

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: P333025-935

Luminaire Tested: **S124RDIW-S350D1050U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333025-935
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: S124RDIW-S350D1050U935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4840.9 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

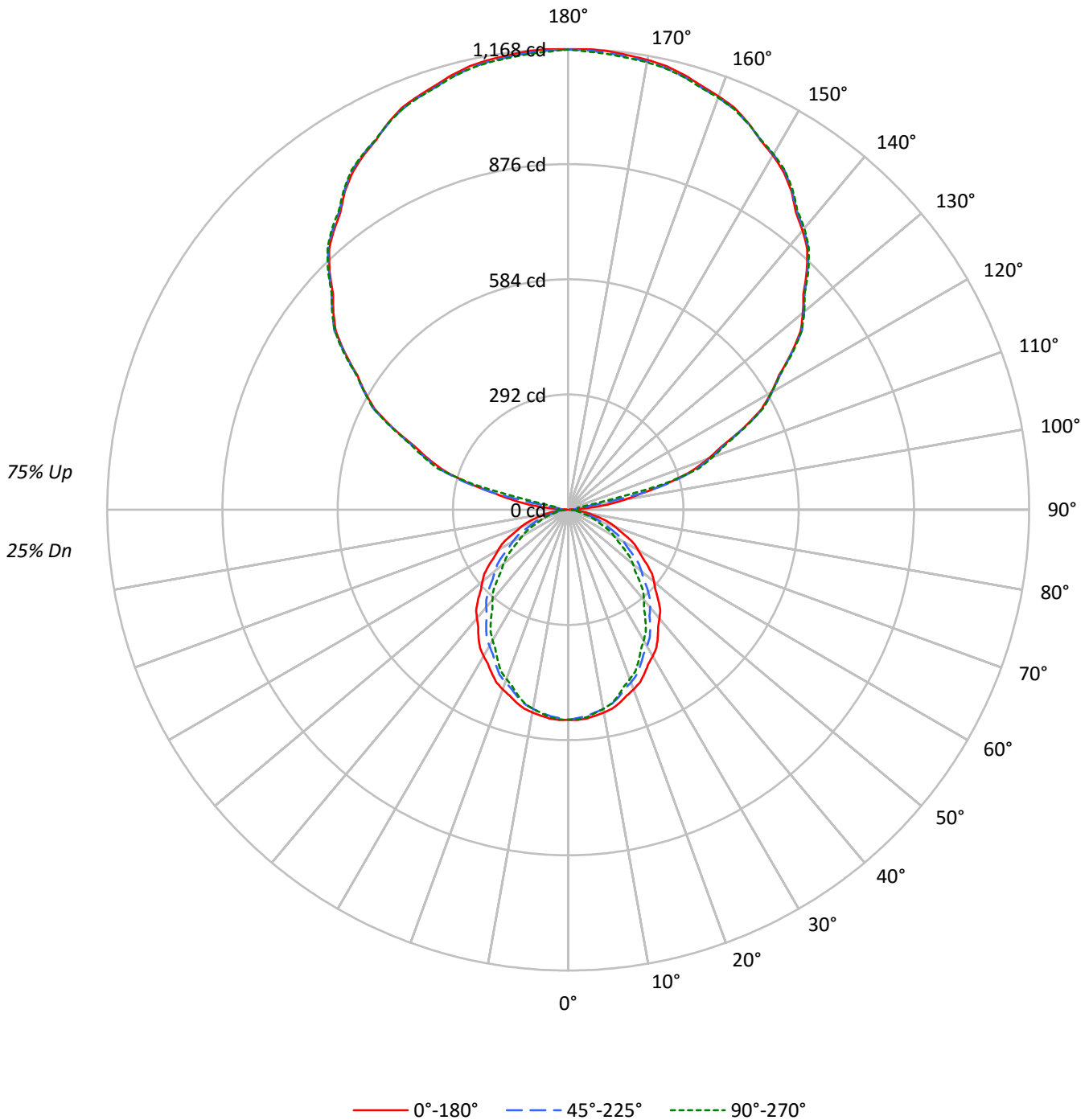
Input Watts (W): 38
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	88	85	81	82	79	76	73	61	59	57	45	44	42	30	29	29	22
2	84	77	71	67	75	69	64	60	54	50	48	39	37	36	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	53	47	62	54	47	43	42	38	34	31	28	26	21	19	18	14
5	64	53	46	40	57	48	41	36	38	33	29	28	25	22	19	17	16	12
6	59	48	40	35	53	43	36	31	34	29	25	25	22	20	17	15	14	10
7	55	43	35	30	49	39	32	27	31	26	22	23	20	17	16	14	12	9
8	51	39	32	26	45	35	29	24	28	23	20	21	18	15	14	12	11	8
9	47	35	28	23	42	32	26	21	25	21	18	19	16	14	13	11	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4297	4297	4297
5°	4306	4254	4280
10°	4279	4203	4203
15°	4231	4115	4084
20°	4163	3998	3924
25°	4077	3862	3764
30°	3993	3719	3564
35°	3900	3571	3362
40°	3789	3402	3144
45°	3685	3234	2923
50°	3567	3041	2688
55°	3441	2839	2432
60°	3303	2619	2172
65°	3177	2344	1914
70°	2991	2039	1626
75°	2757	1691	1323
80°	2404	1288	1213
85°	2038	1176	1093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	1.0
10°-20°	139.4	2.9
20°-30°	201.3	4.2
30°-40°	228.2	4.7
40°-50°	220.4	4.6
50°-60°	183.2	3.8
60°-70°	126.5	2.6
70°-80°	64.1	1.3
80°-90°	19.8	0.4
90°-100°	39.9	0.8
100°-110°	254.3	5.3
110°-120°	486.6	10.1
120°-130°	617.7	12.8
130°-140°	660.8	13.7
140°-150°	618.0	12.8
150°-160°	498.3	10.3
160°-170°	321.4	6.6
170°-180°	110.8	2.3
0°-30°	390.7	8.1
0°-40°	619.0	12.8
0°-60°	1022.6	21.1
0°-90°	1233.1	25.5
90°-120°	780.8	16.1
90°-150°	2677.3	55.3
90°-180°	3608.0	74.5
0°-180°	4840.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	531	530	525	529	528	50
15°	506	502	492	491	489	143
25°	458	450	434	427	423	211
35°	396	382	362	349	341	247
45°	323	307	283	264	256	249
55°	244	228	202	181	173	219
65°	166	148	123	106	100	164
75°	88	73	54	45	42	93
85°	22	14	13	12	12	25
90°	3	12	19	24	26	3
95°	48	20	19	24	25	62
105°	263	268	272	278	249	275
115°	490	493	492	494	494	482
125°	689	692	691	693	694	615
135°	855	854	858	859	861	658
145°	986	988	988	989	991	616
155°	1081	1082	1079	1082	1080	498
165°	1140	1136	1136	1142	1135	322
175°	1166	1161	1162	1169	1159	111
180°	1166	1166	1166	1166	1166	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	533.6	533.2	533.0	532.7	532.4	531.8	531.1	530.3	529.4	528.7	529.4
5°	531.4	531.1	530.7	530.4	529.9	529.3	528.1	527.1	526.0	525.0	525.8
7.5°	526.6	526.2	525.9	525.5	525.1	524.2	522.8	521.3	520.0	518.6	519.1
10°	522.0	521.6	521.2	520.7	520.2	519.2	517.5	515.9	514.3	512.7	513.1
12.5°	516.2	515.7	515.1	514.6	514.1	512.9	510.9	509.0	507.1	505.1	505.4
15°	506.2	505.3	504.5	503.7	502.9	501.4	499.1	496.8	494.6	492.3	492.1
17.5°	494.0	492.8	491.6	490.5	489.3	487.3	484.7	481.9	479.2	476.5	476.0
20°	484.6	483.4	482.2	481.0	479.8	477.8	474.7	471.6	468.5	465.4	464.7
22.5°	474.2	472.8	471.5	470.2	468.8	466.5	463.2	459.9	456.7	453.3	452.3
25°	457.7	456.1	454.4	452.8	451.2	448.5	444.8	441.1	437.3	433.6	432.0
27.5°	440.4	438.3	436.3	434.3	432.2	429.2	425.2	421.3	417.3	413.4	411.4
30°	428.3	426.0	423.8	421.5	419.3	416.0	411.7	407.5	403.2	399.0	396.7
32.5°	415.6	413.0	410.5	407.9	405.4	401.9	397.5	393.1	388.7	384.4	381.7
35°	395.7	392.8	389.9	387.0	384.1	380.4	375.9	371.3	366.9	362.3	359.2
37.5°	374.4	371.4	368.5	365.5	362.5	358.5	353.4	348.4	343.5	338.5	335.0
40°	359.5	356.5	353.4	350.5	347.5	343.5	338.3	333.1	328.0	322.8	319.0
42.5°	345.1	342.0	338.8	335.7	332.6	328.3	323.0	317.5	312.2	306.8	302.9
45°	322.8	319.4	316.1	312.7	309.4	305.0	299.5	294.1	288.7	283.3	278.8
47.5°	299.7	296.3	292.8	289.3	285.9	281.3	275.7	270.0	264.3	258.7	254.1
50°	284.0	280.5	277.0	273.5	269.9	265.3	259.5	253.7	247.9	242.1	237.5
52.5°	268.1	264.6	261.1	257.7	254.3	249.5	243.6	237.6	231.7	225.8	221.2
55°	244.5	240.9	237.3	233.7	230.1	225.2	219.4	213.5	207.6	201.7	197.0
57.5°	221.2	217.4	213.7	209.9	206.1	201.4	195.5	189.8	184.0	178.1	173.4
60°	204.6	201.0	197.3	193.7	190.1	185.4	179.6	173.7	168.0	162.2	157.5
62.5°	189.6	185.8	182.0	178.3	174.5	169.7	163.8	157.8	151.9	145.9	141.5
65°	166.3	162.4	158.5	154.6	150.7	145.9	140.1	134.2	128.5	122.7	118.8
67.5°	142.1	138.4	134.6	130.9	127.2	122.6	117.2	111.8	106.4	101.1	97.7
70°	126.7	123.0	119.2	115.4	111.5	107.0	101.9	96.7	91.5	86.4	83.4
72.5°	110.5	107.0	103.6	100.1	96.7	92.6	87.6	82.7	77.9	73.0	70.5
75°	88.4	85.1	81.7	78.4	75.0	71.2	67.0	62.7	58.5	54.2	52.1
77.5°	66.1	63.3	60.4	57.6	54.8	51.6	48.1	44.7	41.2	37.8	36.6
80°	51.7	49.2	46.5	43.9	41.2	38.6	35.9	33.1	30.4	27.7	27.5
82.5°	39.3	36.9	34.5	32.1	29.7	27.7	26.2	24.6	23.1	21.5	21.4
85°	22.0	20.2	18.4	16.5	14.7	13.7	13.4	13.2	12.9	12.7	12.5
87.5°	8.0	7.8	7.7	7.6	7.4	7.5	7.7	7.9	8.2	8.4	8.5
90°	2.6	4.7	6.9	9.0	11.1	13.0	14.6	16.1	17.7	19.2	20.3
92.5°	11.0	11.1	11.2	11.4	11.5	12.3	13.9	15.4	17.0	18.5	19.6
95°	48.0	41.4	34.8	28.2	21.6	18.4	18.6	18.8	19.0	19.2	20.3
97.5°	101.9	106.0	110.1	114.3	118.3	109.6	87.9	66.3	44.7	23.0	23.2
100°	143.1	146.5	150.1	153.5	157.0	145.4	118.6	91.9	65.2	38.4	35.1
102.5°	189.2	191.7	194.2	196.8	199.3	198.9	195.4	191.9	188.4	184.9	149.4
105°	262.6	263.7	264.9	266.0	267.3	268.3	269.2	270.3	271.2	272.2	273.9
107.5°	330.8	331.4	331.9	332.5	333.1	334.1	335.4	336.7	338.0	339.3	340.2
110°	376.9	377.5	378.0	378.6	379.2	380.0	381.3	382.4	383.6	384.7	385.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	421.5	422.6	423.6	424.6	425.7	426.5	427.1	427.6	428.1	428.7	428.6
115°	490.3	490.9	491.5	492.0	492.6	492.8	492.6	492.4	492.2	492.0	492.4
117.5°	552.2	552.9	553.7	554.5	555.3	555.9	556.3	556.7	557.2	557.6	557.5
120°	594.1	594.9	595.6	596.4	597.2	597.4	597.3	597.1	596.8	596.7	597.1
122.5°	633.2	633.6	634.0	634.6	635.0	635.4	635.7	635.9	636.2	636.5	636.7
125°	689.1	689.9	690.7	691.5	692.2	692.4	692.1	691.6	691.3	690.9	691.5
127.5°	742.2	742.4	742.6	742.8	743.0	743.5	744.4	745.3	746.1	747.1	747.0
130°	776.4	776.6	776.8	777.0	777.1	777.6	778.2	778.7	779.3	779.9	780.1
132.5°	807.8	808.1	808.5	808.8	809.2	809.8	810.5	811.2	811.9	812.7	812.9
135°	854.9	854.7	854.5	854.3	854.1	854.5	855.2	856.0	856.8	857.6	857.9
137.5°	896.6	896.6	896.7	896.8	896.9	897.3	898.2	899.1	899.9	900.8	901.2
140°	923.9	924.2	924.6	925.0	925.4	925.7	926.2	926.5	927.0	927.3	927.9
142.5°	948.2	948.9	949.6	950.4	951.1	951.5	951.7	951.9	952.2	952.4	952.9
145°	985.8	986.4	986.9	987.5	988.1	988.3	988.3	988.3	988.3	988.3	988.6
147.5°	1015.5	1016.7	1017.8	1018.8	1019.9	1020.4	1020.2	1020.0	1019.8	1019.6	1019.8
150°	1037.2	1038.0	1038.8	1039.6	1040.3	1040.6	1040.4	1040.3	1040.0	1039.8	1039.8
152.5°	1055.3	1056.0	1056.6	1057.2	1057.8	1058.0	1057.7	1057.3	1057.0	1056.6	1056.9
155°	1080.8	1081.1	1081.2	1081.4	1081.6	1081.4	1080.8	1080.3	1079.7	1079.1	1079.9
157.5°	1102.3	1102.2	1102.1	1101.9	1101.8	1101.5	1100.8	1100.1	1099.5	1098.8	1099.8
160°	1114.8	1114.3	1113.7	1113.1	1112.5	1112.2	1112.0	1111.7	1111.6	1111.4	1112.5
162.5°	1126.0	1125.3	1124.6	1123.8	1123.1	1122.6	1122.4	1122.2	1122.1	1121.8	1123.0
165°	1140.1	1139.2	1138.2	1137.2	1136.3	1135.8	1135.8	1135.8	1135.8	1135.8	1137.4
167.5°	1151.3	1150.3	1149.3	1148.3	1147.3	1146.8	1146.6	1146.5	1146.4	1146.2	1148.0
170°	1157.6	1156.4	1155.3	1154.1	1153.0	1152.4	1152.6	1152.9	1153.1	1153.2	1154.8
172.5°	1161.7	1160.6	1159.4	1158.3	1157.1	1156.7	1156.8	1157.0	1157.3	1157.4	1159.0
175°	1166.3	1165.2	1164.0	1162.9	1161.7	1161.2	1161.4	1161.6	1161.7	1162.0	1163.7
177.5°	1168.4	1167.3	1166.2	1165.2	1164.1	1163.7	1164.0	1164.3	1164.6	1164.9	1166.1
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	530.3	531.1	531.8	532.2	532.1	532.1	532.0	531.9
5°	526.8	527.6	528.6	528.9	528.7	528.6	528.3	528.1
7.5°	519.7	520.3	520.9	521.0	520.7	520.5	520.1	519.9
10°	513.4	513.8	514.1	514.1	513.8	513.4	513.1	512.7
12.5°	505.6	505.8	506.1	505.9	505.4	504.9	504.4	503.9
15°	492.0	491.8	491.5	491.2	490.5	489.9	489.3	488.6
17.5°	475.4	475.0	474.5	473.7	472.8	471.8	470.9	469.9
20°	464.0	463.2	462.5	461.6	460.4	459.2	458.1	456.8
22.5°	451.2	450.0	449.0	448.0	447.0	446.1	445.1	444.1
25°	430.5	429.0	427.5	426.3	425.3	424.4	423.5	422.6
27.5°	409.5	407.6	405.7	404.2	402.8	401.5	400.2	398.9
30°	394.4	392.2	389.9	388.1	386.6	385.2	383.7	382.3
32.5°	379.1	376.4	373.8	371.8	370.4	369.0	367.6	366.3
35°	356.1	353.1	350.0	347.7	346.0	344.4	342.8	341.1
37.5°	331.6	328.1	324.7	322.1	320.5	318.8	317.2	315.6
40°	315.1	311.3	307.5	304.9	303.2	301.6	300.0	298.3
42.5°	299.0	295.2	291.3	288.5	286.8	285.1	283.4	281.7
45°	274.4	269.9	265.4	262.4	260.8	259.2	257.5	256.0
47.5°	249.5	244.9	240.3	237.1	235.3	233.5	231.7	230.0
50°	233.0	228.5	223.9	220.8	219.1	217.4	215.7	214.0
52.5°	216.5	212.0	207.4	204.1	202.4	200.6	198.8	197.0
55°	192.3	187.6	182.9	179.7	178.0	176.2	174.5	172.8
57.5°	168.6	163.8	159.0	156.0	154.7	153.4	152.1	150.8
60°	152.7	148.1	143.4	140.3	138.8	137.4	136.0	134.5
62.5°	137.2	132.9	128.5	125.8	124.6	123.5	122.3	121.1
65°	114.9	111.0	107.1	104.6	103.5	102.5	101.3	100.2
67.5°	94.4	91.0	87.6	85.4	84.2	83.0	81.8	80.6
70°	80.4	77.4	74.5	72.5	71.5	70.7	69.7	68.9
72.5°	67.9	65.3	62.9	61.1	60.3	59.5	58.6	57.8
75°	50.0	48.0	45.9	44.6	44.0	43.5	43.0	42.4
77.5°	35.4	34.2	33.0	32.3	32.1	31.9	31.8	31.6
80°	27.2	26.9	26.6	26.4	26.3	26.3	26.2	26.1
82.5°	21.1	20.9	20.8	20.6	20.5	20.4	20.3	20.2
85°	12.3	12.1	11.9	11.8	11.8	11.8	11.8	11.8
87.5°	8.7	8.9	9.0	9.2	9.4	9.5	9.6	9.8
90°	21.5	22.6	23.8	24.6	25.0	25.4	25.7	26.2
92.5°	20.8	22.0	23.2	23.8	23.8	23.9	24.0	24.1
95°	21.5	22.6	23.8	24.5	24.7	24.9	25.1	25.3
97.5°	23.2	23.4	23.5	23.7	23.8	24.0	24.2	24.5
100°	31.8	28.5	25.2	23.7	23.8	24.0	24.2	24.5
102.5°	113.8	78.3	42.7	25.0	25.0	25.1	25.1	25.1
105°	275.7	277.4	279.1	276.6	269.6	262.6	255.6	248.7
107.5°	341.0	341.9	342.8	343.5	344.3	345.0	345.8	346.5
110°	385.5	385.9	386.2	386.8	387.4	387.9	388.5	389.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	428.5	428.4	428.3	428.7	429.5	430.2	430.9	431.6
115°	492.8	493.2	493.5	493.8	493.8	493.8	493.8	493.8
117.5°	557.4	557.4	557.3	557.2	557.2	557.1	557.0	556.9
120°	597.4	597.9	598.2	598.2	597.9	597.4	597.1	596.7
122.5°	637.0	637.1	637.4	637.3	637.0	636.5	636.2	635.8
125°	692.1	692.7	693.2	693.6	693.8	694.0	694.2	694.4
127.5°	746.8	746.7	746.6	746.5	746.3	746.1	746.0	745.9
130°	780.2	780.5	780.7	780.8	780.8	780.8	780.8	780.8
132.5°	813.0	813.3	813.5	813.5	813.3	813.1	813.0	812.9
135°	858.3	858.7	859.1	859.5	859.9	860.2	860.7	861.0
137.5°	901.6	902.1	902.5	902.7	902.5	902.4	902.3	902.2
140°	928.5	929.0	929.6	930.1	930.2	930.4	930.6	930.8
142.5°	953.3	953.7	954.2	954.3	954.4	954.4	954.5	954.5
145°	988.8	988.9	989.1	989.5	989.8	990.2	990.6	991.0
147.5°	1019.9	1020.0	1020.2	1020.4	1020.6	1020.8	1021.0	1021.1
150°	1039.8	1039.8	1039.8	1039.9	1040.1	1040.3	1040.5	1040.7
152.5°	1057.2	1057.5	1057.8	1057.9	1057.8	1057.7	1057.6	1057.5
155°	1080.6	1081.4	1082.2	1082.3	1081.7	1081.2	1080.6	1080.0
157.5°	1100.8	1101.8	1102.9	1102.9	1101.8	1100.8	1099.8	1098.8
160°	1113.7	1114.8	1116.0	1116.0	1114.8	1113.7	1112.5	1111.4
162.5°	1124.1	1125.3	1126.4	1126.4	1125.1	1123.8	1122.5	1121.1
165°	1138.9	1140.5	1142.0	1141.9	1140.1	1138.4	1136.7	1134.9
167.5°	1149.7	1151.4	1153.1	1153.0	1151.1	1149.1	1147.2	1145.2
170°	1156.3	1157.9	1159.4	1159.3	1157.3	1155.4	1153.4	1151.5
172.5°	1160.5	1162.1	1163.6	1163.4	1161.2	1159.2	1157.1	1154.9
175°	1165.4	1167.2	1169.0	1168.6	1166.3	1164.0	1161.7	1159.3
177.5°	1167.4	1168.6	1169.9	1169.6	1167.7	1165.9	1164.0	1162.2
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3

(END OF REPORT)