

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: P332068-935

Luminaire Tested: **S123DIP-S1165D805U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332068-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D805U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6679.5 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

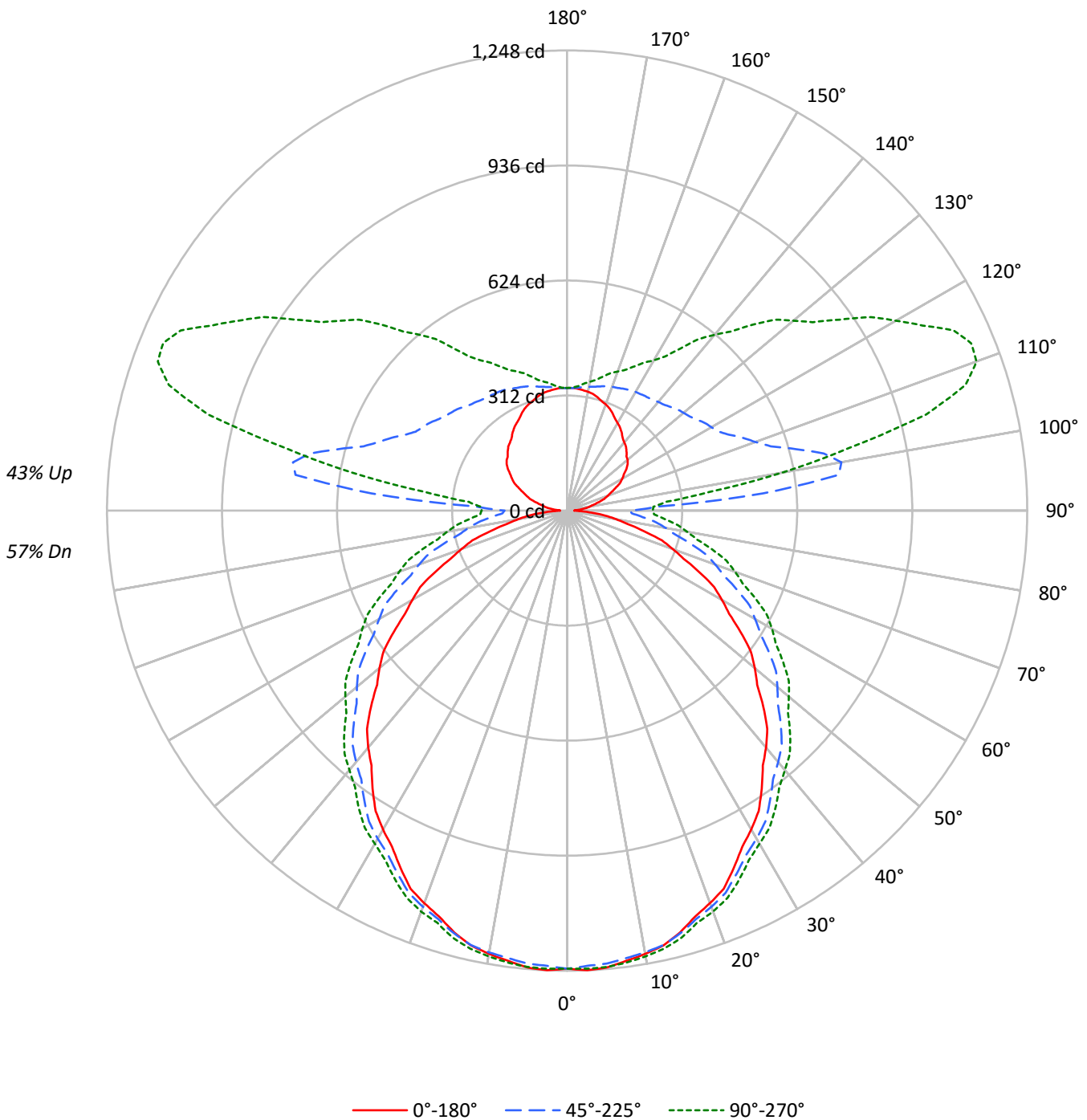
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63
1	98	93	89	85	91	87	83	80	75	72	69	64	62	60	54	52	51
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	42
3	81	71	63	56	75	66	59	53	57	51	47	49	44	41	41	38	35
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	33	30
5	68	55	47	40	63	52	44	38	45	39	34	39	34	30	33	29	26
6	62	50	41	35	58	46	39	33	40	34	30	35	30	26	29	26	23
7	58	45	36	31	53	42	34	29	37	30	26	32	27	23	27	23	20
8	53	41	33	27	50	38	31	26	33	27	23	29	24	20	25	21	18
9	50	37	29	24	46	35	28	23	31	25	21	27	22	18	23	19	16
10	46	34	27	22	43	32	25	21	28	22	19	25	20	17	21	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13373	13373	13373
5°	13415	13037	13044
10°	13294	12736	12672
15°	13123	12396	12267
20°	12878	12006	11821
25°	12576	11558	11352
30°	12267	11155	10876
35°	11919	10728	10496
40°	11588	10340	10090
45°	11221	9968	9765
50°	10858	9599	9408
55°	10459	9224	9085
60°	10067	8841	8755
65°	9669	8433	8362
70°	9064	7974	7959
75°	8304	7449	7549
80°	7429	6933	7081
85°	6613	6577	6812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.8
10°-20°	335.7	5.0
20°-30°	502.2	7.5
30°-40°	599.7	9.0
40°-50°	627.4	9.4
50°-60°	588.8	8.8
60°-70°	491.8	7.4
70°-80°	351.8	5.3
80°-90°	212.4	3.2
90°-100°	316.7	4.7
100°-110°	620.8	9.3
110°-120°	580.1	8.7
120°-130°	448.1	6.7
130°-140°	340.7	5.1
140°-150°	245.5	3.7
150°-160°	168.7	2.5
160°-170°	99.1	1.5
170°-180°	32.2	0.5
0°-30°	955.7	14.3
0°-40°	1555.4	23.3
0°-60°	2771.6	41.5
0°-90°	3827.6	57.3
90°-120°	1517.6	22.7
90°-150°	2551.9	38.2
90°-180°	2852.0	42.7
0°-180°	6679.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1244	1241	1233	1243	1242	118
15°	1184	1188	1187	1200	1199	333
25°	1069	1082	1087	1103	1104	492
35°	920	942	960	979	985	575
45°	752	785	819	844	855	580
55°	574	619	667	702	715	514
65°	397	450	509	548	563	392
75°	215	279	346	390	407	230
85°	66	134	206	250	265	70
90°	19	92	170	216	232	14
95°	38	143	533	291	268	36
105°	89	160	643	1084	1008	94
115°	145	197	486	1011	1156	144
125°	196	233	430	771	902	174
135°	228	270	397	616	713	176
145°	258	294	376	483	537	161
155°	291	314	364	414	431	134
165°	318	327	349	370	376	90
175°	332	332	335	339	339	32
180°	332	332	332	332	332	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1247.8	1247.2	1246.4	1245.7	1244.9	1243.6	1241.7	1239.8	1237.9	1236.0	1237.9
5°	1243.8	1243.2	1242.6	1242.0	1241.4	1240.2	1238.4	1236.6	1234.8	1233.0	1235.4
7.5°	1231.6	1231.7	1231.8	1232.0	1232.1	1231.3	1229.5	1227.8	1226.1	1224.3	1227.3
10°	1220.8	1221.4	1222.0	1222.6	1223.2	1222.7	1221.2	1219.7	1218.2	1216.7	1219.7
12.5°	1207.8	1208.6	1209.4	1210.3	1211.2	1211.1	1210.0	1209.0	1208.0	1206.9	1209.7
15°	1184.2	1185.2	1186.0	1187.0	1187.8	1188.2	1187.8	1187.6	1187.2	1187.0	1190.0
17.5°	1154.4	1156.2	1158.0	1159.9	1161.7	1162.5	1162.4	1162.3	1162.2	1162.0	1164.8
20°	1132.8	1134.6	1136.4	1138.2	1140.1	1141.3	1141.9	1142.5	1143.1	1143.7	1146.3
22.5°	1110.1	1111.9	1113.7	1115.5	1117.3	1118.6	1119.5	1120.3	1121.1	1122.0	1125.4
25°	1069.2	1072.2	1075.2	1078.2	1081.2	1083.1	1084.1	1084.9	1085.9	1086.8	1090.7
27.5°	1028.0	1031.5	1034.9	1038.4	1041.7	1044.5	1046.4	1048.3	1050.2	1052.1	1055.5
30°	998.8	1002.7	1006.6	1010.6	1014.4	1017.6	1020.0	1022.4	1024.8	1027.3	1030.9
32.5°	966.3	970.7	975.1	979.5	983.9	987.7	990.8	993.9	997.0	1000.1	1004.0
35°	920.3	925.1	930.0	934.8	939.6	943.9	947.9	951.7	955.6	959.6	964.1
37.5°	871.6	877.0	882.4	887.9	893.3	898.4	903.2	908.0	912.8	917.7	922.7
40°	839.1	844.6	850.0	855.3	860.7	866.5	872.5	878.5	884.5	890.5	895.7
42.5°	803.4	810.0	816.7	823.2	829.8	836.3	842.6	848.8	855.1	861.3	866.9
45°	752.5	759.7	766.9	774.1	781.4	788.8	796.3	803.7	811.3	818.8	824.5
47.5°	699.1	707.3	715.5	723.8	731.9	740.3	748.9	757.5	766.1	774.7	781.1
50°	664.5	673.0	681.4	689.7	698.2	707.1	716.4	725.7	735.0	744.3	751.3
52.5°	627.8	636.6	645.5	654.4	663.3	673.0	683.2	693.4	703.8	714.0	721.3
55°	573.9	583.8	593.7	603.6	613.5	623.9	634.7	645.6	656.4	667.3	675.4
57.5°	521.3	531.7	542.0	552.3	562.7	573.9	585.7	597.5	609.3	621.2	629.4
60°	484.5	495.3	506.2	517.0	527.8	539.4	551.7	564.0	576.4	588.8	597.2
62.5°	449.9	461.0	472.0	483.1	494.1	506.2	519.3	532.3	545.4	558.4	566.8
65°	396.6	408.3	420.0	431.7	443.5	456.0	469.2	482.4	495.7	508.9	517.9
67.5°	342.4	354.9	367.3	379.8	392.2	405.2	418.6	432.1	445.6	459.1	468.9
70°	304.5	317.5	330.4	343.3	356.3	370.0	384.4	398.8	413.3	427.7	437.3
72.5°	269.8	282.8	295.8	308.7	321.6	335.5	350.4	365.3	380.3	395.2	405.1
75°	215.2	229.4	243.5	257.6	271.7	286.3	301.4	316.4	331.4	346.5	356.4
77.5°	167.6	181.8	196.0	210.3	224.5	239.3	254.4	269.6	284.7	299.9	310.4
80°	134.0	148.7	163.5	178.2	193.0	208.1	223.8	239.4	255.0	270.7	280.9
82.5°	104.8	119.8	134.7	149.7	164.6	180.1	196.0	211.9	227.7	243.6	253.8
85°	66.3	81.4	96.4	111.4	126.5	142.0	157.9	173.8	189.8	205.7	215.9
87.5°	36.2	51.5	66.7	82.1	97.4	112.8	128.5	144.3	160.1	175.8	185.9
90°	18.9	35.0	51.1	67.8	83.9	100.3	117.7	135.1	152.4	169.8	179.3
92.5°	24.9	42.2	61.1	79.6	98.7	122.8	155.5	199.6	243.1	247.8	232.4
95°	37.8	51.5	70.7	93.8	123.0	162.6	234.5	349.6	474.7	533.1	467.1
97.5°	52.3	63.5	79.9	100.5	128.3	169.0	237.8	365.0	563.1	742.9	795.0
100°	62.0	72.3	86.6	105.6	131.5	169.4	230.4	343.9	534.8	755.2	896.6
102.5°	72.2	82.1	95.0	112.4	135.7	170.9	226.8	324.9	496.2	713.7	895.2
105°	88.9	98.2	109.4	124.7	144.7	175.6	225.0	307.2	447.4	642.7	844.3
107.5°	105.3	113.5	123.6	137.6	155.8	184.3	228.5	298.3	413.3	579.1	762.6
110°	117.2	124.6	133.4	146.2	163.1	190.6	233.0	296.1	398.4	543.0	711.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	129.0	135.5	143.3	155.2	171.1	197.3	237.0	296.0	386.9	516.1	665.6
115°	144.7	151.1	158.7	169.0	184.1	209.5	245.9	297.8	377.3	485.7	609.4
117.5°	161.6	166.9	172.5	180.9	196.0	219.0	254.4	301.3	369.7	463.3	571.2
120°	172.4	175.9	180.7	189.0	203.3	225.8	259.9	304.9	366.7	451.9	550.4
122.5°	182.6	185.4	189.5	197.6	210.6	233.7	266.7	308.5	365.5	442.8	532.4
125°	195.9	197.3	201.3	208.7	221.4	244.0	276.3	314.6	363.8	429.7	508.1
127.5°	207.1	208.8	213.4	220.8	234.5	256.1	286.2	320.0	363.6	419.1	485.5
130°	214.0	215.8	221.5	229.4	243.1	264.2	292.4	324.0	363.7	412.2	472.3
132.5°	218.3	220.8	227.4	237.0	251.2	271.1	297.6	327.4	362.7	406.1	459.7
135°	227.6	229.9	237.0	246.8	260.6	280.3	304.5	330.7	360.9	397.3	442.4
137.5°	236.2	238.8	245.7	256.3	270.1	287.7	309.6	333.3	359.1	389.3	427.2
140°	241.0	244.4	251.1	261.8	275.3	292.6	313.1	334.2	357.9	384.4	417.8
142.5°	247.5	250.0	257.1	266.6	279.7	295.5	314.6	334.5	355.9	379.0	408.7
145°	257.8	259.5	265.3	275.1	286.2	301.6	319.1	337.3	356.1	376.3	400.3
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.9
150°	274.0	274.7	280.0	288.8	298.2	310.3	325.8	339.9	356.1	371.6	388.4
152.5°	280.9	281.1	286.5	294.2	302.5	314.1	327.4	341.0	354.5	368.9	384.1
155°	291.4	291.4	295.5	302.2	309.6	319.1	330.5	341.3	352.8	364.2	377.6
157.5°	299.8	300.3	303.6	309.5	315.8	323.1	332.3	342.0	350.4	360.0	370.4
160°	306.3	306.3	309.0	314.4	319.1	325.8	333.9	342.0	349.4	356.8	365.5
162.5°	311.2	311.2	313.3	317.6	321.8	327.4	334.4	341.4	347.2	353.5	360.7
165°	318.4	317.7	319.1	322.4	325.1	329.8	335.2	339.9	344.0	348.7	354.0
167.5°	323.9	323.1	323.8	326.3	328.2	331.2	335.1	338.9	340.8	343.9	347.8
170°	327.2	325.8	326.5	328.5	329.8	331.2	334.6	337.3	338.6	340.6	344.0
172.5°	329.3	328.5	328.6	330.1	330.9	331.7	334.6	336.7	337.0	337.9	340.2
175°	331.8	331.2	330.5	331.8	331.8	332.5	333.9	335.2	334.6	334.6	335.9
177.5°	333.0	332.5	332.0	332.5	332.5	332.5	333.0	334.2	333.0	332.5	333.0
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1239.8	1241.7	1243.6	1244.5	1244.2	1244.0	1243.7	1243.5
5°	1237.8	1240.2	1242.6	1243.6	1243.4	1243.0	1242.8	1242.4
7.5°	1230.3	1233.3	1236.3	1237.7	1237.3	1236.9	1236.6	1236.2
10°	1222.7	1225.7	1228.7	1229.9	1229.3	1228.7	1228.1	1227.5
12.5°	1212.5	1215.3	1218.1	1219.1	1218.5	1217.9	1217.3	1216.7
15°	1192.9	1195.9	1198.9	1200.3	1200.1	1199.7	1199.5	1199.1
17.5°	1167.4	1170.2	1172.9	1174.0	1173.6	1173.2	1172.8	1172.3
20°	1149.0	1151.8	1154.4	1156.0	1156.2	1156.6	1156.8	1157.2
22.5°	1128.9	1132.3	1135.7	1137.3	1137.1	1137.0	1136.8	1136.6
25°	1094.6	1098.5	1102.4	1104.4	1104.4	1104.4	1104.4	1104.4
27.5°	1058.9	1062.2	1065.6	1067.4	1067.6	1067.9	1068.2	1068.4
30°	1034.5	1038.1	1041.6	1043.4	1043.4	1043.4	1043.4	1043.4
32.5°	1007.9	1011.8	1015.5	1017.9	1018.6	1019.3	1020.0	1020.7
35°	968.6	973.1	977.6	980.5	981.7	982.9	984.1	985.2
37.5°	927.8	933.0	938.1	941.1	942.1	943.1	944.0	944.9
40°	900.8	905.9	911.0	914.1	915.3	916.5	917.7	918.9
42.5°	872.5	878.1	883.7	887.3	889.0	890.7	892.3	894.1
45°	830.3	835.9	841.7	845.8	848.2	850.6	853.0	855.3
47.5°	787.6	794.0	800.5	804.6	806.4	808.3	810.2	812.0
50°	758.2	765.2	772.1	776.5	778.7	780.8	782.9	785.0
52.5°	728.4	735.6	742.7	747.6	750.2	752.8	755.4	757.9
55°	683.5	691.6	699.7	705.0	707.4	709.8	712.2	714.6
57.5°	637.6	645.8	653.9	659.4	662.3	665.1	668.0	670.7
60°	605.5	614.0	622.4	628.3	631.6	634.9	638.2	641.5
62.5°	575.2	583.7	592.1	597.9	600.9	604.0	607.1	610.1
65°	526.9	536.0	545.0	551.0	554.0	557.0	560.0	563.0
67.5°	478.8	488.7	498.5	504.7	507.3	509.8	512.3	514.9
70°	446.9	456.6	466.1	472.5	475.5	478.5	481.5	484.5
72.5°	414.9	424.8	434.6	441.1	444.1	447.1	450.1	453.1
75°	366.4	376.3	386.2	393.0	396.6	400.2	403.8	407.3
77.5°	320.8	331.3	341.8	348.4	351.2	354.0	356.7	359.5
80°	291.1	301.4	311.6	318.2	321.2	324.3	327.3	330.2
82.5°	264.1	274.3	284.5	291.1	294.1	297.1	300.1	303.2
85°	226.2	236.4	246.6	253.2	256.2	259.2	262.3	265.3
87.5°	196.2	206.6	217.0	223.9	226.7	229.9	233.0	235.9
90°	190.2	201.1	212.0	220.0	222.3	226.0	229.7	232.0
92.5°	220.9	219.2	223.9	226.8	228.3	229.1	232.6	234.1
95°	394.9	326.2	299.9	281.8	272.0	269.0	267.3	267.6
97.5°	746.2	635.0	557.2	482.6	435.9	408.6	393.5	390.7
100°	928.8	883.0	813.0	723.2	658.3	612.2	588.9	592.6
102.5°	984.9	991.6	954.2	899.3	849.5	813.6	794.6	782.1
105°	993.4	1069.2	1090.4	1078.5	1050.2	1027.3	1008.5	1007.8
107.5°	930.2	1047.6	1114.6	1143.9	1147.1	1141.2	1136.5	1133.0
110°	873.7	1005.4	1098.0	1150.2	1171.5	1179.3	1180.3	1181.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	816.7	950.7	1053.3	1119.0	1156.2	1175.5	1183.3	1186.2
115°	741.1	865.5	971.6	1049.8	1102.8	1134.8	1150.6	1156.4
117.5°	683.5	791.8	887.8	967.0	1021.9	1058.3	1080.0	1086.8
120°	652.3	750.1	837.8	910.2	965.5	1005.4	1023.6	1029.8
122.5°	626.5	715.4	796.9	864.4	913.8	949.9	969.7	977.0
125°	591.1	670.8	741.8	799.8	845.0	876.7	895.6	902.4
127.5°	559.1	630.5	694.7	747.7	788.2	815.5	832.8	839.1
130°	538.6	604.9	665.2	714.7	752.2	778.3	794.2	801.4
132.5°	519.3	580.5	636.7	684.2	719.7	746.0	760.5	766.4
135°	492.9	546.1	595.3	637.1	671.6	693.3	706.9	713.1
137.5°	468.5	512.5	554.9	591.2	620.5	642.5	654.2	658.8
140°	454.0	492.8	529.7	561.6	588.7	609.1	621.3	622.2
142.5°	439.5	473.0	505.1	533.0	556.4	574.5	585.7	586.6
145°	424.2	448.8	472.8	494.0	512.1	527.4	534.0	536.6
147.5°	411.8	430.2	448.2	463.0	476.9	487.5	493.7	495.3
150°	403.9	419.4	433.5	446.6	457.3	465.3	469.9	470.5
152.5°	398.0	411.3	423.8	434.5	442.6	449.5	452.1	452.2
155°	389.1	399.8	409.9	418.0	424.0	429.5	430.8	431.4
157.5°	379.6	388.7	396.5	402.8	408.0	412.1	413.2	413.0
160°	374.3	381.7	388.4	393.1	397.9	401.8	401.8	401.2
162.5°	367.8	374.1	380.3	384.5	387.6	391.1	391.1	390.5
165°	359.5	363.5	368.2	371.6	374.3	376.9	376.3	376.3
167.5°	352.1	355.2	358.0	360.4	361.6	363.5	362.8	362.8
170°	347.3	349.4	352.1	353.4	354.0	355.4	354.7	354.7
172.5°	343.0	344.5	346.6	347.5	347.6	349.0	347.8	347.2
175°	337.3	337.9	339.2	339.2	339.2	339.9	339.2	338.6
177.5°	333.6	334.2	334.7	334.7	334.2	334.7	333.6	333.6
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5

(END OF REPORT)