

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: P331997-935

Luminaire Tested: **S123DIP-S775D1195U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331997-935
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: S123DIP-S775D1195U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6838.0 lumens
Efficiency: N/A
Efficacy: 120.2 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-Indirect

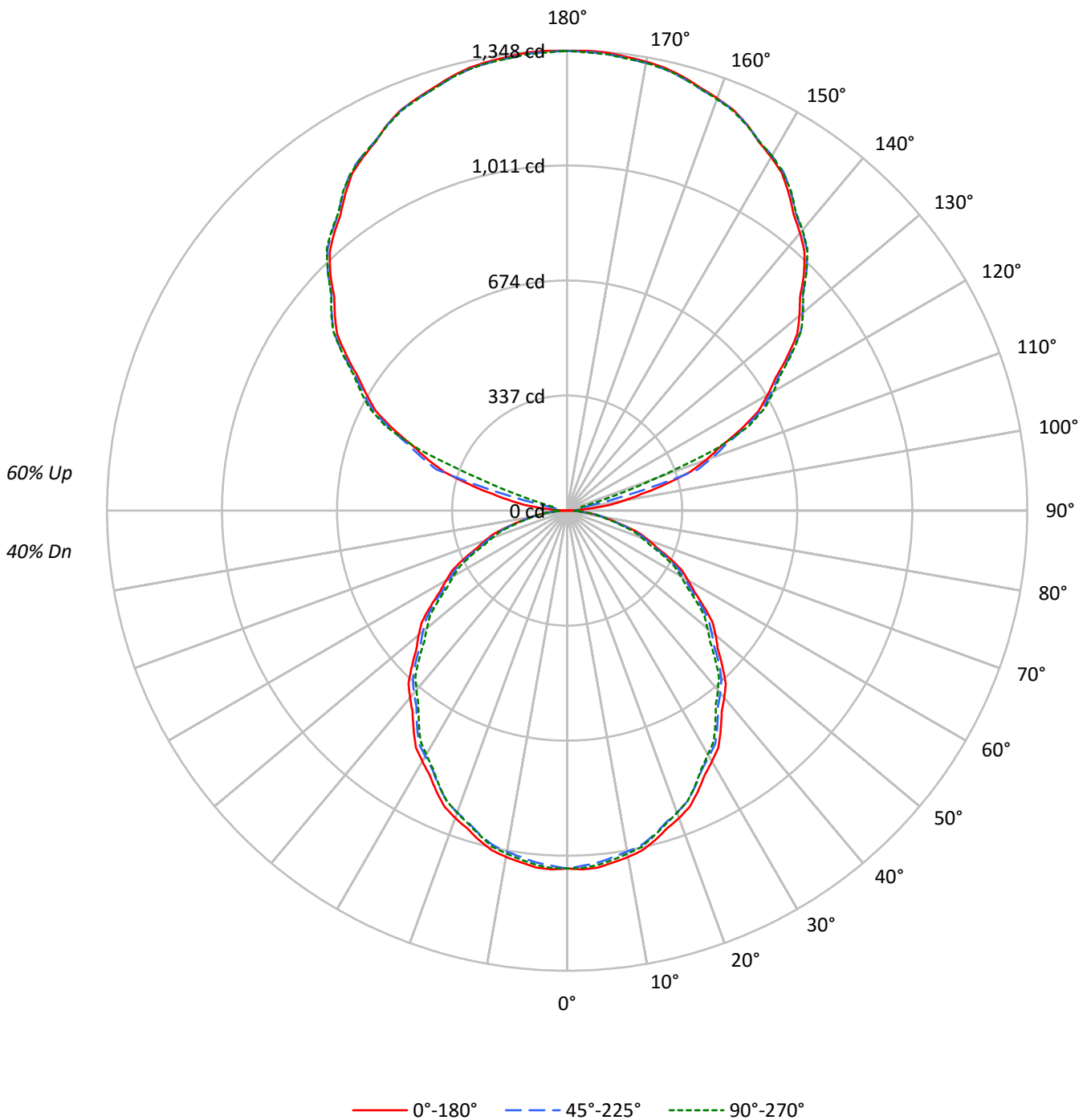
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40			
1	95	91	87	84	87	83	80	77	68	66	64	54	53	51	41	40	39	34			
2	87	80	74	68	79	73	67	63	60	56	53	47	45	43	36	35	33	28			
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24			
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20			
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18			
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	19	15			
7	56	44	37	31	51	41	34	29	34	29	25	27	23	21	21	19	16	14			
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12			
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11			
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11286	11286	11286
5°	11339	11182	11261
10°	11262	11086	11154
15°	11131	10961	10981
20°	10977	10781	10791
25°	10772	10568	10546
30°	10544	10331	10253
35°	10307	10081	9950
40°	10058	9805	9653
45°	9785	9552	9319
50°	9512	9239	8982
55°	9154	8916	8646
60°	8792	8540	8269
65°	8474	8130	7875
70°	8003	7660	7320
75°	7311	7049	6750
80°	6595	6316	6261
85°	5780	5570	5348



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	1.4
10°-20°	278.9	4.1
20°-30°	411.9	6.0
30°-40°	481.2	7.0
40°-50°	483.8	7.1
50°-60°	425.0	6.2
60°-70°	316.6	4.6
70°-80°	180.4	2.6
80°-90°	55.6	0.8
90°-100°	48.9	0.7
100°-110°	233.3	3.4
110°-120°	560.4	8.2
120°-130°	713.6	10.4
130°-140°	762.5	11.2
140°-150°	713.0	10.4
150°-160°	575.1	8.4
160°-170°	371.2	5.4
170°-180°	127.9	1.9
0°-30°	789.6	11.5
0°-40°	1270.8	18.6
0°-60°	2179.5	31.9
0°-90°	2732.0	40.0
90°-120°	842.6	12.3
90°-150°	3031.7	44.3
90°-180°	4106.0	60.0
0°-180°	6838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1049	1045	1035	1043	1042	99
15°	999	995	984	990	985	281
25°	907	901	890	890	888	418
35°	784	779	767	762	757	490
45°	643	639	628	617	612	496
55°	488	486	475	466	461	437
65°	333	328	319	312	309	328
75°	176	172	170	165	162	188
85°	47	45	45	43	43	51
90°	1	11	24	28	30	5
95°	61	23	31	38	38	75
105°	298	304	219	52	44	316
115°	559	565	574	584	588	552
125°	788	796	800	802	804	704
135°	981	987	991	994	991	755
145°	1132	1139	1141	1143	1143	709
155°	1247	1246	1246	1251	1245	574
165°	1315	1313	1311	1319	1312	371
175°	1346	1342	1342	1349	1341	128
180°	1346	1346	1346	1346	1346	



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1052.1	1051.5	1050.9	1050.2	1049.6	1048.4	1046.5	1044.8	1043.0	1041.3	1042.8
5°	1049.4	1048.4	1047.4	1046.4	1045.3	1043.8	1041.6	1039.4	1037.2	1034.9	1037.0
7.5°	1039.1	1038.1	1037.1	1036.1	1035.1	1033.5	1031.1	1028.9	1026.6	1024.3	1026.1
10°	1030.4	1029.4	1028.5	1027.4	1026.5	1024.7	1022.0	1019.4	1016.8	1014.3	1016.1
12.5°	1018.9	1018.0	1017.3	1016.4	1015.5	1013.9	1011.5	1009.0	1006.6	1004.1	1005.5
15°	998.9	998.1	997.3	996.5	995.7	994.0	991.4	988.8	986.2	983.6	985.2
17.5°	975.6	974.6	973.5	972.5	971.5	969.7	967.1	964.4	961.8	959.2	960.4
20°	958.3	957.1	956.0	954.8	953.6	951.6	949.0	946.4	943.8	941.2	942.0
22.5°	938.8	937.6	936.4	935.2	934.0	932.1	929.5	927.0	924.4	921.7	922.4
25°	907.0	905.8	904.6	903.4	902.2	900.3	897.6	895.0	892.4	889.8	890.0
27.5°	872.9	871.7	870.6	869.4	868.2	866.3	863.4	860.7	857.8	855.0	855.1
30°	848.3	847.3	846.4	845.3	844.3	842.4	839.6	836.8	834.1	831.2	831.2
32.5°	823.8	822.5	821.1	819.8	818.6	816.8	814.6	812.4	810.3	808.1	807.0
35°	784.4	783.2	782.0	780.8	779.5	777.7	775.0	772.4	769.8	767.2	766.0
37.5°	743.9	742.4	740.9	739.3	737.9	735.8	733.1	730.5	727.8	725.2	723.8
40°	715.8	714.6	713.4	712.2	711.0	709.0	706.2	703.4	700.6	697.8	696.2
42.5°	687.7	686.3	684.9	683.6	682.3	680.2	677.3	674.5	671.8	668.9	667.4
45°	642.8	642.0	641.2	640.4	639.6	637.9	635.2	632.7	630.1	627.5	625.1
47.5°	598.2	597.1	595.9	594.8	593.6	591.8	589.4	586.9	584.4	582.0	579.6
50°	568.0	567.0	565.9	565.0	564.0	562.1	559.6	557.0	554.3	551.7	549.6
52.5°	536.2	535.5	534.9	534.2	533.5	531.8	529.0	526.2	523.5	520.7	518.8
55°	487.8	487.5	487.3	487.2	486.9	485.5	482.9	480.4	477.7	475.1	472.9
57.5°	441.6	440.9	440.2	439.5	438.9	437.5	435.4	433.3	431.2	429.1	427.1
60°	408.4	408.2	408.0	407.8	407.6	406.3	403.9	401.5	399.1	396.7	394.9
62.5°	378.8	378.3	377.8	377.3	376.8	375.3	372.9	370.5	368.1	365.7	363.9
65°	332.7	331.7	330.6	329.7	328.6	327.2	325.1	323.1	321.2	319.2	317.5
67.5°	283.8	282.9	282.1	281.1	280.3	279.1	277.6	276.0	274.5	273.0	271.6
70°	254.3	253.0	251.8	250.6	249.4	248.2	247.0	245.8	244.6	243.4	242.0
72.5°	223.3	222.3	221.4	220.6	219.7	218.6	217.2	215.9	214.5	213.1	211.9
75°	175.8	175.0	174.2	173.4	172.6	171.9	171.3	170.7	170.0	169.5	168.5
77.5°	133.8	133.4	132.9	132.5	132.0	131.5	130.7	130.0	129.3	128.5	127.9
80°	106.4	105.8	105.2	104.6	104.0	103.5	103.1	102.7	102.3	101.9	101.7
82.5°	79.7	79.6	79.5	79.3	79.2	79.1	79.0	79.0	78.9	78.8	78.4
85°	46.8	46.5	46.1	45.7	45.3	45.1	45.1	45.1	45.1	45.1	44.7
87.5°	18.9	18.9	18.9	18.9	18.8	19.0	19.4	19.8	20.2	20.7	20.7
90°	1.0	3.2	5.4	7.7	9.9	12.5	15.3	18.3	21.1	24.0	24.9
92.5°	18.6	18.0	17.4	16.7	16.1	16.9	19.1	21.3	23.4	25.6	27.0
95°	61.0	51.9	42.8	33.7	24.5	21.3	23.7	26.1	28.6	31.0	32.5
97.5°	122.6	118.6	114.4	110.4	106.2	96.3	80.2	64.2	48.2	32.2	34.0
100°	169.0	173.5	178.0	182.4	186.8	171.7	137.1	102.4	67.7	33.0	34.8
102.5°	221.9	225.1	228.3	231.4	234.7	217.3	179.4	141.5	103.7	65.8	60.3
105°	298.1	300.6	303.0	305.4	307.9	299.1	279.1	259.1	239.1	219.0	179.7
107.5°	378.5	380.5	382.5	384.4	386.3	388.9	392.1	395.2	398.4	401.6	372.6
110°	432.1	433.9	435.7	437.5	439.3	441.3	443.8	446.3	448.7	451.2	443.8



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	483.4	484.9	486.6	488.2	489.7	491.8	494.2	496.7	499.1	501.5	501.7
115°	559.2	560.5	561.8	563.2	564.5	566.2	568.2	570.2	572.2	574.2	576.4
117.5°	632.6	634.2	635.8	637.6	639.2	640.5	641.5	642.6	643.6	644.6	646.4
120°	678.2	680.2	682.3	684.2	686.2	687.6	688.2	688.9	689.6	690.2	692.0
122.5°	724.6	726.3	727.9	729.5	731.2	732.5	733.3	734.2	734.9	735.8	737.1
125°	788.2	790.1	791.8	793.6	795.4	796.7	797.5	798.5	799.4	800.2	800.7
127.5°	849.9	851.6	853.4	855.2	857.0	858.4	859.5	860.6	861.6	862.6	863.4
130°	888.3	890.1	891.8	893.6	895.4	896.7	897.6	898.5	899.4	900.3	901.2
132.5°	925.1	926.9	928.7	930.4	932.2	933.4	934.2	934.9	935.6	936.3	937.2
135°	981.3	982.7	984.0	985.3	986.6	987.7	988.7	989.5	990.4	991.4	992.0
137.5°	1029.3	1031.0	1032.7	1034.4	1036.1	1037.2	1037.7	1038.2	1038.6	1039.1	1040.2
140°	1061.4	1062.6	1064.0	1065.3	1066.7	1067.6	1068.3	1069.0	1069.7	1070.3	1071.3
142.5°	1091.0	1092.3	1093.6	1094.9	1096.3	1097.3	1097.9	1098.6	1099.3	1099.9	1100.7
145°	1132.4	1133.9	1135.5	1137.0	1138.6	1139.6	1140.1	1140.5	1140.9	1141.3	1141.8
147.5°	1171.4	1172.4	1173.5	1174.4	1175.4	1176.2	1176.6	1177.1	1177.5	1177.9	1178.5
150°	1195.4	1196.0	1196.7	1197.4	1198.1	1198.6	1199.0	1199.5	1200.0	1200.4	1200.8
152.5°	1217.0	1217.3	1217.6	1217.9	1218.2	1218.5	1218.7	1219.1	1219.3	1219.6	1220.4
155°	1247.4	1247.0	1246.5	1246.0	1245.6	1245.5	1245.7	1246.0	1246.2	1246.4	1247.5
157.5°	1271.0	1270.9	1270.9	1270.8	1270.8	1270.7	1270.5	1270.2	1270.1	1269.8	1271.2
160°	1285.4	1285.2	1285.0	1284.8	1284.5	1284.3	1284.1	1283.8	1283.7	1283.4	1284.8
162.5°	1299.0	1298.5	1297.9	1297.3	1296.7	1296.3	1296.1	1295.9	1295.6	1295.4	1296.9
165°	1315.4	1314.7	1314.1	1313.5	1312.8	1312.3	1312.1	1311.8	1311.6	1311.4	1313.2
167.5°	1328.3	1327.3	1326.5	1325.6	1324.6	1324.2	1324.2	1324.2	1324.2	1324.2	1326.0
170°	1335.4	1334.6	1333.7	1332.7	1331.9	1331.5	1331.5	1331.5	1331.5	1331.5	1333.2
172.5°	1340.2	1339.2	1338.1	1337.0	1335.9	1335.5	1335.7	1335.8	1336.0	1336.2	1338.0
175°	1346.4	1345.3	1344.2	1343.1	1342.0	1341.5	1341.8	1342.0	1342.2	1342.4	1344.0
177.5°	1348.1	1347.1	1346.3	1345.4	1344.5	1344.1	1344.3	1344.5	1344.6	1344.8	1346.3
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1044.5	1046.1	1047.7	1048.4	1048.3	1048.1	1047.9	1047.8
5°	1039.0	1040.9	1043.0	1043.8	1043.4	1043.0	1042.6	1042.2
7.5°	1027.9	1029.8	1031.6	1032.3	1032.1	1031.8	1031.6	1031.4
10°	1017.9	1019.6	1021.4	1022.2	1021.7	1021.3	1021.0	1020.5
12.5°	1006.8	1008.1	1009.4	1010.0	1009.7	1009.4	1009.3	1009.0
15°	986.8	988.3	990.0	990.2	988.9	987.7	986.6	985.4
17.5°	961.5	962.6	963.7	964.1	963.6	963.2	962.8	962.3
20°	942.8	943.6	944.4	944.5	943.9	943.3	942.7	942.1
22.5°	923.0	923.7	924.3	924.2	923.5	922.7	922.0	921.2
25°	890.2	890.4	890.6	890.4	889.8	889.2	888.6	888.0
27.5°	855.3	855.5	855.7	855.3	854.6	853.9	853.1	852.3
30°	831.2	831.2	831.2	830.5	829.1	827.7	826.3	824.9
32.5°	805.9	804.8	803.7	802.7	801.9	801.2	800.4	799.7
35°	764.8	763.6	762.4	761.3	760.3	759.3	758.3	757.2
37.5°	722.3	720.8	719.5	718.4	717.7	717.1	716.4	715.8
40°	694.6	693.0	691.4	690.2	689.4	688.5	687.8	687.0
42.5°	665.7	664.1	662.5	661.3	660.6	659.7	658.9	658.1
45°	622.7	620.3	617.9	616.1	615.2	614.2	613.1	612.2
47.5°	577.3	575.0	572.6	570.9	570.1	569.2	568.3	567.4
50°	547.3	545.1	542.9	541.2	540.0	538.8	537.6	536.4
52.5°	516.9	515.1	513.2	511.7	510.5	509.3	508.1	506.9
55°	470.7	468.5	466.3	464.7	463.6	462.7	461.7	460.7
57.5°	425.2	423.3	421.3	419.7	418.5	417.4	416.2	415.1
60°	393.0	391.2	389.4	388.1	387.0	386.1	385.0	384.1
62.5°	362.1	360.2	358.4	357.2	356.5	355.9	355.2	354.5
65°	315.9	314.4	312.7	311.6	311.0	310.4	309.8	309.2
67.5°	270.2	268.8	267.3	266.2	265.4	264.6	263.7	262.9
70°	240.6	239.2	237.8	236.6	235.6	234.6	233.6	232.6
72.5°	210.6	209.4	208.2	207.2	206.7	206.2	205.7	205.2
75°	167.5	166.5	165.5	164.7	164.1	163.5	162.9	162.3
77.5°	127.2	126.5	125.8	125.5	125.5	125.5	125.5	125.5
80°	101.5	101.3	101.1	101.0	101.0	101.0	101.0	101.0
82.5°	78.1	77.7	77.3	77.1	77.0	76.8	76.6	76.5
85°	44.3	43.9	43.5	43.3	43.3	43.3	43.3	43.3
87.5°	20.7	20.8	20.8	20.8	20.9	21.0	21.1	21.2
90°	25.7	26.7	27.6	28.2	28.7	29.1	29.5	30.0
92.5°	28.4	29.9	31.3	32.1	32.4	32.7	33.0	33.2
95°	34.1	35.6	37.2	38.0	38.0	38.0	38.0	38.0
97.5°	35.7	37.5	39.3	40.3	40.6	40.8	41.0	41.2
100°	36.6	38.3	40.1	41.2	41.3	41.6	41.8	42.0
102.5°	54.8	49.2	43.7	41.2	41.6	42.0	42.4	42.8
105°	140.3	101.0	61.6	42.3	42.7	43.1	43.6	44.0
107.5°	343.8	315.0	286.1	256.8	227.2	197.5	167.9	138.3
110°	436.4	429.1	421.8	402.3	370.5	338.6	306.9	275.1



TEST NUMBER: P331997-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	501.8	502.0	502.1	498.8	492.1	485.3	478.6	471.9
115°	578.6	580.8	583.1	584.6	585.5	586.4	587.3	588.1
117.5°	648.2	650.0	651.7	652.7	652.9	653.1	653.2	653.4
120°	693.8	695.5	697.3	698.2	698.2	698.2	698.2	698.2
122.5°	738.3	739.6	740.8	741.5	741.7	741.8	742.1	742.3
125°	801.2	801.6	802.0	802.5	802.9	803.4	803.8	804.3
127.5°	864.1	864.8	865.5	865.6	865.2	864.8	864.4	863.8
130°	902.1	902.9	903.9	904.0	903.6	903.2	902.8	902.3
132.5°	938.1	939.0	939.9	940.0	939.4	938.7	938.1	937.5
135°	992.6	993.3	994.0	994.0	993.3	992.6	992.0	991.4
137.5°	1041.3	1042.3	1043.4	1043.7	1043.3	1042.8	1042.4	1041.9
140°	1072.1	1073.0	1073.9	1074.1	1073.7	1073.2	1072.8	1072.4
142.5°	1101.4	1102.1	1102.8	1102.9	1102.3	1101.6	1101.0	1100.4
145°	1142.3	1142.7	1143.1	1143.3	1143.3	1143.3	1143.3	1143.3
147.5°	1178.9	1179.3	1179.7	1179.5	1178.5	1177.4	1176.4	1175.4
150°	1201.3	1201.7	1202.1	1202.0	1201.4	1200.8	1200.1	1199.4
152.5°	1221.2	1222.0	1222.8	1222.7	1221.7	1220.6	1219.6	1218.6
155°	1248.6	1249.7	1250.9	1250.7	1249.4	1248.1	1246.7	1245.4
157.5°	1272.5	1273.8	1275.1	1275.0	1273.2	1271.4	1269.7	1268.0
160°	1286.1	1287.4	1288.7	1288.7	1287.1	1285.6	1283.9	1282.4
162.5°	1298.5	1299.9	1301.5	1301.5	1300.1	1298.7	1297.4	1296.0
165°	1315.0	1316.7	1318.5	1318.6	1317.1	1315.5	1314.0	1312.4
167.5°	1327.7	1329.6	1331.4	1331.4	1329.6	1327.7	1326.0	1324.2
170°	1335.0	1336.8	1338.5	1338.5	1336.8	1335.0	1333.2	1331.5
172.5°	1339.8	1341.5	1343.3	1343.2	1341.3	1339.4	1337.4	1335.4
175°	1345.6	1347.1	1348.7	1348.5	1346.8	1345.0	1343.2	1341.4
177.5°	1347.6	1349.1	1350.5	1350.3	1348.6	1346.8	1345.0	1343.2
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4

(END OF REPORT)