

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: P332075-935

Luminaire Tested: **S123DIP-S1165D1025U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332075-935
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-S1165D1025U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7705.9 lumens
Efficiency: N/A
Efficacy: 115.4 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

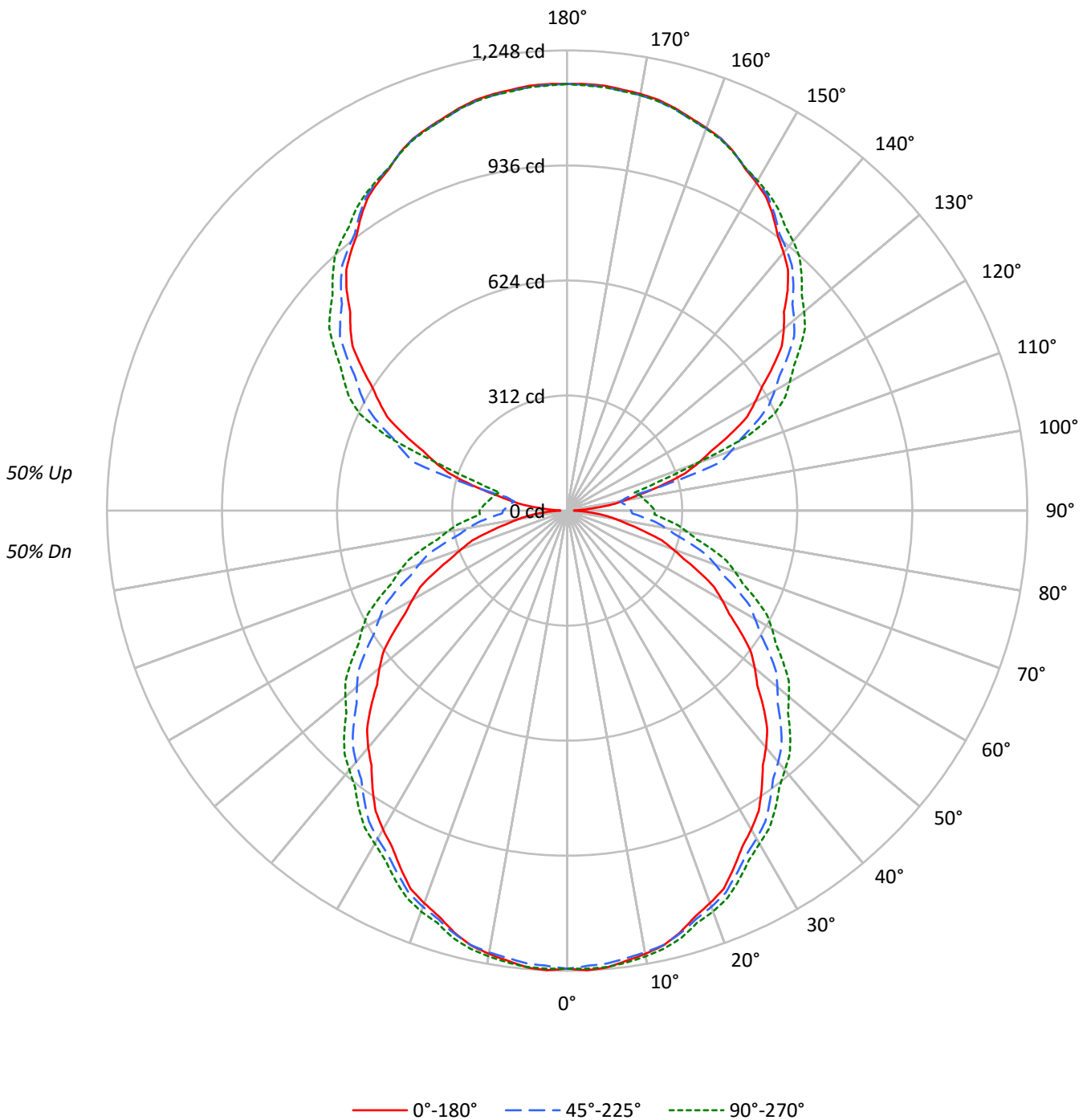
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-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	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	73	68	63	62	58	54	51	48	45	41	39	37	32
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	33	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	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	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	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13373	13373	13373
5°	13415	13037	13044
10°	13294	12736	12672
15°	13123	12396	12267
20°	12878	12006	11821
25°	12576	11558	11352
30°	12267	11155	10876
35°	11919	10728	10496
40°	11588	10340	10090
45°	11221	9968	9765
50°	10858	9599	9408
55°	10459	9224	9085
60°	10067	8841	8755
65°	9669	8433	8362
70°	9064	7974	7959
75°	8304	7449	7549
80°	7429	6933	7081
85°	6613	6577	6812



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.5
10°-20°	335.7	4.4
20°-30°	502.2	6.5
30°-40°	599.7	7.8
40°-50°	627.4	8.1
50°-60°	588.8	7.6
60°-70°	491.8	6.4
70°-80°	351.8	4.6
80°-90°	213.1	2.8
90°-100°	173.7	2.3
100°-110°	297.2	3.9
110°-120°	546.1	7.1
120°-130°	650.0	8.4
130°-140°	671.6	8.7
140°-150°	616.1	8.0
150°-160°	494.1	6.4
160°-170°	318.9	4.1
170°-180°	109.9	1.4
0°-30°	955.7	12.4
0°-40°	1555.4	20.2
0°-60°	2771.6	36.0
0°-90°	3828.3	49.7
90°-120°	1017.0	13.2
90°-150°	2954.7	38.3
90°-180°	3878.0	50.3
0°-180°	7705.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1244	1241	1233	1243	1242	118
15°	1184	1188	1187	1200	1199	333
25°	1069	1082	1087	1103	1104	492
35°	920	942	960	979	985	575
45°	752	785	819	844	855	580
55°	574	619	667	702	715	514
65°	397	450	509	548	563	392
75°	215	279	346	390	407	230
85°	66	134	206	250	265	70
90°	18	94	174	221	238	14
95°	67	88	161	207	222	76
105°	267	306	290	183	189	282
115°	487	511	565	605	620	481
125°	681	690	731	760	772	609
135°	846	850	868	894	899	651
145°	974	979	981	993	998	609
155°	1072	1070	1071	1075	1070	494
165°	1130	1128	1127	1133	1128	319
175°	1157	1153	1153	1159	1152	110
180°	1157	1157	1157	1157	1157	



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1247.8	1247.2	1246.4	1245.7	1244.9	1243.6	1241.7	1239.8	1237.9	1236.0	1237.9
5°	1243.8	1243.2	1242.6	1242.0	1241.4	1240.2	1238.4	1236.6	1234.8	1233.0	1235.4
7.5°	1231.6	1231.7	1231.8	1232.0	1232.1	1231.3	1229.5	1227.8	1226.1	1224.3	1227.3
10°	1220.8	1221.4	1222.0	1222.6	1223.2	1222.7	1221.2	1219.7	1218.2	1216.7	1219.7
12.5°	1207.8	1208.6	1209.4	1210.3	1211.2	1211.1	1210.0	1209.0	1208.0	1206.9	1209.7
15°	1184.2	1185.2	1186.0	1187.0	1187.8	1188.2	1187.8	1187.6	1187.2	1187.0	1190.0
17.5°	1154.4	1156.2	1158.0	1159.9	1161.7	1162.5	1162.4	1162.3	1162.2	1162.0	1164.8
20°	1132.8	1134.6	1136.4	1138.2	1140.1	1141.3	1141.9	1142.5	1143.1	1143.7	1146.3
22.5°	1110.1	1111.9	1113.7	1115.5	1117.3	1118.6	1119.5	1120.3	1121.1	1122.0	1125.4
25°	1069.2	1072.2	1075.2	1078.2	1081.2	1083.1	1084.1	1084.9	1085.9	1086.8	1090.7
27.5°	1028.0	1031.5	1034.9	1038.4	1041.7	1044.5	1046.4	1048.3	1050.2	1052.1	1055.5
30°	998.8	1002.7	1006.6	1010.6	1014.4	1017.6	1020.0	1022.4	1024.8	1027.3	1030.9
32.5°	966.3	970.7	975.1	979.5	983.9	987.7	990.8	993.9	997.0	1000.1	1004.0
35°	920.3	925.1	930.0	934.8	939.6	943.9	947.9	951.7	955.6	959.6	964.1
37.5°	871.6	877.0	882.4	887.9	893.3	898.4	903.2	908.0	912.8	917.7	922.7
40°	839.1	844.6	850.0	855.3	860.7	866.5	872.5	878.5	884.5	890.5	895.7
42.5°	803.4	810.0	816.7	823.2	829.8	836.3	842.6	848.8	855.1	861.3	866.9
45°	752.5	759.7	766.9	774.1	781.4	788.8	796.3	803.7	811.3	818.8	824.5
47.5°	699.1	707.3	715.5	723.8	731.9	740.3	748.9	757.5	766.1	774.7	781.1
50°	664.5	673.0	681.4	689.7	698.2	707.1	716.4	725.7	735.0	744.3	751.3
52.5°	627.8	636.6	645.5	654.4	663.3	673.0	683.2	693.4	703.8	714.0	721.3
55°	573.9	583.8	593.7	603.6	613.5	623.9	634.7	645.6	656.4	667.3	675.4
57.5°	521.3	531.7	542.0	552.3	562.7	573.9	585.7	597.5	609.3	621.2	629.4
60°	484.5	495.3	506.2	517.0	527.8	539.4	551.7	564.0	576.4	588.8	597.2
62.5°	449.9	461.0	472.0	483.1	494.1	506.2	519.3	532.3	545.4	558.4	566.8
65°	396.6	408.3	420.0	431.7	443.5	456.0	469.2	482.4	495.7	508.9	517.9
67.5°	342.4	354.9	367.3	379.8	392.2	405.2	418.6	432.1	445.6	459.1	468.9
70°	304.5	317.5	330.4	343.3	356.3	370.0	384.4	398.8	413.3	427.7	437.3
72.5°	269.8	282.8	295.8	308.7	321.6	335.5	350.4	365.3	380.3	395.2	405.1
75°	215.2	229.4	243.5	257.6	271.7	286.3	301.4	316.4	331.4	346.5	356.4
77.5°	167.6	181.8	196.0	210.3	224.5	239.3	254.4	269.6	284.7	299.9	310.4
80°	134.0	148.7	163.5	178.2	193.0	208.1	223.8	239.4	255.0	270.7	280.9
82.5°	104.8	119.8	134.7	149.7	164.6	180.1	196.0	211.9	227.7	243.6	253.8
85°	66.3	81.4	96.4	111.4	126.5	142.0	157.9	173.8	189.8	205.7	215.9
87.5°	36.2	51.6	66.9	82.2	97.6	113.2	129.1	144.9	160.7	176.6	186.9
90°	18.4	35.1	51.7	68.4	85.1	102.3	120.1	137.9	155.8	173.6	184.5
92.5°	32.5	45.3	58.0	70.8	83.5	98.4	115.4	132.3	149.3	166.3	177.5
95°	67.3	71.2	75.1	79.0	82.9	93.2	110.1	126.9	143.8	160.7	171.3
97.5°	118.6	125.7	132.8	139.8	146.9	150.6	150.9	151.3	151.6	151.9	162.4
100°	157.4	170.8	184.3	197.8	211.2	209.9	194.0	178.1	162.0	146.1	156.4
102.5°	201.7	213.1	224.5	235.9	247.4	243.6	224.6	205.7	186.8	167.8	171.5
105°	266.9	276.2	285.6	294.9	304.2	306.8	302.5	298.3	293.9	289.7	264.3
107.5°	334.4	342.2	350.0	357.8	365.7	377.0	392.0	407.0	422.0	437.0	420.3
110°	379.4	386.3	393.3	400.2	407.2	417.7	431.8	445.9	460.1	474.2	475.7



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	423.4	429.2	435.1	440.8	446.7	456.4	470.1	483.7	497.4	511.0	518.8
115°	487.2	491.9	496.7	501.4	506.2	514.9	527.4	539.9	552.5	565.0	574.1
117.5°	550.0	553.6	557.2	560.9	564.6	571.9	582.9	594.0	605.0	616.0	624.7
120°	588.1	591.3	594.5	597.8	601.0	607.9	618.4	628.9	639.3	649.8	658.3
122.5°	627.9	630.2	632.3	634.6	636.7	642.9	653.1	663.2	673.5	683.6	691.4
125°	681.3	682.8	684.3	685.9	687.4	692.8	702.4	711.9	721.3	730.8	737.5
127.5°	734.2	735.5	736.7	737.9	739.1	743.8	751.9	760.1	768.2	776.4	782.9
130°	767.2	768.4	769.6	770.9	772.1	776.1	782.9	789.7	796.4	803.2	809.7
132.5°	797.7	799.2	800.7	802.2	803.7	807.1	812.5	817.9	823.4	828.8	835.0
135°	845.8	846.6	847.5	848.3	849.2	851.6	855.7	859.8	863.8	867.9	873.9
137.5°	886.7	887.9	889.2	890.4	891.6	893.4	895.6	897.9	900.2	902.5	908.2
140°	913.2	914.3	915.5	916.6	917.7	919.1	920.6	922.0	923.5	925.0	930.2
142.5°	938.7	939.5	940.5	941.3	942.3	943.1	943.8	944.6	945.3	946.1	950.7
145°	974.2	975.3	976.3	977.3	978.4	979.0	979.5	979.8	980.2	980.6	983.3
147.5°	1006.3	1007.3	1008.1	1009.0	1009.9	1010.5	1010.9	1011.2	1011.7	1012.0	1013.1
150°	1027.0	1027.6	1028.1	1028.7	1029.2	1029.8	1030.1	1030.5	1030.9	1031.3	1031.7
152.5°	1045.5	1045.9	1046.1	1046.4	1046.6	1046.9	1047.1	1047.3	1047.6	1047.8	1048.4
155°	1071.7	1071.3	1070.9	1070.6	1070.1	1070.1	1070.2	1070.4	1070.7	1070.8	1071.8
157.5°	1091.9	1091.9	1091.9	1091.8	1091.8	1091.7	1091.5	1091.3	1091.1	1090.9	1092.1
160°	1104.3	1104.1	1104.0	1103.8	1103.5	1103.4	1103.2	1103.0	1102.8	1102.6	1103.8
162.5°	1116.0	1115.5	1115.0	1114.6	1114.0	1113.7	1113.5	1113.3	1113.1	1112.9	1114.2
165°	1130.1	1129.5	1128.9	1128.4	1127.8	1127.5	1127.2	1127.0	1126.9	1126.7	1128.2
167.5°	1141.1	1140.4	1139.6	1138.8	1138.1	1137.6	1137.6	1137.6	1137.6	1137.6	1139.2
170°	1147.3	1146.5	1145.8	1145.0	1144.3	1143.8	1143.8	1143.8	1143.8	1143.8	1145.4
172.5°	1151.4	1150.6	1149.6	1148.7	1147.8	1147.4	1147.5	1147.7	1147.8	1148.0	1149.5
175°	1156.8	1155.8	1154.9	1153.9	1153.0	1152.5	1152.7	1153.0	1153.1	1153.3	1154.7
177.5°	1158.1	1157.4	1156.6	1155.8	1155.1	1154.8	1154.9	1155.1	1155.2	1155.4	1156.6
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1239.8	1241.7	1243.6	1244.5	1244.2	1244.0	1243.7	1243.5
5°	1237.8	1240.2	1242.6	1243.6	1243.4	1243.0	1242.8	1242.4
7.5°	1230.3	1233.3	1236.3	1237.7	1237.3	1236.9	1236.6	1236.2
10°	1222.7	1225.7	1228.7	1229.9	1229.3	1228.7	1228.1	1227.5
12.5°	1212.5	1215.3	1218.1	1219.1	1218.5	1217.9	1217.3	1216.7
15°	1192.9	1195.9	1198.9	1200.3	1200.1	1199.7	1199.5	1199.1
17.5°	1167.4	1170.2	1172.9	1174.0	1173.6	1173.2	1172.8	1172.3
20°	1149.0	1151.8	1154.4	1156.0	1156.2	1156.6	1156.8	1157.2
22.5°	1128.9	1132.3	1135.7	1137.3	1137.1	1137.0	1136.8	1136.6
25°	1094.6	1098.5	1102.4	1104.4	1104.4	1104.4	1104.4	1104.4
27.5°	1058.9	1062.2	1065.6	1067.4	1067.6	1067.9	1068.2	1068.4
30°	1034.5	1038.1	1041.6	1043.4	1043.4	1043.4	1043.4	1043.4
32.5°	1007.9	1011.8	1015.5	1017.9	1018.6	1019.3	1020.0	1020.7
35°	968.6	973.1	977.6	980.5	981.7	982.9	984.1	985.2
37.5°	927.8	933.0	938.1	941.1	942.1	943.1	944.0	944.9
40°	900.8	905.9	911.0	914.1	915.3	916.5	917.7	918.9
42.5°	872.5	878.1	883.7	887.3	889.0	890.7	892.3	894.1
45°	830.3	835.9	841.7	845.8	848.2	850.6	853.0	855.3
47.5°	787.6	794.0	800.5	804.6	806.4	808.3	810.2	812.0
50°	758.2	765.2	772.1	776.5	778.7	780.8	782.9	785.0
52.5°	728.4	735.6	742.7	747.6	750.2	752.8	755.4	757.9
55°	683.5	691.6	699.7	705.0	707.4	709.8	712.2	714.6
57.5°	637.6	645.8	653.9	659.4	662.3	665.1	668.0	670.7
60°	605.5	614.0	622.4	628.3	631.6	634.9	638.2	641.5
62.5°	575.2	583.7	592.1	597.9	600.9	604.0	607.1	610.1
65°	526.9	536.0	545.0	551.0	554.0	557.0	560.0	563.0
67.5°	478.8	488.7	498.5	504.7	507.3	509.8	512.3	514.9
70°	446.9	456.6	466.1	472.5	475.5	478.5	481.5	484.5
72.5°	414.9	424.8	434.6	441.1	444.1	447.1	450.1	453.1
75°	366.4	376.3	386.2	393.0	396.6	400.2	403.8	407.3
77.5°	320.8	331.3	341.8	348.4	351.2	354.0	356.7	359.5
80°	291.1	301.4	311.6	318.2	321.2	324.3	327.3	330.2
82.5°	264.1	274.3	284.5	291.1	294.1	297.1	300.1	303.2
85°	226.2	236.4	246.6	253.2	256.2	259.2	262.3	265.3
87.5°	197.3	207.7	218.1	224.8	227.9	231.0	234.0	237.1
90°	195.5	206.6	217.5	224.7	228.1	231.5	234.9	238.2
92.5°	188.7	199.9	211.1	218.2	221.2	224.2	227.2	230.2
95°	181.9	192.6	203.3	210.1	213.1	216.1	219.1	222.1
97.5°	172.9	183.4	193.9	200.7	203.9	207.2	210.3	213.5
100°	166.6	176.8	187.1	193.8	197.0	200.3	203.5	206.6
102.5°	175.3	179.0	182.8	186.3	189.7	193.0	196.4	199.8
105°	238.9	213.5	188.2	177.0	180.1	183.2	186.3	189.4
107.5°	403.6	386.8	370.1	350.3	327.4	304.6	281.8	259.0
110°	477.3	478.8	480.3	468.6	443.7	418.8	393.9	368.9



TEST NUMBER: P332075-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	526.4	534.1	541.8	544.1	541.0	537.9	534.8	531.6
115°	583.3	592.5	601.6	607.7	610.9	614.1	617.2	620.4
117.5°	633.4	642.1	650.8	656.4	658.9	661.4	663.9	666.4
120°	666.8	675.2	683.6	688.9	691.0	693.1	695.2	697.3
122.5°	699.1	706.9	714.6	719.6	721.9	724.1	726.3	728.7
125°	744.2	751.0	757.6	762.2	764.7	767.2	769.6	772.1
127.5°	789.5	796.0	802.6	806.8	808.4	810.0	811.8	813.4
130°	816.2	822.7	829.1	833.1	834.6	835.9	837.4	838.8
132.5°	841.2	847.5	853.7	857.6	859.1	860.6	862.1	863.7
135°	879.9	885.9	891.8	895.4	896.2	897.2	898.1	899.1
137.5°	913.9	919.5	925.1	928.6	929.7	930.8	931.9	933.1
140°	935.6	940.8	946.1	949.3	950.4	951.5	952.6	953.7
142.5°	955.4	960.0	964.7	967.4	968.5	969.4	970.3	971.3
145°	986.2	988.9	991.7	993.8	995.0	996.2	997.3	998.5
147.5°	1014.3	1015.4	1016.4	1017.1	1017.3	1017.5	1017.7	1018.0
150°	1032.1	1032.4	1032.9	1033.0	1033.0	1033.1	1033.1	1033.1
152.5°	1049.1	1049.8	1050.5	1050.5	1049.7	1049.0	1048.3	1047.5
155°	1072.7	1073.7	1074.6	1074.5	1073.4	1072.3	1071.1	1070.0
157.5°	1093.2	1094.3	1095.5	1095.4	1093.8	1092.4	1090.9	1089.4
160°	1104.9	1106.0	1107.2	1107.1	1105.8	1104.4	1103.1	1101.7
162.5°	1115.5	1116.8	1118.1	1118.2	1117.0	1115.8	1114.7	1113.4
165°	1129.7	1131.3	1132.8	1132.9	1131.5	1130.2	1128.9	1127.6
167.5°	1140.7	1142.3	1143.8	1143.8	1142.3	1140.7	1139.2	1137.6
170°	1146.9	1148.5	1150.0	1150.0	1148.5	1146.9	1145.4	1143.8
172.5°	1151.1	1152.5	1154.1	1154.0	1152.4	1150.6	1149.0	1147.3
175°	1156.0	1157.4	1158.6	1158.6	1157.0	1155.5	1154.0	1152.4
177.5°	1157.8	1159.1	1160.3	1160.1	1158.6	1157.1	1155.5	1154.0
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8

(END OF REPORT)