

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: P331997

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331997
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-S775D1195U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7941.9 lumens
Efficiency: N/A
Efficacy: 139.6 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: Semi-Indirect

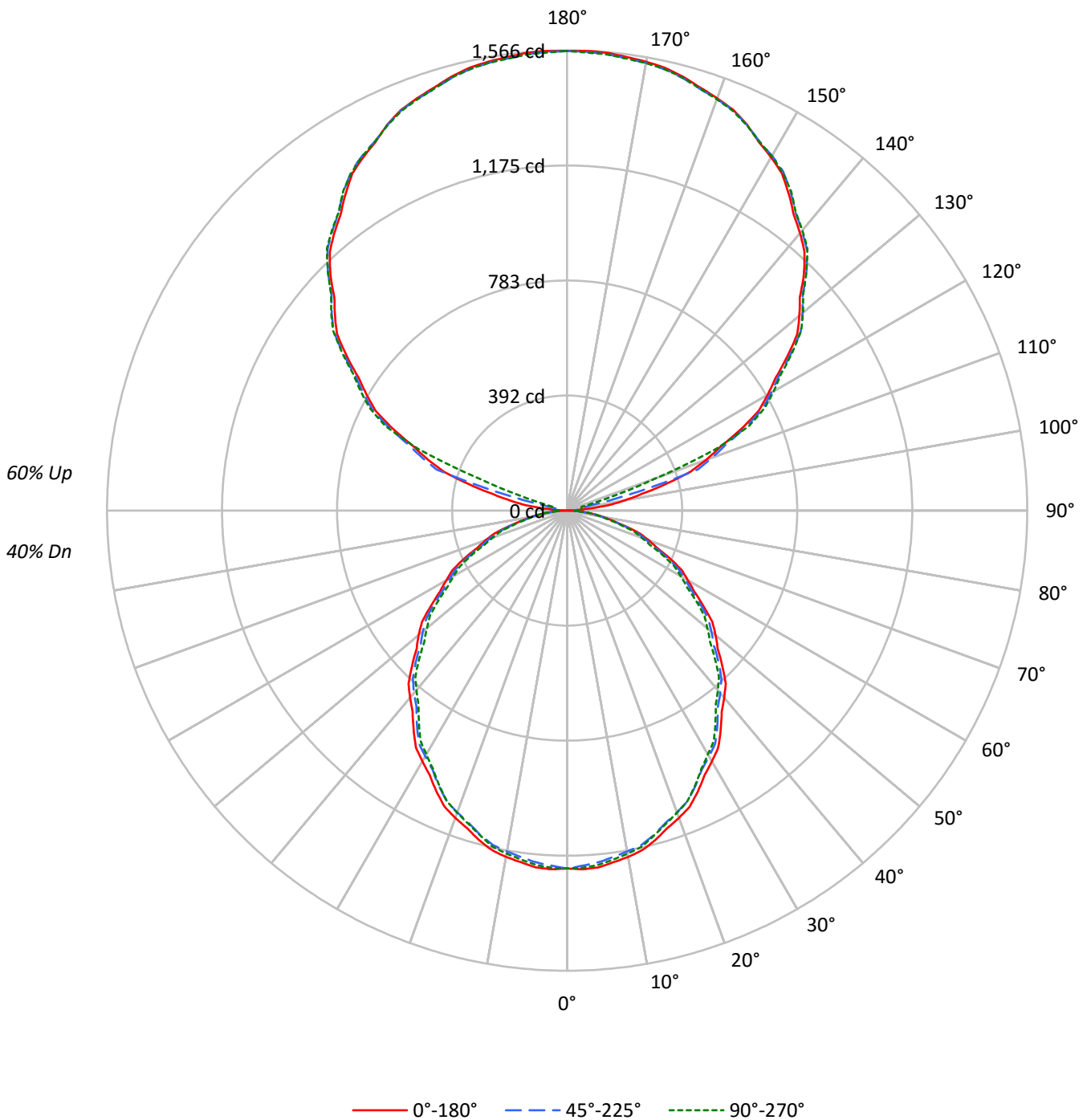
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	91	87	84	87	83	80	77	68	66	64	54	53	51	41	40	39	34
2	87	80	74	68	79	73	67	63	60	56	53	47	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	19	15
7	56	44	37	31	51	41	34	29	34	29	25	27	23	21	21	19	16	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10

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	1.4
10°-20°	323.9	4.1
20°-30°	478.4	6.0
30°-40°	558.9	7.0
40°-50°	561.9	7.1
50°-60°	493.6	6.2
60°-70°	367.7	4.6
70°-80°	209.5	2.6
80°-90°	64.5	0.8
90°-100°	56.9	0.7
100°-110°	271.0	3.4
110°-120°	650.9	8.2
120°-130°	828.8	10.4
130°-140°	885.6	11.2
140°-150°	828.1	10.4
150°-160°	668.0	8.4
160°-170°	431.1	5.4
170°-180°	148.6	1.9
0°-30°	917.1	11.5
0°-40°	1475.9	18.6
0°-60°	2531.4	31.9
0°-90°	3173.1	40.0
90°-120°	978.7	12.3
90°-150°	3521.2	44.3
90°-180°	4769.0	60.0
0°-180°	7941.9	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	6
95°	71	27	36	44	44	88
105°	346	352	254	60	51	367
115°	650	657	667	678	683	641
125°	916	925	929	932	934	817
135°	1140	1147	1151	1154	1151	877
145°	1315	1323	1326	1328	1328	823
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	



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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	22.5	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°	21.6	20.9	20.2	19.4	18.7	19.6	22.2	24.7	27.2	29.7	31.4
95°	70.9	60.3	49.7	39.1	28.5	24.7	27.5	30.3	33.2	36.0	37.8
97.5°	142.4	137.7	132.9	128.2	123.4	111.8	93.2	74.6	56.0	37.4	39.5
100°	196.3	201.5	206.7	211.8	217.0	199.4	159.2	118.9	78.6	38.3	40.4
102.5°	257.7	261.4	265.1	268.8	272.6	252.4	208.4	164.4	120.4	76.4	70.0
105°	346.2	349.1	351.9	354.7	357.6	347.4	324.1	300.9	277.7	254.4	208.7
107.5°	439.6	441.9	444.2	446.4	448.7	451.7	455.4	459.0	462.7	466.4	432.8
110°	501.9	504.0	506.0	508.1	510.2	512.6	515.5	518.3	521.1	524.0	515.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.4	563.2	565.1	567.0	568.8	571.2	574.0	576.9	579.7	582.5	582.7
115°	649.5	651.0	652.5	654.1	655.6	657.6	659.9	662.2	664.6	666.9	669.5
117.5°	734.7	736.6	738.5	740.5	742.4	743.9	745.1	746.3	747.5	748.7	750.7
120°	787.7	790.0	792.4	794.7	797.0	798.6	799.3	800.1	800.9	801.6	803.7
122.5°	841.6	843.5	845.4	847.3	849.3	850.7	851.7	852.7	853.6	854.6	856.1
125°	915.5	917.6	919.6	921.7	923.8	925.3	926.3	927.4	928.4	929.4	930.0
127.5°	987.1	989.1	991.2	993.3	995.3	997.0	998.2	999.5	1000.7	1001.9	1002.8
130°	1031.7	1033.8	1035.8	1037.9	1039.9	1041.5	1042.5	1043.6	1044.6	1045.6	1046.7
132.5°	1074.4	1076.5	1078.6	1080.6	1082.7	1084.1	1085.0	1085.8	1086.6	1087.5	1088.5
135°	1139.7	1141.3	1142.8	1144.4	1145.9	1147.2	1148.3	1149.3	1150.3	1151.4	1152.1
137.5°	1195.5	1197.5	1199.4	1201.4	1203.4	1204.6	1205.2	1205.8	1206.3	1206.9	1208.1
140°	1232.7	1234.2	1235.8	1237.3	1238.9	1240.0	1240.8	1241.6	1242.4	1243.1	1244.2
142.5°	1267.1	1268.6	1270.2	1271.7	1273.3	1274.4	1275.2	1276.0	1276.8	1277.5	1278.4
145°	1315.2	1317.0	1318.8	1320.6	1322.4	1323.6	1324.1	1324.6	1325.1	1325.6	1326.1
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1368.7
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8



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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°	29.9	31.0	32.0	32.8	33.3	33.8	34.3	34.9
92.5°	33.0	34.7	36.4	37.3	37.6	38.0	38.3	38.6
95°	39.6	41.4	43.2	44.1	44.1	44.1	44.1	44.1
97.5°	41.5	43.6	45.7	46.8	47.1	47.4	47.6	47.9
100°	42.5	44.5	46.6	47.8	48.0	48.3	48.5	48.8
102.5°	63.6	57.2	50.8	47.9	48.3	48.8	49.3	49.7
105°	163.0	117.3	71.6	49.1	49.6	50.1	50.6	51.1
107.5°	399.3	365.8	332.3	298.3	263.9	229.4	195.0	160.6
110°	506.9	498.4	489.9	467.2	430.3	393.3	356.4	319.5



TEST NUMBER: P331997

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	582.8	583.0	583.2	579.3	571.5	563.7	555.9	548.1
115°	672.0	674.6	677.2	679.0	680.0	681.1	682.1	683.1
117.5°	752.8	754.9	756.9	758.1	758.3	758.5	758.7	758.9
120°	805.8	807.8	809.9	810.9	810.9	810.9	810.9	810.9
122.5°	857.5	859.0	860.4	861.2	861.4	861.6	861.9	862.1
125°	930.5	931.0	931.5	932.0	932.5	933.1	933.6	934.1
127.5°	1003.6	1004.4	1005.2	1005.4	1004.9	1004.4	1003.9	1003.3
130°	1047.7	1048.7	1049.8	1050.0	1049.5	1049.0	1048.5	1048.0
132.5°	1089.5	1090.6	1091.6	1091.7	1091.0	1090.3	1089.6	1088.8
135°	1152.9	1153.7	1154.5	1154.5	1153.7	1152.9	1152.1	1151.4
137.5°	1209.4	1210.6	1211.8	1212.2	1211.7	1211.2	1210.7	1210.1
140°	1245.2	1246.2	1247.3	1247.5	1247.0	1246.5	1246.0	1245.5
142.5°	1279.2	1280.0	1280.8	1280.9	1280.2	1279.4	1278.7	1278.0
145°	1326.7	1327.2	1327.7	1327.9	1327.9	1327.9	1327.9	1327.9
147.5°	1369.2	1369.7	1370.2	1369.9	1368.7	1367.5	1366.3	1365.1
150°	1395.2	1395.7	1396.2	1396.1	1395.3	1394.6	1393.8	1393.0
152.5°	1418.3	1419.3	1420.2	1420.1	1418.9	1417.7	1416.5	1415.3
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)