

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: P332031-830

Luminaire Tested: **S123DIP-S1000D1025U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332031-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1025U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7279.4 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

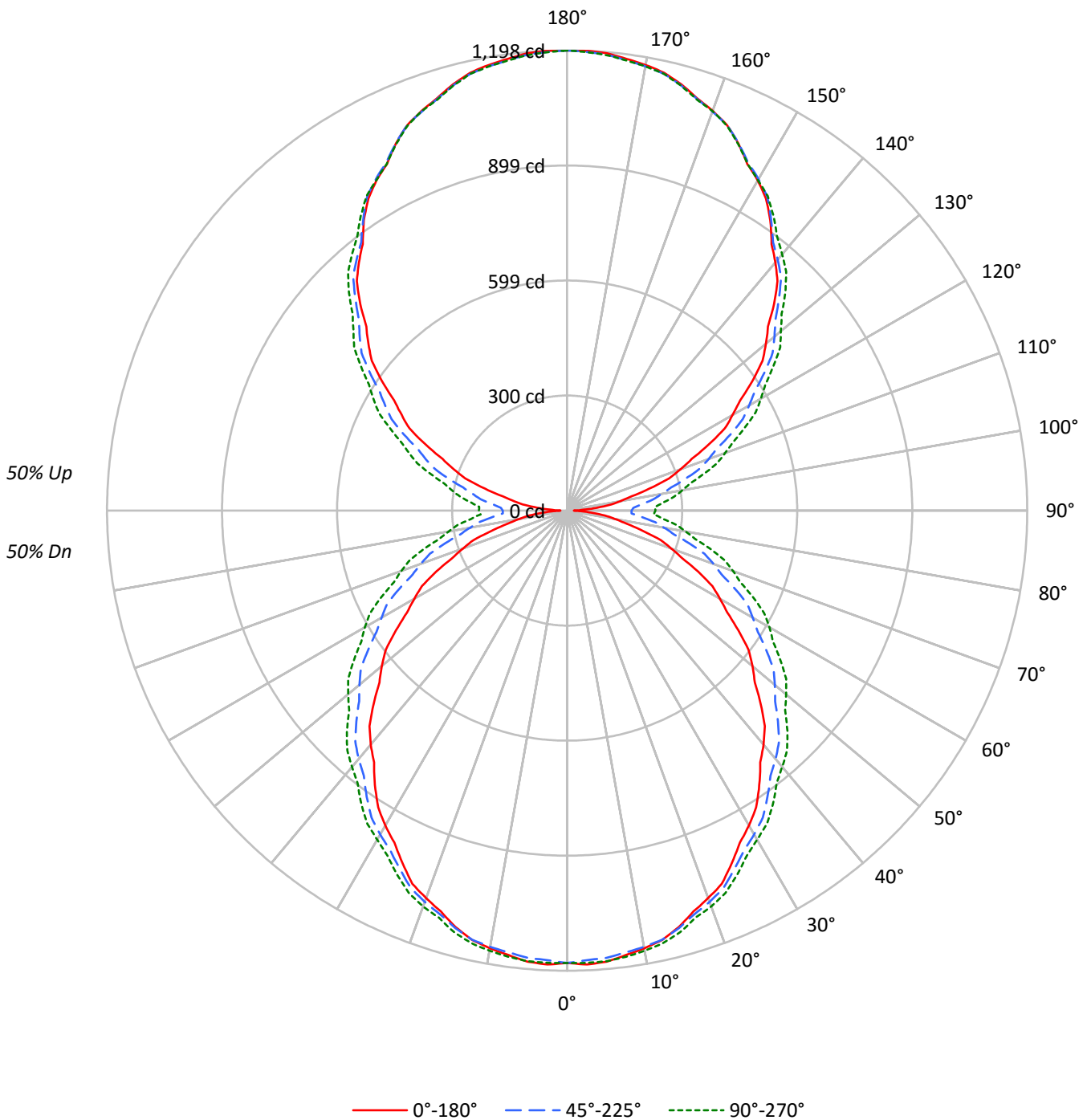
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	50	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	23	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12676	12676	12676
5°	12715	12357	12363
10°	12602	12072	12012
15°	12439	11748	11627
20°	12206	11380	11204
25°	11920	10955	10760
30°	11627	10572	10310
35°	11297	10169	9950
40°	10983	9801	9564
45°	10635	9448	9257
50°	10293	9100	8917
55°	9912	8741	8611
60°	9543	8380	8298
65°	9165	7994	7927
70°	8591	7558	7545
75°	7872	7060	7157
80°	7040	6572	6712
85°	6274	6235	6458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	1.5
10°-20°	318.2	4.4
20°-30°	476.0	6.5
30°-40°	568.4	7.8
40°-50°	594.7	8.2
50°-60°	558.1	7.7
60°-70°	466.1	6.4
70°-80°	333.5	4.6
80°-90°	202.4	2.8
90°-100°	202.8	2.8
100°-110°	325.2	4.5
110°-120°	458.4	6.3
120°-130°	557.5	7.7
130°-140°	602.9	8.3
140°-150°	580.6	8.0
150°-160°	486.0	6.7
160°-170°	323.5	4.4
170°-180°	113.3	1.6
0°-30°	905.9	12.4
0°-40°	1474.3	20.3
0°-60°	2627.1	36.1
0°-90°	3629.1	49.9
90°-120°	986.5	13.6
90°-150°	2727.5	37.5
90°-180°	3650.0	50.1
0°-180°	7279.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1179	1176	1169	1178	1178	112
15°	1122	1126	1125	1137	1137	316
25°	1013	1026	1030	1046	1047	467
35°	872	893	910	928	934	545
45°	713	744	776	800	811	550
55°	544	586	632	666	677	487
65°	376	426	482	519	534	371
75°	204	264	328	369	386	218
85°	63	127	195	237	252	66
90°	18	90	168	213	230	15
95°	70	127	197	238	253	73
105°	222	256	318	353	368	237
115°	406	426	469	499	510	402
125°	589	594	627	649	656	526
135°	762	767	779	798	803	587
145°	922	923	926	935	936	576
155°	1055	1055	1056	1059	1053	485
165°	1149	1146	1146	1151	1145	324
175°	1195	1191	1191	1196	1190	113
180°	1198	1198	1198	1198	1198	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1182.8	1182.1	1181.4	1180.7	1180.1	1178.7	1177.0	1175.2	1173.3	1171.5	1173.3
5°	1178.9	1178.4	1177.8	1177.2	1176.7	1175.5	1173.8	1172.1	1170.4	1168.7	1170.9
7.5°	1167.3	1167.5	1167.6	1167.7	1167.8	1167.1	1165.5	1163.8	1162.1	1160.5	1163.3
10°	1157.2	1157.7	1158.3	1158.9	1159.4	1159.0	1157.5	1156.1	1154.7	1153.3	1156.1
12.5°	1144.8	1145.6	1146.4	1147.2	1148.0	1147.9	1147.0	1145.9	1145.0	1144.1	1146.7
15°	1122.5	1123.3	1124.2	1125.0	1125.9	1126.1	1125.9	1125.6	1125.3	1125.0	1127.9
17.5°	1094.3	1096.0	1097.7	1099.4	1101.1	1101.9	1101.8	1101.6	1101.5	1101.5	1104.0
20°	1073.7	1075.4	1077.1	1078.8	1080.5	1081.8	1082.3	1082.9	1083.5	1084.0	1086.6
22.5°	1052.2	1053.9	1055.6	1057.3	1059.0	1060.3	1061.1	1061.9	1062.7	1063.5	1066.7
25°	1013.4	1016.2	1019.2	1022.0	1024.8	1026.7	1027.6	1028.4	1029.3	1030.1	1033.8
27.5°	974.4	977.7	980.9	984.2	987.4	990.0	991.8	993.6	995.4	997.3	1000.5
30°	946.7	950.5	954.1	957.8	961.6	964.5	966.9	969.1	971.4	973.6	977.1
32.5°	916.0	920.1	924.3	928.4	932.6	936.1	939.1	942.1	945.1	948.0	951.7
35°	872.3	876.8	881.5	886.0	890.6	894.7	898.4	902.1	905.8	909.6	913.8
37.5°	826.1	831.3	836.4	841.5	846.7	851.5	856.1	860.6	865.2	869.8	874.6
40°	795.3	800.5	805.6	810.8	815.9	821.3	827.0	832.7	838.4	844.1	848.9
42.5°	761.5	767.8	774.0	780.3	786.6	792.7	798.6	804.6	810.5	816.4	821.7
45°	713.2	720.1	727.0	733.8	740.6	747.6	754.7	761.9	769.0	776.1	781.6
47.5°	662.7	670.4	678.3	686.0	693.7	701.7	709.8	718.0	726.1	734.3	740.4
50°	629.9	637.8	645.8	653.8	661.8	670.2	679.0	687.9	696.7	705.6	712.1
52.5°	594.9	603.4	611.9	620.3	628.8	637.8	647.6	657.3	667.0	676.8	683.6
55°	543.9	553.4	562.7	572.1	581.5	591.4	601.6	611.9	622.2	632.4	640.2
57.5°	494.2	504.0	513.8	523.6	533.4	543.9	555.2	566.4	577.6	588.8	596.5
60°	459.3	469.5	479.8	490.0	500.3	511.2	522.9	534.7	546.4	558.1	566.0
62.5°	426.4	436.9	447.4	457.9	468.3	479.8	492.2	504.5	516.9	529.3	537.2
65°	375.9	387.0	398.1	409.3	420.4	432.2	444.7	457.2	469.8	482.4	490.9
67.5°	324.5	336.4	348.2	360.0	371.7	384.1	396.8	409.6	422.4	435.2	444.5
70°	288.6	300.9	313.1	325.5	337.7	350.6	364.3	378.1	391.7	405.4	414.5
72.5°	255.8	268.1	280.3	292.6	304.8	318.0	332.2	346.3	360.4	374.6	383.9
75°	204.0	217.4	230.7	244.2	257.6	271.4	285.7	299.9	314.1	328.4	337.8
77.5°	158.8	172.3	185.9	199.3	212.8	226.8	241.2	255.5	269.9	284.3	294.2
80°	127.0	141.0	155.0	168.9	182.9	197.3	212.1	227.0	241.8	256.6	266.3
82.5°	99.2	113.5	127.7	141.9	156.1	170.7	185.8	200.8	215.8	230.9	240.6
85°	62.9	77.1	91.3	105.7	119.9	134.6	149.7	164.8	179.8	195.0	204.7
87.5°	34.3	48.9	63.5	78.1	92.7	107.6	122.7	137.8	152.9	168.0	177.8
90°	17.6	33.6	49.8	65.8	81.8	98.5	115.7	133.0	150.2	167.6	178.0
92.5°	38.5	52.4	66.4	80.5	94.5	109.4	125.3	141.2	157.0	172.9	183.0
95°	69.7	82.2	94.8	107.4	120.0	134.0	149.7	165.3	181.0	196.6	206.3
97.5°	111.2	122.3	133.5	144.5	155.6	168.5	183.0	197.7	212.2	226.7	236.2
100°	139.5	149.9	160.2	170.6	181.0	193.3	207.5	221.6	235.7	249.9	258.8
102.5°	172.4	181.3	190.3	199.3	208.2	219.8	234.0	248.4	262.6	276.9	285.5
105°	222.0	229.2	236.5	243.7	251.0	261.6	275.8	290.0	304.2	318.3	326.2
107.5°	278.3	284.5	290.5	296.6	302.7	311.9	324.2	336.7	349.0	361.4	369.7
110°	313.5	319.1	324.6	330.1	335.6	344.3	356.2	368.0	379.8	391.6	399.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	351.1	355.6	360.1	364.5	369.0	376.7	387.8	398.8	409.8	420.8	429.0
115°	406.2	410.3	414.3	418.4	422.4	429.4	439.2	449.1	458.9	468.8	475.9
117.5°	462.9	465.3	467.9	470.4	473.0	478.8	487.9	496.9	506.1	515.1	521.9
120°	497.2	499.9	502.6	505.2	507.9	513.4	521.8	530.2	538.6	546.9	553.3
122.5°	534.0	535.7	537.4	539.0	540.7	545.7	554.1	562.6	571.0	579.4	585.1
125°	589.1	589.7	590.3	591.0	591.5	595.8	603.7	611.5	619.3	627.2	632.4
127.5°	641.0	642.1	643.1	644.1	645.2	648.9	655.3	661.7	668.1	674.5	678.9
130°	675.6	677.0	678.3	679.8	681.2	684.4	689.5	694.6	699.6	704.7	709.3
132.5°	709.2	710.9	712.5	714.1	715.7	718.5	722.6	726.7	730.8	734.9	739.1
135°	761.9	762.8	763.7	764.8	765.7	767.7	770.6	773.5	776.5	779.4	783.6
137.5°	810.5	811.3	812.1	812.9	813.8	815.3	817.7	819.9	822.3	824.5	828.2
140°	843.4	844.4	845.5	846.5	847.5	848.6	849.6	850.7	851.8	852.8	856.9
142.5°	874.2	875.1	875.8	876.7	877.5	878.2	878.7	879.3	879.8	880.3	883.9
145°	922.4	922.5	922.7	922.7	922.9	923.3	923.9	924.5	925.2	925.8	927.8
147.5°	963.3	964.0	964.8	965.5	966.3	967.0	967.5	968.1	968.7	969.3	970.0
150°	992.6	993.1	993.4	993.8	994.3	994.7	995.1	995.5	996.0	996.4	996.4
152.5°	1016.7	1017.3	1017.9	1018.4	1019.0	1019.5	1019.7	1019.9	1020.2	1020.5	1020.8
155°	1054.7	1054.7	1054.7	1054.7	1054.7	1054.8	1055.0	1055.2	1055.5	1055.6	1056.5
157.5°	1087.0	1086.8	1086.6	1086.3	1086.1	1086.0	1086.2	1086.4	1086.6	1086.7	1087.6
160°	1107.4	1106.9	1106.5	1106.2	1105.7	1105.5	1105.5	1105.5	1105.5	1105.5	1106.5
162.5°	1125.5	1124.8	1124.3	1123.7	1123.1	1122.9	1123.0	1123.2	1123.4	1123.6	1124.6
165°	1148.8	1148.1	1147.5	1146.9	1146.3	1145.9	1145.9	1145.9	1145.9	1145.9	1147.2
167.5°	1167.4	1166.6	1165.7	1164.9	1164.0	1163.8	1163.9	1164.0	1164.2	1164.4	1165.7
170°	1178.0	1177.1	1176.3	1175.4	1174.6	1174.2	1174.2	1174.2	1174.2	1174.2	1175.6
172.5°	1186.2	1185.4	1184.6	1183.7	1182.9	1182.4	1182.4	1182.4	1182.4	1182.4	1183.7
175°	1194.9	1194.0	1193.2	1192.4	1191.6	1191.1	1191.1	1191.1	1191.1	1191.1	1192.4
177.5°	1198.4	1197.8	1197.1	1196.5	1195.8	1195.4	1195.4	1195.4	1195.4	1195.4	1196.5
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1175.2	1177.0	1178.7	1179.6	1179.3	1179.1	1178.9	1178.6
5°	1173.2	1175.5	1177.8	1178.7	1178.5	1178.2	1177.9	1177.6
7.5°	1166.1	1169.0	1171.9	1173.1	1172.8	1172.4	1172.1	1171.8
10°	1159.0	1161.8	1164.7	1165.8	1165.3	1164.7	1164.1	1163.6
12.5°	1149.2	1151.9	1154.5	1155.6	1155.0	1154.4	1153.9	1153.3
15°	1130.8	1133.6	1136.4	1137.7	1137.5	1137.2	1136.9	1136.6
17.5°	1106.5	1109.2	1111.7	1112.8	1112.4	1112.0	1111.6	1111.2
20°	1089.1	1091.7	1094.3	1095.7	1096.0	1096.3	1096.6	1096.8
22.5°	1070.0	1073.2	1076.5	1078.0	1077.8	1077.7	1077.5	1077.3
25°	1037.6	1041.2	1044.9	1046.8	1046.8	1046.8	1046.8	1046.8
27.5°	1003.6	1006.8	1010.0	1011.7	1012.0	1012.2	1012.5	1012.7
30°	980.5	983.9	987.3	989.1	989.1	989.1	989.1	989.1
32.5°	955.4	958.9	962.6	964.8	965.4	966.1	966.9	967.5
35°	918.0	922.4	926.6	929.3	930.5	931.6	932.7	933.9
37.5°	879.5	884.3	889.2	892.0	893.0	893.8	894.8	895.7
40°	853.8	858.7	863.5	866.5	867.6	868.7	869.9	871.0
42.5°	827.0	832.3	837.6	841.0	842.6	844.2	845.8	847.4
45°	786.9	792.4	797.8	801.6	803.9	806.2	808.5	810.8
47.5°	746.5	752.6	758.7	762.6	764.4	766.2	767.9	769.7
50°	718.7	725.2	731.8	736.0	738.1	740.1	742.1	744.0
52.5°	690.4	697.2	704.0	708.6	711.1	713.5	716.0	718.4
55°	647.8	655.5	663.3	668.2	670.5	672.8	675.0	677.3
57.5°	604.4	612.1	619.8	625.1	627.7	630.4	633.1	635.7
60°	574.0	582.0	589.9	595.5	598.7	601.8	604.9	608.0
62.5°	545.3	553.3	561.2	566.7	569.6	572.5	575.4	578.3
65°	499.5	508.0	516.5	522.3	525.1	527.9	530.8	533.7
67.5°	453.8	463.2	472.5	478.4	480.8	483.2	485.6	488.0
70°	423.6	432.7	441.9	447.9	450.7	453.6	456.4	459.3
72.5°	393.3	402.7	412.0	418.1	420.9	423.8	426.7	429.5
75°	347.2	356.7	366.0	372.5	375.9	379.3	382.7	386.2
77.5°	304.2	314.1	324.0	330.3	332.8	335.5	338.1	340.7
80°	276.0	285.7	295.3	301.6	304.4	307.3	310.2	313.0
82.5°	250.3	260.0	269.7	276.0	278.8	281.6	284.5	287.4
85°	214.3	224.0	233.8	240.1	242.9	245.7	248.5	251.5
87.5°	187.7	197.6	207.4	213.8	216.7	219.6	222.6	225.6
90°	188.6	199.2	209.6	216.6	219.8	223.1	226.4	229.6
92.5°	193.1	203.3	213.4	219.7	222.1	224.4	226.8	229.1
95°	215.9	225.6	235.4	241.6	244.4	247.3	250.2	253.0
97.5°	245.6	255.1	264.6	270.7	273.4	276.2	279.0	281.7
100°	267.7	276.6	285.5	291.5	294.8	298.1	301.4	304.6
102.5°	294.2	302.8	311.5	317.3	320.0	322.8	325.6	328.3
105°	334.2	342.2	350.2	355.6	358.6	361.7	364.6	367.6
107.5°	378.1	386.3	394.6	399.9	402.2	404.4	406.7	409.0
110°	408.1	416.4	424.6	429.7	431.6	433.4	435.3	437.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	437.2	445.4	453.6	458.9	461.4	463.7	466.2	468.6
115°	482.9	489.9	497.0	501.5	503.6	505.7	507.7	509.8
117.5°	528.6	535.4	542.2	546.3	547.9	549.6	551.2	552.9
120°	559.6	565.9	572.3	576.3	577.8	579.4	581.0	582.6
122.5°	591.0	596.7	602.6	606.1	607.6	609.0	610.4	611.8
125°	637.5	642.6	647.8	650.9	652.1	653.3	654.4	655.6
127.5°	683.4	687.9	692.4	695.0	696.1	697.0	698.0	699.0
130°	713.9	718.4	723.0	725.5	725.7	725.9	726.1	726.4
132.5°	743.3	747.5	751.7	754.2	755.0	755.8	756.6	757.4
135°	788.0	792.2	796.5	799.2	800.2	801.3	802.2	803.2
137.5°	831.8	835.5	839.1	841.2	841.9	842.4	843.1	843.8
140°	861.0	865.1	869.1	871.1	871.1	871.0	871.0	871.0
142.5°	887.6	891.2	894.8	896.7	897.0	897.3	897.7	898.0
145°	929.9	932.0	934.1	935.3	935.6	935.9	936.2	936.5
147.5°	970.6	971.3	972.0	972.2	972.0	971.8	971.6	971.3
150°	996.4	996.4	996.4	996.0	995.3	994.7	994.0	993.3
152.5°	1021.2	1021.4	1021.8	1021.4	1020.5	1019.5	1018.5	1017.6
155°	1057.3	1058.2	1058.9	1058.7	1057.2	1055.7	1054.2	1052.8
157.5°	1088.4	1089.3	1090.2	1090.1	1088.9	1087.7	1086.6	1085.3
160°	1107.6	1108.6	1109.7	1109.7	1109.0	1108.1	1107.3	1106.5
162.5°	1125.7	1126.7	1127.8	1127.6	1126.2	1124.9	1123.6	1122.3
165°	1148.5	1149.7	1150.9	1150.8	1149.4	1147.9	1146.5	1145.0
167.5°	1167.0	1168.3	1169.6	1169.6	1168.3	1167.0	1165.7	1164.4
170°	1177.1	1178.6	1180.1	1180.1	1178.6	1177.1	1175.6	1174.2
172.5°	1185.1	1186.4	1187.6	1187.6	1186.1	1184.7	1183.2	1181.7
175°	1193.6	1194.9	1196.2	1196.0	1194.6	1193.1	1191.7	1190.1
177.5°	1197.5	1198.4	1199.5	1199.4	1198.3	1197.0	1195.9	1194.7
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7

(END OF REPORT)