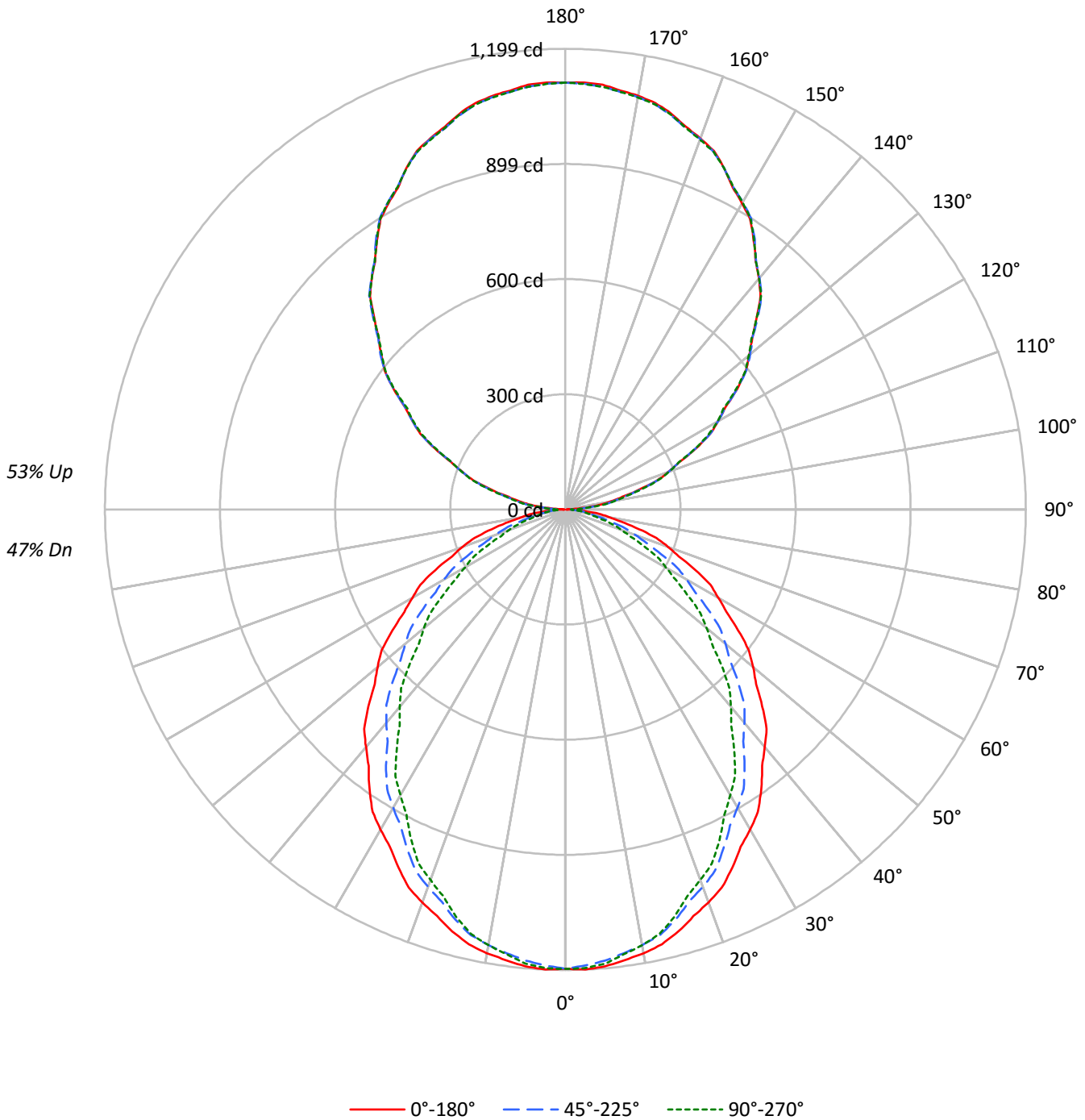
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.4	1.9
10°-20°	313.3	5.4
20°-30°	452.4	7.7
30°-40°	512.8	8.8
40°-50°	495.2	8.5
50°-60°	411.8	7.0
60°-70°	284.4	4.9
70°-80°	144.1	2.5
80°-90°	40.3	0.7
90°-100°	73.3	1.3
100°-110°	217.1	3.7
110°-120°	368.5	6.3
120°-130°	485.9	8.3
130°-140°	545.7	9.3
140°-150°	536.2	9.2
150°-160°	451.0	7.7
160°-170°	300.1	5.1
170°-180°	105.1	1.8
0°-30°	878.1	15.0
0°-40°	1390.9	23.8
0°-60°	2297.9	39.3
0°-90°	2766.7	47.3
90°-120°	658.9	11.3
90°-150°	2226.8	38.1
90°-180°	3083.0	52.7
0°-180°	5849.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	3	12	19	24	26	6
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°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.4	16.4	15.6	14.7	13.9	13.4	13.6	13.8	13.9	14.0	14.1
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°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	14.2	14.2	14.3	14.5	14.7	14.9	15.2	15.4
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)