

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: P332034-935

Luminaire Tested: **S123DIP-S1000D1025U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332034-935
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-S1000D1025U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH 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: 6580.9 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

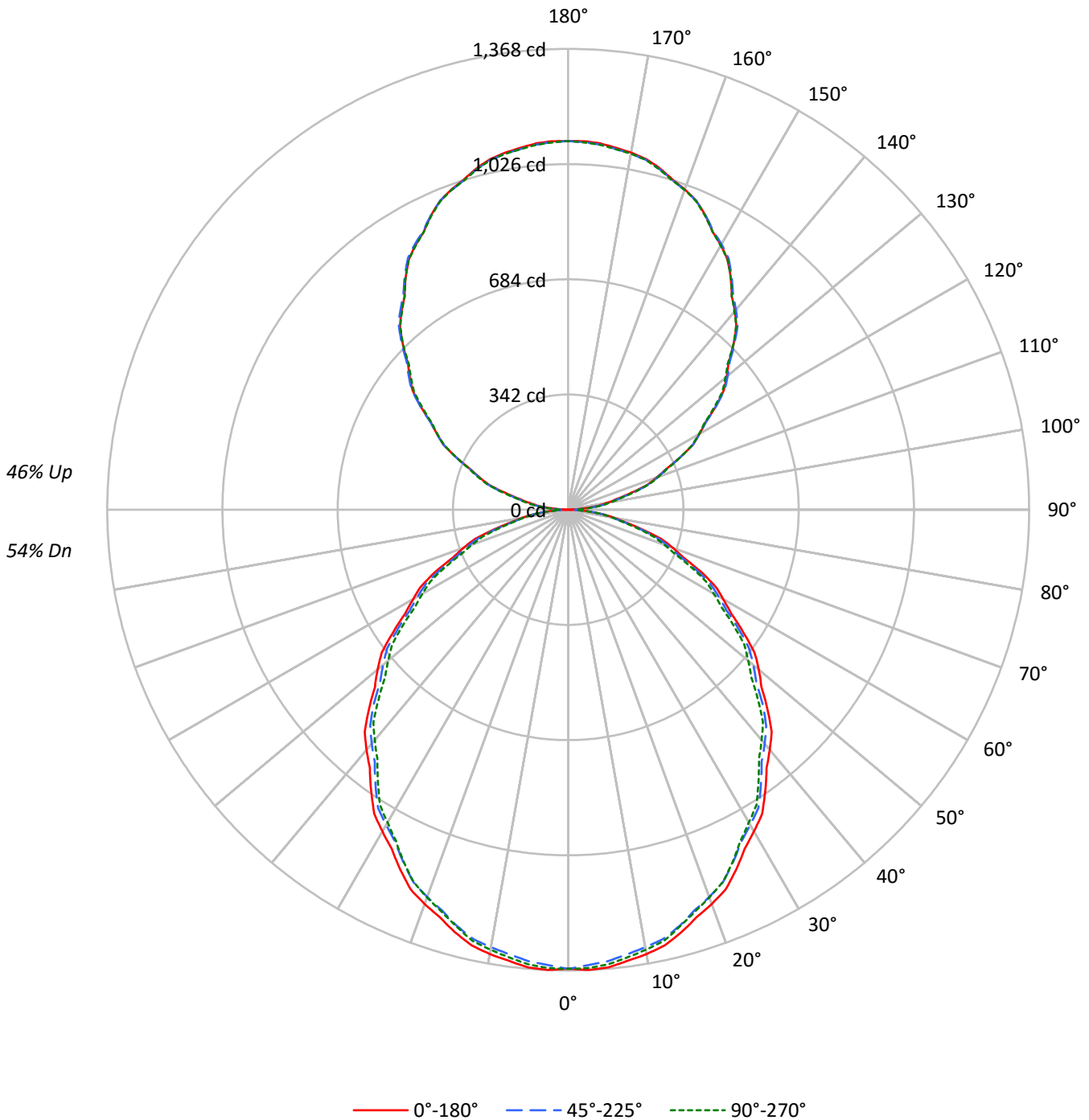
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	86	86		72	72	72		60	60	60	54
1	99	94	90	87	91	87	84	81	75	72	70		63	62	60		53	51	50	45
2	90	82	76	71	83	76	71	66	66	62	58		56	53	50		46	44	42	38
3	82	72	65	59	76	67	61	55	58	53	49		49	45	42		41	38	36	32
4	75	64	56	50	69	60	53	47	51	46	42		44	40	36		37	34	31	27
5	69	57	49	43	63	53	46	40	46	40	36		39	35	31		33	30	27	24
6	63	51	43	37	59	48	40	35	41	36	31		36	31	27		30	26	24	21
7	59	46	38	33	54	43	36	31	38	32	28		32	28	24		27	24	21	19
8	54	42	34	29	50	39	32	27	34	29	24		30	25	22		25	22	19	17
9	51	38	31	26	47	36	29	24	31	26	22		27	23	19		23	20	17	15
10	47	35	28	23	44	33	26	22	29	24	20		25	21	18		22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14670	14670	14670
5°	14738	14536	14638
10°	14641	14410	14499
15°	14469	14247	14273
20°	14269	14014	14027
25°	14001	13737	13709
30°	13706	13430	13326
35°	13397	13104	12935
40°	13075	12745	12546
45°	12718	12415	12113
50°	12363	12010	11675
55°	11898	11590	11237
60°	11427	11102	10747
65°	11013	10565	10236
70°	10401	9958	9514
75°	9503	9162	8771
80°	8573	8207	8133
85°	7534	7237	6941



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	2.0
10°-20°	362.5	5.5
20°-30°	535.5	8.1
30°-40°	625.5	9.5
40°-50°	628.8	9.6
50°-60°	552.4	8.4
60°-70°	411.5	6.3
70°-80°	234.5	3.6
80°-90°	70.5	1.1
90°-100°	71.3	1.1
100°-110°	213.3	3.2
110°-120°	362.8	5.5
120°-130°	477.3	7.3
130°-140°	536.4	8.2
140°-150°	527.3	8.0
150°-160°	443.9	6.7
160°-170°	295.5	4.5
170°-180°	103.5	1.6
0°-30°	1026.3	15.6
0°-40°	1651.8	25.1
0°-60°	2833.0	43.0
0°-90°	3549.5	53.9
90°-120°	647.5	9.8
90°-150°	2188.5	33.3
90°-180°	3031.0	46.1
0°-180°	6580.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1363	1363	1363	1363	1363	
5°	1364	1358	1345	1356	1355	129
15°	1298	1293	1278	1287	1281	366
25°	1179	1171	1157	1158	1154	543
35°	1020	1012	997	990	984	638
45°	836	830	816	802	796	645
55°	634	632	618	605	599	568
65°	432	426	415	406	402	427
75°	228	224	220	215	211	244
85°	61	59	59	56	56	67
90°	1	10	21	24	26	6
95°	51	57	64	67	67	57
105°	193	195	203	203	205	207
115°	365	368	366	367	366	361
125°	535	537	536	532	529	477
135°	694	698	698	694	693	534
145°	841	843	846	845	841	525
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°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1367.5	1366.8	1365.9	1365.0	1364.3	1362.6	1360.4	1358.1	1355.8	1353.5	1355.6
5°	1364.0	1362.7	1361.4	1360.1	1358.8	1356.8	1353.9	1351.0	1348.2	1345.3	1347.9
7.5°	1350.7	1349.4	1348.1	1346.8	1345.5	1343.3	1340.4	1337.4	1334.5	1331.5	1333.8
10°	1339.5	1338.2	1336.8	1335.5	1334.2	1331.9	1328.5	1325.1	1321.7	1318.4	1320.7
12.5°	1324.4	1323.4	1322.2	1321.1	1320.1	1317.9	1314.7	1311.6	1308.4	1305.2	1306.9
15°	1298.4	1297.4	1296.3	1295.3	1294.3	1292.0	1288.7	1285.3	1281.9	1278.5	1280.6
17.5°	1268.2	1266.8	1265.5	1264.1	1262.7	1260.4	1257.0	1253.6	1250.3	1246.8	1248.3
20°	1245.7	1244.1	1242.6	1241.0	1239.4	1236.9	1233.6	1230.2	1226.8	1223.4	1224.4
22.5°	1220.4	1218.8	1217.3	1215.6	1214.1	1211.7	1208.2	1204.9	1201.5	1198.1	1198.9
25°	1178.9	1177.3	1175.8	1174.2	1172.6	1170.2	1166.7	1163.4	1160.0	1156.6	1156.8
27.5°	1134.6	1133.1	1131.5	1130.1	1128.5	1125.9	1122.3	1118.7	1115.0	1111.4	1111.6
30°	1102.7	1101.4	1100.1	1098.8	1097.5	1095.0	1091.4	1087.7	1084.1	1080.5	1080.5
32.5°	1070.8	1069.1	1067.4	1065.7	1063.9	1061.7	1058.9	1056.1	1053.3	1050.4	1049.0
35°	1019.5	1018.0	1016.4	1014.9	1013.2	1010.8	1007.4	1004.0	1000.7	997.2	995.7
37.5°	967.0	965.0	963.0	961.0	959.1	956.4	953.0	949.5	946.1	942.6	940.7
40°	930.5	928.8	927.3	925.7	924.2	921.6	917.9	914.3	910.7	907.0	904.9
42.5°	893.9	892.1	890.4	888.6	886.8	884.1	880.5	876.8	873.1	869.5	867.5
45°	835.5	834.5	833.4	832.4	831.4	829.1	825.8	822.3	819.0	815.6	812.5
47.5°	777.7	776.1	774.6	773.1	771.6	769.2	766.1	762.9	759.7	756.6	753.5
50°	738.3	736.9	735.6	734.3	733.1	730.7	727.3	723.9	720.6	717.2	714.3
52.5°	697.0	696.1	695.3	694.4	693.4	691.2	687.7	684.1	680.4	676.8	674.4
55°	634.0	633.7	633.4	633.2	632.9	631.1	627.8	624.3	621.0	617.6	614.7
57.5°	573.9	573.1	572.2	571.4	570.4	568.6	565.9	563.2	560.5	557.8	555.3
60°	530.8	530.5	530.3	530.0	529.8	528.1	525.0	521.9	518.8	515.7	513.2
62.5°	492.4	491.7	491.0	490.3	489.7	487.8	484.7	481.6	478.5	475.3	472.9
65°	432.4	431.1	429.8	428.5	427.2	425.2	422.7	420.1	417.4	414.8	412.8
67.5°	368.9	367.7	366.6	365.5	364.3	362.7	360.8	358.8	356.8	354.8	353.0
70°	330.5	328.9	327.4	325.8	324.3	322.6	321.1	319.5	318.0	316.4	314.6
72.5°	290.2	289.0	287.8	286.7	285.6	284.1	282.3	280.6	278.8	277.0	275.4
75°	228.5	227.5	226.4	225.4	224.4	223.4	222.7	221.9	221.1	220.3	219.0
77.5°	173.9	173.3	172.7	172.2	171.6	170.8	170.0	169.0	168.1	167.1	166.3
80°	138.3	137.5	136.7	136.0	135.2	134.5	134.0	133.5	132.9	132.4	132.2
82.5°	103.6	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.5	102.5	101.9
85°	61.0	60.4	59.9	59.4	58.9	58.6	58.6	58.6	58.6	58.6	58.0
87.5°	24.5	24.3	24.0	23.8	23.6	23.6	23.8	24.2	24.5	24.7	24.7
90°	0.9	2.8	4.6	6.6	8.5	10.7	13.2	15.7	18.2	20.7	21.4
92.5°	20.8	22.1	23.4	24.7	26.0	27.4	28.8	30.1	31.6	33.0	33.6
95°	50.7	52.0	53.4	54.8	56.1	57.5	59.0	60.5	62.1	63.6	64.4
97.5°	90.1	91.1	92.0	93.1	94.0	95.1	96.2	97.3	98.4	99.5	100.4
100°	116.9	118.0	119.2	120.3	121.5	122.5	123.5	124.4	125.4	126.3	126.9
102.5°	147.8	148.5	149.2	149.9	150.6	151.5	152.8	154.0	155.3	156.6	157.1
105°	193.4	193.7	194.2	194.5	194.9	196.0	197.7	199.4	201.1	202.9	202.9
107.5°	246.3	246.6	246.8	247.0	247.3	247.7	248.4	249.1	249.8	250.5	251.1
110°	279.3	279.7	280.1	280.4	280.9	281.2	281.6	282.0	282.4	282.8	283.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.7	313.9	314.2	314.4	314.6	314.8	314.9	315.0	315.0	315.0	316.0
115°	365.2	365.8	366.4	367.0	367.6	367.6	367.3	366.9	366.5	366.1	366.4
117.5°	417.2	417.6	417.9	418.4	418.7	418.6	418.2	417.7	417.2	416.6	416.6
120°	449.5	450.6	451.8	453.0	454.1	454.2	453.2	452.3	451.3	450.4	450.1
122.5°	483.2	484.1	484.8	485.7	486.6	486.7	486.2	485.7	485.3	484.7	484.2
125°	534.6	535.2	535.7	536.3	536.8	537.0	536.6	536.2	535.8	535.5	534.7
127.5°	582.0	583.2	584.4	585.7	586.9	587.3	586.9	586.5	586.1	585.7	584.5
130°	613.6	615.2	616.7	618.2	619.7	620.3	619.7	619.1	618.5	617.9	617.2
132.5°	645.3	646.8	648.3	649.9	651.4	651.9	651.5	651.1	650.7	650.2	649.4
135°	693.6	694.7	695.9	697.0	698.2	698.6	698.4	698.3	698.1	697.8	697.2
137.5°	738.3	739.3	740.2	741.1	742.1	742.8	743.3	743.8	744.3	744.8	744.0
140°	769.2	770.2	771.1	772.1	773.0	773.6	773.8	774.0	774.2	774.4	774.2
142.5°	797.4	798.3	799.4	800.3	801.2	801.8	802.2	802.5	802.9	803.2	803.1
145°	841.4	841.8	842.1	842.6	842.9	843.4	844.0	844.6	845.2	845.7	845.5
147.5°	879.9	880.6	881.3	882.0	882.7	883.3	883.8	884.3	884.8	885.5	885.5
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°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1357.6	1359.8	1361.8	1362.8	1362.5	1362.4	1362.1	1361.9
5°	1350.5	1353.1	1355.7	1356.8	1356.2	1355.7	1355.2	1354.7
7.5°	1336.2	1338.5	1340.8	1341.9	1341.5	1341.3	1340.9	1340.6
10°	1323.0	1325.3	1327.7	1328.6	1328.1	1327.6	1327.1	1326.5
12.5°	1308.6	1310.4	1312.1	1312.8	1312.5	1312.2	1311.8	1311.6
15°	1282.6	1284.7	1286.9	1287.1	1285.6	1283.9	1282.4	1280.8
17.5°	1249.7	1251.2	1252.7	1253.1	1252.6	1252.0	1251.4	1250.9
20°	1225.5	1226.6	1227.6	1227.7	1226.9	1226.2	1225.4	1224.6
22.5°	1199.8	1200.6	1201.4	1201.4	1200.4	1199.4	1198.4	1197.4
25°	1157.1	1157.4	1157.7	1157.4	1156.6	1155.8	1155.0	1154.3
27.5°	1111.8	1112.0	1112.2	1111.8	1110.9	1109.8	1108.9	1107.8
30°	1080.5	1080.5	1080.5	1079.5	1077.7	1075.9	1074.1	1072.2
32.5°	1047.5	1046.1	1044.7	1043.4	1042.4	1041.4	1040.4	1039.4
35°	994.1	992.6	991.0	989.5	988.3	987.0	985.7	984.4
37.5°	938.9	937.0	935.1	933.8	933.0	932.1	931.3	930.5
40°	902.8	900.8	898.7	897.1	896.0	895.0	894.0	892.9
42.5°	865.3	863.2	861.2	859.6	858.6	857.6	856.5	855.5
45°	809.3	806.2	803.1	800.9	799.6	798.3	797.0	795.7
47.5°	750.4	747.3	744.2	742.2	741.0	739.9	738.7	737.5
50°	711.4	708.6	705.7	703.5	702.0	700.3	698.8	697.2
52.5°	671.9	669.5	667.1	665.0	663.5	661.9	660.4	658.8
55°	611.8	609.0	606.1	604.0	602.7	601.4	600.1	598.8
57.5°	552.7	550.2	547.6	545.5	544.1	542.5	541.1	539.5
60°	510.9	508.6	506.3	504.5	503.1	501.8	500.5	499.2
62.5°	470.6	468.3	465.9	464.3	463.4	462.5	461.7	460.8
65°	410.7	408.5	406.5	405.1	404.3	403.6	402.7	401.9
67.5°	351.2	349.4	347.6	346.1	345.0	343.9	342.8	341.7
70°	312.7	310.9	309.1	307.5	306.3	305.0	303.7	302.3
72.5°	273.8	272.2	270.5	269.4	268.7	268.0	267.4	266.7
75°	217.7	216.4	215.1	214.0	213.3	212.5	211.7	210.9
77.5°	165.3	164.5	163.6	163.2	163.2	163.2	163.2	163.2
80°	131.9	131.6	131.4	131.2	131.2	131.2	131.2	131.2
82.5°	101.5	101.0	100.6	100.2	100.0	99.8	99.6	99.4
85°	57.5	57.0	56.5	56.2	56.2	56.2	56.2	56.2
87.5°	24.6	24.6	24.5	24.5	24.6	24.7	24.8	24.9
90°	22.1	22.9	23.7	24.3	24.6	25.1	25.4	25.7
92.5°	34.3	34.9	35.5	35.6	35.4	35.2	35.0	34.7
95°	65.1	65.9	66.6	67.1	67.1	67.1	67.1	67.1
97.5°	101.3	102.2	103.1	103.4	103.4	103.3	103.2	103.1
100°	127.5	128.0	128.6	129.2	129.5	129.8	130.3	130.6
102.5°	157.7	158.3	158.9	159.1	159.0	158.9	158.9	158.9
105°	202.9	202.9	202.9	203.0	203.4	203.8	204.1	204.6
107.5°	251.7	252.3	252.9	253.0	252.9	252.6	252.4	252.2
110°	284.3	285.1	285.9	286.0	285.6	285.2	284.9	284.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.9	317.8	318.7	319.2	319.1	319.0	318.9	318.8
115°	366.5	366.7	366.9	366.9	366.7	366.5	366.4	366.1
117.5°	416.6	416.6	416.6	416.2	415.7	415.2	414.7	414.1
120°	450.0	449.8	449.6	449.3	448.9	448.6	448.2	447.8
122.5°	483.7	483.3	482.8	482.2	481.7	481.1	480.6	480.1
125°	533.9	533.1	532.4	531.6	530.9	530.1	529.3	528.6
127.5°	583.5	582.5	581.3	580.4	579.5	578.6	577.7	576.9
130°	616.4	615.6	614.9	613.8	612.5	611.1	609.8	608.5
132.5°	648.4	647.6	646.6	645.7	644.6	643.6	642.6	641.5
135°	696.4	695.6	694.8	694.2	693.9	693.4	693.1	692.8
137.5°	743.2	742.4	741.6	740.8	740.1	739.3	738.7	738.0
140°	774.0	773.8	773.6	772.8	771.5	770.2	768.9	767.5
142.5°	802.9	802.7	802.5	801.8	800.8	799.8	798.7	797.7
145°	845.3	845.2	844.9	844.5	843.7	842.9	842.1	841.4
147.5°	885.5	885.5	885.5	884.8	883.7	882.5	881.4	880.3
150°	910.2	910.2	910.2	909.6	908.4	907.3	906.1	905.0
152.5°	932.8	933.1	933.4	933.1	932.0	931.1	930.1	929.1
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)