

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: P332167

Luminaire Tested: **S123DIW-S775D1030U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332167
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-S775D1030U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6745.8 lumens
Efficiency: N/A
Efficacy: 128.2 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: General Diffuse

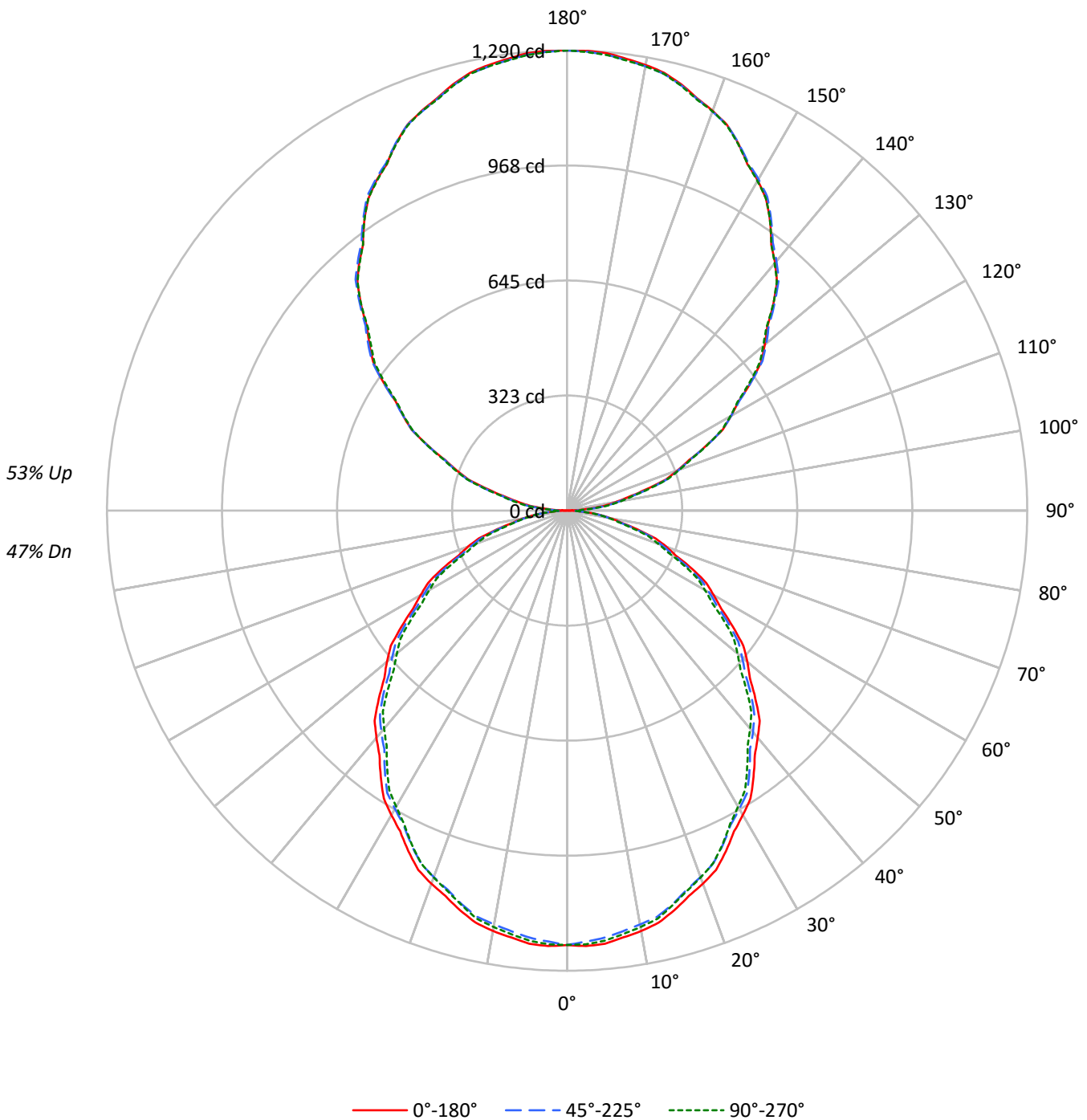
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	50	30	10	0		
RCR																										
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47					47			
1	97	93	89	85	89	85	82	79	71	69	67	59	57	56	47	46	45					39				
2	88	81	75	70	81	75	69	65	63	59	55	52	49	46	41	39	38					33				
3	81	71	64	58	74	66	59	54	55	50	46	46	42	39	37	34	32					28				
4	74	63	55	49	67	58	51	46	49	44	40	41	37	34	33	30	28					24				
5	68	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24					21				
6	62	50	42	36	57	46	39	34	39	34	30	33	29	25	27	24	21					18				
7	58	45	37	32	53	42	35	30	36	30	26	30	26	22	24	21	19					16				
8	53	41	33	28	49	38	31	26	33	27	23	27	23	20	22	19	17					14				
9	50	37	30	25	46	35	28	24	30	24	21	25	21	18	21	18	15					13				
10	46	34	27	22	43	32	26	21	27	22	19	23	19	16	19	16	14					12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13108	13108	13108
5°	13169	12988	13078
10°	13081	12875	12955
15°	12929	12730	12754
20°	12749	12521	12534
25°	12511	12275	12250
30°	12246	11999	11908
35°	11971	11709	11557
40°	11682	11387	11212
45°	11365	11094	10823
50°	11047	10731	10433
55°	10631	10355	10042
60°	10211	9918	9604
65°	9841	9442	9146
70°	9294	8897	8500
75°	8492	8189	7839
80°	7662	7333	7271
85°	6719	6472	6212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	1.7
10°-20°	323.9	4.8
20°-30°	478.4	7.1
30°-40°	558.9	8.3
40°-50°	561.9	8.3
50°-60°	493.6	7.3
60°-70°	367.7	5.5
70°-80°	209.5	3.1
80°-90°	64.0	0.9
90°-100°	84.0	1.2
100°-110°	251.5	3.7
110°-120°	427.7	6.3
120°-130°	562.6	8.3
130°-140°	632.3	9.4
140°-150°	621.6	9.2
150°-160°	523.3	7.8
160°-170°	348.3	5.2
170°-180°	122.0	1.8
0°-30°	917.1	13.6
0°-40°	1475.9	21.9
0°-60°	2531.4	37.5
0°-90°	3172.5	47.0
90°-120°	763.2	11.3
90°-150°	2579.7	38.2
90°-180°	3573.0	53.0
0°-180°	6745.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1219	1213	1202	1212	1210	115
15°	1160	1155	1142	1150	1144	327
25°	1053	1047	1034	1034	1031	485
35°	911	904	891	885	880	570
45°	747	742	729	717	711	576
55°	566	565	552	541	535	507
65°	386	381	371	363	359	381
75°	204	200	197	192	188	218
85°	54	52	52	50	50	60
90°	1	11	24	28	30	7
95°	60	67	75	79	79	67
105°	228	230	239	239	241	244
115°	431	433	432	432	432	426
125°	630	633	631	627	623	562
135°	818	823	823	819	817	630
145°	992	994	997	996	992	619
155°	1136	1136	1137	1140	1134	523
165°	1237	1234	1234	1239	1233	349
175°	1287	1283	1283	1288	1282	122
180°	1290	1290	1290	1290	1290	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1221.9	1221.2	1220.5	1219.7	1219.0	1217.6	1215.5	1213.5	1211.4	1209.4	1211.2
5°	1218.8	1217.6	1216.5	1215.3	1214.1	1212.3	1209.7	1207.2	1204.6	1202.0	1204.4
7.5°	1206.9	1205.7	1204.5	1203.4	1202.2	1200.3	1197.6	1195.0	1192.3	1189.7	1191.8
10°	1196.8	1195.6	1194.5	1193.3	1192.2	1190.1	1187.0	1184.0	1181.0	1178.0	1180.1
12.5°	1183.4	1182.4	1181.5	1180.5	1179.5	1177.6	1174.8	1171.9	1169.1	1166.2	1167.8
15°	1160.2	1159.2	1158.3	1157.4	1156.4	1154.5	1151.4	1148.4	1145.4	1142.4	1144.2
17.5°	1133.1	1131.9	1130.7	1129.5	1128.3	1126.2	1123.2	1120.1	1117.1	1114.1	1115.4
20°	1113.0	1111.6	1110.3	1108.9	1107.5	1105.2	1102.2	1099.2	1096.2	1093.1	1094.1
22.5°	1090.4	1089.0	1087.6	1086.2	1084.8	1082.6	1079.6	1076.6	1073.6	1070.5	1071.3
25°	1053.4	1052.0	1050.6	1049.2	1047.8	1045.6	1042.5	1039.5	1036.5	1033.5	1033.7
27.5°	1013.8	1012.4	1011.1	1009.7	1008.4	1006.1	1002.8	999.6	996.3	993.0	993.2
30°	985.3	984.1	983.0	981.8	980.6	978.4	975.2	971.9	968.7	965.4	965.4
32.5°	956.8	955.3	953.7	952.2	950.7	948.7	946.1	943.6	941.1	938.6	937.3
35°	911.0	909.6	908.2	906.8	905.4	903.2	900.1	897.1	894.1	891.1	889.7
37.5°	864.0	862.3	860.5	858.7	857.0	854.6	851.5	848.4	845.3	842.3	840.6
40°	831.4	830.0	828.6	827.2	825.8	823.5	820.2	817.0	813.7	810.4	808.6
42.5°	798.7	797.1	795.5	794.0	792.4	790.0	786.7	783.4	780.2	776.9	775.1
45°	746.6	745.6	744.7	743.8	742.8	740.9	737.8	734.8	731.8	728.8	726.0
47.5°	694.8	693.5	692.1	690.8	689.4	687.3	684.5	681.7	678.8	676.0	673.2
50°	659.7	658.5	657.3	656.2	655.0	652.9	649.9	646.9	643.8	640.8	638.3
52.5°	622.8	622.0	621.2	620.4	619.6	617.6	614.4	611.2	608.0	604.8	602.6
55°	566.5	566.2	566.0	565.8	565.5	563.9	560.9	557.9	554.8	551.8	549.3
57.5°	512.9	512.1	511.3	510.5	509.7	508.1	505.7	503.2	500.8	498.4	496.1
60°	474.3	474.1	473.9	473.6	473.4	471.9	469.1	466.3	463.5	460.7	458.6
62.5°	440.0	439.4	438.8	438.2	437.6	435.9	433.1	430.3	427.5	424.7	422.6
65°	386.4	385.2	384.0	382.9	381.7	380.0	377.6	375.3	373.0	370.7	368.8
67.5°	329.6	328.6	327.6	326.5	325.5	324.1	322.4	320.6	318.8	317.1	315.4
70°	295.3	293.9	292.5	291.1	289.7	288.3	286.9	285.5	284.1	282.7	281.1
72.5°	259.3	258.2	257.2	256.2	255.2	253.9	252.3	250.7	249.1	247.5	246.1
75°	204.2	203.2	202.3	201.4	200.5	199.6	198.9	198.2	197.5	196.9	195.7
77.5°	155.4	154.9	154.4	153.9	153.3	152.7	151.8	151.0	150.2	149.3	148.5
80°	123.6	122.9	122.2	121.5	120.8	120.2	119.7	119.3	118.8	118.3	118.1
82.5°	92.6	92.4	92.3	92.1	92.0	91.9	91.8	91.7	91.6	91.5	91.1
85°	54.4	54.0	53.5	53.1	52.6	52.4	52.4	52.4	52.4	52.4	51.9
87.5°	22.0	21.9	21.8	21.7	21.5	21.7	22.1	22.5	22.9	23.3	23.3
90°	1.0	3.3	5.5	7.8	10.0	12.6	15.5	18.5	21.4	24.3	25.2
92.5°	24.5	26.0	27.6	29.1	30.6	32.2	33.9	35.6	37.2	38.9	39.6
95°	59.8	61.3	62.9	64.5	66.1	67.8	69.6	71.4	73.2	75.0	75.9
97.5°	106.2	107.3	108.5	109.7	110.9	112.1	113.4	114.7	116.0	117.3	118.4
100°	137.8	139.1	140.5	141.8	143.2	144.4	145.6	146.7	147.8	148.9	149.6
102.5°	174.3	175.1	175.9	176.7	177.5	178.6	180.1	181.6	183.1	184.6	185.3
105°	228.0	228.4	228.9	229.3	229.8	231.0	233.0	235.0	237.1	239.1	239.1
107.5°	290.4	290.6	290.9	291.2	291.4	292.0	292.8	293.6	294.4	295.2	295.9
110°	329.3	329.7	330.2	330.6	331.1	331.5	332.0	332.4	332.9	333.3	334.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	369.8	370.1	370.3	370.6	370.9	371.0	371.1	371.2	371.3	371.4	372.5
115°	430.6	431.2	431.9	432.6	433.3	433.4	432.9	432.5	432.0	431.6	431.8
117.5°	491.8	492.2	492.7	493.1	493.6	493.5	492.9	492.3	491.7	491.2	491.1
120°	529.9	531.2	532.6	533.9	535.3	535.4	534.2	533.1	532.0	530.9	530.6
122.5°	569.6	570.6	571.6	572.5	573.5	573.7	573.2	572.6	572.0	571.4	570.8
125°	630.2	630.8	631.5	632.2	632.9	633.0	632.5	632.1	631.6	631.2	630.3
127.5°	686.1	687.5	689.0	690.4	691.8	692.3	691.8	691.3	690.8	690.3	689.1
130°	723.4	725.2	727.0	728.8	730.6	731.1	730.5	729.8	729.1	728.4	727.5
132.5°	760.6	762.4	764.2	766.1	767.9	768.5	768.0	767.5	767.0	766.5	765.4
135°	817.6	818.9	820.3	821.6	823.0	823.5	823.3	823.1	822.9	822.6	821.7
137.5°	870.3	871.4	872.5	873.6	874.8	875.6	876.2	876.8	877.4	878.0	877.0
140°	906.7	907.9	909.0	910.1	911.2	911.9	912.1	912.4	912.6	912.8	912.6
142.5°	940.0	941.1	942.2	943.3	944.5	945.2	945.6	946.0	946.5	946.9	946.6
145°	991.8	992.3	992.7	993.2	993.6	994.2	994.9	995.6	996.2	996.9	996.7
147.5°	1037.2	1038.0	1038.8	1039.7	1040.5	1041.2	1041.8	1042.5	1043.1	1043.7	1043.7
150°	1068.8	1069.3	1069.7	1070.2	1070.6	1071.1	1071.5	1072.0	1072.4	1072.9	1072.9
152.5°	1094.8	1095.4	1096.0	1096.7	1097.3	1097.7	1098.0	1098.3	1098.6	1098.8	1099.2
155°	1135.7	1135.7	1135.7	1135.7	1135.7	1135.8	1136.0	1136.3	1136.5	1136.7	1137.6
157.5°	1170.6	1170.3	1170.0	1169.7	1169.5	1169.4	1169.6	1169.8	1170.0	1170.1	1171.1
160°	1192.4	1192.0	1191.5	1191.1	1190.6	1190.4	1190.4	1190.4	1190.4	1190.4	1191.5
162.5°	1211.9	1211.3	1210.6	1210.0	1209.4	1209.1	1209.3	1209.5	1209.7	1209.9	1211.0
165°	1237.0	1236.3	1235.7	1235.0	1234.3	1234.0	1234.0	1234.0	1234.0	1234.0	1235.3
167.5°	1257.1	1256.2	1255.3	1254.4	1253.5	1253.1	1253.3	1253.5	1253.7	1253.8	1255.2
170°	1268.4	1267.5	1266.6	1265.7	1264.8	1264.4	1264.4	1264.4	1264.4	1264.4	1265.9
172.5°	1277.3	1276.4	1275.5	1274.6	1273.7	1273.3	1273.3	1273.3	1273.3	1273.3	1274.7
175°	1286.7	1285.8	1284.9	1284.0	1283.1	1282.6	1282.6	1282.6	1282.6	1282.6	1284.0
177.5°	1290.5	1289.8	1289.1	1288.3	1287.6	1287.3	1287.3	1287.3	1287.3	1287.3	1288.3
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1213.1	1215.0	1216.8	1217.7	1217.5	1217.3	1217.1	1216.9
5°	1206.7	1209.0	1211.4	1212.3	1211.8	1211.4	1210.9	1210.4
7.5°	1193.9	1196.0	1198.1	1199.0	1198.7	1198.4	1198.1	1197.9
10°	1182.2	1184.2	1186.3	1187.2	1186.7	1186.2	1185.8	1185.3
12.5°	1169.3	1170.8	1172.4	1173.0	1172.7	1172.4	1172.2	1171.9
15°	1146.1	1147.9	1149.8	1150.0	1148.6	1147.2	1145.9	1144.5
17.5°	1116.7	1118.0	1119.3	1119.7	1119.2	1118.7	1118.2	1117.7
20°	1095.0	1095.9	1096.9	1097.0	1096.3	1095.6	1094.9	1094.2
22.5°	1072.0	1072.8	1073.5	1073.4	1072.6	1071.7	1070.8	1069.9
25°	1033.9	1034.2	1034.4	1034.2	1033.5	1032.8	1032.1	1031.4
27.5°	993.4	993.6	993.8	993.4	992.6	991.7	990.8	989.9
30°	965.4	965.4	965.4	964.6	963.0	961.3	959.7	958.1
32.5°	936.0	934.7	933.4	932.3	931.4	930.5	929.6	928.8
35°	888.3	886.9	885.5	884.2	883.0	881.9	880.7	879.5
37.5°	838.9	837.2	835.6	834.4	833.6	832.9	832.1	831.4
40°	806.7	804.9	803.0	801.6	800.7	799.7	798.8	797.9
42.5°	773.2	771.3	769.5	768.1	767.2	766.2	765.3	764.4
45°	723.2	720.4	717.6	715.6	714.5	713.3	712.1	711.0
47.5°	670.5	667.8	665.0	663.1	662.1	661.1	660.1	659.0
50°	635.7	633.1	630.6	628.6	627.2	625.8	624.4	623.0
52.5°	600.4	598.2	596.0	594.3	592.9	591.5	590.1	588.7
55°	546.7	544.1	541.6	539.7	538.5	537.4	536.2	535.1
57.5°	493.8	491.6	489.3	487.5	486.1	484.8	483.4	482.1
60°	456.5	454.4	452.3	450.7	449.5	448.4	447.2	446.1
62.5°	420.5	418.4	416.3	414.9	414.1	413.3	412.5	411.7
65°	366.9	365.1	363.2	361.9	361.2	360.5	359.8	359.1
67.5°	313.8	312.2	310.5	309.2	308.3	307.3	306.3	305.3
70°	279.5	277.8	276.2	274.8	273.6	272.5	271.3	270.1
72.5°	244.6	243.2	241.8	240.7	240.1	239.5	238.9	238.3
75°	194.5	193.4	192.2	191.3	190.6	189.9	189.2	188.5
77.5°	147.7	146.9	146.1	145.8	145.8	145.8	145.8	145.8
80°	117.9	117.6	117.4	117.3	117.3	117.3	117.3	117.3
82.5°	90.7	90.3	89.8	89.5	89.4	89.2	89.0	88.8
85°	51.4	51.0	50.5	50.3	50.3	50.3	50.3	50.3
87.5°	23.3	23.3	23.3	23.3	23.4	23.5	23.6	23.7
90°	26.1	27.0	27.9	28.6	29.0	29.5	29.9	30.4
92.5°	40.3	41.1	41.8	42.0	41.7	41.5	41.2	40.9
95°	76.8	77.7	78.6	79.0	79.0	79.0	79.0	79.0
97.5°	119.4	120.4	121.5	121.9	121.8	121.8	121.7	121.6
100°	150.3	151.0	151.6	152.2	152.6	153.1	153.5	154.0
102.5°	185.9	186.6	187.3	187.6	187.5	187.4	187.3	187.2
105°	239.1	239.1	239.1	239.3	239.8	240.2	240.7	241.1
107.5°	296.7	297.4	298.1	298.3	298.1	297.8	297.5	297.2
110°	335.1	336.0	336.9	337.1	336.7	336.2	335.8	335.3



TEST NUMBER: P332167

CATALOG NUMBER: S123DIW-S775D1030U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	373.6	374.6	375.7	376.2	376.1	376.0	376.0	375.9
115°	432.0	432.3	432.5	432.5	432.3	432.0	431.8	431.6
117.5°	491.1	491.0	491.0	490.6	490.0	489.4	488.7	488.1
120°	530.4	530.2	530.0	529.6	529.2	528.7	528.3	527.8
122.5°	570.2	569.6	569.1	568.4	567.8	567.2	566.6	565.9
125°	629.4	628.5	627.6	626.7	625.8	624.9	624.0	623.1
127.5°	687.8	686.6	685.3	684.1	683.1	682.1	681.0	680.0
130°	726.6	725.7	724.8	723.6	722.0	720.4	718.9	717.3
132.5°	764.4	763.3	762.2	761.1	759.8	758.6	757.4	756.2
135°	820.8	819.9	819.0	818.4	817.9	817.5	817.0	816.6
137.5°	876.1	875.1	874.2	873.3	872.4	871.6	870.7	869.9
140°	912.4	912.1	911.9	911.0	909.4	907.9	906.3	904.7
142.5°	946.4	946.2	946.0	945.2	944.0	942.8	941.6	940.4
145°	996.5	996.2	996.0	995.4	994.5	993.6	992.7	991.8
147.5°	1043.7	1043.7	1043.7	1043.0	1041.7	1040.3	1039.0	1037.6
150°	1072.9	1072.9	1072.9	1072.2	1070.9	1069.5	1068.2	1066.8
152.5°	1099.5	1099.9	1100.3	1099.9	1098.7	1097.5	1096.3	1095.2
155°	1138.5	1139.4	1140.3	1140.0	1138.4	1136.8	1135.3	1133.7
157.5°	1172.0	1173.0	1173.9	1173.8	1172.5	1171.3	1170.0	1168.7
160°	1192.7	1193.8	1194.9	1195.0	1194.1	1193.2	1192.3	1191.4
162.5°	1212.1	1213.2	1214.4	1214.2	1212.8	1211.3	1209.9	1208.4
165°	1236.7	1238.0	1239.4	1239.3	1237.7	1236.1	1234.5	1233.0
167.5°	1256.6	1258.0	1259.4	1259.4	1258.0	1256.6	1255.2	1253.8
170°	1267.5	1269.1	1270.7	1270.7	1269.1	1267.5	1265.9	1264.4
172.5°	1276.1	1277.5	1278.9	1278.8	1277.2	1275.6	1274.0	1272.5
175°	1285.3	1286.7	1288.0	1287.9	1286.3	1284.7	1283.2	1281.6
177.5°	1289.4	1290.5	1291.6	1291.5	1290.2	1289.0	1287.7	1286.5
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7

(END OF REPORT)