

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: P332710-930

Luminaire Tested: **SA4XXDIP-C1195D1205U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332710-930
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-C1195D1205U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7364.7 lumens
Efficiency: N/A
Efficacy: 102.7 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

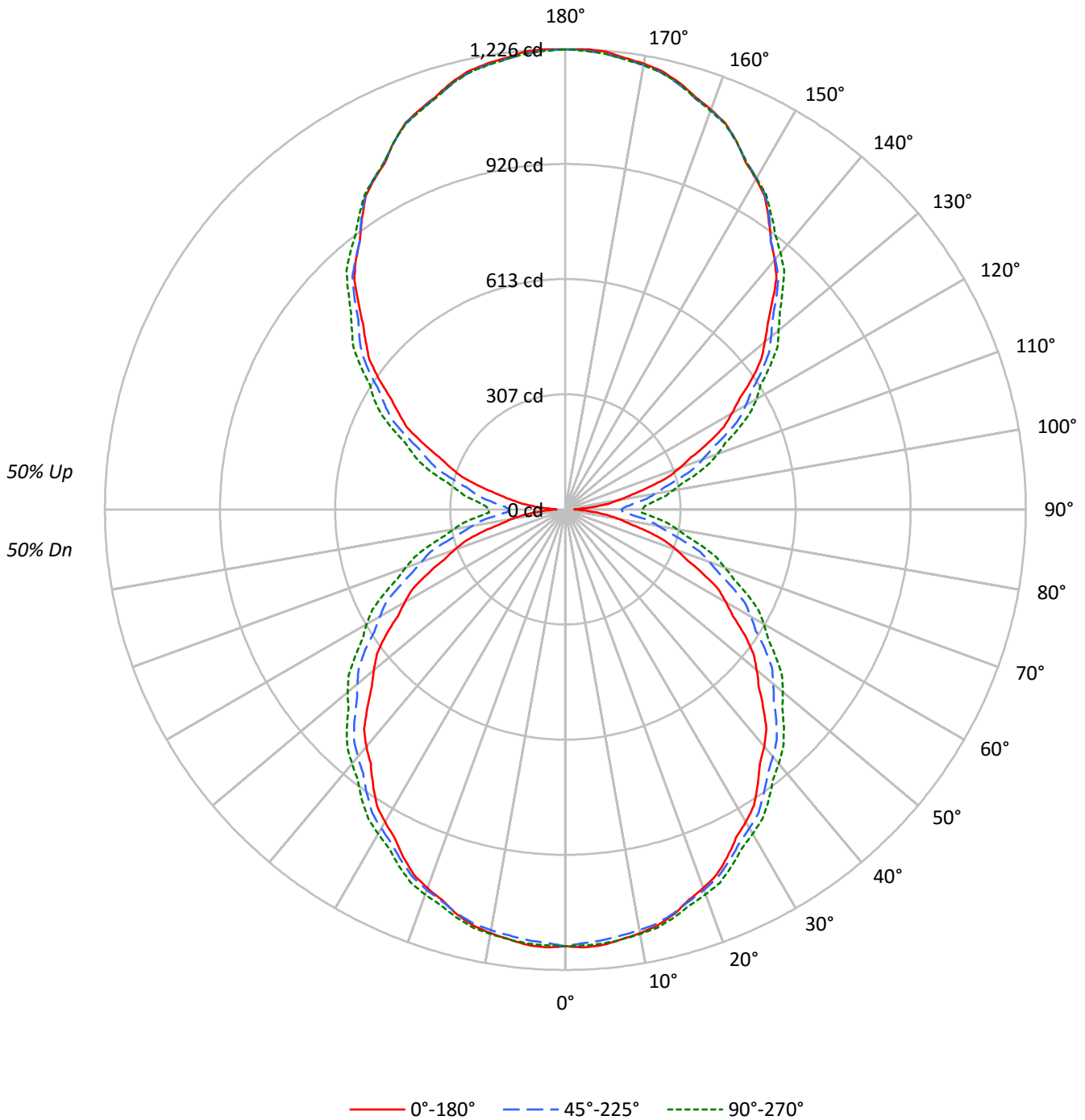
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9386	9386	9386
5°	9414	9173	9199
10°	9357	9022	9016
15°	9273	8849	8800
20°	9147	8658	8591
25°	9004	8442	8360
30°	8849	8228	8124
35°	8675	8010	7917
40°	8536	7801	7700
45°	8329	7610	7515
50°	8153	7388	7319
55°	7973	7179	7089
60°	7689	6913	6880
65°	7380	6628	6622
70°	7004	6302	6322
75°	6483	5945	6051
80°	5900	5600	5784
85°	5162	5295	5626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	1.5
10°-20°	315.4	4.3
20°-30°	477.0	6.5
30°-40°	577.1	7.8
40°-50°	610.1	8.3
50°-60°	574.2	7.8
60°-70°	476.4	6.5
70°-80°	334.6	4.5
80°-90°	192.8	2.6
90°-100°	193.1	2.6
100°-110°	322.4	4.4
110°-120°	462.0	6.3
120°-130°	567.0	7.7
130°-140°	615.1	8.4
140°-150°	593.8	8.1
150°-160°	497.1	6.8
160°-170°	330.7	4.5
170°-180°	115.8	1.6
0°-30°	902.5	12.3
0°-40°	1479.6	20.1
0°-60°	2663.8	36.2
0°-90°	3667.6	49.8
90°-120°	977.5	13.3
90°-150°	2753.4	37.4
90°-180°	3697.0	50.2
0°-180°	7364.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1163	1163	1163	1163	1163	
5°	1164	1160	1151	1161	1160	110
15°	1116	1117	1113	1124	1124	314
25°	1021	1028	1032	1046	1048	470
35°	893	908	922	939	944	559
45°	745	769	794	815	823	575
55°	583	611	650	675	684	520
65°	404	445	490	521	532	400
75°	224	272	327	362	375	238
85°	69	124	182	220	234	73
90°	24	86	150	191	206	17
95°	74	126	185	222	235	77
105°	232	261	311	346	360	247
115°	421	434	472	499	508	415
125°	607	607	637	659	666	541
135°	778	784	793	811	817	602
145°	944	946	947	954	956	591
155°	1080	1080	1079	1082	1079	497
165°	1176	1173	1171	1176	1173	331
175°	1223	1218	1217	1223	1217	116
180°	1225	1225	1225	1225	1225	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1166.8	1166.0	1165.4	1164.7	1164.0	1162.7	1160.8	1159.0	1157.2	1155.3	1156.9
5°	1163.8	1163.0	1162.1	1161.3	1160.4	1158.9	1156.9	1154.9	1152.9	1150.9	1153.2
7.5°	1154.0	1153.5	1152.9	1152.4	1151.9	1150.8	1149.2	1147.5	1145.7	1144.1	1146.7
10°	1145.7	1145.3	1145.1	1144.8	1144.5	1143.6	1142.2	1140.8	1139.3	1137.8	1140.4
12.5°	1134.2	1134.2	1134.1	1134.0	1134.0	1133.4	1132.5	1131.5	1130.5	1129.5	1131.9
15°	1115.7	1116.0	1116.3	1116.6	1116.9	1116.6	1115.7	1114.8	1113.9	1113.1	1115.7
17.5°	1090.5	1091.4	1092.2	1093.1	1093.9	1094.3	1094.1	1093.9	1093.7	1093.6	1096.3
20°	1072.8	1073.6	1074.5	1075.4	1076.2	1076.8	1077.1	1077.4	1077.7	1078.0	1080.8
22.5°	1053.0	1054.0	1055.2	1056.2	1057.4	1058.2	1058.7	1059.2	1059.7	1060.2	1063.2
25°	1020.7	1022.4	1024.2	1025.9	1027.6	1028.9	1029.8	1030.6	1031.5	1032.4	1035.6
27.5°	984.7	987.3	989.9	992.4	994.9	996.9	998.2	999.6	1000.9	1002.2	1005.1
30°	960.7	963.1	965.4	967.8	970.0	972.2	974.2	976.2	978.3	980.3	983.5
32.5°	934.7	937.5	940.3	943.1	945.8	948.4	950.6	952.9	955.1	957.4	961.1
35°	893.1	896.6	900.0	903.5	906.9	910.1	913.1	915.9	918.8	921.7	925.8
37.5°	851.2	855.2	859.2	863.2	867.2	870.9	874.5	878.1	881.7	885.3	889.4
40°	824.1	827.9	831.6	835.4	839.1	843.0	847.1	851.2	855.2	859.2	863.6
42.5°	792.9	797.0	801.3	805.5	809.8	814.2	819.0	823.7	828.4	833.2	838.0
45°	744.7	750.2	755.7	761.2	766.6	772.2	777.6	783.2	788.6	794.2	799.1
47.5°	698.5	704.3	710.0	715.6	721.3	727.3	733.7	740.0	746.4	752.8	757.8
50°	665.3	671.6	678.0	684.4	690.7	697.1	703.4	709.8	716.2	722.5	728.3
52.5°	631.9	638.3	644.7	651.0	657.4	664.2	671.5	678.8	686.1	693.4	699.2
55°	583.3	589.3	595.4	601.4	607.6	614.9	623.6	632.3	641.0	649.6	655.4
57.5°	528.8	536.4	543.9	551.4	558.9	567.0	575.6	584.2	592.9	601.4	608.4
60°	493.4	500.9	508.4	516.0	523.5	532.1	541.6	551.1	560.7	570.2	576.9
62.5°	459.0	467.2	475.5	483.7	491.9	500.8	510.4	519.9	529.5	539.0	545.6
65°	403.6	412.9	422.1	431.4	440.6	450.1	460.0	469.9	479.6	489.5	496.8
67.5°	350.2	360.0	369.9	379.7	389.6	399.7	410.3	420.8	431.3	441.9	449.2
70°	313.7	323.6	333.5	343.2	353.1	363.5	374.5	385.5	396.5	407.5	415.3
72.5°	278.3	288.4	298.5	308.5	318.6	329.5	341.2	352.9	364.5	376.3	383.8
75°	224.0	234.6	245.3	256.0	266.8	278.2	290.3	302.5	314.6	326.8	334.8
77.5°	173.2	184.5	195.8	207.2	218.5	230.6	243.3	256.0	268.7	281.4	289.7
80°	141.9	153.4	165.0	176.6	188.2	200.3	213.0	225.8	238.6	251.3	259.9
82.5°	110.6	122.7	134.8	146.8	158.8	171.2	183.9	196.7	209.4	222.1	231.0
85°	69.0	81.1	93.3	105.4	117.6	130.2	143.2	156.2	169.3	182.3	190.9
87.5°	39.1	51.4	63.7	75.9	88.1	100.8	113.8	126.9	139.8	152.9	161.5
90°	23.6	37.6	51.4	65.3	79.2	93.2	107.4	121.5	135.6	149.7	159.4
92.5°	40.0	53.2	66.2	79.2	92.3	105.7	119.3	132.9	146.5	160.1	169.1
95°	73.8	85.2	96.6	108.1	119.5	131.9	145.3	158.6	171.9	185.2	193.7
97.5°	114.6	124.3	134.1	143.8	153.5	165.2	178.6	192.1	205.5	219.1	227.4
100°	146.9	155.3	163.6	172.0	180.4	191.2	204.3	217.5	230.7	243.9	252.1
102.5°	181.8	188.7	195.7	202.6	209.5	219.4	232.1	244.9	257.7	270.5	278.7
105°	232.4	238.4	244.4	250.4	256.4	265.1	276.7	288.3	299.8	311.4	319.2
107.5°	288.0	293.0	298.1	303.0	308.0	315.7	325.9	336.1	346.4	356.7	364.4
110°	324.9	329.4	333.9	338.3	342.8	350.0	359.9	369.8	379.7	389.6	395.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.2	366.9	370.6	374.3	378.0	384.4	393.7	403.0	412.3	421.6	427.9
115°	420.8	423.4	426.0	428.6	431.2	436.9	445.8	454.6	463.4	472.3	478.4
117.5°	476.2	477.9	479.7	481.4	483.1	488.2	496.5	504.8	513.1	521.5	526.8
120°	512.3	514.0	515.8	517.5	519.2	523.9	531.7	539.4	547.1	554.9	559.6
122.5°	551.0	551.5	552.0	552.5	553.0	557.1	564.7	572.3	580.0	587.6	592.6
125°	606.7	606.4	606.1	605.8	605.5	608.9	616.0	623.0	630.0	637.0	642.0
127.5°	658.1	658.5	658.8	659.2	659.5	662.3	667.5	672.7	677.9	683.1	687.9
130°	693.5	693.8	694.1	694.5	694.9	697.3	702.0	706.6	711.2	715.8	720.6
132.5°	730.6	730.8	730.9	731.2	731.3	733.1	736.7	740.2	743.8	747.3	751.9
135°	778.4	779.7	780.9	782.2	783.4	785.1	787.1	789.1	791.2	793.2	797.4
137.5°	831.8	832.1	832.4	832.7	833.0	833.8	835.1	836.4	837.8	839.1	842.8
140°	867.4	867.6	867.6	867.8	868.0	868.1	868.5	868.7	869.0	869.3	872.9
142.5°	898.9	899.3	899.7	900.0	900.4	900.4	900.1	899.8	899.4	899.0	902.3
145°	943.8	944.4	944.9	945.4	946.0	946.4	946.6	946.8	947.0	947.2	948.8
147.5°	988.5	989.2	989.9	990.7	991.4	991.6	991.5	991.3	991.2	991.0	991.1
150°	1015.8	1016.4	1016.8	1017.4	1018.0	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
152.5°	1040.5	1041.0	1041.4	1041.9	1042.3	1042.6	1042.8	1042.9	1043.1	1043.3	1043.7
155°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.7	1079.5	1079.3	1079.0	1078.9	1079.7
157.5°	1113.1	1112.8	1112.4	1112.1	1111.7	1111.4	1111.4	1111.3	1111.3	1111.3	1111.9
160°	1132.9	1132.7	1132.5	1132.2	1132.0	1131.8	1131.6	1131.4	1131.1	1131.0	1131.6
162.5°	1151.0	1150.5	1150.0	1149.4	1148.8	1148.5	1148.3	1148.1	1147.9	1147.6	1148.8
165°	1175.5	1174.8	1174.2	1173.6	1173.0	1172.4	1172.0	1171.6	1171.2	1170.8	1172.0
167.5°	1194.3	1193.4	1192.5	1191.6	1190.7	1190.3	1190.3	1190.3	1190.4	1190.4	1191.7
170°	1204.8	1203.8	1202.7	1201.7	1200.6	1200.2	1200.4	1200.6	1200.9	1201.1	1202.3
172.5°	1212.4	1211.5	1210.6	1209.7	1208.9	1208.4	1208.5	1208.6	1208.6	1208.7	1210.1
175°	1222.9	1221.8	1220.7	1219.7	1218.6	1218.0	1217.8	1217.6	1217.4	1217.2	1218.6
177.5°	1226.3	1225.4	1224.6	1223.8	1222.9	1222.5	1222.5	1222.5	1222.5	1222.5	1223.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1158.5	1160.2	1161.8	1162.5	1162.2	1162.0	1161.8	1161.6
5°	1155.5	1157.8	1160.1	1161.1	1160.8	1160.6	1160.3	1160.0
7.5°	1149.3	1151.9	1154.5	1155.7	1155.4	1155.1	1154.8	1154.5
10°	1143.0	1145.7	1148.3	1149.4	1149.2	1148.8	1148.5	1148.3
12.5°	1134.2	1136.6	1139.0	1140.2	1140.1	1140.0	1140.0	1140.0
15°	1118.3	1121.0	1123.5	1124.7	1124.4	1124.1	1123.8	1123.5
17.5°	1098.9	1101.6	1104.2	1105.5	1105.2	1105.0	1104.7	1104.5
20°	1083.8	1086.6	1089.6	1091.0	1091.0	1091.0	1091.0	1091.0
22.5°	1066.0	1068.9	1071.8	1073.5	1074.0	1074.4	1074.9	1075.4
25°	1038.8	1042.0	1045.1	1046.8	1047.2	1047.4	1047.7	1048.0
27.5°	1008.1	1011.1	1014.0	1015.6	1016.0	1016.4	1016.7	1017.0
30°	986.7	989.9	993.0	994.9	995.5	996.1	996.6	997.3
32.5°	964.7	968.3	972.0	974.1	974.7	975.3	975.8	976.4
35°	929.8	933.8	937.9	940.4	941.3	942.2	943.0	943.9
37.5°	893.5	897.6	901.7	904.2	905.1	906.0	907.0	907.9
40°	867.9	872.3	876.6	879.4	880.5	881.7	882.8	883.9
42.5°	842.8	847.6	852.4	855.2	856.2	857.1	858.0	859.0
45°	804.0	808.9	813.8	817.0	818.5	819.9	821.3	822.8
47.5°	763.0	768.0	773.1	776.5	778.3	780.0	781.7	783.5
50°	734.1	739.9	745.7	749.4	751.2	752.9	754.6	756.4
52.5°	705.0	710.8	716.5	720.3	722.0	723.7	725.5	727.2
55°	661.2	667.0	672.8	676.5	678.2	680.0	681.8	683.5
57.5°	615.2	622.2	629.0	633.2	634.9	636.5	638.1	639.8
60°	583.5	590.2	596.8	601.3	603.6	605.9	608.3	610.6
62.5°	552.3	559.0	565.6	570.1	572.4	574.7	577.0	579.4
65°	503.9	511.2	518.4	523.2	525.5	527.8	530.2	532.5
67.5°	456.6	463.9	471.2	476.1	478.3	480.5	482.8	485.1
70°	423.1	430.9	438.7	443.7	445.6	447.7	449.7	451.8
72.5°	391.4	399.0	406.6	411.5	413.8	416.0	418.2	420.5
75°	343.0	351.1	359.1	364.5	367.1	369.7	372.3	375.0
77.5°	297.9	306.1	314.3	319.8	322.6	325.4	328.2	330.9
80°	268.6	277.3	286.0	291.5	293.8	296.1	298.4	300.8
82.5°	239.9	248.8	257.7	263.5	266.0	268.6	271.1	273.6
85°	199.6	208.3	217.0	222.7	225.7	228.5	231.5	234.3
87.5°	170.2	178.8	187.4	193.1	195.7	198.3	201.0	203.6
90°	169.0	178.7	188.3	194.5	197.3	200.0	202.8	205.5
92.5°	178.0	186.9	195.8	201.5	204.2	206.7	209.3	211.8
95°	202.1	210.6	219.0	224.5	227.1	229.8	232.4	235.0
97.5°	235.7	244.0	252.4	257.8	260.3	262.8	265.3	267.7
100°	260.3	268.6	276.8	281.9	284.0	286.0	288.0	290.0
102.5°	286.8	295.0	303.1	308.4	310.9	313.3	315.8	318.1
105°	327.1	334.9	342.8	348.2	351.1	354.1	357.0	360.0
107.5°	372.1	379.8	387.5	392.4	394.4	396.5	398.5	400.6
110°	402.1	408.3	414.6	419.1	422.1	425.0	428.0	431.0



TEST NUMBER: P332710-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	434.2	440.6	446.9	451.3	453.7	456.2	458.6	461.1
115°	484.6	490.7	496.9	500.9	502.7	504.5	506.3	508.2
117.5°	532.1	537.4	542.7	546.3	548.2	550.1	552.0	553.8
120°	564.4	569.2	573.9	577.6	580.3	583.1	585.8	588.6
122.5°	597.8	602.8	607.9	611.1	612.5	613.8	615.1	616.4
125°	647.1	652.2	657.3	660.5	661.8	663.1	664.5	665.8
127.5°	692.8	697.5	702.3	705.6	707.2	708.8	710.5	712.1
130°	725.5	730.2	735.0	737.8	738.7	739.6	740.5	741.4
132.5°	756.4	761.0	765.5	768.5	769.9	771.3	772.7	774.1
135°	801.6	805.8	810.0	812.7	813.8	814.9	816.0	817.1
137.5°	846.4	850.1	853.8	856.4	858.0	859.6	861.1	862.7
140°	876.4	880.0	883.5	885.9	887.1	888.4	889.6	890.9
142.5°	905.6	908.8	912.1	914.3	915.4	916.6	917.8	919.0
145°	950.2	951.8	953.3	954.3	954.9	955.4	955.9	956.4
147.5°	991.1	991.2	991.2	991.6	992.3	993.0	993.8	994.5
150°	1018.2	1018.2	1018.2	1018.1	1017.9	1017.7	1017.5	1017.3
152.5°	1044.2	1044.8	1045.3	1045.3	1044.7	1044.2	1043.6	1043.1
155°	1080.6	1081.4	1082.2	1082.2	1081.4	1080.6	1079.7	1078.9
157.5°	1112.6	1113.1	1113.8	1113.8	1113.0	1112.3	1111.6	1110.9
160°	1132.2	1132.9	1133.5	1133.3	1132.2	1131.1	1130.2	1129.1
162.5°	1149.9	1151.0	1152.2	1152.3	1151.2	1150.1	1149.1	1148.0
165°	1173.3	1174.5	1175.8	1176.0	1175.2	1174.4	1173.5	1172.6
167.5°	1192.9	1194.3	1195.5	1195.5	1194.2	1192.9	1191.6	1190.3
170°	1203.6	1204.8	1206.2	1206.0	1204.5	1203.1	1201.6	1200.1
172.5°	1211.5	1212.9	1214.4	1214.4	1212.8	1211.4	1209.9	1208.4
175°	1220.1	1221.6	1223.0	1223.0	1221.6	1220.1	1218.6	1217.2
177.5°	1224.8	1226.0	1227.2	1227.1	1225.7	1224.4	1223.0	1221.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7

(END OF REPORT)