

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: P331409-935

Luminaire Tested: **SA2XXDIP-C865D925U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331409-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

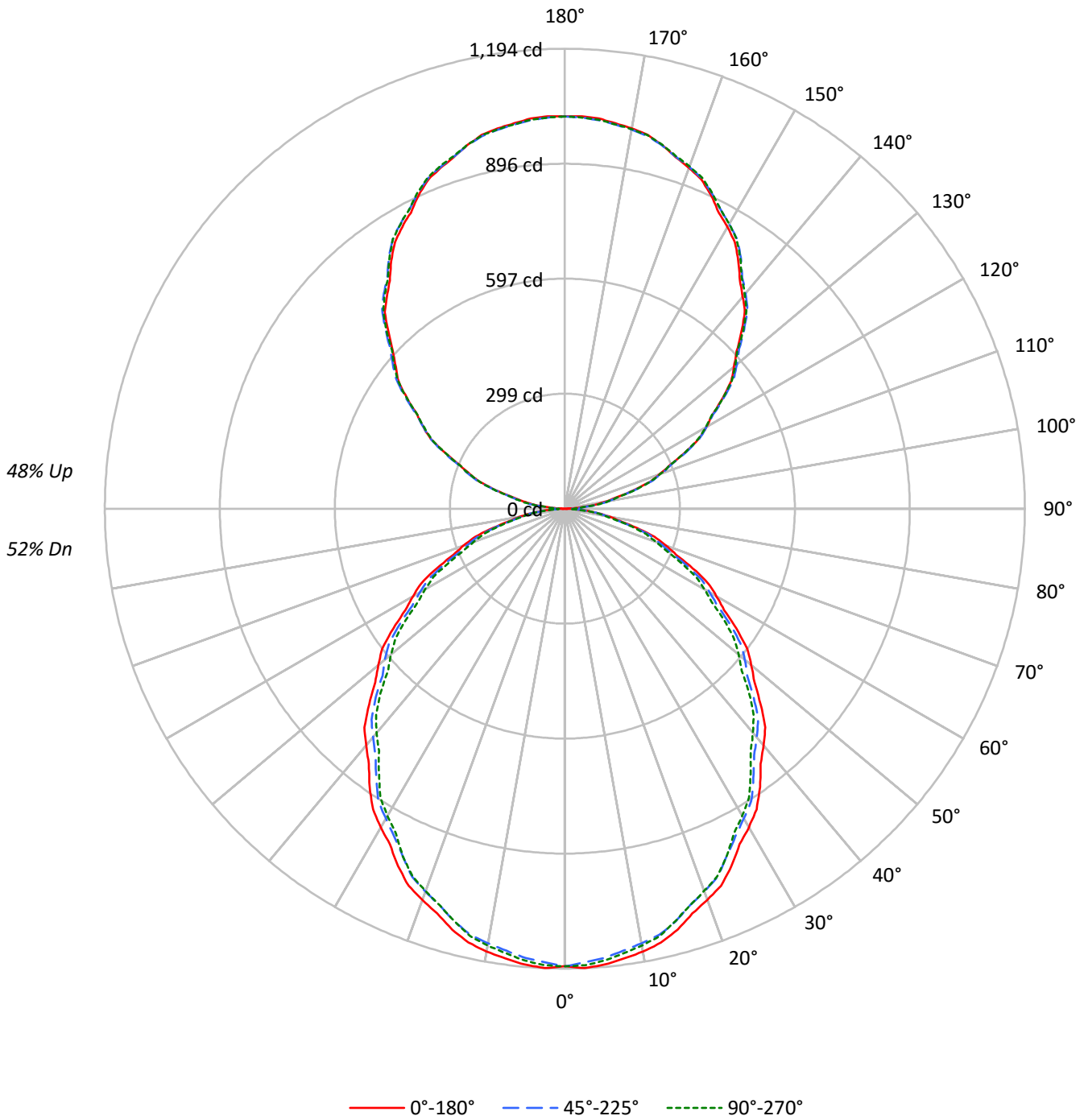
Lumens per Lamp: N/A
Luminaire Lumens: 5874.1 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 60.5
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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	86	91	87	83	80	74	71	69	62	60	59	51	50	49	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	45	43	41	36
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	31	26	47	36	29	24	31	26	22	27	22	19	22	19	17	14
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19184	19184	19184
5°	19258	18979	19091
10°	19143	18787	18882
15°	18907	18544	18524
20°	18570	18179	18158
25°	18235	17728	17728
30°	17807	17316	17167
35°	17406	16821	16575
40°	16904	16326	16012
45°	16408	15835	15445
50°	15870	15325	14780
55°	15308	14728	14184
60°	14683	14018	13504
65°	14013	13310	12699
70°	13161	12458	11863
75°	11971	11472	11185
80°	10628	10302	9772
85°	8670	8262	7410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	1.9
10°-20°	314.4	5.4
20°-30°	462.1	7.9
30°-40°	536.8	9.1
40°-50°	536.2	9.1
50°-60°	467.6	8.0
60°-70°	345.7	5.9
70°-80°	195.8	3.3
80°-90°	56.7	1.0
90°-100°	64.5	1.1
100°-110°	200.4	3.4
110°-120°	342.5	5.8
120°-130°	450.4	7.7
130°-140°	505.6	8.6
140°-150°	495.7	8.4
150°-160°	415.8	7.1
160°-170°	275.8	4.7
170°-180°	96.4	1.6
0°-30°	888.2	15.1
0°-40°	1425.0	24.3
0°-60°	2428.7	41.3
0°-90°	3027.0	51.5
90°-120°	607.4	10.3
90°-150°	2059.1	35.1
90°-180°	2847.0	48.5
0°-180°	5874.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1183	1171	1180	1178	113
15°	1131	1124	1109	1113	1108	318
25°	1024	1014	995	997	995	471
35°	883	871	853	847	841	551
45°	719	710	694	681	676	554
55°	544	537	523	510	504	486
65°	367	360	348	338	332	363
75°	192	189	184	178	179	205
85°	47	46	45	41	40	54
90°	1	12	30	28	29	5
95°	45	53	55	55	53	51
105°	185	187	189	191	191	195
115°	344	348	347	346	344	340
125°	500	507	505	503	502	447
135°	647	656	658	657	655	500
145°	785	791	796	797	794	490
155°	898	900	903	907	905	413
165°	977	976	976	982	978	275
175°	1016	1014	1012	1018	1013	97
180°	1018	1018	1018	1018	1018	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1193.7	1192.7	1191.6	1190.7	1189.6	1188.0	1185.8	1183.5	1181.3	1179.1	1181.1
5°	1188.2	1187.1	1186.2	1185.2	1184.1	1182.2	1179.5	1176.6	1173.9	1171.0	1173.1
7.5°	1177.7	1176.1	1174.6	1172.9	1171.4	1169.2	1166.3	1163.5	1160.6	1157.8	1159.9
10°	1167.6	1165.9	1164.1	1162.3	1160.5	1158.1	1155.0	1152.0	1149.0	1145.9	1148.0
12.5°	1153.9	1152.4	1150.8	1149.2	1147.6	1145.3	1142.3	1139.2	1136.2	1133.2	1134.5
15°	1131.1	1129.5	1128.0	1126.5	1125.0	1122.6	1119.3	1115.9	1112.7	1109.4	1110.3
17.5°	1101.8	1100.3	1098.8	1097.3	1095.7	1093.3	1089.9	1086.6	1083.2	1079.9	1081.1
20°	1080.8	1079.3	1077.8	1076.2	1074.7	1072.2	1068.6	1065.1	1061.5	1058.0	1058.7
22.5°	1059.8	1057.7	1055.5	1053.3	1051.3	1048.5	1045.2	1041.8	1038.5	1035.1	1035.3
25°	1023.6	1021.7	1019.6	1017.6	1015.5	1012.4	1008.1	1003.8	999.4	995.1	995.7
27.5°	982.6	980.8	978.9	977.1	975.3	972.6	969.2	965.8	962.4	959.0	958.3
30°	955.1	953.1	951.1	949.1	947.0	944.1	940.3	936.5	932.6	928.8	928.1
32.5°	925.9	924.3	922.6	921.0	919.4	916.5	912.6	908.5	904.6	900.5	899.1
35°	883.1	880.6	878.0	875.6	873.0	869.7	865.6	861.6	857.5	853.4	852.0
37.5°	834.9	832.7	830.4	828.2	826.0	822.9	818.8	814.8	810.6	806.6	804.7
40°	802.0	800.0	798.0	795.9	793.9	790.8	786.8	782.7	778.7	774.6	772.3
42.5°	770.1	768.0	765.9	764.0	761.9	758.9	754.8	750.8	746.7	742.6	740.1
45°	718.6	716.9	715.1	713.3	711.5	708.7	704.9	701.1	697.3	693.5	690.7
47.5°	667.4	665.8	664.1	662.5	660.7	657.9	653.9	650.0	646.0	642.0	639.1
50°	631.8	630.5	629.3	628.0	626.7	624.3	620.8	617.2	613.6	610.1	606.6
52.5°	597.1	595.4	593.7	592.0	590.4	587.9	584.5	581.2	577.8	574.5	571.5
55°	543.8	542.3	540.8	539.2	537.7	535.5	532.4	529.3	526.3	523.2	520.2
57.5°	490.3	489.1	487.9	486.7	485.5	483.2	479.8	476.5	473.1	469.8	466.8
60°	454.7	453.7	452.7	451.7	450.6	448.4	444.8	441.3	437.7	434.1	431.4
62.5°	420.0	418.4	416.7	415.1	413.5	411.3	408.5	405.8	403.0	400.4	397.8
65°	366.8	365.2	363.7	362.1	360.7	358.6	356.1	353.5	351.0	348.4	346.2
67.5°	312.6	311.3	310.1	308.9	307.7	306.0	303.7	301.4	299.1	296.8	295.1
70°	278.8	277.8	276.7	275.7	274.7	273.0	270.8	268.5	266.2	263.9	262.2
72.5°	244.0	243.1	242.0	241.0	240.0	238.8	237.3	235.8	234.3	232.8	231.1
75°	191.9	191.4	190.9	190.5	189.9	189.0	187.8	186.5	185.2	183.9	182.4
77.5°	145.3	144.5	143.6	142.8	141.9	141.2	140.7	140.2	139.7	139.1	138.4
80°	114.3	114.0	113.7	113.5	113.2	112.9	112.4	111.8	111.3	110.8	110.0
82.5°	85.0	85.0	84.9	84.8	84.8	84.6	84.3	84.0	83.7	83.4	82.4
85°	46.8	46.6	46.3	46.1	45.8	45.5	45.3	45.0	44.8	44.6	43.8
87.5°	16.6	16.7	16.7	16.8	16.8	17.0	17.5	17.9	18.3	18.8	18.2
90°	0.9	3.2	5.4	7.7	10.0	13.3	17.5	21.7	25.8	30.0	29.7
92.5°	15.3	17.0	18.7	20.3	22.0	23.3	24.4	25.3	26.3	27.3	27.4
95°	44.7	46.6	48.5	50.4	52.3	53.5	53.8	54.2	54.6	55.0	55.0
97.5°	81.6	83.3	85.0	86.7	88.3	89.5	90.3	91.0	91.7	92.5	92.5
100°	109.1	110.6	112.2	113.7	115.2	116.3	116.8	117.4	118.0	118.6	118.6
102.5°	138.0	139.2	140.4	141.6	142.8	143.9	144.6	145.3	146.0	146.8	146.9
105°	184.8	185.3	185.9	186.5	187.0	187.5	187.9	188.3	188.6	189.0	189.4
107.5°	231.8	232.6	233.5	234.4	235.2	235.6	235.6	235.6	235.6	235.6	235.7
110°	262.1	263.2	264.3	265.5	266.7	267.3	267.3	267.3	267.3	267.3	267.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.1	296.2	297.4	298.5	299.6	300.1	300.0	299.8	299.7	299.5	299.1
115°	343.7	344.8	345.9	347.2	348.3	348.6	348.3	347.9	347.5	347.2	347.0
117.5°	392.2	393.6	395.2	396.7	398.3	398.5	397.4	396.3	395.3	394.3	393.7
120°	424.5	426.0	427.5	429.0	430.6	430.6	429.0	427.5	426.0	424.5	424.5
122.5°	454.0	455.8	457.7	459.5	461.3	461.8	460.6	459.6	458.6	457.4	457.0
125°	500.1	501.8	503.5	505.2	507.0	507.6	507.0	506.4	505.8	505.2	504.6
127.5°	544.9	547.1	549.3	551.5	553.6	554.4	553.7	553.0	552.3	551.6	551.0
130°	573.1	575.6	578.1	580.6	583.1	584.1	583.7	583.3	583.0	582.6	582.2
132.5°	604.8	606.7	608.8	610.8	612.9	613.9	614.0	614.1	614.1	614.2	613.4
135°	647.0	649.1	651.2	653.3	655.4	656.7	657.0	657.4	657.8	658.1	658.0
137.5°	691.6	693.2	694.9	696.6	698.4	699.5	700.0	700.5	701.0	701.5	701.4
140°	718.3	720.1	721.8	723.5	725.2	726.5	727.5	728.4	729.4	730.4	730.4
142.5°	745.8	747.5	749.2	751.0	752.7	753.9	754.5	755.2	755.8	756.5	756.6
145°	785.3	786.7	788.0	789.4	790.7	791.9	793.1	794.2	795.4	796.5	796.7
147.5°	820.5	822.2	823.8	825.4	827.0	828.2	829.0	829.7	830.4	831.2	831.6
150°	844.6	845.8	846.9	848.1	849.2	850.2	850.9	851.7	852.5	853.3	853.8
152.5°	865.9	867.1	868.2	869.4	870.6	871.6	872.5	873.4	874.3	875.2	876.0
155°	897.9	898.5	899.1	899.7	900.2	900.8	901.4	901.9	902.5	903.0	904.0
157.5°	925.2	925.6	926.0	926.3	926.8	927.1	927.5	927.8	928.2	928.5	929.8
160°	941.8	942.1	942.5	942.9	943.2	943.6	943.7	943.9	944.1	944.3	945.5
162.5°	956.8	956.9	957.0	957.1	957.2	957.3	957.5	957.7	957.9	958.0	959.3
165°	977.0	976.8	976.5	976.4	976.2	976.1	976.1	976.1	976.1	976.1	977.4
167.5°	993.8	993.2	992.6	992.0	991.5	991.2	991.2	991.1	991.1	991.0	992.4
170°	1002.7	1002.1	1001.6	1001.0	1000.4	1000.1	999.9	999.7	999.4	999.3	1000.7
172.5°	1008.9	1008.3	1007.8	1007.2	1006.6	1006.3	1006.1	1005.8	1005.6	1005.5	1006.9
175°	1016.5	1015.9	1015.3	1014.8	1014.2	1013.7	1013.3	1013.0	1012.5	1012.2	1013.5
177.5°	1019.6	1019.1	1018.6	1018.2	1017.7	1017.4	1017.0	1016.8	1016.4	1016.2	1017.0
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1183.1	1185.2	1187.1	1188.0	1187.6	1187.1	1186.8	1186.4
5°	1175.1	1177.2	1179.2	1179.9	1179.5	1179.0	1178.5	1177.9
7.5°	1161.8	1163.9	1166.0	1166.7	1166.1	1165.5	1165.0	1164.4
10°	1150.0	1152.0	1154.1	1154.7	1153.9	1153.1	1152.4	1151.7
12.5°	1136.0	1137.4	1138.8	1139.3	1138.7	1138.2	1137.6	1137.0
15°	1111.4	1112.4	1113.4	1113.3	1112.1	1110.8	1109.5	1108.2
17.5°	1082.2	1083.4	1084.6	1084.5	1083.3	1082.1	1080.9	1079.7
20°	1059.5	1060.2	1061.0	1060.8	1059.9	1058.9	1057.8	1056.8
22.5°	1035.4	1035.5	1035.7	1035.5	1034.8	1034.2	1033.6	1033.0
25°	996.2	996.6	997.1	997.1	996.6	996.2	995.7	995.1
27.5°	957.5	956.7	956.0	955.0	953.7	952.5	951.3	950.1
30°	927.3	926.6	925.8	924.9	923.9	922.9	921.9	920.8
32.5°	897.8	896.4	895.0	893.8	892.9	891.8	890.8	889.8
35°	850.4	848.9	847.4	845.9	844.7	843.4	842.1	840.9
37.5°	802.9	801.0	799.1	797.5	796.3	795.1	793.9	792.6
40°	770.1	767.8	765.5	763.8	762.8	761.8	760.8	759.7
42.5°	737.6	735.1	732.7	730.7	729.3	727.9	726.4	725.0
45°	687.9	685.1	682.3	680.4	679.4	678.4	677.3	676.4
47.5°	636.2	633.3	630.3	628.1	626.6	625.2	623.7	622.2
50°	603.0	599.4	595.9	593.5	592.2	590.9	589.7	588.4
52.5°	568.5	565.6	562.7	560.3	558.7	557.0	555.3	553.6
55°	517.2	514.1	511.1	508.9	507.6	506.4	505.1	503.9
57.5°	463.8	460.8	457.8	455.8	454.9	453.9	453.0	451.9
60°	428.6	425.8	423.0	421.2	420.4	419.7	418.9	418.2
62.5°	395.1	392.5	389.9	388.2	387.2	386.2	385.3	384.4
65°	343.9	341.6	339.3	337.5	336.3	335.0	333.7	332.4
67.5°	293.3	291.4	289.7	288.3	287.3	286.3	285.2	284.2
70°	260.4	258.6	256.8	255.4	254.4	253.4	252.4	251.3
72.5°	229.3	227.5	225.8	224.5	223.6	222.8	222.0	221.2
75°	180.9	179.3	177.9	177.4	177.9	178.4	178.8	179.3
77.5°	137.7	136.9	136.1	135.3	134.7	134.0	133.3	132.5
80°	109.3	108.6	107.8	107.1	106.6	106.2	105.6	105.1
82.5°	81.5	80.5	79.6	79.0	78.9	78.8	78.7	78.6
85°	43.0	42.3	41.5	41.0	40.7	40.5	40.2	40.0
87.5°	17.5	16.8	16.1	15.7	15.5	15.3	15.2	15.0
90°	29.3	28.9	28.6	28.4	28.7	28.8	29.0	29.2
92.5°	27.5	27.6	27.6	27.7	27.7	27.7	27.8	27.8
95°	55.0	55.0	55.0	54.8	54.4	54.1	53.6	53.3
97.5°	92.5	92.5	92.5	92.5	92.4	92.4	92.3	92.3
100°	118.6	118.6	118.6	118.5	118.3	118.1	117.9	117.7
102.5°	147.1	147.2	147.4	147.3	147.1	147.0	146.8	146.6
105°	189.8	190.2	190.5	190.7	190.7	190.7	190.7	190.7
107.5°	235.9	236.1	236.2	235.8	235.0	234.1	233.2	232.3
110°	267.3	267.3	267.3	266.9	266.4	265.8	265.2	264.7



TEST NUMBER: P331409-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	298.6	298.2	297.7	297.2	296.9	296.4	296.0	295.6
115°	346.7	346.6	346.4	345.9	345.4	344.8	344.2	343.7
117.5°	393.3	392.9	392.4	391.8	391.3	390.7	390.1	389.6
120°	424.5	424.5	424.5	424.2	423.6	423.0	422.5	421.9
122.5°	456.5	456.1	455.6	455.2	454.8	454.3	453.9	453.5
125°	504.1	503.5	502.9	502.6	502.4	502.1	502.0	501.8
127.5°	550.3	549.6	548.9	548.2	547.6	547.0	546.4	545.8
130°	581.8	581.4	581.0	580.5	579.7	578.9	578.2	577.4
132.5°	612.5	611.7	610.8	610.1	609.5	608.9	608.3	607.7
135°	657.8	657.6	657.4	657.0	656.4	655.9	655.3	654.7
137.5°	701.2	701.0	700.9	700.4	699.6	698.9	698.1	697.3
140°	730.4	730.4	730.4	730.0	729.2	728.4	727.7	726.9
142.5°	756.8	756.9	757.1	756.8	756.0	755.3	754.5	753.7
145°	796.9	797.1	797.3	797.0	796.3	795.5	794.7	793.9
147.5°	832.1	832.5	832.9	832.8	832.1	831.3	830.6	829.8
150°	854.4	855.0	855.5	855.5	855.0	854.4	853.8	853.3
152.5°	876.7	877.4	878.1	878.1	877.4	876.7	876.0	875.2
155°	905.0	905.9	906.9	907.1	906.5	905.9	905.3	904.7
157.5°	931.1	932.4	933.7	933.8	933.0	932.0	931.1	930.2
160°	946.6	947.7	948.9	949.1	948.3	947.5	946.8	946.0
162.5°	960.6	961.9	963.2	963.5	962.5	961.6	960.7	959.8
165°	978.8	980.1	981.5	981.6	980.7	979.7	978.8	977.8
167.5°	993.7	995.1	996.3	996.5	995.6	994.5	993.6	992.6
170°	1001.9	1003.3	1004.6	1004.7	1003.6	1002.5	1001.3	1000.1
172.5°	1008.1	1009.5	1010.8	1010.9	1009.8	1008.7	1007.5	1006.3
175°	1014.9	1016.2	1017.5	1017.6	1016.5	1015.3	1014.2	1013.1
177.5°	1018.0	1018.9	1019.8	1019.8	1018.9	1018.0	1017.0	1016.2
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2

(END OF REPORT)