

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: P332166

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332166
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: S123DIW-S775D1030U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7295.2 lumens
Efficiency: N/A
Efficacy: 138.7 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

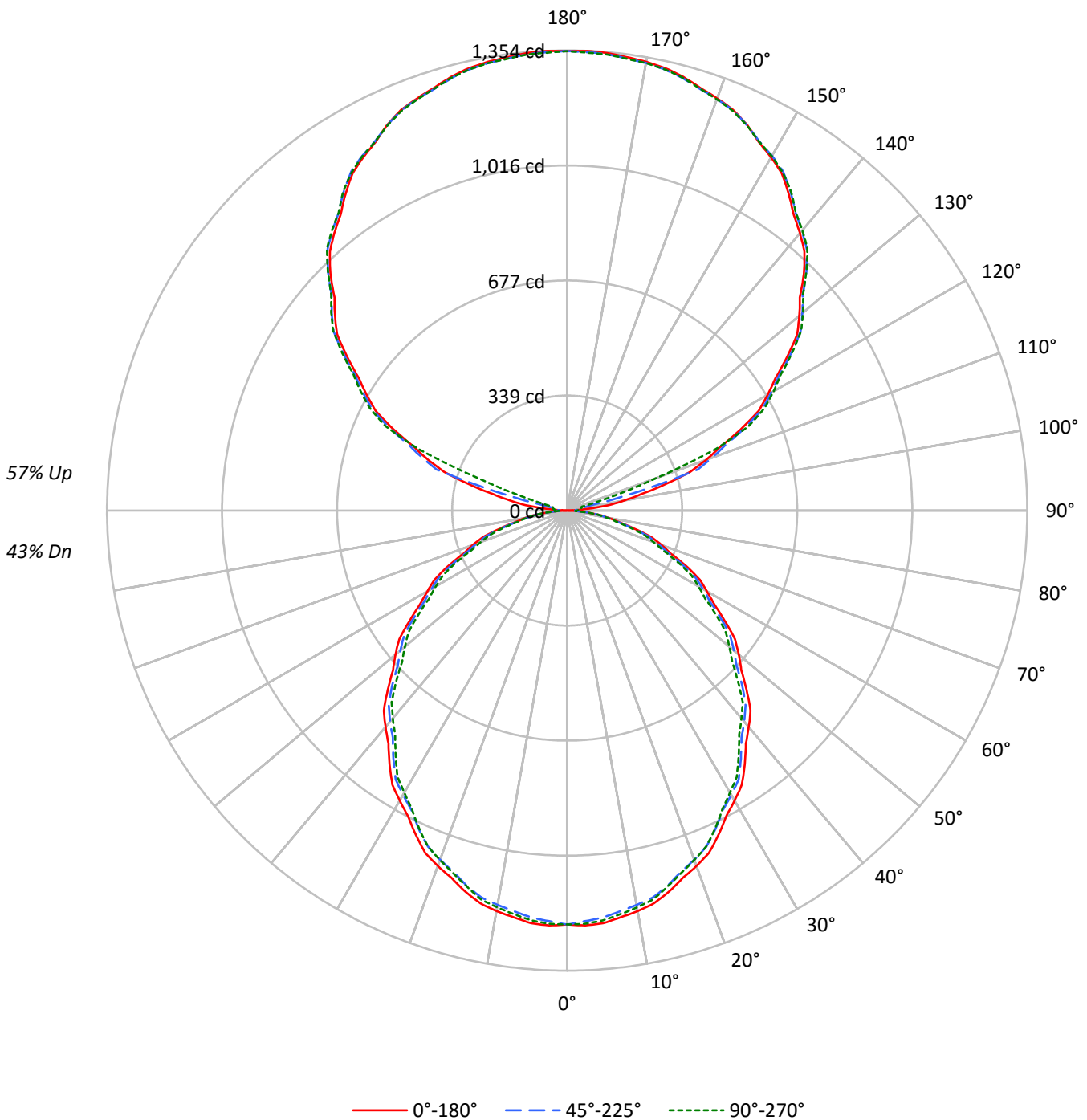
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43				
1	96	92	88	85	88	84	81	78	70	67	65	56	55	53	44	43	42	36				
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	35	31				
3	80	70	63	57	73	65	58	53	54	49	45	44	40	38	34	32	30	26				
4	73	62	54	48	67	57	50	45	48	43	39	39	35	32	31	28	26	22				
5	67	55	47	41	61	51	44	39	43	37	33	35	31	28	28	25	23	19				
6	62	50	42	36	56	46	39	34	38	33	29	32	27	24	25	22	20	17				
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18	15				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12				
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11				

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	1.6
10°-20°	323.9	4.4
20°-30°	478.4	6.6
30°-40°	558.9	7.7
40°-50°	561.9	7.7
50°-60°	493.6	6.8
60°-70°	367.7	5.0
70°-80°	209.5	2.9
80°-90°	63.9	0.9
90°-100°	49.2	0.7
100°-110°	234.3	3.2
110°-120°	562.7	7.7
120°-130°	716.5	9.8
130°-140°	765.6	10.5
140°-150°	715.9	9.8
150°-160°	577.5	7.9
160°-170°	372.7	5.1
170°-180°	128.4	1.8
0°-30°	917.1	12.6
0°-40°	1475.9	20.2
0°-60°	2531.4	34.7
0°-90°	3172.5	43.5
90°-120°	846.1	11.6
90°-150°	3044.1	41.7
90°-180°	4123.0	56.5
0°-180°	7295.2	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	6
95°	61	23	31	38	38	76
105°	299	305	220	52	44	317
115°	562	568	576	586	591	554
125°	792	799	804	806	808	707
135°	985	991	995	998	995	758
145°	1137	1144	1146	1148	1148	711
155°	1252	1251	1252	1256	1250	577
165°	1321	1318	1317	1324	1318	373
175°	1352	1347	1348	1354	1347	129
180°	1352	1352	1352	1352	1352	



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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	21.6	21.5	21.7	22.1	22.5	22.9	23.2	23.2
90°	1.0	3.2	5.5	7.7	9.9	12.5	15.4	18.3	21.2	24.1	25.0
92.5°	18.7	18.1	17.4	16.8	16.2	17.0	19.2	21.3	23.5	25.7	27.1
95°	61.3	52.1	43.0	33.8	24.7	21.3	23.8	26.2	28.7	31.1	32.7
97.5°	123.1	119.0	114.9	110.8	106.7	96.6	80.6	64.5	48.4	32.3	34.1
100°	169.7	174.2	178.7	183.1	187.6	172.4	137.6	102.8	68.0	33.1	34.9
102.5°	222.8	226.0	229.2	232.4	235.6	218.2	180.2	142.2	104.1	66.1	60.6
105°	299.3	301.8	304.2	306.7	309.1	300.3	280.2	260.1	240.1	220.0	180.5
107.5°	380.1	382.0	384.0	386.0	387.9	390.5	393.7	396.8	400.0	403.2	374.2
110°	433.9	435.7	437.5	439.3	441.0	443.2	445.6	448.1	450.5	453.0	445.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	485.3	486.9	488.5	490.2	491.8	493.8	496.2	498.7	501.2	503.6	503.7
115°	561.5	562.8	564.1	565.5	566.8	568.5	570.5	572.5	574.5	576.5	578.8
117.5°	635.2	636.8	638.5	640.1	641.8	643.1	644.2	645.2	646.2	647.2	649.0
120°	681.0	683.0	685.0	687.0	689.0	690.4	691.0	691.7	692.4	693.0	694.8
122.5°	727.6	729.2	730.9	732.5	734.2	735.4	736.3	737.1	738.0	738.8	740.1
125°	791.5	793.3	795.0	796.8	798.6	800.0	800.8	801.7	802.6	803.5	804.0
127.5°	853.3	855.1	856.9	858.7	860.5	861.9	863.0	864.1	865.1	866.2	866.9
130°	891.9	893.7	895.5	897.3	899.1	900.4	901.3	902.2	903.1	904.0	904.9
132.5°	928.9	930.7	932.4	934.2	936.0	937.3	938.0	938.7	939.4	940.1	941.0
135°	985.3	986.7	988.0	989.3	990.7	991.8	992.7	993.6	994.5	995.4	996.0
137.5°	1033.5	1035.2	1036.9	1038.6	1040.3	1041.4	1041.9	1042.4	1042.9	1043.4	1044.4
140°	1065.7	1067.0	1068.4	1069.7	1071.0	1072.0	1072.7	1073.4	1074.0	1074.7	1075.6
142.5°	1095.4	1096.7	1098.1	1099.4	1100.8	1101.8	1102.4	1103.1	1103.8	1104.4	1105.2
145°	1137.0	1138.5	1140.1	1141.7	1143.2	1144.2	1144.7	1145.1	1145.6	1146.0	1146.5
147.5°	1176.2	1177.2	1178.2	1179.2	1180.3	1181.0	1181.4	1181.9	1182.3	1182.8	1183.2
150°	1200.3	1200.9	1201.6	1202.3	1202.9	1203.5	1203.9	1204.4	1204.8	1205.3	1205.7
152.5°	1222.0	1222.3	1222.6	1222.9	1223.2	1223.5	1223.8	1224.0	1224.3	1224.6	1225.4
155°	1252.5	1252.0	1251.6	1251.2	1250.7	1250.6	1250.8	1251.0	1251.3	1251.5	1252.6
157.5°	1276.2	1276.2	1276.1	1276.1	1276.0	1275.9	1275.7	1275.4	1275.2	1275.0	1276.3
160°	1290.7	1290.4	1290.2	1290.0	1289.8	1289.5	1289.3	1289.1	1288.9	1288.7	1290.0
162.5°	1304.3	1303.7	1303.2	1302.6	1302.0	1301.6	1301.4	1301.2	1300.9	1300.7	1302.2
165°	1320.8	1320.1	1319.5	1318.8	1318.1	1317.7	1317.4	1317.2	1317.0	1316.8	1318.6
167.5°	1333.6	1332.8	1331.9	1331.0	1330.1	1329.6	1329.6	1329.6	1329.6	1329.6	1331.4
170°	1340.9	1340.0	1339.1	1338.2	1337.3	1336.9	1336.9	1336.9	1336.9	1336.9	1338.6
172.5°	1345.7	1344.6	1343.6	1342.5	1341.4	1341.0	1341.1	1341.3	1341.5	1341.7	1343.5
175°	1351.9	1350.8	1349.7	1348.6	1347.5	1347.0	1347.2	1347.5	1347.7	1347.9	1349.5
177.5°	1353.5	1352.6	1351.8	1350.9	1350.0	1349.6	1349.8	1350.0	1350.1	1350.3	1351.8
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9



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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°	23.2	23.2	23.2	23.3	23.3	23.4	23.5	23.6
90°	25.9	26.8	27.7	28.3	28.8	29.2	29.7	30.1
92.5°	28.6	30.0	31.4	32.3	32.5	32.8	33.1	33.3
95°	34.3	35.8	37.4	38.2	38.2	38.2	38.2	38.2
97.5°	35.9	37.7	39.5	40.5	40.7	40.9	41.2	41.4
100°	36.7	38.5	40.3	41.3	41.5	41.7	42.0	42.2
102.5°	55.0	49.5	43.9	41.4	41.8	42.2	42.6	43.0
105°	141.0	101.4	61.9	42.4	42.9	43.3	43.7	44.2
107.5°	345.2	316.3	287.3	257.9	228.1	198.4	168.6	138.8
110°	438.3	430.9	423.5	403.9	372.0	340.0	308.1	276.2



TEST NUMBER: P332166

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	503.9	504.0	504.1	500.8	494.1	487.4	480.6	473.9
115°	581.0	583.2	585.5	587.0	587.9	588.8	589.7	590.6
117.5°	650.8	652.6	654.4	655.4	655.5	655.7	655.9	656.1
120°	696.6	698.4	700.2	701.1	701.1	701.1	701.1	701.1
122.5°	741.3	742.6	743.8	744.6	744.7	744.9	745.1	745.3
125°	804.4	804.9	805.3	805.8	806.2	806.6	807.1	807.5
127.5°	867.6	868.3	869.1	869.2	868.7	868.3	867.9	867.4
130°	905.8	906.6	907.5	907.8	907.3	906.9	906.4	906.0
132.5°	941.9	942.8	943.7	943.8	943.2	942.6	942.0	941.3
135°	996.7	997.4	998.0	998.0	997.4	996.7	996.0	995.4
137.5°	1045.5	1046.6	1047.7	1048.0	1047.5	1047.1	1046.6	1046.2
140°	1076.5	1077.4	1078.3	1078.5	1078.1	1077.6	1077.2	1076.7
142.5°	1105.9	1106.6	1107.3	1107.3	1106.7	1106.1	1105.5	1104.8
145°	1146.9	1147.4	1147.8	1148.0	1148.0	1148.0	1148.0	1148.0
147.5°	1183.7	1184.1	1184.6	1184.3	1183.3	1182.2	1181.2	1180.2
150°	1206.2	1206.6	1207.1	1207.0	1206.3	1205.6	1205.0	1204.3
152.5°	1226.2	1227.0	1227.8	1227.7	1226.6	1225.6	1224.6	1223.6
155°	1253.7	1254.8	1256.0	1255.8	1254.5	1253.2	1251.8	1250.5
157.5°	1277.7	1279.0	1280.3	1280.1	1278.4	1276.7	1274.9	1273.2
160°	1291.3	1292.7	1294.0	1293.9	1292.3	1290.8	1289.2	1287.6
162.5°	1303.7	1305.3	1306.8	1306.8	1305.5	1304.1	1302.7	1301.3
165°	1320.3	1322.1	1323.9	1324.0	1322.5	1320.9	1319.3	1317.8
167.5°	1333.2	1335.0	1336.8	1336.8	1335.0	1333.2	1331.4	1329.6
170°	1340.4	1342.2	1344.0	1344.0	1342.2	1340.4	1338.6	1336.9
172.5°	1345.3	1347.0	1348.8	1348.7	1346.8	1344.8	1342.8	1340.9
175°	1351.0	1352.6	1354.2	1354.1	1352.3	1350.5	1348.7	1346.9
177.5°	1353.2	1354.6	1356.0	1355.9	1354.1	1352.3	1350.5	1348.7
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9

(END OF REPORT)