

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: P332532-930

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332532-930
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-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5157.5 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

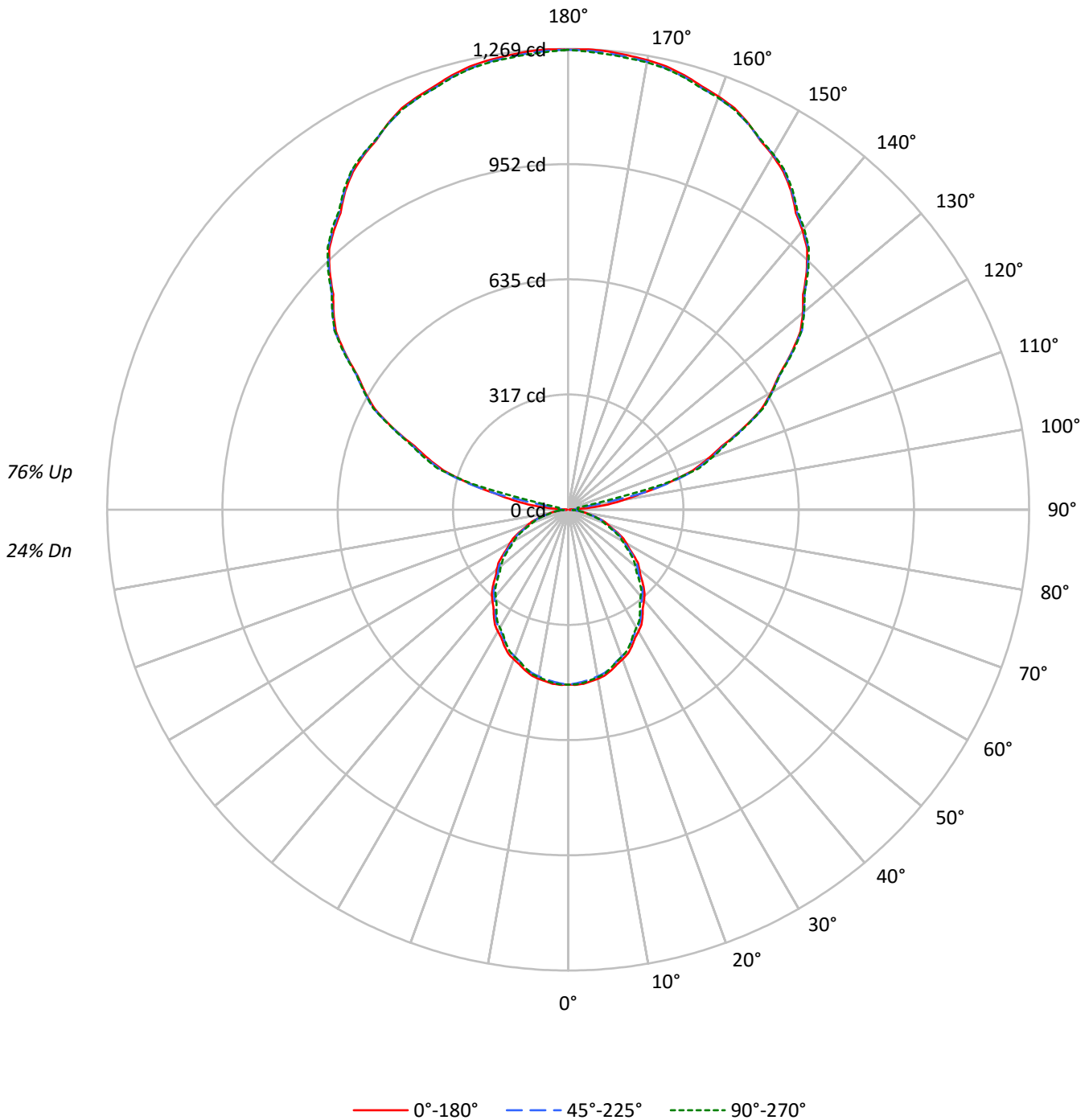
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	88	84	81	82	78	75	72	60	58	56	44	42	41	28	28	27	20
2	84	77	71	66	74	68	63	59	53	49	46	38	36	34	25	24	23	17
3	76	67	60	55	68	60	54	49	46	42	39	34	31	29	22	21	19	14
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12
5	64	53	45	39	56	47	41	36	37	32	28	27	24	21	18	16	14	11
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	8
8	50	38	31	26	44	34	28	23	27	22	19	20	17	14	13	11	10	7
9	46	35	28	23	41	31	25	21	25	20	17	18	15	13	12	10	9	7
10	43	32	25	20	38	29	23	18	23	18	15	17	14	12	11	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3888	3888	3888
5°	3900	3853	3881
10°	3875	3822	3841
15°	3828	3768	3777
20°	3766	3699	3703
25°	3695	3624	3613
30°	3608	3533	3500
35°	3517	3438	3392
40°	3424	3331	3270
45°	3327	3225	3164
50°	3218	3131	3034
55°	3102	3009	2911
60°	2984	2872	2785
65°	2854	2743	2632
70°	2705	2568	2469
75°	2480	2361	2299
80°	2208	2120	2064
85°	1936	1862	1815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	0.9
10°-20°	127.8	2.5
20°-30°	188.1	3.6
30°-40°	218.7	4.2
40°-50°	218.7	4.2
50°-60°	191.3	3.7
60°-70°	142.1	2.8
70°-80°	80.7	1.6
80°-90°	27.0	0.5
90°-100°	43.3	0.8
100°-110°	276.2	5.4
110°-120°	528.4	10.2
120°-130°	670.8	13.0
130°-140°	717.7	13.9
140°-150°	671.1	13.0
150°-160°	541.2	10.5
160°-170°	349.1	6.8
170°-180°	120.3	2.3
0°-30°	361.2	7.0
0°-40°	579.9	11.2
0°-60°	989.8	19.2
0°-90°	1239.6	24.0
90°-120°	847.9	16.4
90°-150°	2907.4	56.4
90°-180°	3918.0	76.0
0°-180°	5157.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	481	480	475	479	479	46
15°	458	456	451	453	452	129
25°	415	412	407	407	406	191
35°	357	354	349	346	344	223
45°	291	288	282	278	277	225
55°	220	219	214	209	207	197
65°	149	147	144	140	138	148
75°	80	78	76	74	74	84
85°	21	21	20	20	20	23
90°	3	13	21	26	28	4
95°	52	22	21	26	28	67
105°	285	291	296	302	270	298
115°	532	535	534	536	536	524
125°	748	752	750	753	754	668
135°	928	928	931	933	935	715
145°	1070	1073	1073	1074	1076	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°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	482.8	482.7	482.4	482.2	482.0	481.5	480.8	480.0	479.3	478.5	479.2
5°	481.2	480.9	480.5	480.2	479.9	479.2	478.3	477.4	476.4	475.4	476.4
7.5°	476.8	476.4	476.1	475.7	475.4	474.7	473.6	472.6	471.6	470.5	471.2
10°	472.7	472.4	472.1	471.7	471.4	470.7	469.5	468.4	467.3	466.2	466.8
12.5°	467.5	467.2	466.8	466.4	466.1	465.4	464.1	463.0	461.8	460.6	461.4
15°	458.0	457.7	457.4	457.1	456.7	455.9	454.6	453.3	452.0	450.8	451.3
17.5°	446.7	446.3	445.9	445.5	445.0	444.2	443.0	441.7	440.5	439.3	439.6
20°	438.4	438.0	437.6	437.1	436.7	435.9	434.6	433.3	431.9	430.6	431.0
22.5°	429.4	428.8	428.3	427.7	427.1	426.2	424.9	423.7	422.4	421.1	421.6
25°	414.8	414.3	413.7	413.0	412.5	411.6	410.3	409.1	408.0	406.8	406.8
27.5°	398.2	397.5	397.0	396.3	395.7	394.8	393.7	392.6	391.5	390.4	390.2
30°	387.1	386.4	385.7	385.0	384.3	383.4	382.3	381.2	380.1	379.0	378.6
32.5°	375.4	374.7	374.1	373.5	372.8	371.9	370.8	369.6	368.4	367.2	366.8
35°	356.9	356.4	355.8	355.1	354.6	353.7	352.5	351.2	350.1	348.9	348.3
37.5°	337.6	337.0	336.5	336.0	335.4	334.5	333.2	331.9	330.6	329.3	328.6
40°	324.9	324.2	323.6	322.9	322.2	321.2	319.9	318.6	317.3	316.1	315.2
42.5°	311.4	311.0	310.5	310.1	309.7	308.8	307.4	305.9	304.5	303.1	302.1
45°	291.4	290.7	290.2	289.6	288.9	288.0	286.6	285.2	283.9	282.5	281.5
47.5°	270.4	270.0	269.6	269.2	268.8	268.0	266.7	265.4	264.2	262.9	261.8
50°	256.2	255.9	255.6	255.2	254.9	254.1	252.9	251.7	250.5	249.3	248.1
52.5°	242.4	241.9	241.5	241.1	240.7	239.9	238.6	237.3	236.0	234.8	233.7
55°	220.4	220.1	219.8	219.6	219.3	218.6	217.4	216.2	215.0	213.8	212.8
57.5°	199.3	199.1	198.8	198.5	198.2	197.5	196.2	195.1	193.9	192.7	191.8
60°	184.8	184.4	184.0	183.5	183.1	182.4	181.2	180.1	179.0	177.9	177.2
62.5°	170.6	170.3	169.9	169.6	169.2	168.4	167.2	166.1	164.9	163.7	163.0
65°	149.4	149.0	148.5	148.1	147.7	147.0	146.1	145.3	144.4	143.6	142.7
67.5°	127.9	127.5	127.1	126.7	126.3	125.7	124.9	124.1	123.3	122.4	121.6
70°	114.6	114.0	113.4	112.8	112.2	111.5	110.9	110.2	109.5	108.8	108.1
72.5°	100.4	99.8	99.2	98.7	98.0	97.4	96.9	96.4	95.8	95.2	94.7
75°	79.5	79.1	78.7	78.2	77.8	77.4	77.0	76.5	76.1	75.7	75.3
77.5°	59.5	59.4	59.1	58.9	58.8	58.5	58.1	57.7	57.3	57.0	56.8
80°	47.5	47.2	47.0	46.7	46.5	46.2	46.1	45.9	45.7	45.6	45.3
82.5°	35.7	35.6	35.5	35.4	35.2	35.1	35.1	35.1	35.1	35.1	35.0
85°	20.9	20.9	20.9	20.9	20.9	20.8	20.5	20.4	20.2	20.1	20.1
87.5°	8.6	9.0	9.4	9.8	10.2	10.5	10.8	11.0	11.3	11.6	11.8
90°	2.9	5.1	7.5	9.8	12.1	14.1	15.8	17.4	19.2	20.9	22.1
92.5°	11.9	12.1	12.2	12.3	12.5	13.4	15.0	16.7	18.4	20.1	21.4
95°	52.1	44.9	37.7	30.7	23.5	20.0	20.2	20.4	20.6	20.9	22.1
97.5°	110.6	115.1	119.6	124.0	128.5	119.0	95.5	72.0	48.5	25.0	25.1
100°	155.4	159.1	163.0	166.7	170.6	157.9	128.8	99.8	70.8	41.7	38.1
102.5°	205.4	208.1	210.9	213.7	216.5	216.0	212.2	208.4	204.6	200.8	162.2
105°	285.1	286.4	287.6	288.9	290.2	291.4	292.4	293.4	294.5	295.5	297.5
107.5°	359.2	359.9	360.5	361.1	361.7	362.8	364.2	365.7	367.0	368.5	369.4
110°	409.3	409.9	410.5	411.2	411.8	412.7	414.0	415.2	416.5	417.8	418.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	457.8	458.9	460.0	461.1	462.3	463.2	463.7	464.3	465.0	465.5	465.5
115°	532.4	533.0	533.7	534.3	534.9	535.2	534.9	534.8	534.5	534.3	534.8
117.5°	599.7	600.5	601.4	602.2	603.0	603.6	604.1	604.6	605.1	605.5	605.4
120°	645.1	646.0	646.9	647.7	648.5	648.8	648.7	648.4	648.2	648.0	648.4
122.5°	687.5	688.1	688.6	689.1	689.6	690.0	690.3	690.6	690.9	691.2	691.5
125°	748.4	749.3	750.1	750.9	751.8	752.0	751.5	751.1	750.7	750.3	750.9
127.5°	806.0	806.2	806.4	806.7	806.8	807.4	808.4	809.3	810.3	811.3	811.1
130°	843.1	843.3	843.6	843.8	844.0	844.4	845.1	845.6	846.3	846.9	847.1
132.5°	877.3	877.6	878.0	878.4	878.7	879.4	880.1	880.9	881.7	882.6	882.7
135°	928.4	928.2	928.0	927.7	927.6	927.9	928.7	929.5	930.4	931.2	931.6
137.5°	973.7	973.8	973.9	974.0	974.0	974.5	975.4	976.4	977.3	978.2	978.7
140°	1003.2	1003.6	1004.0	1004.5	1004.9	1005.3	1005.8	1006.2	1006.6	1007.1	1007.6
142.5°	1029.7	1030.5	1031.3	1032.0	1032.8	1033.3	1033.6	1033.8	1034.0	1034.3	1034.8
145°	1070.5	1071.1	1071.8	1072.4	1073.0	1073.3	1073.3	1073.3	1073.3	1073.3	1073.6
147.5°	1102.9	1104.1	1105.2	1106.4	1107.6	1108.1	1107.9	1107.7	1107.4	1107.3	1107.4
150°	1126.4	1127.2	1128.0	1128.9	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°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	479.9	480.6	481.3	481.6	481.5	481.4	481.4	481.3
5°	477.4	478.3	479.2	479.6	479.4	479.2	479.1	478.9
7.5°	472.0	472.8	473.5	473.9	473.8	473.6	473.5	473.4
10°	467.6	468.2	469.0	469.2	469.0	468.8	468.6	468.5
12.5°	462.1	462.8	463.7	463.9	463.7	463.4	463.2	462.9
15°	451.8	452.2	452.8	452.9	452.7	452.4	452.2	451.9
17.5°	439.9	440.3	440.6	440.7	440.5	440.3	440.2	440.0
20°	431.2	431.5	431.7	431.8	431.5	431.4	431.2	431.0
22.5°	422.0	422.5	423.0	423.1	422.7	422.4	422.1	421.8
25°	406.9	407.0	407.1	407.0	406.6	406.3	405.9	405.6
27.5°	390.0	389.8	389.6	389.2	388.8	388.4	387.9	387.5
30°	378.3	378.0	377.6	377.2	376.7	376.3	375.9	375.5
32.5°	366.4	366.0	365.6	365.2	364.8	364.3	363.9	363.5
35°	347.6	347.1	346.4	345.9	345.5	345.1	344.6	344.2
37.5°	328.0	327.3	326.7	326.1	325.5	325.0	324.4	323.8
40°	314.4	313.5	312.7	312.0	311.5	311.1	310.7	310.3
42.5°	301.1	300.1	299.1	298.5	298.2	297.9	297.6	297.3
45°	280.6	279.6	278.8	278.1	277.9	277.6	277.4	277.1
47.5°	260.7	259.7	258.6	257.8	257.1	256.5	255.8	255.2
50°	246.9	245.7	244.5	243.6	243.1	242.6	242.1	241.6
52.5°	232.7	231.6	230.6	229.7	229.0	228.4	227.7	227.1
55°	211.7	210.7	209.7	208.9	208.4	207.9	207.3	206.8
57.5°	190.8	189.8	188.8	188.1	187.6	187.1	186.6	186.1
60°	176.3	175.6	174.8	174.2	173.8	173.3	172.9	172.5
62.5°	162.3	161.6	160.9	160.3	159.9	159.5	159.1	158.6
65°	141.9	141.0	140.1	139.5	139.1	138.6	138.2	137.8
67.5°	120.7	119.9	119.1	118.6	118.5	118.4	118.3	118.1
70°	107.5	106.8	106.1	105.6	105.3	105.1	104.8	104.6
72.5°	94.2	93.6	93.0	92.6	92.4	92.1	91.9	91.6
75°	74.9	74.6	74.3	74.0	73.9	73.9	73.8	73.7
77.5°	56.7	56.7	56.6	56.4	56.2	55.9	55.7	55.5
80°	45.2	45.0	44.8	44.8	44.6	44.5	44.4	44.4
82.5°	34.8	34.7	34.7	34.6	34.5	34.3	34.2	34.2
85°	20.1	20.1	20.1	20.1	20.0	19.9	19.7	19.6
87.5°	12.1	12.3	12.6	12.7	12.8	13.0	13.0	13.1
90°	23.4	24.6	25.9	26.7	27.1	27.6	28.0	28.5
92.5°	22.6	23.9	25.1	25.8	25.9	26.0	26.1	26.2
95°	23.4	24.6	25.9	26.7	26.8	27.1	27.2	27.5
97.5°	25.3	25.4	25.5	25.7	25.9	26.1	26.3	26.5
100°	34.5	31.0	27.4	25.7	25.9	26.1	26.3	26.5
102.5°	123.6	85.0	46.4	27.1	27.1	27.2	27.2	27.3
105°	299.4	301.3	303.1	300.3	292.7	285.1	277.6	270.0
107.5°	370.4	371.3	372.2	373.1	373.9	374.7	375.4	376.3
110°	418.7	419.1	419.5	420.0	420.6	421.3	421.9	422.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	465.4	465.3	465.2	465.5	466.4	467.2	468.0	468.7
115°	535.2	535.6	536.0	536.2	536.2	536.2	536.2	536.2
117.5°	605.4	605.3	605.2	605.1	605.0	605.0	604.9	604.8
120°	648.8	649.2	649.6	649.6	649.2	648.8	648.4	648.0
122.5°	691.7	691.9	692.2	692.1	691.7	691.3	690.8	690.4
125°	751.5	752.2	752.8	753.3	753.4	753.7	753.9	754.1
127.5°	811.1	810.9	810.8	810.7	810.5	810.3	810.2	810.0
130°	847.3	847.6	847.7	847.8	847.8	847.8	847.8	847.8
132.5°	883.0	883.2	883.4	883.4	883.2	883.1	882.9	882.7
135°	932.1	932.5	932.9	933.4	933.8	934.2	934.6	935.0
137.5°	979.2	979.6	980.1	980.2	980.2	980.0	979.8	979.7
140°	1008.3	1008.9	1009.6	1010.0	1010.2	1010.4	1010.6	1010.8
142.5°	1035.3	1035.7	1036.2	1036.4	1036.5	1036.5	1036.6	1036.6
145°	1073.7	1074.0	1074.2	1074.5	1074.9	1075.3	1075.8	1076.2
147.5°	1107.6	1107.7	1107.9	1108.1	1108.3	1108.6	1108.7	1109.0
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)