

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: P332520-830

Luminaire Tested: **S124DIP-S350D1035U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332520-830
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-S350D1035U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5253.1 lumens
Efficiency: N/A
Efficacy: 140.8 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

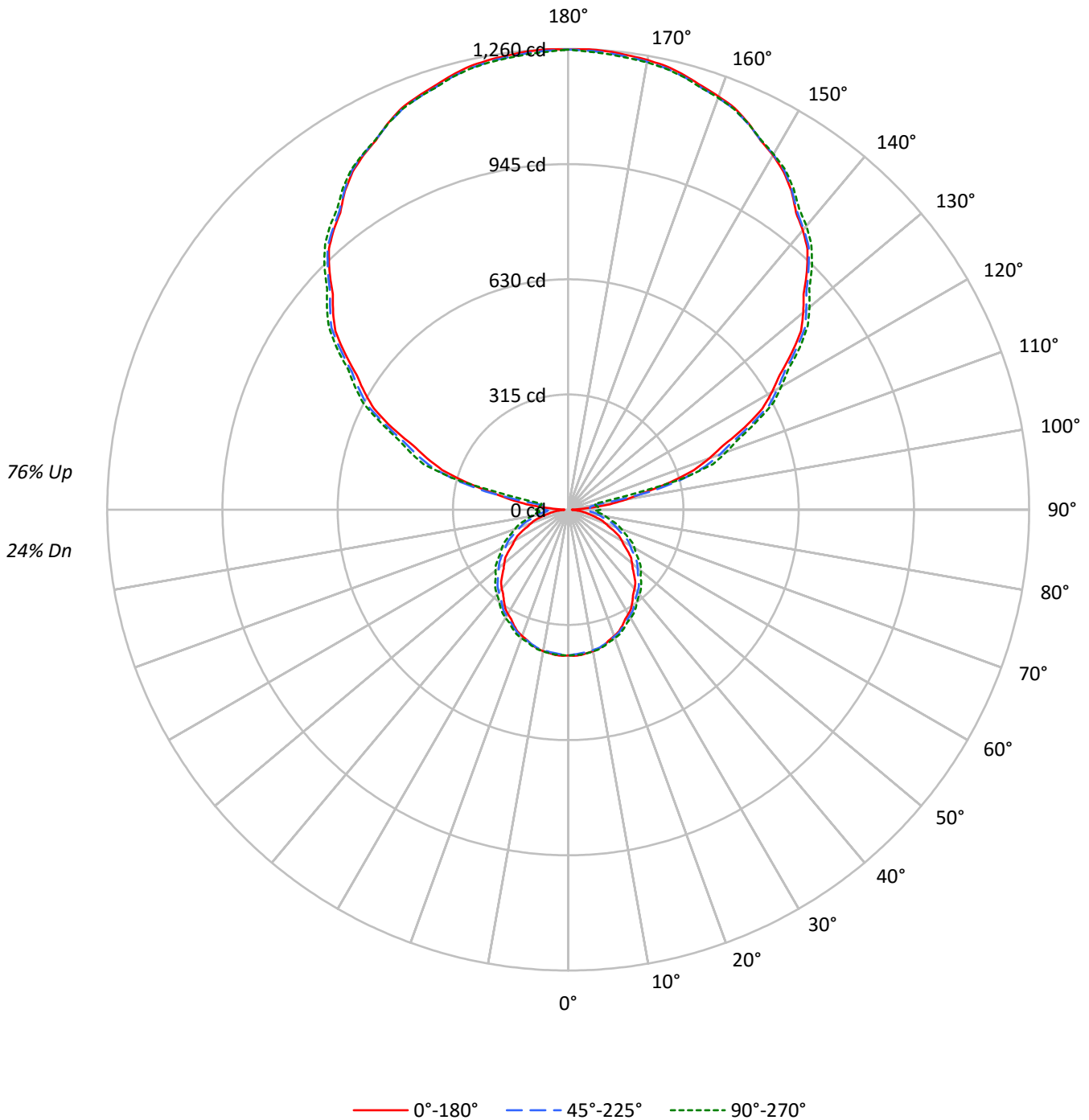
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	42	40	28	27	26	19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	46	40	40	36	32	29	26	24	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3216	3216	3216
5°	3227	3143	3152
10°	3207	3092	3090
15°	3177	3032	3016
20°	3134	2967	2944
25°	3086	2893	2865
30°	3032	2819	2784
35°	2972	2744	2713
40°	2925	2674	2639
45°	2853	2607	2575
50°	2794	2532	2508
55°	2732	2460	2429
60°	2635	2369	2357
65°	2529	2272	2269
70°	2400	2161	2166
75°	2220	2037	2074
80°	2021	1919	1981
85°	1773	1815	1928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.7
10°-20°	108.1	2.1
20°-30°	163.4	3.1
30°-40°	197.8	3.8
40°-50°	209.1	4.0
50°-60°	196.8	3.7
60°-70°	163.2	3.1
70°-80°	114.7	2.2
80°-90°	68.5	1.3
90°-100°	81.5	1.6
100°-110°	302.8	5.8
110°-120°	543.9	10.4
120°-130°	677.0	12.9
130°-140°	717.4	13.7
140°-150°	667.5	12.7
150°-160°	537.5	10.2
160°-170°	346.7	6.6
170°-180°	119.5	2.3
0°-30°	309.3	5.9
0°-40°	507.0	9.7
0°-60°	912.9	17.4
0°-90°	1259.2	24.0
90°-120°	928.3	17.7
90°-150°	2990.2	56.9
90°-180°	3994.0	76.0
0°-180°	5253.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	399	397	394	398	398	38
15°	382	383	381	385	385	108
25°	350	352	354	358	359	161
35°	306	311	316	322	324	192
45°	255	264	272	279	282	197
55°	200	210	223	231	234	178
65°	138	153	168	178	182	137
75°	77	93	112	124	128	82
85°	24	42	62	75	80	25
90°	10	38	65	83	89	7
95°	58	42	60	76	82	71
105°	287	302	323	340	312	301
115°	532	539	552	563	566	523
125°	745	749	758	769	773	665
135°	923	922	929	938	942	711
145°	1064	1066	1066	1070	1073	664
155°	1166	1166	1164	1167	1165	537
165°	1230	1225	1225	1232	1224	347
175°	1258	1253	1253	1261	1250	120
180°	1258	1258	1258	1258	1258	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	399.8	399.5	399.4	399.1	398.9	398.4	397.8	397.2	396.5	395.9	396.4
5°	398.9	398.5	398.2	397.9	397.7	397.2	396.4	395.8	395.1	394.4	395.2
7.5°	395.5	395.3	395.1	394.9	394.7	394.4	393.8	393.2	392.7	392.1	392.9
10°	392.6	392.5	392.4	392.3	392.2	391.9	391.4	390.9	390.4	389.9	390.8
12.5°	388.7	388.6	388.6	388.6	388.6	388.4	388.0	387.8	387.4	387.1	387.9
15°	382.3	382.5	382.6	382.7	382.8	382.7	382.3	382.0	381.7	381.4	382.3
17.5°	373.7	374.0	374.3	374.6	374.8	375.0	374.9	374.8	374.8	374.8	375.7
20°	367.6	367.9	368.3	368.5	368.8	369.0	369.1	369.2	369.3	369.4	370.4
22.5°	360.8	361.2	361.6	361.9	362.3	362.6	362.8	363.0	363.2	363.4	364.3
25°	349.8	350.3	351.0	351.6	352.1	352.6	352.9	353.2	353.5	353.8	354.9
27.5°	337.4	338.4	339.2	340.1	340.9	341.6	342.0	342.5	343.0	343.5	344.4
30°	329.2	330.1	330.8	331.6	332.4	333.2	333.8	334.5	335.3	335.9	337.1
32.5°	320.4	321.3	322.3	323.2	324.1	325.0	325.7	326.5	327.3	328.1	329.3
35°	306.0	307.3	308.4	309.6	310.9	311.9	312.9	313.9	314.9	315.8	317.3
37.5°	291.7	293.0	294.5	295.8	297.2	298.4	299.7	301.0	302.2	303.4	304.8
40°	282.4	283.7	285.0	286.3	287.6	288.9	290.3	291.7	293.0	294.5	296.0
42.5°	271.7	273.1	274.6	276.1	277.5	279.0	280.7	282.3	283.9	285.5	287.2
45°	255.1	257.0	258.9	260.8	262.7	264.6	266.5	268.3	270.2	272.1	273.8
47.5°	239.4	241.4	243.3	245.2	247.1	249.2	251.4	253.6	255.8	258.0	259.7
50°	228.0	230.2	232.3	234.5	236.7	238.8	241.1	243.3	245.4	247.6	249.6
52.5°	216.6	218.8	220.9	223.1	225.3	227.6	230.1	232.6	235.1	237.6	239.6
55°	199.9	202.0	204.1	206.1	208.2	210.8	213.7	216.7	219.6	222.6	224.6
57.5°	181.3	183.8	186.3	189.0	191.5	194.3	197.3	200.2	203.1	206.1	208.5
60°	169.1	171.6	174.3	176.8	179.4	182.3	185.6	188.9	192.1	195.4	197.7
62.5°	157.3	160.1	163.0	165.8	168.5	171.6	174.8	178.1	181.4	184.7	187.0
65°	138.3	141.5	144.7	147.8	151.0	154.3	157.6	161.0	164.4	167.8	170.2
67.5°	120.0	123.4	126.8	130.2	133.5	137.0	140.6	144.2	147.8	151.4	153.9
70°	107.5	110.8	114.2	117.6	121.0	124.6	128.4	132.1	135.9	139.7	142.3
72.5°	95.4	98.9	102.3	105.8	109.1	112.9	116.9	120.9	124.9	128.9	131.5
75°	76.7	80.4	84.1	87.8	91.4	95.3	99.5	103.7	107.8	112.0	114.8
77.5°	59.4	63.2	67.1	71.0	74.8	79.0	83.3	87.8	92.1	96.4	99.2
80°	48.6	52.6	56.6	60.5	64.5	68.6	73.0	77.4	81.7	86.1	89.1
82.5°	37.9	42.0	46.2	50.3	54.4	58.6	63.1	67.4	71.7	76.2	79.2
85°	23.7	27.8	32.0	36.1	40.3	44.6	49.1	53.5	58.0	62.5	65.4
87.5°	13.8	18.3	22.8	27.2	31.8	36.4	41.1	45.7	50.4	55.0	58.2
90°	10.0	16.2	22.5	28.7	35.1	41.1	47.0	53.0	58.9	64.8	69.0
92.5°	18.7	22.3	26.0	29.7	33.5	38.3	44.2	50.1	56.1	62.0	66.0
95°	57.6	53.7	49.9	46.0	42.2	42.4	46.7	51.0	55.2	59.5	63.4
97.5°	115.2	122.4	129.7	137.0	144.1	138.1	118.9	99.5	80.2	60.9	63.6
100°	159.2	165.6	171.9	178.2	184.5	175.2	150.2	125.3	100.3	75.3	74.5
102.5°	208.9	214.0	219.0	223.9	228.9	231.5	231.5	231.6	231.6	231.6	195.9
105°	287.2	290.5	293.7	296.9	300.2	304.2	308.9	313.6	318.3	323.0	327.3
107.5°	360.7	363.0	365.2	367.5	369.8	373.3	378.2	383.0	388.0	392.9	396.2
110°	410.0	412.1	414.1	416.1	418.1	421.5	426.2	430.9	435.6	440.4	443.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	457.9	460.2	462.6	465.0	467.3	470.4	474.3	478.2	482.1	486.0	488.1
115°	531.5	533.0	534.5	536.0	537.5	539.8	542.7	545.7	548.7	551.7	554.2
117.5°	598.2	599.6	601.0	602.3	603.7	606.1	609.4	612.9	616.3	619.7	621.7
120°	643.0	644.1	645.3	646.4	647.5	649.4	652.1	654.8	657.4	660.1	662.5
122.5°	685.1	685.7	686.3	686.8	687.4	689.2	692.2	695.2	698.2	701.3	703.4
125°	745.1	745.8	746.6	747.3	748.1	749.4	751.5	753.6	755.6	757.7	760.2
127.5°	802.2	802.3	802.5	802.6	802.7	804.2	807.0	809.9	812.8	815.6	817.3
130°	838.8	838.9	839.0	839.1	839.1	840.4	842.5	844.8	847.0	849.2	851.2
132.5°	872.6	872.9	873.2	873.5	873.7	874.9	876.9	879.0	881.1	883.2	885.0
135°	923.0	922.7	922.6	922.4	922.2	922.8	924.4	925.9	927.4	929.0	930.9
137.5°	968.0	968.0	967.9	967.9	967.9	968.6	969.8	971.0	972.3	973.6	975.4
140°	997.3	997.7	998.0	998.2	998.6	999.0	999.6	1000.0	1000.6	1001.1	1003.0
142.5°	1023.3	1024.1	1024.7	1025.5	1026.2	1026.7	1026.9	1027.1	1027.3	1027.5	1029.1
145°	1063.7	1064.2	1064.7	1065.3	1065.8	1066.0	1066.0	1066.0	1066.0	1066.0	1066.9
147.5°	1095.9	1096.9	1098.0	1099.1	1100.1	1100.6	1100.3	1100.1	1099.9	1099.8	1099.9
150°	1119.2	1119.9	1120.7	1121.4	1122.1	1122.4	1122.2	1122.0	1121.8	1121.5	1121.5
152.5°	1138.4	1139.1	1139.7	1140.4	1141.0	1141.1	1140.8	1140.4	1140.0	1139.6	1140.0
155°	1165.8	1166.0	1166.2	1166.4	1166.6	1166.4	1165.8	1165.2	1164.5	1163.9	1164.7
157.5°	1188.9	1188.8	1188.6	1188.5	1188.5	1188.0	1187.3	1186.6	1185.9	1185.2	1186.3
160°	1202.5	1201.8	1201.3	1200.6	1200.0	1199.6	1199.4	1199.1	1198.9	1198.7	1200.0
162.5°	1214.6	1213.7	1213.0	1212.1	1211.4	1210.9	1210.6	1210.4	1210.2	1210.0	1211.3
165°	1229.7	1228.7	1227.7	1226.6	1225.6	1225.0	1225.0	1225.0	1225.0	1225.0	1226.7
167.5°	1241.8	1240.8	1239.6	1238.6	1237.5	1236.9	1236.7	1236.6	1236.5	1236.3	1238.2
170°	1248.6	1247.4	1246.0	1244.8	1243.6	1243.0	1243.2	1243.5	1243.7	1243.9	1245.6
172.5°	1253.1	1251.9	1250.6	1249.3	1248.1	1247.5	1247.7	1248.0	1248.2	1248.4	1250.1
175°	1258.0	1256.8	1255.5	1254.2	1253.0	1252.5	1252.6	1252.9	1253.1	1253.3	1255.2
177.5°	1260.3	1259.0	1257.9	1256.8	1255.6	1255.2	1255.5	1255.8	1256.1	1256.5	1257.8
180°	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	397.0	397.6	398.1	398.3	398.3	398.2	398.1	398.0
5°	396.0	396.7	397.6	397.9	397.8	397.7	397.6	397.5
7.5°	393.9	394.7	395.7	396.1	396.0	395.9	395.8	395.7
10°	391.7	392.6	393.5	393.9	393.8	393.7	393.6	393.5
12.5°	388.7	389.6	390.3	390.7	390.7	390.7	390.7	390.6
15°	383.2	384.1	385.0	385.4	385.3	385.2	385.1	385.0
17.5°	376.5	377.5	378.4	378.8	378.7	378.6	378.6	378.5
20°	371.4	372.4	373.3	373.9	373.9	373.9	373.9	373.9
22.5°	365.3	366.3	367.3	367.9	368.1	368.2	368.3	368.5
25°	356.0	357.0	358.2	358.7	358.8	358.9	359.0	359.1
27.5°	345.4	346.5	347.5	348.1	348.2	348.3	348.4	348.6
30°	338.1	339.2	340.3	340.9	341.1	341.4	341.6	341.8
32.5°	330.5	331.9	333.1	333.8	334.0	334.2	334.4	334.6
35°	318.7	320.0	321.4	322.3	322.5	322.8	323.2	323.5
37.5°	306.2	307.6	309.0	309.9	310.2	310.5	310.9	311.1
40°	297.5	298.9	300.4	301.3	301.7	302.2	302.6	302.9
42.5°	288.8	290.5	292.1	293.1	293.4	293.7	294.1	294.4
45°	275.5	277.2	278.9	279.9	280.5	281.0	281.4	281.9
47.5°	261.5	263.2	264.9	266.1	266.7	267.3	267.9	268.5
50°	251.6	253.5	255.5	256.8	257.4	258.0	258.6	259.2
52.5°	241.6	243.6	245.5	246.9	247.4	248.0	248.6	249.2
55°	226.6	228.6	230.5	231.9	232.4	233.0	233.7	234.2
57.5°	210.8	213.2	215.6	217.0	217.5	218.1	218.7	219.2
60°	200.0	202.3	204.5	206.0	206.9	207.6	208.5	209.2
62.5°	189.3	191.5	193.8	195.4	196.1	196.9	197.7	198.5
65°	172.7	175.2	177.7	179.3	180.1	180.9	181.7	182.5
67.5°	156.5	159.0	161.5	163.2	163.9	164.7	165.4	166.3
70°	145.0	147.7	150.3	152.0	152.7	153.4	154.1	154.8
72.5°	134.1	136.8	139.3	141.0	141.8	142.5	143.4	144.1
75°	117.5	120.3	123.1	124.9	125.8	126.7	127.6	128.5
77.5°	102.1	104.9	107.7	109.6	110.6	111.5	112.4	113.4
80°	92.1	95.0	98.0	99.9	100.7	101.5	102.3	103.0
82.5°	82.2	85.3	88.3	90.3	91.1	92.0	92.9	93.8
85°	68.4	71.4	74.4	76.3	77.3	78.3	79.3	80.3
87.5°	61.4	64.5	67.6	69.7	70.6	71.5	72.5	73.4
90°	73.1	77.3	81.3	84.1	85.3	86.5	87.7	88.9
92.5°	70.0	74.1	78.1	80.7	81.5	82.4	83.2	84.2
95°	67.4	71.4	75.2	77.8	78.9	79.9	81.1	82.2
97.5°	66.4	69.1	71.8	73.7	74.7	75.8	76.8	77.9
100°	73.5	72.7	71.8	71.8	72.7	73.6	74.6	75.4
102.5°	160.1	124.3	88.6	71.2	71.9	72.8	73.6	74.4
105°	331.8	336.1	340.4	339.2	332.5	325.8	319.1	312.4
107.5°	399.5	402.9	406.3	408.8	410.3	411.8	413.3	414.8
110°	445.7	448.5	451.2	453.3	454.7	456.1	457.5	458.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	490.2	492.4	494.5	496.3	497.9	499.5	501.1	502.7
115°	556.9	559.4	562.0	563.6	564.4	565.1	565.8	566.5
117.5°	623.7	625.7	627.6	629.0	629.7	630.4	631.1	631.8
120°	664.9	667.3	669.7	671.1	671.5	671.8	672.2	672.6
122.5°	705.7	707.9	710.1	711.4	711.7	712.0	712.3	712.6
125°	762.7	765.3	767.7	769.4	770.2	771.0	771.8	772.6
127.5°	819.0	820.6	822.3	823.3	823.9	824.3	824.8	825.4
130°	853.2	855.2	857.1	858.5	859.0	859.7	860.3	860.8
132.5°	887.0	888.9	890.8	892.0	892.4	892.9	893.2	893.7
135°	932.9	934.9	937.0	938.5	939.4	940.5	941.5	942.5
137.5°	977.3	979.3	981.2	982.3	982.7	983.1	983.4	983.8
140°	1004.9	1006.8	1008.7	1010.0	1010.8	1011.4	1012.2	1012.9
142.5°	1030.7	1032.3	1033.8	1034.8	1035.3	1035.8	1036.2	1036.7
145°	1067.6	1068.5	1069.3	1070.1	1070.9	1071.7	1072.5	1073.4
147.5°	1100.2	1100.5	1100.7	1101.1	1101.6	1102.2	1102.7	1103.2
150°	1121.5	1121.5	1121.5	1121.6	1121.9	1122.1	1122.3	1122.5
152.5°	1140.3	1140.7	1140.9	1141.0	1140.9	1140.9	1140.7	1140.6
155°	1165.5	1166.4	1167.2	1167.3	1166.8	1166.1	1165.5	1164.9
157.5°	1187.3	1188.5	1189.5	1189.5	1188.5	1187.3	1186.3	1185.2
160°	1201.3	1202.5	1203.7	1203.7	1202.5	1201.3	1200.0	1198.7
162.5°	1212.5	1213.8	1215.0	1214.9	1213.5	1212.1	1210.7	1209.3
165°	1228.4	1230.1	1231.7	1231.6	1229.7	1227.9	1226.0	1224.1
167.5°	1240.0	1241.9	1243.7	1243.6	1241.5	1239.4	1237.3	1235.2
170°	1247.3	1248.9	1250.6	1250.4	1248.3	1246.2	1244.1	1242.0
172.5°	1251.8	1253.4	1255.1	1254.8	1252.5	1250.3	1248.0	1245.8
175°	1257.1	1259.0	1260.8	1260.5	1258.0	1255.5	1253.0	1250.5
177.5°	1259.1	1260.5	1261.9	1261.5	1259.5	1257.5	1255.5	1253.5
180°	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0	1258.0

(END OF REPORT)