

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: P332042-927

Luminaire Tested: **S123DIP-S1000D1195U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332042-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7044.1 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

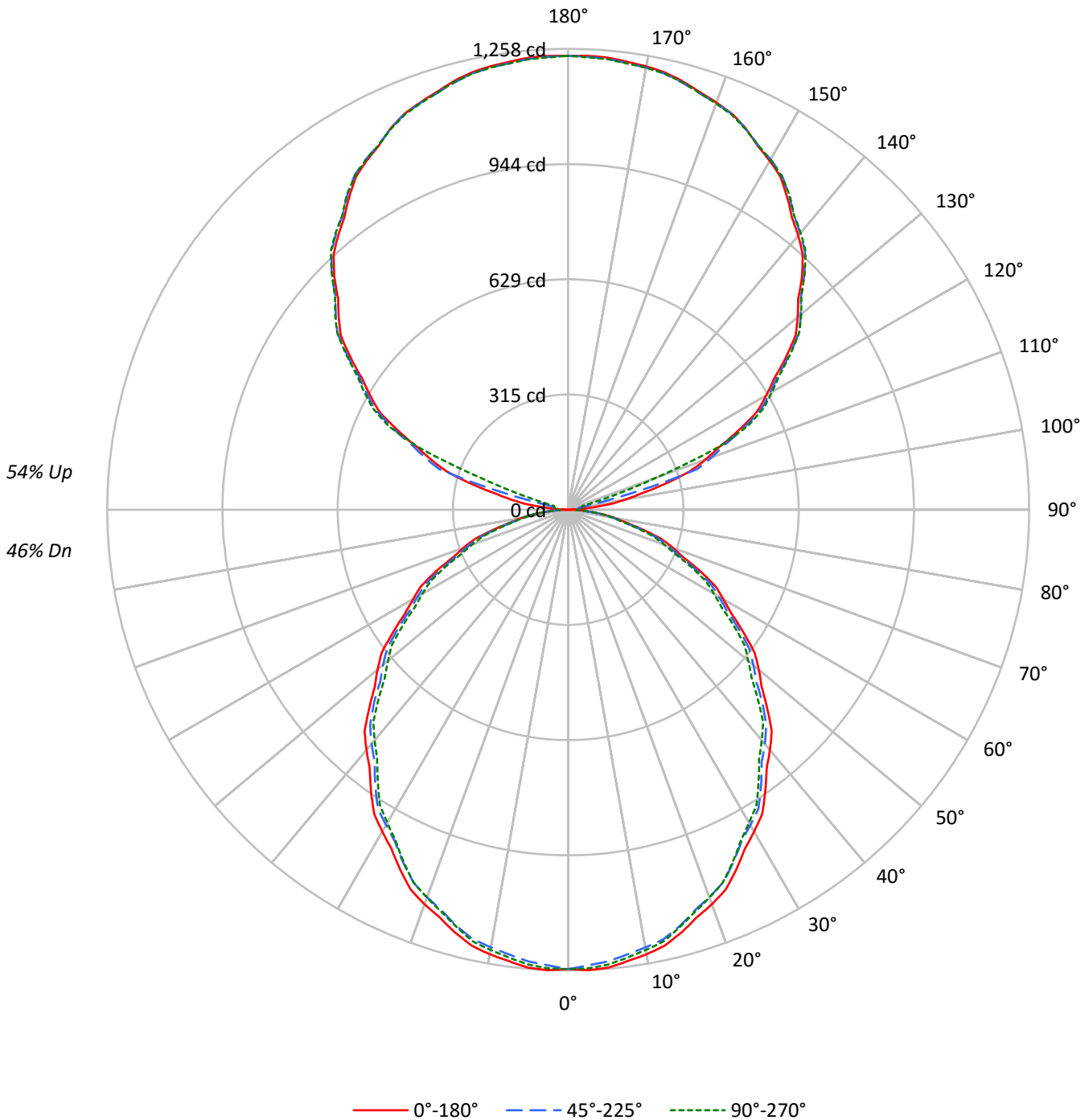
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	97	93	89	85	89	85	82	79	71	69	67	58	57	55	47	45	44	39
2	88	81	75	70	81	74	69	65	62	58	55	51	48	46	41	39	37	33
3	80	71	64	58	74	65	59	54	55	50	46	45	42	39	36	34	32	28
4	74	63	55	49	67	58	51	46	49	44	39	40	36	33	32	30	27	24
5	67	56	48	42	62	52	44	39	44	38	34	36	32	29	29	26	24	20
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14
9	50	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	43	32	25	21	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13497	13497	13497
5°	13560	13374	13467
10°	13470	13258	13340
15°	13312	13108	13133
20°	13128	12893	12906
25°	12883	12638	12613
30°	12609	12356	12261
35°	12326	12056	11901
40°	12029	11726	11545
45°	11702	11423	11144
50°	11375	11050	10742
55°	10946	10663	10340
60°	10514	10213	9888
65°	10132	9722	9419
70°	9567	9161	8752
75°	8742	8430	8072
80°	7885	7550	7482
85°	6928	6657	6385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	1.7
10°-20°	333.5	4.7
20°-30°	492.7	7.0
30°-40°	575.5	8.2
40°-50°	578.6	8.2
50°-60°	508.2	7.2
60°-70°	378.6	5.4
70°-80°	215.7	3.1
80°-90°	65.4	0.9
90°-100°	45.0	0.6
100°-110°	214.7	3.0
110°-120°	515.6	7.3
120°-130°	656.6	9.3
130°-140°	701.5	10.0
140°-150°	656.0	9.3
150°-160°	529.2	7.5
160°-170°	341.5	4.8
170°-180°	117.7	1.7
0°-30°	944.3	13.4
0°-40°	1519.8	21.6
0°-60°	2606.6	37.0
0°-90°	3266.3	46.4
90°-120°	775.3	11.0
90°-150°	2789.4	39.6
90°-180°	3778.0	53.6
0°-180°	7044.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1255	1249	1238	1248	1246	119
15°	1195	1190	1176	1184	1178	337
25°	1085	1078	1064	1065	1062	499
35°	938	931	918	911	906	587
45°	769	764	750	738	732	593
55°	583	582	568	557	551	522
65°	398	392	382	373	370	392
75°	210	206	203	197	194	225
85°	56	54	54	52	52	62
90°	1	10	22	26	28	6
95°	56	21	28	35	35	69
105°	274	279	202	48	40	291
115°	514	520	528	537	541	508
125°	725	732	736	738	740	647
135°	903	908	912	915	912	695
145°	1042	1048	1050	1052	1052	652
155°	1148	1146	1147	1151	1146	529
165°	1210	1208	1207	1213	1208	342
175°	1239	1234	1235	1241	1234	118
180°	1239	1239	1239	1239	1239	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1258.2	1257.5	1256.7	1255.9	1255.2	1253.7	1251.6	1249.5	1247.4	1245.3	1247.2
5°	1255.0	1253.8	1252.6	1251.4	1250.2	1248.3	1245.7	1243.0	1240.4	1237.8	1240.2
7.5°	1242.7	1241.5	1240.3	1239.1	1237.9	1236.0	1233.3	1230.5	1227.8	1225.0	1227.2
10°	1232.4	1231.2	1229.9	1228.8	1227.6	1225.4	1222.3	1219.2	1216.1	1213.0	1215.1
12.5°	1218.5	1217.6	1216.6	1215.5	1214.6	1212.6	1209.7	1206.7	1203.8	1200.9	1202.5
15°	1194.6	1193.7	1192.7	1191.8	1190.8	1188.7	1185.7	1182.6	1179.4	1176.3	1178.2
17.5°	1166.8	1165.5	1164.3	1163.1	1161.8	1159.7	1156.5	1153.4	1150.3	1147.2	1148.5
20°	1146.1	1144.7	1143.3	1141.8	1140.3	1138.0	1135.0	1131.9	1128.8	1125.6	1126.6
22.5°	1122.8	1121.4	1120.0	1118.5	1117.1	1114.8	1111.7	1108.6	1105.5	1102.3	1103.1
25°	1084.7	1083.2	1081.8	1080.4	1078.9	1076.7	1073.5	1070.4	1067.3	1064.1	1064.4
27.5°	1043.9	1042.5	1041.1	1039.7	1038.3	1035.9	1032.6	1029.3	1025.9	1022.5	1022.7
30°	1014.5	1013.4	1012.2	1011.0	1009.8	1007.5	1004.2	1000.8	997.4	994.1	994.1
32.5°	985.2	983.7	982.1	980.5	978.9	976.8	974.2	971.7	969.1	966.5	965.1
35°	938.0	936.6	935.2	933.7	932.2	930.0	926.9	923.8	920.7	917.5	916.1
37.5°	889.7	887.9	886.1	884.2	882.4	880.0	876.8	873.6	870.4	867.3	865.5
40°	856.1	854.6	853.2	851.8	850.3	848.0	844.5	841.2	837.9	834.5	832.6
42.5°	822.4	820.8	819.2	817.5	815.9	813.4	810.1	806.8	803.4	800.0	798.1
45°	768.7	767.8	766.8	765.9	764.9	762.9	759.8	756.6	753.5	750.4	747.6
47.5°	715.5	714.1	712.7	711.3	710.0	707.7	704.9	702.0	699.0	696.1	693.2
50°	679.3	678.0	676.8	675.7	674.5	672.3	669.2	666.1	663.0	659.9	657.2
52.5°	641.3	640.5	639.7	638.9	638.0	636.0	632.7	629.4	626.1	622.7	620.5
55°	583.3	583.0	582.8	582.6	582.3	580.7	577.6	574.4	571.3	568.2	565.5
57.5°	528.1	527.3	526.5	525.7	524.8	523.2	520.7	518.2	515.7	513.3	510.9
60°	488.4	488.1	487.9	487.7	487.4	485.9	483.0	480.1	477.3	474.4	472.2
62.5°	453.0	452.4	451.8	451.1	450.6	448.9	445.9	443.1	440.2	437.3	435.1
65°	397.8	396.6	395.5	394.3	393.1	391.3	388.9	386.5	384.0	381.7	379.8
67.5°	339.5	338.3	337.3	336.3	335.2	333.7	331.9	330.1	328.3	326.5	324.8
70°	304.0	302.6	301.2	299.8	298.3	296.8	295.4	294.0	292.6	291.1	289.5
72.5°	267.0	265.9	264.8	263.8	262.8	261.4	259.8	258.2	256.5	254.8	253.4
75°	210.2	209.3	208.3	207.4	206.4	205.6	204.9	204.1	203.4	202.7	201.5
77.5°	160.0	159.5	158.9	158.4	157.9	157.2	156.4	155.5	154.6	153.8	153.0
80°	127.2	126.5	125.8	125.1	124.4	123.7	123.3	122.8	122.3	121.8	121.6
82.5°	95.3	95.1	95.1	94.9	94.7	94.6	94.5	94.4	94.3	94.3	93.8
85°	56.1	55.6	55.1	54.7	54.2	53.9	53.9	53.9	53.9	53.9	53.4
87.5°	22.6	22.4	22.3	22.1	21.9	22.0	22.3	22.7	23.1	23.4	23.4
90°	1.0	2.9	5.0	7.1	9.1	11.5	14.1	16.8	19.4	22.1	22.9
92.5°	17.1	16.6	16.0	15.4	14.8	15.5	17.6	19.6	21.5	23.5	24.9
95°	56.2	47.8	39.4	31.0	22.6	19.6	21.8	24.0	26.3	28.5	29.9
97.5°	112.8	109.1	105.3	101.6	97.8	88.6	73.8	59.1	44.4	29.6	31.3
100°	155.5	159.6	163.7	167.8	171.9	158.0	126.1	94.2	62.3	30.3	32.0
102.5°	204.1	207.1	210.0	212.9	215.9	199.9	165.1	130.2	95.4	60.5	55.5
105°	274.3	276.6	278.8	281.0	283.3	275.2	256.7	238.4	220.0	201.5	165.3
107.5°	348.2	350.1	351.9	353.6	355.5	357.8	360.8	363.6	366.5	369.5	342.9
110°	397.6	399.3	400.8	402.5	404.2	406.1	408.4	410.6	412.8	415.1	408.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	444.7	446.2	447.7	449.2	450.6	452.5	454.7	457.0	459.2	461.4	461.6
115°	514.5	515.7	516.9	518.2	519.4	520.9	522.8	524.6	526.5	528.3	530.4
117.5°	582.0	583.5	585.0	586.6	588.1	589.3	590.3	591.2	592.2	593.1	594.7
120°	624.0	625.8	627.7	629.5	631.4	632.6	633.2	633.8	634.5	635.0	636.7
122.5°	666.7	668.2	669.7	671.2	672.8	673.9	674.7	675.5	676.2	677.0	678.2
125°	725.2	726.9	728.5	730.2	731.8	733.0	733.8	734.7	735.5	736.3	736.7
127.5°	782.0	783.5	785.2	786.9	788.5	789.8	790.8	791.8	792.7	793.7	794.4
130°	817.3	819.0	820.5	822.2	823.8	825.1	825.9	826.7	827.5	828.3	829.2
132.5°	851.1	852.8	854.4	856.0	857.7	858.8	859.5	860.2	860.8	861.5	862.3
135°	902.9	904.1	905.3	906.6	907.8	908.8	909.7	910.5	911.2	912.1	912.7
137.5°	947.1	948.6	950.1	951.7	953.3	954.3	954.7	955.2	955.6	956.1	957.0
140°	976.5	977.7	979.0	980.2	981.4	982.3	982.9	983.6	984.2	984.8	985.6
142.5°	1003.8	1005.0	1006.2	1007.4	1008.7	1009.6	1010.2	1010.8	1011.5	1012.0	1012.7
145°	1041.9	1043.3	1044.7	1046.2	1047.6	1048.5	1048.9	1049.3	1049.7	1050.1	1050.5
147.5°	1077.8	1078.7	1079.7	1080.5	1081.5	1082.2	1082.6	1083.0	1083.4	1083.8	1084.3
150°	1099.9	1100.4	1101.1	1101.7	1102.3	1102.8	1103.2	1103.6	1104.1	1104.5	1104.9
152.5°	1119.7	1120.0	1120.3	1120.5	1120.9	1121.1	1121.3	1121.7	1121.9	1122.1	1122.8
155°	1147.7	1147.3	1146.8	1146.4	1146.1	1146.0	1146.1	1146.4	1146.6	1146.8	1147.8
157.5°	1169.4	1169.3	1169.3	1169.3	1169.3	1169.1	1168.9	1168.7	1168.5	1168.3	1169.6
160°	1182.6	1182.5	1182.3	1182.1	1181.9	1181.6	1181.5	1181.2	1181.1	1180.8	1182.1
162.5°	1195.2	1194.7	1194.1	1193.6	1193.0	1192.7	1192.5	1192.3	1192.1	1191.8	1193.3
165°	1210.3	1209.7	1209.0	1208.5	1207.8	1207.4	1207.2	1207.0	1206.8	1206.6	1208.2
167.5°	1222.1	1221.2	1220.4	1219.6	1218.8	1218.4	1218.4	1218.4	1218.4	1218.4	1220.0
170°	1228.7	1227.9	1227.1	1226.2	1225.4	1225.0	1225.0	1225.0	1225.0	1225.0	1226.6
172.5°	1233.1	1232.2	1231.1	1230.2	1229.2	1228.8	1228.9	1229.1	1229.2	1229.4	1231.1
175°	1238.8	1237.8	1236.8	1235.7	1234.7	1234.3	1234.5	1234.7	1234.9	1235.1	1236.6
177.5°	1240.3	1239.4	1238.7	1237.9	1237.0	1236.7	1236.8	1237.0	1237.2	1237.3	1238.7
180°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1249.1	1251.1	1253.0	1253.9	1253.6	1253.5	1253.2	1253.1
5°	1242.5	1244.9	1247.4	1248.3	1247.8	1247.4	1246.9	1246.4
7.5°	1229.4	1231.5	1233.7	1234.6	1234.3	1234.1	1233.7	1233.4
10°	1217.3	1219.4	1221.6	1222.4	1221.9	1221.5	1221.0	1220.5
12.5°	1204.0	1205.6	1207.2	1207.8	1207.6	1207.3	1207.0	1206.7
15°	1180.1	1182.0	1184.0	1184.2	1182.8	1181.3	1179.9	1178.5
17.5°	1149.9	1151.2	1152.5	1152.9	1152.5	1151.9	1151.4	1150.9
20°	1127.5	1128.5	1129.5	1129.6	1128.9	1128.1	1127.4	1126.7
22.5°	1103.9	1104.6	1105.4	1105.3	1104.5	1103.5	1102.6	1101.7
25°	1064.6	1064.9	1065.2	1064.9	1064.1	1063.4	1062.7	1062.0
27.5°	1022.9	1023.1	1023.3	1022.9	1022.1	1021.1	1020.3	1019.3
30°	994.1	994.1	994.1	993.2	991.6	989.9	988.2	986.5
32.5°	963.8	962.5	961.2	960.0	959.1	958.1	957.3	956.3
35°	914.7	913.2	911.8	910.5	909.3	908.1	906.9	905.7
37.5°	863.9	862.1	860.4	859.1	858.4	857.6	856.8	856.1
40°	830.7	828.8	826.9	825.4	824.4	823.5	822.5	821.6
42.5°	796.1	794.2	792.3	790.9	790.0	789.0	788.1	787.1
45°	744.7	741.8	738.9	736.9	735.7	734.5	733.3	732.1
47.5°	690.4	687.6	684.8	682.9	681.8	680.7	679.7	678.6
50°	654.6	652.0	649.3	647.3	645.9	644.4	642.9	641.5
52.5°	618.2	616.0	613.8	611.9	610.5	609.0	607.6	606.2
55°	562.9	560.3	557.7	555.7	554.5	553.3	552.2	551.0
57.5°	508.5	506.2	503.8	501.9	500.6	499.2	497.8	496.4
60°	470.1	467.9	465.8	464.1	462.9	461.7	460.5	459.3
62.5°	433.0	430.9	428.6	427.2	426.4	425.6	424.8	424.0
65°	377.9	375.9	374.0	372.7	372.0	371.3	370.5	369.8
67.5°	323.1	321.5	319.8	318.5	317.4	316.4	315.4	314.4
70°	287.7	286.1	284.4	283.0	281.8	280.6	279.4	278.1
72.5°	251.9	250.4	248.9	247.9	247.2	246.6	246.1	245.4
75°	200.3	199.1	197.9	196.9	196.2	195.5	194.8	194.1
77.5°	152.1	151.3	150.5	150.1	150.1	150.1	150.1	150.1
80°	121.4	121.1	120.9	120.7	120.7	120.7	120.7	120.7
82.5°	93.4	92.9	92.5	92.2	92.0	91.8	91.7	91.4
85°	52.9	52.4	52.0	51.7	51.7	51.7	51.7	51.7
87.5°	23.4	23.3	23.3	23.3	23.4	23.4	23.5	23.6
90°	23.7	24.6	25.3	26.0	26.4	26.8	27.2	27.6
92.5°	26.1	27.5	28.8	29.5	29.8	30.1	30.3	30.6
95°	31.4	32.8	34.2	34.9	34.9	34.9	34.9	34.9
97.5°	32.9	34.5	36.2	37.1	37.3	37.5	37.7	37.9
100°	33.7	35.3	36.9	37.9	38.0	38.3	38.4	38.7
102.5°	50.4	45.3	40.2	37.9	38.3	38.7	39.1	39.4
105°	129.1	92.9	56.7	38.9	39.3	39.7	40.1	40.5
107.5°	316.3	289.8	263.2	236.3	209.1	181.7	154.5	127.2
110°	401.6	394.8	388.1	370.1	340.9	311.6	282.3	253.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	461.7	461.8	462.0	458.9	452.7	446.6	440.4	434.2
115°	532.3	534.4	536.5	537.9	538.7	539.6	540.3	541.1
117.5°	596.4	598.0	599.6	600.6	600.7	600.9	601.0	601.2
120°	638.3	639.9	641.6	642.4	642.4	642.4	642.4	642.4
122.5°	679.3	680.5	681.6	682.2	682.4	682.5	682.8	682.9
125°	737.1	737.5	737.9	738.3	738.7	739.2	739.6	740.0
127.5°	795.0	795.7	796.3	796.5	796.1	795.7	795.3	794.8
130°	830.0	830.8	831.6	831.8	831.4	831.0	830.6	830.2
132.5°	863.1	864.0	864.7	864.8	864.3	863.7	863.2	862.5
135°	913.3	913.9	914.6	914.6	913.9	913.3	912.7	912.1
137.5°	958.1	959.0	960.0	960.3	959.9	959.5	959.1	958.6
140°	986.4	987.2	988.1	988.2	987.9	987.5	987.1	986.7
142.5°	1013.4	1014.0	1014.6	1014.7	1014.2	1013.5	1013.0	1012.4
145°	1051.0	1051.4	1051.8	1051.9	1051.9	1051.9	1051.9	1051.9
147.5°	1084.7	1085.1	1085.4	1085.2	1084.3	1083.3	1082.4	1081.4
150°	1105.3	1105.6	1106.0	1106.0	1105.3	1104.8	1104.1	1103.5
152.5°	1123.6	1124.3	1125.1	1125.0	1124.0	1123.1	1122.1	1121.2
155°	1148.8	1149.9	1150.9	1150.7	1149.5	1148.3	1147.1	1145.9
157.5°	1170.8	1172.0	1173.2	1173.1	1171.5	1169.8	1168.2	1166.6
160°	1183.3	1184.5	1185.7	1185.7	1184.2	1182.8	1181.3	1179.9
162.5°	1194.7	1196.0	1197.5	1197.5	1196.2	1194.9	1193.7	1192.4
165°	1209.9	1211.5	1213.1	1213.2	1211.8	1210.4	1208.9	1207.5
167.5°	1221.6	1223.3	1225.0	1225.0	1223.3	1221.6	1220.0	1218.4
170°	1228.3	1229.9	1231.5	1231.5	1229.9	1228.3	1226.6	1225.0
172.5°	1232.7	1234.3	1236.0	1235.9	1234.1	1232.3	1230.5	1228.7
175°	1238.0	1239.4	1240.9	1240.7	1239.1	1237.5	1235.9	1234.2
177.5°	1239.9	1241.3	1242.5	1242.4	1240.8	1239.1	1237.5	1235.9
180°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8

(END OF REPORT)