

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: P332351-927

Luminaire Tested: **S123RDIP-S1000D1025U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332351-927  
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: S123RDIP-S1000D1025U927-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1025 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6251.9 lumens  
Efficiency: N/A  
Efficacy: 103.3 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

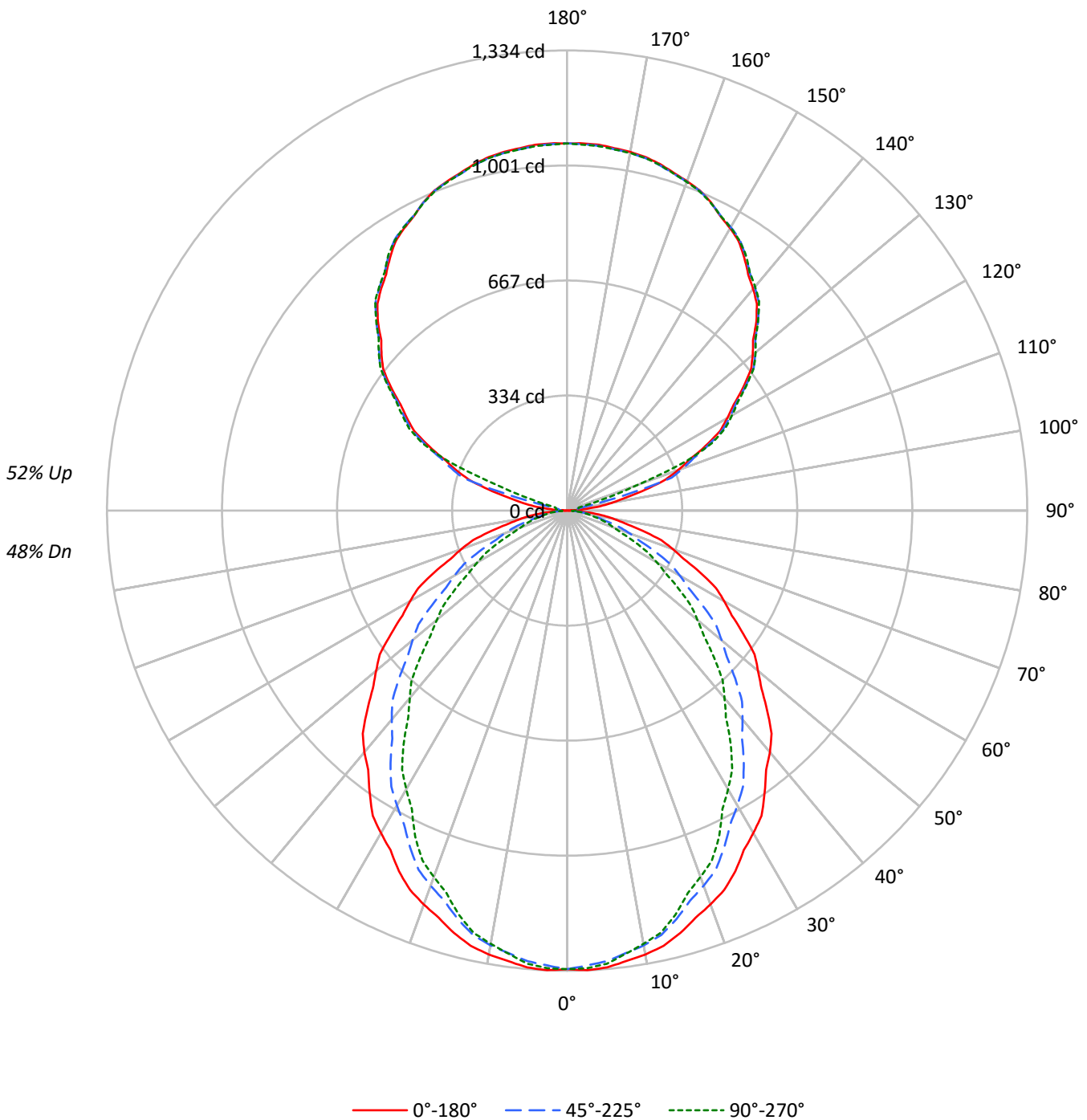
Input Watts (W): 60.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	98	93	90	86	90	86	83	80	73	70	68	60	58	57	49	47	47	41
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35
3	82	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30
4	75	64	56	51	69	59	53	47	51	45	41	42	38	35	35	32	30	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23
6	63	51	44	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20
7	59	47	39	33	54	43	36	31	37	32	28	31	27	24	26	23	21	18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	18	16
9	51	39	31	26	47	36	29	25	31	26	22	27	22	19	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	25	20	18	21	17	15	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°	42.6	0.7
90°-100°	38.7	0.6
100°-110°	184.4	2.9
110°-120°	443.0	7.1
120°-130°	564.1	9.0
130°-140°	602.7	9.6
140°-150°	563.6	9.0
150°-160°	454.6	7.3
160°-170°	293.4	4.7
170°-180°	101.1	1.6
0°-30°	972.3	15.6
0°-40°	1535.7	24.6
0°-60°	2516.0	40.2
0°-90°	3006.2	48.1
90°-120°	666.1	10.7
90°-150°	2396.5	38.3
90°-180°	3246.0	51.9
0°-180°	6251.9	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	9	19	22	24	5
95°	48	18	24	30	30	60
105°	236	240	173	41	35	250
115°	442	447	454	462	465	436
125°	623	629	633	634	636	556
135°	776	780	784	786	784	597
145°	895	900	902	904	904	560
155°	986	985	985	989	984	454
165°	1040	1038	1037	1042	1037	294
175°	1064	1061	1061	1066	1060	101
180°	1064	1064	1064	1064	1064	



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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°	20.8	19.1	17.3	15.6	13.9	13.2	13.6	14.1	14.6	15.0	15.0
90°	0.8	2.5	4.3	6.1	7.8	9.8	12.1	14.4	16.7	19.0	19.6
92.5°	14.7	14.2	13.7	13.2	12.8	13.4	15.1	16.8	18.5	20.3	21.4
95°	48.2	41.0	33.8	26.6	19.4	16.8	18.7	20.7	22.6	24.5	25.7
97.5°	97.0	93.7	90.5	87.2	84.0	76.0	63.5	50.8	38.1	25.4	26.9
100°	133.6	137.1	140.7	144.2	147.7	135.7	108.3	80.9	53.5	26.1	27.5
102.5°	175.4	177.9	180.5	183.0	185.5	171.8	141.9	111.9	82.0	52.0	47.7
105°	235.6	237.6	239.5	241.5	243.4	236.4	220.6	204.8	189.0	173.2	142.0
107.5°	299.2	300.8	302.3	303.9	305.4	307.4	309.9	312.4	314.9	317.4	294.6
110°	341.6	343.0	344.4	345.8	347.2	348.9	350.8	352.8	354.7	356.6	350.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.1	383.3	384.6	385.9	387.1	388.7	390.7	392.6	394.5	396.5	396.6
115°	442.0	443.1	444.1	445.2	446.2	447.6	449.1	450.7	452.3	453.8	455.7
117.5°	500.0	501.4	502.6	504.0	505.3	506.3	507.1	507.9	508.7	509.5	511.0
120°	536.1	537.7	539.2	540.8	542.4	543.5	544.0	544.5	545.1	545.6	547.0
122.5°	572.8	574.1	575.4	576.7	578.0	579.0	579.6	580.4	581.0	581.6	582.7
125°	623.1	624.5	625.9	627.3	628.7	629.8	630.5	631.1	631.8	632.6	633.0
127.5°	671.8	673.2	674.6	676.0	677.4	678.5	679.4	680.2	681.0	681.9	682.5
130°	702.2	703.5	705.0	706.4	707.8	708.8	709.6	710.3	710.9	711.6	712.3
132.5°	731.3	732.7	734.0	735.5	736.9	737.8	738.4	738.9	739.6	740.1	740.8
135°	775.7	776.7	777.8	778.9	779.9	780.8	781.5	782.2	782.9	783.6	784.1
137.5°	813.7	815.0	816.3	817.7	819.0	819.8	820.2	820.6	821.0	821.4	822.2
140°	838.9	840.0	841.1	842.1	843.2	844.0	844.5	845.0	845.6	846.1	846.8
142.5°	862.4	863.4	864.4	865.5	866.6	867.4	867.9	868.4	868.9	869.5	870.1
145°	895.1	896.4	897.5	898.8	900.0	900.8	901.2	901.5	901.8	902.2	902.5
147.5°	925.9	926.8	927.6	928.4	929.2	929.7	930.1	930.4	930.8	931.1	931.5
150°	944.9	945.5	945.9	946.5	947.0	947.5	947.8	948.2	948.5	948.9	949.2
152.5°	961.9	962.3	962.5	962.7	963.0	963.2	963.4	963.6	963.8	964.0	964.6
155°	986.0	985.6	985.3	985.0	984.6	984.5	984.7	984.8	985.1	985.2	986.1
157.5°	1004.6	1004.6	1004.6	1004.6	1004.6	1004.4	1004.2	1004.1	1003.9	1003.7	1004.8
160°	1016.1	1015.9	1015.7	1015.6	1015.3	1015.2	1015.0	1014.9	1014.6	1014.5	1015.6
162.5°	1026.8	1026.4	1025.9	1025.5	1025.0	1024.7	1024.5	1024.3	1024.1	1024.0	1025.2
165°	1039.8	1039.3	1038.7	1038.2	1037.7	1037.4	1037.1	1037.0	1036.8	1036.6	1038.0
167.5°	1049.9	1049.2	1048.5	1047.8	1047.1	1046.7	1046.7	1046.7	1046.7	1046.7	1048.1
170°	1055.6	1054.9	1054.2	1053.5	1052.8	1052.4	1052.4	1052.4	1052.4	1052.4	1053.8
172.5°	1059.4	1058.6	1057.7	1056.9	1056.1	1055.7	1055.8	1056.0	1056.1	1056.2	1057.6
175°	1064.3	1063.4	1062.6	1061.7	1060.8	1060.4	1060.6	1060.8	1061.0	1061.1	1062.4
177.5°	1065.6	1064.9	1064.1	1063.4	1062.8	1062.5	1062.6	1062.8	1062.9	1063.0	1064.1
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



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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°	14.9	14.9	14.8	14.7	14.6	14.5	14.3	14.3
90°	20.4	21.1	21.8	22.3	22.7	23.1	23.4	23.7
92.5°	22.5	23.6	24.7	25.4	25.6	25.8	26.1	26.2
95°	26.9	28.2	29.5	30.0	30.0	30.0	30.0	30.0
97.5°	28.3	29.7	31.1	31.8	32.1	32.2	32.4	32.6
100°	28.9	30.3	31.7	32.5	32.7	32.9	33.0	33.2
102.5°	43.3	39.0	34.6	32.6	32.9	33.2	33.5	33.8
105°	111.0	79.9	48.8	33.4	33.7	34.1	34.5	34.8
107.5°	271.8	249.0	226.2	203.0	179.6	156.1	132.7	109.2
110°	345.0	339.2	333.4	318.0	292.8	267.7	242.6	217.5





TEST NUMBER: P332351-927

CATALOG NUMBER: S123RDIP-S1000D1025U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	396.6	396.8	396.9	394.3	389.0	383.7	378.3	373.0
115°	457.4	459.1	460.9	462.2	462.8	463.5	464.2	464.9
117.5°	512.4	513.7	515.2	515.9	516.1	516.2	516.3	516.5
120°	548.4	549.8	551.2	551.9	551.9	551.9	551.9	551.9
122.5°	583.6	584.6	585.6	586.1	586.3	586.5	586.5	586.7
125°	633.3	633.6	634.0	634.3	634.7	635.0	635.4	635.7
127.5°	683.0	683.6	684.1	684.3	683.9	683.6	683.2	682.9
130°	713.0	713.8	714.5	714.6	714.3	713.9	713.6	713.2
132.5°	741.5	742.2	742.9	743.0	742.5	742.0	741.6	741.1
135°	784.7	785.2	785.7	785.7	785.2	784.7	784.1	783.6
137.5°	823.1	823.9	824.7	825.0	824.7	824.3	823.9	823.6
140°	847.5	848.2	848.9	849.1	848.7	848.3	848.0	847.6
142.5°	870.6	871.2	871.7	871.7	871.2	870.8	870.3	869.8
145°	902.9	903.2	903.6	903.8	903.8	903.8	903.8	903.8
147.5°	931.8	932.2	932.6	932.3	931.5	930.7	929.9	929.1
150°	949.6	949.9	950.3	950.1	949.7	949.1	948.6	948.1
152.5°	965.3	965.9	966.5	966.5	965.7	964.9	964.1	963.2
155°	987.0	987.9	988.7	988.6	987.6	986.6	985.5	984.4
157.5°	1005.8	1006.9	1008.0	1007.8	1006.4	1005.0	1003.7	1002.3
160°	1016.6	1017.6	1018.7	1018.6	1017.4	1016.1	1014.9	1013.7
162.5°	1026.4	1027.5	1028.7	1028.8	1027.7	1026.6	1025.6	1024.5
165°	1039.4	1040.8	1042.3	1042.4	1041.1	1039.9	1038.6	1037.4
167.5°	1049.6	1051.0	1052.3	1052.3	1051.0	1049.6	1048.1	1046.7
170°	1055.3	1056.7	1058.0	1058.0	1056.7	1055.3	1053.8	1052.4
172.5°	1059.1	1060.4	1061.8	1061.8	1060.3	1058.7	1057.2	1055.6
175°	1063.6	1064.9	1066.0	1066.0	1064.5	1063.2	1061.8	1060.3
177.5°	1065.2	1066.4	1067.5	1067.4	1066.0	1064.6	1063.2	1061.8
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3

(END OF REPORT)