

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: P332529-930

Luminaire Tested: **S124DIP-S350D1205U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332529-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5096.3 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

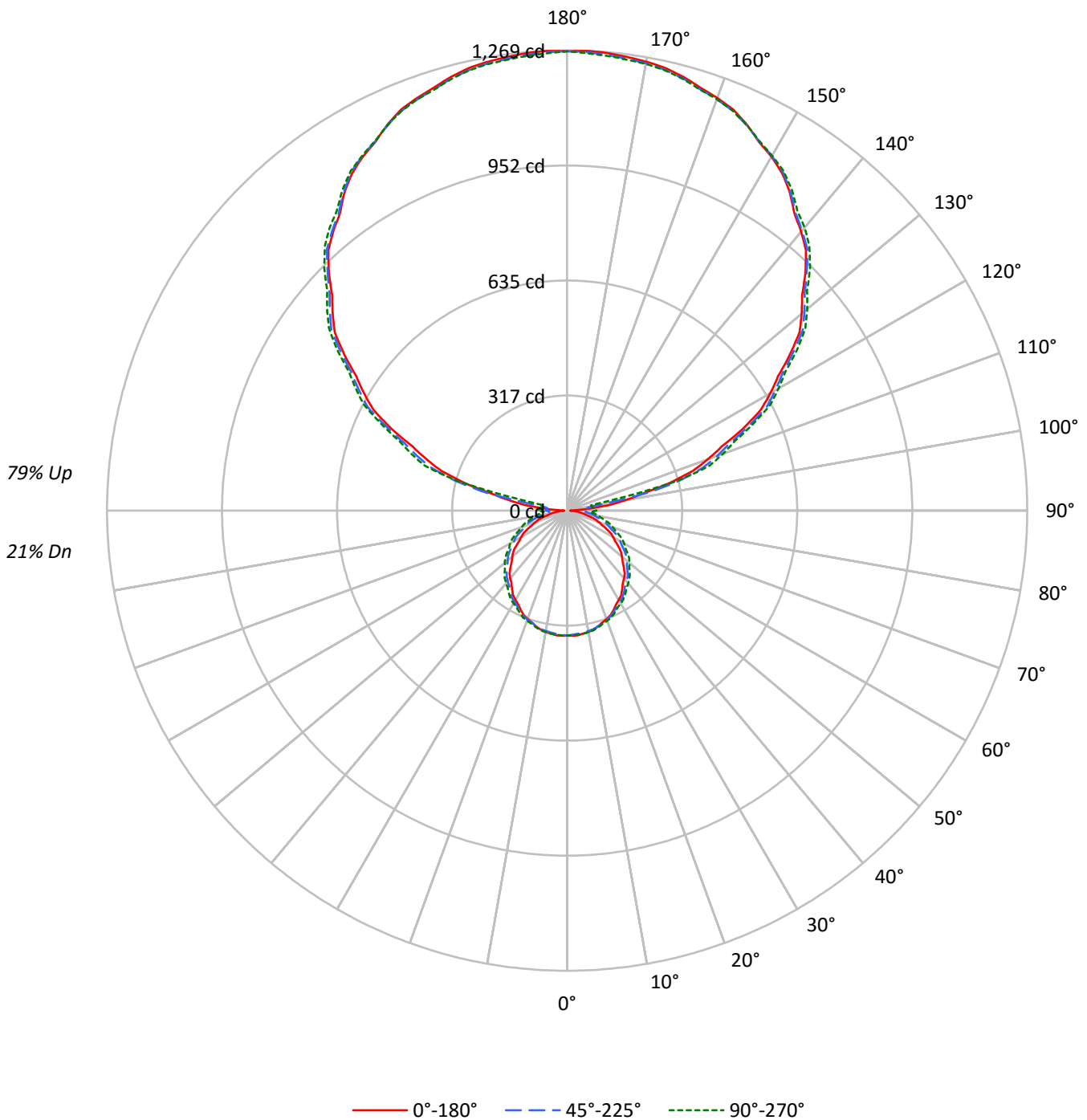
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	79	80	77	73	71	58	56	54	41	40	39	26	25	24	17
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	16	14	12	8
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7
7	53	41	34	28	47	37	30	25	28	24	20	20	17	15	13	11	9	6
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	37	28	22	17	21	17	14	15	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2782	2782	2782
5°	2791	2719	2726
10°	2774	2675	2673
15°	2749	2623	2608
20°	2711	2566	2547
25°	2669	2503	2478
30°	2623	2439	2408
35°	2571	2374	2347
40°	2530	2313	2282
45°	2468	2256	2228
50°	2417	2190	2169
55°	2363	2129	2101
60°	2280	2049	2039
65°	2187	1965	1962
70°	2076	1868	1874
75°	1922	1763	1793
80°	1750	1660	1713
85°	1534	1571	1669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	0.6
10°-20°	93.5	1.8
20°-30°	141.4	2.8
30°-40°	171.1	3.4
40°-50°	180.8	3.5
50°-60°	170.2	3.3
60°-70°	141.2	2.8
70°-80°	99.2	1.9
80°-90°	59.7	1.2
90°-100°	76.6	1.5
100°-110°	300.8	5.9
110°-120°	544.9	10.7
120°-130°	680.1	13.3
130°-140°	721.7	14.2
140°-150°	671.9	13.2
150°-160°	541.2	10.6
160°-170°	349.1	6.8
170°-180°	120.3	2.4
0°-30°	267.5	5.2
0°-40°	438.6	8.6
0°-60°	789.6	15.5
0°-90°	1089.7	21.4
90°-120°	922.4	18.1
90°-150°	2996.1	58.8
90°-180°	4007.0	78.6
0°-180°	5096.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	345	344	341	344	344	33
15°	331	331	330	333	333	93
25°	303	305	306	310	311	139
35°	265	269	273	278	280	166
45°	221	228	235	242	244	171
55°	173	181	193	200	203	154
65°	120	132	145	154	158	119
75°	66	81	97	107	111	71
85°	20	37	54	65	70	22
90°	9	35	59	75	81	7
95°	57	40	54	70	75	71
105°	289	302	321	336	308	302
115°	535	541	552	562	566	526
125°	750	754	761	771	774	669
135°	929	929	935	943	947	716
145°	1071	1073	1073	1077	1080	669
155°	1174	1174	1172	1175	1173	541
165°	1238	1234	1234	1240	1232	350
175°	1267	1261	1262	1269	1259	121
180°	1267	1267	1267	1267	1267	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	345.8	345.6	345.4	345.2	345.0	344.6	344.1	343.6	343.0	342.4	342.9
5°	345.0	344.7	344.5	344.2	344.0	343.6	342.9	342.3	341.8	341.1	341.9
7.5°	342.1	341.9	341.8	341.6	341.4	341.1	340.6	340.1	339.7	339.2	339.9
10°	339.6	339.5	339.4	339.3	339.2	339.0	338.6	338.1	337.7	337.3	338.0
12.5°	336.2	336.1	336.1	336.1	336.1	336.0	335.7	335.4	335.1	334.8	335.5
15°	330.7	330.8	330.9	331.0	331.1	331.0	330.7	330.4	330.2	330.0	330.7
17.5°	323.3	323.5	323.8	324.0	324.2	324.4	324.3	324.2	324.2	324.2	325.0
20°	318.0	318.2	318.5	318.8	319.0	319.2	319.3	319.4	319.4	319.5	320.4
22.5°	312.1	312.4	312.7	313.1	313.4	313.6	313.8	314.0	314.1	314.3	315.1
25°	302.6	303.0	303.6	304.1	304.6	305.0	305.2	305.5	305.7	306.1	307.0
27.5°	291.9	292.7	293.4	294.2	294.9	295.5	295.9	296.3	296.7	297.1	297.9
30°	284.8	285.5	286.2	286.8	287.6	288.2	288.8	289.3	290.0	290.6	291.6
32.5°	277.1	277.9	278.8	279.6	280.4	281.1	281.8	282.4	283.2	283.8	284.9
35°	264.7	265.8	266.8	267.8	268.9	269.8	270.7	271.5	272.4	273.2	274.4
37.5°	252.3	253.5	254.7	255.8	257.1	258.1	259.3	260.3	261.4	262.4	263.7
40°	244.3	245.4	246.5	247.6	248.7	249.9	251.1	252.3	253.5	254.7	256.0
42.5°	235.1	236.3	237.5	238.8	240.0	241.3	242.8	244.2	245.6	247.0	248.4
45°	220.7	222.3	224.0	225.6	227.2	228.9	230.5	232.1	233.7	235.4	236.8
47.5°	207.1	208.8	210.4	212.1	213.8	215.6	217.4	219.4	221.3	223.1	224.6
50°	197.2	199.1	201.0	202.8	204.7	206.6	208.6	210.4	212.3	214.2	215.9
52.5°	187.4	189.2	191.1	193.0	194.9	196.9	199.0	201.2	203.3	205.5	207.2
55°	172.9	174.7	176.5	178.3	180.1	182.3	184.8	187.4	190.0	192.6	194.3
57.5°	156.8	159.0	161.2	163.5	165.7	168.0	170.6	173.2	175.7	178.3	180.3
60°	146.3	148.5	150.7	153.0	155.2	157.7	160.5	163.4	166.2	169.0	171.0
62.5°	136.1	138.5	141.0	143.4	145.8	148.5	151.2	154.1	156.9	159.8	161.8
65°	119.6	122.4	125.1	127.8	130.6	133.5	136.3	139.3	142.2	145.1	147.2
67.5°	103.8	106.7	109.7	112.6	115.4	118.5	121.6	124.7	127.8	130.9	133.1
70°	93.0	95.9	98.8	101.7	104.7	107.8	111.0	114.3	117.6	120.8	123.1
72.5°	82.5	85.5	88.5	91.5	94.4	97.7	101.1	104.6	108.0	111.5	113.7
75°	66.4	69.5	72.7	75.9	79.1	82.4	86.1	89.7	93.3	96.9	99.3
77.5°	51.4	54.7	58.0	61.4	64.7	68.3	72.1	75.9	79.7	83.4	85.9
80°	42.1	45.5	48.9	52.3	55.8	59.4	63.2	66.9	70.7	74.5	77.0
82.5°	32.8	36.4	39.9	43.5	47.0	50.7	54.5	58.3	62.0	65.9	68.5
85°	20.5	24.1	27.6	31.2	34.9	38.6	42.5	46.3	50.1	54.1	56.6
87.5°	12.0	16.0	19.9	23.9	27.8	31.9	36.0	40.0	44.1	48.3	51.0
90°	9.0	14.8	20.5	26.3	32.0	37.6	43.0	48.3	53.6	59.0	62.8
92.5°	17.8	21.0	24.2	27.5	30.7	35.0	40.4	45.7	51.0	56.4	60.1
95°	57.2	52.8	48.4	44.1	39.8	39.5	43.2	47.0	50.7	54.4	58.0
97.5°	115.2	122.1	129.0	135.9	142.8	136.2	116.3	96.2	76.2	56.2	58.5
100°	159.6	165.6	171.6	177.7	183.7	173.8	148.1	122.5	96.7	71.0	69.7
102.5°	209.6	214.3	219.1	223.8	228.5	230.6	230.2	229.7	229.1	228.6	192.2
105°	288.6	291.6	294.6	297.6	300.5	304.1	308.3	312.6	316.8	321.1	325.1
107.5°	362.6	364.7	366.7	368.8	370.8	374.0	378.5	382.9	387.3	391.8	394.8
110°	412.4	414.2	416.0	417.8	419.6	422.7	427.0	431.2	435.5	439.8	442.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	460.6	462.8	465.0	467.2	469.4	472.1	475.6	479.1	482.5	486.0	487.8
115°	534.8	536.1	537.5	538.9	540.3	542.3	544.9	547.4	549.9	552.4	554.7
117.5°	601.9	603.2	604.5	605.8	607.2	609.3	612.3	615.3	618.3	621.3	623.1
120°	647.1	648.2	649.3	650.4	651.5	653.1	655.4	657.7	660.0	662.3	664.4
122.5°	689.5	690.1	690.6	691.2	691.7	693.3	696.0	698.6	701.2	703.9	705.9
125°	749.9	750.7	751.5	752.2	752.9	754.2	755.9	757.7	759.4	761.1	763.4
127.5°	807.5	807.6	807.7	807.8	808.0	809.3	812.0	814.6	817.2	819.8	821.2
130°	844.3	844.4	844.6	844.7	844.8	845.9	847.8	849.9	851.8	853.9	855.7
132.5°	878.4	878.6	879.0	879.3	879.5	880.7	882.6	884.4	886.4	888.3	889.9
135°	929.2	929.0	928.7	928.5	928.3	929.0	930.4	931.8	933.3	934.7	936.5
137.5°	974.4	974.4	974.4	974.4	974.4	975.0	976.2	977.5	978.7	979.9	981.6
140°	1004.0	1004.4	1004.7	1005.0	1005.3	1005.8	1006.2	1006.8	1007.3	1007.8	1009.5
142.5°	1030.2	1030.9	1031.7	1032.4	1033.1	1033.6	1033.9	1034.0	1034.3	1034.5	1035.9
145°	1070.9	1071.4	1072.0	1072.5	1073.1	1073.3	1073.3	1073.3	1073.3	1073.3	1074.1
147.5°	1103.3	1104.4	1105.5	1106.5	1107.7	1108.1	1107.9	1107.7	1107.4	1107.3	1107.5
150°	1126.7	1127.6	1128.3	1129.0	1129.8	1130.1	1129.8	1129.7	1129.4	1129.2	1129.2
152.5°	1146.1	1146.8	1147.5	1148.1	1148.8	1148.9	1148.6	1148.2	1147.8	1147.5	1147.8
155°	1173.8	1173.9	1174.2	1174.4	1174.6	1174.4	1173.8	1173.1	1172.5	1171.8	1172.7
157.5°	1197.0	1196.9	1196.8	1196.7	1196.5	1196.1	1195.4	1194.7	1194.0	1193.3	1194.3
160°	1210.7	1210.1	1209.4	1208.8	1208.2	1207.8	1207.5	1207.3	1207.1	1206.9	1208.2
162.5°	1222.8	1222.1	1221.2	1220.4	1219.6	1219.1	1218.9	1218.7	1218.5	1218.3	1219.5
165°	1238.2	1237.1	1236.1	1235.0	1234.0	1233.5	1233.5	1233.5	1233.5	1233.5	1235.1
167.5°	1250.3	1249.2	1248.1	1247.0	1245.9	1245.3	1245.2	1245.0	1245.0	1244.8	1246.7
170°	1257.1	1255.9	1254.6	1253.4	1252.1	1251.6	1251.7	1252.0	1252.1	1252.4	1254.1
172.5°	1261.7	1260.4	1259.1	1257.8	1256.6	1256.1	1256.3	1256.5	1256.7	1256.9	1258.6
175°	1266.6	1265.3	1264.0	1262.8	1261.5	1261.0	1261.2	1261.4	1261.7	1261.8	1263.7
177.5°	1268.9	1267.7	1266.5	1265.3	1264.1	1263.7	1264.0	1264.4	1264.8	1265.1	1266.4
180°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	343.4	343.9	344.4	344.5	344.5	344.5	344.4	344.3
5°	342.5	343.2	343.9	344.2	344.1	344.0	343.9	343.8
7.5°	340.7	341.4	342.3	342.6	342.5	342.4	342.3	342.3
10°	338.8	339.6	340.4	340.7	340.6	340.6	340.5	340.4
12.5°	336.2	337.0	337.6	337.9	337.9	337.9	337.9	337.9
15°	331.5	332.2	333.0	333.4	333.3	333.2	333.1	333.0
17.5°	325.7	326.5	327.3	327.7	327.6	327.5	327.5	327.4
20°	321.2	322.1	322.9	323.4	323.4	323.4	323.4	323.4
22.5°	316.0	316.8	317.7	318.2	318.4	318.5	318.6	318.8
25°	307.9	308.8	309.8	310.3	310.4	310.5	310.5	310.6
27.5°	298.8	299.7	300.6	301.1	301.2	301.3	301.3	301.5
30°	292.4	293.4	294.3	294.9	295.1	295.3	295.5	295.6
32.5°	285.9	287.1	288.1	288.8	288.9	289.1	289.3	289.4
35°	275.7	276.8	278.0	278.8	279.0	279.2	279.6	279.8
37.5°	264.9	266.0	267.3	268.1	268.3	268.6	268.9	269.1
40°	257.3	258.5	259.8	260.7	261.0	261.4	261.7	262.0
42.5°	249.8	251.3	252.7	253.6	253.8	254.0	254.4	254.6
45°	238.3	239.8	241.2	242.1	242.6	243.0	243.4	243.9
47.5°	226.2	227.6	229.2	230.2	230.7	231.2	231.7	232.3
50°	217.6	219.3	221.0	222.2	222.7	223.1	223.7	224.2
52.5°	209.0	210.7	212.4	213.5	214.0	214.5	215.1	215.6
55°	196.0	197.7	199.4	200.6	201.1	201.5	202.1	202.6
57.5°	182.4	184.4	186.5	187.7	188.2	188.7	189.1	189.6
60°	173.0	175.0	176.9	178.2	179.0	179.6	180.3	181.0
62.5°	163.7	165.7	167.6	169.0	169.7	170.3	171.0	171.7
65°	149.4	151.6	153.7	155.1	155.8	156.5	157.2	157.8
67.5°	135.3	137.5	139.7	141.1	141.8	142.4	143.1	143.8
70°	125.4	127.8	130.0	131.5	132.1	132.7	133.3	133.9
72.5°	116.0	118.3	120.5	122.0	122.6	123.3	124.0	124.7
75°	101.7	104.0	106.5	108.0	108.8	109.6	110.4	111.1
77.5°	88.3	90.7	93.2	94.8	95.6	96.4	97.3	98.1
80°	79.7	82.2	84.8	86.4	87.1	87.8	88.5	89.1
82.5°	71.1	73.8	76.4	78.1	78.8	79.6	80.4	81.1
85°	59.2	61.7	64.3	66.0	66.9	67.8	68.6	69.5
87.5°	53.7	56.4	59.2	61.0	61.8	62.7	63.5	64.3
90°	66.5	70.3	74.0	76.5	77.6	78.7	79.8	80.9
92.5°	63.8	67.5	71.2	73.4	74.2	74.9	75.7	76.5
95°	61.6	65.1	68.7	71.0	72.0	73.0	73.9	74.9
97.5°	60.9	63.3	65.7	67.3	68.3	69.2	70.2	71.2
100°	68.5	67.3	66.0	65.7	66.5	67.3	68.2	69.0
102.5°	155.9	119.5	83.2	65.3	66.0	66.8	67.5	68.2
105°	329.1	333.1	337.2	335.7	328.9	322.0	315.1	308.2
107.5°	397.8	400.9	403.9	406.1	407.6	409.0	410.3	411.8
110°	444.6	446.9	449.3	451.2	452.5	453.9	455.2	456.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	489.6	491.5	493.3	494.9	496.4	497.9	499.4	500.8
115°	557.0	559.4	561.7	563.1	563.7	564.4	564.9	565.5
117.5°	624.8	626.5	628.2	629.3	629.9	630.6	631.1	631.7
120°	666.5	668.6	670.8	672.0	672.3	672.5	672.8	673.0
122.5°	707.8	709.8	711.8	712.9	713.1	713.2	713.5	713.6
125°	765.6	767.8	770.1	771.6	772.3	773.1	773.8	774.5
127.5°	822.6	824.0	825.5	826.4	826.8	827.2	827.6	828.0
130°	857.4	859.2	860.9	862.0	862.5	863.1	863.6	864.1
132.5°	891.6	893.3	895.0	896.0	896.3	896.7	897.1	897.4
135°	938.3	940.1	941.9	943.2	944.2	945.1	946.1	947.0
137.5°	983.3	985.0	986.8	987.8	988.1	988.4	988.7	989.0
140°	1011.3	1013.0	1014.8	1015.9	1016.6	1017.2	1017.9	1018.6
142.5°	1037.3	1038.8	1040.2	1041.1	1041.5	1042.0	1042.4	1042.8
145°	1074.8	1075.5	1076.3	1077.0	1077.7	1078.5	1079.3	1080.0
147.5°	1107.7	1108.0	1108.2	1108.6	1109.1	1109.5	1110.0	1110.5
150°	1129.2	1129.2	1129.2	1129.4	1129.5	1129.8	1130.0	1130.2
152.5°	1148.1	1148.4	1148.8	1148.8	1148.8	1148.6	1148.5	1148.3
155°	1173.5	1174.4	1175.3	1175.3	1174.7	1174.0	1173.5	1172.8
157.5°	1195.5	1196.5	1197.7	1197.7	1196.5	1195.5	1194.3	1193.3
160°	1209.4	1210.7	1211.9	1211.9	1210.7	1209.4	1208.2	1206.9
162.5°	1220.8	1222.1	1223.4	1223.3	1221.8	1220.4	1219.0	1217.5
165°	1236.8	1238.5	1240.2	1240.1	1238.2	1236.2	1234.4	1232.5
167.5°	1248.5	1250.3	1252.2	1252.1	1250.0	1247.9	1245.8	1243.7
170°	1255.7	1257.4	1259.1	1258.9	1256.8	1254.7	1252.6	1250.5
172.5°	1260.3	1262.0	1263.6	1263.4	1261.1	1258.8	1256.5	1254.3
175°	1265.7	1267.5	1269.4	1269.1	1266.6	1264.0	1261.5	1259.0
177.5°	1267.8	1269.1	1270.5	1270.2	1268.1	1266.1	1264.0	1262.1
180°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6

(END OF REPORT)