

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: P332191-935

Luminaire Tested: **S123DIW-S1000D755U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332191-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIW-S1000D755U935-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5802.7 lumens  
Efficiency: N/A  
Efficacy: 108.3 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: Semi-Direct

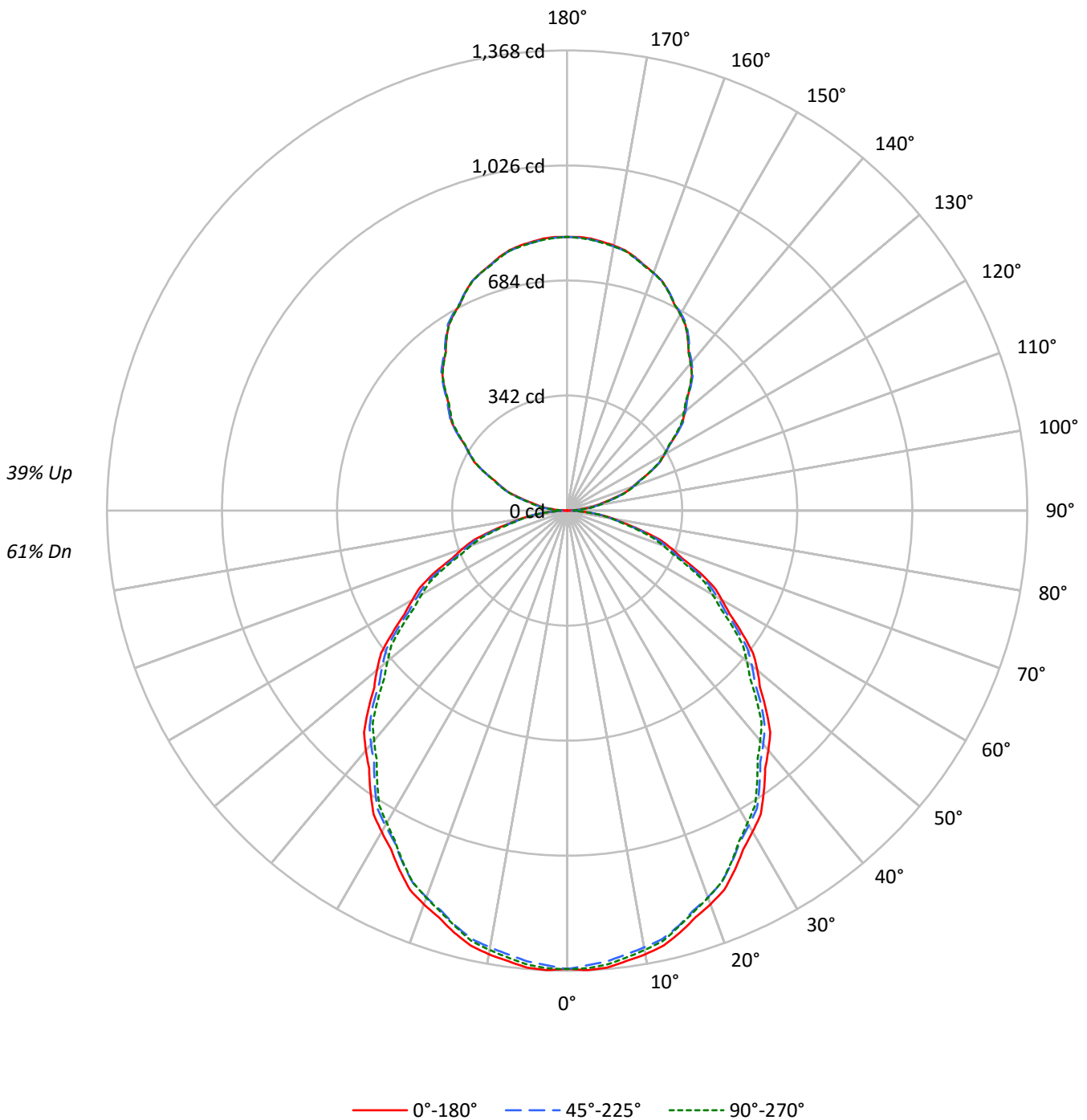
Input Watts (W): 53.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**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	110	110	110	110	103	103	103	103	90	90	90		77	77	77		66	66	66	61
1	100	96	92	88	94	90	86	83	78	76	73		68	66	64		59	57	56	51
2	91	84	77	72	85	78	73	68	69	64	61		60	57	54		51	49	47	43
3	83	73	66	60	78	69	62	57	61	55	51		53	49	45		46	43	40	36
4	76	65	57	51	71	61	54	48	54	48	44		47	43	39		41	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38		42	38	34		37	33	30	27
6	64	52	44	38	60	49	42	36	44	37	33		38	33	30		33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29		35	30	26		30	27	24	21
8	55	43	35	29	52	41	33	28	36	30	26		32	27	23		28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23		29	25	21		26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21		27	22	19		24	20	17	15

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

	0°	45°	90°
0°	14670	14670	14670
5°	14738	14536	14638
10°	14641	14410	14499
15°	14469	14247	14273
20°	14269	14014	14027
25°	14001	13737	13709
30°	13706	13430	13326
35°	13397	13104	12935
40°	13075	12745	12546
45°	12718	12415	12113
50°	12363	12010	11675
55°	11898	11590	11237
60°	11427	11102	10747
65°	11013	10565	10236
70°	10401	9958	9514
75°	9503	9162	8771
80°	8573	8207	8133
85°	7534	7237	6941



TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.4	2.2
10°-20°	362.5	6.2
20°-30°	535.5	9.2
30°-40°	625.5	10.8
40°-50°	628.8	10.8
50°-60°	552.4	9.5
60°-70°	411.5	7.1
70°-80°	234.5	4.0
80°-90°	69.7	1.2
90°-100°	53.0	0.9
100°-110°	158.6	2.7
110°-120°	269.8	4.6
120°-130°	354.9	6.1
130°-140°	398.9	6.9
140°-150°	392.1	6.8
150°-160°	330.1	5.7
160°-170°	219.7	3.8
170°-180°	76.9	1.3
0°-30°	1026.3	17.7
0°-40°	1651.8	28.5
0°-60°	2833.0	48.8
0°-90°	3548.7	61.2
90°-120°	481.4	8.3
90°-150°	1627.3	28.0
90°-180°	2254.0	38.8
0°-180°	5802.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1363	1363	1363	1363	1363	
5°	1364	1358	1345	1356	1355	129
15°	1298	1293	1278	1287	1281	366
25°	1179	1171	1157	1158	1154	543
35°	1020	1012	997	990	984	638
45°	836	830	816	802	796	645
55°	634	632	618	605	599	568
65°	432	426	415	406	402	427
75°	228	224	220	215	211	244
85°	61	59	59	56	56	67
90°	1	7	15	18	19	6
95°	38	42	47	50	50	42
105°	144	145	151	151	152	154
115°	272	273	272	273	272	269
125°	398	399	398	396	393	354
135°	516	519	519	516	515	397
145°	626	627	629	628	626	391
155°	716	716	717	719	715	330
165°	780	778	778	782	778	220
175°	812	809	809	812	808	77
180°	814	814	814	814	814	



TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1367.5	1366.8	1365.9	1365.0	1364.3	1362.6	1360.4	1358.1	1355.8	1353.5	1355.6
5°	1364.0	1362.7	1361.4	1360.1	1358.8	1356.8	1353.9	1351.0	1348.2	1345.3	1347.9
7.5°	1350.7	1349.4	1348.1	1346.8	1345.5	1343.3	1340.4	1337.4	1334.5	1331.5	1333.8
10°	1339.5	1338.2	1336.8	1335.5	1334.2	1331.9	1328.5	1325.1	1321.7	1318.4	1320.7
12.5°	1324.4	1323.4	1322.2	1321.1	1320.1	1317.9	1314.7	1311.6	1308.4	1305.2	1306.9
15°	1298.4	1297.4	1296.3	1295.3	1294.3	1292.0	1288.7	1285.3	1281.9	1278.5	1280.6
17.5°	1268.2	1266.8	1265.5	1264.1	1262.7	1260.4	1257.0	1253.6	1250.3	1246.8	1248.3
20°	1245.7	1244.1	1242.6	1241.0	1239.4	1236.9	1233.6	1230.2	1226.8	1223.4	1224.4
22.5°	1220.4	1218.8	1217.3	1215.6	1214.1	1211.7	1208.2	1204.9	1201.5	1198.1	1198.9
25°	1178.9	1177.3	1175.8	1174.2	1172.6	1170.2	1166.7	1163.4	1160.0	1156.6	1156.8
27.5°	1134.6	1133.1	1131.5	1130.1	1128.5	1125.9	1122.3	1118.7	1115.0	1111.4	1111.6
30°	1102.7	1101.4	1100.1	1098.8	1097.5	1095.0	1091.4	1087.7	1084.1	1080.5	1080.5
32.5°	1070.8	1069.1	1067.4	1065.7	1063.9	1061.7	1058.9	1056.1	1053.3	1050.4	1049.0
35°	1019.5	1018.0	1016.4	1014.9	1013.2	1010.8	1007.4	1004.0	1000.7	997.2	995.7
37.5°	967.0	965.0	963.0	961.0	959.1	956.4	953.0	949.5	946.1	942.6	940.7
40°	930.5	928.8	927.3	925.7	924.2	921.6	917.9	914.3	910.7	907.0	904.9
42.5°	893.9	892.1	890.4	888.6	886.8	884.1	880.5	876.8	873.1	869.5	867.5
45°	835.5	834.5	833.4	832.4	831.4	829.1	825.8	822.3	819.0	815.6	812.5
47.5°	777.7	776.1	774.6	773.1	771.6	769.2	766.1	762.9	759.7	756.6	753.5
50°	738.3	736.9	735.6	734.3	733.1	730.7	727.3	723.9	720.6	717.2	714.3
52.5°	697.0	696.1	695.3	694.4	693.4	691.2	687.7	684.1	680.4	676.8	674.4
55°	634.0	633.7	633.4	633.2	632.9	631.1	627.8	624.3	621.0	617.6	614.7
57.5°	573.9	573.1	572.2	571.4	570.4	568.6	565.9	563.2	560.5	557.8	555.3
60°	530.8	530.5	530.3	530.0	529.8	528.1	525.0	521.9	518.8	515.7	513.2
62.5°	492.4	491.7	491.0	490.3	489.7	487.8	484.7	481.6	478.5	475.3	472.9
65°	432.4	431.1	429.8	428.5	427.2	425.2	422.7	420.1	417.4	414.8	412.8
67.5°	368.9	367.7	366.6	365.5	364.3	362.7	360.8	358.8	356.8	354.8	353.0
70°	330.5	328.9	327.4	325.8	324.3	322.6	321.1	319.5	318.0	316.4	314.6
72.5°	290.2	289.0	287.8	286.7	285.6	284.1	282.3	280.6	278.8	277.0	275.4
75°	228.5	227.5	226.4	225.4	224.4	223.4	222.7	221.9	221.1	220.3	219.0
77.5°	173.9	173.3	172.7	172.2	171.6	170.8	170.0	169.0	168.1	167.1	166.3
80°	138.3	137.5	136.7	136.0	135.2	134.5	134.0	133.5	132.9	132.4	132.2
82.5°	103.6	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.5	102.5	101.9
85°	61.0	60.4	59.9	59.4	58.9	58.6	58.6	58.6	58.6	58.6	58.0
87.5°	24.5	24.2	23.8	23.5	23.2	23.1	23.2	23.3	23.5	23.7	23.6
90°	0.6	2.1	3.4	4.9	6.3	7.9	9.8	11.6	13.5	15.3	15.9
92.5°	15.5	16.4	17.4	18.3	19.3	20.3	21.4	22.5	23.5	24.5	25.0
95°	37.7	38.7	39.7	40.7	41.7	42.7	43.9	45.0	46.1	47.3	47.9
97.5°	67.0	67.7	68.4	69.2	69.9	70.7	71.5	72.3	73.2	74.0	74.6
100°	86.9	87.7	88.6	89.5	90.3	91.1	91.8	92.6	93.2	93.9	94.4
102.5°	109.9	110.5	111.0	111.4	111.9	112.7	113.7	114.6	115.5	116.4	116.8
105°	143.8	144.0	144.4	144.6	144.9	145.7	147.0	148.3	149.6	150.8	150.8
107.5°	183.1	183.3	183.5	183.7	183.8	184.2	184.7	185.2	185.7	186.2	186.7
110°	207.7	208.0	208.3	208.5	208.8	209.1	209.4	209.7	210.0	210.3	210.9



TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	233.2	233.4	233.6	233.8	233.9	234.0	234.1	234.2	234.2	234.3	235.0
115°	271.6	272.0	272.4	272.9	273.3	273.4	273.1	272.9	272.5	272.2	272.4
117.5°	310.2	310.5	310.7	311.1	311.3	311.3	310.9	310.6	310.2	309.8	309.8
120°	334.2	335.1	336.0	336.8	337.7	337.7	337.0	336.3	335.6	334.8	334.8
122.5°	359.3	359.9	360.5	361.2	361.8	361.9	361.5	361.2	360.8	360.4	360.1
125°	397.5	398.0	398.4	398.8	399.2	399.2	399.0	398.7	398.4	398.1	397.6
127.5°	432.7	433.7	434.6	435.5	436.4	436.7	436.4	436.1	435.8	435.5	434.6
130°	456.3	457.4	458.6	459.7	460.8	461.2	460.8	460.4	459.9	459.5	458.9
132.5°	479.8	481.0	482.1	483.2	484.4	484.7	484.5	484.1	483.8	483.5	482.8
135°	515.7	516.6	517.5	518.3	519.1	519.5	519.4	519.2	519.1	518.9	518.3
137.5°	549.0	549.7	550.4	551.1	551.8	552.3	552.7	553.1	553.5	553.8	553.2
140°	572.0	572.7	573.4	574.1	574.8	575.2	575.4	575.5	575.7	575.8	575.7
142.5°	593.0	593.7	594.3	595.0	595.7	596.2	596.5	596.8	597.0	597.3	597.1
145°	625.7	625.9	626.2	626.5	626.8	627.2	627.6	628.0	628.4	628.9	628.7
147.5°	654.3	654.8	655.3	655.8	656.3	656.8	657.2	657.5	658.0	658.4	658.4
150°	674.2	674.5	674.8	675.1	675.4	675.6	675.9	676.2	676.5	676.7	676.7
152.5°	690.6	691.0	691.4	691.8	692.2	692.4	692.6	692.8	692.9	693.1	693.4
155°	716.4	716.4	716.4	716.4	716.4	716.4	716.6	716.8	716.9	717.0	717.6
157.5°	738.4	738.2	738.0	737.9	737.7	737.7	737.8	737.9	738.0	738.1	738.7
160°	752.2	751.9	751.7	751.3	751.1	750.9	750.9	750.9	750.9	750.9	751.7
162.5°	764.5	764.1	763.6	763.3	762.8	762.8	762.8	762.9	763.1	763.2	763.9
165°	780.3	779.9	779.5	779.0	778.6	778.3	778.3	778.3	778.3	778.3	779.2
167.5°	793.0	792.4	791.9	791.3	790.7	790.5	790.6	790.7	790.8	790.9	791.8
170°	800.1	799.5	799.0	798.4	797.8	797.5	797.5	797.5	797.5	797.5	798.6
172.5°	805.7	805.2	804.6	804.0	803.5	803.1	803.1	803.1	803.1	803.1	804.1
175°	811.6	811.1	810.5	809.9	809.3	809.1	809.1	809.1	809.1	809.1	809.9
177.5°	814.1	813.6	813.1	812.7	812.3	812.0	812.0	812.0	812.0	812.0	812.7
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6



TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1357.6	1359.8	1361.8	1362.8	1362.5	1362.4	1362.1	1361.9
5°	1350.5	1353.1	1355.7	1356.8	1356.2	1355.7	1355.2	1354.7
7.5°	1336.2	1338.5	1340.8	1341.9	1341.5	1341.3	1340.9	1340.6
10°	1323.0	1325.3	1327.7	1328.6	1328.1	1327.6	1327.1	1326.5
12.5°	1308.6	1310.4	1312.1	1312.8	1312.5	1312.2	1311.8	1311.6
15°	1282.6	1284.7	1286.9	1287.1	1285.6	1283.9	1282.4	1280.8
17.5°	1249.7	1251.2	1252.7	1253.1	1252.6	1252.0	1251.4	1250.9
20°	1225.5	1226.6	1227.6	1227.7	1226.9	1226.2	1225.4	1224.6
22.5°	1199.8	1200.6	1201.4	1201.4	1200.4	1199.4	1198.4	1197.4
25°	1157.1	1157.4	1157.7	1157.4	1156.6	1155.8	1155.0	1154.3
27.5°	1111.8	1112.0	1112.2	1111.8	1110.9	1109.8	1108.9	1107.8
30°	1080.5	1080.5	1080.5	1079.5	1077.7	1075.9	1074.1	1072.2
32.5°	1047.5	1046.1	1044.7	1043.4	1042.4	1041.4	1040.4	1039.4
35°	994.1	992.6	991.0	989.5	988.3	987.0	985.7	984.4
37.5°	938.9	937.0	935.1	933.8	933.0	932.1	931.3	930.5
40°	902.8	900.8	898.7	897.1	896.0	895.0	894.0	892.9
42.5°	865.3	863.2	861.2	859.6	858.6	857.6	856.5	855.5
45°	809.3	806.2	803.1	800.9	799.6	798.3	797.0	795.7
47.5°	750.4	747.3	744.2	742.2	741.0	739.9	738.7	737.5
50°	711.4	708.6	705.7	703.5	702.0	700.3	698.8	697.2
52.5°	671.9	669.5	667.1	665.0	663.5	661.9	660.4	658.8
55°	611.8	609.0	606.1	604.0	602.7	601.4	600.1	598.8
57.5°	552.7	550.2	547.6	545.5	544.1	542.5	541.1	539.5
60°	510.9	508.6	506.3	504.5	503.1	501.8	500.5	499.2
62.5°	470.6	468.3	465.9	464.3	463.4	462.5	461.7	460.8
65°	410.7	408.5	406.5	405.1	404.3	403.6	402.7	401.9
67.5°	351.2	349.4	347.6	346.1	345.0	343.9	342.8	341.7
70°	312.7	310.9	309.1	307.5	306.3	305.0	303.7	302.3
72.5°	273.8	272.2	270.5	269.4	268.7	268.0	267.4	266.7
75°	217.7	216.4	215.1	214.0	213.3	212.5	211.7	210.9
77.5°	165.3	164.5	163.6	163.2	163.2	163.2	163.2	163.2
80°	131.9	131.6	131.4	131.2	131.2	131.2	131.2	131.2
82.5°	101.5	101.0	100.6	100.2	100.0	99.8	99.6	99.4
85°	57.5	57.0	56.5	56.2	56.2	56.2	56.2	56.2
87.5°	23.5	23.4	23.3	23.3	23.3	23.4	23.5	23.5
90°	16.4	17.0	17.7	18.0	18.3	18.6	18.9	19.2
92.5°	25.5	25.9	26.3	26.5	26.3	26.2	26.0	25.8
95°	48.4	49.0	49.6	49.9	49.9	49.9	49.9	49.9
97.5°	75.3	75.9	76.6	76.9	76.9	76.8	76.7	76.7
100°	94.8	95.2	95.7	96.0	96.3	96.6	96.9	97.1
102.5°	117.3	117.7	118.1	118.3	118.3	118.2	118.1	118.1
105°	150.8	150.8	150.8	150.9	151.3	151.5	151.8	152.1
107.5°	187.1	187.6	188.0	188.2	188.0	187.9	187.7	187.5
110°	211.4	212.0	212.5	212.7	212.4	212.1	211.8	211.5





TEST NUMBER: P332191-935

CATALOG NUMBER: S123DIW-S1000D755U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.7	236.3	237.0	237.3	237.3	237.2	237.1	237.1
115°	272.5	272.7	272.9	272.9	272.7	272.5	272.4	272.2
117.5°	309.8	309.7	309.7	309.5	309.1	308.7	308.3	307.9
120°	334.6	334.4	334.3	334.1	333.8	333.6	333.2	332.9
122.5°	359.7	359.3	359.0	358.6	358.2	357.7	357.4	357.0
125°	397.0	396.4	395.9	395.3	394.8	394.2	393.6	393.0
127.5°	433.9	433.1	432.3	431.5	430.9	430.2	429.6	429.0
130°	458.4	457.8	457.2	456.4	455.5	454.4	453.5	452.5
132.5°	482.2	481.5	480.8	480.1	479.3	478.5	477.8	477.0
135°	517.8	517.2	516.7	516.3	515.9	515.7	515.4	515.1
137.5°	552.6	552.0	551.5	550.9	550.4	549.7	549.2	548.7
140°	575.5	575.4	575.2	574.6	573.7	572.7	571.7	570.7
142.5°	597.0	596.8	596.7	596.2	595.5	594.7	593.9	593.1
145°	628.5	628.4	628.3	627.9	627.3	626.8	626.2	625.7
147.5°	658.4	658.4	658.4	658.0	657.1	656.3	655.4	654.5
150°	676.7	676.7	676.7	676.3	675.5	674.7	673.8	673.0
152.5°	693.6	693.8	694.1	693.8	693.0	692.3	691.6	690.9
155°	718.2	718.8	719.3	719.1	718.1	717.1	716.1	715.1
157.5°	739.3	739.9	740.5	740.4	739.6	738.8	738.0	737.2
160°	752.3	753.0	753.7	753.8	753.3	752.7	752.1	751.6
162.5°	764.6	765.3	766.0	765.9	765.0	764.1	763.2	762.2
165°	780.1	780.9	781.8	781.7	780.8	779.7	778.8	777.7
167.5°	792.6	793.6	794.4	794.4	793.6	792.6	791.8	790.9
170°	799.5	800.6	801.5	801.5	800.6	799.5	798.6	797.5
172.5°	804.9	805.8	806.7	806.7	805.6	804.7	803.7	802.7
175°	810.8	811.6	812.4	812.4	811.4	810.4	809.4	808.4
177.5°	813.4	814.1	814.8	814.7	813.9	813.0	812.3	811.5
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6

(END OF REPORT)