

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: P332353-930

Luminaire Tested: **S123RDIP-S1000D1025U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332353-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6118.7 lumens  
Efficiency: N/A  
Efficacy: 101.1 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

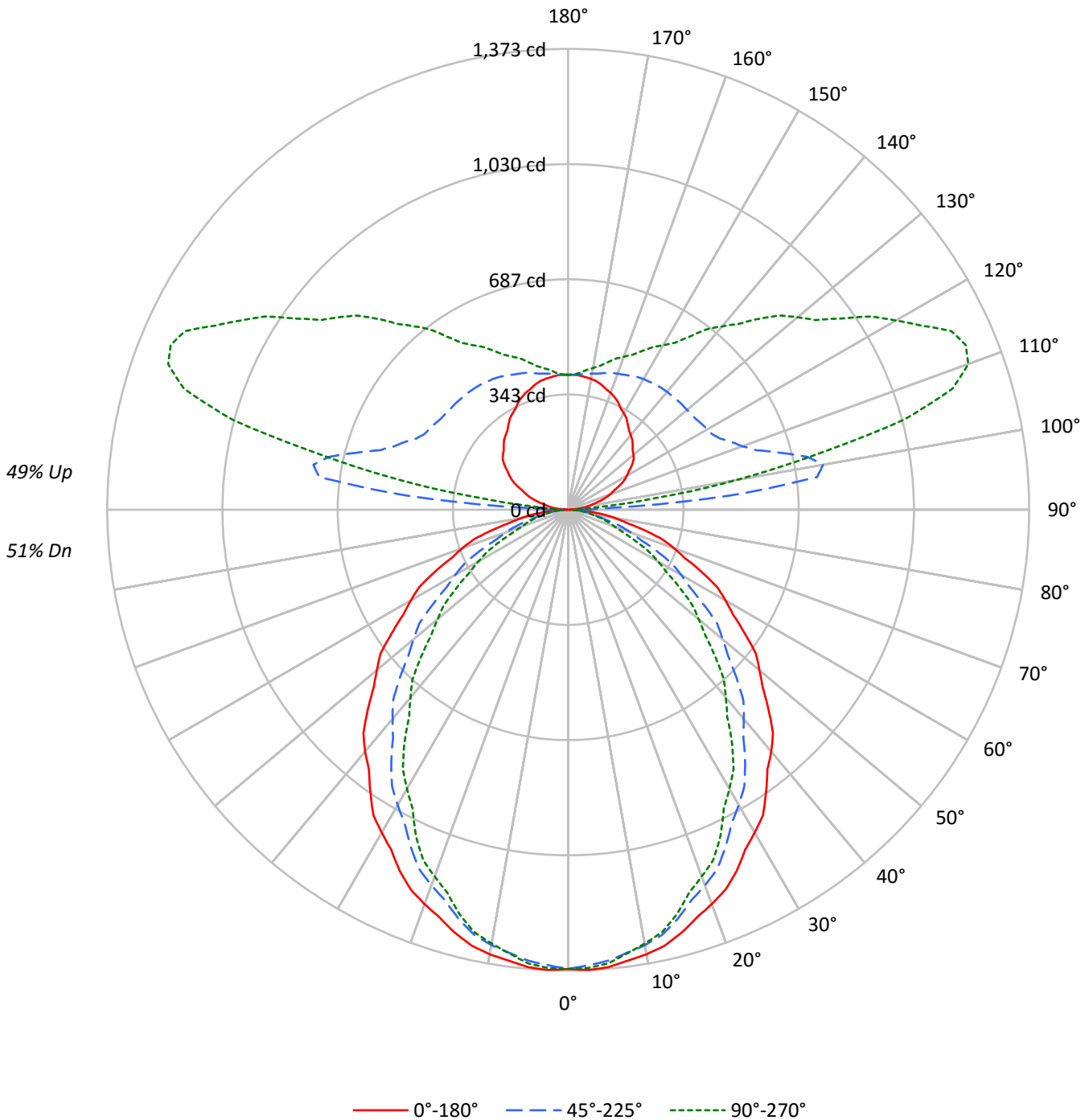
Input Watts (W): 60.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332353-930

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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	99	99	99	99	84	84	84		70	70	70		57	57	57	51
1	98	94	90	87	91	87	84	81	74	71	69		62	60	59		51	49	48	43
2	90	82	77	71	83	76	71	67	65	61	58		55	52	49		45	43	41	37
3	82	73	66	60	76	68	61	56	58	53	49		49	45	42		40	38	36	31
4	75	65	57	51	69	60	53	48	51	46	42		43	40	36		36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36		39	35	32		33	30	27	24
6	64	52	44	38	59	48	41	36	42	36	32		35	31	28		30	26	24	21
7	59	47	39	34	54	44	37	32	38	32	28		32	28	25		27	24	21	19
8	55	43	35	30	51	40	33	28	35	29	25		30	25	22		25	22	19	17
9	51	39	32	27	47	37	30	25	32	26	23		27	23	20		23	20	17	15
10	48	36	29	24	44	34	27	23	29	24	20		25	21	18		21	18	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14727	14727	14727
5°	14783	14579	14664
10°	14700	14397	14348
15°	14542	14060	13912
20°	14325	13639	13321
25°	14101	13166	12744
30°	13806	12621	11931
35°	13502	12073	11184
40°	13222	11428	10260
45°	12855	10794	9426
50°	12450	10071	8492
55°	12037	9246	7621
60°	11657	8361	6665
65°	11163	7404	5708
70°	10546	6216	4611
75°	9649	4891	4338
80°	8598	4333	3986
85°	7262	3841	3569



TEST NUMBER: P332353-930

CATALOG NUMBER: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.5	2.1
10°-20°	357.5	5.8
20°-30°	514.7	8.4
30°-40°	579.8	9.5
40°-50°	554.7	9.1
50°-60°	454.2	7.4
60°-70°	306.5	5.0
70°-80°	154.2	2.5
80°-90°	43.9	0.7
90°-100°	223.7	3.7
100°-110°	633.5	10.4
110°-120°	623.2	10.2
120°-130°	497.1	8.1
130°-140°	391.9	6.4
140°-150°	292.5	4.8
150°-160°	203.9	3.3
160°-170°	119.8	2.0
170°-180°	39.0	0.6
0°-30°	1000.7	16.4
0°-40°	1580.5	25.8
0°-60°	2589.5	42.3
0°-90°	3094.0	50.6
90°-120°	1480.5	24.2
90°-150°	2662.0	43.5
90°-180°	3025.0	49.4
0°-180°	6118.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1368	1368	1368	1368	1368	
5°	1368	1362	1349	1359	1357	130
15°	1305	1292	1262	1256	1248	367
25°	1187	1158	1109	1086	1073	546
35°	1028	986	919	873	851	643
45°	844	793	709	648	619	651
55°	641	585	493	431	406	575
65°	438	376	291	239	224	434
75°	232	178	118	107	104	247
85°	59	36	31	29	29	66
90°	2	10	20	23	24	5
95°	28	90	483	141	94	30
105°	94	140	654	1144	1035	100
115°	167	208	500	1097	1259	165
125°	232	274	467	846	993	206
135°	272	324	461	697	805	210
145°	310	355	455	572	629	194
155°	352	380	440	500	522	162
165°	385	396	422	447	455	108
175°	401	402	404	410	409	38
180°	402	402	402	402	402	



TEST NUMBER: P332353-930

CATALOG NUMBER: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1372.6	1371.8	1371.1	1370.3	1369.5	1367.9	1365.5	1363.2	1360.8	1358.5	1360.6
5°	1368.2	1366.9	1365.7	1364.5	1363.3	1361.1	1358.2	1355.3	1352.3	1349.3	1351.5
7.5°	1355.5	1354.2	1352.9	1351.5	1350.2	1347.6	1343.8	1339.9	1336.1	1332.3	1333.5
10°	1344.9	1343.2	1341.4	1339.7	1338.0	1334.9	1330.5	1326.0	1321.6	1317.2	1317.4
12.5°	1329.8	1327.9	1326.0	1324.0	1322.1	1318.4	1313.0	1307.6	1302.2	1296.7	1296.6
15°	1305.0	1302.3	1299.5	1296.8	1294.1	1289.3	1282.4	1275.5	1268.6	1261.7	1260.5
17.5°	1273.7	1270.5	1267.4	1264.2	1261.0	1255.1	1246.3	1237.5	1228.7	1219.9	1217.3
20°	1250.6	1246.7	1242.7	1238.8	1234.8	1228.2	1218.8	1209.4	1200.0	1190.7	1187.5
22.5°	1224.8	1220.3	1215.8	1211.2	1206.7	1199.5	1189.4	1179.5	1169.5	1159.6	1155.6
25°	1187.3	1181.2	1175.0	1168.8	1162.7	1153.9	1142.6	1131.2	1119.9	1108.6	1103.3
27.5°	1141.8	1135.1	1128.2	1121.4	1114.6	1104.9	1092.3	1079.6	1067.0	1054.4	1047.2
30°	1110.8	1103.3	1096.0	1088.6	1081.2	1070.6	1056.8	1042.9	1029.2	1015.4	1007.0
32.5°	1079.7	1071.3	1062.9	1054.5	1046.2	1034.7	1020.1	1005.5	990.8	976.2	967.1
35°	1027.5	1018.6	1009.7	1000.9	992.1	979.9	964.7	949.3	934.1	918.8	908.2
37.5°	974.7	964.8	955.0	945.1	935.2	922.2	905.9	889.5	873.2	856.9	844.8
40°	941.0	930.2	919.2	908.4	897.6	883.4	865.9	848.4	830.9	813.3	800.5
42.5°	902.8	891.9	881.1	870.3	859.4	845.0	826.9	808.8	790.7	772.6	758.6
45°	844.5	833.3	822.2	811.1	800.1	785.1	766.1	747.1	728.1	709.1	695.0
47.5°	786.1	773.9	761.7	749.5	737.4	721.8	702.8	683.8	664.8	645.8	630.6
50°	743.5	731.9	720.3	708.7	697.1	681.3	661.4	641.4	621.4	601.4	586.1
52.5°	705.3	692.8	680.1	667.6	655.0	638.8	619.1	599.2	579.5	559.7	543.8
55°	641.4	629.3	617.2	605.1	593.0	576.5	555.5	534.6	513.6	492.7	478.4
57.5°	582.4	569.2	556.0	542.8	529.7	512.6	491.5	470.4	449.4	428.4	414.8
60°	541.5	528.0	514.4	500.8	487.2	470.3	449.8	429.3	408.9	388.4	375.0
62.5°	500.7	487.1	473.5	460.0	446.5	429.4	409.0	388.5	368.0	347.6	335.0
65°	438.3	424.8	411.2	397.6	384.1	367.7	348.5	329.2	310.0	290.7	278.7
67.5°	375.9	362.2	348.5	334.8	321.1	305.0	286.6	268.2	249.7	231.2	222.3
70°	335.1	321.8	308.5	295.1	281.8	266.6	249.3	232.0	214.7	197.5	188.9
72.5°	294.2	281.2	268.1	254.9	241.8	227.4	211.7	196.1	180.3	164.7	157.6
75°	232.0	220.0	208.2	196.4	184.6	171.9	158.3	144.7	131.2	117.6	115.1
77.5°	175.1	164.4	153.7	143.0	132.3	122.5	113.8	105.1	96.4	87.6	86.3
80°	138.7	128.6	118.5	108.4	98.2	90.7	85.4	80.2	75.1	69.9	69.1
82.5°	104.1	95.4	86.7	77.9	69.1	63.6	61.1	58.8	56.3	53.9	53.2
85°	58.8	53.4	47.9	42.6	37.1	34.0	33.3	32.5	31.8	31.1	30.6
87.5°	21.6	19.8	17.9	16.2	14.4	13.7	14.1	14.6	15.1	15.6	15.2
90°	1.6	3.3	4.9	7.3	9.0	10.6	13.0	15.5	17.9	20.4	19.6
92.5°	10.1	15.0	21.9	28.1	35.0	47.0	68.3	103.4	137.7	125.1	94.4
95°	27.6	30.1	39.1	52.9	74.0	105.8	175.0	296.2	429.7	482.6	391.4
97.5°	47.2	48.0	55.0	67.0	87.9	122.2	188.3	325.1	547.6	747.9	800.1
100°	60.3	61.1	66.8	78.1	97.7	129.4	186.4	306.8	520.8	770.7	931.0
102.5°	73.9	75.3	80.4	91.2	108.8	137.9	189.0	291.1	481.8	728.4	937.5
105°	94.4	96.9	101.7	111.5	126.9	152.2	196.2	280.0	433.7	654.3	887.9
107.5°	116.2	118.6	123.4	133.0	147.5	170.9	209.5	279.2	403.2	588.9	801.0
110°	131.8	134.3	138.4	147.3	161.1	183.9	220.5	282.4	391.4	551.8	746.2



TEST NUMBER: P332353-930

CATALOG NUMBER: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.2	148.6	152.7	161.6	175.5	197.6	231.6	288.9	384.9	527.0	698.7
115°	166.8	170.1	175.0	183.1	197.0	218.9	249.8	299.5	382.5	500.5	641.3
117.5°	187.5	191.3	195.3	202.8	218.3	238.6	269.2	313.5	383.9	484.9	606.6
120°	201.8	204.2	208.3	216.5	232.0	252.3	281.6	323.9	386.5	477.7	588.4
122.5°	214.2	216.6	220.7	229.5	244.3	266.0	294.6	333.7	391.1	473.1	573.4
125°	232.0	233.6	238.5	247.4	262.9	284.9	313.3	349.1	397.9	467.2	554.2
127.5°	245.5	247.9	253.9	263.0	280.1	302.1	329.6	361.8	405.8	464.2	537.3
130°	253.9	256.3	263.7	273.5	290.5	312.5	339.3	370.3	411.0	462.3	528.2
132.5°	260.4	263.5	271.5	283.2	300.3	321.6	347.8	378.1	414.9	461.6	519.7
135°	271.8	275.1	284.1	296.2	313.3	335.3	360.5	388.2	420.8	460.6	508.7
137.5°	282.6	286.0	294.7	307.8	324.7	345.0	369.3	395.7	424.6	458.9	499.0
140°	289.8	293.8	301.9	315.0	331.3	351.6	375.2	399.6	427.2	458.2	493.2
142.5°	297.5	300.9	309.7	321.5	337.7	356.8	379.8	403.5	429.2	456.9	488.0
145°	310.1	312.5	319.8	332.1	345.8	364.6	385.7	407.7	430.5	454.9	480.9
147.5°	322.8	324.2	331.4	341.9	355.3	371.3	390.6	410.3	430.5	451.8	474.1
150°	331.3	332.1	338.5	349.1	360.5	375.2	393.9	411.0	430.5	449.2	469.5
152.5°	339.7	339.8	346.3	355.6	365.7	379.8	395.8	412.3	428.5	446.0	464.4
155°	352.4	352.4	357.3	365.4	374.4	385.7	399.6	412.6	426.4	440.3	456.6
157.5°	362.5	363.1	367.0	374.2	381.8	390.6	401.7	413.4	423.7	435.2	447.8
160°	370.3	370.3	373.6	380.0	385.7	393.9	403.7	413.4	422.4	431.3	441.9
162.5°	376.2	376.2	378.8	383.9	389.0	395.8	404.3	412.8	419.8	427.4	436.0
165°	384.9	384.1	385.7	389.8	393.1	398.8	405.3	411.0	415.9	421.6	428.0
167.5°	391.6	390.6	391.4	394.5	396.8	400.4	405.1	409.7	412.0	415.7	420.4
170°	395.5	393.9	394.7	397.1	398.8	400.4	404.5	407.7	409.4	411.8	415.9
172.5°	398.1	397.1	397.3	399.1	400.1	401.0	404.5	407.1	407.4	408.5	411.3
175°	401.2	400.4	399.6	401.2	401.2	402.0	403.7	405.3	404.5	404.5	406.1
177.5°	402.7	402.0	401.4	402.0	402.0	402.0	402.7	404.0	402.7	402.0	402.7
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0



TEST NUMBER: P332353-930

CATALOG NUMBER: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1362.8	1365.0	1367.1	1368.0	1367.6	1367.3	1366.8	1366.4
5°	1353.8	1356.0	1358.2	1359.1	1358.6	1358.1	1357.6	1357.1
7.5°	1334.7	1335.9	1337.2	1337.4	1336.5	1335.7	1334.9	1334.0
10°	1317.7	1317.9	1318.2	1317.7	1316.4	1315.2	1313.9	1312.7
12.5°	1296.4	1296.3	1296.2	1295.3	1294.0	1292.5	1291.1	1289.6
15°	1259.2	1258.0	1256.8	1255.2	1253.5	1251.8	1250.1	1248.4
17.5°	1214.7	1212.1	1209.5	1206.9	1204.4	1201.8	1199.2	1196.6
20°	1184.2	1181.0	1177.9	1174.8	1171.8	1168.8	1165.9	1162.9
22.5°	1151.6	1147.6	1143.6	1140.2	1137.5	1134.7	1132.0	1129.2
25°	1098.2	1093.0	1087.9	1083.9	1081.2	1078.5	1075.8	1073.0
27.5°	1040.0	1032.8	1025.6	1019.9	1015.8	1011.6	1007.5	1003.4
30°	998.6	990.2	981.8	975.7	971.7	967.8	963.8	959.9
32.5°	957.9	948.8	939.6	932.9	928.8	924.6	920.5	916.3
35°	897.6	887.0	876.4	868.9	864.5	860.0	855.6	851.1
37.5°	832.8	820.8	808.8	800.0	794.5	789.0	783.6	778.1
40°	787.7	774.9	762.1	752.8	747.1	741.5	735.8	730.2
42.5°	744.5	730.5	716.5	706.9	701.9	696.8	691.7	686.6
45°	680.9	666.9	652.8	642.9	636.9	631.0	625.1	619.2
47.5°	615.2	600.0	584.7	574.4	569.1	563.9	558.6	553.3
50°	570.9	555.5	540.3	529.8	524.2	518.4	512.8	507.1
52.5°	528.0	512.1	496.2	485.7	480.6	475.6	470.5	465.4
55°	464.1	449.8	435.5	425.8	420.9	416.0	411.1	406.1
57.5°	401.3	387.8	374.3	365.4	361.3	357.0	352.9	348.6
60°	361.7	348.5	335.1	326.4	322.2	318.0	313.8	309.6
62.5°	322.5	310.0	297.4	288.9	284.6	280.2	275.8	271.4
65°	266.6	254.5	242.4	235.0	232.3	229.6	226.9	224.1
67.5°	213.2	204.2	195.2	189.1	186.3	183.4	180.4	177.6
70°	180.3	171.6	163.0	157.4	154.6	151.9	149.2	146.5
72.5°	150.6	143.5	136.5	132.4	131.3	130.1	129.0	127.8
75°	112.7	110.2	107.8	106.3	105.8	105.3	104.8	104.3
77.5°	85.0	83.6	82.3	81.4	81.0	80.5	80.0	79.5
80°	68.4	67.7	66.9	66.4	65.9	65.4	64.8	64.3
82.5°	52.4	51.7	51.0	50.5	50.5	50.4	50.2	50.1
85°	30.1	29.6	29.1	28.9	28.9	28.9	28.9	28.9
87.5°	15.2	15.2	15.2	15.2	14.9	14.9	14.8	14.5
90°	20.4	21.2	22.0	23.6	22.7	23.6	24.4	23.6
92.5°	68.5	54.4	48.0	43.8	42.3	39.9	40.7	39.2
95°	292.9	198.6	155.5	126.1	110.7	103.4	97.7	94.4
97.5°	730.3	585.0	480.0	382.6	322.6	286.0	264.0	257.0
100°	959.5	893.6	798.3	682.8	600.6	541.2	509.5	510.3
102.5°	1035.7	1033.6	978.0	904.8	840.8	793.8	767.3	748.5
105°	1057.9	1139.4	1154.8	1133.7	1096.2	1065.3	1039.3	1035.2
107.5°	993.8	1126.0	1197.3	1226.3	1226.9	1216.5	1207.7	1200.2
110°	932.6	1082.4	1184.9	1241.9	1264.7	1271.2	1269.6	1268.0





TEST NUMBER: P332353-930

CATALOG NUMBER: S123RDIP-S1000D1025U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.0	1025.1	1140.0	1213.2	1254.9	1275.0	1281.2	1281.6
115°	791.8	933.4	1053.0	1141.7	1202.8	1238.6	1254.9	1259.0
117.5°	733.8	856.0	963.4	1053.4	1117.0	1158.1	1181.5	1187.0
120°	703.1	813.0	910.7	992.9	1057.1	1102.7	1122.3	1127.2
122.5°	679.1	778.5	869.0	945.3	1002.5	1043.5	1064.9	1071.1
125°	647.0	735.7	813.8	878.9	931.0	966.8	987.2	992.9
127.5°	619.0	698.1	768.6	827.8	874.2	904.8	923.2	928.4
130°	601.4	674.7	740.5	795.9	839.0	868.4	885.4	891.9
132.5°	585.1	652.5	713.9	766.6	807.1	836.4	851.6	856.1
135°	563.1	620.9	673.8	720.2	760.1	784.5	799.2	804.9
137.5°	543.2	590.5	636.1	676.3	709.8	734.6	746.9	750.6
140°	531.4	572.9	612.0	647.0	677.9	700.7	713.7	712.9
142.5°	520.3	556.0	589.9	620.3	646.7	666.8	678.6	677.8
145°	507.0	533.9	559.9	583.5	603.8	620.9	627.5	629.1
147.5°	496.1	517.4	538.4	555.2	570.6	582.2	588.4	589.1
150°	488.3	507.0	524.1	539.6	551.8	560.7	565.6	565.6
152.5°	481.1	497.3	512.4	525.2	534.8	543.2	546.1	546.1
155°	470.3	483.4	495.6	505.4	512.7	519.2	520.8	521.6
157.5°	459.0	469.9	479.3	487.0	493.3	498.2	499.5	499.4
160°	452.5	461.5	469.5	475.2	480.9	485.8	485.8	485.0
162.5°	444.7	452.3	459.8	464.9	468.6	472.8	472.8	472.0
165°	434.6	439.4	445.2	449.2	452.5	455.8	454.9	454.9
167.5°	425.7	429.5	432.8	435.7	437.2	439.4	438.6	438.6
170°	420.0	422.4	425.6	427.2	428.0	429.7	428.8	428.8
172.5°	414.7	416.5	419.1	420.1	420.3	421.9	420.4	419.8
175°	407.7	408.5	410.2	410.2	410.2	411.0	410.2	409.4
177.5°	403.3	404.0	404.6	404.6	404.0	404.6	403.3	403.3
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0

(END OF REPORT)