

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: P332700-930

Luminaire Tested: **SA4XXDIP-C1195D1035U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332700-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D1035U930-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

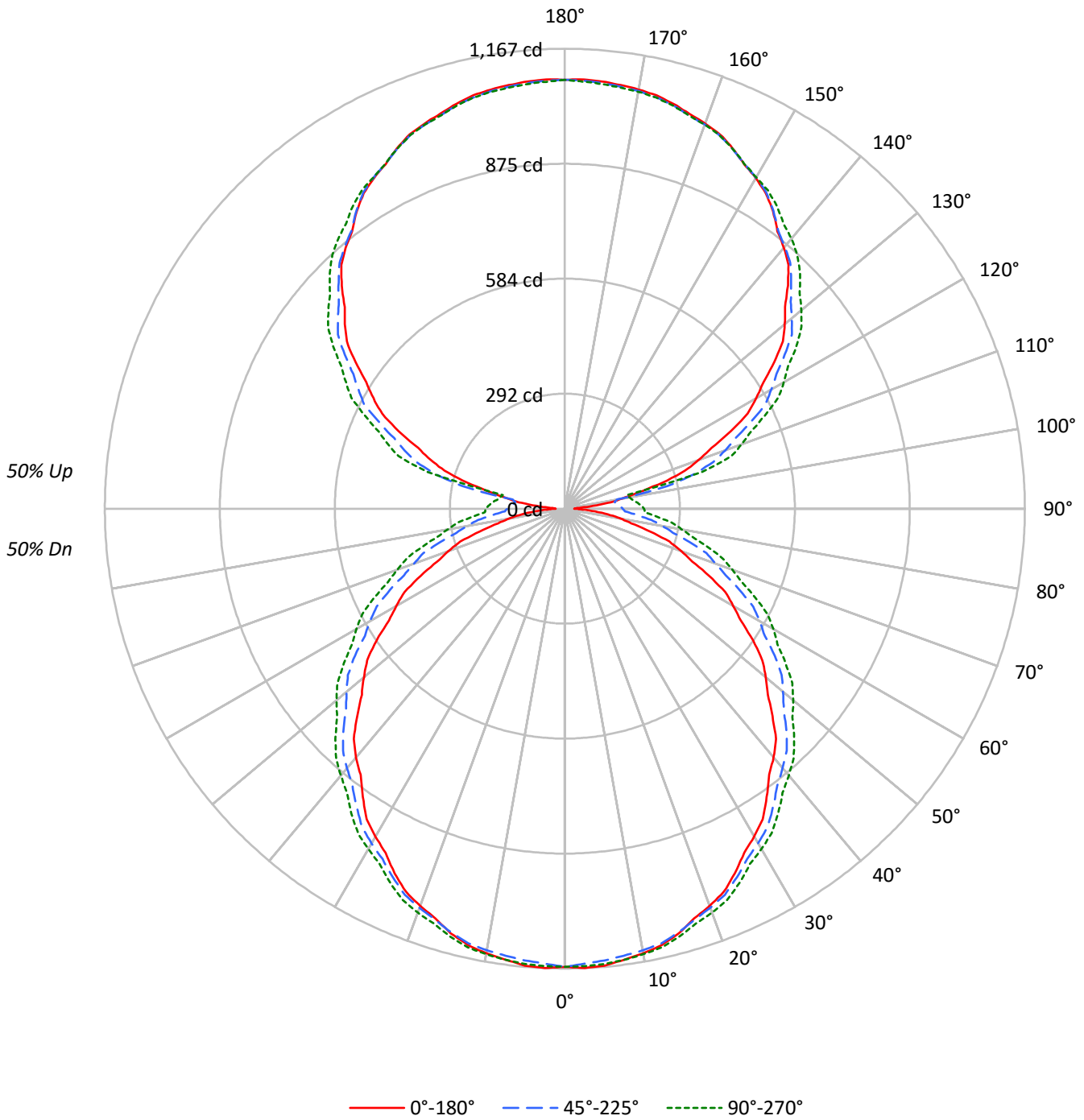
Lumens per Lamp: N/A  
Luminaire Lumens: 7332.3 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

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





TEST NUMBER: P332700-930

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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	72	69	66	59	57	56	48	47	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	46	42	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	37	34	31	27
4	73	61	53	47	67	57	50	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	39	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	53	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	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	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	7.9
40°-50°	610.1	8.3
50°-60°	574.2	7.8
60°-70°	476.4	6.5
70°-80°	334.6	4.6
80°-90°	192.3	2.6
90°-100°	149.5	2.0
100°-110°	320.4	4.4
110°-120°	509.8	7.0
120°-130°	607.8	8.3
130°-140°	630.2	8.6
140°-150°	579.3	7.9
150°-160°	465.0	6.3
160°-170°	299.9	4.1
170°-180°	103.4	1.4
0°-30°	902.5	12.3
0°-40°	1479.6	20.2
0°-60°	2663.8	36.3
0°-90°	3667.1	50.0
90°-120°	979.7	13.4
90°-150°	2797.0	38.1
90°-180°	3665.0	50.0
0°-180°	7332.3	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°	23	84	147	188	202	16
95°	62	79	131	170	184	71
105°	257	289	340	376	361	270
115°	465	481	520	549	560	458
125°	648	652	681	707	717	579
135°	800	800	812	834	844	617
145°	921	922	922	931	938	575
155°	1008	1009	1007	1010	1008	465
165°	1064	1060	1060	1065	1059	300
175°	1088	1084	1084	1090	1082	104
180°	1088	1088	1088	1088	1088	



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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	51.2	63.4	75.7	87.8	100.4	113.4	126.4	139.3	152.2	160.9
90°	23.2	36.9	50.4	63.9	77.5	91.2	105.1	119.0	132.9	146.8	156.3
92.5°	30.0	40.6	51.1	61.6	72.2	84.4	98.2	112.1	126.0	139.9	149.1
95°	61.7	65.1	68.5	71.9	75.3	83.0	95.1	107.0	119.1	131.2	140.1
97.5°	110.4	122.5	134.5	146.6	158.7	160.5	152.0	143.6	135.1	126.7	134.4
100°	147.8	158.6	169.3	180.1	190.9	189.5	175.8	162.1	148.5	134.8	139.5
102.5°	190.8	199.7	208.7	217.7	226.7	235.1	242.9	250.7	258.4	266.3	240.7
105°	256.7	263.6	270.4	277.3	284.2	293.4	305.0	316.7	328.2	339.8	348.7
107.5°	320.1	325.4	330.7	336.0	341.2	349.5	360.9	372.3	383.6	395.0	402.9
110°	362.0	366.6	371.2	375.8	380.4	388.3	399.5	410.7	421.9	433.2	440.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	402.7	407.2	411.8	416.4	420.9	428.3	438.5	448.6	458.8	469.0	475.3
115°	465.2	468.4	471.5	474.7	477.8	483.9	493.0	502.1	511.1	520.2	526.9
117.5°	522.8	525.1	527.3	529.6	531.9	537.5	546.6	555.5	564.6	573.6	579.6
120°	560.8	562.4	563.9	565.6	567.1	572.0	580.2	588.5	596.6	604.9	611.0
122.5°	597.2	597.9	598.4	599.1	599.7	604.1	612.2	620.4	628.6	636.7	642.8
125°	648.2	648.7	649.1	649.5	650.0	653.5	660.5	667.3	674.2	681.0	687.1
127.5°	697.4	697.3	697.2	697.1	697.0	700.1	706.5	712.9	719.3	725.6	730.8
130°	728.3	728.1	728.1	728.0	727.8	730.3	735.6	740.7	745.9	751.1	756.4
132.5°	757.6	757.6	757.7	757.7	757.7	759.9	764.3	768.7	773.1	777.5	782.6
135°	800.2	800.1	799.9	799.6	799.5	800.8	803.6	806.2	809.0	811.8	816.8
137.5°	839.1	838.9	838.7	838.5	838.3	839.0	840.8	842.6	844.4	846.1	850.8
140°	864.5	864.6	864.6	864.7	864.8	865.2	865.8	866.5	867.2	867.8	872.0
142.5°	886.2	886.9	887.5	888.0	888.6	888.9	889.0	889.0	889.1	889.1	892.8
145°	921.0	921.3	921.5	921.8	922.0	922.1	922.1	922.1	922.1	922.1	924.1
147.5°	948.8	949.6	950.3	951.0	951.7	952.0	951.8	951.6	951.5	951.3	951.6
150°	969.0	969.5	969.9	970.3	970.8	970.9	970.7	970.5	970.4	970.1	970.1
152.5°	984.9	985.5	985.9	986.4	987.0	987.1	986.8	986.4	986.1	985.8	986.1
155°	1008.4	1008.6	1008.8	1008.9	1009.1	1008.9	1008.4	1007.9	1007.3	1006.8	1007.5
157.5°	1028.4	1028.3	1028.2	1028.1	1028.0	1027.6	1027.0	1026.4	1025.8	1025.2	1026.1
160°	1040.2	1039.6	1039.1	1038.5	1038.0	1037.6	1037.5	1037.2	1037.1	1036.9	1038.0
162.5°	1050.6	1049.9	1049.2	1048.5	1047.8	1047.4	1047.2	1047.0	1046.8	1046.7	1047.7
165°	1063.7	1062.8	1061.9	1061.0	1060.1	1059.6	1059.6	1059.6	1059.6	1059.6	1061.1
167.5°	1074.2	1073.3	1072.3	1071.4	1070.4	1069.9	1069.8	1069.7	1069.6	1069.4	1071.1
170°	1080.0	1079.0	1077.8	1076.8	1075.7	1075.2	1075.4	1075.6	1075.8	1076.0	1077.4
172.5°	1083.9	1082.9	1081.7	1080.7	1079.6	1079.1	1079.3	1079.5	1079.7	1079.9	1081.3
175°	1088.2	1087.1	1086.0	1084.9	1083.9	1083.4	1083.5	1083.8	1083.9	1084.1	1085.7
177.5°	1090.1	1089.1	1088.1	1087.1	1086.1	1085.7	1086.0	1086.3	1086.5	1086.9	1088.0
180°	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2



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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°	169.5	178.1	186.7	192.3	194.9	197.5	200.2	202.8
90°	165.8	175.2	184.7	190.8	193.5	196.1	198.8	201.5
92.5°	158.4	167.6	176.8	182.7	185.1	187.4	189.8	192.2
95°	149.0	157.8	166.7	172.6	175.4	178.1	180.9	183.8
97.5°	142.0	149.8	157.4	162.6	165.3	168.0	170.6	173.3
100°	144.2	149.0	153.7	157.2	159.4	161.6	163.8	166.0
102.5°	215.1	189.5	164.0	152.3	154.6	156.9	159.1	161.4
105°	357.6	366.5	375.3	377.6	373.4	369.2	365.0	360.9
107.5°	410.8	418.7	426.6	431.9	434.7	437.5	440.3	443.0
110°	447.2	454.2	461.2	466.1	469.0	471.8	474.7	477.5





TEST NUMBER: P332700-930

CATALOG NUMBER: SA4XXDIP-C1195D1035U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	481.7	488.0	494.3	499.0	502.1	505.0	508.0	511.0
115°	533.7	540.4	547.1	551.5	553.5	555.5	557.6	559.6
117.5°	585.5	591.4	597.4	601.5	603.7	606.0	608.2	610.5
120°	617.2	623.3	629.5	633.5	635.4	637.4	639.4	641.3
122.5°	648.8	654.8	660.8	664.6	666.3	668.1	669.8	671.6
125°	693.2	699.2	705.2	709.2	711.1	713.1	714.9	716.9
127.5°	735.9	740.9	746.1	749.5	751.3	753.2	755.0	756.8
130°	761.8	767.2	772.6	776.2	777.9	779.7	781.4	783.1
132.5°	787.8	793.0	798.1	801.5	803.1	804.7	806.2	807.9
135°	821.7	826.7	831.8	835.3	837.4	839.4	841.6	843.7
137.5°	855.4	860.0	864.6	867.6	868.9	870.3	871.6	872.9
140°	876.4	880.7	885.0	887.9	889.6	891.2	892.8	894.5
142.5°	896.5	900.2	903.9	906.4	907.7	908.9	910.1	911.4
145°	925.9	927.9	929.8	931.6	933.0	934.6	936.0	937.6
147.5°	952.0	952.4	952.8	953.5	954.6	955.7	956.8	958.0
150°	970.1	970.1	970.1	970.2	970.5	970.6	970.8	970.9
152.5°	986.3	986.7	986.9	987.0	986.9	986.8	986.7	986.6
155°	1008.2	1008.9	1009.7	1009.7	1009.3	1008.7	1008.1	1007.6
157.5°	1027.0	1028.0	1028.9	1028.9	1028.0	1027.0	1026.1	1025.2
160°	1039.1	1040.2	1041.2	1041.2	1040.2	1039.1	1038.0	1036.9
162.5°	1048.8	1049.9	1051.0	1050.9	1049.7	1048.5	1047.3	1046.0
165°	1062.6	1064.0	1065.4	1065.4	1063.7	1062.1	1060.5	1058.8
167.5°	1072.6	1074.2	1075.8	1075.7	1073.9	1072.1	1070.2	1068.4
170°	1078.9	1080.3	1081.7	1081.6	1079.8	1078.0	1076.1	1074.3
172.5°	1082.8	1084.2	1085.7	1085.4	1083.5	1081.5	1079.5	1077.6
175°	1087.4	1089.0	1090.6	1090.3	1088.2	1086.0	1083.9	1081.7
177.5°	1089.2	1090.3	1091.5	1091.2	1089.5	1087.8	1086.0	1084.3
180°	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2	1088.2

(END OF REPORT)