

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: P332469-927

Luminaire Tested: **S123RDIW-S1000D1535U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332469-927  
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: S123RDIW-S1000D1535U927-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7221.0 lumens  
Efficiency: N/A  
Efficacy: 94.3 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

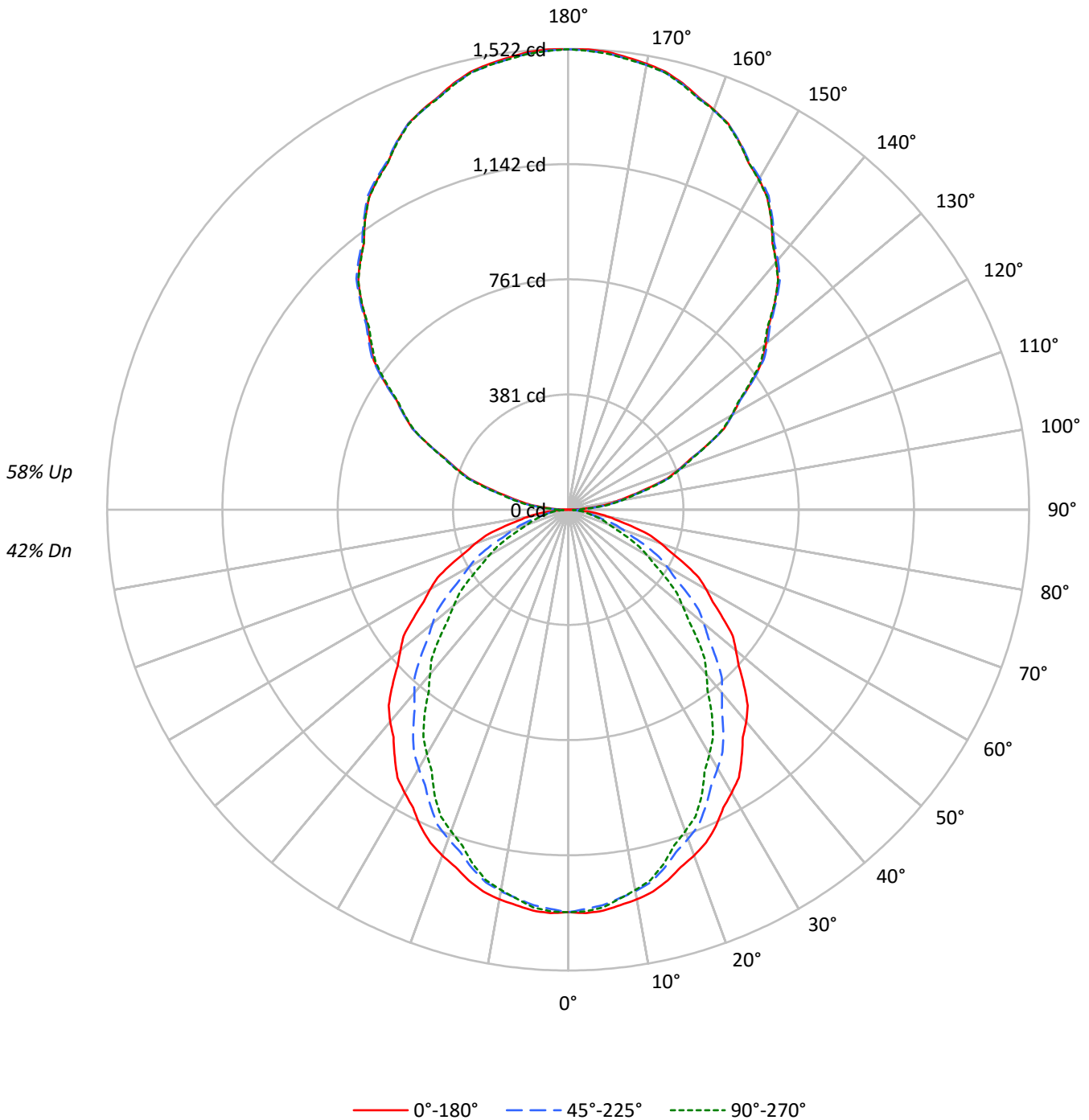
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	22	27	22	19	23	19	16	18	15	13	11				

**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	1.7
10°-20°	347.3	4.8
20°-30°	500.2	6.9
30°-40°	563.4	7.8
40°-50°	539.0	7.5
50°-60°	441.4	6.1
60°-70°	297.8	4.1
70°-80°	149.8	2.1
80°-90°	44.1	0.6
90°-100°	99.1	1.4
100°-110°	296.5	4.1
110°-120°	504.3	7.0
120°-130°	663.4	9.2
130°-140°	745.6	10.3
140°-150°	732.9	10.1
150°-160°	617.0	8.5
160°-170°	410.7	5.7
170°-180°	143.8	2.0
0°-30°	972.3	13.5
0°-40°	1535.7	21.3
0°-60°	2516.0	34.8
0°-90°	3007.8	41.7
90°-120°	899.9	12.5
90°-150°	3041.8	42.1
90°-180°	4213.0	58.3
0°-180°	7221.0	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	13	29	33	36	7
95°	70	79	88	93	93	79
105°	269	272	282	282	284	288
115°	508	511	509	510	509	502
125°	743	746	744	739	735	662
135°	964	971	970	965	963	743
145°	1170	1172	1175	1174	1170	730
155°	1339	1339	1340	1344	1337	616
165°	1459	1455	1455	1461	1454	411
175°	1517	1513	1512	1519	1511	144
180°	1521	1521	1521	1521	1521	



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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	19.3	17.8	16.2	14.7	14.2	14.9	15.6	16.2	17.0	17.0
90°	1.2	3.9	6.5	9.2	11.8	14.9	18.3	21.8	25.2	28.7	29.7
92.5°	28.9	30.7	32.5	34.3	36.1	38.0	40.0	41.9	43.9	45.9	46.7
95°	70.5	72.3	74.2	76.0	78.0	79.9	82.0	84.1	86.3	88.4	89.4
97.5°	125.2	126.6	127.9	129.4	130.7	132.1	133.7	135.2	136.8	138.3	139.6
100°	162.5	164.1	165.6	167.2	168.8	170.3	171.6	172.9	174.3	175.6	176.4
102.5°	205.5	206.4	207.4	208.3	209.3	210.6	212.4	214.1	215.9	217.6	218.5
105°	268.8	269.3	269.8	270.4	270.9	272.4	274.7	277.1	279.6	281.9	281.9
107.5°	342.4	342.7	343.0	343.3	343.6	344.3	345.2	346.2	347.1	348.1	349.0
110°	388.2	388.8	389.3	389.8	390.4	390.9	391.4	392.0	392.4	393.0	394.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	436.0	436.3	436.7	437.0	437.3	437.5	437.6	437.7	437.8	437.9	439.2
115°	507.7	508.5	509.3	510.1	510.9	511.0	510.5	509.9	509.5	508.9	509.1
117.5°	579.9	580.4	580.9	581.5	581.9	581.9	581.2	580.5	579.8	579.2	579.1
120°	624.8	626.4	628.0	629.5	631.1	631.3	629.9	628.6	627.2	626.0	625.7
122.5°	671.6	672.7	673.9	675.1	676.3	676.5	675.8	675.1	674.5	673.8	673.0
125°	743.0	743.8	744.7	745.4	746.2	746.3	745.8	745.3	744.7	744.3	743.1
127.5°	809.0	810.6	812.4	814.0	815.8	816.3	815.7	815.2	814.6	814.0	812.5
130°	852.9	855.1	857.1	859.3	861.4	862.1	861.3	860.5	859.7	858.9	857.9
132.5°	896.9	899.0	901.1	903.2	905.4	906.2	905.5	905.0	904.4	903.8	902.5
135°	964.0	965.6	967.2	968.8	970.4	971.1	970.8	970.5	970.3	970.0	968.9
137.5°	1026.1	1027.5	1028.8	1030.2	1031.4	1032.5	1033.2	1033.8	1034.5	1035.2	1034.1
140°	1069.1	1070.5	1071.8	1073.1	1074.4	1075.2	1075.5	1075.8	1076.0	1076.3	1076.0
142.5°	1108.3	1109.6	1111.0	1112.3	1113.6	1114.5	1115.0	1115.5	1115.9	1116.4	1116.2
145°	1169.5	1170.1	1170.5	1171.1	1171.6	1172.3	1173.1	1173.9	1174.6	1175.4	1175.2
147.5°	1223.0	1223.9	1224.9	1225.9	1226.9	1227.6	1228.4	1229.2	1229.9	1230.7	1230.7
150°	1260.3	1260.8	1261.3	1261.9	1262.4	1262.9	1263.5	1264.0	1264.5	1265.0	1265.0
152.5°	1290.9	1291.6	1292.4	1293.1	1293.8	1294.3	1294.7	1295.0	1295.3	1295.6	1296.1
155°	1339.1	1339.1	1339.1	1339.1	1339.1	1339.3	1339.5	1339.7	1340.1	1340.3	1341.4
157.5°	1380.2	1379.9	1379.6	1379.3	1379.0	1378.9	1379.1	1379.3	1379.5	1379.7	1380.9
160°	1406.0	1405.5	1404.9	1404.4	1403.9	1403.6	1403.6	1403.6	1403.6	1403.6	1404.9
162.5°	1428.9	1428.2	1427.4	1426.7	1426.0	1425.7	1425.9	1426.2	1426.3	1426.6	1427.9
165°	1458.6	1457.8	1457.0	1456.2	1455.4	1455.0	1455.0	1455.0	1455.0	1455.0	1456.6
167.5°	1482.3	1481.1	1480.1	1479.0	1478.0	1477.6	1477.7	1478.0	1478.2	1478.4	1480.0
170°	1495.6	1494.5	1493.5	1492.4	1491.4	1490.8	1490.8	1490.8	1490.8	1490.8	1492.7
172.5°	1506.1	1505.1	1504.0	1502.9	1501.9	1501.3	1501.3	1501.3	1501.3	1501.3	1503.0
175°	1517.1	1516.1	1515.0	1513.9	1512.8	1512.4	1512.4	1512.4	1512.4	1512.4	1513.9
177.5°	1521.6	1520.8	1520.0	1519.1	1518.2	1517.8	1517.8	1517.8	1517.8	1517.8	1519.1
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7



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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°	17.0	17.0	17.0	17.0	16.9	16.8	16.7	16.6
90°	30.8	31.8	33.0	33.7	34.2	34.8	35.3	35.8
92.5°	47.5	48.4	49.3	49.5	49.2	48.9	48.6	48.2
95°	90.5	91.6	92.6	93.2	93.2	93.2	93.2	93.2
97.5°	140.8	142.0	143.2	143.8	143.7	143.5	143.5	143.4
100°	177.2	178.0	178.8	179.4	180.0	180.5	181.0	181.6
102.5°	219.3	220.1	220.9	221.2	221.1	220.9	220.9	220.8
105°	281.9	281.9	281.9	282.2	282.7	283.3	283.8	284.3
107.5°	349.8	350.6	351.5	351.7	351.4	351.1	350.8	350.5
110°	395.1	396.2	397.3	397.5	397.0	396.5	395.9	395.4





TEST NUMBER: P332469-927

CATALOG NUMBER: S123RDIW-S1000D1535U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	440.5	441.7	443.0	443.6	443.5	443.4	443.3	443.1
115°	509.5	509.7	509.9	509.9	509.7	509.5	509.1	508.9
117.5°	579.0	579.0	578.9	578.5	577.7	577.0	576.3	575.5
120°	625.4	625.2	624.9	624.5	624.0	623.4	622.9	622.3
122.5°	672.3	671.7	671.0	670.3	669.6	668.8	668.0	667.3
125°	742.1	741.0	740.0	738.9	737.8	736.8	735.7	734.7
127.5°	811.0	809.5	808.0	806.7	805.5	804.2	803.0	801.8
130°	856.7	855.7	854.7	853.2	851.4	849.5	847.6	845.7
132.5°	901.3	900.0	898.7	897.4	896.0	894.5	893.0	891.6
135°	967.9	966.8	965.7	965.0	964.4	963.8	963.4	962.8
137.5°	1033.0	1031.9	1030.8	1029.7	1028.6	1027.7	1026.7	1025.6
140°	1075.8	1075.5	1075.2	1074.2	1072.3	1070.5	1068.6	1066.8
142.5°	1115.9	1115.6	1115.4	1114.5	1113.1	1111.7	1110.2	1108.8
145°	1174.9	1174.6	1174.4	1173.7	1172.7	1171.6	1170.5	1169.5
147.5°	1230.7	1230.7	1230.7	1229.9	1228.3	1226.7	1225.0	1223.4
150°	1265.0	1265.0	1265.0	1264.2	1262.7	1261.1	1259.5	1257.9
152.5°	1296.5	1296.9	1297.4	1296.9	1295.5	1294.1	1292.7	1291.3
155°	1342.4	1343.5	1344.6	1344.2	1342.3	1340.5	1338.6	1336.7
157.5°	1382.0	1383.1	1384.2	1384.0	1382.5	1381.0	1379.5	1378.1
160°	1406.3	1407.6	1408.9	1409.1	1408.0	1406.9	1405.9	1404.8
162.5°	1429.2	1430.5	1431.9	1431.7	1430.0	1428.3	1426.6	1424.9
165°	1458.2	1459.8	1461.3	1461.3	1459.4	1457.5	1455.6	1453.8
167.5°	1481.7	1483.4	1484.9	1484.9	1483.4	1481.7	1480.0	1478.4
170°	1494.5	1496.4	1498.3	1498.3	1496.4	1494.5	1492.7	1490.8
172.5°	1504.6	1506.3	1507.9	1507.8	1505.9	1504.1	1502.2	1500.4
175°	1515.5	1517.1	1518.7	1518.5	1516.7	1514.8	1513.0	1511.2
177.5°	1520.4	1521.6	1522.9	1522.8	1521.3	1519.8	1518.4	1516.9
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7

(END OF REPORT)