

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: P331998

Luminaire Tested: **S123DIP-S775D1195U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331998
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: S123DIP-S775D1195U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7271.1 lumens
Efficiency: N/A
Efficacy: 127.8 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

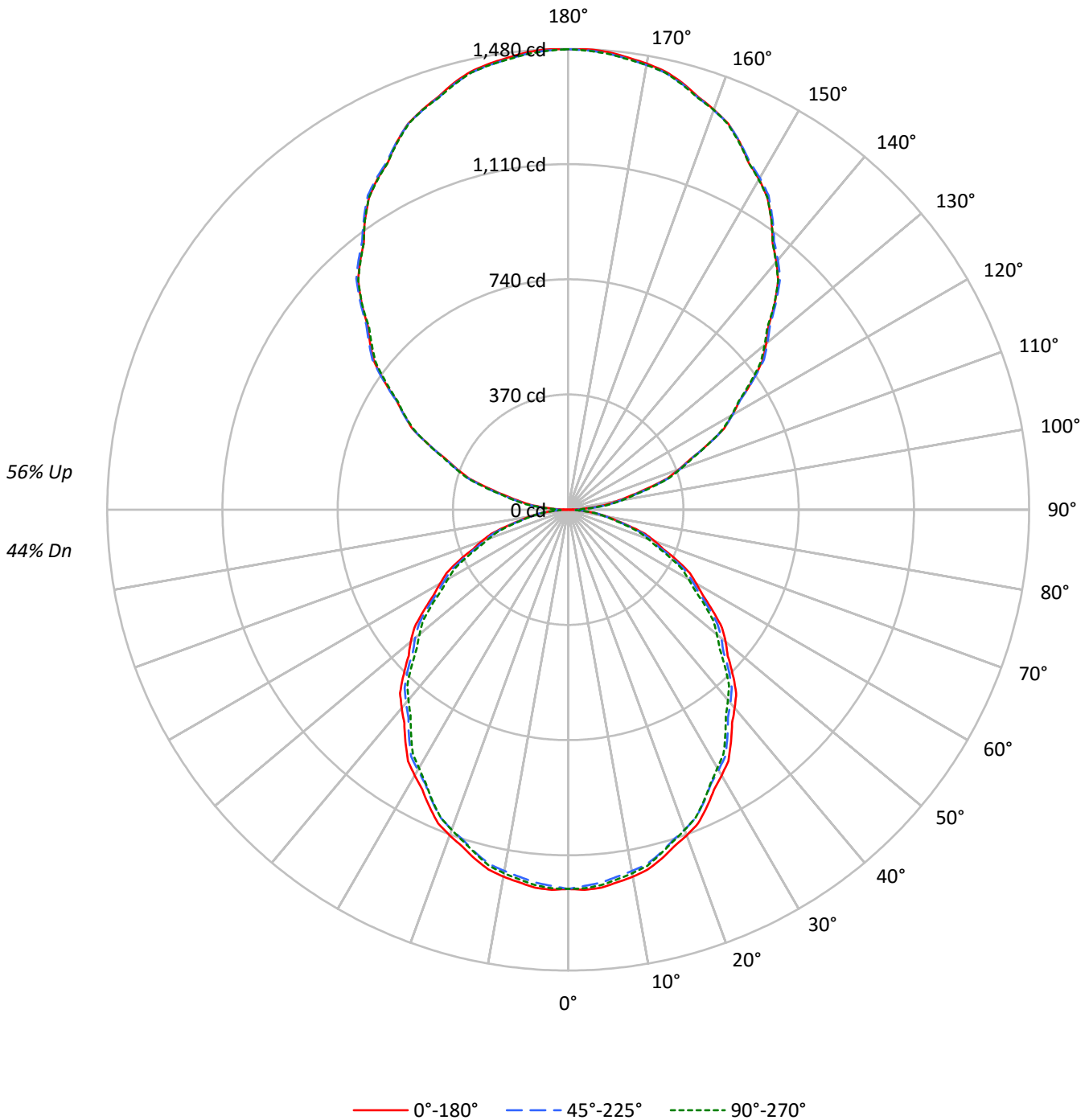
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	97	97	97	80	80	80	64	64	64	50	50	50	44					44			
1	96	92	88	85	88	84	81	78	70	67	65	57	55	53	44	43	42					37				
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36					31				
3	80	71	63	57	73	65	58	53	54	49	45	44	40	38	35	32	30					26				
4	73	62	55	49	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	28	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	4.5
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	5.1
70°-80°	209.5	2.9
80°-90°	64.5	0.9
90°-100°	96.4	1.3
100°-110°	288.4	4.0
110°-120°	490.5	6.7
120°-130°	645.2	8.9
130°-140°	725.2	10.0
140°-150°	712.8	9.8
150°-160°	600.1	8.3
160°-170°	399.5	5.5
170°-180°	139.9	1.9
0°-30°	917.1	12.6
0°-40°	1475.9	20.3
0°-60°	2531.4	34.8
0°-90°	3173.1	43.6
90°-120°	875.3	12.0
90°-150°	2958.5	40.7
90°-180°	4098.0	56.4
0°-180°	7271.1	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	13	28	32	35	7
95°	69	77	86	90	91	77
105°	261	264	274	274	276	280
115°	494	497	495	496	495	488
125°	723	726	724	719	715	644
135°	938	944	943	939	936	722
145°	1138	1140	1143	1142	1138	710
155°	1302	1303	1304	1308	1300	599
165°	1419	1415	1415	1421	1414	400
175°	1476	1471	1471	1477	1470	140
180°	1479	1479	1479	1479	1479	



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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	22.0	21.9	21.9	21.8	22.1	22.6	23.0	23.5	24.0	24.0
90°	1.2	3.7	6.3	8.9	11.5	14.5	17.8	21.2	24.5	27.9	28.9
92.5°	28.1	29.9	31.6	33.4	35.1	37.0	38.9	40.8	42.7	44.6	45.4
95°	68.6	70.4	72.2	74.0	75.8	77.7	79.8	81.8	83.9	86.0	87.0
97.5°	121.8	123.1	124.5	125.8	127.1	128.6	130.1	131.6	133.0	134.5	135.7
100°	158.0	159.6	161.1	162.7	164.2	165.6	166.9	168.2	169.5	170.8	171.6
102.5°	199.8	200.8	201.7	202.6	203.6	204.9	206.6	208.3	210.0	211.7	212.5
105°	261.4	261.9	262.5	263.0	263.5	264.9	267.2	269.6	271.9	274.2	274.2
107.5°	333.0	333.3	333.6	333.9	334.2	334.9	335.8	336.7	337.6	338.6	339.4
110°	377.6	378.1	378.6	379.2	379.7	380.2	380.7	381.2	381.7	382.3	383.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	424.1	424.4	424.7	425.0	425.3	425.5	425.6	425.7	425.8	425.9	427.2
115°	493.8	494.6	495.3	496.1	496.9	497.0	496.5	496.0	495.5	495.0	495.2
117.5°	564.0	564.5	565.0	565.5	566.0	566.0	565.3	564.6	564.0	563.3	563.2
120°	607.7	609.2	610.8	612.3	613.9	614.0	612.7	611.4	610.1	608.8	608.6
122.5°	653.2	654.3	655.5	656.6	657.8	658.0	657.3	656.6	656.0	655.3	654.6
125°	722.7	723.5	724.2	725.0	725.8	725.9	725.4	724.9	724.4	723.9	722.8
127.5°	786.8	788.5	790.1	791.8	793.4	794.0	793.4	792.8	792.3	791.7	790.3
130°	829.6	831.6	833.7	835.8	837.8	838.5	837.7	836.9	836.2	835.4	834.4
132.5°	872.3	874.4	876.5	878.5	880.6	881.4	880.8	880.2	879.6	879.1	877.8
135°	937.6	939.2	940.7	942.3	943.8	944.5	944.2	944.0	943.7	943.4	942.4
137.5°	998.1	999.3	1000.6	1001.9	1003.2	1004.2	1004.9	1005.5	1006.2	1006.9	1005.8
140°	1039.9	1041.2	1042.5	1043.8	1045.0	1045.8	1046.1	1046.3	1046.6	1046.9	1046.6
142.5°	1078.0	1079.3	1080.6	1081.9	1083.2	1084.0	1084.5	1085.0	1085.4	1085.9	1085.6
145°	1137.5	1138.0	1138.5	1139.0	1139.5	1140.2	1141.0	1141.7	1142.5	1143.3	1143.0
147.5°	1189.5	1190.5	1191.4	1192.3	1193.3	1194.1	1194.8	1195.5	1196.2	1197.0	1197.0
150°	1225.8	1226.3	1226.8	1227.3	1227.9	1228.4	1228.9	1229.4	1229.9	1230.4	1230.4
152.5°	1255.5	1256.3	1257.0	1257.7	1258.4	1258.9	1259.2	1259.6	1259.9	1260.2	1260.6
155°	1302.5	1302.5	1302.5	1302.5	1302.5	1302.6	1302.9	1303.1	1303.4	1303.6	1304.7
157.5°	1342.4	1342.1	1341.8	1341.5	1341.2	1341.1	1341.4	1341.6	1341.8	1342.0	1343.1
160°	1367.5	1367.0	1366.5	1366.0	1365.5	1365.2	1365.2	1365.2	1365.2	1365.2	1366.5
162.5°	1389.8	1389.1	1388.4	1387.7	1387.0	1386.7	1386.9	1387.1	1387.3	1387.5	1388.8
165°	1418.7	1417.9	1417.1	1416.3	1415.6	1415.2	1415.2	1415.2	1415.2	1415.2	1416.7
167.5°	1441.7	1440.6	1439.6	1438.6	1437.5	1437.1	1437.3	1437.5	1437.7	1437.9	1439.5
170°	1454.7	1453.6	1452.6	1451.6	1450.5	1450.0	1450.0	1450.0	1450.0	1450.0	1451.8
172.5°	1464.9	1463.9	1462.8	1461.8	1460.8	1460.3	1460.3	1460.3	1460.3	1460.3	1461.9
175°	1475.6	1474.6	1473.5	1472.5	1471.5	1470.9	1470.9	1470.9	1470.9	1470.9	1472.5
177.5°	1480.0	1479.2	1478.4	1477.5	1476.7	1476.3	1476.3	1476.3	1476.3	1476.3	1477.5
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1



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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°	24.0	24.1	24.1	24.1	24.3	24.4	24.5	24.6
90°	30.0	31.0	32.0	32.8	33.3	33.8	34.3	34.9
92.5°	46.3	47.1	47.9	48.2	47.9	47.6	47.2	46.9
95°	88.0	89.1	90.1	90.6	90.6	90.6	90.6	90.6
97.5°	136.9	138.1	139.3	139.8	139.7	139.6	139.5	139.4
100°	172.3	173.1	173.9	174.5	175.1	175.6	176.1	176.6
102.5°	213.2	214.0	214.8	215.1	215.0	214.9	214.8	214.7
105°	274.2	274.2	274.2	274.5	275.0	275.5	276.0	276.5
107.5°	340.2	341.1	341.9	342.1	341.8	341.5	341.2	340.9
110°	384.3	385.4	386.4	386.6	386.1	385.6	385.1	384.6



TEST NUMBER: P331998

CATALOG NUMBER: S123DIP-S775D1195U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	428.4	429.7	430.9	431.5	431.4	431.3	431.2	431.1
115°	495.5	495.7	496.0	496.0	495.7	495.5	495.2	495.0
117.5°	563.2	563.1	563.1	562.7	562.0	561.2	560.5	559.8
120°	608.3	608.1	607.8	607.4	606.9	606.4	605.9	605.3
122.5°	654.0	653.3	652.6	651.9	651.2	650.5	649.7	649.0
125°	721.8	720.8	719.7	718.7	717.7	716.6	715.6	714.6
127.5°	788.8	787.4	785.9	784.6	783.4	782.2	781.0	779.9
130°	833.3	832.3	831.3	829.8	828.0	826.2	824.4	822.6
132.5°	876.6	875.4	874.1	872.8	871.4	870.0	868.6	867.2
135°	941.4	940.3	939.3	938.5	938.0	937.5	937.0	936.5
137.5°	1004.7	1003.6	1002.5	1001.5	1000.5	999.6	998.6	997.6
140°	1046.3	1046.1	1045.8	1044.8	1043.0	1041.2	1039.4	1037.6
142.5°	1085.4	1085.1	1084.9	1084.0	1082.6	1081.2	1079.9	1078.5
145°	1142.8	1142.5	1142.3	1141.6	1140.6	1139.5	1138.5	1137.5
147.5°	1197.0	1197.0	1197.0	1196.2	1194.6	1193.1	1191.5	1190.0
150°	1230.4	1230.4	1230.4	1229.7	1228.1	1226.6	1225.0	1223.5
152.5°	1261.0	1261.4	1261.8	1261.4	1260.0	1258.7	1257.3	1256.0
155°	1305.7	1306.7	1307.8	1307.4	1305.6	1303.8	1302.0	1300.1
157.5°	1344.1	1345.2	1346.3	1346.1	1344.7	1343.2	1341.8	1340.3
160°	1367.8	1369.1	1370.4	1370.5	1369.5	1368.4	1367.4	1366.4
162.5°	1390.1	1391.4	1392.7	1392.5	1390.8	1389.2	1387.5	1385.9
165°	1418.3	1419.8	1421.4	1421.2	1419.4	1417.6	1415.8	1414.0
167.5°	1441.1	1442.7	1444.3	1444.3	1442.7	1441.1	1439.5	1437.9
170°	1453.6	1455.5	1457.3	1457.3	1455.5	1453.6	1451.8	1450.0
172.5°	1463.5	1465.1	1466.7	1466.6	1464.7	1462.9	1461.1	1459.3
175°	1474.0	1475.6	1477.1	1477.0	1475.2	1473.4	1471.6	1469.8
177.5°	1478.8	1480.0	1481.2	1481.1	1479.7	1478.2	1476.8	1475.4
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1

(END OF REPORT)