

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: P331860-935

Luminaire Tested: **S122RDIW-S1005D1240U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331860-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S1005D1240U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6703.3 lumens  
Efficiency: N/A  
Efficacy: 88.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

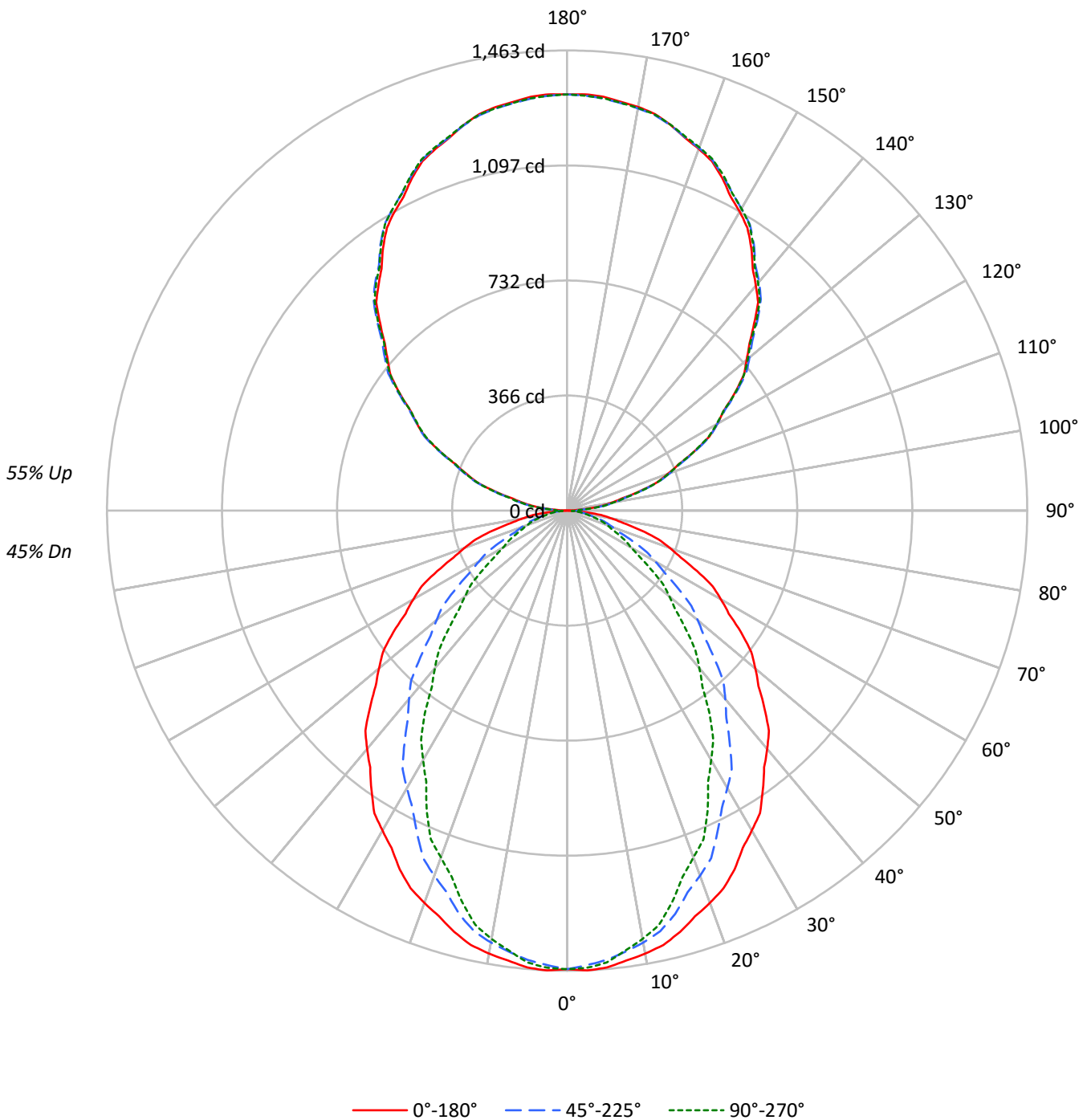
Input Watts (W): 76.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	28
4	74	64	56	51	68	59	52	47	50	45	41	41	38	35	33	31	29	25
5	68	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	25	22	19
7	58	47	39	33	54	43	36	32	37	31	28	31	27	24	25	22	20	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16
9	51	39	31	27	46	36	30	25	31	26	22	26	22	19	21	19	16	14
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	23541	23541	23541
5°	23631	23246	23376
10°	23451	22866	22673
15°	23181	22188	21549
20°	22807	21220	20155
25°	22425	20122	18805
30°	21895	18990	17074
35°	21378	17763	15554
40°	20858	16493	13793
45°	20247	15066	12202
50°	19623	13622	10638
55°	18978	12073	9137
60°	18235	10440	7585
65°	17391	8772	6907
70°	16386	7227	6354
75°	15147	6588	5926
80°	13371	5895	5393
85°	10504	4650	4650



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.5	2.0
10°-20°	374.7	5.6
20°-30°	526.2	7.9
30°-40°	573.8	8.6
40°-50°	527.6	7.9
50°-60°	414.4	6.2
60°-70°	270.2	4.0
70°-80°	139.3	2.1
80°-90°	41.4	0.6
90°-100°	83.8	1.3
100°-110°	260.4	3.9
110°-120°	445.0	6.6
120°-130°	585.3	8.7
130°-140°	656.9	9.8
140°-150°	644.1	9.6
150°-160°	540.2	8.1
160°-170°	358.3	5.3
170°-180°	125.2	1.9
0°-30°	1037.4	15.5
0°-40°	1611.3	24.0
0°-60°	2553.2	38.1
0°-90°	3004.1	44.8
90°-120°	789.2	11.8
90°-150°	2675.4	39.9
90°-180°	3699.0	55.2
0°-180°	6703.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1458	1451	1434	1445	1442	138
15°	1387	1371	1327	1303	1289	390
25°	1259	1214	1130	1077	1056	579
35°	1085	1015	901	821	789	678
45°	887	796	660	570	534	684
55°	674	569	429	353	325	602
65°	455	348	230	187	181	451
75°	243	153	106	97	95	257
85°	57	30	25	25	25	67
90°	1	15	39	37	38	5
95°	58	69	72	71	69	67
105°	240	243	246	248	248	253
115°	447	453	451	450	447	442
125°	650	659	656	653	652	580
135°	841	852	855	854	851	649
145°	1020	1028	1035	1036	1032	637
155°	1167	1170	1173	1178	1176	537
165°	1269	1268	1268	1275	1270	358
175°	1321	1318	1315	1322	1316	125
180°	1323	1323	1323	1323	1323	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1463.4	1462.2	1460.9	1459.8	1458.6	1456.7	1454.1	1451.6	1449.1	1446.5	1448.8
5°	1458.0	1456.6	1455.1	1453.6	1452.2	1449.6	1445.7	1441.9	1438.1	1434.3	1436.9
7.5°	1443.0	1441.2	1439.4	1437.5	1435.7	1432.6	1428.1	1423.7	1419.3	1414.8	1415.6
10°	1430.4	1428.3	1426.2	1424.2	1422.1	1418.2	1412.3	1406.4	1400.6	1394.7	1393.9
12.5°	1414.5	1412.0	1409.5	1407.0	1404.5	1399.4	1391.9	1384.4	1376.9	1369.4	1367.8
15°	1386.8	1383.5	1380.4	1377.1	1373.9	1367.3	1357.4	1347.4	1337.4	1327.4	1321.9
17.5°	1352.7	1347.8	1342.9	1338.0	1333.1	1324.2	1311.4	1298.6	1285.8	1273.1	1266.4
20°	1327.4	1321.5	1315.7	1309.8	1304.0	1293.7	1279.0	1264.4	1249.7	1235.0	1227.7
22.5°	1299.9	1293.4	1286.9	1280.3	1273.7	1262.1	1245.6	1229.1	1212.5	1196.0	1186.5
25°	1258.8	1249.4	1240.0	1230.6	1221.2	1206.9	1187.6	1168.2	1148.8	1129.5	1117.5
27.5°	1209.2	1199.0	1188.8	1178.6	1168.4	1152.4	1130.6	1108.7	1086.9	1065.1	1051.1
30°	1174.4	1163.2	1152.1	1140.9	1129.8	1112.5	1089.0	1065.6	1042.2	1018.6	1003.7
32.5°	1140.6	1127.6	1114.6	1101.6	1088.5	1070.1	1046.1	1022.2	998.2	974.3	957.3
35°	1084.6	1069.7	1054.7	1039.7	1024.8	1004.4	978.6	952.9	927.0	901.2	882.8
37.5°	1028.7	1012.3	995.8	979.4	963.0	941.1	913.5	886.1	858.5	831.0	810.7
40°	989.6	972.1	954.4	936.9	919.3	896.2	867.8	839.4	810.9	782.5	761.6
42.5°	949.5	931.0	912.5	893.9	875.4	851.4	822.1	792.6	763.3	733.9	712.4
45°	886.7	867.0	847.4	827.8	808.1	782.9	752.1	721.3	690.5	659.8	638.9
47.5°	825.4	804.7	783.9	763.0	742.2	715.9	684.2	652.3	620.5	588.8	568.1
50°	781.2	760.3	739.5	718.7	697.8	671.3	639.1	606.8	574.5	542.3	522.1
52.5°	737.9	716.1	694.4	672.6	650.8	624.2	592.6	561.1	529.5	498.0	478.5
55°	674.2	651.4	628.5	605.6	582.8	555.5	523.8	492.1	460.5	428.9	411.2
57.5°	609.1	585.7	562.1	538.7	515.2	488.3	457.9	427.4	397.0	366.5	350.4
60°	564.7	541.3	517.8	494.4	470.9	444.1	413.9	383.7	353.4	323.3	308.3
62.5°	521.5	498.0	474.6	451.1	427.7	401.5	372.7	343.9	315.1	286.4	272.1
65°	455.2	431.4	407.8	384.0	360.2	335.2	308.8	282.4	256.0	229.6	219.6
67.5°	391.3	367.8	344.2	320.6	297.0	273.4	249.7	225.9	202.2	178.4	173.8
70°	347.1	324.2	301.3	278.4	255.5	234.0	213.8	193.6	173.3	153.1	150.2
72.5°	304.8	282.8	261.0	239.0	217.1	197.9	181.8	165.5	149.2	133.0	130.5
75°	242.8	222.2	201.7	181.2	160.7	145.4	135.4	125.5	115.5	105.6	103.5
77.5°	181.8	163.8	145.9	127.9	109.8	98.4	93.6	88.8	83.9	79.2	78.0
80°	143.8	128.9	113.9	98.9	84.0	75.1	72.2	69.2	66.3	63.4	62.2
82.5°	109.0	97.3	85.7	74.0	62.3	55.4	53.5	51.5	49.5	47.5	46.8
85°	56.7	50.5	44.4	38.2	32.1	28.6	27.7	26.9	25.9	25.1	25.1
87.5°	17.1	15.8	14.6	13.3	12.0	11.9	13.0	14.0	15.2	16.3	15.9
90°	1.1	4.1	7.1	10.1	13.0	17.2	22.7	28.2	33.6	39.1	38.6
92.5°	19.9	22.0	24.3	26.4	28.6	30.3	31.6	32.9	34.2	35.5	35.6
95°	58.0	60.5	63.0	65.5	68.0	69.5	70.0	70.4	70.9	71.5	71.5
97.5°	106.1	108.2	110.5	112.6	114.8	116.3	117.3	118.2	119.2	120.1	120.1
100°	141.8	143.8	145.8	147.7	149.7	151.1	151.8	152.6	153.3	154.0	154.0
102.5°	179.3	180.9	182.4	184.1	185.6	186.9	187.9	188.8	189.8	190.7	190.9
105°	240.0	240.7	241.5	242.3	243.0	243.7	244.1	244.6	245.1	245.6	246.1
107.5°	301.2	302.3	303.4	304.4	305.6	306.1	306.1	306.1	306.1	306.1	306.3
110°	340.5	342.0	343.5	345.0	346.5	347.2	347.2	347.2	347.2	347.2	347.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	383.4	384.9	386.3	387.9	389.3	389.9	389.8	389.6	389.3	389.2	388.6
115°	446.6	448.1	449.5	451.0	452.5	453.0	452.5	452.0	451.5	451.0	450.8
117.5°	509.5	511.5	513.5	515.5	517.5	517.8	516.3	515.0	513.6	512.2	511.6
120°	551.5	553.5	555.5	557.5	559.5	559.5	557.5	555.5	553.5	551.5	551.5
122.5°	589.9	592.3	594.7	597.0	599.4	599.9	598.6	597.2	595.7	594.3	593.7
125°	649.7	651.9	654.2	656.4	658.7	659.4	658.7	658.0	657.2	656.4	655.7
127.5°	708.0	710.8	713.7	716.5	719.4	720.3	719.5	718.5	717.6	716.7	715.8
130°	744.7	747.9	751.1	754.3	757.5	758.9	758.5	757.9	757.4	756.9	756.4
132.5°	785.7	788.3	791.0	793.6	796.3	797.6	797.7	797.8	797.9	798.0	796.9
135°	840.7	843.3	846.1	848.9	851.6	853.2	853.7	854.2	854.7	855.1	854.9
137.5°	898.5	900.7	902.9	905.2	907.4	908.9	909.5	910.2	910.8	911.5	911.3
140°	933.3	935.6	937.8	940.0	942.3	944.0	945.2	946.5	947.7	948.9	948.9
142.5°	969.1	971.3	973.5	975.8	978.0	979.5	980.3	981.2	982.1	982.9	983.1
145°	1020.4	1022.2	1023.9	1025.6	1027.3	1029.0	1030.4	1031.9	1033.5	1034.9	1035.2
147.5°	1066.2	1068.2	1070.3	1072.5	1074.5	1076.1	1077.0	1078.1	1079.0	1080.0	1080.6
150°	1097.4	1098.9	1100.4	1101.9	1103.4	1104.7	1105.6	1106.6	1107.6	1108.6	1109.3
152.5°	1125.2	1126.6	1128.1	1129.5	1131.1	1132.4	1133.6	1134.8	1136.0	1137.2	1138.2
155°	1166.7	1167.4	1168.1	1168.9	1169.7	1170.4	1171.1	1171.8	1172.6	1173.4	1174.6
157.5°	1202.1	1202.6	1203.2	1203.7	1204.1	1204.6	1205.1	1205.5	1205.9	1206.4	1208.1
160°	1223.6	1224.1	1224.6	1225.1	1225.5	1226.0	1226.2	1226.4	1226.7	1226.9	1228.4
162.5°	1243.2	1243.4	1243.5	1243.5	1243.6	1243.8	1244.1	1244.3	1244.6	1244.8	1246.5
165°	1269.4	1269.1	1268.9	1268.6	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1270.0
167.5°	1291.2	1290.5	1289.8	1289.0	1288.2	1287.9	1287.8	1287.8	1287.7	1287.6	1289.4
170°	1302.9	1302.1	1301.4	1300.6	1299.9	1299.4	1299.2	1298.9	1298.6	1298.4	1300.1
172.5°	1310.9	1310.2	1309.4	1308.6	1307.9	1307.4	1307.2	1306.9	1306.7	1306.4	1308.2
175°	1320.7	1320.0	1319.2	1318.4	1317.8	1317.2	1316.6	1316.1	1315.6	1315.1	1316.9
177.5°	1324.7	1324.1	1323.5	1322.9	1322.3	1321.9	1321.5	1321.0	1320.7	1320.3	1321.5
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1451.1	1453.5	1455.9	1456.7	1456.3	1455.9	1455.3	1454.9
5°	1439.6	1442.3	1444.8	1445.7	1444.8	1444.0	1443.1	1442.3
7.5°	1416.3	1417.0	1417.8	1417.5	1415.9	1414.4	1412.9	1411.4
10°	1392.9	1392.1	1391.2	1389.9	1388.1	1386.4	1384.6	1382.9
12.5°	1366.2	1364.6	1363.0	1360.8	1357.9	1355.0	1352.0	1349.1
15°	1316.3	1310.7	1305.1	1300.9	1298.0	1295.0	1292.1	1289.2
17.5°	1259.8	1253.2	1246.6	1240.7	1235.7	1230.6	1225.5	1220.6
20°	1220.4	1213.1	1205.7	1198.9	1192.4	1185.9	1179.5	1173.0
22.5°	1177.2	1167.7	1158.2	1151.1	1146.3	1141.5	1136.7	1131.9
25°	1105.4	1093.5	1081.4	1073.2	1068.8	1064.4	1060.0	1055.6
27.5°	1037.1	1023.0	1009.0	998.5	991.5	984.6	977.6	970.6
30°	988.8	973.8	958.8	947.4	939.5	931.6	923.7	915.8
32.5°	940.2	923.2	906.0	893.8	886.4	878.9	871.4	864.0
35°	864.3	845.8	827.3	814.9	808.4	801.9	795.5	789.1
37.5°	790.3	770.0	749.6	735.7	728.4	721.0	713.6	706.2
40°	740.8	720.0	699.2	685.0	677.3	669.7	662.1	654.4
42.5°	690.9	669.3	647.8	633.4	625.9	618.5	611.2	603.8
45°	618.1	597.3	576.4	562.6	555.5	548.5	541.4	534.4
47.5°	547.3	526.7	505.9	492.4	486.0	479.7	473.2	466.8
50°	501.9	481.6	461.4	448.2	442.0	435.8	429.7	423.5
52.5°	458.9	439.4	419.9	407.3	401.6	395.9	390.2	384.5
55°	393.6	376.1	358.4	346.9	341.3	335.7	330.2	324.6
57.5°	334.3	318.1	302.0	291.6	287.0	282.2	277.6	272.9
60°	293.3	278.4	263.5	253.7	248.9	244.3	239.5	234.9
62.5°	257.9	243.6	229.4	220.8	218.0	215.2	212.3	209.6
65°	209.7	199.7	189.7	184.3	183.4	182.5	181.7	180.8
67.5°	169.3	164.7	160.1	157.3	156.4	155.5	154.5	153.6
70°	147.2	144.3	141.4	139.3	138.1	136.9	135.8	134.6
72.5°	128.1	125.6	123.1	121.6	120.9	120.2	119.4	118.7
75°	101.4	99.4	97.4	96.2	95.9	95.6	95.3	95.0
77.5°	76.8	75.7	74.5	73.6	73.2	72.8	72.2	71.8
80°	61.0	59.8	58.6	58.0	58.0	58.0	58.0	58.0
82.5°	46.1	45.4	44.7	44.3	44.3	44.3	44.3	44.3
85°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
87.5°	15.6	15.2	14.9	14.8	14.8	14.9	14.9	15.0
90°	38.1	37.6	37.1	36.9	37.2	37.5	37.7	38.0
92.5°	35.7	35.8	35.9	36.0	36.0	36.1	36.2	36.2
95°	71.5	71.5	71.5	71.2	70.7	70.2	69.7	69.2
97.5°	120.1	120.1	120.1	120.1	120.0	120.0	119.9	119.9
100°	154.0	154.0	154.0	153.9	153.7	153.4	153.2	152.9
102.5°	191.1	191.3	191.5	191.5	191.2	191.0	190.7	190.5
105°	246.6	247.1	247.6	247.9	247.9	247.9	247.9	247.9
107.5°	306.5	306.7	306.9	306.4	305.3	304.2	303.0	301.9
110°	347.2	347.2	347.2	346.8	346.1	345.3	344.6	343.9





TEST NUMBER: P331860-935

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.0	387.4	386.8	386.2	385.6	385.1	384.6	384.0
115°	450.6	450.3	450.0	449.5	448.8	448.1	447.3	446.6
117.5°	511.0	510.4	509.8	509.2	508.4	507.6	507.0	506.2
120°	551.5	551.5	551.5	551.1	550.4	549.7	548.9	548.2
122.5°	593.2	592.6	592.0	591.4	590.9	590.3	589.8	589.3
125°	655.0	654.2	653.5	653.0	652.7	652.5	652.2	651.9
127.5°	715.0	714.0	713.2	712.3	711.5	710.8	710.0	709.1
130°	756.0	755.4	754.9	754.2	753.2	752.3	751.2	750.2
132.5°	795.8	794.7	793.7	792.7	791.9	791.1	790.3	789.5
135°	854.7	854.5	854.2	853.7	852.9	852.2	851.4	850.7
137.5°	911.0	910.9	910.7	910.1	909.0	908.1	907.1	906.1
140°	948.9	948.9	948.9	948.5	947.4	946.5	945.5	944.5
142.5°	983.3	983.5	983.7	983.3	982.3	981.3	980.3	979.3
145°	1035.4	1035.7	1035.9	1035.5	1034.6	1033.5	1032.6	1031.6
147.5°	1081.1	1081.7	1082.2	1082.0	1081.1	1080.1	1079.2	1078.2
150°	1110.1	1110.9	1111.6	1111.6	1110.9	1110.1	1109.3	1108.6
152.5°	1139.1	1140.0	1140.9	1140.9	1140.0	1139.1	1138.2	1137.2
155°	1175.9	1177.1	1178.3	1178.5	1177.8	1177.1	1176.3	1175.6
157.5°	1209.8	1211.4	1213.1	1213.4	1212.2	1211.0	1209.8	1208.6
160°	1229.9	1231.4	1232.9	1233.1	1232.2	1231.1	1230.2	1229.2
162.5°	1248.2	1249.8	1251.5	1251.8	1250.6	1249.4	1248.2	1247.1
165°	1271.7	1273.4	1275.2	1275.4	1274.2	1273.0	1271.7	1270.5
167.5°	1291.2	1292.9	1294.6	1294.9	1293.6	1292.3	1291.0	1289.7
170°	1301.8	1303.6	1305.4	1305.4	1304.0	1302.5	1301.0	1299.5
172.5°	1309.9	1311.6	1313.4	1313.5	1312.0	1310.5	1309.1	1307.5
175°	1318.6	1320.3	1322.1	1322.2	1320.7	1319.2	1317.8	1316.2
177.5°	1322.7	1323.9	1325.0	1325.0	1323.9	1322.7	1321.5	1320.3
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9

(END OF REPORT)