

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: P332710-940

Luminaire Tested: **SA4XXDIP-C1195D1205U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332710-940  
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: SA4XXDIP-C1195D1205U940-4F0-1E-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: 8055.0 lumens  
Efficiency: N/A  
Efficacy: 112.3 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

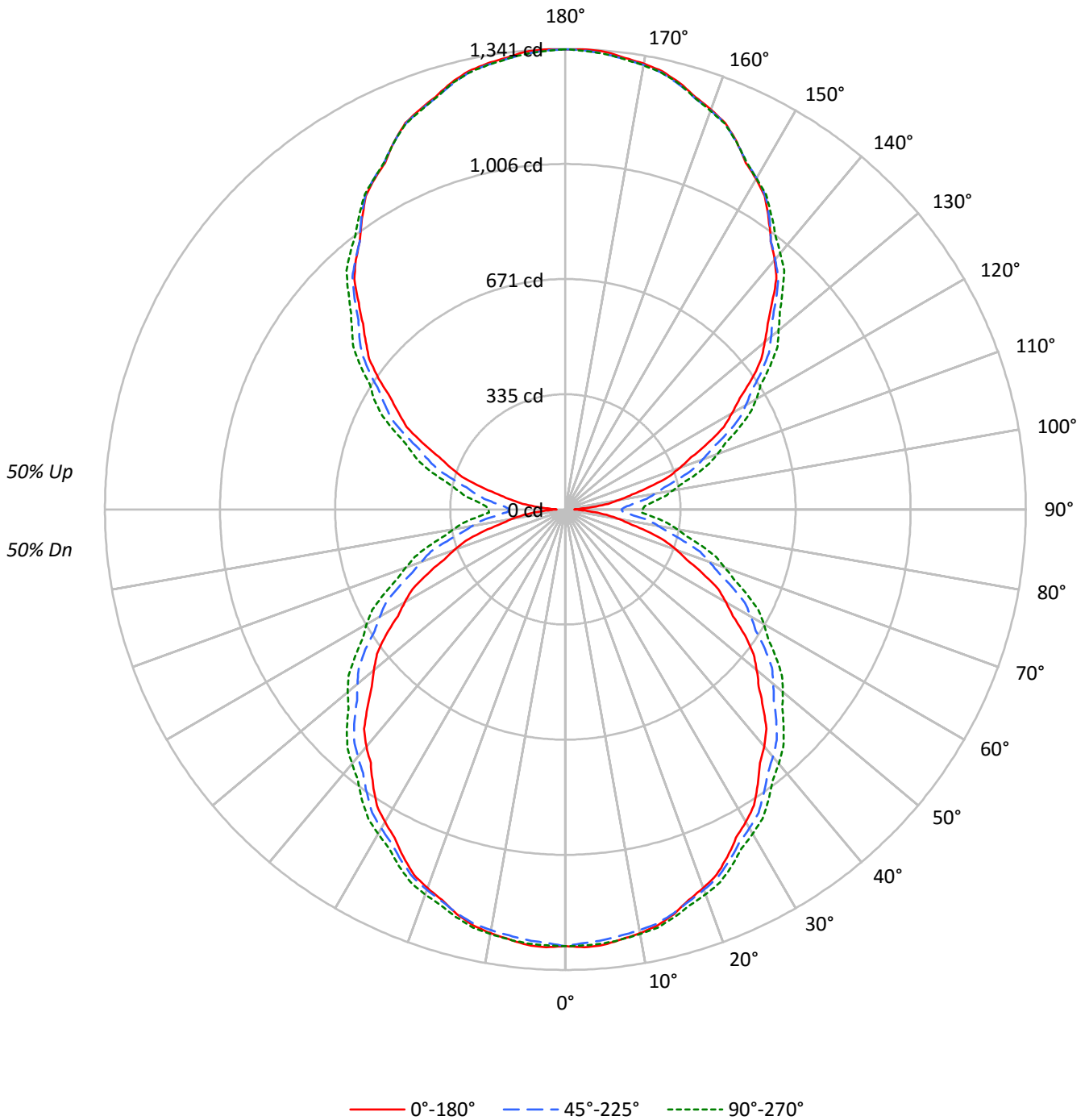
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	10266	10266	10266
5°	10297	10032	10061
10°	10234	9869	9861
15°	10142	9679	9625
20°	10004	9469	9396
25°	9848	9234	9144
30°	9679	9000	8885
35°	9488	8760	8658
40°	9335	8533	8422
45°	9109	8323	8219
50°	8917	8080	8004
55°	8719	7852	7753
60°	8410	7562	7524
65°	8071	7250	7242
70°	7660	6893	6914
75°	7091	6501	6617
80°	6453	6124	6326
85°	5641	5792	6154



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.4	1.5
10°-20°	345.0	4.3
20°-30°	521.7	6.5
30°-40°	631.2	7.8
40°-50°	667.3	8.3
50°-60°	628.0	7.8
60°-70°	521.0	6.5
70°-80°	366.0	4.5
80°-90°	210.9	2.6
90°-100°	211.2	2.6
100°-110°	352.7	4.4
110°-120°	505.3	6.3
120°-130°	620.2	7.7
130°-140°	672.7	8.4
140°-150°	649.4	8.1
150°-160°	543.7	6.8
160°-170°	361.7	4.5
170°-180°	126.7	1.6
0°-30°	987.1	12.3
0°-40°	1618.2	20.1
0°-60°	2913.5	36.2
0°-90°	4011.3	49.8
90°-120°	1069.1	13.3
90°-150°	3011.5	37.4
90°-180°	4044.0	50.2
0°-180°	8055.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1273	1268	1259	1269	1269	121
15°	1220	1221	1218	1229	1229	344
25°	1116	1125	1129	1144	1146	514
35°	977	994	1008	1027	1032	611
45°	814	842	869	892	900	629
55°	638	668	710	738	748	568
65°	441	487	535	570	582	437
75°	245	298	357	396	410	260
85°	75	136	199	240	256	80
90°	26	94	164	209	225	19
95°	81	138	203	243	257	84
105°	254	285	340	378	394	271
115°	460	475	517	546	556	454
125°	664	664	697	721	728	592
135°	851	858	868	887	894	659
145°	1032	1035	1036	1043	1046	646
155°	1181	1181	1180	1184	1180	543
165°	1286	1283	1280	1286	1282	362
175°	1338	1332	1331	1338	1331	127
180°	1340	1340	1340	1340	1340	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1276.1	1275.3	1274.6	1273.8	1273.1	1271.7	1269.6	1267.7	1265.6	1263.6	1265.3
5°	1272.9	1272.0	1271.0	1270.2	1269.2	1267.6	1265.3	1263.1	1261.0	1258.7	1261.2
7.5°	1262.1	1261.6	1261.0	1260.4	1259.9	1258.6	1256.9	1255.0	1253.1	1251.3	1254.2
10°	1253.0	1252.7	1252.4	1252.1	1251.8	1250.8	1249.2	1247.7	1246.1	1244.5	1247.3
12.5°	1240.5	1240.5	1240.4	1240.3	1240.3	1239.7	1238.6	1237.5	1236.4	1235.4	1238.0
15°	1220.3	1220.6	1220.9	1221.2	1221.6	1221.2	1220.3	1219.3	1218.3	1217.5	1220.3
17.5°	1192.7	1193.6	1194.5	1195.5	1196.4	1196.9	1196.7	1196.4	1196.2	1196.1	1199.0
20°	1173.3	1174.2	1175.2	1176.2	1177.1	1177.7	1178.0	1178.4	1178.7	1179.0	1182.1
22.5°	1151.6	1152.8	1154.1	1155.2	1156.5	1157.4	1157.9	1158.5	1159.0	1159.6	1162.8
25°	1116.3	1118.2	1120.2	1122.0	1123.9	1125.3	1126.3	1127.2	1128.2	1129.2	1132.7
27.5°	1077.0	1079.9	1082.6	1085.4	1088.2	1090.3	1091.7	1093.2	1094.7	1096.1	1099.3
30°	1050.8	1053.4	1055.9	1058.5	1061.0	1063.4	1065.5	1067.7	1070.0	1072.2	1075.7
32.5°	1022.3	1025.4	1028.4	1031.4	1034.5	1037.2	1039.7	1042.2	1044.6	1047.1	1051.1
35°	976.8	980.6	984.4	988.2	991.9	995.4	998.6	1001.7	1005.0	1008.1	1012.5
37.5°	930.9	935.3	939.7	944.1	948.4	952.5	956.4	960.4	964.3	968.2	972.8
40°	901.3	905.4	909.5	913.6	917.7	922.0	926.5	930.9	935.3	939.8	944.5
42.5°	867.2	871.7	876.4	881.0	885.6	890.6	895.7	900.9	906.1	911.3	916.6
45°	814.5	820.5	826.5	832.5	838.5	844.5	850.5	856.6	862.6	868.6	874.0
47.5°	764.0	770.3	776.5	782.7	788.9	795.5	802.5	809.4	816.4	823.3	828.8
50°	727.6	734.6	741.5	748.5	755.5	762.4	769.4	776.3	783.3	790.2	796.6
52.5°	691.2	698.1	705.1	712.0	719.0	726.5	734.4	742.4	750.4	758.4	764.7
55°	637.9	644.5	651.2	657.8	664.5	672.5	682.1	691.5	701.1	710.5	716.8
57.5°	578.4	586.7	594.9	603.1	611.3	620.1	629.5	639.0	648.5	657.8	665.4
60°	539.7	547.9	556.1	564.4	572.6	581.9	592.4	602.8	613.2	623.7	631.0
62.5°	502.0	511.0	520.0	529.1	538.0	547.7	558.2	568.6	579.1	589.5	596.7
65°	441.4	451.6	461.6	471.8	481.9	492.3	503.1	513.9	524.6	535.4	543.3
67.5°	383.0	393.8	404.6	415.3	426.1	437.2	448.7	460.2	471.7	483.3	491.3
70°	343.1	353.9	364.7	375.4	386.2	397.6	409.6	421.6	433.6	445.7	454.2
72.5°	304.4	315.4	326.5	337.4	348.5	360.3	373.2	385.9	398.7	411.5	419.8
75°	245.0	256.6	268.3	280.0	291.8	304.3	317.5	330.8	344.1	357.4	366.2
77.5°	189.4	201.8	214.2	226.6	239.0	252.2	266.1	280.0	293.9	307.8	316.8
80°	155.2	167.8	180.5	193.1	205.8	219.1	233.0	247.0	260.9	274.8	284.3
82.5°	121.0	134.2	147.4	160.5	173.7	187.3	201.2	215.1	229.0	242.9	252.6
85°	75.4	88.7	102.0	115.3	128.6	142.4	156.6	170.9	185.1	199.4	208.8
87.5°	42.8	56.2	69.6	83.0	96.4	110.2	124.5	138.8	152.9	167.2	176.6
90°	25.9	41.1	56.3	71.4	86.7	101.9	117.4	132.9	148.3	163.7	174.3
92.5°	43.8	58.1	72.4	86.7	100.9	115.6	130.5	145.3	160.2	175.1	184.9
95°	80.7	93.2	105.7	118.2	130.7	144.3	158.9	173.4	188.1	202.6	211.9
97.5°	125.4	136.0	146.7	157.3	167.9	180.7	195.4	210.1	224.8	239.6	248.7
100°	160.7	169.9	179.0	188.2	197.3	209.1	223.5	237.9	252.4	266.7	275.7
102.5°	198.9	206.4	214.0	221.6	229.2	240.0	253.9	267.9	281.9	295.9	304.8
105°	254.2	260.7	267.3	273.8	280.4	290.0	302.6	315.3	327.9	340.5	349.1
107.5°	315.0	320.5	326.0	331.4	336.9	345.3	356.4	367.7	378.9	390.1	398.5
110°	355.3	360.3	365.2	370.0	374.9	382.8	393.6	404.5	415.3	426.1	432.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	397.3	401.3	405.4	409.4	413.4	420.4	430.6	440.8	450.9	461.1	468.0
115°	460.2	463.1	465.9	468.8	471.6	477.9	487.6	497.2	506.8	516.6	523.3
117.5°	520.8	522.7	524.7	526.6	528.4	534.0	543.1	552.1	561.2	570.3	576.1
120°	560.4	562.2	564.1	566.0	567.8	573.0	581.5	590.0	598.4	606.9	612.1
122.5°	602.6	603.2	603.7	604.3	604.8	609.3	617.6	626.0	634.4	642.7	648.2
125°	663.5	663.3	662.9	662.6	662.3	665.9	673.7	681.4	689.0	696.7	702.2
127.5°	719.8	720.2	720.6	720.9	721.3	724.3	730.0	735.8	741.5	747.2	752.4
130°	758.5	758.8	759.2	759.6	760.0	762.7	767.8	772.8	777.8	782.9	788.2
132.5°	799.1	799.2	799.4	799.7	799.9	801.8	805.7	809.6	813.5	817.3	822.3
135°	851.3	852.7	854.1	855.5	856.8	858.6	860.9	863.1	865.3	867.5	872.1
137.5°	909.7	910.1	910.4	910.7	911.1	912.0	913.4	914.8	916.3	917.7	921.8
140°	948.7	948.9	949.0	949.1	949.3	949.5	949.9	950.1	950.5	950.7	954.7
142.5°	983.2	983.6	984.0	984.4	984.8	984.8	984.4	984.1	983.6	983.3	986.9
145°	1032.2	1032.9	1033.4	1034.0	1034.7	1035.1	1035.3	1035.5	1035.7	1036.0	1037.7
147.5°	1081.1	1081.9	1082.7	1083.5	1084.3	1084.6	1084.4	1084.2	1084.1	1083.9	1084.0
150°	1111.0	1111.6	1112.1	1112.8	1113.4	1113.7	1113.7	1113.7	1113.7	1113.7	1113.7
152.5°	1138.0	1138.5	1139.0	1139.5	1140.0	1140.3	1140.5	1140.7	1140.9	1141.0	1141.6
155°	1181.0	1181.0	1181.0	1181.0	1181.0	1180.9	1180.7	1180.4	1180.2	1180.0	1180.9
157.5°	1217.5	1217.1	1216.7	1216.3	1215.8	1215.6	1215.6	1215.5	1215.5	1215.4	1216.1
160°	1239.0	1238.9	1238.6	1238.3	1238.1	1237.9	1237.7	1237.4	1237.2	1237.0	1237.7
162.5°	1258.9	1258.3	1257.8	1257.1	1256.5	1256.2	1255.9	1255.7	1255.4	1255.2	1256.4
165°	1285.7	1285.0	1284.2	1283.6	1282.9	1282.3	1281.8	1281.4	1280.9	1280.5	1281.8
167.5°	1306.2	1305.2	1304.2	1303.2	1302.3	1301.8	1301.9	1301.9	1302.0	1302.0	1303.4
170°	1317.8	1316.6	1315.5	1314.3	1313.1	1312.7	1313.0	1313.1	1313.4	1313.7	1315.0
172.5°	1326.1	1325.1	1324.1	1323.1	1322.2	1321.7	1321.8	1321.9	1321.9	1322.0	1323.5
175°	1337.5	1336.3	1335.2	1334.0	1332.8	1332.1	1331.9	1331.7	1331.5	1331.2	1332.8
177.5°	1341.2	1340.2	1339.3	1338.5	1337.5	1337.0	1337.0	1337.0	1337.0	1337.0	1338.4
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1267.1	1268.9	1270.7	1271.4	1271.1	1270.9	1270.7	1270.4
5°	1263.8	1266.3	1268.8	1270.0	1269.6	1269.4	1269.0	1268.7
7.5°	1257.0	1259.9	1262.8	1264.0	1263.6	1263.4	1263.0	1262.8
10°	1250.2	1253.0	1255.9	1257.1	1256.9	1256.5	1256.2	1255.9
12.5°	1240.5	1243.1	1245.7	1247.1	1247.0	1246.9	1246.8	1246.8
15°	1223.2	1226.0	1228.8	1230.1	1229.8	1229.5	1229.1	1228.8
17.5°	1201.9	1204.8	1207.7	1209.1	1208.8	1208.5	1208.3	1208.0
20°	1185.4	1188.5	1191.7	1193.2	1193.2	1193.2	1193.2	1193.2
22.5°	1165.9	1169.1	1172.2	1174.1	1174.7	1175.1	1175.6	1176.2
25°	1136.1	1139.6	1143.1	1145.0	1145.3	1145.6	1145.9	1146.2
27.5°	1102.6	1105.8	1109.0	1110.8	1111.3	1111.6	1112.0	1112.3
30°	1079.1	1082.6	1086.1	1088.2	1088.8	1089.4	1090.0	1090.7
32.5°	1055.1	1059.1	1063.1	1065.4	1066.0	1066.7	1067.3	1067.9
35°	1017.0	1021.4	1025.8	1028.5	1029.5	1030.5	1031.4	1032.3
37.5°	977.2	981.7	986.2	989.0	990.0	991.0	992.0	993.0
40°	949.2	954.0	958.8	961.8	963.0	964.3	965.5	966.8
42.5°	921.8	927.0	932.3	935.4	936.5	937.5	938.4	939.5
45°	879.3	884.8	890.1	893.6	895.2	896.7	898.3	899.9
47.5°	834.5	840.0	845.6	849.3	851.2	853.1	855.0	856.9
50°	802.9	809.2	815.6	819.7	821.6	823.5	825.4	827.2
52.5°	771.1	777.4	783.6	787.8	789.7	791.6	793.4	795.4
55°	723.2	729.5	735.8	739.9	741.8	743.8	745.6	747.5
57.5°	672.9	680.5	688.0	692.6	694.4	696.2	697.9	699.7
60°	638.2	645.5	652.7	657.6	660.2	662.7	665.3	667.8
62.5°	604.0	611.4	618.6	623.5	626.1	628.6	631.1	633.6
65°	551.2	559.1	567.0	572.2	574.8	577.3	579.9	582.4
67.5°	499.4	507.4	515.4	520.7	523.2	525.6	528.1	530.6
70°	462.8	471.3	479.8	485.3	487.4	489.6	491.9	494.1
72.5°	428.1	436.4	444.7	450.0	452.5	455.0	457.4	459.9
75°	375.1	384.0	392.8	398.7	401.5	404.4	407.2	410.1
77.5°	325.8	334.8	343.8	349.8	352.8	355.9	358.9	361.9
80°	293.8	303.3	312.8	318.8	321.3	323.9	326.4	329.0
82.5°	262.4	272.2	281.9	288.2	291.0	293.7	296.5	299.3
85°	218.3	227.8	237.3	243.6	246.8	249.9	253.2	256.3
87.5°	186.1	195.6	205.0	211.2	214.0	216.9	219.8	222.7
90°	184.9	195.5	206.0	212.8	215.8	218.7	221.8	224.7
92.5°	194.7	204.4	214.2	220.4	223.3	226.0	228.9	231.7
95°	221.1	230.3	239.5	245.6	248.4	251.3	254.1	257.0
97.5°	257.8	266.9	276.1	282.0	284.7	287.4	290.2	292.8
100°	284.7	293.7	302.7	308.4	310.6	312.8	315.0	317.2
102.5°	313.7	322.6	331.5	337.3	340.0	342.7	345.4	347.9
105°	357.8	366.3	375.0	380.8	384.1	387.3	390.5	393.8
107.5°	407.0	415.4	423.8	429.2	431.4	433.6	435.9	438.1
110°	439.8	446.6	453.4	458.4	461.6	464.8	468.1	471.4





TEST NUMBER: P332710-940

CATALOG NUMBER: SA4XXDIP-C1195D1205U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	474.9	481.9	488.7	493.6	496.2	498.9	501.6	504.3
115°	530.0	536.7	543.5	547.9	549.8	551.8	553.8	555.8
117.5°	581.9	587.7	593.5	597.5	599.6	601.6	603.7	605.7
120°	617.3	622.5	627.7	631.7	634.7	637.8	640.7	643.7
122.5°	653.8	659.3	664.9	668.3	669.9	671.3	672.7	674.1
125°	707.8	713.4	718.9	722.4	723.8	725.2	726.7	728.2
127.5°	757.7	762.9	768.1	771.7	773.5	775.3	777.0	778.8
130°	793.4	798.6	803.9	807.0	808.0	809.0	809.9	810.9
132.5°	827.3	832.3	837.2	840.5	842.0	843.6	845.1	846.7
135°	876.7	881.3	885.9	888.9	890.0	891.3	892.4	893.7
137.5°	925.8	929.8	933.8	936.7	938.4	940.1	941.8	943.5
140°	958.5	962.4	966.3	968.9	970.3	971.6	972.9	974.4
142.5°	990.4	994.0	997.6	1000.0	1001.2	1002.6	1003.8	1005.1
145°	1039.3	1041.0	1042.7	1043.7	1044.4	1044.9	1045.5	1046.1
147.5°	1084.0	1084.1	1084.1	1084.6	1085.3	1086.1	1086.9	1087.7
150°	1113.7	1113.7	1113.7	1113.6	1113.3	1113.1	1112.9	1112.7
152.5°	1142.1	1142.7	1143.3	1143.3	1142.6	1142.0	1141.4	1140.9
155°	1181.9	1182.8	1183.7	1183.7	1182.8	1181.9	1180.9	1180.0
157.5°	1216.8	1217.5	1218.2	1218.2	1217.4	1216.6	1215.8	1215.0
160°	1238.3	1239.0	1239.7	1239.5	1238.3	1237.2	1236.1	1234.9
162.5°	1257.7	1258.9	1260.2	1260.3	1259.1	1257.9	1256.8	1255.6
165°	1283.3	1284.6	1286.0	1286.2	1285.3	1284.4	1283.4	1282.5
167.5°	1304.8	1306.2	1307.5	1307.5	1306.1	1304.7	1303.2	1301.8
170°	1316.4	1317.8	1319.2	1319.0	1317.4	1315.8	1314.2	1312.6
172.5°	1325.1	1326.6	1328.2	1328.2	1326.5	1324.9	1323.3	1321.7
175°	1334.4	1336.1	1337.7	1337.7	1336.1	1334.4	1332.8	1331.2
177.5°	1339.6	1341.0	1342.2	1342.1	1340.6	1339.2	1337.7	1336.2
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5

(END OF REPORT)