

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: P332085-935

Luminaire Tested: **S123DIP-S1165D1195U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332085-935
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-S1165D1195U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7707.3 lumens
Efficiency: N/A
Efficacy: 107.5 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

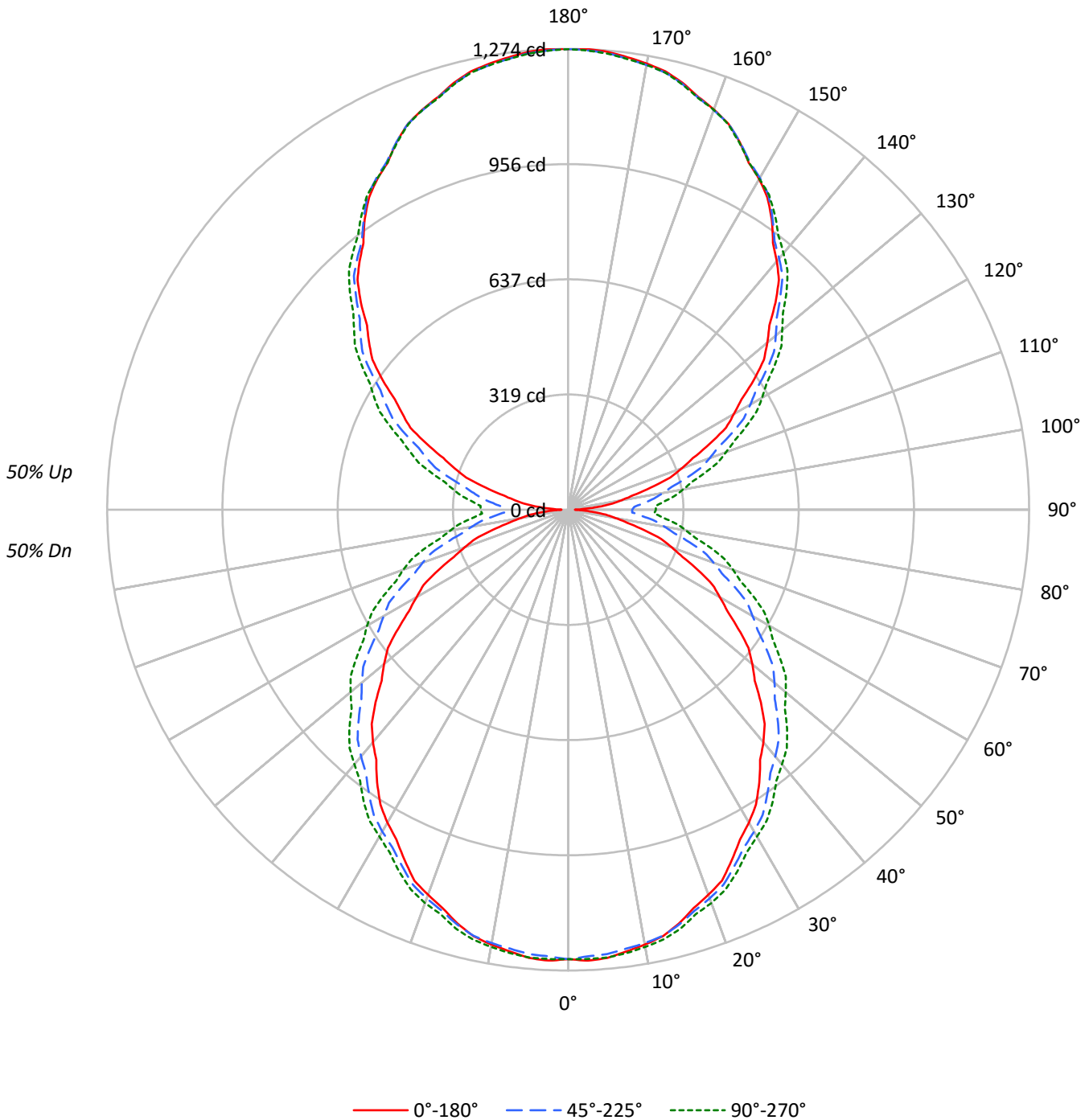
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	73	68	63	62	58	54	51	48	45	41	39	37	32
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	49	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	40	34	56	45	38	32	38	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	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	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°	13373	13373	13373
5°	13415	13037	13044
10°	13294	12736	12672
15°	13123	12396	12267
20°	12878	12006	11821
25°	12576	11558	11352
30°	12267	11155	10876
35°	11919	10728	10496
40°	11588	10340	10090
45°	11221	9968	9765
50°	10858	9599	9408
55°	10459	9224	9085
60°	10067	8841	8755
65°	9669	8433	8362
70°	9064	7974	7959
75°	8304	7449	7549
80°	7429	6933	7081
85°	6613	6577	6812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.5
10°-20°	335.7	4.4
20°-30°	502.2	6.5
30°-40°	599.7	7.8
40°-50°	627.4	8.1
50°-60°	588.8	7.6
60°-70°	491.8	6.4
70°-80°	351.8	4.6
80°-90°	213.6	2.8
90°-100°	214.6	2.8
100°-110°	345.1	4.5
110°-120°	486.9	6.3
120°-130°	592.4	7.7
130°-140°	641.0	8.3
140°-150°	617.3	8.0
150°-160°	516.7	6.7
160°-170°	343.9	4.5
170°-180°	120.4	1.6
0°-30°	955.7	12.4
0°-40°	1555.4	20.2
0°-60°	2771.6	36.0
0°-90°	3828.8	49.7
90°-120°	1046.6	13.6
90°-150°	2897.3	37.6
90°-180°	3878.0	50.3
0°-180°	7707.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1244	1241	1233	1243	1242	118
15°	1184	1188	1187	1200	1199	333
25°	1069	1082	1087	1103	1104	492
35°	920	942	960	979	985	575
45°	752	785	819	844	855	580
55°	574	619	667	702	715	514
65°	397	450	509	548	563	392
75°	215	279	346	390	407	230
85°	66	134	206	250	265	70
90°	19	95	177	225	242	16
95°	74	135	208	252	268	78
105°	236	272	338	374	390	252
115°	432	453	498	530	541	428
125°	626	631	667	690	696	559
135°	810	815	828	848	854	624
145°	981	982	984	994	996	612
155°	1122	1122	1122	1126	1119	516
165°	1222	1219	1218	1224	1218	344
175°	1270	1267	1266	1272	1266	121
180°	1274	1274	1274	1274	1274	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1247.8	1247.2	1246.4	1245.7	1244.9	1243.6	1241.7	1239.8	1237.9	1236.0	1237.9
5°	1243.8	1243.2	1242.6	1242.0	1241.4	1240.2	1238.4	1236.6	1234.8	1233.0	1235.4
7.5°	1231.6	1231.7	1231.8	1232.0	1232.1	1231.3	1229.5	1227.8	1226.1	1224.3	1227.3
10°	1220.8	1221.4	1222.0	1222.6	1223.2	1222.7	1221.2	1219.7	1218.2	1216.7	1219.7
12.5°	1207.8	1208.6	1209.4	1210.3	1211.2	1211.1	1210.0	1209.0	1208.0	1206.9	1209.7
15°	1184.2	1185.2	1186.0	1187.0	1187.8	1188.2	1187.8	1187.6	1187.2	1187.0	1190.0
17.5°	1154.4	1156.2	1158.0	1159.9	1161.7	1162.5	1162.4	1162.3	1162.2	1162.0	1164.8
20°	1132.8	1134.6	1136.4	1138.2	1140.1	1141.3	1141.9	1142.5	1143.1	1143.7	1146.3
22.5°	1110.1	1111.9	1113.7	1115.5	1117.3	1118.6	1119.5	1120.3	1121.1	1122.0	1125.4
25°	1069.2	1072.2	1075.2	1078.2	1081.2	1083.1	1084.1	1084.9	1085.9	1086.8	1090.7
27.5°	1028.0	1031.5	1034.9	1038.4	1041.7	1044.5	1046.4	1048.3	1050.2	1052.1	1055.5
30°	998.8	1002.7	1006.6	1010.6	1014.4	1017.6	1020.0	1022.4	1024.8	1027.3	1030.9
32.5°	966.3	970.7	975.1	979.5	983.9	987.7	990.8	993.9	997.0	1000.1	1004.0
35°	920.3	925.1	930.0	934.8	939.6	943.9	947.9	951.7	955.6	959.6	964.1
37.5°	871.6	877.0	882.4	887.9	893.3	898.4	903.2	908.0	912.8	917.7	922.7
40°	839.1	844.6	850.0	855.3	860.7	866.5	872.5	878.5	884.5	890.5	895.7
42.5°	803.4	810.0	816.7	823.2	829.8	836.3	842.6	848.8	855.1	861.3	866.9
45°	752.5	759.7	766.9	774.1	781.4	788.8	796.3	803.7	811.3	818.8	824.5
47.5°	699.1	707.3	715.5	723.8	731.9	740.3	748.9	757.5	766.1	774.7	781.1
50°	664.5	673.0	681.4	689.7	698.2	707.1	716.4	725.7	735.0	744.3	751.3
52.5°	627.8	636.6	645.5	654.4	663.3	673.0	683.2	693.4	703.8	714.0	721.3
55°	573.9	583.8	593.7	603.6	613.5	623.9	634.7	645.6	656.4	667.3	675.4
57.5°	521.3	531.7	542.0	552.3	562.7	573.9	585.7	597.5	609.3	621.2	629.4
60°	484.5	495.3	506.2	517.0	527.8	539.4	551.7	564.0	576.4	588.8	597.2
62.5°	449.9	461.0	472.0	483.1	494.1	506.2	519.3	532.3	545.4	558.4	566.8
65°	396.6	408.3	420.0	431.7	443.5	456.0	469.2	482.4	495.7	508.9	517.9
67.5°	342.4	354.9	367.3	379.8	392.2	405.2	418.6	432.1	445.6	459.1	468.9
70°	304.5	317.5	330.4	343.3	356.3	370.0	384.4	398.8	413.3	427.7	437.3
72.5°	269.8	282.8	295.8	308.7	321.6	335.5	350.4	365.3	380.3	395.2	405.1
75°	215.2	229.4	243.5	257.6	271.7	286.3	301.4	316.4	331.4	346.5	356.4
77.5°	167.6	181.8	196.0	210.3	224.5	239.3	254.4	269.6	284.7	299.9	310.4
80°	134.0	148.7	163.5	178.2	193.0	208.1	223.8	239.4	255.0	270.7	280.9
82.5°	104.8	119.8	134.7	149.7	164.6	180.1	196.0	211.9	227.7	243.6	253.8
85°	66.3	81.4	96.4	111.4	126.5	142.0	157.9	173.8	189.8	205.7	215.9
87.5°	36.2	51.7	67.1	82.5	97.9	113.6	129.5	145.4	161.4	177.2	187.6
90°	18.6	35.6	52.5	69.5	86.4	104.0	122.3	140.5	158.7	176.9	188.0
92.5°	40.7	55.5	70.3	85.2	100.0	115.7	132.4	149.2	165.9	182.7	193.4
95°	73.9	87.2	100.5	113.7	127.1	142.0	158.5	175.0	191.5	208.0	218.3
97.5°	118.1	129.8	141.5	153.3	165.1	178.7	194.0	209.4	224.7	240.0	250.0
100°	148.3	159.2	170.1	181.1	192.1	205.0	220.0	234.9	249.9	264.8	274.2
102.5°	183.1	192.6	202.1	211.5	221.0	233.2	248.3	263.4	278.4	293.5	302.6
105°	235.9	243.6	251.2	258.9	266.6	277.8	292.8	307.7	322.7	337.6	346.0
107.5°	295.9	302.3	308.8	315.1	321.5	331.2	344.3	357.4	370.5	383.6	392.3
110°	333.2	339.1	345.0	350.9	356.7	365.8	378.3	390.8	403.3	415.8	424.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	373.2	378.0	382.7	387.4	392.1	400.3	412.0	423.6	435.2	446.9	455.5
115°	432.0	436.2	440.5	444.8	449.0	456.3	466.7	477.2	487.5	497.9	505.3
117.5°	492.1	494.7	497.4	500.1	502.7	508.9	518.5	528.1	537.7	547.3	554.3
120°	528.7	531.4	534.3	537.1	539.9	545.8	554.6	563.4	572.2	581.0	587.7
122.5°	567.8	569.6	571.4	573.1	574.9	580.1	589.0	597.9	606.7	615.6	621.7
125°	626.3	627.0	627.7	628.3	629.0	633.4	641.7	650.0	658.2	666.6	672.0
127.5°	681.5	682.6	683.7	684.9	686.0	689.9	696.6	703.4	710.2	716.9	721.5
130°	718.3	719.8	721.3	722.7	724.3	727.6	733.0	738.4	743.7	749.1	753.9
132.5°	754.1	755.8	757.5	759.2	761.0	764.0	768.3	772.6	777.0	781.3	785.7
135°	810.0	811.1	812.1	813.1	814.2	816.2	819.3	822.3	825.4	828.5	833.1
137.5°	861.8	862.6	863.5	864.4	865.2	866.9	869.4	871.8	874.3	876.7	880.5
140°	896.7	897.8	898.9	900.0	901.1	902.2	903.4	904.5	905.6	906.7	911.0
142.5°	929.5	930.4	931.3	932.1	933.0	933.8	934.3	934.9	935.5	936.1	939.9
145°	980.8	980.9	981.0	981.2	981.3	981.7	982.4	983.0	983.7	984.4	986.5
147.5°	1024.2	1025.0	1025.8	1026.6	1027.4	1028.1	1028.7	1029.3	1029.9	1030.6	1031.3
150°	1055.4	1055.8	1056.3	1056.7	1057.2	1057.7	1058.1	1058.5	1058.9	1059.4	1059.4
152.5°	1081.0	1081.7	1082.3	1082.9	1083.5	1083.9	1084.2	1084.5	1084.8	1085.0	1085.4
155°	1121.5	1121.5	1121.5	1121.5	1121.5	1121.5	1121.8	1122.0	1122.2	1122.4	1123.3
157.5°	1155.8	1155.5	1155.3	1155.0	1154.8	1154.7	1154.9	1155.1	1155.3	1155.5	1156.4
160°	1177.4	1177.0	1176.6	1176.1	1175.7	1175.4	1175.4	1175.4	1175.4	1175.4	1176.6
162.5°	1196.6	1196.0	1195.4	1194.8	1194.2	1193.9	1194.1	1194.3	1194.5	1194.6	1195.8
165°	1221.5	1220.8	1220.1	1219.4	1218.8	1218.5	1218.5	1218.5	1218.5	1218.5	1219.8
167.5°	1241.3	1240.4	1239.5	1238.6	1237.7	1237.3	1237.5	1237.7	1237.9	1238.0	1239.4
170°	1252.5	1251.5	1250.7	1249.8	1248.9	1248.4	1248.4	1248.4	1248.4	1248.4	1250.0
172.5°	1261.3	1260.4	1259.5	1258.6	1257.7	1257.3	1257.3	1257.3	1257.3	1257.3	1258.7
175°	1270.5	1269.6	1268.7	1267.8	1267.0	1266.4	1266.4	1266.4	1266.4	1266.4	1267.8
177.5°	1274.3	1273.6	1272.9	1272.1	1271.4	1271.1	1271.1	1271.1	1271.1	1271.1	1272.1
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1239.8	1241.7	1243.6	1244.5	1244.2	1244.0	1243.7	1243.5
5°	1237.8	1240.2	1242.6	1243.6	1243.4	1243.0	1242.8	1242.4
7.5°	1230.3	1233.3	1236.3	1237.7	1237.3	1236.9	1236.6	1236.2
10°	1222.7	1225.7	1228.7	1229.9	1229.3	1228.7	1228.1	1227.5
12.5°	1212.5	1215.3	1218.1	1219.1	1218.5	1217.9	1217.3	1216.7
15°	1192.9	1195.9	1198.9	1200.3	1200.1	1199.7	1199.5	1199.1
17.5°	1167.4	1170.2	1172.9	1174.0	1173.6	1173.2	1172.8	1172.3
20°	1149.0	1151.8	1154.4	1156.0	1156.2	1156.6	1156.8	1157.2
22.5°	1128.9	1132.3	1135.7	1137.3	1137.1	1137.0	1136.8	1136.6
25°	1094.6	1098.5	1102.4	1104.4	1104.4	1104.4	1104.4	1104.4
27.5°	1058.9	1062.2	1065.6	1067.4	1067.6	1067.9	1068.2	1068.4
30°	1034.5	1038.1	1041.6	1043.4	1043.4	1043.4	1043.4	1043.4
32.5°	1007.9	1011.8	1015.5	1017.9	1018.6	1019.3	1020.0	1020.7
35°	968.6	973.1	977.6	980.5	981.7	982.9	984.1	985.2
37.5°	927.8	933.0	938.1	941.1	942.1	943.1	944.0	944.9
40°	900.8	905.9	911.0	914.1	915.3	916.5	917.7	918.9
42.5°	872.5	878.1	883.7	887.3	889.0	890.7	892.3	894.1
45°	830.3	835.9	841.7	845.8	848.2	850.6	853.0	855.3
47.5°	787.6	794.0	800.5	804.6	806.4	808.3	810.2	812.0
50°	758.2	765.2	772.1	776.5	778.7	780.8	782.9	785.0
52.5°	728.4	735.6	742.7	747.6	750.2	752.8	755.4	757.9
55°	683.5	691.6	699.7	705.0	707.4	709.8	712.2	714.6
57.5°	637.6	645.8	653.9	659.4	662.3	665.1	668.0	670.7
60°	605.5	614.0	622.4	628.3	631.6	634.9	638.2	641.5
62.5°	575.2	583.7	592.1	597.9	600.9	604.0	607.1	610.1
65°	526.9	536.0	545.0	551.0	554.0	557.0	560.0	563.0
67.5°	478.8	488.7	498.5	504.7	507.3	509.8	512.3	514.9
70°	446.9	456.6	466.1	472.5	475.5	478.5	481.5	484.5
72.5°	414.9	424.8	434.6	441.1	444.1	447.1	450.1	453.1
75°	366.4	376.3	386.2	393.0	396.6	400.2	403.8	407.3
77.5°	320.8	331.3	341.8	348.4	351.2	354.0	356.7	359.5
80°	291.1	301.4	311.6	318.2	321.2	324.3	327.3	330.2
82.5°	264.1	274.3	284.5	291.1	294.1	297.1	300.1	303.2
85°	226.2	236.4	246.6	253.2	256.2	259.2	262.3	265.3
87.5°	198.0	208.4	218.9	225.6	228.7	231.8	234.9	238.0
90°	199.1	210.3	221.4	228.7	232.1	235.6	239.0	242.5
92.5°	204.1	214.8	225.5	232.0	234.5	237.0	239.6	242.1
95°	228.4	238.7	248.8	255.5	258.5	261.5	264.5	267.5
97.5°	260.0	270.0	280.0	286.5	289.4	292.3	295.2	298.2
100°	283.6	293.0	302.4	308.8	312.2	315.6	319.2	322.6
102.5°	311.9	321.0	330.1	336.1	339.1	342.0	344.9	347.8
105°	354.5	362.8	371.3	377.0	380.2	383.4	386.5	389.7
107.5°	401.1	409.8	418.6	424.2	426.6	429.0	431.4	433.7
110°	433.2	441.9	450.6	455.9	457.9	459.9	461.8	463.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	464.2	472.8	481.5	487.1	489.6	492.1	494.7	497.3
115°	512.8	520.2	527.6	532.4	534.7	536.8	539.0	541.2
117.5°	561.5	568.6	575.7	580.1	581.9	583.6	585.3	587.0
120°	594.4	601.2	607.8	612.0	613.6	615.4	617.0	618.6
122.5°	627.8	634.0	640.1	643.9	645.3	646.8	648.2	649.8
125°	677.4	682.9	688.3	691.6	692.8	694.0	695.3	696.5
127.5°	726.3	731.0	735.7	738.6	739.6	740.6	741.6	742.6
130°	758.7	763.5	768.4	770.9	771.1	771.4	771.6	771.9
132.5°	790.1	794.4	798.8	801.5	802.4	803.2	804.0	804.9
135°	837.6	842.1	846.6	849.5	850.5	851.5	852.6	853.7
137.5°	884.3	888.1	891.9	894.1	894.8	895.5	896.1	896.8
140°	915.3	919.6	923.9	926.0	926.0	925.9	925.8	925.8
142.5°	943.7	947.4	951.2	953.3	953.6	953.9	954.2	954.5
145°	988.8	990.9	993.1	994.4	994.7	995.0	995.3	995.6
147.5°	1032.0	1032.8	1033.5	1033.7	1033.5	1033.2	1032.9	1032.7
150°	1059.4	1059.4	1059.4	1059.0	1058.3	1057.6	1056.9	1056.1
152.5°	1085.7	1086.1	1086.4	1086.1	1085.0	1084.0	1083.0	1081.9
155°	1124.2	1125.1	1126.0	1125.7	1124.1	1122.6	1121.0	1119.4
157.5°	1157.3	1158.2	1159.2	1159.0	1157.8	1156.5	1155.3	1154.0
160°	1177.7	1178.8	1179.9	1180.0	1179.1	1178.2	1177.3	1176.5
162.5°	1196.9	1198.0	1199.1	1198.9	1197.5	1196.1	1194.6	1193.3
165°	1221.2	1222.4	1223.8	1223.7	1222.1	1220.6	1219.0	1217.5
167.5°	1240.8	1242.2	1243.5	1243.5	1242.2	1240.8	1239.4	1238.0
170°	1251.5	1253.2	1254.7	1254.7	1253.2	1251.5	1250.0	1248.4
172.5°	1260.1	1261.5	1262.8	1262.7	1261.1	1259.6	1258.0	1256.5
175°	1269.1	1270.5	1271.8	1271.7	1270.1	1268.6	1267.0	1265.5
177.5°	1273.2	1274.3	1275.3	1275.2	1274.0	1272.7	1271.5	1270.3
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5

(END OF REPORT)