

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: P332039-935

Luminaire Tested: **S123DIP-S1000D1195U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332039-935
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-S1000D1195U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7724.8 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

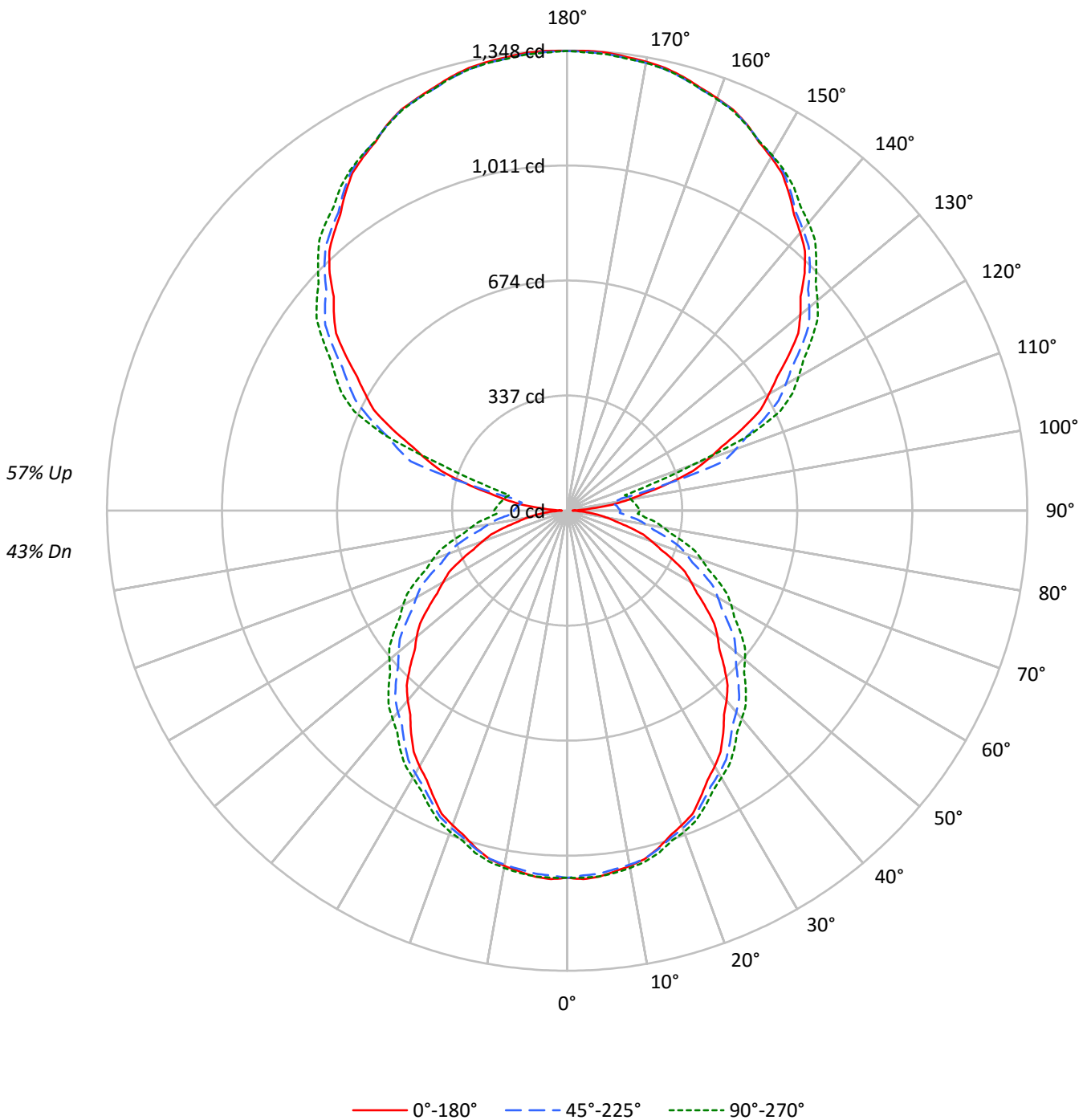
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332039-935

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Luminous Intensity Polar Plot





TEST NUMBER: P332039-935

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-D

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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	95	91	86	83	87	83	79	76	68	66	63	55	53	51	42	41	40	34
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



TEST NUMBER: P332039-935

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.3
10°-20°	290.7	3.8
20°-30°	434.8	5.6
30°-40°	519.2	6.7
40°-50°	543.3	7.0
50°-60°	509.8	6.6
60°-70°	425.8	5.5
70°-80°	304.6	3.9
80°-90°	185.4	2.4
90°-100°	162.9	2.1
100°-110°	317.1	4.1
110°-120°	616.3	8.0
120°-130°	745.6	9.7
130°-140°	776.8	10.1
140°-150°	716.1	9.3
150°-160°	575.2	7.4
160°-170°	371.2	4.8
170°-180°	127.9	1.7
0°-30°	827.5	10.7
0°-40°	1346.7	17.4
0°-60°	2399.8	31.1
0°-90°	3315.7	42.9
90°-120°	1096.4	14.2
90°-150°	3334.8	43.2
90°-180°	4409.0	57.1
0°-180°	7724.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	84	156	199	214	13
95°	74	82	147	189	202	85
105°	308	342	307	171	175	325
115°	565	587	636	673	688	558
125°	792	801	838	863	875	707
135°	984	989	1005	1028	1032	757
145°	1134	1139	1141	1152	1157	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: P332039-935

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.8	58.2	71.6	85.1	98.7	112.5	126.4	140.3	154.1	163.2
90°	16.3	31.3	46.2	61.2	76.2	91.8	107.9	124.1	140.3	156.4	166.2
92.5°	32.9	43.8	54.7	65.6	76.5	89.5	104.8	120.0	135.3	150.5	160.6
95°	73.9	75.0	76.0	77.1	78.1	86.2	101.4	116.6	131.8	147.1	156.6
97.5°	134.1	139.2	144.3	149.4	154.5	155.1	151.3	147.4	143.6	139.8	149.3
100°	179.6	192.3	205.2	217.9	230.7	225.8	203.0	180.4	157.6	135.0	144.3
102.5°	231.4	242.2	252.9	263.6	274.3	266.6	240.5	214.4	188.2	162.1	164.0
105°	307.5	316.2	324.9	333.6	342.2	342.2	333.4	324.6	315.7	306.9	274.9
107.5°	386.5	393.7	401.1	408.3	415.6	426.1	439.9	453.7	467.4	481.2	459.3
110°	439.2	445.7	452.1	458.6	465.0	474.7	487.6	500.4	513.2	526.2	525.6



TEST NUMBER: P332039-935

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	490.4	495.8	501.3	506.8	512.2	521.2	533.6	546.0	558.5	570.9	577.6
115°	565.1	569.5	573.9	578.4	582.9	590.8	602.2	613.5	624.9	636.3	644.8
117.5°	638.3	641.8	645.4	648.9	652.6	659.2	669.0	678.9	688.7	698.5	706.5
120°	682.9	686.2	689.5	692.8	696.1	702.4	711.6	720.9	730.2	739.4	747.2
122.5°	729.4	731.7	734.0	736.2	738.6	744.2	753.3	762.3	771.4	780.3	787.4
125°	791.8	793.6	795.3	797.1	798.9	804.0	812.4	820.9	829.3	837.8	843.7
127.5°	853.4	854.9	856.4	857.9	859.5	863.8	871.2	878.5	885.8	893.1	899.0
130°	891.8	893.3	894.8	896.4	897.9	901.6	907.8	913.9	920.0	926.1	931.9
132.5°	927.6	929.4	931.1	932.9	934.6	937.9	942.8	947.6	952.5	957.4	963.0
135°	983.7	984.7	985.8	986.9	987.9	990.3	994.1	997.9	1001.6	1005.4	1010.7
137.5°	1031.5	1032.9	1034.4	1035.9	1037.3	1039.1	1041.3	1043.4	1045.4	1047.6	1052.7
140°	1062.5	1063.9	1065.1	1066.5	1067.8	1069.3	1070.7	1072.1	1073.6	1075.0	1079.9
142.5°	1092.1	1093.2	1094.3	1095.5	1096.7	1097.6	1098.4	1099.2	1100.1	1100.9	1105.1
145°	1133.5	1134.8	1136.1	1137.4	1138.7	1139.6	1140.1	1140.5	1140.9	1141.3	1143.9
147.5°	1171.4	1172.4	1173.5	1174.4	1175.4	1176.2	1176.6	1177.1	1177.5	1177.9	1179.1
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: P332039-935

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	172.2	181.2	190.2	196.0	198.8	201.5	204.1	206.9
90°	175.9	185.6	195.4	201.8	204.8	207.9	210.9	214.0
92.5°	170.7	180.7	190.8	197.2	199.8	202.5	205.2	207.8
95°	166.3	175.9	185.5	191.7	194.2	196.8	199.5	202.1
97.5°	158.9	168.4	178.0	184.1	186.9	189.8	192.6	195.4
100°	153.6	163.0	172.3	178.4	181.2	184.0	186.8	189.7
102.5°	165.8	167.6	169.4	171.9	174.9	177.9	180.9	183.9
105°	242.9	210.8	178.7	164.1	166.9	169.7	172.5	175.3
107.5°	437.5	415.6	393.7	369.1	341.7	314.4	287.0	259.7
110°	525.0	524.4	523.9	508.8	479.1	449.4	419.7	389.9



TEST NUMBER: P332039-935

CATALOG NUMBER: S123DIP-S1000D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	584.4	591.0	597.7	598.8	594.4	590.0	585.6	581.2
115°	653.2	661.7	670.2	675.9	678.9	681.8	684.8	687.8
117.5°	714.5	722.5	730.4	735.5	737.7	739.9	742.1	744.3
120°	755.0	762.8	770.5	775.3	777.1	778.9	780.8	782.6
122.5°	794.4	801.4	808.5	813.0	815.0	817.0	819.0	821.0
125°	849.5	855.5	861.4	865.5	867.8	870.0	872.3	874.6
127.5°	904.9	910.8	916.6	920.2	921.5	922.8	924.2	925.5
130°	937.7	943.6	949.4	952.9	954.0	955.1	956.2	957.3
132.5°	968.6	974.3	979.9	983.3	984.5	985.6	986.7	987.9
135°	1016.1	1021.4	1026.8	1029.8	1030.4	1031.0	1031.7	1032.3
137.5°	1057.9	1063.1	1068.3	1071.3	1072.2	1073.1	1073.9	1074.8
140°	1084.6	1089.4	1094.2	1097.0	1097.9	1098.7	1099.6	1100.4
142.5°	1109.3	1113.5	1117.7	1120.2	1120.8	1121.5	1122.1	1122.8
145°	1146.4	1148.9	1151.5	1153.2	1154.3	1155.4	1156.4	1157.4
147.5°	1180.1	1181.2	1182.2	1182.8	1182.7	1182.6	1182.5	1182.4
150°	1201.3	1201.7	1202.1	1202.3	1202.1	1202.0	1201.9	1201.7
152.5°	1221.2	1222.0	1222.8	1222.7	1221.8	1220.9	1220.0	1219.1
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)