

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: P332941

Luminaire Tested: **SA4XXRDIP-C795D810U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332941
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D810U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

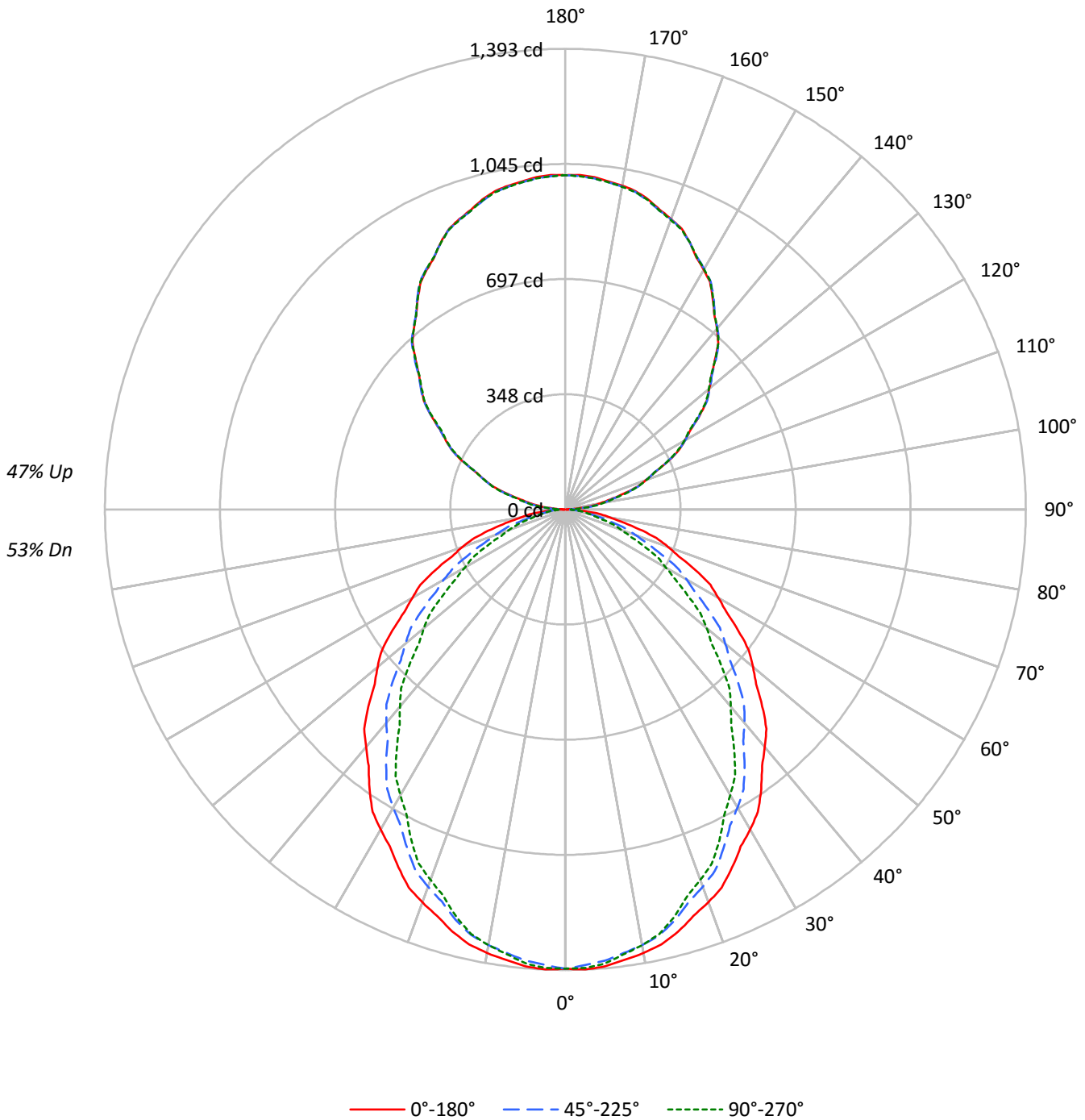
Lumens per Lamp: N/A
Luminaire Lumens: 6017.1 lumens
Efficiency: N/A
Efficacy: 131.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	99	95	91	87	91	88	85	82	75	73	71	64	62	60	53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	37	34	32	29
5	69	58	50	44	64	54	47	42	47	41	37	40	36	32	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	22	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11215	11215	11215
5°	11240	11102	11171
10°	11170	10969	10969
15°	11041	10739	10659
20°	10865	10436	10244
25°	10640	10081	9825
30°	10421	9707	9300
35°	10178	9319	8774
40°	9887	8878	8205
45°	9618	8440	7626
50°	9311	7935	7013
55°	8983	7410	6348
60°	8622	6835	5667
65°	8290	6117	4999
70°	7808	5323	4244
75°	7199	4414	3450
80°	6281	3361	3166
85°	5317	3057	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	2.2
10°-20°	363.9	6.0
20°-30°	525.5	8.7
30°-40°	595.6	9.9
40°-50°	575.2	9.6
50°-60°	478.3	7.9
60°-70°	330.3	5.5
70°-80°	167.4	2.8
80°-90°	46.0	0.8
90°-100°	66.7	1.1
100°-110°	197.5	3.3
110°-120°	335.2	5.6
120°-130°	442.0	7.3
130°-140°	496.4	8.3
140°-150°	487.8	8.1
150°-160°	410.3	6.8
160°-170°	273.0	4.5
170°-180°	95.6	1.6
0°-30°	1019.8	16.9
0°-40°	1615.5	26.8
0°-60°	2668.9	44.4
0°-90°	3212.5	53.4
90°-120°	599.4	10.0
90°-150°	2025.7	33.7
90°-180°	2805.0	46.6
0°-180°	6017.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1387	1382	1370	1380	1378	132
15°	1321	1311	1285	1282	1275	372
25°	1194	1174	1132	1114	1103	550
35°	1033	998	946	910	890	645
45°	842	802	739	689	668	649
55°	638	594	526	473	451	571
65°	434	387	320	276	262	428
75°	231	191	142	118	111	244
85°	57	37	33	31	31	65
90°	2	11	17	22	24	6
95°	47	54	59	62	62	52
105°	182	183	186	188	191	193
115°	341	341	339	338	338	336
125°	496	496	496	494	492	442
135°	640	645	645	643	641	495
145°	778	781	782	781	779	487
155°	891	891	890	893	890	410
165°	970	968	966	971	968	273
175°	1009	1006	1005	1010	1005	96
180°	1011	1011	1011	1011	1011	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1392.6	1391.8	1391.0	1390.3	1389.5	1388.1	1386.0	1384.0	1381.9	1379.8	1381.9
5°	1387.0	1386.1	1385.1	1384.2	1383.2	1381.4	1378.5	1375.7	1372.8	1370.0	1372.4
7.5°	1374.5	1373.5	1372.5	1371.5	1370.5	1368.2	1364.5	1360.8	1357.1	1353.4	1354.9
10°	1362.6	1361.4	1360.2	1359.0	1357.8	1355.1	1350.9	1346.6	1342.4	1338.1	1339.0
12.5°	1347.2	1345.9	1344.5	1343.1	1341.8	1338.6	1333.6	1328.5	1323.5	1318.5	1319.1
15°	1321.1	1319.0	1316.8	1314.7	1312.6	1308.6	1302.6	1296.7	1290.8	1284.9	1284.4
17.5°	1289.4	1286.3	1283.2	1280.2	1277.1	1272.0	1264.9	1257.8	1250.7	1243.6	1242.3
20°	1264.7	1261.6	1258.6	1255.5	1252.4	1246.9	1238.8	1230.8	1222.7	1214.7	1212.8
22.5°	1237.5	1234.0	1230.6	1227.1	1223.7	1217.6	1209.0	1200.4	1191.8	1183.2	1180.4
25°	1194.5	1190.2	1186.0	1181.7	1177.5	1170.5	1160.8	1151.1	1141.4	1131.7	1127.7
27.5°	1149.4	1144.1	1138.7	1133.4	1128.0	1120.2	1109.8	1099.5	1089.1	1078.8	1073.8
30°	1117.9	1112.0	1106.1	1100.2	1094.3	1085.8	1074.7	1063.6	1052.4	1041.3	1035.4
32.5°	1084.7	1078.1	1071.4	1064.7	1058.1	1049.0	1037.5	1026.0	1014.5	1003.0	996.2
35°	1032.8	1025.3	1017.7	1010.1	1002.6	992.9	981.1	969.2	957.4	945.6	937.6
37.5°	977.3	969.5	961.7	953.9	946.1	935.7	922.6	909.5	896.4	883.3	874.3
40°	938.2	930.4	922.6	914.8	907.0	896.3	882.8	869.4	855.9	842.4	832.5
42.5°	900.7	892.5	884.4	876.2	868.0	856.9	842.9	828.8	814.8	800.7	790.6
45°	842.4	833.7	824.9	816.2	807.4	796.0	781.8	767.6	753.4	739.3	727.7
47.5°	782.2	773.2	764.2	755.1	746.1	734.2	719.5	704.7	690.0	675.2	663.2
50°	741.4	732.2	722.9	713.7	704.5	692.3	677.2	662.1	646.9	631.8	620.0
52.5°	699.7	690.7	681.6	672.6	663.6	651.3	635.8	620.3	604.8	589.3	577.3
55°	638.2	628.7	619.3	609.8	600.4	588.0	572.6	557.2	541.9	526.5	514.2
57.5°	577.4	567.5	557.7	547.9	538.0	525.5	510.4	495.3	480.2	465.0	452.6
60°	534.0	524.5	515.1	505.6	496.1	483.9	468.7	453.6	438.5	423.3	411.0
62.5°	494.8	485.0	475.2	465.3	455.5	442.8	427.3	411.8	396.3	380.8	369.4
65°	434.0	423.8	413.6	403.5	393.3	380.7	365.5	350.4	335.3	320.2	310.0
67.5°	370.8	361.1	351.3	341.6	331.8	320.0	305.9	291.9	277.8	263.8	255.0
70°	330.8	320.9	310.9	301.0	291.1	279.4	265.9	252.4	239.0	225.5	217.7
72.5°	288.3	279.3	270.3	261.3	252.3	241.5	228.8	216.0	203.3	190.6	183.9
75°	230.8	222.1	213.3	204.6	195.8	185.9	174.8	163.7	152.6	141.5	136.0
77.5°	172.5	165.1	157.7	150.3	142.8	134.6	125.7	116.7	107.7	98.7	95.5
80°	135.1	128.2	121.4	114.5	107.7	100.7	93.6	86.5	79.4	72.3	71.6
82.5°	102.8	96.5	90.2	83.9	77.6	72.4	68.4	64.3	60.2	56.2	55.6
85°	57.4	52.7	48.0	43.3	38.5	35.8	35.1	34.4	33.7	33.0	32.5
87.5°	20.0	18.9	17.8	16.6	15.5	15.0	15.1	15.2	15.3	15.4	15.4
90°	2.3	4.3	6.2	8.1	10.0	11.6	13.0	14.4	15.8	17.2	18.2
92.5°	16.7	18.9	21.1	23.3	25.5	27.1	28.0	29.0	30.0	31.0	31.6
95°	46.9	48.5	50.0	51.6	53.2	54.6	55.8	57.0	58.2	59.4	59.9
97.5°	81.9	83.2	84.4	85.7	86.9	88.3	89.7	91.1	92.5	94.0	94.6
100°	109.5	110.1	110.8	111.5	112.2	113.4	114.9	116.5	118.0	119.6	120.0
102.5°	138.2	138.5	138.8	139.1	139.3	140.2	141.6	143.0	144.5	145.9	146.4
105°	182.2	182.3	182.5	182.7	182.9	183.3	184.0	184.7	185.4	186.1	186.6
107.5°	228.3	228.5	228.7	228.9	229.1	229.3	229.4	229.5	229.6	229.7	230.2
110°	259.6	259.9	260.2	260.6	260.9	261.0	260.9	260.7	260.5	260.3	260.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.1	292.1	292.2	292.3	292.4	292.2	291.9	291.6	291.3	291.0	290.9
115°	340.9	340.9	340.9	340.9	340.9	340.7	340.3	340.0	339.6	339.3	339.1
117.5°	386.8	387.0	387.1	387.2	387.4	387.3	387.1	386.8	386.6	386.4	385.8
120°	417.5	418.2	418.9	419.6	420.3	420.3	419.8	419.3	418.8	418.3	417.4
122.5°	449.4	449.6	449.9	450.2	450.5	450.5	450.3	450.0	449.8	449.5	448.9
125°	496.4	496.4	496.4	496.4	496.4	496.3	496.2	496.0	495.8	495.7	495.3
127.5°	539.1	539.6	540.2	540.7	541.2	541.3	541.0	540.8	540.5	540.2	539.9
130°	569.1	569.7	570.2	570.7	571.2	571.5	571.5	571.5	571.5	571.5	571.1
132.5°	599.8	600.2	600.6	600.9	601.3	601.4	601.3	601.2	601.0	600.9	600.5
135°	640.3	641.3	642.4	643.4	644.5	645.0	645.0	645.0	645.0	645.0	644.6
137.5°	684.4	684.9	685.3	685.8	686.3	686.7	687.0	687.3	687.5	687.8	687.4
140°	713.8	714.1	714.5	714.8	715.2	715.3	715.3	715.3	715.3	715.3	715.2
142.5°	740.7	741.0	741.4	741.7	742.1	742.2	742.0	741.9	741.7	741.6	741.6
145°	777.9	778.6	779.3	780.0	780.7	781.1	781.3	781.4	781.6	781.8	781.6
147.5°	814.8	815.6	816.4	817.3	818.1	818.5	818.3	818.2	818.0	817.9	817.8
150°	837.3	838.0	838.7	839.4	840.1	840.4	840.4	840.4	840.4	840.4	840.4
152.5°	858.6	859.0	859.4	859.8	860.2	860.5	860.6	860.8	860.9	861.1	861.5
155°	891.2	891.2	891.2	891.2	891.2	891.1	891.0	890.8	890.6	890.5	891.1
157.5°	918.8	918.4	918.1	917.8	917.5	917.3	917.3	917.3	917.2	917.2	917.7
160°	935.0	934.8	934.7	934.5	934.3	934.1	934.0	933.8	933.6	933.5	934.0
162.5°	950.0	949.6	949.1	948.7	948.2	947.9	947.7	947.6	947.4	947.2	948.2
165°	970.2	969.7	969.2	968.6	968.1	967.7	967.3	967.0	966.6	966.3	967.3
167.5°	985.7	984.9	984.2	983.5	982.8	982.4	982.4	982.5	982.5	982.5	983.6
170°	994.4	993.6	992.7	991.8	991.0	990.6	990.8	991.0	991.1	991.3	992.3
172.5°	1000.7	1000.0	999.2	998.5	997.8	997.4	997.5	997.5	997.5	997.6	998.7
175°	1009.3	1008.4	1007.5	1006.7	1005.8	1005.3	1005.1	1004.9	1004.8	1004.6	1005.8
177.5°	1012.1	1011.4	1010.7	1010.0	1009.3	1009.0	1009.0	1009.0	1009.0	1009.0	1009.9
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1384.0	1386.0	1388.1	1389.1	1388.9	1388.7	1388.5	1388.3
5°	1374.7	1377.1	1379.5	1380.4	1379.9	1379.5	1379.0	1378.5
7.5°	1356.4	1358.0	1359.5	1359.8	1359.1	1358.3	1357.6	1356.8
10°	1340.0	1340.9	1341.9	1341.9	1340.9	1340.0	1339.0	1338.1
12.5°	1319.7	1320.2	1320.8	1320.4	1319.1	1317.8	1316.4	1315.1
15°	1284.0	1283.5	1283.0	1282.0	1280.3	1278.6	1277.0	1275.3
17.5°	1241.0	1239.7	1238.3	1236.4	1233.9	1231.4	1228.9	1226.4
20°	1210.9	1209.0	1207.1	1204.7	1201.6	1198.5	1195.4	1192.4
22.5°	1177.6	1174.7	1171.9	1169.2	1166.7	1164.2	1161.7	1159.2
25°	1123.7	1119.7	1115.7	1112.5	1110.1	1107.8	1105.4	1103.0
27.5°	1068.8	1063.9	1058.9	1054.7	1051.3	1047.9	1044.5	1041.1
30°	1029.5	1023.6	1017.7	1012.8	1009.1	1005.3	1001.5	997.7
32.5°	989.3	982.5	975.6	970.4	966.8	963.2	959.6	956.0
35°	929.5	921.5	913.5	907.3	903.1	898.8	894.5	890.3
37.5°	865.3	856.3	847.3	840.7	836.5	832.2	828.0	823.7
40°	822.6	812.6	802.7	795.6	791.4	787.1	782.9	778.6
42.5°	780.5	770.4	760.3	753.0	748.5	744.1	739.7	735.2
45°	716.1	704.5	692.9	685.0	680.7	676.5	672.2	668.0
47.5°	651.2	639.2	627.2	618.8	614.2	609.5	604.8	600.1
50°	608.2	596.4	584.5	576.4	571.9	567.4	562.9	558.4
52.5°	565.3	553.3	541.2	532.9	528.2	523.5	518.9	514.2
55°	501.9	489.6	477.4	469.0	464.5	460.0	455.5	451.0
57.5°	440.1	427.6	415.1	407.2	403.8	400.4	397.0	393.6
60°	398.8	386.5	374.2	366.1	362.4	358.6	354.8	351.0
62.5°	358.1	346.8	335.4	328.2	325.2	322.2	319.1	316.1
65°	299.8	289.7	279.5	273.0	270.2	267.3	264.5	261.7
67.5°	246.3	237.6	228.8	222.9	219.8	216.6	213.5	210.4
70°	209.9	202.1	194.3	189.2	186.9	184.5	182.1	179.8
72.5°	177.3	170.6	163.9	159.5	157.4	155.2	153.0	150.8
75°	130.6	125.2	119.7	116.3	114.9	113.5	112.0	110.6
77.5°	92.4	89.2	86.0	84.2	83.8	83.4	83.0	82.5
80°	70.9	70.2	69.5	69.0	68.8	68.5	68.3	68.1
82.5°	55.1	54.6	54.1	53.7	53.5	53.2	53.0	52.8
85°	32.0	31.6	31.1	30.8	30.8	30.8	30.8	30.8
87.5°	15.4	15.4	15.4	15.6	15.8	16.1	16.3	16.6
90°	19.3	20.3	21.4	22.1	22.4	22.8	23.1	23.5
92.5°	32.2	32.8	33.5	33.9	34.1	34.3	34.5	34.7
95°	60.5	61.0	61.5	61.8	61.8	61.8	61.8	61.8
97.5°	95.2	95.8	96.5	96.8	96.8	96.8	96.8	96.8
100°	120.3	120.7	121.0	121.2	121.2	121.2	121.2	121.2
102.5°	146.9	147.3	147.8	148.1	148.3	148.4	148.6	148.7
105°	187.1	187.6	188.1	188.7	189.2	189.7	190.2	190.8
107.5°	230.7	231.1	231.6	231.9	231.8	231.8	231.8	231.7
110°	259.6	259.3	258.9	259.0	259.6	260.1	260.6	261.1



TEST NUMBER: P332941

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	290.8	290.8	290.7	290.7	290.8	290.9	291.0	291.1
115°	338.9	338.8	338.6	338.4	338.3	338.1	337.9	337.7
117.5°	385.2	384.6	384.0	383.5	383.2	382.8	382.5	382.1
120°	416.5	415.6	414.8	414.5	414.9	415.2	415.6	415.9
122.5°	448.3	447.8	447.2	446.6	445.9	445.3	444.7	444.1
125°	495.0	494.6	494.3	493.9	493.6	493.2	492.9	492.5
127.5°	539.5	539.2	538.8	538.5	538.2	538.0	537.7	537.4
130°	570.8	570.4	570.1	569.6	568.9	568.2	567.5	566.8
132.5°	600.2	599.8	599.5	599.2	598.9	598.6	598.3	598.1
135°	644.3	643.9	643.6	643.1	642.6	642.1	641.6	641.1
137.5°	686.9	686.5	686.0	685.8	685.9	686.0	686.1	686.3
140°	715.0	714.8	714.6	714.5	714.3	714.1	713.9	713.8
142.5°	741.5	741.5	741.5	741.4	741.4	741.4	741.3	741.3
145°	781.4	781.3	781.1	780.7	780.2	779.7	779.2	778.7
147.5°	817.6	817.5	817.3	817.2	817.0	816.8	816.7	816.5
150°	840.4	840.4	840.4	840.3	840.2	840.0	839.8	839.6
152.5°	861.9	862.3	862.7	862.7	862.3	861.8	861.4	860.9
155°	891.8	892.5	893.2	893.2	892.5	891.8	891.1	890.5
157.5°	918.2	918.8	919.3	919.2	918.7	918.1	917.5	916.9
160°	934.5	935.0	935.5	935.4	934.5	933.6	932.8	931.9
162.5°	949.1	950.0	951.0	951.0	950.1	949.3	948.4	947.5
165°	968.4	969.4	970.5	970.6	969.9	969.2	968.5	967.9
167.5°	984.6	985.7	986.7	986.7	985.6	984.5	983.5	982.4
170°	993.4	994.4	995.5	995.4	994.2	993.0	991.7	990.5
172.5°	999.9	1001.1	1002.3	1002.3	1001.1	999.8	998.6	997.4
175°	1007.0	1008.2	1009.5	1009.5	1008.2	1007.0	1005.8	1004.6
177.5°	1010.9	1011.9	1012.9	1012.8	1011.7	1010.6	1009.5	1008.3
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8

(END OF REPORT)