

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: P332946-927

Luminaire Tested: **SA4XXRDIP-C795D1035U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332946-927
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-C795D1035U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 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: 5816.2 lumens
Efficiency: N/A
Efficacy: 111.8 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

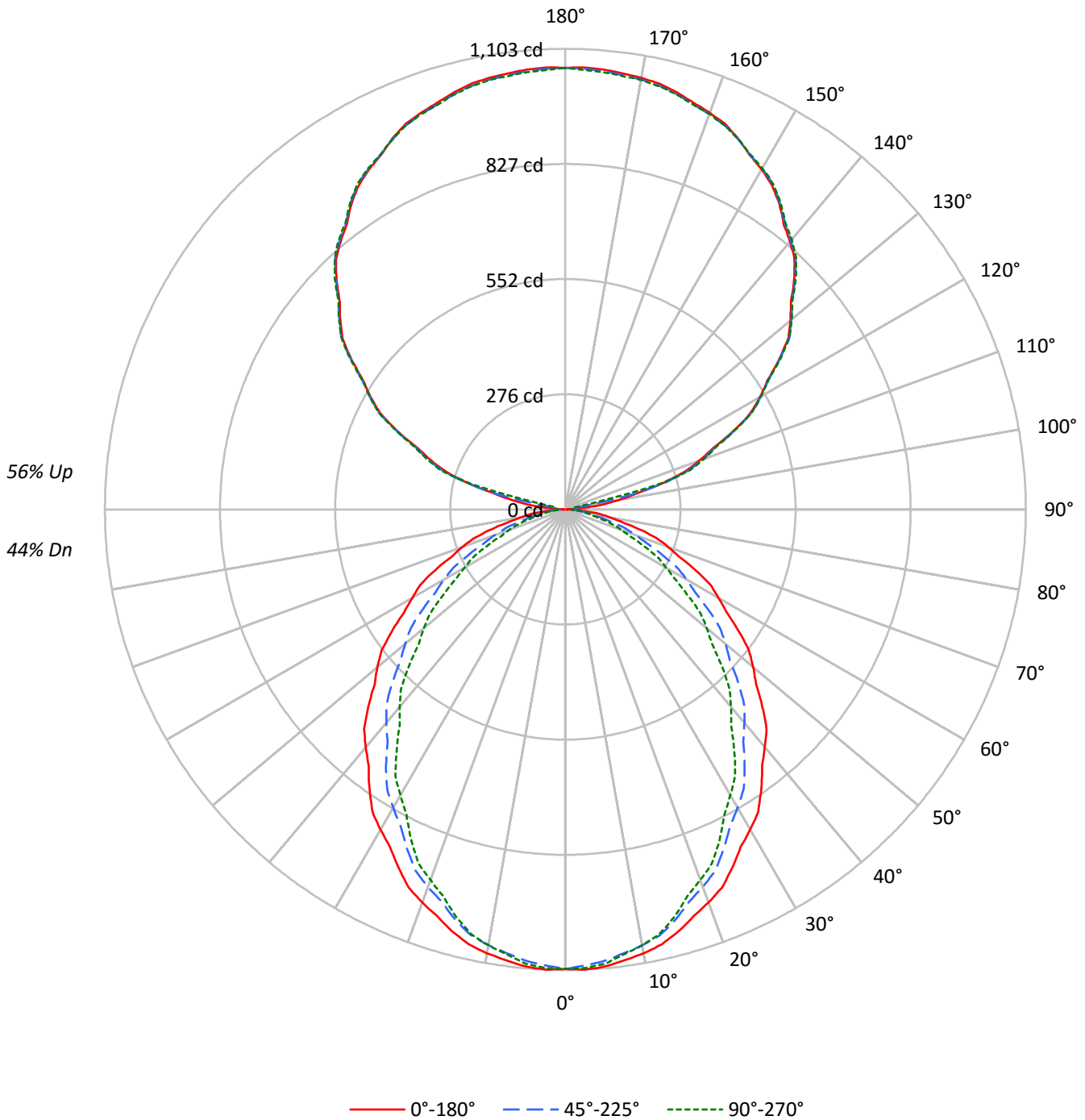
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	50	50	50	44				
1	97	92	89	85	88	85	82	79	70	68	66	57	56	54	45	44	43	37				
2	88	81	75	70	80	74	69	65	62	58	55	50	48	46	40	38	37	32				
3	81	71	64	59	73	66	59	54	55	50	46	45	41	39	35	33	31	27				
4	74	63	56	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23				
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20				
6	62	51	43	37	57	47	40	35	39	34	30	33	29	25	26	23	21	18				
7	58	46	38	32	53	42	35	30	36	30	26	30	26	23	24	21	19	16				
8	54	41	34	29	49	38	32	27	33	27	24	27	23	20	22	19	17	14				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13				
10	47	35	28	23	43	32	26	22	28	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8884	8884	8884
5°	8904	8795	8849
10°	8848	8689	8689
15°	8747	8507	8444
20°	8607	8267	8115
25°	8429	7986	7783
30°	8255	7690	7368
35°	8064	7383	6951
40°	7832	7032	6500
45°	7618	6687	6042
50°	7376	6286	5556
55°	7116	5871	5029
60°	6830	5414	4490
65°	6567	4846	3960
70°	6187	4216	3361
75°	5702	3497	2732
80°	4974	2664	2506
85°	4215	2418	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	1.8
10°-20°	288.3	5.0
20°-30°	416.3	7.2
30°-40°	471.8	8.1
40°-50°	455.6	7.8
50°-60°	378.9	6.5
60°-70°	261.6	4.5
70°-80°	132.6	2.3
80°-90°	37.1	0.6
90°-100°	36.2	0.6
100°-110°	230.6	4.0
110°-120°	441.1	7.6
120°-130°	559.9	9.6
130°-140°	599.1	10.3
140°-150°	560.2	9.6
150°-160°	451.8	7.8
160°-170°	291.4	5.0
170°-180°	100.4	1.7
0°-30°	807.9	13.9
0°-40°	1279.7	22.0
0°-60°	2114.3	36.4
0°-90°	2545.6	43.8
90°-120°	707.8	12.2
90°-150°	2427.0	41.7
90°-180°	3271.0	56.2
0°-180°	5816.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1099	1095	1085	1093	1092	104
15°	1047	1038	1018	1016	1010	295
25°	946	930	896	883	874	436
35°	818	790	749	721	705	511
45°	667	635	586	546	529	514
55°	506	471	417	375	357	452
65°	344	307	254	219	207	339
75°	183	151	112	93	88	193
85°	46	29	26	24	24	51
90°	2	11	17	22	24	4
95°	44	18	17	22	23	56
105°	238	243	247	252	225	249
115°	444	447	446	448	448	437
125°	625	628	626	629	630	558
135°	775	774	777	779	780	597
145°	894	896	896	897	898	558
155°	980	980	978	981	979	452
165°	1034	1030	1030	1035	1029	292
175°	1057	1053	1053	1060	1051	101
180°	1057	1057	1057	1057	1057	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1103.2	1102.6	1101.9	1101.4	1100.7	1099.6	1098.0	1096.4	1094.7	1093.1	1094.7
5°	1098.8	1098.0	1097.3	1096.5	1095.7	1094.3	1092.0	1089.8	1087.5	1085.3	1087.2
7.5°	1088.9	1088.1	1087.3	1086.5	1085.7	1083.9	1080.9	1078.0	1075.1	1072.1	1073.3
10°	1079.4	1078.5	1077.5	1076.6	1075.6	1073.5	1070.2	1066.8	1063.4	1060.0	1060.7
12.5°	1067.2	1066.2	1065.1	1064.0	1063.0	1060.4	1056.5	1052.4	1048.5	1044.5	1045.0
15°	1046.6	1044.9	1043.1	1041.5	1039.8	1036.6	1031.9	1027.2	1022.5	1017.9	1017.5
17.5°	1021.4	1019.0	1016.5	1014.2	1011.7	1007.7	1002.0	996.4	990.8	985.2	984.1
20°	1001.9	999.4	997.0	994.6	992.1	987.8	981.4	975.0	968.6	962.3	960.8
22.5°	980.3	977.6	974.9	972.1	969.4	964.6	957.7	950.9	944.1	937.3	935.1
25°	946.3	942.9	939.5	936.1	932.8	927.2	919.6	911.9	904.2	896.5	893.3
27.5°	910.5	906.3	902.1	897.9	893.6	887.4	879.2	871.0	862.8	854.6	850.6
30°	885.6	880.9	876.2	871.6	866.9	860.2	851.4	842.6	833.7	824.9	820.2
32.5°	859.3	854.1	848.7	843.4	838.2	831.0	821.9	812.8	803.7	794.6	789.2
35°	818.2	812.2	806.2	800.2	794.2	786.6	777.2	767.8	758.4	749.1	742.8
37.5°	774.2	768.0	761.8	755.7	749.5	741.2	730.9	720.5	710.1	699.7	692.6
40°	743.2	737.0	730.9	724.7	718.5	710.0	699.3	688.7	678.0	667.3	659.5
42.5°	713.5	707.0	700.6	694.1	687.6	678.8	667.7	656.6	645.5	634.3	626.3
45°	667.3	660.4	653.5	646.6	639.6	630.6	619.3	608.1	596.8	585.7	576.5
47.5°	619.6	612.5	605.4	598.2	591.0	581.6	570.0	558.3	546.6	534.9	525.4
50°	587.3	580.0	572.7	565.4	558.1	548.4	536.5	524.5	512.5	500.5	491.2
52.5°	554.3	547.2	540.0	532.8	525.7	515.9	503.7	491.4	479.1	466.8	457.3
55°	505.6	498.0	490.6	483.1	475.6	465.8	453.6	441.4	429.3	417.1	407.3
57.5°	457.4	449.6	441.8	434.0	426.2	416.3	404.3	392.4	380.4	368.4	358.5
60°	423.0	415.5	408.1	400.5	393.0	383.3	371.3	359.3	347.4	335.3	325.6
62.5°	392.0	384.2	376.4	368.6	360.8	350.8	338.5	326.2	313.9	301.7	292.6
65°	343.8	335.7	327.6	319.6	311.6	301.6	289.5	277.6	265.6	253.7	245.6
67.5°	293.7	286.1	278.3	270.6	262.8	253.5	242.3	231.2	220.1	209.0	202.0
70°	262.1	254.2	246.3	238.4	230.6	221.3	210.6	199.9	189.3	178.6	172.5
72.5°	228.4	221.3	214.1	207.0	199.9	191.3	181.3	171.1	161.1	151.0	145.7
75°	182.8	175.9	169.0	162.1	155.1	147.3	138.5	129.7	120.9	112.1	107.7
77.5°	136.7	130.8	124.9	119.1	113.1	106.6	99.6	92.4	85.3	78.2	75.7
80°	107.0	101.6	96.2	90.7	85.3	79.8	74.1	68.5	62.9	57.3	56.7
82.5°	81.4	76.4	71.5	66.5	61.5	57.4	54.2	50.9	47.7	44.5	44.0
85°	45.5	41.7	38.0	34.3	30.5	28.4	27.8	27.3	26.7	26.1	25.7
87.5°	16.0	15.1	14.3	13.5	12.8	12.4	12.5	12.7	12.8	12.9	13.0
90°	2.4	4.3	6.3	8.2	10.1	11.8	13.2	14.6	16.0	17.4	18.5
92.5°	10.0	10.1	10.1	10.3	10.4	11.2	12.5	13.9	15.4	16.8	17.8
95°	43.5	37.5	31.5	25.6	19.6	16.7	16.9	17.0	17.2	17.4	18.5
97.5°	92.4	96.1	99.8	103.5	107.3	99.3	79.7	60.1	40.5	20.9	21.0
100°	129.7	132.8	136.0	139.2	142.4	131.8	107.6	83.3	59.0	34.8	31.8
102.5°	171.4	173.8	176.1	178.4	180.7	180.3	177.1	174.0	170.8	167.6	135.4
105°	238.1	239.1	240.1	241.2	242.2	243.2	244.1	244.9	245.9	246.8	248.3
107.5°	299.8	300.4	301.0	301.4	302.0	302.9	304.0	305.2	306.4	307.6	308.4
110°	341.7	342.1	342.7	343.2	343.7	344.5	345.5	346.7	347.7	348.7	349.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.1	383.1	384.0	385.0	386.0	386.7	387.1	387.6	388.1	388.6	388.6
115°	444.4	445.0	445.5	446.0	446.6	446.7	446.6	446.4	446.2	446.0	446.4
117.5°	500.6	501.3	502.0	502.7	503.4	503.9	504.3	504.7	505.1	505.5	505.4
120°	538.5	539.2	540.0	540.7	541.4	541.6	541.5	541.3	541.1	540.9	541.3
122.5°	573.9	574.4	574.8	575.2	575.7	576.0	576.2	576.5	576.7	576.9	577.2
125°	624.7	625.4	626.1	626.9	627.6	627.7	627.4	627.0	626.7	626.3	626.9
127.5°	672.8	673.0	673.2	673.4	673.5	674.0	674.9	675.7	676.4	677.2	677.2
130°	703.9	704.0	704.2	704.3	704.5	704.9	705.4	705.9	706.5	707.0	707.2
132.5°	732.3	732.6	732.9	733.2	733.6	734.0	734.7	735.4	736.0	736.7	736.9
135°	775.0	774.8	774.7	774.4	774.3	774.5	775.2	775.9	776.7	777.4	777.7
137.5°	812.8	812.9	812.9	813.0	813.1	813.5	814.3	815.1	815.8	816.6	817.0
140°	837.5	837.8	838.2	838.5	838.8	839.2	839.6	840.0	840.3	840.7	841.1
142.5°	859.6	860.2	860.9	861.5	862.1	862.5	862.8	863.0	863.2	863.4	863.8
145°	893.6	894.1	894.7	895.2	895.7	896.0	896.0	896.0	896.0	896.0	896.2
147.5°	920.7	921.6	922.7	923.6	924.6	925.0	924.8	924.6	924.5	924.3	924.5
150°	940.2	941.0	941.7	942.4	943.1	943.3	943.2	943.0	942.9	942.6	942.6
152.5°	956.7	957.3	957.8	958.4	958.9	959.1	958.8	958.5	958.1	957.8	958.1
155°	979.9	980.0	980.2	980.3	980.5	980.3	979.9	979.3	978.7	978.3	978.9
157.5°	999.3	999.2	999.0	998.9	998.9	998.5	997.9	997.3	996.7	996.1	997.0
160°	1010.7	1010.1	1009.6	1009.1	1008.5	1008.2	1008.1	1007.8	1007.7	1007.5	1008.5
162.5°	1020.8	1020.1	1019.5	1018.7	1018.1	1017.7	1017.5	1017.3	1017.2	1017.0	1018.0
165°	1033.6	1032.7	1031.8	1030.9	1030.1	1029.6	1029.6	1029.6	1029.6	1029.6	1031.0
167.5°	1043.7	1042.8	1041.9	1041.0	1040.1	1039.6	1039.4	1039.3	1039.3	1039.1	1040.7
170°	1049.4	1048.4	1047.3	1046.2	1045.2	1044.7	1044.9	1045.1	1045.3	1045.4	1046.9
172.5°	1053.2	1052.2	1051.1	1050.0	1049.0	1048.5	1048.7	1048.9	1049.1	1049.2	1050.7
175°	1057.3	1056.3	1055.2	1054.2	1053.1	1052.7	1052.8	1053.0	1053.2	1053.4	1054.9
177.5°	1059.2	1058.2	1057.2	1056.3	1055.3	1054.9	1055.2	1055.5	1055.7	1056.1	1057.2
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1096.4	1098.0	1099.6	1100.4	1100.3	1100.1	1099.9	1099.8
5°	1089.0	1090.9	1092.8	1093.5	1093.1	1092.8	1092.4	1092.0
7.5°	1074.5	1075.8	1077.0	1077.2	1076.7	1076.0	1075.5	1074.8
10°	1061.5	1062.2	1063.0	1063.0	1062.2	1061.5	1060.7	1060.0
12.5°	1045.4	1045.8	1046.3	1046.0	1045.0	1043.9	1042.8	1041.8
15°	1017.2	1016.8	1016.4	1015.6	1014.2	1012.9	1011.6	1010.3
17.5°	983.1	982.1	981.0	979.5	977.5	975.5	973.5	971.5
20°	959.3	957.7	956.2	954.3	951.9	949.4	947.0	944.6
22.5°	932.9	930.6	928.4	926.2	924.2	922.3	920.3	918.3
25°	890.2	887.0	883.8	881.3	879.4	877.6	875.7	873.8
27.5°	846.7	842.8	838.8	835.5	832.8	830.1	827.4	824.7
30°	815.6	810.9	806.2	802.3	799.4	796.4	793.4	790.4
32.5°	783.7	778.3	772.9	768.7	765.9	763.0	760.2	757.3
35°	736.3	730.0	723.7	718.7	715.4	712.0	708.6	705.3
37.5°	685.5	678.3	671.2	666.0	662.7	659.3	655.9	652.5
40°	651.6	643.7	635.9	630.3	626.9	623.5	620.2	616.8
42.5°	618.3	610.3	602.3	596.5	592.9	589.5	586.0	582.4
45°	567.3	558.1	548.9	542.6	539.2	535.9	532.5	529.2
47.5°	515.9	506.4	496.9	490.2	486.6	482.8	479.1	475.4
50°	481.8	472.5	463.0	456.6	453.0	449.5	445.9	442.4
52.5°	447.8	438.3	428.7	422.2	418.4	414.7	411.1	407.3
55°	397.6	387.9	378.2	371.5	368.0	364.4	360.8	357.3
57.5°	348.6	338.7	328.8	322.6	319.9	317.2	314.5	311.8
60°	315.9	306.2	296.4	290.0	287.1	284.1	281.1	278.1
62.5°	283.7	274.7	265.7	260.0	257.6	255.2	252.8	250.4
65°	237.5	229.5	221.4	216.3	214.0	211.8	209.5	207.3
67.5°	195.1	188.2	181.3	176.6	174.1	171.6	169.1	166.7
70°	166.3	160.1	153.9	149.9	148.1	146.2	144.3	142.4
72.5°	140.5	135.1	129.8	126.4	124.7	122.9	121.2	119.5
75°	103.5	99.2	94.8	92.1	91.0	89.9	88.7	87.6
77.5°	73.2	70.7	68.1	66.7	66.4	66.1	65.8	65.4
80°	56.2	55.6	55.1	54.7	54.5	54.3	54.1	53.9
82.5°	43.6	43.3	42.9	42.5	42.4	42.1	42.0	41.8
85°	25.3	25.0	24.6	24.4	24.4	24.4	24.4	24.4
87.5°	13.1	13.1	13.2	13.3	13.5	13.7	13.9	14.2
90°	19.5	20.6	21.6	22.3	22.7	23.1	23.4	23.7
92.5°	18.9	20.0	21.0	21.5	21.6	21.7	21.8	21.9
95°	19.5	20.6	21.6	22.3	22.4	22.6	22.7	22.9
97.5°	21.1	21.2	21.3	21.5	21.6	21.8	21.9	22.2
100°	28.8	25.8	22.8	21.5	21.6	21.8	21.9	22.2
102.5°	103.2	71.0	38.7	22.7	22.7	22.7	22.7	22.8
105°	249.9	251.4	253.0	250.7	244.4	238.1	231.7	225.4
107.5°	309.2	310.0	310.7	311.4	312.1	312.8	313.5	314.1
110°	349.4	349.8	350.1	350.6	351.1	351.6	352.2	352.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.5	388.4	388.3	388.6	389.3	390.0	390.6	391.3
115°	446.7	447.1	447.4	447.6	447.6	447.6	447.6	447.6
117.5°	505.3	505.3	505.2	505.2	505.1	505.0	504.9	504.9
120°	541.6	541.9	542.3	542.3	541.9	541.6	541.3	540.9
122.5°	577.4	577.6	577.8	577.7	577.4	577.0	576.7	576.3
125°	627.4	627.9	628.4	628.8	629.0	629.2	629.3	629.5
127.5°	677.1	676.9	676.8	676.7	676.6	676.4	676.3	676.1
130°	707.3	707.5	707.7	707.8	707.8	707.8	707.8	707.8
132.5°	737.0	737.3	737.4	737.4	737.3	737.1	737.0	736.9
135°	778.1	778.4	778.8	779.1	779.5	779.8	780.1	780.5
137.5°	817.4	817.8	818.2	818.2	818.2	818.1	817.9	817.8
140°	841.7	842.2	842.7	843.1	843.3	843.4	843.6	843.8
142.5°	864.2	864.6	865.0	865.1	865.2	865.2	865.3	865.3
145°	896.4	896.5	896.7	897.0	897.3	897.6	898.0	898.3
147.5°	924.6	924.7	924.9	925.0	925.2	925.3	925.6	925.7
150°	942.6	942.6	942.6	942.7	942.9	943.1	943.3	943.4
152.5°	958.4	958.7	958.9	959.0	958.9	958.9	958.7	958.6
155°	979.6	980.3	981.0	981.1	980.6	980.1	979.5	979.1
157.5°	997.9	998.9	999.7	999.7	998.9	997.9	997.0	996.1
160°	1009.6	1010.7	1011.7	1011.7	1010.7	1009.6	1008.5	1007.5
162.5°	1019.1	1020.2	1021.2	1021.1	1019.9	1018.7	1017.6	1016.4
165°	1032.5	1033.9	1035.2	1035.1	1033.6	1032.0	1030.4	1028.8
167.5°	1042.2	1043.8	1045.3	1045.2	1043.5	1041.7	1039.9	1038.2
170°	1048.3	1049.6	1051.1	1050.9	1049.2	1047.4	1045.6	1043.9
172.5°	1052.1	1053.4	1054.9	1054.6	1052.7	1050.8	1048.9	1047.0
175°	1056.5	1058.1	1059.7	1059.4	1057.3	1055.2	1053.1	1051.0
177.5°	1058.3	1059.4	1060.6	1060.3	1058.6	1056.9	1055.2	1053.5
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3

(END OF REPORT)