

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: P332076-935

Luminaire Tested: **S123DIP-S1165D1025U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332076-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D1025U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7209.7 lumens
Efficiency: N/A
Efficacy: 107.9 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

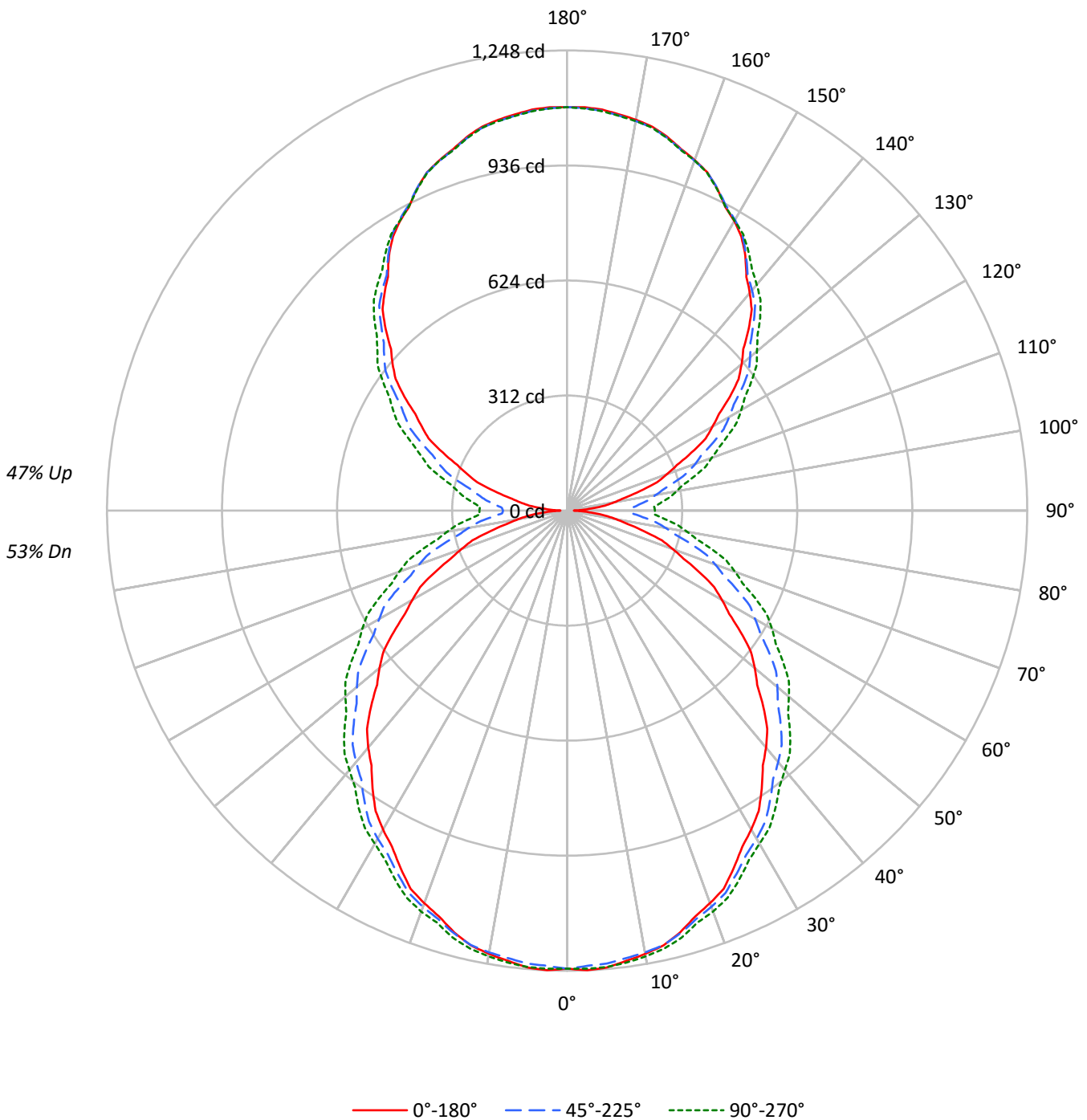
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	78	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	47	43	39	38	35	33	29
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	19	17	14
9	49	37	29	24	45	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

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	1.6
10°-20°	335.7	4.7
20°-30°	502.2	7.0
30°-40°	599.7	8.3
40°-50°	627.4	8.7
50°-60°	588.8	8.2
60°-70°	491.8	6.8
70°-80°	351.8	4.9
80°-90°	213.1	3.0
90°-100°	202.9	2.8
100°-110°	310.1	4.3
110°-120°	427.4	5.9
120°-130°	514.2	7.1
130°-140°	553.0	7.7
140°-150°	530.8	7.4
150°-160°	443.9	6.2
160°-170°	295.5	4.1
170°-180°	103.5	1.4
0°-30°	955.7	13.3
0°-40°	1555.4	21.6
0°-60°	2771.6	38.4
0°-90°	3828.3	53.1
90°-120°	940.5	13.0
90°-150°	2538.5	35.2
90°-180°	3381.0	46.9
0°-180°	7209.7	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°	18	94	174	221	238	15
95°	66	125	198	241	256	69
105°	204	240	304	341	356	218
115°	372	392	438	470	481	368
125°	539	543	579	603	610	481
135°	696	701	714	734	740	536
145°	843	843	846	855	858	526
155°	964	964	964	967	962	443
165°	1049	1047	1047	1051	1046	296
175°	1092	1088	1088	1093	1087	104
180°	1094	1094	1094	1094	1094	



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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	51.6	66.9	82.2	97.6	113.2	129.1	144.9	160.7	176.6	186.9
90°	18.4	35.1	51.7	68.4	85.1	102.3	120.1	137.9	155.8	173.6	184.5
92.5°	37.3	51.9	66.5	81.1	95.7	111.2	127.8	144.2	160.7	177.3	187.9
95°	65.6	78.7	91.7	104.8	117.9	132.5	148.8	165.1	181.3	197.6	207.7
97.5°	103.3	114.9	126.5	138.1	149.6	163.1	178.2	193.4	208.6	223.8	233.6
100°	129.1	139.8	150.6	161.4	172.1	184.9	199.8	214.5	229.3	244.1	253.4
102.5°	158.9	168.2	177.6	187.0	196.3	208.4	223.3	238.2	253.0	267.9	276.9
105°	204.2	211.8	219.4	227.0	234.6	245.7	260.4	275.0	289.7	304.4	312.8
107.5°	255.5	261.9	268.3	274.7	280.9	290.7	303.6	316.6	329.5	342.5	351.1
110°	287.4	293.3	299.0	304.8	310.6	319.7	332.2	344.6	357.0	369.4	378.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	321.8	326.5	331.1	335.9	340.5	348.7	360.3	372.0	383.6	395.2	403.7
115°	372.0	376.3	380.4	384.6	388.7	396.1	406.6	417.0	427.4	437.8	445.3
117.5°	423.7	426.3	428.9	431.5	434.1	440.2	449.9	459.6	469.2	478.9	486.0
120°	455.0	457.5	460.2	462.9	465.5	471.3	480.3	489.2	498.3	507.2	513.9
122.5°	488.6	490.3	491.8	493.4	495.1	500.4	509.3	518.2	527.2	536.1	542.3
125°	538.6	539.2	539.8	540.4	541.0	545.4	553.7	562.1	570.4	578.8	584.3
127.5°	586.1	587.0	587.9	588.8	589.8	593.7	600.5	607.3	614.1	620.8	625.7
130°	617.7	619.0	620.2	621.4	622.6	625.9	631.4	636.9	642.3	647.7	652.6
132.5°	648.2	649.7	651.2	652.6	654.1	657.0	661.4	665.8	670.2	674.6	679.2
135°	696.3	697.2	698.0	698.8	699.6	701.6	704.7	707.9	711.0	714.1	718.8
137.5°	740.7	741.4	742.1	742.9	743.6	745.1	747.4	749.8	752.2	754.6	758.5
140°	770.6	771.5	772.5	773.4	774.4	775.4	776.5	777.6	778.7	779.8	784.1
142.5°	798.7	799.4	800.2	800.9	801.6	802.2	802.8	803.3	803.8	804.3	808.1
145°	842.7	842.8	842.9	843.0	843.1	843.4	844.0	844.6	845.2	845.7	847.9
147.5°	879.9	880.6	881.3	882.0	882.7	883.3	883.8	884.3	884.8	885.5	886.1
150°	906.7	907.1	907.5	907.8	908.3	908.6	909.0	909.4	909.8	910.2	910.2
152.5°	928.8	929.3	929.8	930.3	930.8	931.3	931.5	931.7	931.9	932.2	932.5
155°	963.5	963.5	963.5	963.5	963.5	963.5	963.7	963.9	964.1	964.3	965.1
157.5°	993.0	992.8	992.6	992.3	992.1	992.0	992.2	992.4	992.6	992.6	993.5
160°	1011.6	1011.2	1010.8	1010.5	1010.0	1009.9	1009.9	1009.9	1009.9	1009.9	1010.8
162.5°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.8	1025.9	1026.1	1026.2	1026.4	1027.3
165°	1049.4	1048.8	1048.3	1047.7	1047.1	1046.8	1046.8	1046.8	1046.8	1046.8	1047.9
167.5°	1066.4	1065.7	1064.9	1064.1	1063.3	1063.1	1063.2	1063.3	1063.5	1063.7	1064.9
170°	1076.1	1075.3	1074.5	1073.8	1073.0	1072.6	1072.6	1072.6	1072.6	1072.6	1073.9
172.5°	1083.6	1082.9	1082.1	1081.3	1080.6	1080.1	1080.1	1080.1	1080.1	1080.1	1081.3
175°	1091.5	1090.7	1089.9	1089.3	1088.5	1088.0	1088.0	1088.0	1088.0	1088.0	1089.3
177.5°	1094.8	1094.2	1093.6	1093.0	1092.4	1092.0	1092.0	1092.0	1092.0	1092.0	1093.0
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1



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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°	197.3	207.7	218.1	224.8	227.9	231.0	234.0	237.1
90°	195.5	206.6	217.5	224.7	228.1	231.5	234.9	238.2
92.5°	198.5	209.1	219.6	226.3	228.8	231.3	233.8	236.3
95°	217.7	227.8	238.0	244.5	247.5	250.5	253.5	256.5
97.5°	243.5	253.3	263.1	269.5	272.4	275.3	278.3	281.2
100°	262.7	272.0	281.3	287.6	291.0	294.4	297.8	301.2
102.5°	285.9	295.0	304.0	310.0	313.0	315.9	318.8	321.8
105°	321.2	329.6	338.0	343.8	346.9	350.0	353.0	356.1
107.5°	359.8	368.5	377.2	382.7	385.1	387.5	389.9	392.4
110°	386.6	395.1	403.7	409.1	411.0	413.1	415.1	417.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	412.2	420.7	429.2	434.7	437.3	439.9	442.5	445.0
115°	452.7	460.1	467.5	472.3	474.5	476.7	479.0	481.1
117.5°	493.2	500.2	507.4	511.9	513.7	515.5	517.3	519.1
120°	520.6	527.4	534.1	538.3	540.0	541.7	543.5	545.2
122.5°	548.5	554.7	560.9	564.7	566.4	567.9	569.5	571.0
125°	589.9	595.4	601.0	604.4	605.7	607.1	608.5	609.8
127.5°	630.6	635.5	640.3	643.4	644.5	645.8	646.9	648.1
130°	657.6	662.5	667.5	670.2	670.7	671.1	671.7	672.1
132.5°	683.7	688.3	692.8	695.6	696.6	697.7	698.7	699.7
135°	723.4	728.1	732.7	735.6	736.8	737.9	739.0	740.1
137.5°	762.4	766.4	770.3	772.7	773.5	774.3	775.1	775.8
140°	788.4	792.7	797.0	799.4	799.4	799.6	799.8	800.0
142.5°	812.0	815.9	819.7	821.8	822.3	822.8	823.3	823.7
145°	850.2	852.4	854.5	855.9	856.4	856.8	857.2	857.6
147.5°	886.8	887.6	888.3	888.6	888.6	888.5	888.5	888.4
150°	910.2	910.2	910.2	909.9	909.4	908.8	908.3	907.8
152.5°	932.8	933.1	933.4	933.1	932.2	931.3	930.5	929.6
155°	965.9	966.6	967.3	967.1	965.8	964.4	963.0	961.7
157.5°	994.3	995.1	995.9	995.7	994.7	993.6	992.6	991.4
160°	1011.8	1012.7	1013.7	1013.7	1013.1	1012.3	1011.5	1010.7
162.5°	1028.3	1029.2	1030.2	1030.0	1028.8	1027.6	1026.4	1025.2
165°	1049.1	1050.2	1051.4	1051.3	1050.0	1048.6	1047.3	1045.9
167.5°	1066.0	1067.2	1068.4	1068.4	1067.2	1066.0	1064.9	1063.7
170°	1075.3	1076.6	1078.0	1078.0	1076.6	1075.3	1073.9	1072.6
172.5°	1082.5	1083.7	1084.9	1084.9	1083.5	1082.2	1080.8	1079.4
175°	1090.4	1091.5	1092.7	1092.5	1091.2	1089.9	1088.6	1087.2
177.5°	1093.9	1094.8	1095.7	1095.6	1094.6	1093.5	1092.4	1091.3
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1

(END OF REPORT)