

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: P332202-930

Luminaire Tested: **S123DIW-S1000D1320U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332202-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D1320U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1320 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7665.1 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

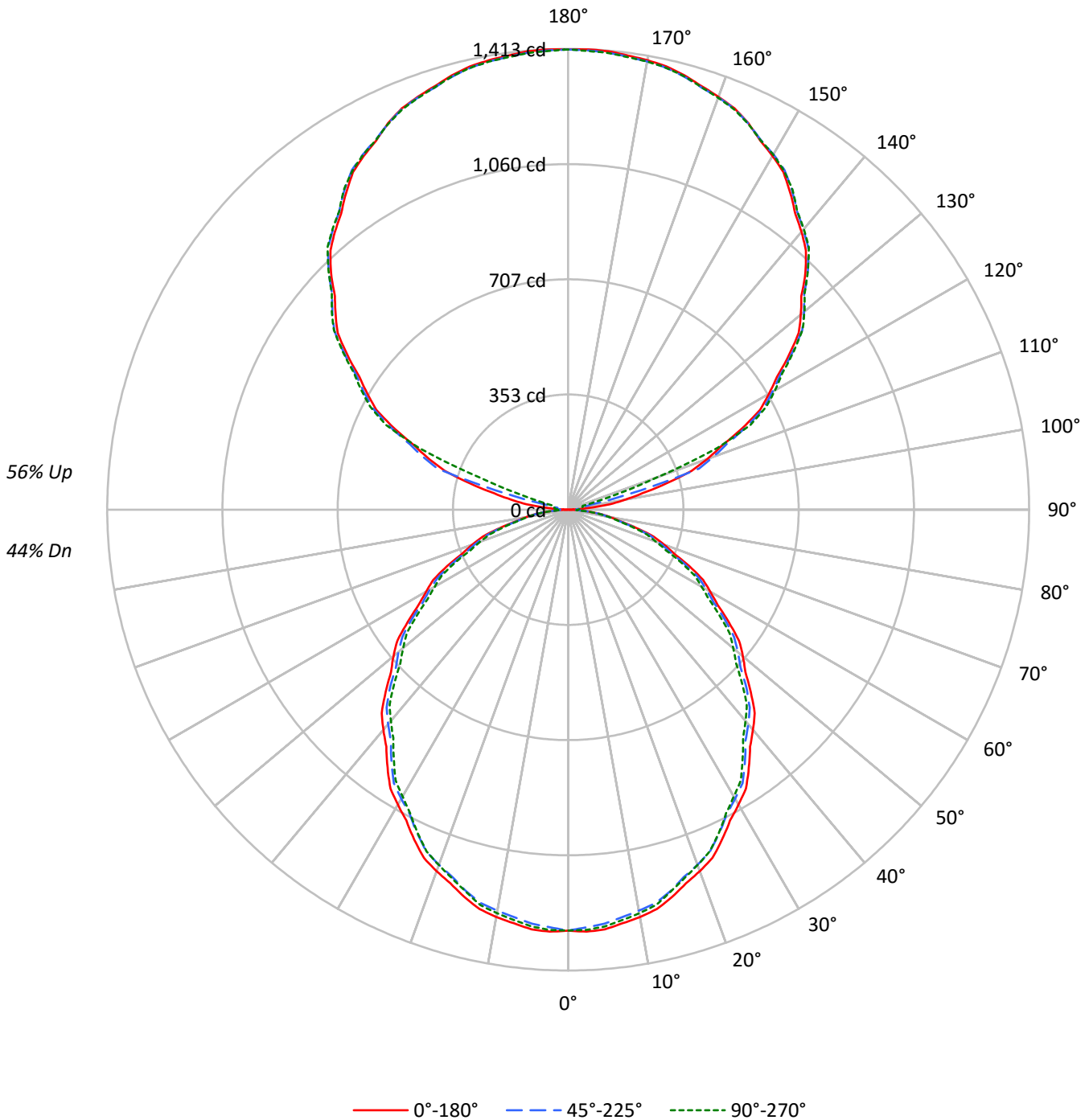
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	50	50	50	44				
1	96	92	88	85	88	84	81	78	70	68	65	57	55	54	45	43	42	37				
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36	31				
3	80	71	63	57	73	65	58	53	54	49	45	44	41	38	35	32	30	26				
4	73	62	55	49	67	57	51	45	48	43	39	39	35	32	31	28	26	22				
5	67	56	47	42	61	51	44	39	43	37	33	35	31	28	28	25	23	19				
6	62	50	42	36	56	46	39	34	39	33	29	32	28	24	25	22	20	17				
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18	15				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	20	17	14	12				
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13891	13891	13891
5°	13956	13765	13861
10°	13864	13645	13729
15°	13701	13490	13515
20°	13512	13270	13283
25°	13258	13007	12981
30°	12978	12716	12619
35°	12686	12408	12248
40°	12381	12067	11880
45°	12044	11756	11469
50°	11707	11372	11055
55°	11265	10975	10640
60°	10820	10512	10176
65°	10427	10004	9694
70°	9847	9429	9010
75°	9000	8675	8305
80°	8114	7773	7705
85°	7126	6854	6570



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	1.6
10°-20°	343.3	4.5
20°-30°	507.0	6.6
30°-40°	592.3	7.7
40°-50°	595.5	7.8
50°-60°	523.1	6.8
60°-70°	389.7	5.1
70°-80°	222.0	2.9
80°-90°	67.7	0.9
90°-100°	51.3	0.7
100°-110°	244.5	3.2
110°-120°	587.3	7.7
120°-130°	747.9	9.8
130°-140°	799.1	10.4
140°-150°	747.2	9.7
150°-160°	602.7	7.9
160°-170°	389.0	5.1
170°-180°	134.1	1.7
0°-30°	971.9	12.7
0°-40°	1564.1	20.4
0°-60°	2682.6	35.0
0°-90°	3362.0	43.9
90°-120°	883.1	11.5
90°-150°	3177.3	41.5
90°-180°	4303.0	56.1
0°-180°	7665.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1292	1286	1274	1284	1283	122
15°	1230	1224	1211	1219	1213	346
25°	1116	1109	1095	1096	1093	514
35°	965	958	944	938	932	604
45°	791	786	772	759	753	611
55°	600	598	585	573	567	538
65°	409	404	393	384	381	404
75°	216	212	209	203	200	231
85°	58	56	56	53	53	63
90°	1	12	25	29	32	6
95°	64	24	32	40	40	79
105°	312	318	230	54	46	331
115°	586	592	602	612	616	578
125°	826	834	839	841	843	737
135°	1028	1035	1039	1042	1039	791
145°	1187	1194	1196	1198	1198	743
155°	1307	1305	1306	1311	1305	602
165°	1379	1376	1374	1382	1375	389
175°	1411	1406	1407	1413	1406	134
180°	1411	1411	1411	1411	1411	



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1294.9	1294.2	1293.4	1292.6	1291.8	1290.3	1288.2	1286.0	1283.9	1281.7	1283.6
5°	1291.6	1290.4	1289.2	1287.9	1286.7	1284.7	1282.1	1279.3	1276.6	1273.9	1276.4
7.5°	1279.0	1277.7	1276.5	1275.3	1274.1	1272.0	1269.3	1266.4	1263.6	1260.8	1263.0
10°	1268.4	1267.1	1265.8	1264.6	1263.4	1261.2	1258.0	1254.7	1251.6	1248.4	1250.6
12.5°	1254.1	1253.1	1252.1	1251.0	1250.0	1248.0	1245.0	1241.9	1238.9	1235.9	1237.5
15°	1229.5	1228.5	1227.5	1226.5	1225.6	1223.4	1220.3	1217.1	1213.8	1210.6	1212.6
17.5°	1200.9	1199.5	1198.3	1197.0	1195.7	1193.5	1190.3	1187.1	1183.9	1180.6	1182.0
20°	1179.6	1178.1	1176.6	1175.1	1173.6	1171.3	1168.1	1164.9	1161.7	1158.5	1159.4
22.5°	1155.6	1154.1	1152.7	1151.1	1149.7	1147.4	1144.1	1140.9	1137.8	1134.5	1135.3
25°	1116.3	1114.8	1113.4	1111.9	1110.4	1108.1	1104.8	1101.6	1098.5	1095.2	1095.4
27.5°	1074.4	1072.9	1071.5	1070.1	1068.6	1066.2	1062.7	1059.3	1055.8	1052.4	1052.6
30°	1044.2	1042.9	1041.7	1040.5	1039.3	1036.9	1033.5	1030.0	1026.5	1023.1	1023.1
32.5°	1014.0	1012.4	1010.7	1009.1	1007.5	1005.3	1002.7	1000.0	997.4	994.7	993.3
35°	965.4	963.9	962.5	961.0	959.4	957.2	953.9	950.7	947.5	944.3	942.8
37.5°	915.7	913.8	911.9	910.0	908.2	905.6	902.4	899.1	895.9	892.6	890.8
40°	881.1	879.5	878.1	876.6	875.1	872.7	869.2	865.8	862.3	858.8	856.9
42.5°	846.4	844.7	843.1	841.4	839.8	837.1	833.7	830.3	826.8	823.4	821.4
45°	791.2	790.2	789.2	788.2	787.3	785.1	782.0	778.7	775.5	772.3	769.4
47.5°	736.4	734.9	733.5	732.1	730.7	728.4	725.5	722.4	719.4	716.4	713.5
50°	699.1	697.8	696.6	695.4	694.1	691.9	688.7	685.5	682.3	679.1	676.4
52.5°	660.0	659.2	658.4	657.5	656.6	654.5	651.2	647.8	644.3	640.9	638.6
55°	600.3	600.1	599.8	599.6	599.3	597.6	594.4	591.2	588.0	584.8	582.0
57.5°	543.5	542.7	541.8	541.0	540.1	538.4	535.9	533.3	530.8	528.2	525.8
60°	502.6	502.4	502.1	501.9	501.7	500.1	497.1	494.2	491.2	488.3	486.0
62.5°	466.3	465.6	465.0	464.3	463.7	461.9	458.9	456.0	453.1	450.0	447.8
65°	409.4	408.2	407.0	405.8	404.6	402.7	400.2	397.8	395.3	392.8	390.9
67.5°	349.4	348.2	347.2	346.1	345.0	343.5	341.6	339.7	337.9	336.0	334.3
70°	312.9	311.4	310.0	308.5	307.0	305.5	304.0	302.6	301.1	299.6	297.9
72.5°	274.8	273.7	272.6	271.5	270.4	269.0	267.3	265.7	264.0	262.3	260.8
75°	216.4	215.4	214.4	213.4	212.5	211.6	210.8	210.1	209.4	208.6	207.4
77.5°	164.7	164.1	163.5	163.1	162.5	161.8	160.9	160.0	159.1	158.2	157.4
80°	130.9	130.2	129.5	128.7	128.0	127.3	126.9	126.4	125.9	125.4	125.1
82.5°	98.1	97.9	97.8	97.7	97.5	97.3	97.3	97.2	97.1	97.0	96.5
85°	57.7	57.2	56.7	56.3	55.8	55.5	55.5	55.5	55.5	55.5	55.0
87.5°	23.3	23.2	23.1	22.9	22.7	22.9	23.3	23.7	24.1	24.5	24.5
90°	1.1	3.3	5.7	8.1	10.4	13.0	16.1	19.1	22.1	25.2	26.1
92.5°	19.5	18.8	18.2	17.5	16.9	17.7	20.0	22.3	24.5	26.8	28.3
95°	63.9	54.4	44.8	35.3	25.8	22.3	24.8	27.4	29.9	32.5	34.2
97.5°	128.5	124.3	119.9	115.7	111.4	100.9	84.1	67.3	50.5	33.8	35.6
100°	177.2	181.8	186.5	191.1	195.8	179.9	143.7	107.3	70.9	34.6	36.4
102.5°	232.5	235.9	239.2	242.6	246.0	227.8	188.1	148.4	108.7	69.0	63.2
105°	312.4	315.0	317.6	320.1	322.6	313.5	292.4	271.5	250.5	229.6	188.3
107.5°	396.7	398.8	400.8	402.8	404.9	407.6	410.9	414.2	417.5	420.8	390.5
110°	452.9	454.8	456.6	458.4	460.3	462.5	465.1	467.7	470.3	472.8	465.1



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	506.5	508.3	509.9	511.6	513.2	515.4	518.0	520.5	523.1	525.6	525.8
115°	586.0	587.4	588.8	590.2	591.6	593.4	595.4	597.5	599.7	601.8	604.1
117.5°	663.0	664.7	666.4	668.1	669.8	671.2	672.3	673.4	674.5	675.6	677.4
120°	710.8	712.9	714.9	717.1	719.2	720.6	721.2	721.9	722.7	723.3	725.2
122.5°	759.5	761.2	762.9	764.6	766.3	767.6	768.5	769.4	770.3	771.2	772.5
125°	826.1	827.9	829.8	831.7	833.6	834.9	835.8	836.8	837.7	838.7	839.1
127.5°	890.6	892.5	894.4	896.3	898.1	899.6	900.7	901.9	902.9	904.1	904.8
130°	930.9	932.8	934.7	936.5	938.4	939.8	940.7	941.7	942.6	943.5	944.4
132.5°	969.5	971.3	973.2	975.1	977.0	978.3	979.0	979.7	980.5	981.2	982.2
135°	1028.4	1029.8	1031.2	1032.6	1034.0	1035.2	1036.1	1037.1	1038.0	1038.9	1039.6
137.5°	1078.7	1080.5	1082.3	1084.0	1085.8	1087.0	1087.4	1088.0	1088.5	1089.0	1090.1
140°	1112.3	1113.7	1115.1	1116.5	1117.9	1118.9	1119.7	1120.3	1121.0	1121.7	1122.7
142.5°	1143.3	1144.7	1146.1	1147.5	1148.9	1150.0	1150.6	1151.4	1152.0	1152.8	1153.5
145°	1186.7	1188.4	1190.0	1191.6	1193.3	1194.3	1194.7	1195.2	1195.7	1196.1	1196.6
147.5°	1227.6	1228.7	1229.7	1230.8	1231.9	1232.7	1233.1	1233.5	1234.0	1234.5	1235.0
150°	1252.8	1253.4	1254.2	1254.8	1255.6	1256.1	1256.6	1257.0	1257.5	1258.0	1258.5
152.5°	1275.4	1275.7	1276.0	1276.4	1276.7	1277.0	1277.3	1277.6	1277.8	1278.1	1279.0
155°	1307.3	1306.8	1306.4	1305.9	1305.4	1305.3	1305.5	1305.8	1306.0	1306.2	1307.4
157.5°	1332.0	1332.0	1332.0	1331.9	1331.8	1331.7	1331.5	1331.2	1331.0	1330.7	1332.1
160°	1347.1	1346.9	1346.6	1346.4	1346.1	1346.0	1345.7	1345.5	1345.2	1345.0	1346.4
162.5°	1361.4	1360.7	1360.2	1359.5	1358.9	1358.5	1358.3	1358.0	1357.8	1357.6	1359.2
165°	1378.6	1377.9	1377.1	1376.5	1375.7	1375.3	1375.1	1374.8	1374.6	1374.4	1376.2
167.5°	1392.0	1391.1	1390.1	1389.2	1388.2	1387.8	1387.8	1387.8	1387.8	1387.8	1389.7
170°	1399.5	1398.6	1397.7	1396.8	1395.8	1395.3	1395.3	1395.3	1395.3	1395.3	1397.2
172.5°	1404.6	1403.5	1402.3	1401.2	1400.1	1399.6	1399.8	1400.0	1400.2	1400.4	1402.2
175°	1411.0	1409.9	1408.8	1407.5	1406.4	1405.9	1406.1	1406.4	1406.6	1406.9	1408.5
177.5°	1412.8	1411.8	1410.9	1410.0	1409.0	1408.7	1408.8	1409.0	1409.2	1409.4	1410.9
180°	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1285.6	1287.6	1289.6	1290.5	1290.2	1290.0	1289.8	1289.6
5°	1278.8	1281.2	1283.8	1284.7	1284.3	1283.8	1283.3	1282.8
7.5°	1265.3	1267.5	1269.7	1270.6	1270.3	1270.1	1269.7	1269.4
10°	1252.8	1255.0	1257.3	1258.1	1257.6	1257.1	1256.6	1256.1
12.5°	1239.2	1240.8	1242.4	1243.1	1242.8	1242.5	1242.2	1241.9
15°	1214.6	1216.5	1218.5	1218.8	1217.3	1215.8	1214.3	1212.8
17.5°	1183.4	1184.8	1186.2	1186.6	1186.1	1185.5	1185.0	1184.5
20°	1160.4	1161.5	1162.5	1162.5	1161.8	1161.1	1160.3	1159.6
22.5°	1136.1	1136.9	1137.7	1137.6	1136.7	1135.7	1134.8	1133.8
25°	1095.7	1096.0	1096.3	1096.0	1095.2	1094.5	1093.7	1093.0
27.5°	1052.8	1053.0	1053.2	1052.8	1051.9	1050.9	1050.0	1049.0
30°	1023.1	1023.1	1023.1	1022.2	1020.5	1018.8	1017.1	1015.3
32.5°	991.9	990.6	989.2	988.0	987.1	986.1	985.2	984.2
35°	941.3	939.9	938.4	937.0	935.8	934.6	933.4	932.1
37.5°	889.1	887.3	885.5	884.2	883.5	882.6	881.8	881.1
40°	854.9	853.0	851.0	849.5	848.5	847.5	846.5	845.5
42.5°	819.4	817.4	815.5	814.0	813.0	812.0	811.1	810.1
45°	766.4	763.4	760.5	758.4	757.2	755.9	754.7	753.4
47.5°	710.5	707.7	704.7	702.8	701.6	700.6	699.5	698.4
50°	673.7	671.0	668.2	666.2	664.7	663.2	661.7	660.2
52.5°	636.3	634.0	631.7	629.7	628.3	626.8	625.3	623.9
55°	579.4	576.7	574.0	571.9	570.7	569.5	568.3	567.0
57.5°	523.3	521.0	518.5	516.6	515.2	513.7	512.3	510.9
60°	483.8	481.6	479.4	477.7	476.4	475.2	473.9	472.7
62.5°	445.6	443.4	441.2	439.7	438.8	438.0	437.2	436.3
65°	388.9	386.9	384.9	383.6	382.9	382.1	381.3	380.6
67.5°	332.6	330.8	329.1	327.8	326.7	325.6	324.6	323.6
70°	296.1	294.4	292.7	291.2	290.0	288.8	287.6	286.3
72.5°	259.3	257.7	256.2	255.1	254.5	253.8	253.2	252.6
75°	206.2	204.9	203.7	202.7	201.9	201.2	200.5	199.7
77.5°	156.5	155.7	154.9	154.5	154.5	154.5	154.5	154.5
80°	124.9	124.7	124.4	124.3	124.3	124.3	124.3	124.3
82.5°	96.1	95.6	95.2	94.9	94.7	94.5	94.3	94.1
85°	54.5	54.0	53.5	53.2	53.2	53.2	53.2	53.2
87.5°	24.5	24.5	24.5	24.5	24.6	24.8	24.9	24.9
90°	27.0	28.0	28.9	29.6	30.1	30.5	31.0	31.5
92.5°	29.8	31.3	32.8	33.7	34.0	34.2	34.5	34.8
95°	35.8	37.4	39.1	39.9	39.9	39.9	39.9	39.9
97.5°	37.5	39.4	41.2	42.2	42.5	42.7	43.0	43.2
100°	38.3	40.2	42.1	43.1	43.3	43.5	43.8	44.0
102.5°	57.4	51.6	45.9	43.2	43.6	44.0	44.4	44.8
105°	147.1	105.9	64.7	44.3	44.8	45.2	45.7	46.1
107.5°	360.4	330.1	299.9	269.2	238.1	207.0	175.9	144.9
110°	457.4	449.7	442.1	421.5	388.2	354.9	321.6	288.3



TEST NUMBER: P332202-930

CATALOG NUMBER: S123DIW-S1000D1320U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	525.9	526.0	526.2	522.8	515.7	508.7	501.7	494.6
115°	606.4	608.7	611.1	612.7	613.6	614.6	615.5	616.4
117.5°	679.3	681.1	683.0	684.0	684.2	684.4	684.6	684.8
120°	727.1	729.0	730.8	731.7	731.7	731.7	731.7	731.7
122.5°	773.8	775.1	776.4	777.1	777.3	777.5	777.7	777.9
125°	839.6	840.1	840.5	841.0	841.5	842.0	842.4	842.9
127.5°	905.6	906.3	907.1	907.2	906.8	906.3	905.8	905.3
130°	945.3	946.3	947.2	947.5	947.0	946.6	946.1	945.6
132.5°	983.1	984.1	985.0	985.1	984.5	983.8	983.2	982.5
135°	1040.3	1041.0	1041.7	1041.7	1041.0	1040.3	1039.6	1038.9
137.5°	1091.3	1092.3	1093.5	1093.8	1093.3	1092.9	1092.4	1091.9
140°	1123.6	1124.5	1125.4	1125.7	1125.2	1124.7	1124.3	1123.8
142.5°	1154.2	1155.0	1155.8	1155.8	1155.1	1154.5	1153.8	1153.2
145°	1197.1	1197.5	1198.0	1198.2	1198.2	1198.2	1198.2	1198.2
147.5°	1235.4	1235.9	1236.4	1236.1	1235.0	1234.0	1232.9	1231.8
150°	1258.9	1259.4	1259.9	1259.7	1259.1	1258.3	1257.7	1256.9
152.5°	1279.8	1280.7	1281.5	1281.4	1280.3	1279.2	1278.1	1277.1
155°	1308.6	1309.7	1310.9	1310.8	1309.4	1308.0	1306.6	1305.2
157.5°	1333.6	1335.0	1336.4	1336.1	1334.3	1332.5	1330.6	1328.9
160°	1347.8	1349.2	1350.6	1350.5	1348.8	1347.2	1345.6	1343.9
162.5°	1360.7	1362.4	1363.9	1364.0	1362.5	1361.1	1359.7	1358.2
165°	1378.1	1380.0	1381.9	1381.9	1380.3	1378.7	1377.0	1375.4
167.5°	1391.6	1393.3	1395.2	1395.2	1393.3	1391.6	1389.7	1387.8
170°	1399.1	1400.9	1402.8	1402.8	1400.9	1399.1	1397.2	1395.3
172.5°	1404.1	1406.0	1407.9	1407.7	1405.7	1403.6	1401.6	1399.5
175°	1410.1	1411.8	1413.4	1413.2	1411.4	1409.6	1407.7	1405.8
177.5°	1412.3	1413.9	1415.4	1415.2	1413.3	1411.4	1409.6	1407.7
180°	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0

(END OF REPORT)