

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: P332043-927

Luminaire Tested: **S123DIP-S1000D1195U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332043-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6512.7 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

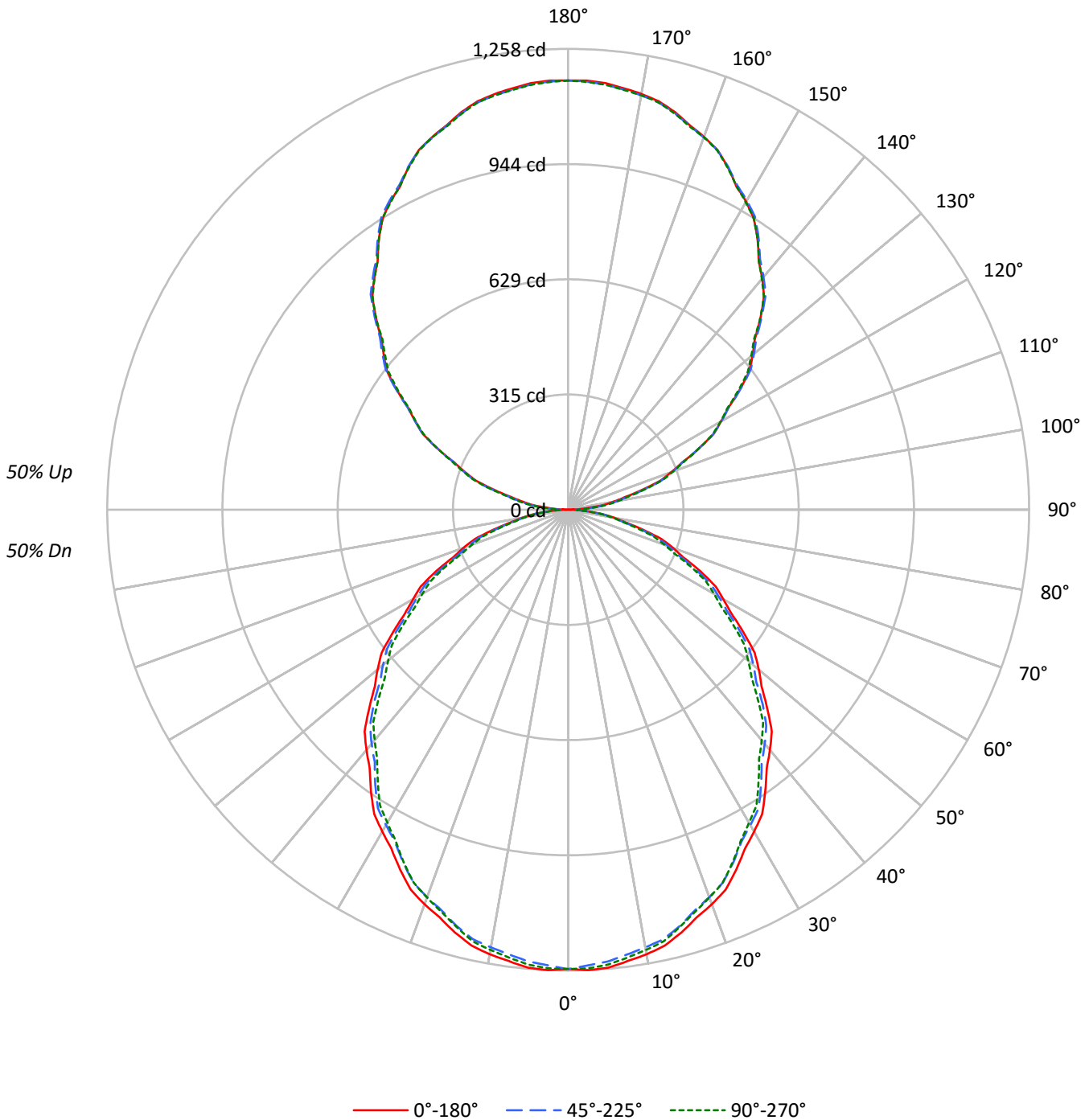
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	93	89	86	90	86	83	80	73	71	68	61	59	58	50	48	47	42
2	89	82	75	70	82	75	70	65	64	60	57	53	51	48	44	42	40	35
3	81	72	64	58	75	66	60	55	56	52	47	47	44	41	39	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	35	32	29	26
5	68	56	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	42	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	43	35	30	37	31	27	31	27	23	26	22	20	17
8	54	41	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15
9	50	38	30	25	46	35	29	24	31	25	21	26	22	19	22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13497	13497	13497
5°	13560	13374	13467
10°	13470	13258	13340
15°	13312	13108	13133
20°	13128	12893	12906
25°	12883	12638	12613
30°	12609	12356	12261
35°	12326	12056	11901
40°	12029	11726	11545
45°	11702	11423	11144
50°	11375	11050	10742
55°	10946	10663	10340
60°	10514	10213	9888
65°	10132	9722	9419
70°	9567	9161	8752
75°	8742	8430	8072
80°	7885	7550	7482
85°	6928	6657	6385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	1.8
10°-20°	333.5	5.1
20°-30°	492.7	7.6
30°-40°	575.5	8.8
40°-50°	578.6	8.9
50°-60°	508.2	7.8
60°-70°	378.6	5.8
70°-80°	215.7	3.3
80°-90°	65.4	1.0
90°-100°	76.3	1.2
100°-110°	228.5	3.5
110°-120°	388.6	6.0
120°-130°	511.1	7.8
130°-140°	574.5	8.8
140°-150°	564.7	8.7
150°-160°	475.4	7.3
160°-170°	316.5	4.9
170°-180°	110.8	1.7
0°-30°	944.3	14.5
0°-40°	1519.8	23.3
0°-60°	2606.6	40.0
0°-90°	3266.3	50.2
90°-120°	693.4	10.6
90°-150°	2343.7	36.0
90°-180°	3246.0	49.8
0°-180°	6512.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1255	1249	1238	1248	1246	119
15°	1195	1190	1176	1184	1178	337
25°	1085	1078	1064	1065	1062	499
35°	938	931	918	911	906	587
45°	769	764	750	738	732	593
55°	583	582	568	557	551	522
65°	398	392	382	373	370	392
75°	210	206	203	197	194	225
85°	56	54	54	52	52	62
90°	1	10	22	26	28	6
95°	54	61	68	72	72	61
105°	207	209	217	217	219	222
115°	391	394	392	393	392	387
125°	572	575	574	570	566	510
135°	743	748	747	744	742	572
145°	901	903	906	905	901	563
155°	1032	1032	1033	1036	1030	475
165°	1124	1121	1121	1126	1120	317
175°	1169	1165	1165	1170	1164	111
180°	1172	1172	1172	1172	1172	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1258.2	1257.5	1256.7	1255.9	1255.2	1253.7	1251.6	1249.5	1247.4	1245.3	1247.2
5°	1255.0	1253.8	1252.6	1251.4	1250.2	1248.3	1245.7	1243.0	1240.4	1237.8	1240.2
7.5°	1242.7	1241.5	1240.3	1239.1	1237.9	1236.0	1233.3	1230.5	1227.8	1225.0	1227.2
10°	1232.4	1231.2	1229.9	1228.8	1227.6	1225.4	1222.3	1219.2	1216.1	1213.0	1215.1
12.5°	1218.5	1217.6	1216.6	1215.5	1214.6	1212.6	1209.7	1206.7	1203.8	1200.9	1202.5
15°	1194.6	1193.7	1192.7	1191.8	1190.8	1188.7	1185.7	1182.6	1179.4	1176.3	1178.2
17.5°	1166.8	1165.5	1164.3	1163.1	1161.8	1159.7	1156.5	1153.4	1150.3	1147.2	1148.5
20°	1146.1	1144.7	1143.3	1141.8	1140.3	1138.0	1135.0	1131.9	1128.8	1125.6	1126.6
22.5°	1122.8	1121.4	1120.0	1118.5	1117.1	1114.8	1111.7	1108.6	1105.5	1102.3	1103.1
25°	1084.7	1083.2	1081.8	1080.4	1078.9	1076.7	1073.5	1070.4	1067.3	1064.1	1064.4
27.5°	1043.9	1042.5	1041.1	1039.7	1038.3	1035.9	1032.6	1029.3	1025.9	1022.5	1022.7
30°	1014.5	1013.4	1012.2	1011.0	1009.8	1007.5	1004.2	1000.8	997.4	994.1	994.1
32.5°	985.2	983.7	982.1	980.5	978.9	976.8	974.2	971.7	969.1	966.5	965.1
35°	938.0	936.6	935.2	933.7	932.2	930.0	926.9	923.8	920.7	917.5	916.1
37.5°	889.7	887.9	886.1	884.2	882.4	880.0	876.8	873.6	870.4	867.3	865.5
40°	856.1	854.6	853.2	851.8	850.3	848.0	844.5	841.2	837.9	834.5	832.6
42.5°	822.4	820.8	819.2	817.5	815.9	813.4	810.1	806.8	803.4	800.0	798.1
45°	768.7	767.8	766.8	765.9	764.9	762.9	759.8	756.6	753.5	750.4	747.6
47.5°	715.5	714.1	712.7	711.3	710.0	707.7	704.9	702.0	699.0	696.1	693.2
50°	679.3	678.0	676.8	675.7	674.5	672.3	669.2	666.1	663.0	659.9	657.2
52.5°	641.3	640.5	639.7	638.9	638.0	636.0	632.7	629.4	626.1	622.7	620.5
55°	583.3	583.0	582.8	582.6	582.3	580.7	577.6	574.4	571.3	568.2	565.5
57.5°	528.1	527.3	526.5	525.7	524.8	523.2	520.7	518.2	515.7	513.3	510.9
60°	488.4	488.1	487.9	487.7	487.4	485.9	483.0	480.1	477.3	474.4	472.2
62.5°	453.0	452.4	451.8	451.1	450.6	448.9	445.9	443.1	440.2	437.3	435.1
65°	397.8	396.6	395.5	394.3	393.1	391.3	388.9	386.5	384.0	381.7	379.8
67.5°	339.5	338.3	337.3	336.3	335.2	333.7	331.9	330.1	328.3	326.5	324.8
70°	304.0	302.6	301.2	299.8	298.3	296.8	295.4	294.0	292.6	291.1	289.5
72.5°	267.0	265.9	264.8	263.8	262.8	261.4	259.8	258.2	256.5	254.8	253.4
75°	210.2	209.3	208.3	207.4	206.4	205.6	204.9	204.1	203.4	202.7	201.5
77.5°	160.0	159.5	158.9	158.4	157.9	157.2	156.4	155.5	154.6	153.8	153.0
80°	127.2	126.5	125.8	125.1	124.4	123.7	123.3	122.8	122.3	121.8	121.6
82.5°	95.3	95.1	95.1	94.9	94.7	94.6	94.5	94.4	94.3	94.3	93.8
85°	56.1	55.6	55.1	54.7	54.2	53.9	53.9	53.9	53.9	53.9	53.4
87.5°	22.6	22.4	22.3	22.1	21.9	22.0	22.3	22.7	23.1	23.4	23.4
90°	1.0	2.9	5.0	7.1	9.1	11.5	14.1	16.8	19.4	22.1	22.9
92.5°	22.3	23.7	25.0	26.5	27.8	29.3	30.8	32.3	33.8	35.3	36.0
95°	54.3	55.8	57.2	58.6	60.0	61.6	63.2	64.8	66.5	68.1	68.9
97.5°	96.5	97.5	98.6	99.7	100.7	101.9	103.1	104.3	105.4	106.5	107.5
100°	125.2	126.4	127.6	128.9	130.1	131.2	132.2	133.2	134.3	135.3	135.9
102.5°	158.3	159.1	159.8	160.5	161.3	162.3	163.7	165.0	166.4	167.7	168.3
105°	207.1	207.5	207.9	208.3	208.7	209.8	211.7	213.6	215.4	217.2	217.2
107.5°	263.8	264.0	264.3	264.5	264.7	265.3	266.0	266.7	267.4	268.2	268.9
110°	299.1	299.5	299.9	300.4	300.8	301.2	301.6	302.0	302.4	302.9	303.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.0	336.2	336.4	336.7	336.9	337.1	337.2	337.2	337.3	337.4	338.4
115°	391.2	391.8	392.4	393.0	393.6	393.7	393.3	392.9	392.5	392.1	392.3
117.5°	446.8	447.2	447.6	448.0	448.4	448.4	447.8	447.3	446.8	446.2	446.2
120°	481.4	482.6	483.9	485.1	486.3	486.4	485.4	484.3	483.3	482.3	482.1
122.5°	517.5	518.3	519.3	520.1	521.1	521.3	520.7	520.1	519.7	519.1	518.6
125°	572.5	573.1	573.7	574.3	575.0	575.0	574.6	574.3	573.9	573.5	572.6
127.5°	623.3	624.6	625.9	627.2	628.5	629.0	628.5	628.0	627.6	627.2	626.1
130°	657.2	658.8	660.4	662.1	663.7	664.2	663.6	663.0	662.4	661.8	661.0
132.5°	691.0	692.7	694.3	695.9	697.6	698.2	697.8	697.3	696.8	696.4	695.4
135°	742.8	744.0	745.2	746.5	747.7	748.2	748.0	747.8	747.6	747.3	746.6
137.5°	790.7	791.6	792.7	793.7	794.7	795.5	796.1	796.5	797.1	797.6	796.8
140°	823.8	824.8	825.9	826.9	827.8	828.5	828.7	828.9	829.1	829.3	829.1
142.5°	854.0	855.0	856.0	857.1	858.1	858.7	859.1	859.5	859.8	860.2	860.0
145°	901.1	901.5	901.9	902.3	902.7	903.2	903.9	904.4	905.1	905.7	905.5
147.5°	942.3	943.1	943.8	944.5	945.3	945.9	946.5	947.1	947.6	948.2	948.2
150°	971.1	971.5	971.8	972.2	972.7	973.1	973.5	973.9	974.3	974.7	974.7
152.5°	994.6	995.2	995.8	996.3	996.9	997.3	997.5	997.8	998.1	998.3	998.6
155°	1031.8	1031.8	1031.8	1031.8	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.6
157.5°	1063.4	1063.2	1063.0	1062.7	1062.5	1062.4	1062.6	1062.8	1063.0	1063.1	1064.0
160°	1083.3	1082.9	1082.5	1082.1	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5
162.5°	1101.0	1100.4	1099.9	1099.3	1098.8	1098.5	1098.7	1098.8	1099.0	1099.2	1100.2
165°	1123.9	1123.2	1122.6	1122.0	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3
167.5°	1142.1	1141.2	1140.4	1139.6	1138.8	1138.4	1138.6	1138.8	1138.9	1139.1	1140.3
170°	1152.4	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1
172.5°	1160.5	1159.7	1158.8	1158.0	1157.2	1156.8	1156.8	1156.8	1156.8	1156.8	1158.1
175°	1168.9	1168.2	1167.3	1166.5	1165.7	1165.2	1165.2	1165.2	1165.2	1165.2	1166.5
177.5°	1172.4	1171.8	1171.2	1170.4	1169.8	1169.5	1169.5	1169.5	1169.5	1169.5	1170.4
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1249.1	1251.1	1253.0	1253.9	1253.6	1253.5	1253.2	1253.1
5°	1242.5	1244.9	1247.4	1248.3	1247.8	1247.4	1246.9	1246.4
7.5°	1229.4	1231.5	1233.7	1234.6	1234.3	1234.1	1233.7	1233.4
10°	1217.3	1219.4	1221.6	1222.4	1221.9	1221.5	1221.0	1220.5
12.5°	1204.0	1205.6	1207.2	1207.8	1207.6	1207.3	1207.0	1206.7
15°	1180.1	1182.0	1184.0	1184.2	1182.8	1181.3	1179.9	1178.5
17.5°	1149.9	1151.2	1152.5	1152.9	1152.5	1151.9	1151.4	1150.9
20°	1127.5	1128.5	1129.5	1129.6	1128.9	1128.1	1127.4	1126.7
22.5°	1103.9	1104.6	1105.4	1105.3	1104.5	1103.5	1102.6	1101.7
25°	1064.6	1064.9	1065.2	1064.9	1064.1	1063.4	1062.7	1062.0
27.5°	1022.9	1023.1	1023.3	1022.9	1022.1	1021.1	1020.3	1019.3
30°	994.1	994.1	994.1	993.2	991.6	989.9	988.2	986.5
32.5°	963.8	962.5	961.2	960.0	959.1	958.1	957.3	956.3
35°	914.7	913.2	911.8	910.5	909.3	908.1	906.9	905.7
37.5°	863.9	862.1	860.4	859.1	858.4	857.6	856.8	856.1
40°	830.7	828.8	826.9	825.4	824.4	823.5	822.5	821.6
42.5°	796.1	794.2	792.3	790.9	790.0	789.0	788.1	787.1
45°	744.7	741.8	738.9	736.9	735.7	734.5	733.3	732.1
47.5°	690.4	687.6	684.8	682.9	681.8	680.7	679.7	678.6
50°	654.6	652.0	649.3	647.3	645.9	644.4	642.9	641.5
52.5°	618.2	616.0	613.8	611.9	610.5	609.0	607.6	606.2
55°	562.9	560.3	557.7	555.7	554.5	553.3	552.2	551.0
57.5°	508.5	506.2	503.8	501.9	500.6	499.2	497.8	496.4
60°	470.1	467.9	465.8	464.1	462.9	461.7	460.5	459.3
62.5°	433.0	430.9	428.6	427.2	426.4	425.6	424.8	424.0
65°	377.9	375.9	374.0	372.7	372.0	371.3	370.5	369.8
67.5°	323.1	321.5	319.8	318.5	317.4	316.4	315.4	314.4
70°	287.7	286.1	284.4	283.0	281.8	280.6	279.4	278.1
72.5°	251.9	250.4	248.9	247.9	247.2	246.6	246.1	245.4
75°	200.3	199.1	197.9	196.9	196.2	195.5	194.8	194.1
77.5°	152.1	151.3	150.5	150.1	150.1	150.1	150.1	150.1
80°	121.4	121.1	120.9	120.7	120.7	120.7	120.7	120.7
82.5°	93.4	92.9	92.5	92.2	92.0	91.8	91.7	91.4
85°	52.9	52.4	52.0	51.7	51.7	51.7	51.7	51.7
87.5°	23.4	23.3	23.3	23.3	23.4	23.4	23.5	23.6
90°	23.8	24.6	25.3	26.0	26.4	26.8	27.2	27.6
92.5°	36.7	37.3	37.9	38.2	37.9	37.7	37.4	37.2
95°	69.7	70.6	71.4	71.8	71.8	71.8	71.8	71.8
97.5°	108.4	109.4	110.4	110.7	110.7	110.6	110.5	110.4
100°	136.5	137.1	137.8	138.2	138.7	139.1	139.5	139.9
102.5°	168.9	169.5	170.2	170.4	170.3	170.2	170.2	170.1
105°	217.2	217.2	217.2	217.5	217.9	218.2	218.6	219.0
107.5°	269.5	270.2	270.8	271.0	270.8	270.5	270.3	270.1
110°	304.4	305.3	306.1	306.3	305.9	305.5	305.1	304.7



TEST NUMBER: P332043-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	339.4	340.4	341.4	341.8	341.7	341.7	341.6	341.5
115°	392.5	392.7	392.9	392.9	392.7	392.5	392.3	392.1
117.5°	446.2	446.1	446.1	445.8	445.2	444.6	444.0	443.5
120°	481.9	481.7	481.5	481.2	480.8	480.4	480.0	479.5
122.5°	518.1	517.5	517.0	516.4	515.9	515.3	514.7	514.1
125°	571.8	571.0	570.1	569.3	568.5	567.7	566.9	566.1
127.5°	624.9	623.8	622.6	621.5	620.6	619.6	618.7	617.8
130°	660.1	659.3	658.5	657.4	655.9	654.5	653.1	651.6
132.5°	694.4	693.5	692.4	691.4	690.3	689.2	688.1	687.0
135°	745.8	744.9	744.1	743.5	743.1	742.7	742.3	741.9
137.5°	795.9	795.0	794.2	793.4	792.6	791.9	791.1	790.3
140°	828.9	828.7	828.5	827.7	826.2	824.8	823.4	822.0
142.5°	859.8	859.6	859.4	858.7	857.6	856.5	855.5	854.4
145°	905.3	905.1	904.9	904.4	903.6	902.7	901.9	901.1
147.5°	948.2	948.2	948.2	947.6	946.3	945.2	943.9	942.7
150°	974.7	974.7	974.7	974.1	972.9	971.7	970.4	969.2
152.5°	998.9	999.3	999.6	999.3	998.1	997.1	996.0	995.0
155°	1034.4	1035.1	1036.0	1035.7	1034.3	1032.8	1031.4	1029.9
157.5°	1064.8	1065.6	1066.5	1066.4	1065.2	1064.1	1063.0	1061.8
160°	1083.5	1084.6	1085.6	1085.7	1084.9	1084.0	1083.2	1082.4
162.5°	1101.2	1102.2	1103.3	1103.1	1101.8	1100.5	1099.2	1097.9
165°	1123.6	1124.7	1126.0	1125.8	1124.4	1123.0	1121.6	1120.1
167.5°	1141.6	1142.9	1144.1	1144.1	1142.9	1141.6	1140.3	1139.1
170°	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7
172.5°	1159.4	1160.6	1161.9	1161.8	1160.3	1158.9	1157.5	1156.0
175°	1167.7	1168.9	1170.1	1170.1	1168.6	1167.2	1165.8	1164.3
177.5°	1171.5	1172.4	1173.4	1173.3	1172.2	1171.0	1169.9	1168.8
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7

(END OF REPORT)