

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: P332066

Luminaire Tested: **S123DIP-S1165D805U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332066  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D805U835-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8061.1 lumens  
Efficiency: N/A  
Efficacy: 132.8 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

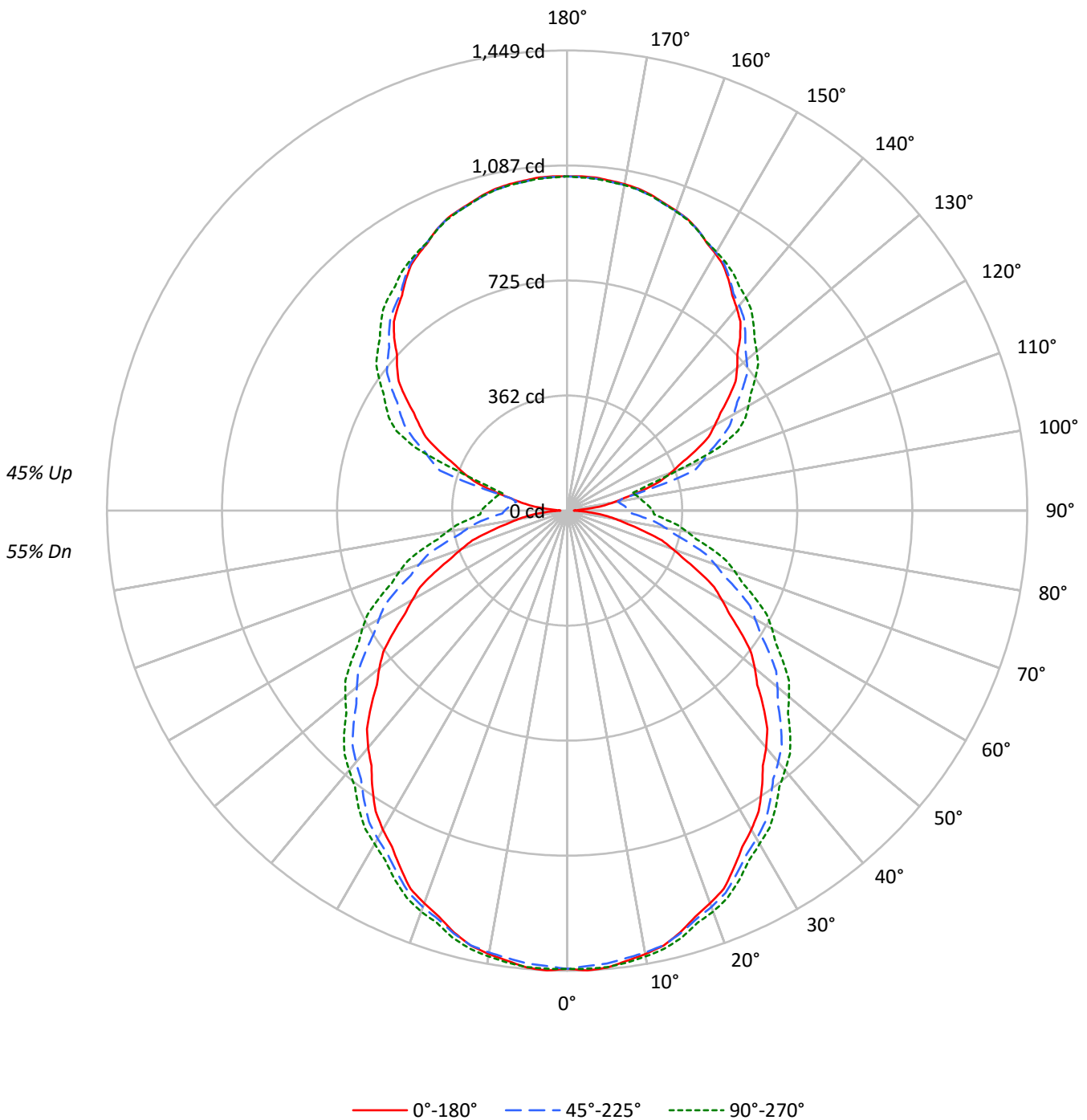
Input Watts (W): 60.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	98	93	89	85	90	86	82	79	74	71	68	62	60	58	52	50	49	44
2	89	80	74	68	82	75	69	64	64	60	56	54	51	48	45	43	40	36
3	81	70	63	56	74	65	58	53	56	51	46	48	43	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	25
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	19	17
8	53	40	32	27	49	38	31	25	33	27	23	28	23	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

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

	0°	45°	90°
0°	15532	15532	15532
5°	15581	15141	15150
10°	15441	14792	14718
15°	15242	14397	14247
20°	14958	13944	13729
25°	14607	13423	13185
30°	14248	12956	12632
35°	13844	12460	12191
40°	13459	12010	11719
45°	13033	11577	11342
50°	12611	11149	10926
55°	12146	10713	10553
60°	11692	10267	10169
65°	11230	9793	9712
70°	10529	9260	9244
75°	9643	8650	8768
80°	8626	8052	8224
85°	7681	7639	7911



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.8	1.7
10°-20°	390.0	4.8
20°-30°	583.2	7.2
30°-40°	696.5	8.6
40°-50°	728.7	9.0
50°-60°	683.9	8.5
60°-70°	571.2	7.1
70°-80°	408.7	5.1
80°-90°	246.6	3.1
90°-100°	191.2	2.4
100°-110°	294.7	3.7
110°-120°	513.0	6.4
120°-130°	600.6	7.5
130°-140°	615.1	7.6
140°-150°	561.4	7.0
150°-160°	449.5	5.6
160°-170°	290.1	3.6
170°-180°	100.0	1.2
0°-30°	1110.0	13.8
0°-40°	1806.5	22.4
0°-60°	3219.1	39.9
0°-90°	4445.5	55.1
90°-120°	998.9	12.4
90°-150°	2776.0	34.4
90°-180°	3616.0	44.9
0°-180°	8061.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1445	1441	1432	1444	1443	137
15°	1375	1380	1379	1393	1393	387
25°	1242	1257	1262	1282	1283	572
35°	1069	1094	1114	1137	1144	668
45°	874	912	951	980	993	674
55°	666	719	775	816	830	597
65°	461	522	591	636	654	455
75°	250	324	402	452	473	267
85°	77	156	239	290	308	81
90°	21	106	196	251	270	16
95°	65	97	180	232	250	72
105°	246	289	289	201	210	260
115°	445	471	532	576	593	439
125°	621	629	676	709	723	555
135°	770	774	794	823	830	593
145°	887	890	892	906	912	554
155°	975	973	974	978	973	449
165°	1028	1026	1025	1031	1026	290
175°	1052	1049	1049	1054	1048	100
180°	1052	1052	1052	1052	1052	



TEST NUMBER: P332066

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1449.3	1448.5	1447.6	1446.8	1445.9	1444.4	1442.2	1439.9	1437.7	1435.5	1437.7
5°	1444.6	1443.9	1443.2	1442.5	1441.8	1440.4	1438.3	1436.2	1434.1	1432.0	1434.8
7.5°	1430.4	1430.6	1430.7	1430.9	1431.0	1430.1	1428.0	1426.0	1424.0	1421.9	1425.4
10°	1417.9	1418.6	1419.3	1420.0	1420.7	1420.1	1418.4	1416.6	1414.9	1413.1	1416.6
12.5°	1402.8	1403.7	1404.7	1405.7	1406.7	1406.6	1405.4	1404.2	1403.0	1401.8	1405.0
15°	1375.4	1376.5	1377.5	1378.6	1379.6	1380.0	1379.6	1379.3	1378.9	1378.6	1382.1
17.5°	1340.8	1342.9	1345.0	1347.1	1349.2	1350.2	1350.1	1349.9	1349.8	1349.6	1352.8
20°	1315.7	1317.8	1319.9	1322.0	1324.1	1325.5	1326.2	1326.9	1327.6	1328.3	1331.4
22.5°	1289.3	1291.4	1293.5	1295.6	1297.7	1299.2	1300.2	1301.2	1302.1	1303.1	1307.1
25°	1241.8	1245.3	1248.8	1252.3	1255.8	1258.0	1259.1	1260.1	1261.2	1262.2	1266.8
27.5°	1194.0	1198.0	1202.0	1206.0	1209.9	1213.1	1215.3	1217.5	1219.8	1222.0	1225.9
30°	1160.1	1164.6	1169.1	1173.7	1178.2	1181.9	1184.7	1187.5	1190.3	1193.1	1197.3
32.5°	1122.3	1127.4	1132.5	1137.6	1142.7	1147.1	1150.7	1154.4	1158.0	1161.6	1166.1
35°	1068.9	1074.5	1080.1	1085.7	1091.3	1096.3	1100.9	1105.4	1109.9	1114.5	1119.7
37.5°	1012.3	1018.6	1024.9	1031.2	1037.5	1043.4	1049.0	1054.6	1060.2	1065.8	1071.7
40°	974.6	980.9	987.2	993.4	999.7	1006.4	1013.4	1020.3	1027.3	1034.3	1040.3
42.5°	933.1	940.8	948.5	956.1	963.8	971.3	978.6	985.8	993.1	1000.4	1006.9
45°	874.0	882.4	890.7	899.1	907.5	916.1	924.8	933.5	942.3	951.0	957.6
47.5°	812.0	821.5	831.0	840.6	850.1	859.8	869.8	879.8	889.8	899.8	907.2
50°	771.8	781.6	791.4	801.1	810.9	821.2	832.1	842.9	853.7	864.5	872.6
52.5°	729.1	739.4	749.7	760.1	770.4	781.6	793.5	805.4	817.4	829.3	837.7
55°	666.5	678.0	689.5	701.1	712.6	724.6	737.2	749.8	762.4	775.0	784.4
57.5°	605.5	617.5	629.5	641.5	653.6	666.5	680.2	694.0	707.7	721.5	731.0
60°	562.7	575.3	587.9	600.5	613.0	626.5	640.8	655.1	669.5	683.8	693.6
62.5°	522.5	535.4	548.2	561.1	573.9	587.9	603.1	618.2	633.4	648.6	658.3
65°	460.6	474.2	487.8	501.4	515.1	529.6	544.9	560.3	575.7	591.0	601.5
67.5°	397.7	412.2	426.6	441.1	455.5	470.6	486.2	501.9	517.5	533.2	544.6
70°	353.7	368.7	383.7	398.7	413.8	429.7	446.4	463.2	480.0	496.7	507.9
72.5°	313.4	328.5	343.5	358.5	373.5	389.7	407.0	424.3	441.7	459.0	470.5
75°	249.9	266.4	282.8	299.2	315.6	332.5	350.0	367.5	384.9	402.4	413.9
77.5°	194.6	211.2	227.7	244.3	260.8	277.9	295.5	313.1	330.7	348.3	360.5
80°	155.6	172.7	189.9	207.0	224.1	241.7	259.9	278.1	296.2	314.4	326.3
82.5°	121.7	139.1	156.5	173.9	191.2	209.2	227.6	246.1	264.5	282.9	294.8
85°	77.0	94.5	112.0	129.4	146.9	164.9	183.4	201.9	220.4	238.9	250.8
87.5°	42.0	59.7	77.5	95.2	112.9	130.9	149.2	167.5	185.7	204.0	216.0
90°	21.2	40.1	58.9	77.8	96.6	116.1	136.2	156.2	176.3	196.4	209.0
92.5°	33.7	48.7	63.6	78.6	93.5	110.6	129.9	149.1	168.3	187.6	200.3
95°	65.0	71.5	78.0	84.5	91.0	103.7	122.8	141.8	160.8	179.9	191.9
97.5°	111.3	120.4	129.5	138.6	147.6	154.1	158.0	161.8	165.6	169.5	181.3
100°	146.3	160.9	175.6	190.2	204.9	206.7	195.7	184.6	173.6	162.6	174.1
102.5°	186.3	198.9	211.4	224.0	236.5	235.9	222.1	208.3	194.5	180.7	186.2
105°	245.6	255.8	266.1	276.4	286.7	291.6	291.0	290.3	289.7	289.1	268.1
107.5°	306.5	315.2	323.8	332.5	341.1	353.8	370.5	387.3	404.0	420.7	407.5
110°	347.2	354.8	362.5	370.2	377.9	389.7	405.5	421.4	437.3	453.2	456.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	387.2	393.6	400.0	406.5	412.9	423.8	439.1	454.4	469.7	485.0	494.0
115°	444.9	450.1	455.4	460.6	465.8	475.5	489.6	503.8	517.9	532.1	542.2
117.5°	502.0	505.8	509.7	513.6	517.4	525.7	538.3	550.9	563.5	576.1	585.8
120°	536.3	539.7	543.0	546.3	549.6	557.3	569.3	581.4	593.4	605.5	614.9
122.5°	572.6	574.8	577.0	579.2	581.4	588.3	599.9	611.6	623.2	634.8	643.5
125°	620.8	622.2	623.5	624.9	626.3	632.4	643.3	654.1	664.9	675.7	683.4
127.5°	668.9	670.0	671.0	672.0	673.1	678.2	687.4	696.7	705.9	715.1	722.6
130°	698.9	700.0	701.0	702.1	703.1	707.5	715.2	722.8	730.5	738.2	745.5
132.5°	726.5	727.8	729.1	730.4	731.7	735.5	741.6	747.8	753.9	760.1	767.1
135°	770.1	770.8	771.5	772.2	772.9	775.5	780.0	784.5	789.1	793.6	800.4
137.5°	807.3	808.3	809.4	810.4	811.5	813.3	815.8	818.3	820.9	823.4	829.8
140°	831.1	832.1	833.1	834.2	835.2	836.5	838.1	839.7	841.2	842.8	848.7
142.5°	854.2	855.0	855.7	856.5	857.2	858.0	858.7	859.5	860.2	860.9	866.2
145°	886.6	887.4	888.3	889.2	890.0	890.6	891.0	891.3	891.7	892.0	895.2
147.5°	915.5	916.3	917.1	917.9	918.7	919.3	919.6	919.9	920.3	920.6	921.8
150°	934.2	934.8	935.3	935.8	936.3	936.8	937.1	937.5	937.8	938.2	938.5
152.5°	951.1	951.4	951.6	951.9	952.1	952.3	952.5	952.7	953.0	953.2	953.8
155°	974.9	974.6	974.2	973.9	973.5	973.4	973.6	973.8	973.9	974.1	975.0
157.5°	993.3	993.3	993.3	993.2	993.2	993.1	992.9	992.8	992.6	992.4	993.5
160°	1004.6	1004.4	1004.3	1004.1	1003.9	1003.7	1003.6	1003.4	1003.2	1003.0	1004.1
162.5°	1015.2	1014.8	1014.3	1013.9	1013.4	1013.1	1012.9	1012.8	1012.6	1012.4	1013.6
165°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.6	1025.5	1025.3	1025.1	1024.9	1026.3
167.5°	1038.1	1037.4	1036.7	1036.0	1035.3	1034.9	1034.9	1034.9	1034.9	1034.9	1036.3
170°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.6	1040.6	1040.6	1040.6	1040.6	1042.0
172.5°	1047.4	1046.6	1045.8	1044.9	1044.1	1043.8	1043.9	1044.0	1044.2	1044.3	1045.7
175°	1052.3	1051.4	1050.6	1049.7	1048.8	1048.5	1048.6	1048.8	1049.0	1049.2	1050.4
177.5°	1053.5	1052.9	1052.2	1051.5	1050.8	1050.5	1050.6	1050.8	1050.9	1051.0	1052.2
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1439.9	1442.2	1444.4	1445.4	1445.1	1444.8	1444.5	1444.3
5°	1437.6	1440.4	1443.2	1444.4	1444.1	1443.7	1443.4	1443.0
7.5°	1428.9	1432.4	1435.9	1437.5	1437.0	1436.6	1436.2	1435.8
10°	1420.1	1423.6	1427.1	1428.5	1427.8	1427.1	1426.4	1425.7
12.5°	1408.3	1411.5	1414.7	1415.9	1415.2	1414.5	1413.8	1413.1
15°	1385.5	1389.0	1392.5	1394.1	1393.8	1393.4	1393.1	1392.7
17.5°	1355.9	1359.1	1362.2	1363.5	1363.1	1362.6	1362.1	1361.6
20°	1334.5	1337.7	1340.8	1342.6	1342.9	1343.3	1343.6	1344.0
22.5°	1311.1	1315.1	1319.0	1320.9	1320.7	1320.5	1320.3	1320.1
25°	1271.3	1275.9	1280.4	1282.7	1282.7	1282.7	1282.7	1282.7
27.5°	1229.8	1233.7	1237.6	1239.7	1240.0	1240.3	1240.6	1240.9
30°	1201.5	1205.7	1209.8	1211.9	1211.9	1211.9	1211.9	1211.9
32.5°	1170.6	1175.1	1179.5	1182.2	1183.0	1183.9	1184.7	1185.5
35°	1125.0	1130.2	1135.4	1138.8	1140.2	1141.6	1143.0	1144.3
37.5°	1077.6	1083.6	1089.5	1093.0	1094.2	1095.3	1096.4	1097.5
40°	1046.2	1052.1	1058.1	1061.7	1063.1	1064.5	1065.9	1067.3
42.5°	1013.4	1019.9	1026.4	1030.6	1032.5	1034.5	1036.4	1038.4
45°	964.3	970.9	977.6	982.3	985.1	987.9	990.7	993.4
47.5°	914.7	922.2	929.7	934.5	936.6	938.8	941.0	943.1
50°	880.6	888.7	896.7	901.9	904.4	906.8	909.3	911.7
52.5°	846.0	854.3	862.6	868.3	871.3	874.3	877.3	880.3
55°	793.8	803.2	812.7	818.8	821.6	824.4	827.2	830.0
57.5°	740.5	750.0	759.5	765.9	769.2	772.5	775.8	779.0
60°	703.3	713.1	722.9	729.7	733.6	737.4	741.2	745.1
62.5°	668.1	677.9	687.7	694.4	697.9	701.5	705.1	708.6
65°	612.0	622.5	633.0	639.9	643.4	646.9	650.4	653.9
67.5°	556.1	567.6	579.0	586.2	589.2	592.1	595.0	598.0
70°	519.1	530.3	541.4	548.8	552.3	555.8	559.2	562.7
72.5°	481.9	493.4	504.8	512.3	515.8	519.3	522.8	526.3
75°	425.5	437.0	448.5	456.4	460.6	464.8	469.0	473.1
77.5°	372.6	384.8	397.0	404.6	407.9	411.1	414.3	417.5
80°	338.1	350.0	361.9	369.6	373.1	376.6	380.1	383.5
82.5°	306.7	318.6	330.4	338.1	341.6	345.1	348.6	352.1
85°	262.7	274.6	286.4	294.1	297.6	301.1	304.6	308.1
87.5°	228.0	240.1	252.1	259.9	263.4	267.0	270.6	274.1
90°	221.5	234.1	246.7	254.9	258.7	262.6	266.4	270.2
92.5°	213.0	225.7	238.4	246.5	249.9	253.3	256.7	260.2
95°	203.9	216.0	228.0	235.8	239.3	242.8	246.3	249.8
97.5°	193.1	204.9	216.7	224.4	228.1	231.7	235.4	239.1
100°	185.6	197.1	208.6	216.2	219.9	223.6	227.2	230.9
102.5°	191.7	197.3	202.8	207.5	211.3	215.1	218.9	222.7
105°	247.2	226.2	205.2	196.5	200.0	203.5	207.0	210.5
107.5°	394.3	381.1	367.9	351.3	331.2	311.1	291.0	270.9
110°	459.9	463.2	466.6	457.2	435.2	413.1	391.1	369.0





TEST NUMBER: P332066

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	502.9	511.8	520.7	524.0	521.9	519.7	517.5	515.4
115°	552.3	562.4	572.5	579.3	582.8	586.3	589.8	593.3
117.5°	595.5	605.2	614.9	621.2	624.1	626.9	629.8	632.6
120°	624.3	633.7	643.2	649.1	651.5	654.0	656.4	658.9
122.5°	652.3	661.0	669.7	675.4	678.0	680.6	683.1	685.7
125°	691.1	698.8	706.5	711.7	714.5	717.3	720.1	722.9
127.5°	730.0	737.5	745.0	749.7	751.8	753.8	755.8	757.8
130°	752.9	760.2	767.5	772.1	773.8	775.6	777.3	779.1
132.5°	774.2	781.2	788.3	792.7	794.6	796.5	798.4	800.3
135°	807.2	814.0	820.9	824.9	826.1	827.3	828.5	829.8
137.5°	836.2	842.5	848.9	852.7	854.1	855.5	856.9	858.3
140°	854.7	860.6	866.5	870.2	871.6	873.0	874.4	875.8
142.5°	871.4	876.6	881.9	885.1	886.4	887.6	888.9	890.2
145°	898.3	901.5	904.6	906.9	908.3	909.7	911.1	912.5
147.5°	923.0	924.2	925.4	926.2	926.7	927.1	927.6	928.0
150°	938.8	939.2	939.5	939.8	940.0	940.2	940.3	940.5
152.5°	954.4	955.0	955.7	955.6	955.0	954.3	953.7	953.0
155°	975.9	976.7	977.6	977.5	976.5	975.4	974.4	973.3
157.5°	994.5	995.5	996.6	996.4	995.1	993.7	992.4	991.0
160°	1005.1	1006.2	1007.2	1007.1	1005.9	1004.7	1003.5	1002.3
162.5°	1014.8	1016.0	1017.1	1017.2	1016.1	1015.0	1014.0	1012.9
165°	1027.7	1029.1	1030.5	1030.6	1029.4	1028.1	1026.9	1025.7
167.5°	1037.7	1039.1	1040.5	1040.5	1039.1	1037.7	1036.3	1034.9
170°	1043.3	1044.7	1046.1	1046.1	1044.7	1043.3	1042.0	1040.6
172.5°	1047.1	1048.5	1049.9	1049.8	1048.3	1046.8	1045.2	1043.7
175°	1051.6	1052.8	1054.0	1053.9	1052.6	1051.2	1049.8	1048.4
177.5°	1053.3	1054.4	1055.5	1055.4	1054.0	1052.6	1051.2	1049.8
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3

(END OF REPORT)