

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: P332691

Luminaire Tested: **SA4XXDIP-C1195D810U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332691  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D810U835-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

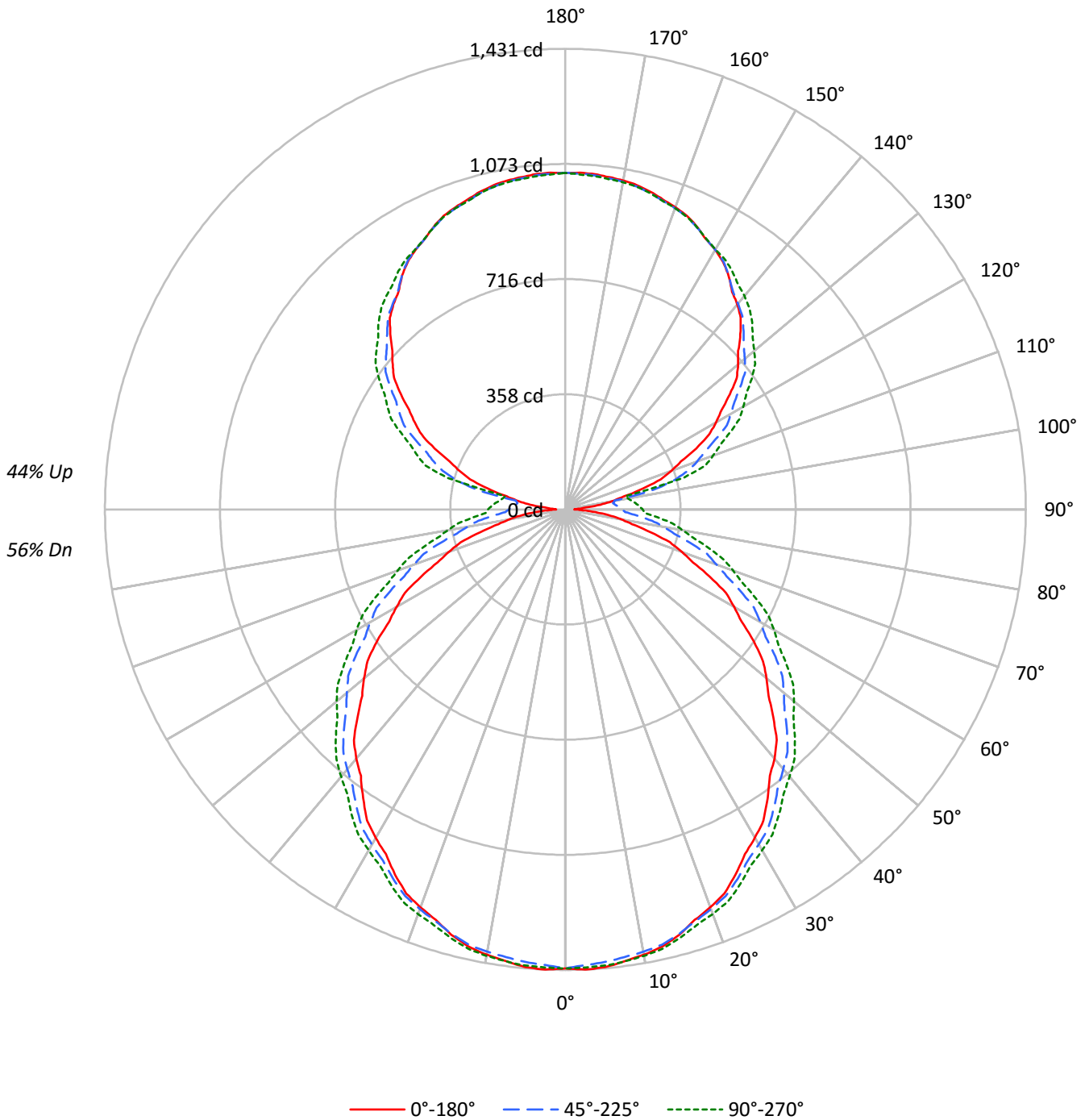
Lumens per Lamp: N/A  
Luminaire Lumens: 8097.6 lumens  
Efficiency: N/A  
Efficacy: 133.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	56				
1	98	93	89	85	91	86	83	79	74	71	69	63	61	59	52	51	49	44				
2	89	81	74	68	82	75	69	64	64	60	56	54	51	48	45	43	41	36				
3	81	70	63	56	74	66	59	53	56	51	46	48	44	40	40	37	34	30				
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	26				
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	38	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	49	37	29	24	46	35	27	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°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	1.7
10°-20°	386.9	4.8
20°-30°	585.0	7.2
30°-40°	707.8	8.7
40°-50°	748.3	9.2
50°-60°	704.2	8.7
60°-70°	584.3	7.2
70°-80°	410.4	5.1
80°-90°	235.0	2.9
90°-100°	173.5	2.1
100°-110°	330.0	4.1
110°-120°	504.5	6.2
120°-130°	592.2	7.3
130°-140°	609.0	7.5
140°-150°	557.3	6.9
150°-160°	446.7	5.5
160°-170°	288.1	3.6
170°-180°	99.3	1.2
0°-30°	1106.9	13.7
0°-40°	1814.7	22.4
0°-60°	3267.3	40.3
0°-90°	4497.0	55.5
90°-120°	1008.0	12.4
90°-150°	2766.5	34.2
90°-180°	3601.0	44.5
0°-180°	8097.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	28	100	175	224	241	19
95°	64	92	156	202	219	72
105°	250	288	349	393	381	262
115°	449	468	516	551	564	442
125°	624	628	664	695	707	557
135°	769	770	783	809	821	593
145°	885	886	886	896	904	553
155°	969	969	967	970	968	447
165°	1022	1018	1018	1024	1017	289
175°	1045	1041	1042	1048	1039	100
180°	1045	1045	1045	1045	1045	



TEST NUMBER: P332691

CATALOG NUMBER: SA4XXDIP-C1195D810U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.7	62.6	77.5	92.3	107.2	122.5	138.3	154.2	170.0	185.8	196.3
90°	27.9	44.0	60.1	76.2	92.3	108.7	125.3	142.0	158.6	175.3	186.6
92.5°	34.1	47.0	59.9	72.8	85.6	100.4	117.1	133.7	150.3	167.0	178.0
95°	63.8	69.6	75.4	81.2	87.0	97.2	112.0	126.7	141.4	156.1	166.7
97.5°	110.2	123.9	137.7	151.5	165.2	169.6	164.6	159.6	154.6	149.7	159.1
100°	145.8	158.1	170.5	182.9	195.2	196.3	186.2	176.0	165.9	155.8	162.4
102.5°	187.1	197.5	207.8	218.2	228.6	239.0	249.4	259.9	270.3	280.7	258.2
105°	249.7	257.9	266.0	274.1	282.3	293.3	307.3	321.3	335.3	349.3	359.8
107.5°	310.5	316.9	323.2	329.6	335.9	345.9	359.5	373.1	386.7	400.3	409.8
110°	350.6	356.0	361.5	367.0	372.5	382.0	395.4	408.9	422.4	435.8	444.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	389.3	394.6	400.0	405.3	410.7	419.5	431.8	444.2	456.5	468.9	476.7
115°	449.0	452.7	456.4	460.1	463.9	471.3	482.5	493.7	504.9	516.0	524.2
117.5°	504.2	506.8	509.4	512.0	514.6	521.4	532.4	543.3	554.3	565.3	572.6
120°	540.5	542.2	544.0	545.7	547.5	553.4	563.5	573.7	583.8	593.9	601.3
122.5°	575.5	576.1	576.7	577.4	578.0	583.3	593.3	603.2	613.2	623.2	630.5
125°	624.1	624.4	624.8	625.1	625.4	629.9	638.4	646.9	655.4	664.0	671.2
127.5°	671.3	671.1	670.9	670.8	670.6	674.3	681.9	689.5	697.1	704.7	711.0
130°	700.7	700.5	700.3	700.1	699.9	703.0	709.2	715.4	721.6	727.8	734.3
132.5°	728.8	728.8	728.7	728.7	728.7	731.2	736.4	741.6	746.8	752.0	758.3
135°	769.4	769.3	769.1	768.9	768.8	770.3	773.4	776.6	779.8	783.0	789.0
137.5°	806.8	806.5	806.3	806.0	805.7	806.5	808.5	810.5	812.4	814.4	820.0
140°	831.2	831.2	831.2	831.2	831.2	831.5	832.2	832.9	833.6	834.3	839.5
142.5°	851.8	852.4	852.9	853.5	854.0	854.3	854.3	854.3	854.3	854.3	858.7
145°	885.1	885.3	885.5	885.6	885.8	885.9	885.9	885.9	885.9	885.9	888.2
147.5°	911.9	912.5	913.1	913.7	914.3	914.6	914.4	914.2	914.0	913.9	914.3
150°	931.3	931.6	931.9	932.3	932.6	932.7	932.5	932.4	932.2	932.0	932.0
152.5°	946.3	946.7	947.2	947.7	948.2	948.3	948.0	947.7	947.3	947.0	947.3
155°	968.8	968.9	969.1	969.3	969.5	969.3	968.8	968.2	967.7	967.2	967.9
157.5°	988.0	987.9	987.8	987.7	987.6	987.2	986.6	986.1	985.5	984.9	985.8
160°	999.3	998.7	998.2	997.7	997.2	996.8	996.7	996.5	996.3	996.1	997.2
162.5°	1009.3	1008.6	1007.9	1007.3	1006.6	1006.2	1006.0	1005.9	1005.7	1005.5	1006.6
165°	1021.9	1021.1	1020.2	1019.3	1018.5	1018.0	1018.0	1018.0	1018.0	1018.0	1019.4
167.5°	1031.9	1031.0	1030.1	1029.2	1028.3	1027.8	1027.7	1027.6	1027.5	1027.4	1028.9
170°	1037.6	1036.5	1035.5	1034.4	1033.4	1033.0	1033.1	1033.3	1033.5	1033.7	1035.0
172.5°	1041.3	1040.3	1039.2	1038.2	1037.2	1036.7	1036.9	1037.1	1037.2	1037.4	1038.8
175°	1045.4	1044.3	1043.3	1042.3	1041.2	1040.8	1041.0	1041.1	1041.3	1041.5	1043.0
177.5°	1047.3	1046.3	1045.3	1044.3	1043.4	1043.0	1043.3	1043.6	1043.9	1044.1	1045.2
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	206.8	217.3	227.8	234.6	237.8	241.0	244.2	247.4
90°	198.0	209.3	220.6	227.9	231.1	234.3	237.4	240.6
92.5°	189.1	200.1	211.2	218.2	221.1	224.0	226.9	229.8
95°	177.4	188.0	198.6	205.6	209.0	212.3	215.7	219.1
97.5°	168.5	177.9	187.3	193.6	196.8	200.0	203.3	206.5
100°	169.0	175.6	182.3	186.9	189.6	192.2	194.9	197.5
102.5°	235.6	213.0	190.5	180.6	183.4	186.2	189.0	191.8
105°	370.2	380.6	391.1	394.6	391.2	387.8	384.3	380.9
107.5°	419.3	428.8	438.3	444.6	447.8	451.0	454.3	457.5
110°	452.9	461.4	469.9	475.8	479.2	482.5	485.9	489.2





TEST NUMBER: P332691

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	484.5	492.3	500.1	505.7	509.2	512.7	516.2	519.7
115°	532.3	540.5	548.7	554.0	556.5	558.9	561.4	563.9
117.5°	579.9	587.2	594.5	599.5	602.3	605.1	607.8	610.6
120°	608.8	616.2	623.7	628.6	631.1	633.6	636.1	638.6
122.5°	637.8	645.1	652.4	657.1	659.3	661.6	663.8	666.0
125°	678.5	685.8	693.0	697.8	700.1	702.4	704.7	707.0
127.5°	717.3	723.6	729.9	734.2	736.4	738.7	741.0	743.2
130°	740.9	747.4	754.0	758.3	760.5	762.6	764.7	766.9
132.5°	764.6	770.9	777.2	781.3	783.3	785.3	787.3	789.2
135°	795.0	801.0	807.1	811.3	813.8	816.3	818.8	821.2
137.5°	825.5	831.1	836.7	840.3	841.9	843.6	845.3	847.0
140°	844.6	849.7	854.9	858.4	860.4	862.3	864.3	866.2
142.5°	863.2	867.6	872.0	875.0	876.5	878.0	879.6	881.1
145°	890.5	892.8	895.1	897.1	898.9	900.7	902.4	904.2
147.5°	914.7	915.1	915.6	916.4	917.7	919.1	920.4	921.7
150°	932.0	932.0	932.0	932.1	932.3	932.4	932.6	932.8
152.5°	947.6	947.9	948.1	948.2	948.1	948.0	947.9	947.8
155°	968.6	969.3	970.0	970.1	969.5	969.0	968.5	968.0
157.5°	986.7	987.6	988.5	988.5	987.6	986.7	985.8	984.9
160°	998.2	999.3	1000.3	1000.3	999.3	998.2	997.2	996.1
162.5°	1007.6	1008.6	1009.7	1009.6	1008.4	1007.2	1006.1	1004.9
165°	1020.8	1022.2	1023.6	1023.5	1021.9	1020.4	1018.8	1017.2
167.5°	1030.5	1032.0	1033.5	1033.4	1031.7	1029.9	1028.2	1026.5
170°	1036.4	1037.8	1039.2	1039.0	1037.3	1035.6	1033.8	1032.1
172.5°	1040.2	1041.6	1043.0	1042.7	1040.9	1039.0	1037.1	1035.2
175°	1044.6	1046.2	1047.7	1047.5	1045.4	1043.3	1041.2	1039.1
177.5°	1046.4	1047.5	1048.6	1048.3	1046.6	1045.0	1043.3	1041.6
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4

(END OF REPORT)