

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: P332953-927

Luminaire Tested: **SA4XXRDIP-C795D1205U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332953-927
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-C795D1205U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5847.7 lumens
Efficiency: N/A
Efficacy: 102.8 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

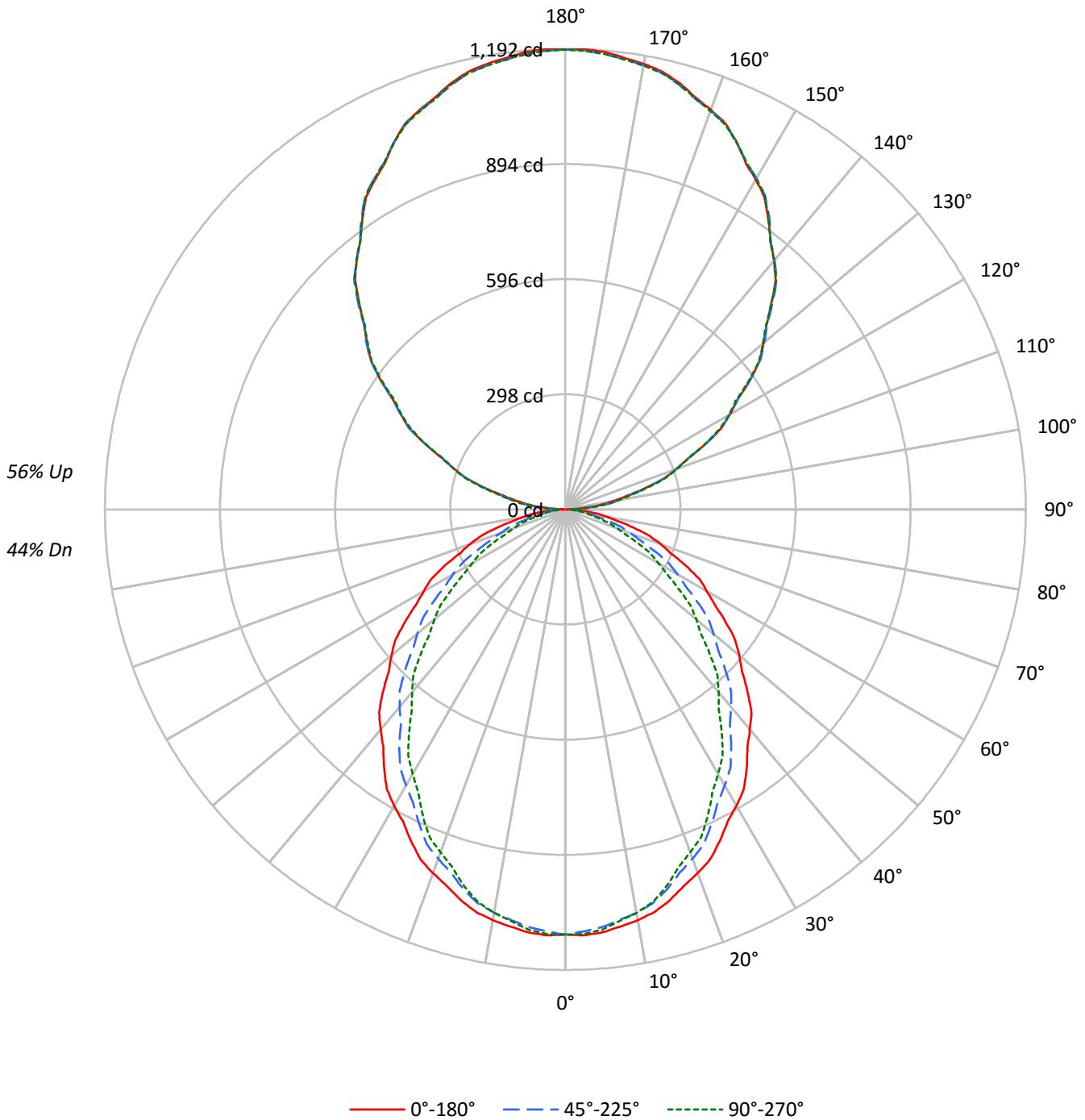
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37				
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36	31				
3	80	71	64	58	73	66	59	54	55	50	46	45	41	39	35	33	31	27				
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23				
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20				
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18				
7	58	46	38	32	53	42	35	30	36	30	26	30	26	23	24	21	19	16				
8	54	41	34	29	49	38	32	27	33	27	23	27	23	20	22	19	17	14				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13				
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8884	8884	8884
5°	8904	8795	8849
10°	8848	8689	8689
15°	8747	8507	8444
20°	8607	8267	8115
25°	8429	7986	7783
30°	8255	7690	7368
35°	8064	7383	6951
40°	7832	7032	6500
45°	7618	6687	6042
50°	7376	6286	5556
55°	7116	5871	5029
60°	6830	5414	4490
65°	6567	4846	3960
70°	6187	4216	3361
75°	5702	3497	2732
80°	4974	2664	2506
85°	4215	2418	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	1.8
10°-20°	288.3	4.9
20°-30°	416.3	7.1
30°-40°	471.8	8.1
40°-50°	455.6	7.8
50°-60°	378.9	6.5
60°-70°	261.6	4.5
70°-80°	132.6	2.3
80°-90°	37.6	0.6
90°-100°	78.5	1.3
100°-110°	232.5	4.0
110°-120°	394.6	6.7
120°-130°	520.4	8.9
130°-140°	584.4	10.0
140°-150°	574.3	9.8
150°-160°	483.0	8.3
160°-170°	321.4	5.5
170°-180°	112.5	1.9
0°-30°	807.9	13.8
0°-40°	1279.7	21.9
0°-60°	2114.3	36.2
0°-90°	2546.1	43.5
90°-120°	705.6	12.1
90°-150°	2384.7	40.8
90°-180°	3302.0	56.5
0°-180°	5847.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1099	1095	1085	1093	1092	104
15°	1047	1038	1018	1016	1010	295
25°	946	930	896	883	874	436
35°	818	790	749	721	705	511
45°	667	635	586	546	529	514
55°	506	471	417	375	357	452
65°	344	307	254	219	207	339
75°	183	151	112	93	88	193
85°	46	29	26	24	24	51
90°	3	13	20	26	28	6
95°	55	63	70	73	73	61
105°	214	216	219	222	225	228
115°	401	401	399	398	398	396
125°	584	584	584	582	580	521
135°	754	759	759	757	755	583
145°	916	919	920	919	917	573
155°	1049	1049	1048	1052	1048	483
165°	1142	1139	1138	1143	1139	322
175°	1188	1184	1183	1188	1183	113
180°	1190	1190	1190	1190	1190	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1103.2	1102.6	1101.9	1101.4	1100.7	1099.6	1098.0	1096.4	1094.7	1093.1	1094.7
5°	1098.8	1098.0	1097.3	1096.5	1095.7	1094.3	1092.0	1089.8	1087.5	1085.3	1087.2
7.5°	1088.9	1088.1	1087.3	1086.5	1085.7	1083.9	1080.9	1078.0	1075.1	1072.1	1073.3
10°	1079.4	1078.5	1077.5	1076.6	1075.6	1073.5	1070.2	1066.8	1063.4	1060.0	1060.7
12.5°	1067.2	1066.2	1065.1	1064.0	1063.0	1060.4	1056.5	1052.4	1048.5	1044.5	1045.0
15°	1046.6	1044.9	1043.1	1041.5	1039.8	1036.6	1031.9	1027.2	1022.5	1017.9	1017.5
17.5°	1021.4	1019.0	1016.5	1014.2	1011.7	1007.7	1002.0	996.4	990.8	985.2	984.1
20°	1001.9	999.4	997.0	994.6	992.1	987.8	981.4	975.0	968.6	962.3	960.8
22.5°	980.3	977.6	974.9	972.1	969.4	964.6	957.7	950.9	944.1	937.3	935.1
25°	946.3	942.9	939.5	936.1	932.8	927.2	919.6	911.9	904.2	896.5	893.3
27.5°	910.5	906.3	902.1	897.9	893.6	887.4	879.2	871.0	862.8	854.6	850.6
30°	885.6	880.9	876.2	871.6	866.9	860.2	851.4	842.6	833.7	824.9	820.2
32.5°	859.3	854.1	848.7	843.4	838.2	831.0	821.9	812.8	803.7	794.6	789.2
35°	818.2	812.2	806.2	800.2	794.2	786.6	777.2	767.8	758.4	749.1	742.8
37.5°	774.2	768.0	761.8	755.7	749.5	741.2	730.9	720.5	710.1	699.7	692.6
40°	743.2	737.0	730.9	724.7	718.5	710.0	699.3	688.7	678.0	667.3	659.5
42.5°	713.5	707.0	700.6	694.1	687.6	678.8	667.7	656.6	645.5	634.3	626.3
45°	667.3	660.4	653.5	646.6	639.6	630.6	619.3	608.1	596.8	585.7	576.5
47.5°	619.6	612.5	605.4	598.2	591.0	581.6	570.0	558.3	546.6	534.9	525.4
50°	587.3	580.0	572.7	565.4	558.1	548.4	536.5	524.5	512.5	500.5	491.2
52.5°	554.3	547.2	540.0	532.8	525.7	515.9	503.7	491.4	479.1	466.8	457.3
55°	505.6	498.0	490.6	483.1	475.6	465.8	453.6	441.4	429.3	417.1	407.3
57.5°	457.4	449.6	441.8	434.0	426.2	416.3	404.3	392.4	380.4	368.4	358.5
60°	423.0	415.5	408.1	400.5	393.0	383.3	371.3	359.3	347.4	335.3	325.6
62.5°	392.0	384.2	376.4	368.6	360.8	350.8	338.5	326.2	313.9	301.7	292.6
65°	343.8	335.7	327.6	319.6	311.6	301.6	289.5	277.6	265.6	253.7	245.6
67.5°	293.7	286.1	278.3	270.6	262.8	253.5	242.3	231.2	220.1	209.0	202.0
70°	262.1	254.2	246.3	238.4	230.6	221.3	210.6	199.9	189.3	178.6	172.5
72.5°	228.4	221.3	214.1	207.0	199.9	191.3	181.3	171.1	161.1	151.0	145.7
75°	182.8	175.9	169.0	162.1	155.1	147.3	138.5	129.7	120.9	112.1	107.7
77.5°	136.7	130.8	124.9	119.1	113.1	106.6	99.6	92.4	85.3	78.2	75.7
80°	107.0	101.6	96.2	90.7	85.3	79.8	74.1	68.5	62.9	57.3	56.7
82.5°	81.4	76.4	71.5	66.5	61.5	57.4	54.2	50.9	47.7	44.5	44.0
85°	45.5	41.7	38.0	34.3	30.5	28.4	27.8	27.3	26.7	26.1	25.7
87.5°	16.1	15.3	14.6	13.8	13.1	12.8	13.0	13.2	13.3	13.5	13.5
90°	2.8	5.0	7.3	9.5	11.7	13.7	15.4	17.0	18.6	20.3	21.5
92.5°	19.7	22.3	24.9	27.4	30.0	31.8	33.0	34.1	35.3	36.4	37.2
95°	55.2	57.0	58.9	60.8	62.6	64.2	65.7	67.1	68.5	69.9	70.6
97.5°	96.5	97.9	99.4	100.8	102.3	103.9	105.6	107.3	108.9	110.6	111.4
100°	128.9	129.7	130.5	131.3	132.1	133.5	135.3	137.1	138.9	140.9	141.2
102.5°	162.7	163.0	163.3	163.7	164.1	165.0	166.7	168.4	170.1	171.7	172.3
105°	214.4	214.7	214.8	215.1	215.2	215.8	216.6	217.4	218.2	219.0	219.7
107.5°	268.7	269.0	269.3	269.5	269.7	269.9	270.1	270.1	270.3	270.4	271.0
110°	305.5	305.9	306.3	306.8	307.2	307.3	307.1	306.9	306.7	306.5	306.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.8	344.0	344.0	344.1	344.2	344.0	343.6	343.3	342.9	342.5	342.5
115°	401.2	401.2	401.2	401.2	401.2	401.1	400.7	400.3	399.8	399.4	399.3
117.5°	455.4	455.6	455.7	455.9	456.1	456.0	455.7	455.4	455.1	454.9	454.2
120°	491.5	492.3	493.1	493.9	494.7	494.9	494.2	493.6	493.0	492.4	491.4
122.5°	529.0	529.3	529.7	530.0	530.4	530.4	530.0	529.8	529.5	529.2	528.5
125°	584.4	584.4	584.4	584.4	584.4	584.3	584.2	583.9	583.7	583.5	583.1
127.5°	634.7	635.3	635.9	636.5	637.2	637.3	636.9	636.6	636.3	636.0	635.6
130°	670.0	670.7	671.2	671.8	672.5	672.8	672.8	672.8	672.8	672.8	672.4
132.5°	706.1	706.5	707.0	707.4	707.9	708.1	707.9	707.7	707.6	707.4	706.9
135°	753.8	755.0	756.2	757.5	758.7	759.3	759.3	759.3	759.3	759.3	758.9
137.5°	805.6	806.3	806.8	807.4	807.9	808.4	808.7	809.1	809.4	809.7	809.2
140°	840.3	840.7	841.1	841.5	841.9	842.1	842.1	842.1	842.1	842.1	841.9
142.5°	872.0	872.4	872.7	873.1	873.6	873.7	873.5	873.4	873.2	873.1	873.0
145°	915.8	916.6	917.4	918.2	919.0	919.6	919.7	920.0	920.1	920.4	920.1
147.5°	959.2	960.2	961.2	962.1	963.1	963.5	963.4	963.2	963.1	962.9	962.7
150°	985.7	986.5	987.4	988.2	989.0	989.4	989.4	989.4	989.4	989.4	989.4
152.5°	1010.7	1011.2	1011.7	1012.2	1012.7	1013.0	1013.2	1013.4	1013.5	1013.7	1014.2
155°	1049.2	1049.2	1049.2	1049.2	1049.2	1049.1	1048.9	1048.7	1048.5	1048.3	1049.1
157.5°	1081.6	1081.2	1080.9	1080.5	1080.1	1079.9	1079.9	1079.8	1079.8	1079.7	1080.4
160°	1100.7	1100.6	1100.3	1100.1	1099.9	1099.7	1099.5	1099.3	1099.1	1098.9	1099.5
162.5°	1118.4	1117.8	1117.4	1116.8	1116.3	1115.9	1115.7	1115.6	1115.3	1115.1	1116.2
165°	1142.2	1141.5	1140.9	1140.3	1139.7	1139.2	1138.8	1138.4	1138.0	1137.6	1138.8
167.5°	1160.4	1159.5	1158.6	1157.8	1157.0	1156.5	1156.6	1156.6	1156.7	1156.7	1157.9
170°	1170.7	1169.7	1168.6	1167.6	1166.6	1166.2	1166.4	1166.6	1166.8	1167.0	1168.2
172.5°	1178.1	1177.2	1176.3	1175.4	1174.6	1174.2	1174.3	1174.3	1174.3	1174.4	1175.8
175°	1188.2	1187.2	1186.1	1185.1	1184.1	1183.4	1183.3	1183.0	1182.9	1182.6	1184.1
177.5°	1191.5	1190.6	1189.9	1189.1	1188.2	1187.8	1187.8	1187.8	1187.8	1187.8	1189.0
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1096.4	1098.0	1099.6	1100.4	1100.3	1100.1	1099.9	1099.8
5°	1089.0	1090.9	1092.8	1093.5	1093.1	1092.8	1092.4	1092.0
7.5°	1074.5	1075.8	1077.0	1077.2	1076.7	1076.0	1075.5	1074.8
10°	1061.5	1062.2	1063.0	1063.0	1062.2	1061.5	1060.7	1060.0
12.5°	1045.4	1045.8	1046.3	1046.0	1045.0	1043.9	1042.8	1041.8
15°	1017.2	1016.8	1016.4	1015.6	1014.2	1012.9	1011.6	1010.3
17.5°	983.1	982.1	981.0	979.5	977.5	975.5	973.5	971.5
20°	959.3	957.7	956.2	954.3	951.9	949.4	947.0	944.6
22.5°	932.9	930.6	928.4	926.2	924.2	922.3	920.3	918.3
25°	890.2	887.0	883.8	881.3	879.4	877.6	875.7	873.8
27.5°	846.7	842.8	838.8	835.5	832.8	830.1	827.4	824.7
30°	815.6	810.9	806.2	802.3	799.4	796.4	793.4	790.4
32.5°	783.7	778.3	772.9	768.7	765.9	763.0	760.2	757.3
35°	736.3	730.0	723.7	718.7	715.4	712.0	708.6	705.3
37.5°	685.5	678.3	671.2	666.0	662.7	659.3	655.9	652.5
40°	651.6	643.7	635.9	630.3	626.9	623.5	620.2	616.8
42.5°	618.3	610.3	602.3	596.5	592.9	589.5	586.0	582.4
45°	567.3	558.1	548.9	542.6	539.2	535.9	532.5	529.2
47.5°	515.9	506.4	496.9	490.2	486.6	482.8	479.1	475.4
50°	481.8	472.5	463.0	456.6	453.0	449.5	445.9	442.4
52.5°	447.8	438.3	428.7	422.2	418.4	414.7	411.1	407.3
55°	397.6	387.9	378.2	371.5	368.0	364.4	360.8	357.3
57.5°	348.6	338.7	328.8	322.6	319.9	317.2	314.5	311.8
60°	315.9	306.2	296.4	290.0	287.1	284.1	281.1	278.1
62.5°	283.7	274.7	265.7	260.0	257.6	255.2	252.8	250.4
65°	237.5	229.5	221.4	216.3	214.0	211.8	209.5	207.3
67.5°	195.1	188.2	181.3	176.6	174.1	171.6	169.1	166.7
70°	166.3	160.1	153.9	149.9	148.1	146.2	144.3	142.4
72.5°	140.5	135.1	129.8	126.4	124.7	122.9	121.2	119.5
75°	103.5	99.2	94.8	92.1	91.0	89.9	88.7	87.6
77.5°	73.2	70.7	68.1	66.7	66.4	66.1	65.8	65.4
80°	56.2	55.6	55.1	54.7	54.5	54.3	54.1	53.9
82.5°	43.6	43.3	42.9	42.5	42.4	42.1	42.0	41.8
85°	25.3	25.0	24.6	24.4	24.4	24.4	24.4	24.4
87.5°	13.7	13.8	13.9	14.0	14.3	14.5	14.7	15.0
90°	22.7	23.9	25.2	26.0	26.4	26.8	27.2	27.6
92.5°	37.9	38.7	39.4	39.8	40.2	40.4	40.6	40.9
95°	71.1	71.8	72.4	72.7	72.7	72.7	72.7	72.7
97.5°	112.1	112.8	113.6	113.9	113.9	113.9	113.9	113.9
100°	141.6	142.0	142.4	142.7	142.7	142.7	142.7	142.7
102.5°	172.9	173.5	174.0	174.4	174.6	174.8	174.9	175.1
105°	220.3	220.9	221.5	222.1	222.8	223.3	223.9	224.6
107.5°	271.6	272.1	272.7	273.0	272.9	272.9	272.8	272.8
110°	305.6	305.2	304.8	304.9	305.5	306.2	306.8	307.4



TEST NUMBER: P332953-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.4	342.3	342.2	342.2	342.4	342.5	342.6	342.8
115°	399.0	398.8	398.6	398.4	398.2	398.0	397.8	397.6
117.5°	453.4	452.7	452.0	451.5	451.1	450.7	450.3	449.9
120°	490.4	489.3	488.3	488.0	488.4	488.8	489.3	489.6
122.5°	527.8	527.1	526.4	525.7	525.0	524.3	523.5	522.8
125°	582.7	582.3	581.9	581.5	581.1	580.7	580.2	579.8
127.5°	635.2	634.8	634.3	634.0	633.7	633.3	633.0	632.6
130°	671.9	671.5	671.1	670.5	669.7	668.9	668.0	667.3
132.5°	706.5	706.2	705.8	705.4	705.0	704.7	704.4	704.1
135°	758.5	758.0	757.6	757.2	756.5	755.9	755.3	754.7
137.5°	808.7	808.1	807.6	807.4	807.6	807.6	807.8	807.9
140°	841.7	841.5	841.3	841.1	840.9	840.7	840.5	840.3
142.5°	873.0	872.9	872.9	872.8	872.8	872.7	872.7	872.7
145°	920.0	919.7	919.6	919.1	918.5	917.9	917.3	916.7
147.5°	962.6	962.4	962.2	962.0	961.9	961.6	961.4	961.2
150°	989.4	989.4	989.4	989.3	989.0	988.9	988.6	988.5
152.5°	1014.6	1015.2	1015.7	1015.7	1015.1	1014.5	1014.0	1013.5
155°	1050.0	1050.8	1051.5	1051.5	1050.8	1050.0	1049.1	1048.3
157.5°	1081.0	1081.6	1082.2	1082.2	1081.5	1080.8	1080.1	1079.4
160°	1100.1	1100.7	1101.4	1101.1	1100.1	1099.1	1098.1	1097.1
162.5°	1117.3	1118.4	1119.5	1119.6	1118.6	1117.5	1116.5	1115.5
165°	1140.0	1141.2	1142.5	1142.6	1141.9	1141.1	1140.2	1139.4
167.5°	1159.1	1160.4	1161.6	1161.6	1160.3	1159.0	1157.8	1156.5
170°	1169.5	1170.7	1172.0	1171.8	1170.4	1168.9	1167.5	1166.1
172.5°	1177.2	1178.5	1180.0	1180.0	1178.5	1177.0	1175.6	1174.2
175°	1185.5	1186.9	1188.4	1188.4	1186.9	1185.5	1184.1	1182.6
177.5°	1190.1	1191.3	1192.4	1192.3	1191.0	1189.7	1188.4	1187.1
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0

(END OF REPORT)