

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: P332941-940

Luminaire Tested: **SA4XXRDIP-C795D810U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332941-940  
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-C795D810U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5365.5 lumens  
Efficiency: N/A  
Efficacy: 116.9 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

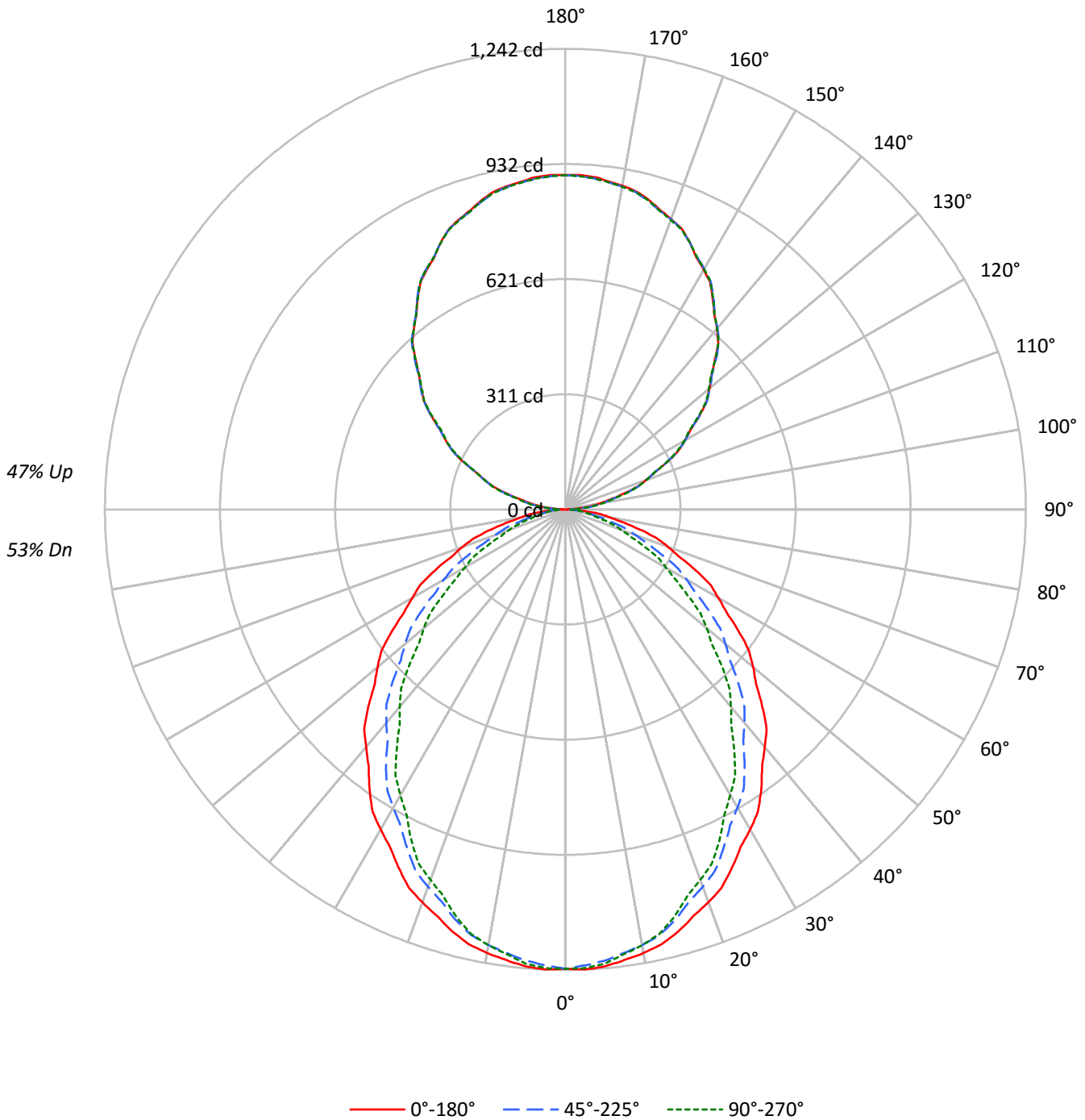
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	99	95	91	87	91	88	85	82	75	73	71	64	62	60	53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	37	34	32	29
5	69	58	50	44	64	54	47	42	47	41	37	40	36	32	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	22	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10001	10001	10001
5°	10023	9900	9961
10°	9960	9781	9781
15°	9845	9576	9504
20°	9688	9306	9135
25°	9487	8989	8761
30°	9292	8655	8294
35°	9077	8310	7824
40°	8816	7917	7317
45°	8576	7526	6801
50°	8303	7076	6253
55°	8010	6608	5661
60°	7689	6095	5054
65°	7393	5454	4458
70°	6963	4747	3784
75°	6419	3936	3075
80°	5602	2999	2822
85°	4742	2723	2547



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.4	2.2
10°-20°	324.5	6.0
20°-30°	468.6	8.7
30°-40°	531.1	9.9
40°-50°	512.9	9.6
50°-60°	426.5	7.9
60°-70°	294.5	5.5
70°-80°	149.3	2.8
80°-90°	41.0	0.8
90°-100°	59.5	1.1
100°-110°	176.1	3.3
110°-120°	298.9	5.6
120°-130°	394.2	7.3
130°-140°	442.7	8.3
140°-150°	435.0	8.1
150°-160°	365.9	6.8
160°-170°	243.4	4.5
170°-180°	85.2	1.6
0°-30°	909.4	16.9
0°-40°	1440.5	26.8
0°-60°	2379.9	44.4
0°-90°	2864.6	53.4
90°-120°	534.5	10.0
90°-150°	1806.3	33.7
90°-180°	2501.0	46.6
0°-180°	5365.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1233	1222	1230	1229	117
15°	1178	1169	1146	1144	1137	332
25°	1065	1047	1009	993	984	491
35°	921	890	843	812	794	575
45°	751	715	659	614	596	579
55°	569	530	470	422	402	509
65°	387	345	286	246	233	382
75°	206	170	126	105	99	217
85°	51	33	29	28	28	58
90°	2	10	15	19	21	5
95°	42	48	53	55	55	47
105°	162	163	166	168	170	172
115°	304	304	303	302	301	300
125°	443	443	442	441	439	394
135°	571	575	575	574	572	442
145°	694	696	697	696	694	434
155°	795	795	794	796	794	366
165°	865	863	862	865	863	244
175°	900	897	896	900	896	85
180°	901	901	901	901	901	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1241.8	1241.1	1240.4	1239.7	1239.0	1237.8	1235.9	1234.1	1232.3	1230.4	1232.3
5°	1236.8	1236.0	1235.1	1234.3	1233.4	1231.8	1229.2	1226.7	1224.1	1221.6	1223.8
7.5°	1225.7	1224.8	1223.9	1223.0	1222.1	1220.0	1216.7	1213.4	1210.1	1206.8	1208.2
10°	1215.0	1214.0	1212.9	1211.8	1210.8	1208.4	1204.6	1200.8	1197.0	1193.2	1194.0
12.5°	1201.3	1200.2	1198.9	1197.7	1196.5	1193.6	1189.2	1184.6	1180.2	1175.7	1176.3
15°	1178.0	1176.2	1174.2	1172.3	1170.5	1166.9	1161.5	1156.3	1151.0	1145.8	1145.3
17.5°	1149.8	1147.0	1144.2	1141.6	1138.8	1134.3	1127.9	1121.6	1115.3	1108.9	1107.8
20°	1127.7	1125.0	1122.3	1119.5	1116.8	1111.9	1104.7	1097.5	1090.3	1083.2	1081.5
22.5°	1103.5	1100.4	1097.3	1094.2	1091.2	1085.7	1078.1	1070.4	1062.7	1055.1	1052.6
25°	1065.1	1061.3	1057.6	1053.7	1050.0	1043.7	1035.1	1026.4	1017.8	1009.1	1005.6
27.5°	1024.9	1020.2	1015.4	1010.7	1005.8	998.9	989.6	980.4	971.2	962.0	957.5
30°	996.8	991.6	986.3	981.1	975.8	968.2	958.3	948.4	938.4	928.5	923.3
32.5°	967.2	961.4	955.4	949.4	943.5	935.4	925.1	914.9	904.6	894.4	888.3
35°	921.0	914.3	907.5	900.7	894.0	885.4	874.9	864.2	853.7	843.2	836.1
37.5°	871.5	864.5	857.6	850.6	843.6	834.4	822.7	811.0	799.3	787.6	779.6
40°	836.6	829.6	822.7	815.7	808.8	799.2	787.2	775.3	763.2	751.2	742.3
42.5°	803.2	795.9	788.6	781.3	774.0	764.1	751.6	739.0	726.6	714.0	705.0
45°	751.2	743.4	735.6	727.8	720.0	709.8	697.1	684.5	671.8	659.2	648.9
47.5°	697.5	689.5	681.4	673.3	665.3	654.7	641.6	628.4	615.3	602.1	591.4
50°	661.1	652.9	644.6	636.4	628.2	617.3	603.9	590.4	576.8	563.4	552.9
52.5°	623.9	615.9	607.8	599.8	591.7	580.8	566.9	553.1	539.3	525.5	514.8
55°	569.1	560.6	552.2	543.8	535.4	524.3	510.6	496.9	483.2	469.5	458.5
57.5°	514.9	506.0	497.3	488.6	479.7	468.6	455.1	441.7	428.2	414.6	403.6
60°	476.2	467.7	459.3	450.8	442.4	431.5	417.9	404.5	391.0	377.5	366.5
62.5°	441.2	432.5	423.7	414.9	406.2	394.8	381.0	367.2	353.4	339.6	329.4
65°	387.0	377.9	368.8	359.8	350.7	339.5	325.9	312.5	299.0	285.5	276.4
67.5°	330.6	322.0	313.3	304.6	295.9	285.3	272.8	260.3	247.7	235.2	227.4
70°	295.0	286.1	277.2	268.4	259.6	249.1	237.1	225.1	213.1	201.1	194.1
72.5°	257.1	249.1	241.0	233.0	225.0	215.3	204.0	192.6	181.3	170.0	164.0
75°	205.8	198.0	190.2	182.4	174.6	165.8	155.9	146.0	136.1	126.2	121.3
77.5°	153.8	147.2	140.6	134.0	127.3	120.0	112.1	104.1	96.0	88.0	85.2
80°	120.5	114.3	108.3	102.1	96.0	89.8	83.5	77.1	70.8	64.5	63.8
82.5°	91.7	86.1	80.4	74.8	69.2	64.6	61.0	57.3	53.7	50.1	49.6
85°	51.2	47.0	42.8	38.6	34.3	31.9	31.3	30.7	30.1	29.4	29.0
87.5°	17.8	16.9	15.9	14.8	13.8	13.4	13.5	13.6	13.6	13.7	13.7
90°	2.1	3.8	5.5	7.2	8.9	10.3	11.6	12.8	14.1	15.3	16.2
92.5°	14.9	16.9	18.8	20.8	22.7	24.2	25.0	25.9	26.8	27.6	28.2
95°	41.8	43.2	44.6	46.0	47.4	48.7	49.8	50.8	51.9	53.0	53.4
97.5°	73.0	74.2	75.3	76.4	77.5	78.7	80.0	81.2	82.5	83.8	84.4
100°	97.6	98.2	98.8	99.4	100.0	101.1	102.5	103.9	105.2	106.6	107.0
102.5°	123.2	123.5	123.8	124.0	124.2	125.0	126.3	127.5	128.9	130.1	130.5
105°	162.5	162.6	162.7	162.9	163.1	163.5	164.1	164.7	165.3	165.9	166.4
107.5°	203.6	203.8	203.9	204.1	204.3	204.5	204.6	204.6	204.7	204.8	205.3
110°	231.5	231.8	232.0	232.4	232.6	232.7	232.6	232.5	232.3	232.1	231.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	260.5	260.5	260.6	260.6	260.7	260.6	260.3	260.0	259.8	259.5	259.4
115°	304.0	304.0	304.0	304.0	304.0	303.8	303.4	303.2	302.8	302.6	302.4
117.5°	344.9	345.1	345.2	345.3	345.4	345.4	345.2	344.9	344.7	344.6	344.0
120°	372.3	372.9	373.5	374.2	374.8	374.8	374.3	373.9	373.4	373.0	372.2
122.5°	400.7	400.9	401.2	401.4	401.7	401.7	401.5	401.3	401.1	400.8	400.3
125°	442.6	442.6	442.6	442.6	442.6	442.6	442.5	442.3	442.1	442.0	441.7
127.5°	480.7	481.2	481.7	482.1	482.6	482.7	482.4	482.2	482.0	481.7	481.4
130°	507.5	508.0	508.5	508.9	509.3	509.6	509.6	509.6	509.6	509.6	509.3
132.5°	534.8	535.2	535.6	535.8	536.2	536.3	536.2	536.1	535.9	535.8	535.5
135°	571.0	571.9	572.8	573.7	574.7	575.2	575.2	575.2	575.2	575.2	574.8
137.5°	610.3	610.7	611.1	611.5	612.0	612.3	612.6	612.9	613.1	613.3	613.0
140°	636.5	636.8	637.1	637.4	637.8	637.8	637.8	637.8	637.8	637.8	637.8
142.5°	660.5	660.8	661.1	661.4	661.7	661.8	661.6	661.6	661.4	661.3	661.3
145°	693.7	694.3	694.9	695.5	696.2	696.5	696.7	696.8	697.0	697.1	697.0
147.5°	726.6	727.3	728.0	728.8	729.5	729.9	729.7	729.6	729.4	729.3	729.2
150°	746.6	747.3	747.9	748.5	749.1	749.4	749.4	749.4	749.4	749.4	749.4
152.5°	765.6	766.0	766.3	766.7	767.0	767.3	767.4	767.6	767.7	767.9	768.2
155°	794.7	794.7	794.7	794.7	794.7	794.6	794.5	794.3	794.2	794.1	794.6
157.5°	819.3	818.9	818.7	818.4	818.1	818.0	818.0	818.0	817.9	817.9	818.3
160°	833.7	833.6	833.5	833.3	833.1	832.9	832.9	832.7	832.5	832.4	832.9
162.5°	847.1	846.8	846.3	846.0	845.5	845.3	845.1	845.0	844.8	844.6	845.5
165°	865.1	864.7	864.2	863.7	863.3	862.9	862.6	862.3	861.9	861.7	862.6
167.5°	879.0	878.2	877.6	877.0	876.4	876.0	876.0	876.1	876.1	876.1	877.1
170°	886.7	886.0	885.2	884.4	883.7	883.3	883.5	883.7	883.8	884.0	884.8
172.5°	892.3	891.7	891.0	890.4	889.7	889.4	889.5	889.5	889.5	889.6	890.6
175°	900.0	899.2	898.4	897.7	896.9	896.4	896.3	896.1	896.0	895.8	896.9
177.5°	902.5	901.9	901.3	900.6	900.0	899.7	899.7	899.7	899.7	899.7	900.5
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1234.1	1235.9	1237.8	1238.7	1238.5	1238.3	1238.1	1238.0
5°	1225.8	1228.0	1230.1	1230.9	1230.5	1230.1	1229.7	1229.2
7.5°	1209.5	1210.9	1212.3	1212.5	1211.9	1211.2	1210.6	1209.9
10°	1194.9	1195.7	1196.6	1196.6	1195.7	1194.9	1194.0	1193.2
12.5°	1176.8	1177.2	1177.8	1177.4	1176.3	1175.1	1173.8	1172.7
15°	1145.0	1144.5	1144.1	1143.2	1141.7	1140.1	1138.7	1137.2
17.5°	1106.6	1105.5	1104.2	1102.5	1100.3	1098.1	1095.8	1093.6
20°	1079.8	1078.1	1076.4	1074.2	1071.5	1068.7	1066.0	1063.3
22.5°	1050.1	1047.5	1045.0	1042.6	1040.4	1038.1	1035.9	1033.7
25°	1002.0	998.4	994.9	992.0	989.9	987.8	985.7	983.6
27.5°	953.1	948.7	944.2	940.5	937.5	934.4	931.4	928.4
30°	918.0	912.8	907.5	903.1	899.8	896.4	893.0	889.7
32.5°	882.2	876.1	870.0	865.3	862.1	858.9	855.7	852.5
35°	828.8	821.7	814.6	809.0	805.3	801.5	797.6	793.9
37.5°	771.6	763.6	755.5	749.7	745.9	742.1	738.3	734.5
40°	733.5	724.6	715.8	709.4	705.7	701.9	698.1	694.3
42.5°	696.0	687.0	678.0	671.5	667.4	663.5	659.6	655.6
45°	638.6	628.2	617.9	610.8	607.0	603.2	599.4	595.7
47.5°	580.7	570.0	559.3	551.8	547.7	543.5	539.3	535.1
50°	542.3	531.8	521.2	514.0	510.0	506.0	501.9	497.9
52.5°	504.1	493.4	482.6	475.2	471.0	466.8	462.7	458.5
55°	447.5	436.6	425.7	418.2	414.2	410.2	406.2	402.2
57.5°	392.4	381.3	370.1	363.1	360.1	357.0	354.0	351.0
60°	355.6	344.6	333.7	326.5	323.2	319.8	316.4	313.0
62.5°	319.3	309.2	299.1	292.7	290.0	287.3	284.5	281.9
65°	267.3	258.3	249.2	243.4	240.9	238.4	235.9	233.4
67.5°	219.6	211.9	204.0	198.8	196.0	193.1	190.4	187.6
70°	187.2	180.2	173.3	168.7	166.7	164.5	162.4	160.3
72.5°	158.1	152.1	146.2	142.2	140.4	138.4	136.4	134.5
75°	116.5	111.6	106.7	103.7	102.5	101.2	99.9	98.6
77.5°	82.4	79.5	76.7	75.1	74.7	74.4	74.0	73.6
80°	63.2	62.6	62.0	61.5	61.3	61.1	60.9	60.7
82.5°	49.1	48.7	48.2	47.9	47.7	47.4	47.3	47.1
85°	28.5	28.2	27.7	27.5	27.5	27.5	27.5	27.5
87.5°	13.7	13.7	13.7	13.9	14.1	14.4	14.5	14.8
90°	17.2	18.1	19.1	19.7	20.0	20.3	20.6	21.0
92.5°	28.7	29.2	29.9	30.2	30.4	30.6	30.8	30.9
95°	53.9	54.4	54.8	55.1	55.1	55.1	55.1	55.1
97.5°	84.9	85.4	86.1	86.3	86.3	86.3	86.3	86.3
100°	107.3	107.6	107.9	108.1	108.1	108.1	108.1	108.1
102.5°	131.0	131.3	131.8	132.1	132.2	132.3	132.5	132.6
105°	166.8	167.3	167.7	168.3	168.7	169.2	169.6	170.1
107.5°	205.7	206.1	206.5	206.8	206.7	206.7	206.7	206.6
110°	231.5	231.2	230.9	231.0	231.5	231.9	232.4	232.8





TEST NUMBER: P332941-940

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	259.3	259.3	259.2	259.2	259.3	259.4	259.5	259.6
115°	302.2	302.1	301.9	301.8	301.7	301.5	301.3	301.1
117.5°	343.5	343.0	342.4	342.0	341.7	341.3	341.1	340.7
120°	371.4	370.6	369.9	369.6	370.0	370.2	370.6	370.9
122.5°	399.8	399.3	398.8	398.2	397.6	397.1	396.5	396.0
125°	441.4	441.0	440.8	440.4	440.1	439.8	439.5	439.2
127.5°	481.1	480.8	480.5	480.2	479.9	479.7	479.5	479.2
130°	509.0	508.6	508.4	507.9	507.3	506.7	506.0	505.4
132.5°	535.2	534.8	534.6	534.3	534.0	533.8	533.5	533.3
135°	574.5	574.2	573.9	573.5	573.0	572.6	572.1	571.7
137.5°	612.5	612.2	611.7	611.5	611.6	611.7	611.8	612.0
140°	637.6	637.4	637.2	637.1	636.9	636.8	636.6	636.5
142.5°	661.2	661.2	661.2	661.1	661.1	661.1	661.0	661.0
145°	696.8	696.7	696.5	696.2	695.7	695.3	694.8	694.4
147.5°	729.1	729.0	728.8	728.7	728.5	728.3	728.3	728.1
150°	749.4	749.4	749.4	749.3	749.2	749.0	748.9	748.7
152.5°	768.6	768.9	769.3	769.3	768.9	768.5	768.1	767.7
155°	795.2	795.9	796.5	796.5	795.9	795.2	794.6	794.1
157.5°	818.8	819.3	819.7	819.7	819.2	818.7	818.1	817.6
160°	833.3	833.7	834.2	834.1	833.3	832.5	831.8	831.0
162.5°	846.3	847.1	848.0	848.0	847.2	846.5	845.7	844.9
165°	863.5	864.4	865.4	865.5	864.9	864.2	863.6	863.1
167.5°	878.0	879.0	879.9	879.9	878.9	877.9	877.0	876.0
170°	885.8	886.7	887.7	887.6	886.5	885.5	884.3	883.2
172.5°	891.6	892.7	893.8	893.8	892.7	891.5	890.5	889.4
175°	898.0	899.0	900.2	900.2	899.0	898.0	896.9	895.8
177.5°	901.4	902.3	903.2	903.1	902.1	901.2	900.2	899.1
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3

(END OF REPORT)