

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: P332358-927

Luminaire Tested: **S123RDIP-S1000D1195U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332358-927
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-S1000D1195U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 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: 6253.1 lumens
Efficiency: N/A
Efficacy: 95.6 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

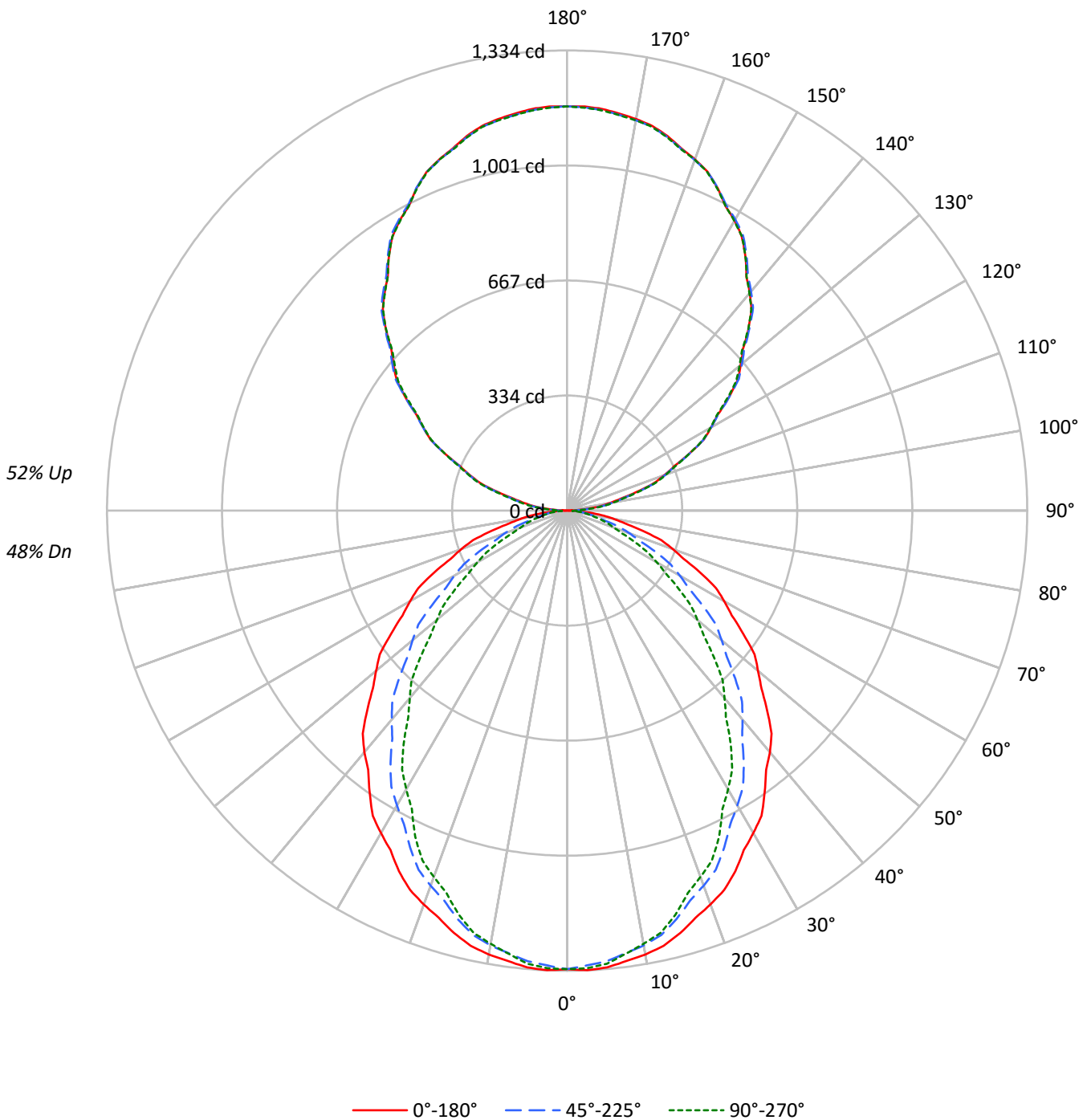
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48				48
1	98	93	90	86	90	86	83	80	73	70	68	60	58	57	49	47	47	41				41
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35				35
3	82	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30				30
4	75	64	56	51	69	59	53	47	51	45	41	42	38	35	35	32	30	26				26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23				23
6	63	51	44	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20				20
7	59	47	39	33	54	43	36	31	37	32	28	31	27	24	26	23	21	18				18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	18	16				16
9	51	39	31	26	47	36	29	25	31	26	22	27	22	19	22	19	17	15				15
10	47	35	28	24	44	33	27	22	29	24	20	25	20	18	21	17	15	13				13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14310	14310	14310
5°	14364	14166	14249
10°	14283	13988	13941
15°	14130	13661	13517
20°	13919	13252	12944
25°	13702	12792	12383
30°	13415	12263	11591
35°	13119	11730	10867
40°	12847	11105	9969
45°	12490	10488	9159
50°	12097	9786	8251
55°	11695	8983	7405
60°	11328	8125	6476
65°	10847	7195	5547
70°	10247	6039	4482
75°	9374	4754	4213
80°	8356	4209	3874
85°	7052	3730	3458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	2.0
10°-20°	347.3	5.6
20°-30°	500.2	8.0
30°-40°	563.4	9.0
40°-50°	539.0	8.6
50°-60°	441.4	7.1
60°-70°	297.8	4.8
70°-80°	149.8	2.4
80°-90°	43.1	0.7
90°-100°	76.3	1.2
100°-110°	228.5	3.7
110°-120°	388.6	6.2
120°-130°	511.1	8.2
130°-140°	574.5	9.2
140°-150°	564.7	9.0
150°-160°	475.4	7.6
160°-170°	316.5	5.1
170°-180°	110.8	1.8
0°-30°	972.3	15.5
0°-40°	1535.7	24.6
0°-60°	2516.0	40.2
0°-90°	3006.7	48.1
90°-120°	693.4	11.1
90°-150°	2343.7	37.5
90°-180°	3246.0	51.9
0°-180°	6253.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1329	1324	1311	1320	1319	126
15°	1268	1255	1226	1220	1213	357
25°	1154	1125	1077	1055	1043	530
35°	998	958	893	848	827	625
45°	820	770	689	629	602	633
55°	623	568	479	418	395	559
65°	426	365	282	232	218	421
75°	225	173	114	104	101	240
85°	57	34	30	28	28	64
90°	1	10	22	26	28	6
95°	54	61	68	72	72	61
105°	207	209	217	217	219	222
115°	391	394	392	393	392	387
125°	572	575	574	570	566	510
135°	743	748	747	744	742	572
145°	901	903	906	905	901	563
155°	1032	1032	1033	1036	1030	475
165°	1124	1121	1121	1126	1120	317
175°	1169	1165	1165	1170	1164	111
180°	1172	1172	1172	1172	1172	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1333.7	1332.9	1332.2	1331.4	1330.6	1329.1	1326.8	1324.5	1322.2	1319.9	1322.0
5°	1329.4	1328.2	1327.0	1325.8	1324.6	1322.5	1319.7	1316.8	1314.0	1311.1	1313.2
7.5°	1317.1	1315.8	1314.5	1313.2	1311.9	1309.4	1305.7	1302.0	1298.2	1294.5	1295.7
10°	1306.8	1305.1	1303.4	1301.7	1300.1	1297.0	1292.8	1288.4	1284.1	1279.8	1280.1
12.5°	1292.1	1290.2	1288.4	1286.5	1284.6	1281.0	1275.8	1270.5	1265.3	1260.0	1259.8
15°	1268.0	1265.4	1262.7	1260.0	1257.4	1252.8	1246.0	1239.3	1232.6	1225.9	1224.7
17.5°	1237.5	1234.5	1231.4	1228.4	1225.3	1219.5	1210.9	1202.5	1193.9	1185.3	1182.8
20°	1215.1	1211.3	1207.4	1203.6	1199.8	1193.3	1184.2	1175.1	1166.0	1156.9	1153.8
22.5°	1190.1	1185.7	1181.3	1176.9	1172.5	1165.5	1155.7	1146.1	1136.4	1126.7	1122.8
25°	1153.7	1147.7	1141.7	1135.7	1129.7	1121.2	1110.2	1099.2	1088.1	1077.1	1072.1
27.5°	1109.5	1102.9	1096.2	1089.6	1083.0	1073.6	1061.3	1049.0	1036.7	1024.5	1017.5
30°	1079.3	1072.1	1064.9	1057.7	1050.5	1040.2	1026.8	1013.4	1000.0	986.6	978.4
32.5°	1049.1	1040.9	1032.8	1024.6	1016.5	1005.4	991.2	977.0	962.7	948.6	939.7
35°	998.4	989.8	981.1	972.6	963.9	952.1	937.3	922.4	907.6	892.7	882.4
37.5°	947.1	937.5	927.9	918.3	908.7	896.0	880.2	864.3	848.4	832.6	820.9
40°	914.3	903.8	893.2	882.6	872.1	858.3	841.4	824.3	807.3	790.3	777.8
42.5°	877.2	866.6	856.1	845.6	835.0	821.0	803.4	785.8	768.3	750.7	737.0
45°	820.5	809.7	798.9	788.1	777.4	762.8	744.3	725.9	707.4	689.0	675.3
47.5°	763.8	751.9	740.1	728.3	716.4	701.3	682.9	664.4	645.9	627.5	612.7
50°	722.4	711.1	699.9	688.6	677.3	662.0	642.6	623.2	603.8	584.4	569.5
52.5°	685.3	673.1	660.8	648.6	636.4	620.7	601.5	582.3	563.1	543.8	528.4
55°	623.2	611.5	599.7	588.0	576.2	560.2	539.8	519.4	499.1	478.7	464.9
57.5°	565.9	553.0	540.3	527.4	514.7	498.0	477.5	457.1	436.7	416.2	403.1
60°	526.2	513.0	499.8	486.6	473.4	456.9	437.0	417.2	397.3	377.4	364.4
62.5°	486.5	473.3	460.1	446.9	433.8	417.2	397.4	377.5	357.6	337.7	325.5
65°	425.9	412.7	399.5	386.3	373.2	357.3	338.6	319.9	301.2	282.5	270.8
67.5°	365.3	352.0	338.7	325.3	312.0	296.4	278.5	260.5	242.6	224.7	215.9
70°	325.6	312.7	299.8	286.8	273.9	259.0	242.2	225.5	208.7	191.9	183.5
72.5°	285.9	273.2	260.5	247.7	235.0	220.9	205.7	190.5	175.2	160.0	153.1
75°	225.4	213.8	202.3	190.8	179.4	167.0	153.8	140.6	127.5	114.3	111.9
77.5°	170.2	159.7	149.3	138.9	128.6	119.1	110.6	102.1	93.6	85.2	83.9
80°	134.8	124.9	115.1	105.3	95.5	88.1	83.0	78.0	73.0	67.9	67.2
82.5°	101.2	92.7	84.2	75.7	67.2	61.8	59.4	57.1	54.7	52.4	51.7
85°	57.1	51.9	46.6	41.4	36.0	33.0	32.3	31.6	30.9	30.2	29.7
87.5°	20.9	19.2	17.5	15.8	14.1	13.5	14.0	14.6	15.1	15.6	15.6
90°	1.0	2.9	5.0	7.1	9.1	11.5	14.1	16.8	19.4	22.1	22.9
92.5°	22.3	23.7	25.0	26.5	27.8	29.3	30.8	32.3	33.8	35.3	36.0
95°	54.3	55.8	57.2	58.6	60.0	61.6	63.2	64.8	66.5	68.1	68.9
97.5°	96.5	97.5	98.6	99.7	100.7	101.9	103.1	104.3	105.4	106.5	107.5
100°	125.2	126.4	127.6	128.9	130.1	131.2	132.2	133.2	134.3	135.3	135.9
102.5°	158.3	159.1	159.8	160.5	161.3	162.3	163.7	165.0	166.4	167.7	168.3
105°	207.1	207.5	207.9	208.3	208.7	209.8	211.7	213.6	215.4	217.2	217.2
107.5°	263.8	264.0	264.3	264.5	264.7	265.3	266.0	266.7	267.4	268.2	268.9
110°	299.1	299.5	299.9	300.4	300.8	301.2	301.6	302.0	302.4	302.9	303.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.0	336.2	336.4	336.7	336.9	337.1	337.2	337.2	337.3	337.4	338.4
115°	391.2	391.8	392.4	393.0	393.6	393.7	393.3	392.9	392.5	392.1	392.3
117.5°	446.8	447.2	447.6	448.0	448.4	448.4	447.8	447.3	446.8	446.2	446.2
120°	481.4	482.6	483.9	485.1	486.3	486.4	485.4	484.3	483.3	482.3	482.1
122.5°	517.5	518.3	519.3	520.1	521.1	521.3	520.7	520.1	519.7	519.1	518.6
125°	572.5	573.1	573.7	574.3	575.0	575.0	574.6	574.3	573.9	573.5	572.6
127.5°	623.3	624.6	625.9	627.2	628.5	629.0	628.5	628.0	627.6	627.2	626.1
130°	657.2	658.8	660.4	662.1	663.7	664.2	663.6	663.0	662.4	661.8	661.0
132.5°	691.0	692.7	694.3	695.9	697.6	698.2	697.8	697.3	696.8	696.4	695.4
135°	742.8	744.0	745.2	746.5	747.7	748.2	748.0	747.8	747.6	747.3	746.6
137.5°	790.7	791.6	792.7	793.7	794.7	795.5	796.1	796.5	797.1	797.6	796.8
140°	823.8	824.8	825.9	826.9	827.8	828.5	828.7	828.9	829.1	829.3	829.1
142.5°	854.0	855.0	856.0	857.1	858.1	858.7	859.1	859.5	859.8	860.2	860.0
145°	901.1	901.5	901.9	902.3	902.7	903.2	903.9	904.4	905.1	905.7	905.5
147.5°	942.3	943.1	943.8	944.5	945.3	945.9	946.5	947.1	947.6	948.2	948.2
150°	971.1	971.5	971.8	972.2	972.7	973.1	973.5	973.9	974.3	974.7	974.7
152.5°	994.6	995.2	995.8	996.3	996.9	997.3	997.5	997.8	998.1	998.3	998.6
155°	1031.8	1031.8	1031.8	1031.8	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.6
157.5°	1063.4	1063.2	1063.0	1062.7	1062.5	1062.4	1062.6	1062.8	1063.0	1063.1	1064.0
160°	1083.3	1082.9	1082.5	1082.1	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5
162.5°	1101.0	1100.4	1099.9	1099.3	1098.8	1098.5	1098.7	1098.8	1099.0	1099.2	1100.2
165°	1123.9	1123.2	1122.6	1122.0	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3
167.5°	1142.1	1141.2	1140.4	1139.6	1138.8	1138.4	1138.6	1138.8	1138.9	1139.1	1140.3
170°	1152.4	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1
172.5°	1160.5	1159.7	1158.8	1158.0	1157.2	1156.8	1156.8	1156.8	1156.8	1156.8	1158.1
175°	1168.9	1168.2	1167.3	1166.5	1165.7	1165.2	1165.2	1165.2	1165.2	1165.2	1166.5
177.5°	1172.4	1171.8	1171.2	1170.4	1169.8	1169.5	1169.5	1169.5	1169.5	1169.5	1170.4
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1324.1	1326.3	1328.3	1329.2	1328.8	1328.5	1328.1	1327.7
5°	1315.4	1317.6	1319.7	1320.6	1320.1	1319.6	1319.1	1318.7
7.5°	1296.9	1298.1	1299.3	1299.5	1298.6	1297.8	1297.0	1296.2
10°	1280.3	1280.6	1280.8	1280.3	1279.1	1277.9	1276.7	1275.5
12.5°	1259.6	1259.6	1259.4	1258.6	1257.3	1255.8	1254.5	1253.1
15°	1223.5	1222.3	1221.1	1219.6	1218.0	1216.3	1214.7	1213.0
17.5°	1180.3	1177.7	1175.2	1172.7	1170.2	1167.7	1165.2	1162.7
20°	1150.6	1147.6	1144.5	1141.5	1138.6	1135.7	1132.8	1130.0
22.5°	1119.0	1115.1	1111.2	1107.9	1105.3	1102.6	1099.9	1097.2
25°	1067.1	1062.0	1057.0	1053.1	1050.5	1047.9	1045.3	1042.6
27.5°	1010.5	1003.5	996.5	991.0	987.0	982.9	978.9	974.9
30°	970.3	962.1	953.9	948.0	944.1	940.3	936.4	932.6
32.5°	930.7	921.9	912.9	906.5	902.5	898.4	894.4	890.3
35°	872.1	861.8	851.5	844.2	840.0	835.6	831.3	827.0
37.5°	809.2	797.5	785.8	777.3	772.0	766.7	761.4	756.1
40°	765.4	753.0	740.5	731.5	726.0	720.5	714.9	709.5
42.5°	723.4	709.8	696.2	686.9	682.0	677.1	672.1	667.2
45°	661.6	648.0	634.3	624.6	618.9	613.1	607.4	601.7
47.5°	597.8	583.0	568.1	558.1	552.9	547.9	542.7	537.6
50°	554.7	539.8	525.0	514.8	509.3	503.7	498.3	492.7
52.5°	513.0	497.6	482.1	471.9	467.0	462.1	457.2	452.2
55°	450.9	437.0	423.1	413.8	409.0	404.2	399.4	394.6
57.5°	389.9	376.8	363.7	355.1	351.0	346.9	342.9	338.7
60°	351.5	338.6	325.6	317.1	313.1	309.0	304.9	300.8
62.5°	313.3	301.2	289.0	280.7	276.6	272.3	268.0	263.7
65°	259.0	247.2	235.5	228.3	225.7	223.1	220.5	217.8
67.5°	207.2	198.4	189.6	183.8	181.0	178.2	175.3	172.5
70°	175.2	166.8	158.4	152.9	150.2	147.6	145.0	142.4
72.5°	146.3	139.4	132.6	128.7	127.5	126.4	125.3	124.2
75°	109.5	107.1	104.7	103.3	102.8	102.3	101.8	101.3
77.5°	82.6	81.3	80.0	79.1	78.7	78.2	77.7	77.2
80°	66.5	65.8	65.0	64.5	64.0	63.5	63.0	62.5
82.5°	50.9	50.2	49.5	49.1	49.0	49.0	48.8	48.7
85°	29.2	28.8	28.3	28.0	28.0	28.0	28.0	28.0
87.5°	15.6	15.5	15.5	15.4	15.4	15.2	15.1	15.0
90°	23.8	24.6	25.3	26.0	26.4	26.8	27.2	27.6
92.5°	36.7	37.3	37.9	38.2	37.9	37.7	37.4	37.2
95°	69.7	70.6	71.4	71.8	71.8	71.8	71.8	71.8
97.5°	108.4	109.4	110.4	110.7	110.7	110.6	110.5	110.4
100°	136.5	137.1	137.8	138.2	138.7	139.1	139.5	139.9
102.5°	168.9	169.5	170.2	170.4	170.3	170.2	170.2	170.1
105°	217.2	217.2	217.2	217.5	217.9	218.2	218.6	219.0
107.5°	269.5	270.2	270.8	271.0	270.8	270.5	270.3	270.1
110°	304.4	305.3	306.1	306.3	305.9	305.5	305.1	304.7



TEST NUMBER: P332358-927

CATALOG NUMBER: S123RDIP-S1000D1195U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	339.4	340.4	341.4	341.8	341.7	341.7	341.6	341.5
115°	392.5	392.7	392.9	392.9	392.7	392.5	392.3	392.1
117.5°	446.2	446.1	446.1	445.8	445.2	444.6	444.0	443.5
120°	481.9	481.7	481.5	481.2	480.8	480.4	480.0	479.5
122.5°	518.1	517.5	517.0	516.4	515.9	515.3	514.7	514.1
125°	571.8	571.0	570.1	569.3	568.5	567.7	566.9	566.1
127.5°	624.9	623.8	622.6	621.5	620.6	619.6	618.7	617.8
130°	660.1	659.3	658.5	657.4	655.9	654.5	653.1	651.6
132.5°	694.4	693.5	692.4	691.4	690.3	689.2	688.1	687.0
135°	745.8	744.9	744.1	743.5	743.1	742.7	742.3	741.9
137.5°	795.9	795.0	794.2	793.4	792.6	791.9	791.1	790.3
140°	828.9	828.7	828.5	827.7	826.2	824.8	823.4	822.0
142.5°	859.8	859.6	859.4	858.7	857.6	856.5	855.5	854.4
145°	905.3	905.1	904.9	904.4	903.6	902.7	901.9	901.1
147.5°	948.2	948.2	948.2	947.6	946.3	945.2	943.9	942.7
150°	974.7	974.7	974.7	974.1	972.9	971.7	970.4	969.2
152.5°	998.9	999.3	999.6	999.3	998.1	997.1	996.0	995.0
155°	1034.4	1035.1	1036.0	1035.7	1034.3	1032.8	1031.4	1029.9
157.5°	1064.8	1065.6	1066.5	1066.4	1065.2	1064.1	1063.0	1061.8
160°	1083.5	1084.6	1085.6	1085.7	1084.9	1084.0	1083.2	1082.4
162.5°	1101.2	1102.2	1103.3	1103.1	1101.8	1100.5	1099.2	1097.9
165°	1123.6	1124.7	1126.0	1125.8	1124.4	1123.0	1121.6	1120.1
167.5°	1141.6	1142.9	1144.1	1144.1	1142.9	1141.6	1140.3	1139.1
170°	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7
172.5°	1159.4	1160.6	1161.9	1161.8	1160.3	1158.9	1157.5	1156.0
175°	1167.7	1168.9	1170.1	1170.1	1168.6	1167.2	1165.8	1164.3
177.5°	1171.5	1172.4	1173.4	1173.3	1172.2	1171.0	1169.9	1168.8
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7

(END OF REPORT)