

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: P332328-940

Luminaire Tested: **S123RDIP-S775D1195U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332328-940
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: S123RDIP-S775D1195U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6258.9 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

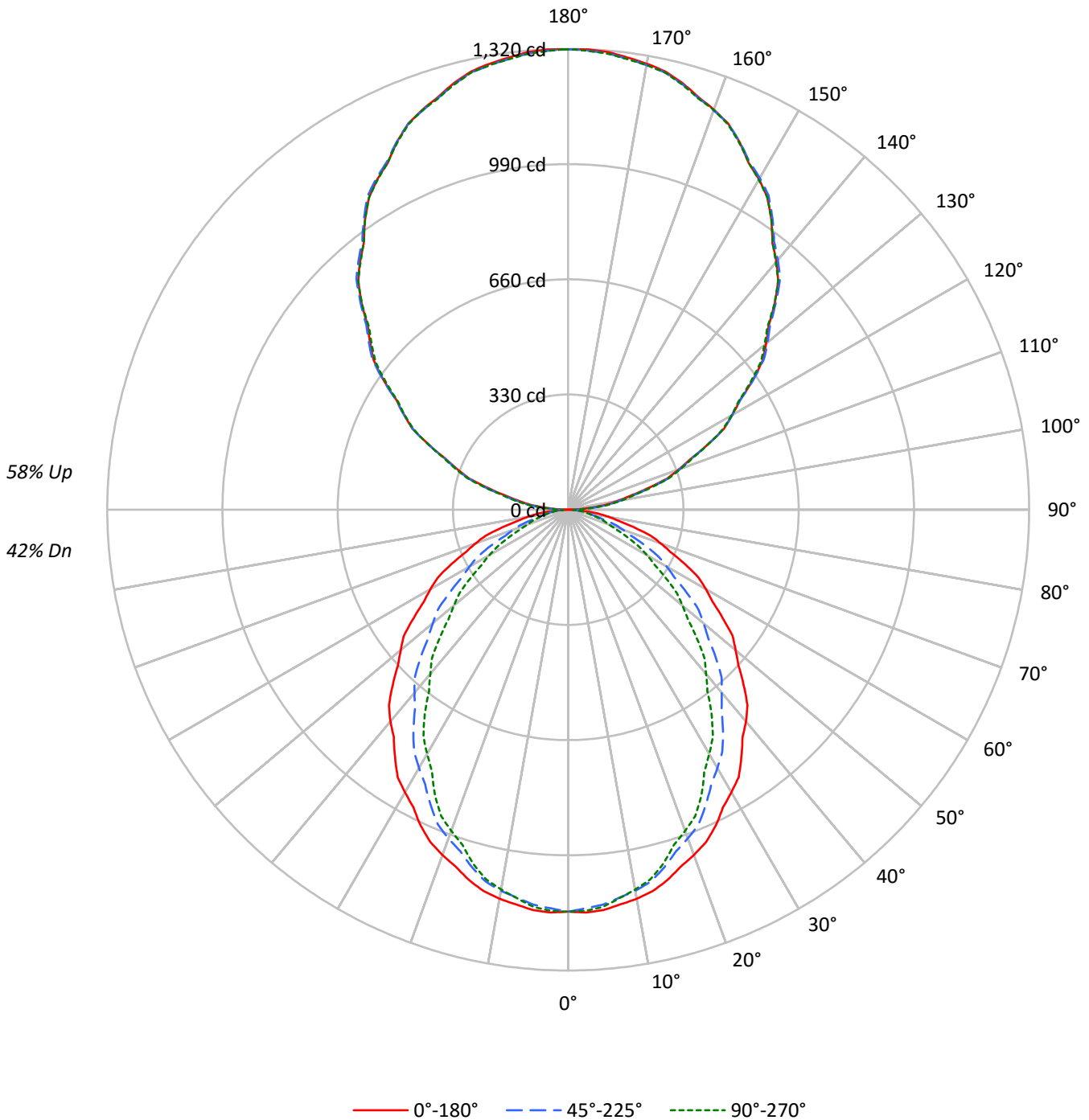
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79		63	63	63		48	48	48	42
1	96	92	88	85	88	84	81	78	69	67	65		56	54	53		43	42	41	36
2	88	81	75	70	80	74	69	64	61	57	54		49	47	45		38	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46		44	41	38		34	32	30	26
4	73	63	55	50	67	58	51	46	48	43	39		39	36	33		31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34		35	31	28		28	25	23	20
6	62	50	43	37	57	46	40	34	39	34	30		32	28	25		25	23	20	17
7	57	46	38	32	52	42	35	30	35	30	26		29	25	22		23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23		27	23	20		21	18	16	14
9	50	38	30	26	45	35	28	24	30	24	21		24	21	18		20	17	15	13
10	46	35	28	23	42	32	26	21	27	22	19		23	19	16		18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	1.7
10°-20°	300.8	4.8
20°-30°	433.1	6.9
30°-40°	487.9	7.8
40°-50°	466.7	7.5
50°-60°	382.2	6.1
60°-70°	257.9	4.1
70°-80°	129.7	2.1
80°-90°	38.2	0.6
90°-100°	85.9	1.4
100°-110°	257.2	4.1
110°-120°	437.4	7.0
120°-130°	575.3	9.2
130°-140°	646.7	10.3
140°-150°	635.6	10.2
150°-160°	535.1	8.5
160°-170°	356.2	5.7
170°-180°	124.7	2.0
0°-30°	842.0	13.5
0°-40°	1329.9	21.2
0°-60°	2178.8	34.8
0°-90°	2604.7	41.6
90°-120°	780.5	12.5
90°-150°	2638.1	42.2
90°-180°	3654.0	58.4
0°-180°	6258.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	1	12	25	29	31	6
95°	61	68	77	81	81	69
105°	233	236	244	245	247	250
115°	440	443	441	442	441	436
125°	644	647	646	641	637	574
135°	836	842	841	837	835	644
145°	1014	1016	1020	1018	1014	633
155°	1162	1162	1162	1166	1159	534
165°	1265	1262	1262	1267	1261	357
175°	1316	1312	1312	1317	1311	125
180°	1319	1319	1319	1319	1319	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.1	16.8	15.4	14.0	12.7	12.3	12.9	13.5	14.1	14.7	14.7
90°	1.1	3.3	5.6	7.9	10.3	12.9	15.9	18.9	21.8	24.9	25.8
92.5°	25.1	26.7	28.2	29.8	31.3	33.0	34.7	36.4	38.1	39.8	40.5
95°	61.2	62.8	64.4	66.0	67.6	69.3	71.2	72.9	74.8	76.7	77.6
97.5°	108.6	109.8	111.0	112.2	113.3	114.7	116.0	117.3	118.6	119.9	121.0
100°	140.9	142.3	143.7	145.1	146.4	147.7	148.8	150.0	151.1	152.3	153.0
102.5°	178.2	179.1	179.9	180.7	181.6	182.7	184.2	185.7	187.3	188.8	189.5
105°	233.1	233.5	234.1	234.5	235.0	236.2	238.3	240.4	242.5	244.5	244.5
107.5°	296.9	297.2	297.5	297.7	298.0	298.6	299.4	300.2	301.0	301.9	302.6
110°	336.7	337.2	337.6	338.1	338.6	339.0	339.5	339.9	340.4	340.9	341.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	378.2	378.4	378.7	379.0	379.2	379.4	379.5	379.6	379.7	379.8	380.9
115°	440.3	441.0	441.7	442.4	443.1	443.2	442.7	442.3	441.8	441.4	441.6
117.5°	502.9	503.4	503.8	504.3	504.7	504.7	504.1	503.5	502.9	502.3	502.2
120°	541.9	543.2	544.7	546.0	547.4	547.5	546.4	545.2	544.0	542.9	542.7
122.5°	582.5	583.4	584.5	585.5	586.6	586.7	586.1	585.5	585.0	584.3	583.7
125°	644.4	645.2	645.8	646.5	647.2	647.3	646.8	646.4	646.0	645.5	644.5
127.5°	701.6	703.1	704.5	706.1	707.5	708.0	707.5	706.9	706.5	706.0	704.7
130°	739.8	741.5	743.4	745.3	747.1	747.7	747.0	746.3	745.6	744.9	744.0
132.5°	777.8	779.7	781.6	783.4	785.2	786.0	785.4	784.9	784.3	783.9	782.7
135°	836.1	837.5	838.8	840.3	841.6	842.2	842.0	841.8	841.5	841.2	840.3
137.5°	890.0	891.1	892.2	893.4	894.6	895.5	896.1	896.6	897.2	897.9	896.9
140°	927.3	928.4	929.6	930.8	931.8	932.6	932.8	933.0	933.3	933.5	933.3
142.5°	961.3	962.4	963.6	964.7	965.9	966.6	967.1	967.5	967.9	968.3	968.0
145°	1014.3	1014.8	1015.2	1015.7	1016.1	1016.7	1017.4	1018.1	1018.8	1019.5	1019.2
147.5°	1060.7	1061.6	1062.4	1063.2	1064.1	1064.8	1065.4	1066.0	1066.7	1067.4	1067.4
150°	1093.1	1093.5	1094.0	1094.4	1094.9	1095.4	1095.8	1096.3	1096.7	1097.2	1097.2
152.5°	1119.5	1120.3	1120.9	1121.5	1122.1	1122.6	1122.8	1123.2	1123.5	1123.7	1124.1
155°	1161.5	1161.5	1161.5	1161.5	1161.5	1161.5	1161.8	1162.0	1162.3	1162.4	1163.4
157.5°	1197.0	1196.8	1196.5	1196.2	1196.0	1195.9	1196.1	1196.3	1196.5	1196.7	1197.7
160°	1219.4	1219.0	1218.5	1218.1	1217.6	1217.4	1217.4	1217.4	1217.4	1217.4	1218.5
162.5°	1239.3	1238.7	1238.1	1237.4	1236.8	1236.5	1236.7	1236.9	1237.1	1237.2	1238.4
165°	1265.1	1264.4	1263.6	1262.9	1262.3	1261.9	1261.9	1261.9	1261.9	1261.9	1263.3
167.5°	1285.6	1284.6	1283.7	1282.8	1281.8	1281.5	1281.7	1281.8	1282.0	1282.2	1283.6
170°	1297.2	1296.2	1295.3	1294.4	1293.4	1293.0	1293.0	1293.0	1293.0	1293.0	1294.6
172.5°	1306.3	1305.4	1304.4	1303.5	1302.6	1302.2	1302.2	1302.2	1302.2	1302.2	1303.6
175°	1315.8	1314.9	1313.9	1313.0	1312.2	1311.6	1311.6	1311.6	1311.6	1311.6	1313.0
177.5°	1319.7	1319.0	1318.3	1317.5	1316.8	1316.4	1316.4	1316.4	1316.4	1316.4	1317.5
180°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	<i>1151.3</i>	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	<i>1150.3</i>	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	<i>1142.8</i>	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	<i>1125.2</i>	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	<i>1109.1</i>	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	<i>1090.7</i>	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	<i>1057.5</i>	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	<i>1017.7</i>	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	<i>991.0</i>	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	<i>962.2</i>	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	<i>915.3</i>	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	<i>863.0</i>	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	<i>826.1</i>	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	<i>790.6</i>	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	<i>737.4</i>	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	<i>680.5</i>	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	<i>641.2</i>	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	<i>602.9</i>	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	<i>549.3</i>	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	<i>492.0</i>	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	<i>454.6</i>	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	<i>417.5</i>	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	<i>366.4</i>	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	<i>315.0</i>	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	<i>282.0</i>	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	<i>250.3</i>	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	<i>203.9</i>	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	<i>164.2</i>	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	<i>137.1</i>	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	<i>114.9</i>	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	<i>90.7</i>	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	<i>69.3</i>	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	<i>56.4</i>	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	<i>42.9</i>	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	<i>24.5</i>	24.3	24.3	24.3	24.3	24.3
87.5°	14.7	14.7	<i>14.7</i>	14.7	14.6	14.6	14.5	14.4
90°	26.8	27.6	<i>28.5</i>	29.2	29.7	30.1	30.6	31.1
92.5°	41.3	42.0	<i>42.7</i>	43.0	42.7	42.4	42.1	41.8
95°	78.5	79.5	<i>80.3</i>	80.8	80.8	80.8	80.8	80.8
97.5°	122.1	123.1	<i>124.2</i>	124.7	124.6	124.5	124.4	124.3
100°	153.6	154.4	<i>155.1</i>	155.6	156.1	156.6	157.0	157.5
102.5°	190.1	190.8	<i>191.5</i>	191.8	191.7	191.6	191.5	191.5
105°	244.5	244.5	<i>244.5</i>	244.8	245.2	245.7	246.1	246.6
107.5°	303.4	304.2	<i>304.9</i>	305.1	304.8	304.5	304.3	304.0
110°	342.7	343.7	<i>344.6</i>	344.7	344.3	343.8	343.4	343.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	382.0	383.2	384.2	384.8	384.7	384.6	384.5	384.4
115°	441.8	442.0	442.3	442.3	442.0	441.8	441.6	441.4
117.5°	502.2	502.1	502.1	501.8	501.1	500.4	499.8	499.2
120°	542.4	542.2	542.0	541.6	541.2	540.7	540.3	539.8
122.5°	583.2	582.6	581.9	581.3	580.7	580.1	579.3	578.7
125°	643.6	642.7	641.8	640.9	640.0	639.0	638.1	637.2
127.5°	703.4	702.1	700.8	699.6	698.6	697.5	696.4	695.4
130°	743.1	742.2	741.3	739.9	738.3	736.7	735.1	733.5
132.5°	781.7	780.6	779.4	778.3	777.0	775.8	774.5	773.3
135°	839.5	838.5	837.6	836.9	836.4	836.0	835.5	835.1
137.5°	895.9	894.9	893.9	893.0	892.2	891.4	890.5	889.6
140°	933.0	932.8	932.6	931.7	930.1	928.4	926.8	925.2
142.5°	967.9	967.6	967.4	966.6	965.4	964.1	963.0	961.7
145°	1019.0	1018.8	1018.6	1018.0	1017.1	1016.1	1015.2	1014.3
147.5°	1067.4	1067.4	1067.4	1066.7	1065.2	1063.9	1062.5	1061.1
150°	1097.2	1097.2	1097.2	1096.5	1095.1	1093.8	1092.3	1091.0
152.5°	1124.4	1124.8	1125.2	1124.8	1123.6	1122.4	1121.1	1120.0
155°	1164.3	1165.2	1166.2	1165.8	1164.2	1162.6	1161.0	1159.3
157.5°	1198.5	1199.5	1200.5	1200.3	1199.1	1197.7	1196.5	1195.2
160°	1219.7	1220.8	1222.0	1222.1	1221.2	1220.2	1219.3	1218.4
162.5°	1239.6	1240.7	1241.9	1241.7	1240.2	1238.8	1237.2	1235.8
165°	1264.7	1266.1	1267.5	1267.3	1265.7	1264.1	1262.5	1260.9
167.5°	1285.0	1286.5	1287.9	1287.9	1286.5	1285.0	1283.6	1282.2
170°	1296.2	1297.9	1299.5	1299.5	1297.9	1296.2	1294.6	1293.0
172.5°	1305.0	1306.4	1307.9	1307.8	1306.1	1304.5	1302.9	1301.3
175°	1314.4	1315.8	1317.1	1317.1	1315.5	1313.8	1312.2	1310.6
177.5°	1318.7	1319.7	1320.8	1320.7	1319.5	1318.1	1316.9	1315.6
180°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9

(END OF REPORT)