

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: P332328

Luminaire Tested: **S123RDIP-S775D1195U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332328
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: S123RDIP-S775D1195U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7019.0 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

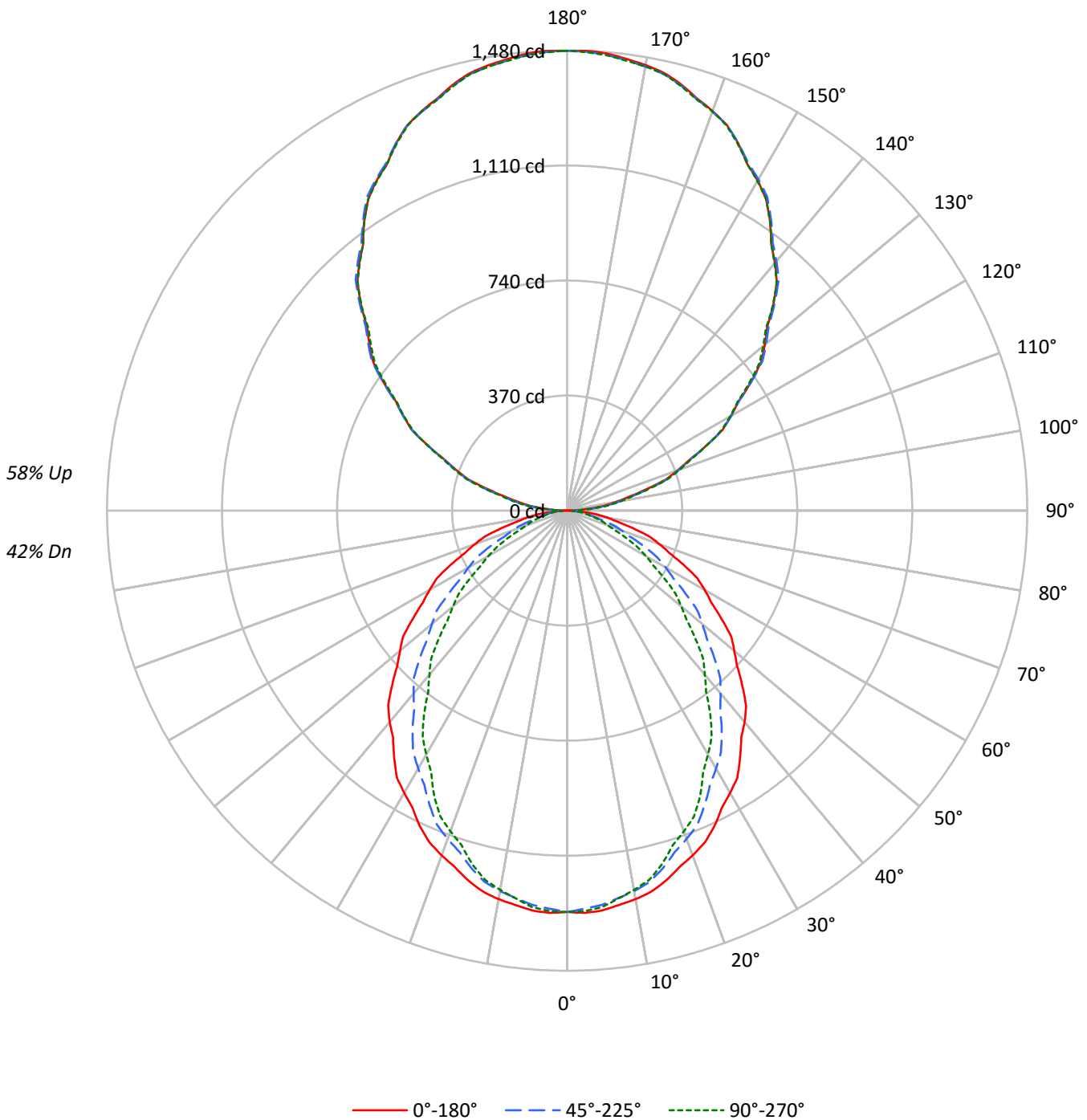
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42				
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36				
2	88	81	75	70	80	74	69	64	61	57	54	49	47	45	38	37	35	30				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26				
4	73	63	55	50	67	58	51	46	48	43	39	39	36	33	31	28	26	22				
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20				
6	62	50	43	37	57	46	40	34	39	34	30	32	28	25	25	23	20	17				
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	18	16	14				
9	50	38	30	26	45	35	28	24	30	24	21	24	21	18	20	17	15	13				
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13897	13897	13897
5°	13950	13758	13837
10°	13871	13585	13539
15°	13722	13266	13127
20°	13518	12869	12569
25°	13307	12423	12025
30°	13027	11908	11257
35°	12741	11393	10553
40°	12476	10784	9681
45°	12129	10185	8894
50°	11747	9503	8013
55°	11357	8724	7191
60°	11001	7890	6288
65°	10534	6986	5387
70°	9951	5866	4349
75°	9100	4616	4092
80°	8114	4091	3763
85°	6854	3619	3359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	1.7
10°-20°	337.3	4.8
20°-30°	485.7	6.9
30°-40°	547.1	7.8
40°-50°	523.4	7.5
50°-60°	428.6	6.1
60°-70°	289.2	4.1
70°-80°	145.5	2.1
80°-90°	42.9	0.6
90°-100°	96.4	1.4
100°-110°	288.4	4.1
110°-120°	490.5	7.0
120°-130°	645.2	9.2
130°-140°	725.2	10.3
140°-150°	712.8	10.2
150°-160°	600.1	8.5
160°-170°	399.5	5.7
170°-180°	139.9	2.0
0°-30°	944.3	13.5
0°-40°	1491.4	21.2
0°-60°	2443.4	34.8
0°-90°	2921.0	41.6
90°-120°	875.3	12.5
90°-150°	2958.5	42.2
90°-180°	4098.0	58.4
0°-180°	7019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1291	1285	1273	1282	1281	122
15°	1231	1219	1190	1185	1178	347
25°	1120	1093	1046	1025	1012	515
35°	970	930	867	823	803	607
45°	797	748	669	611	584	615
55°	605	552	465	406	383	542
65°	414	355	274	225	212	409
75°	219	168	111	101	98	233
85°	56	34	29	27	27	62
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°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1295.2	1294.5	1293.7	1293.0	1292.3	1290.8	1288.5	1286.3	1284.1	1281.8	1283.9
5°	1291.1	1289.9	1288.7	1287.6	1286.4	1284.4	1281.6	1278.8	1276.0	1273.3	1275.3
7.5°	1279.1	1277.9	1276.6	1275.3	1274.1	1271.6	1268.0	1264.4	1260.8	1257.1	1258.3
10°	1269.1	1267.4	1265.8	1264.2	1262.5	1259.6	1255.4	1251.3	1247.1	1242.9	1243.1
12.5°	1254.8	1253.0	1251.2	1249.4	1247.6	1244.1	1239.0	1233.9	1228.7	1223.6	1223.5
15°	1231.4	1228.8	1226.2	1223.7	1221.1	1216.6	1210.1	1203.6	1197.0	1190.5	1189.4
17.5°	1201.8	1198.9	1195.9	1192.9	1189.9	1184.3	1176.0	1167.7	1159.4	1151.2	1148.7
20°	1180.1	1176.3	1172.6	1168.9	1165.2	1158.9	1150.0	1141.2	1132.4	1123.5	1120.5
22.5°	1155.8	1151.5	1147.2	1142.9	1138.6	1131.8	1122.4	1113.0	1103.6	1094.2	1090.4
25°	1120.4	1114.6	1108.7	1102.9	1097.1	1088.8	1078.1	1067.4	1056.7	1046.0	1041.1
27.5°	1077.4	1071.0	1064.6	1058.2	1051.8	1042.6	1030.7	1018.8	1006.8	994.9	988.1
30°	1048.1	1041.1	1034.2	1027.2	1020.2	1010.2	997.2	984.1	971.1	958.1	950.2
32.5°	1018.8	1010.9	1003.0	995.1	987.2	976.3	962.5	948.8	935.0	921.2	912.6
35°	969.6	961.2	952.8	944.5	936.1	924.7	910.3	895.8	881.4	867.0	857.0
37.5°	919.8	910.4	901.1	891.8	882.5	870.2	854.8	839.4	824.0	808.6	797.2
40°	887.9	877.7	867.4	857.2	847.0	833.6	817.1	800.6	784.0	767.5	755.4
42.5°	851.9	841.7	831.4	821.2	811.0	797.3	780.2	763.1	746.1	729.0	715.8
45°	796.8	786.4	775.9	765.4	754.9	740.8	722.8	704.9	687.0	669.1	655.8
47.5°	741.8	730.3	718.8	707.3	695.8	681.1	663.2	645.2	627.3	609.4	595.0
50°	701.5	690.6	679.7	668.7	657.8	642.9	624.1	605.2	586.4	567.5	553.1
52.5°	665.5	653.7	641.8	629.9	618.1	602.8	584.1	565.5	546.8	528.1	513.2
55°	605.2	593.8	582.4	571.0	559.6	544.0	524.2	504.5	484.7	464.9	451.4
57.5°	549.5	537.1	524.7	512.2	499.8	483.7	463.8	443.9	424.0	404.2	391.4
60°	511.0	498.2	485.4	472.6	459.8	443.7	424.4	405.1	385.8	366.5	353.9
62.5°	472.4	459.6	446.8	434.0	421.3	405.2	385.9	366.6	347.3	327.9	316.1
65°	413.6	400.8	388.0	375.2	362.4	346.9	328.8	310.6	292.5	274.3	262.9
67.5°	354.8	341.8	328.9	315.9	303.0	287.8	270.4	253.0	235.6	218.2	209.7
70°	316.2	303.7	291.1	278.5	266.0	251.5	235.2	219.0	202.7	186.4	178.2
72.5°	277.7	265.3	252.9	240.5	228.2	214.6	199.8	185.0	170.2	155.4	148.7
75°	218.8	207.7	196.5	185.3	174.2	162.2	149.4	136.6	123.8	111.0	108.7
77.5°	165.2	155.1	145.0	134.9	124.8	115.7	107.4	99.2	91.0	82.7	81.5
80°	130.9	121.3	111.8	102.3	92.7	85.5	80.6	75.7	70.9	66.0	65.3
82.5°	98.2	90.0	81.7	73.5	65.3	60.0	57.7	55.4	53.2	50.9	50.2
85°	55.5	50.4	45.3	40.1	35.0	32.1	31.4	30.7	30.0	29.3	28.9
87.5°	20.3	18.8	17.3	15.7	14.2	13.8	14.5	15.1	15.8	16.5	16.5
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°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1285.9	1288.0	1290.0	1290.9	1290.5	1290.1	1289.7	1289.4
5°	1277.4	1279.5	1281.6	1282.4	1282.0	1281.5	1281.0	1280.6
7.5°	1259.5	1260.6	1261.8	1262.0	1261.2	1260.4	1259.6	1258.8
10°	1243.4	1243.6	1243.8	1243.4	1242.2	1241.0	1239.9	1238.7
12.5°	1223.3	1223.2	1223.1	1222.3	1221.0	1219.6	1218.3	1216.9
15°	1188.2	1187.0	1185.9	1184.5	1182.9	1181.2	1179.6	1178.0
17.5°	1146.2	1143.8	1141.3	1138.9	1136.4	1134.0	1131.6	1129.2
20°	1117.5	1114.4	1111.4	1108.5	1105.7	1102.9	1100.1	1097.3
22.5°	1086.7	1082.9	1079.1	1075.9	1073.3	1070.7	1068.1	1065.5
25°	1036.3	1031.4	1026.5	1022.8	1020.2	1017.6	1015.1	1012.5
27.5°	981.3	974.6	967.8	962.4	958.5	954.6	950.7	946.8
30°	942.3	934.3	926.4	920.6	916.9	913.2	909.4	905.7
32.5°	903.9	895.3	886.6	880.3	876.4	872.5	868.6	864.7
35°	847.0	837.0	827.0	819.9	815.7	811.5	807.3	803.1
37.5°	785.8	774.5	763.1	754.9	749.7	744.5	739.4	734.2
40°	743.3	731.2	719.1	710.4	705.0	699.7	694.3	689.0
42.5°	702.5	689.3	676.1	667.1	662.3	657.5	652.7	647.9
45°	642.6	629.3	616.0	606.6	601.0	595.4	589.9	584.3
47.5°	580.5	566.1	551.7	542.0	537.0	532.0	527.1	522.1
50°	538.7	524.2	509.8	499.9	494.6	489.2	483.9	478.5
52.5°	498.2	483.2	468.2	458.3	453.5	448.7	443.9	439.1
55°	437.9	424.4	410.9	401.8	397.2	392.5	387.9	383.2
57.5°	378.7	365.9	353.2	344.8	340.9	336.9	332.9	329.0
60°	341.3	328.8	316.2	308.0	304.0	300.0	296.1	292.1
62.5°	304.3	292.5	280.7	272.7	268.5	264.4	260.3	256.1
65°	251.5	240.1	228.7	221.7	219.2	216.6	214.1	211.5
67.5°	201.2	192.7	184.1	178.5	175.8	173.0	170.3	167.5
70°	170.1	161.9	153.8	148.5	145.9	143.3	140.8	138.2
72.5°	142.1	135.4	128.8	124.9	123.8	122.8	121.7	120.6
75°	106.3	104.0	101.7	100.3	99.8	99.4	98.9	98.4
77.5°	80.2	78.9	77.7	76.8	76.4	75.9	75.4	75.0
80°	64.6	63.9	63.2	62.6	62.1	61.7	61.2	60.7
82.5°	49.5	48.8	48.1	47.7	47.6	47.5	47.4	47.3
85°	28.4	27.9	27.5	27.2	27.2	27.2	27.2	27.2
87.5°	16.5	16.5	16.5	16.5	16.4	16.4	16.3	16.2
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: P332328

CATALOG NUMBER: S123RDIP-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)