

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: P332701-935

Luminaire Tested: **SA4XXDIP-C1195D1035U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332701-935
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: SA4XXDIP-C1195D1035U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7271.5 lumens
Efficiency: N/A
Efficacy: 108.9 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

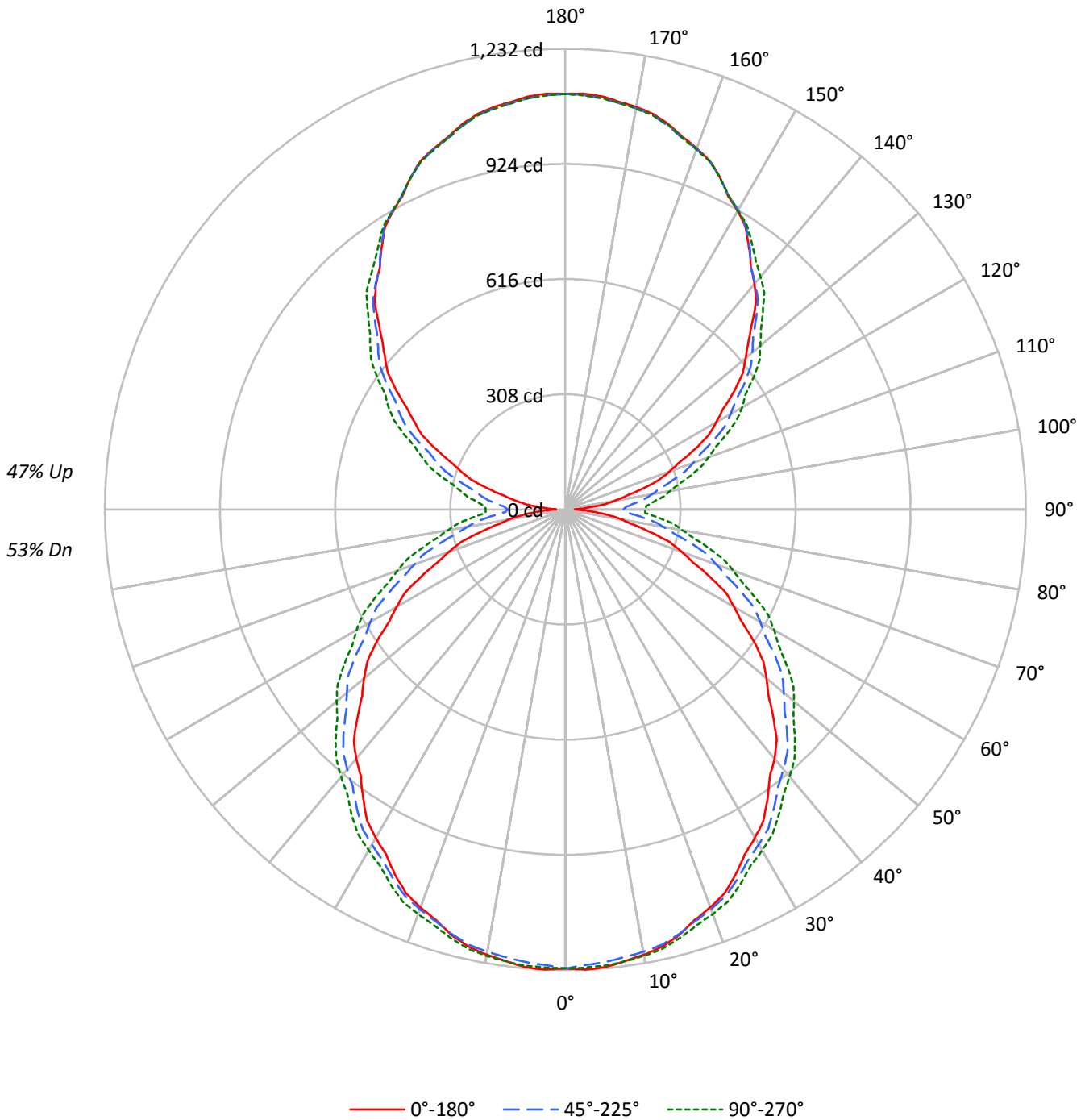
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	85	85	85	72	72	72	59	59	59	53				
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	51	49	48	43				
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	41	39	35				
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	38	36	33	29				
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24				
5	67	55	46	40	62	51	43	38	44	38	33	37	32	29	31	27	24	21				
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18				
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16				
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	19	17	14				
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13				
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9912	9912	9912
5°	9942	9687	9715
10°	9882	9528	9521
15°	9793	9345	9294
20°	9660	9143	9072
25°	9509	8916	8829
30°	9346	8690	8579
35°	9161	8459	8360
40°	9014	8239	8132
45°	8795	8036	7936
50°	8610	7802	7728
55°	8420	7582	7486
60°	8121	7301	7265
65°	7793	6999	6992
70°	7397	6655	6676
75°	6845	6278	6390
80°	6233	5915	6107
85°	5446	5591	5943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	1.6
10°-20°	333.1	4.6
20°-30°	503.7	6.9
30°-40°	609.4	8.4
40°-50°	644.3	8.9
50°-60°	606.4	8.3
60°-70°	503.1	6.9
70°-80°	353.4	4.9
80°-90°	203.1	2.8
90°-100°	191.9	2.6
100°-110°	304.9	4.2
110°-120°	427.4	5.9
120°-130°	519.1	7.1
130°-140°	560.1	7.7
140°-150°	539.2	7.4
150°-160°	451.0	6.2
160°-170°	300.1	4.1
170°-180°	105.1	1.4
0°-30°	953.1	13.1
0°-40°	1562.5	21.5
0°-60°	2813.1	38.7
0°-90°	3872.6	53.3
90°-120°	924.3	12.7
90°-150°	2542.7	35.0
90°-180°	3399.0	46.7
0°-180°	7271.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1229	1225	1215	1226	1225	117
15°	1178	1179	1176	1187	1186	332
25°	1078	1086	1090	1105	1107	496
35°	943	959	973	992	997	590
45°	786	813	839	861	869	608
55°	616	646	686	712	722	549
65°	426	470	517	550	562	422
75°	236	288	345	382	396	252
85°	73	131	192	232	248	78
90°	24	89	155	198	213	18
95°	69	123	185	223	237	72
105°	213	242	295	331	346	226
115°	383	397	438	466	476	378
125°	551	552	583	607	614	491
135°	707	712	721	741	747	547
145°	856	858	859	867	870	536
155°	980	980	979	982	979	451
165°	1066	1064	1062	1067	1064	301
175°	1110	1105	1104	1110	1104	105
180°	1111	1111	1111	1111	1111	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1232.2	1231.4	1230.7	1229.9	1229.2	1227.9	1225.9	1224.0	1222.0	1220.0	1221.8
5°	1229.1	1228.2	1227.3	1226.4	1225.5	1223.9	1221.8	1219.6	1217.5	1215.4	1217.8
7.5°	1218.7	1218.1	1217.5	1217.0	1216.5	1215.3	1213.6	1211.8	1210.0	1208.2	1211.0
10°	1209.9	1209.5	1209.3	1208.9	1208.7	1207.7	1206.2	1204.7	1203.2	1201.6	1204.4
12.5°	1197.7	1197.7	1197.7	1197.6	1197.6	1197.0	1195.9	1194.9	1193.9	1192.8	1195.3
15°	1178.3	1178.5	1178.9	1179.1	1179.5	1179.1	1178.3	1177.3	1176.4	1175.5	1178.3
17.5°	1151.6	1152.5	1153.4	1154.3	1155.2	1155.6	1155.5	1155.2	1155.0	1154.9	1157.7
20°	1132.9	1133.8	1134.7	1135.7	1136.5	1137.1	1137.5	1137.8	1138.1	1138.4	1141.4
22.5°	1112.0	1113.1	1114.3	1115.4	1116.6	1117.5	1118.0	1118.6	1119.1	1119.6	1122.7
25°	1077.9	1079.7	1081.6	1083.4	1085.2	1086.6	1087.5	1088.4	1089.3	1090.3	1093.6
27.5°	1039.9	1042.7	1045.3	1048.0	1050.7	1052.7	1054.1	1055.6	1057.0	1058.3	1061.4
30°	1014.6	1017.1	1019.5	1022.0	1024.4	1026.7	1028.8	1031.0	1033.1	1035.3	1038.6
32.5°	987.1	990.1	993.0	995.9	998.8	1001.5	1003.9	1006.3	1008.7	1011.1	1014.9
35°	943.1	946.8	950.5	954.2	957.8	961.1	964.2	967.2	970.3	973.4	977.7
37.5°	898.9	903.1	907.3	911.5	915.8	919.7	923.5	927.3	931.1	934.9	939.3
40°	870.3	874.3	878.2	882.2	886.1	890.3	894.6	898.9	903.1	907.4	912.0
42.5°	837.3	841.7	846.2	850.7	855.1	859.9	864.9	869.9	874.9	879.9	885.0
45°	786.4	792.2	798.1	803.8	809.6	815.5	821.2	827.1	832.8	838.7	843.9
47.5°	737.7	743.7	749.8	755.7	761.7	768.1	774.8	781.5	788.2	795.0	800.3
50°	702.6	709.3	716.0	722.7	729.4	736.2	742.9	749.6	756.3	763.0	769.1
52.5°	667.4	674.1	680.8	687.5	694.2	701.5	709.1	716.9	724.5	732.3	738.4
55°	616.0	622.3	628.8	635.2	641.6	649.4	658.6	667.7	676.9	686.0	692.2
57.5°	558.4	566.5	574.4	582.3	590.2	598.7	607.9	617.0	626.1	635.2	642.5
60°	521.1	529.0	536.9	544.9	552.8	561.9	572.0	582.0	592.1	602.2	609.2
62.5°	484.7	493.4	502.1	510.8	519.4	528.8	539.0	549.1	559.1	569.2	576.2
65°	426.2	436.0	445.7	455.6	465.3	475.4	485.8	496.2	506.5	516.9	524.6
67.5°	369.8	380.2	390.6	401.0	411.4	422.1	433.3	444.4	455.5	466.7	474.4
70°	331.3	341.7	352.1	362.5	372.9	383.9	395.5	407.1	418.7	430.3	438.6
72.5°	293.9	304.5	315.2	325.8	336.5	347.9	360.3	372.6	385.0	397.4	405.4
75°	236.5	247.8	259.1	270.4	281.7	293.8	306.6	319.4	332.3	345.1	353.6
77.5°	182.9	194.8	206.8	218.8	230.7	243.5	256.9	270.4	283.8	297.2	305.9
80°	149.9	162.0	174.3	186.5	198.7	211.5	225.0	238.5	251.9	265.4	274.5
82.5°	116.8	129.6	142.3	155.0	167.7	180.8	194.2	207.7	221.1	234.5	243.9
85°	72.8	85.7	98.5	111.3	124.2	137.5	151.2	165.0	178.7	192.5	201.6
87.5°	41.2	54.1	67.0	79.9	92.7	106.1	119.8	133.5	147.1	160.7	169.9
90°	24.5	38.9	53.2	67.5	81.9	96.3	111.0	125.7	140.3	155.0	165.1
92.5°	39.3	52.7	66.1	79.5	92.9	106.7	120.9	135.1	149.3	163.5	172.9
95°	69.4	81.3	93.1	104.9	116.7	129.5	143.4	157.2	171.1	184.9	193.7
97.5°	106.2	116.3	126.4	136.5	146.5	158.5	172.5	186.4	200.4	214.4	223.1
100°	135.4	144.1	152.8	161.5	170.3	181.4	195.1	208.7	222.3	236.0	244.6
102.5°	167.0	174.4	181.6	188.9	196.1	206.4	219.6	232.9	246.1	259.3	267.9
105°	212.6	219.0	225.2	231.5	237.8	247.0	259.1	271.1	283.2	295.2	303.5
107.5°	263.0	268.3	273.5	278.8	284.0	292.1	302.8	313.7	324.4	335.3	343.3
110°	296.4	301.0	305.7	310.3	315.0	322.5	333.0	343.5	354.0	364.5	371.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	331.0	334.8	338.7	342.6	346.5	353.3	363.2	373.0	382.9	392.7	399.4
115°	383.0	385.7	388.5	391.2	393.9	400.0	409.4	418.8	428.2	437.6	444.1
117.5°	433.2	435.0	436.8	438.6	440.4	445.7	454.6	463.4	472.3	481.0	486.8
120°	465.8	467.4	469.2	470.8	472.5	477.5	485.8	494.0	502.4	510.7	515.8
122.5°	500.8	501.4	501.8	502.3	502.8	507.1	515.2	523.3	531.4	539.5	545.0
125°	551.2	550.9	550.6	550.3	550.0	553.5	561.0	568.4	575.9	583.3	588.8
127.5°	597.9	598.1	598.4	598.7	598.9	601.8	607.4	612.9	618.5	624.1	629.2
130°	629.7	630.0	630.3	630.6	630.9	633.4	638.3	643.2	648.1	653.0	658.1
132.5°	663.5	663.6	663.7	663.8	663.9	665.8	669.6	673.4	677.1	680.9	685.8
135°	706.6	707.7	708.9	710.1	711.2	712.8	715.0	717.1	719.2	721.3	725.9
137.5°	755.1	755.3	755.5	755.8	756.0	756.7	758.1	759.5	760.8	762.2	766.1
140°	787.4	787.5	787.6	787.6	787.6	787.9	788.2	788.5	788.8	789.1	792.9
142.5°	815.9	816.1	816.5	816.8	817.1	817.1	816.7	816.5	816.1	815.8	819.2
145°	856.4	857.0	857.4	857.8	858.3	858.6	858.8	859.0	859.2	859.4	861.0
147.5°	897.1	897.7	898.3	898.9	899.5	899.7	899.6	899.4	899.2	899.1	899.2
150°	921.8	922.2	922.7	923.2	923.6	923.9	923.9	923.9	923.9	923.9	923.9
152.5°	944.1	944.4	944.9	945.3	945.6	945.9	946.1	946.2	946.4	946.5	947.0
155°	979.7	979.7	979.7	979.7	979.7	979.6	979.4	979.2	979.0	978.9	979.6
157.5°	1010.0	1009.6	1009.3	1008.9	1008.6	1008.4	1008.3	1008.3	1008.3	1008.2	1008.8
160°	1027.9	1027.6	1027.4	1027.3	1027.1	1026.9	1026.7	1026.5	1026.3	1026.1	1026.7
162.5°	1044.3	1043.9	1043.4	1042.8	1042.3	1042.0	1041.8	1041.6	1041.5	1041.2	1042.2
165°	1066.5	1065.9	1065.4	1064.8	1064.2	1063.8	1063.3	1063.0	1062.6	1062.2	1063.3
167.5°	1083.6	1082.7	1081.9	1081.2	1080.3	1080.0	1080.0	1080.0	1080.0	1080.1	1081.2
170°	1093.1	1092.2	1091.2	1090.3	1089.3	1088.9	1089.2	1089.3	1089.5	1089.7	1090.9
172.5°	1100.0	1099.2	1098.5	1097.6	1096.8	1096.4	1096.5	1096.5	1096.6	1096.6	1097.9
175°	1109.5	1108.5	1107.6	1106.6	1105.7	1105.1	1104.9	1104.7	1104.5	1104.3	1105.7
177.5°	1112.6	1111.8	1111.0	1110.3	1109.5	1109.1	1109.1	1109.1	1109.1	1109.1	1110.2
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1223.5	1225.2	1226.9	1227.6	1227.4	1227.1	1226.9	1226.7
5°	1220.3	1222.7	1225.1	1226.2	1225.9	1225.6	1225.3	1225.0
7.5°	1213.8	1216.5	1219.3	1220.5	1220.1	1219.9	1219.5	1219.3
10°	1207.1	1209.9	1212.6	1213.8	1213.6	1213.2	1212.9	1212.6
12.5°	1197.8	1200.3	1202.8	1204.1	1204.0	1203.9	1203.9	1203.9
15°	1181.0	1183.8	1186.5	1187.7	1187.4	1187.1	1186.8	1186.5
17.5°	1160.5	1163.3	1166.1	1167.4	1167.2	1166.9	1166.7	1166.4
20°	1144.5	1147.5	1150.6	1152.1	1152.1	1152.1	1152.1	1152.1
22.5°	1125.8	1128.9	1131.9	1133.7	1134.2	1134.6	1135.1	1135.7
25°	1097.0	1100.4	1103.7	1105.5	1105.9	1106.1	1106.5	1106.7
27.5°	1064.6	1067.7	1070.8	1072.5	1073.0	1073.3	1073.7	1074.0
30°	1042.0	1045.3	1048.7	1050.7	1051.3	1051.9	1052.5	1053.2
32.5°	1018.7	1022.6	1026.5	1028.7	1029.3	1029.9	1030.5	1031.1
35°	982.0	986.2	990.5	993.1	994.0	995.0	995.8	996.8
37.5°	943.6	947.9	952.3	954.9	955.9	956.8	957.9	958.8
40°	916.5	921.2	925.7	928.7	929.9	931.1	932.3	933.5
42.5°	890.0	895.1	900.2	903.2	904.2	905.2	906.1	907.1
45°	849.0	854.3	859.5	862.8	864.4	865.8	867.4	868.9
47.5°	805.7	811.1	816.5	820.0	821.9	823.7	825.5	827.4
50°	775.2	781.4	787.5	791.4	793.3	795.1	796.9	798.7
52.5°	744.5	750.6	756.6	760.7	762.5	764.3	766.1	768.0
55°	698.3	704.4	710.5	714.5	716.3	718.2	720.0	721.8
57.5°	649.7	657.0	664.3	668.7	670.5	672.2	673.9	675.6
60°	616.2	623.3	630.3	635.0	637.5	639.9	642.4	644.8
62.5°	583.2	590.3	597.3	602.0	604.5	606.9	609.3	611.8
65°	532.2	539.8	547.5	552.5	555.0	557.4	559.9	562.3
67.5°	482.2	489.9	497.7	502.7	505.1	507.5	509.9	512.3
70°	446.9	455.0	463.3	468.6	470.6	472.8	474.9	477.1
72.5°	413.4	421.4	429.4	434.5	437.0	439.3	441.7	444.1
75°	362.2	370.7	379.3	385.0	387.7	390.5	393.2	396.0
77.5°	314.6	323.3	331.9	337.8	340.7	343.6	346.6	349.5
80°	283.7	292.8	302.0	307.8	310.2	312.7	315.1	317.6
82.5°	253.4	262.8	272.2	278.3	280.9	283.6	286.3	289.0
85°	210.8	220.0	229.1	235.2	238.3	241.3	244.4	247.5
87.5°	179.0	188.0	197.2	203.1	205.9	208.6	211.4	214.1
90°	175.0	185.0	195.0	201.5	204.3	207.1	209.9	212.8
92.5°	182.2	191.5	200.8	206.7	209.4	212.1	214.7	217.4
95°	202.6	211.4	220.2	226.0	228.8	231.5	234.3	237.0
97.5°	231.8	240.5	249.2	254.9	257.4	260.1	262.7	265.4
100°	253.2	261.8	270.5	275.9	278.0	280.2	282.3	284.5
102.5°	276.5	285.0	293.5	299.0	301.6	304.1	306.7	309.2
105°	311.7	319.9	328.1	333.7	336.7	339.8	342.8	345.8
107.5°	351.4	359.4	367.5	372.6	374.7	376.9	379.0	381.3
110°	377.8	384.5	391.2	396.0	399.0	402.0	405.0	408.0



TEST NUMBER: P332701-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	406.1	412.8	419.6	424.2	426.7	429.3	431.9	434.5
115°	450.6	457.2	463.7	468.0	469.9	471.8	473.8	475.8
117.5°	492.5	498.2	503.9	507.8	509.9	512.0	514.0	516.0
120°	521.0	526.1	531.2	535.3	538.1	540.9	543.7	546.6
122.5°	550.4	555.9	561.4	564.8	566.4	567.9	569.4	570.9
125°	594.2	599.6	605.0	608.5	609.9	611.4	612.9	614.3
127.5°	634.3	639.5	644.5	648.0	649.8	651.5	653.3	655.0
130°	663.2	668.3	673.5	676.5	677.6	678.6	679.8	680.8
132.5°	690.6	695.5	700.3	703.6	705.1	706.6	708.2	709.7
135°	730.4	734.9	739.4	742.3	743.6	744.8	746.1	747.3
137.5°	770.1	774.0	778.0	780.8	782.5	784.1	785.7	787.4
140°	796.7	800.5	804.3	806.8	808.1	809.4	810.8	812.1
142.5°	822.7	826.1	829.6	831.9	833.1	834.4	835.6	836.9
145°	862.7	864.4	866.0	867.1	867.8	868.4	869.1	869.7
147.5°	899.3	899.4	899.5	899.9	900.7	901.5	902.2	903.0
150°	923.9	923.9	923.9	923.8	923.6	923.3	923.2	923.0
152.5°	947.4	947.9	948.4	948.4	947.9	947.4	946.8	946.3
155°	980.4	981.1	981.9	981.9	981.1	980.4	979.6	978.9
157.5°	1009.4	1010.0	1010.6	1010.5	1009.9	1009.2	1008.6	1007.9
160°	1027.3	1027.9	1028.4	1028.2	1027.3	1026.3	1025.4	1024.4
162.5°	1043.3	1044.3	1045.3	1045.4	1044.5	1043.5	1042.6	1041.6
165°	1064.5	1065.7	1066.8	1067.0	1066.3	1065.5	1064.7	1063.9
167.5°	1082.4	1083.6	1084.7	1084.7	1083.5	1082.3	1081.1	1080.0
170°	1092.0	1093.1	1094.3	1094.2	1092.9	1091.5	1090.2	1088.8
172.5°	1099.2	1100.4	1101.8	1101.7	1100.4	1099.1	1097.8	1096.4
175°	1107.0	1108.4	1109.7	1109.7	1108.4	1107.0	1105.7	1104.3
177.5°	1111.3	1112.3	1113.4	1113.4	1112.2	1110.9	1109.7	1108.5
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2

(END OF REPORT)