

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: P332709-935

Luminaire Tested: **SA4XXDIP-C1195D1205U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332709-935  
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-C1195D1205U935-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

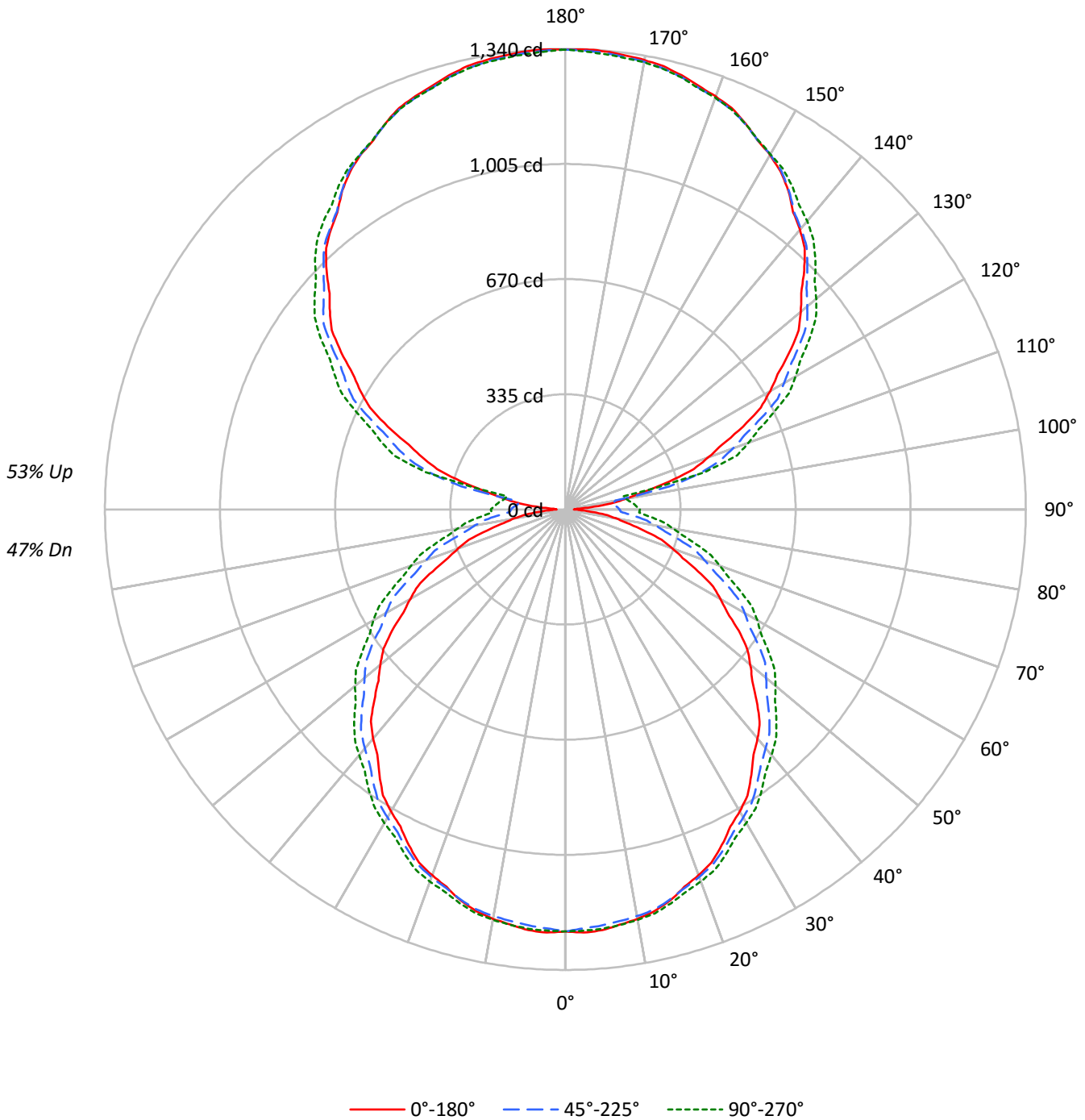
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8326.6 lumens  
Efficiency: N/A  
Efficacy: 116.1 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





TEST NUMBER: P332709-935

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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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

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

	0°	45°	90°
0°	9912	9912	9912
5°	9942	9687	9715
10°	9882	9528	9521
15°	9793	9345	9294
20°	9660	9143	9072
25°	9509	8916	8829
30°	9346	8690	8579
35°	9161	8459	8360
40°	9014	8239	8132
45°	8795	8036	7936
50°	8610	7802	7728
55°	8420	7582	7486
60°	8121	7301	7265
65°	7793	6999	6992
70°	7397	6655	6676
75°	6845	6278	6390
80°	6233	5915	6107
85°	5446	5591	5943



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.3	1.4
10°-20°	333.1	4.0
20°-30°	503.7	6.0
30°-40°	609.4	7.3
40°-50°	644.3	7.7
50°-60°	606.4	7.3
60°-70°	503.1	6.0
70°-80°	353.4	4.2
80°-90°	203.6	2.4
90°-100°	164.4	2.0
100°-110°	379.5	4.6
110°-120°	616.9	7.4
120°-130°	741.6	8.9
130°-140°	772.2	9.3
140°-150°	711.6	8.5
150°-160°	571.5	6.9
160°-170°	368.6	4.4
170°-180°	127.0	1.5
0°-30°	953.1	11.4
0°-40°	1562.5	18.8
0°-60°	2813.1	33.8
0°-90°	3873.2	46.5
90°-120°	1160.8	13.9
90°-150°	3386.3	40.7
90°-180°	4453.0	53.5
0°-180°	8326.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1229	1225	1215	1226	1225	117
15°	1178	1179	1176	1187	1186	332
25°	1078	1086	1090	1105	1107	496
35°	943	959	973	992	997	590
45°	786	813	839	861	869	608
55°	616	646	686	712	722	549
65°	426	470	517	550	562	422
75°	236	288	345	382	396	252
85°	73	131	192	232	248	78
90°	25	91	158	202	217	17
95°	73	87	142	183	198	85
105°	314	348	403	442	421	329
115°	570	587	629	660	671	562
125°	796	800	831	859	869	711
135°	983	983	996	1019	1030	758
145°	1132	1133	1134	1143	1150	707
155°	1240	1240	1238	1241	1238	571
165°	1308	1303	1303	1310	1302	369
175°	1338	1332	1333	1340	1330	127
180°	1338	1338	1338	1338	1338	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1232.2	1231.4	1230.7	1229.9	1229.2	1227.9	1225.9	1224.0	1222.0	1220.0	1221.8
5°	1229.1	1228.2	1227.3	1226.4	1225.5	1223.9	1221.8	1219.6	1217.5	1215.4	1217.8
7.5°	1218.7	1218.1	1217.5	1217.0	1216.5	1215.3	1213.6	1211.8	1210.0	1208.2	1211.0
10°	1209.9	1209.5	1209.3	1208.9	1208.7	1207.7	1206.2	1204.7	1203.2	1201.6	1204.4
12.5°	1197.7	1197.7	1197.7	1197.6	1197.6	1197.0	1195.9	1194.9	1193.9	1192.8	1195.3
15°	1178.3	1178.5	1178.9	1179.1	1179.5	1179.1	1178.3	1177.3	1176.4	1175.5	1178.3
17.5°	1151.6	1152.5	1153.4	1154.3	1155.2	1155.6	1155.5	1155.2	1155.0	1154.9	1157.7
20°	1132.9	1133.8	1134.7	1135.7	1136.5	1137.1	1137.5	1137.8	1138.1	1138.4	1141.4
22.5°	1112.0	1113.1	1114.3	1115.4	1116.6	1117.5	1118.0	1118.6	1119.1	1119.6	1122.7
25°	1077.9	1079.7	1081.6	1083.4	1085.2	1086.6	1087.5	1088.4	1089.3	1090.3	1093.6
27.5°	1039.9	1042.7	1045.3	1048.0	1050.7	1052.7	1054.1	1055.6	1057.0	1058.3	1061.4
30°	1014.6	1017.1	1019.5	1022.0	1024.4	1026.7	1028.8	1031.0	1033.1	1035.3	1038.6
32.5°	987.1	990.1	993.0	995.9	998.8	1001.5	1003.9	1006.3	1008.7	1011.1	1014.9
35°	943.1	946.8	950.5	954.2	957.8	961.1	964.2	967.2	970.3	973.4	977.7
37.5°	898.9	903.1	907.3	911.5	915.8	919.7	923.5	927.3	931.1	934.9	939.3
40°	870.3	874.3	878.2	882.2	886.1	890.3	894.6	898.9	903.1	907.4	912.0
42.5°	837.3	841.7	846.2	850.7	855.1	859.9	864.9	869.9	874.9	879.9	885.0
45°	786.4	792.2	798.1	803.8	809.6	815.5	821.2	827.1	832.8	838.7	843.9
47.5°	737.7	743.7	749.8	755.7	761.7	768.1	774.8	781.5	788.2	795.0	800.3
50°	702.6	709.3	716.0	722.7	729.4	736.2	742.9	749.6	756.3	763.0	769.1
52.5°	667.4	674.1	680.8	687.5	694.2	701.5	709.1	716.9	724.5	732.3	738.4
55°	616.0	622.3	628.8	635.2	641.6	649.4	658.6	667.7	676.9	686.0	692.2
57.5°	558.4	566.5	574.4	582.3	590.2	598.7	607.9	617.0	626.1	635.2	642.5
60°	521.1	529.0	536.9	544.9	552.8	561.9	572.0	582.0	592.1	602.2	609.2
62.5°	484.7	493.4	502.1	510.8	519.4	528.8	539.0	549.1	559.1	569.2	576.2
65°	426.2	436.0	445.7	455.6	465.3	475.4	485.8	496.2	506.5	516.9	524.6
67.5°	369.8	380.2	390.6	401.0	411.4	422.1	433.3	444.4	455.5	466.7	474.4
70°	331.3	341.7	352.1	362.5	372.9	383.9	395.5	407.1	418.7	430.3	438.6
72.5°	293.9	304.5	315.2	325.8	336.5	347.9	360.3	372.6	385.0	397.4	405.4
75°	236.5	247.8	259.1	270.4	281.7	293.8	306.6	319.4	332.3	345.1	353.6
77.5°	182.9	194.8	206.8	218.8	230.7	243.5	256.9	270.4	283.8	297.2	305.9
80°	149.9	162.0	174.3	186.5	198.7	211.5	225.0	238.5	251.9	265.4	274.5
82.5°	116.8	129.6	142.3	155.0	167.7	180.8	194.2	207.7	221.1	234.5	243.9
85°	72.8	85.7	98.5	111.3	124.2	137.5	151.2	165.0	178.7	192.5	201.6
87.5°	41.3	54.2	67.2	80.2	93.1	106.4	120.2	134.0	147.7	161.4	170.6
90°	25.0	39.7	54.3	69.0	83.7	98.5	113.4	128.3	143.2	158.1	168.3
92.5°	33.5	44.6	55.8	66.9	78.0	91.1	106.0	120.9	135.8	150.8	160.7
95°	72.9	75.4	77.9	80.5	83.0	90.7	103.4	116.1	128.9	141.6	151.2
97.5°	133.1	146.5	159.9	173.2	186.7	187.1	174.7	162.3	149.9	137.5	145.6
100°	179.2	191.1	203.1	215.0	227.0	223.6	204.8	186.1	167.3	148.5	153.0
102.5°	232.0	241.9	251.8	261.7	271.6	280.4	288.1	295.8	303.4	311.1	278.3
105°	313.5	321.0	328.4	335.9	343.3	353.2	365.7	378.1	390.5	402.9	412.5
107.5°	391.5	397.2	402.9	408.5	414.1	423.1	435.3	447.5	459.8	471.9	480.4
110°	443.2	448.2	453.1	458.1	463.0	471.5	483.5	495.5	507.6	519.5	527.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	493.4	498.3	503.3	508.2	513.2	521.2	532.0	542.9	553.6	564.5	571.2
115°	570.5	573.9	577.3	580.7	584.2	590.6	600.2	609.8	619.3	628.9	636.0
117.5°	641.3	643.8	646.4	648.8	651.4	657.5	667.1	676.7	686.2	695.9	702.1
120°	688.2	690.0	691.8	693.6	695.4	700.6	709.3	717.9	726.5	735.2	741.8
122.5°	733.0	733.7	734.4	735.1	735.9	740.5	749.2	757.9	766.6	775.3	781.7
125°	795.8	796.4	797.0	797.6	798.1	802.1	809.3	816.5	823.6	830.9	837.3
127.5°	856.4	856.4	856.3	856.2	856.1	859.5	866.3	873.2	880.1	887.0	892.4
130°	894.5	894.4	894.3	894.2	894.1	896.9	902.5	908.0	913.6	919.1	924.9
132.5°	930.6	930.7	930.7	930.8	930.9	933.3	938.1	942.9	947.6	952.4	957.9
135°	983.2	982.9	982.7	982.5	982.3	983.7	986.7	989.7	992.8	995.8	1001.2
137.5°	1031.0	1030.8	1030.5	1030.4	1030.1	1031.0	1033.0	1035.1	1037.1	1039.1	1044.0
140°	1062.2	1062.4	1062.5	1062.6	1062.7	1063.2	1063.9	1064.7	1065.5	1066.2	1070.8
142.5°	1089.2	1089.9	1090.6	1091.3	1092.1	1092.5	1092.6	1092.7	1092.8	1092.9	1096.8
145°	1131.9	1132.2	1132.6	1133.0	1133.3	1133.5	1133.5	1133.5	1133.5	1133.5	1135.6
147.5°	1166.1	1167.0	1167.9	1168.9	1169.8	1170.2	1170.0	1169.8	1169.5	1169.3	1169.8
150°	1190.9	1191.5	1192.1	1192.7	1193.3	1193.4	1193.2	1193.0	1192.7	1192.5	1192.5
152.5°	1210.7	1211.3	1211.9	1212.5	1213.2	1213.3	1213.0	1212.5	1212.1	1211.8	1212.1
155°	1239.6	1239.8	1240.0	1240.2	1240.4	1240.2	1239.6	1238.9	1238.2	1237.5	1238.5
157.5°	1264.1	1264.0	1263.9	1263.8	1263.6	1263.2	1262.4	1261.7	1260.9	1260.2	1261.3
160°	1278.6	1277.9	1277.2	1276.6	1275.9	1275.5	1275.2	1275.0	1274.8	1274.5	1275.9
162.5°	1291.3	1290.6	1289.7	1288.8	1288.0	1287.5	1287.2	1287.0	1286.8	1286.6	1287.9
165°	1307.6	1306.5	1305.4	1304.2	1303.1	1302.6	1302.6	1302.6	1302.6	1302.6	1304.3
167.5°	1320.3	1319.2	1318.1	1316.9	1315.8	1315.1	1315.0	1314.8	1314.7	1314.6	1316.6
170°	1327.6	1326.3	1324.9	1323.6	1322.2	1321.7	1321.9	1322.2	1322.3	1322.6	1324.4
172.5°	1332.4	1331.0	1329.7	1328.4	1327.1	1326.5	1326.7	1327.0	1327.1	1327.4	1329.1
175°	1337.6	1336.3	1334.9	1333.6	1332.2	1331.7	1331.9	1332.1	1332.4	1332.6	1334.6
177.5°	1340.0	1338.8	1337.5	1336.3	1335.0	1334.6	1334.9	1335.2	1335.7	1336.0	1337.4
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1223.5	1225.2	1226.9	1227.6	1227.4	1227.1	1226.9	1226.7
5°	1220.3	1222.7	1225.1	1226.2	1225.9	1225.6	1225.3	1225.0
7.5°	1213.8	1216.5	1219.3	1220.5	1220.1	1219.9	1219.5	1219.3
10°	1207.1	1209.9	1212.6	1213.8	1213.6	1213.2	1212.9	1212.6
12.5°	1197.8	1200.3	1202.8	1204.1	1204.0	1203.9	1203.9	1203.9
15°	1181.0	1183.8	1186.5	1187.7	1187.4	1187.1	1186.8	1186.5
17.5°	1160.5	1163.3	1166.1	1167.4	1167.2	1166.9	1166.7	1166.4
20°	1144.5	1147.5	1150.6	1152.1	1152.1	1152.1	1152.1	1152.1
22.5°	1125.8	1128.9	1131.9	1133.7	1134.2	1134.6	1135.1	1135.7
25°	1097.0	1100.4	1103.7	1105.5	1105.9	1106.1	1106.5	1106.7
27.5°	1064.6	1067.7	1070.8	1072.5	1073.0	1073.3	1073.7	1074.0
30°	1042.0	1045.3	1048.7	1050.7	1051.3	1051.9	1052.5	1053.2
32.5°	1018.7	1022.6	1026.5	1028.7	1029.3	1029.9	1030.5	1031.1
35°	982.0	986.2	990.5	993.1	994.0	995.0	995.8	996.8
37.5°	943.6	947.9	952.3	954.9	955.9	956.8	957.9	958.8
40°	916.5	921.2	925.7	928.7	929.9	931.1	932.3	933.5
42.5°	890.0	895.1	900.2	903.2	904.2	905.2	906.1	907.1
45°	849.0	854.3	859.5	862.8	864.4	865.8	867.4	868.9
47.5°	805.7	811.1	816.5	820.0	821.9	823.7	825.5	827.4
50°	775.2	781.4	787.5	791.4	793.3	795.1	796.9	798.7
52.5°	744.5	750.6	756.6	760.7	762.5	764.3	766.1	768.0
55°	698.3	704.4	710.5	714.5	716.3	718.2	720.0	721.8
57.5°	649.7	657.0	664.3	668.7	670.5	672.2	673.9	675.6
60°	616.2	623.3	630.3	635.0	637.5	639.9	642.4	644.8
62.5°	583.2	590.3	597.3	602.0	604.5	606.9	609.3	611.8
65°	532.2	539.8	547.5	552.5	555.0	557.4	559.9	562.3
67.5°	482.2	489.9	497.7	502.7	505.1	507.5	509.9	512.3
70°	446.9	455.0	463.3	468.6	470.6	472.8	474.9	477.1
72.5°	413.4	421.4	429.4	434.5	437.0	439.3	441.7	444.1
75°	362.2	370.7	379.3	385.0	387.7	390.5	393.2	396.0
77.5°	314.6	323.3	331.9	337.8	340.7	343.6	346.6	349.5
80°	283.7	292.8	302.0	307.8	310.2	312.7	315.1	317.6
82.5°	253.4	262.8	272.2	278.3	280.9	283.6	286.3	289.0
85°	210.8	220.0	229.1	235.2	238.3	241.3	244.4	247.5
87.5°	179.7	188.8	197.9	203.9	206.6	209.4	212.2	215.0
90°	178.5	188.7	198.9	205.4	208.4	211.2	214.1	217.0
92.5°	170.7	180.6	190.5	196.7	199.3	201.8	204.4	206.9
95°	160.7	170.4	179.9	186.2	189.2	192.2	195.2	198.1
97.5°	153.8	162.0	170.0	175.6	178.4	181.2	184.1	186.9
100°	157.5	162.0	166.3	169.8	172.2	174.5	176.8	179.3
102.5°	245.6	212.8	180.0	164.8	167.3	169.7	172.1	174.5
105°	422.1	431.8	441.4	443.5	437.9	432.4	426.8	421.2
107.5°	489.0	497.4	505.9	511.7	514.7	517.8	520.8	523.8
110°	534.5	542.0	549.5	554.7	557.8	560.9	564.0	567.2





TEST NUMBER: P332709-935

CATALOG NUMBER: SA4XXDIP-C1195D1205U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	577.9	584.5	591.2	596.2	599.5	602.8	606.1	609.4
115°	643.2	650.4	657.5	662.2	664.3	666.5	668.6	670.7
117.5°	708.3	714.6	720.9	725.2	727.5	730.0	732.3	734.6
120°	748.3	754.8	761.4	765.7	767.7	769.6	771.6	773.7
122.5°	788.1	794.4	800.8	804.9	806.6	808.4	810.1	811.9
125°	843.8	850.2	856.7	861.0	863.1	865.1	867.2	869.2
127.5°	897.8	903.1	908.5	912.1	914.0	915.9	917.8	919.7
130°	930.6	936.3	942.0	945.8	947.6	949.5	951.3	953.1
132.5°	963.3	968.8	974.3	977.8	979.5	981.1	982.8	984.5
135°	1006.5	1011.8	1017.1	1021.0	1023.2	1025.5	1027.8	1030.0
137.5°	1049.0	1054.0	1058.9	1062.0	1063.5	1064.9	1066.3	1067.6
140°	1075.5	1080.1	1084.8	1088.0	1089.7	1091.5	1093.2	1094.9
142.5°	1100.8	1104.7	1108.7	1111.4	1112.7	1114.0	1115.3	1116.7
145°	1137.6	1139.7	1141.7	1143.6	1145.2	1146.9	1148.6	1150.2
147.5°	1170.2	1170.6	1171.0	1171.8	1173.0	1174.2	1175.4	1176.6
150°	1192.5	1192.5	1192.5	1192.7	1192.8	1193.1	1193.3	1193.5
152.5°	1212.5	1212.8	1213.1	1213.2	1213.1	1213.0	1212.9	1212.7
155°	1239.3	1240.2	1241.1	1241.2	1240.5	1239.8	1239.2	1238.5
157.5°	1262.5	1263.6	1264.8	1264.8	1263.6	1262.5	1261.3	1260.2
160°	1277.2	1278.6	1279.9	1279.9	1278.6	1277.2	1275.9	1274.5
162.5°	1289.3	1290.6	1291.9	1291.8	1290.3	1288.8	1287.3	1285.7
165°	1306.1	1307.9	1309.7	1309.6	1307.6	1305.5	1303.6	1301.6
167.5°	1318.5	1320.4	1322.4	1322.2	1320.1	1317.8	1315.6	1313.4
170°	1326.1	1327.9	1329.7	1329.5	1327.2	1325.0	1322.8	1320.6
172.5°	1330.9	1332.7	1334.5	1334.2	1331.8	1329.4	1327.0	1324.6
175°	1336.6	1338.6	1340.6	1340.2	1337.6	1334.9	1332.2	1329.6
177.5°	1338.9	1340.2	1341.7	1341.4	1339.2	1337.0	1334.9	1332.8
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6

(END OF REPORT)