

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: P332352-927

Luminaire Tested: **S123RDIP-S1000D1025U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332352-927
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: S123RDIP-S1000D1025U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5795.3 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

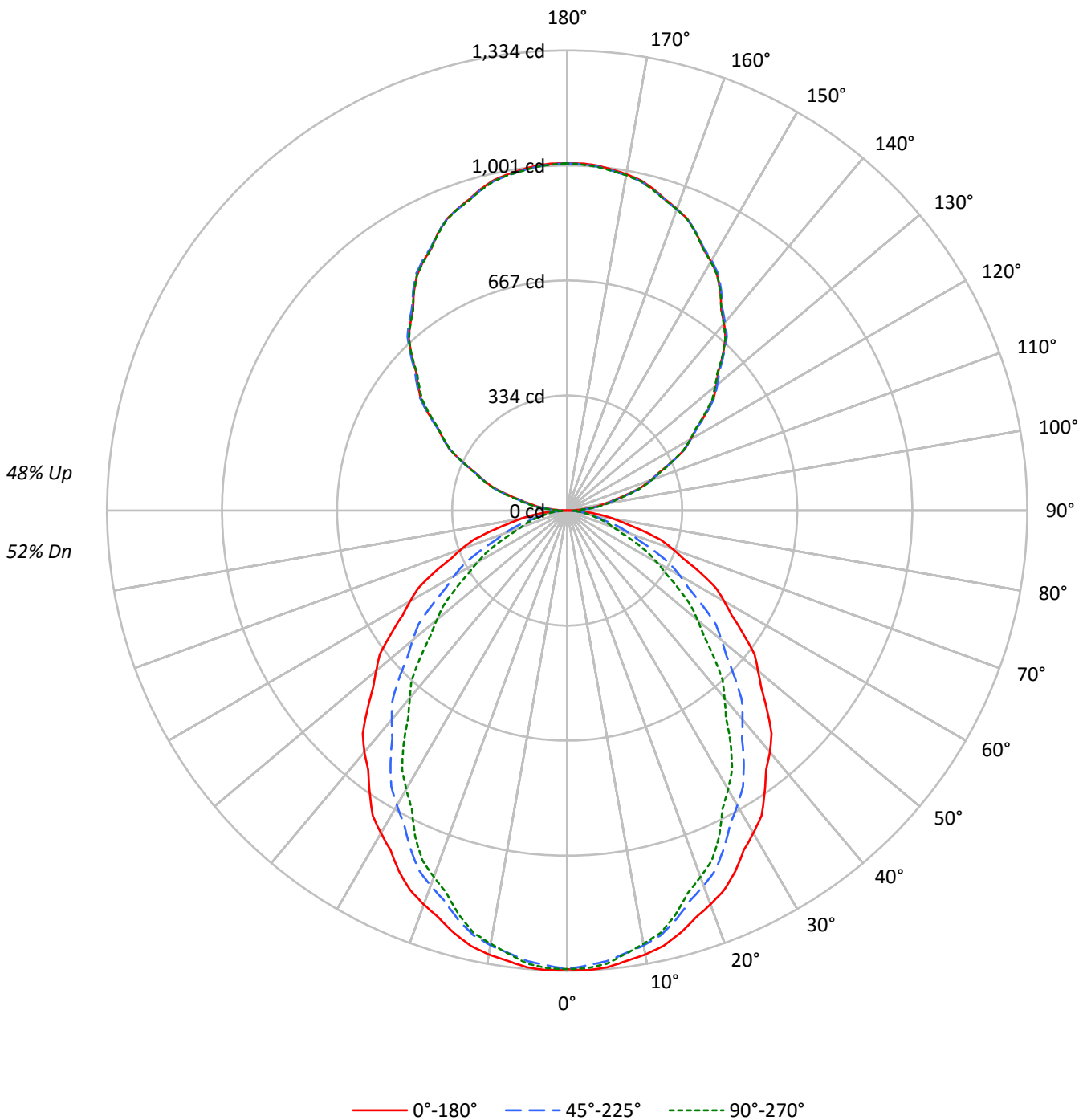
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	99	99	99	84	84	84		71	71	71		58	58	58	52
1	99	94	91	87	91	87	84	81	74	72	70		63	61	59		52	51	50	44
2	90	83	77	72	83	77	72	67	66	62	58		55	53	50		46	44	42	38
3	82	73	66	60	76	68	62	57	58	53	50		49	46	43		41	38	36	32
4	75	65	57	51	70	60	54	48	52	47	42		44	40	37		37	34	32	28
5	69	58	50	44	64	54	47	42	47	41	37		40	35	32		33	30	28	24
6	64	52	44	38	59	49	41	36	42	36	32		36	32	28		30	27	24	22
7	59	47	39	34	55	44	37	32	38	33	29		33	28	25		28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25		30	26	23		26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23		28	23	20		24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21		26	21	18		22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14310	14310	14310
5°	14364	14166	14249
10°	14283	13988	13941
15°	14130	13661	13517
20°	13919	13252	12944
25°	13702	12792	12383
30°	13415	12263	11591
35°	13119	11730	10867
40°	12847	11105	9969
45°	12490	10488	9159
50°	12097	9786	8251
55°	11695	8983	7405
60°	11328	8125	6476
65°	10847	7195	5547
70°	10247	6039	4482
75°	9374	4754	4213
80°	8356	4209	3874
85°	7052	3730	3458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	2.2
10°-20°	347.3	6.0
20°-30°	500.2	8.6
30°-40°	563.4	9.7
40°-50°	539.0	9.3
50°-60°	441.4	7.6
60°-70°	297.8	5.1
70°-80°	149.8	2.6
80°-90°	42.6	0.7
90°-100°	65.6	1.1
100°-110°	196.3	3.4
110°-120°	333.8	5.8
120°-130°	439.1	7.6
130°-140°	493.6	8.5
140°-150°	485.2	8.4
150°-160°	408.4	7.0
160°-170°	271.9	4.7
170°-180°	95.2	1.6
0°-30°	972.3	16.8
0°-40°	1535.7	26.5
0°-60°	2516.0	43.4
0°-90°	3006.2	51.9
90°-120°	595.7	10.3
90°-150°	2013.5	34.7
90°-180°	2789.0	48.1
0°-180°	5795.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1329	1324	1311	1320	1319	126
15°	1268	1255	1226	1220	1213	357
25°	1154	1125	1077	1055	1043	530
35°	998	958	893	848	827	625
45°	820	770	689	629	602	633
55°	623	568	479	418	395	559
65°	426	365	282	232	218	421
75°	225	173	114	104	101	240
85°	57	34	30	28	28	64
90°	1	9	19	22	24	6
95°	47	52	58	62	62	52
105°	178	180	187	187	188	191
115°	336	338	337	338	337	332
125°	492	494	493	489	486	438
135°	638	643	642	639	637	492
145°	774	776	778	777	774	483
155°	886	886	887	890	885	408
165°	966	963	963	967	962	272
175°	1004	1001	1001	1005	1000	95
180°	1007	1007	1007	1007	1007	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1333.7	1332.9	1332.2	1331.4	1330.6	1329.1	1326.8	1324.5	1322.2	1319.9	1322.0
5°	1329.4	1328.2	1327.0	1325.8	1324.6	1322.5	1319.7	1316.8	1314.0	1311.1	1313.2
7.5°	1317.1	1315.8	1314.5	1313.2	1311.9	1309.4	1305.7	1302.0	1298.2	1294.5	1295.7
10°	1306.8	1305.1	1303.4	1301.7	1300.1	1297.0	1292.8	1288.4	1284.1	1279.8	1280.1
12.5°	1292.1	1290.2	1288.4	1286.5	1284.6	1281.0	1275.8	1270.5	1265.3	1260.0	1259.8
15°	1268.0	1265.4	1262.7	1260.0	1257.4	1252.8	1246.0	1239.3	1232.6	1225.9	1224.7
17.5°	1237.5	1234.5	1231.4	1228.4	1225.3	1219.5	1210.9	1202.5	1193.9	1185.3	1182.8
20°	1215.1	1211.3	1207.4	1203.6	1199.8	1193.3	1184.2	1175.1	1166.0	1156.9	1153.8
22.5°	1190.1	1185.7	1181.3	1176.9	1172.5	1165.5	1155.7	1146.1	1136.4	1126.7	1122.8
25°	1153.7	1147.7	1141.7	1135.7	1129.7	1121.2	1110.2	1099.2	1088.1	1077.1	1072.1
27.5°	1109.5	1102.9	1096.2	1089.6	1083.0	1073.6	1061.3	1049.0	1036.7	1024.5	1017.5
30°	1079.3	1072.1	1064.9	1057.7	1050.5	1040.2	1026.8	1013.4	1000.0	986.6	978.4
32.5°	1049.1	1040.9	1032.8	1024.6	1016.5	1005.4	991.2	977.0	962.7	948.6	939.7
35°	998.4	989.8	981.1	972.6	963.9	952.1	937.3	922.4	907.6	892.7	882.4
37.5°	947.1	937.5	927.9	918.3	908.7	896.0	880.2	864.3	848.4	832.6	820.9
40°	914.3	903.8	893.2	882.6	872.1	858.3	841.4	824.3	807.3	790.3	777.8
42.5°	877.2	866.6	856.1	845.6	835.0	821.0	803.4	785.8	768.3	750.7	737.0
45°	820.5	809.7	798.9	788.1	777.4	762.8	744.3	725.9	707.4	689.0	675.3
47.5°	763.8	751.9	740.1	728.3	716.4	701.3	682.9	664.4	645.9	627.5	612.7
50°	722.4	711.1	699.9	688.6	677.3	662.0	642.6	623.2	603.8	584.4	569.5
52.5°	685.3	673.1	660.8	648.6	636.4	620.7	601.5	582.3	563.1	543.8	528.4
55°	623.2	611.5	599.7	588.0	576.2	560.2	539.8	519.4	499.1	478.7	464.9
57.5°	565.9	553.0	540.3	527.4	514.7	498.0	477.5	457.1	436.7	416.2	403.1
60°	526.2	513.0	499.8	486.6	473.4	456.9	437.0	417.2	397.3	377.4	364.4
62.5°	486.5	473.3	460.1	446.9	433.8	417.2	397.4	377.5	357.6	337.7	325.5
65°	425.9	412.7	399.5	386.3	373.2	357.3	338.6	319.9	301.2	282.5	270.8
67.5°	365.3	352.0	338.7	325.3	312.0	296.4	278.5	260.5	242.6	224.7	215.9
70°	325.6	312.7	299.8	286.8	273.9	259.0	242.2	225.5	208.7	191.9	183.5
72.5°	285.9	273.2	260.5	247.7	235.0	220.9	205.7	190.5	175.2	160.0	153.1
75°	225.4	213.8	202.3	190.8	179.4	167.0	153.8	140.6	127.5	114.3	111.9
77.5°	170.2	159.7	149.3	138.9	128.6	119.1	110.6	102.1	93.6	85.2	83.9
80°	134.8	124.9	115.1	105.3	95.5	88.1	83.0	78.0	73.0	67.9	67.2
82.5°	101.2	92.7	84.2	75.7	67.2	61.8	59.4	57.1	54.7	52.4	51.7
85°	57.1	51.9	46.6	41.4	36.0	33.0	32.3	31.6	30.9	30.2	29.7
87.5°	20.8	19.1	17.3	15.6	13.9	13.2	13.6	14.1	14.6	15.0	15.0
90°	0.8	2.5	4.3	6.1	7.8	9.8	12.1	14.4	16.7	19.0	19.6
92.5°	19.2	20.4	21.5	22.7	23.9	25.2	26.5	27.7	29.1	30.3	30.9
95°	46.7	47.8	49.1	50.4	51.6	52.9	54.3	55.7	57.1	58.5	59.3
97.5°	82.9	83.8	84.7	85.6	86.5	87.5	88.5	89.5	90.5	91.6	92.4
100°	107.6	108.6	109.6	110.7	111.8	112.7	113.6	114.5	115.3	116.2	116.8
102.5°	136.0	136.7	137.3	137.9	138.6	139.4	140.6	141.7	142.9	144.1	144.6
105°	177.9	178.2	178.6	179.0	179.4	180.3	181.9	183.5	185.1	186.6	186.6
107.5°	226.6	226.9	227.0	227.3	227.5	227.9	228.5	229.2	229.8	230.4	231.0
110°	257.0	257.4	257.7	258.0	258.4	258.7	259.1	259.4	259.8	260.2	260.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.6	288.8	289.1	289.2	289.5	289.6	289.7	289.8	289.9	289.9	290.7
115°	336.0	336.6	337.2	337.6	338.2	338.3	337.9	337.5	337.2	336.8	337.1
117.5°	383.8	384.2	384.5	384.9	385.2	385.2	384.8	384.3	383.8	383.3	383.3
120°	413.6	414.6	415.7	416.8	417.8	417.9	417.0	416.1	415.3	414.4	414.2
122.5°	444.6	445.4	446.1	446.9	447.7	447.8	447.3	446.9	446.5	446.0	445.5
125°	491.9	492.4	492.9	493.5	493.9	494.1	493.7	493.4	493.0	492.7	491.9
127.5°	535.5	536.6	537.7	538.8	540.0	540.3	540.0	539.6	539.2	538.8	537.8
130°	564.6	566.0	567.4	568.8	570.2	570.7	570.1	569.6	569.1	568.5	567.8
132.5°	593.7	595.1	596.5	597.9	599.4	599.8	599.4	599.0	598.7	598.3	597.5
135°	638.2	639.2	640.2	641.3	642.4	642.8	642.6	642.5	642.3	642.1	641.4
137.5°	679.3	680.2	681.0	681.9	682.8	683.4	683.9	684.4	684.8	685.2	684.5
140°	707.7	708.6	709.5	710.3	711.2	711.8	711.9	712.1	712.3	712.5	712.3
142.5°	733.6	734.5	735.5	736.3	737.2	737.8	738.1	738.4	738.7	739.0	738.9
145°	774.1	774.5	774.8	775.2	775.5	776.0	776.5	777.1	777.6	778.1	777.9
147.5°	809.6	810.2	810.9	811.5	812.1	812.7	813.2	813.7	814.1	814.7	814.7
150°	834.2	834.6	835.0	835.3	835.7	836.0	836.4	836.7	837.1	837.4	837.4
152.5°	854.5	855.0	855.5	856.0	856.4	856.8	857.1	857.2	857.5	857.7	857.9
155°	886.5	886.5	886.5	886.5	886.5	886.5	886.7	886.8	887.1	887.2	888.0
157.5°	913.6	913.5	913.2	913.0	912.8	912.8	912.9	913.1	913.2	913.3	914.1
160°	930.7	930.3	930.0	929.7	929.3	929.2	929.2	929.2	929.2	929.2	930.0
162.5°	945.9	945.4	944.9	944.4	944.0	943.8	943.9	944.0	944.2	944.4	945.2
165°	965.5	965.0	964.5	963.9	963.5	963.1	963.1	963.1	963.1	963.1	964.2
167.5°	981.2	980.5	979.8	979.1	978.3	978.1	978.3	978.3	978.5	978.7	979.8
170°	990.1	989.4	988.6	987.9	987.2	986.9	986.9	986.9	986.9	986.9	988.1
172.5°	997.0	996.3	995.6	994.9	994.2	993.8	993.8	993.8	993.8	993.8	994.9
175°	1004.2	1003.5	1002.8	1002.2	1001.5	1001.1	1001.1	1001.1	1001.1	1001.1	1002.2
177.5°	1007.3	1006.7	1006.2	1005.6	1005.0	1004.7	1004.7	1004.7	1004.7	1004.7	1005.6
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1324.1	1326.3	1328.3	1329.2	1328.8	1328.5	1328.1	1327.7
5°	1315.4	1317.6	1319.7	1320.6	1320.1	1319.6	1319.1	1318.7
7.5°	1296.9	1298.1	1299.3	1299.5	1298.6	1297.8	1297.0	1296.2
10°	1280.3	1280.6	1280.8	1280.3	1279.1	1277.9	1276.7	1275.5
12.5°	1259.6	1259.6	1259.4	1258.6	1257.3	1255.8	1254.5	1253.1
15°	1223.5	1222.3	1221.1	1219.6	1218.0	1216.3	1214.7	1213.0
17.5°	1180.3	1177.7	1175.2	1172.7	1170.2	1167.7	1165.2	1162.7
20°	1150.6	1147.6	1144.5	1141.5	1138.6	1135.7	1132.8	1130.0
22.5°	1119.0	1115.1	1111.2	1107.9	1105.3	1102.6	1099.9	1097.2
25°	1067.1	1062.0	1057.0	1053.1	1050.5	1047.9	1045.3	1042.6
27.5°	1010.5	1003.5	996.5	991.0	987.0	982.9	978.9	974.9
30°	970.3	962.1	953.9	948.0	944.1	940.3	936.4	932.6
32.5°	930.7	921.9	912.9	906.5	902.5	898.4	894.4	890.3
35°	872.1	861.8	851.5	844.2	840.0	835.6	831.3	827.0
37.5°	809.2	797.5	785.8	777.3	772.0	766.7	761.4	756.1
40°	765.4	753.0	740.5	731.5	726.0	720.5	714.9	709.5
42.5°	723.4	709.8	696.2	686.9	682.0	677.1	672.1	667.2
45°	661.6	648.0	634.3	624.6	618.9	613.1	607.4	601.7
47.5°	597.8	583.0	568.1	558.1	552.9	547.9	542.7	537.6
50°	554.7	539.8	525.0	514.8	509.3	503.7	498.3	492.7
52.5°	513.0	497.6	482.1	471.9	467.0	462.1	457.2	452.2
55°	450.9	437.0	423.1	413.8	409.0	404.2	399.4	394.6
57.5°	389.9	376.8	363.7	355.1	351.0	346.9	342.9	338.7
60°	351.5	338.6	325.6	317.1	313.1	309.0	304.9	300.8
62.5°	313.3	301.2	289.0	280.7	276.6	272.3	268.0	263.7
65°	259.0	247.2	235.5	228.3	225.7	223.1	220.5	217.8
67.5°	207.2	198.4	189.6	183.8	181.0	178.2	175.3	172.5
70°	175.2	166.8	158.4	152.9	150.2	147.6	145.0	142.4
72.5°	146.3	139.4	132.6	128.7	127.5	126.4	125.3	124.2
75°	109.5	107.1	104.7	103.3	102.8	102.3	101.8	101.3
77.5°	82.6	81.3	80.0	79.1	78.7	78.2	77.7	77.2
80°	66.5	65.8	65.0	64.5	64.0	63.5	63.0	62.5
82.5°	50.9	50.2	49.5	49.1	49.0	49.0	48.8	48.7
85°	29.2	28.8	28.3	28.0	28.0	28.0	28.0	28.0
87.5°	14.9	14.9	14.8	14.7	14.6	14.5	14.3	14.3
90°	20.4	21.1	21.8	22.3	22.7	23.1	23.4	23.7
92.5°	31.5	32.1	32.6	32.8	32.6	32.4	32.2	31.9
95°	59.9	60.6	61.3	61.7	61.7	61.7	61.7	61.7
97.5°	93.2	94.0	94.8	95.1	95.1	95.1	95.0	94.9
100°	117.3	117.8	118.4	118.8	119.1	119.5	119.9	120.2
102.5°	145.1	145.7	146.2	146.4	146.3	146.2	146.2	146.2
105°	186.6	186.6	186.6	186.8	187.1	187.5	187.8	188.2
107.5°	231.6	232.1	232.7	232.8	232.7	232.4	232.2	232.0
110°	261.6	262.3	263.0	263.2	262.8	262.4	262.1	261.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.6	292.4	293.3	293.7	293.6	293.5	293.4	293.3
115°	337.2	337.4	337.5	337.5	337.4	337.2	337.1	336.8
117.5°	383.3	383.3	383.3	382.9	382.5	382.0	381.5	381.0
120°	414.0	413.8	413.7	413.4	413.0	412.7	412.3	412.0
122.5°	445.0	444.7	444.2	443.7	443.2	442.7	442.2	441.7
125°	491.2	490.5	489.8	489.1	488.5	487.7	487.0	486.3
127.5°	536.9	535.9	534.9	534.0	533.2	532.3	531.6	530.8
130°	567.1	566.4	565.8	564.7	563.6	562.3	561.1	559.8
132.5°	596.6	595.8	594.9	594.1	593.1	592.2	591.2	590.3
135°	640.7	640.0	639.3	638.7	638.4	638.0	637.7	637.4
137.5°	683.8	683.1	682.3	681.6	681.0	680.2	679.6	679.0
140°	712.1	711.9	711.8	711.1	709.9	708.6	707.4	706.2
142.5°	738.7	738.6	738.3	737.8	736.8	735.9	734.9	734.0
145°	777.8	777.6	777.4	777.0	776.3	775.5	774.8	774.1
147.5°	814.7	814.7	814.7	814.1	813.1	812.0	811.0	809.9
150°	837.4	837.4	837.4	836.9	835.8	834.8	833.7	832.7
152.5°	858.3	858.5	858.8	858.5	857.5	856.7	855.7	854.8
155°	888.7	889.4	890.0	889.8	888.6	887.3	886.1	884.9
157.5°	914.8	915.5	916.3	916.2	915.2	914.2	913.2	912.2
160°	930.9	931.8	932.6	932.7	932.1	931.4	930.7	929.9
162.5°	946.1	947.0	947.8	947.7	946.6	945.5	944.4	943.3
165°	965.3	966.3	967.3	967.3	966.1	964.8	963.6	962.3
167.5°	980.8	981.9	983.0	983.0	981.9	980.8	979.8	978.7
170°	989.4	990.5	991.8	991.8	990.5	989.4	988.1	986.9
172.5°	996.0	997.1	998.1	998.1	996.9	995.7	994.4	993.2
175°	1003.2	1004.2	1005.4	1005.2	1004.0	1002.7	1001.6	1000.3
177.5°	1006.5	1007.3	1008.1	1008.1	1007.1	1006.1	1005.1	1004.1
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6

(END OF REPORT)