

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: P332461

Luminaire Tested: **S123RDIW-S1000D1030U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332461  
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-S1000D1030U835-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7368.2 lumens  
Efficiency: N/A  
Efficacy: 120.4 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

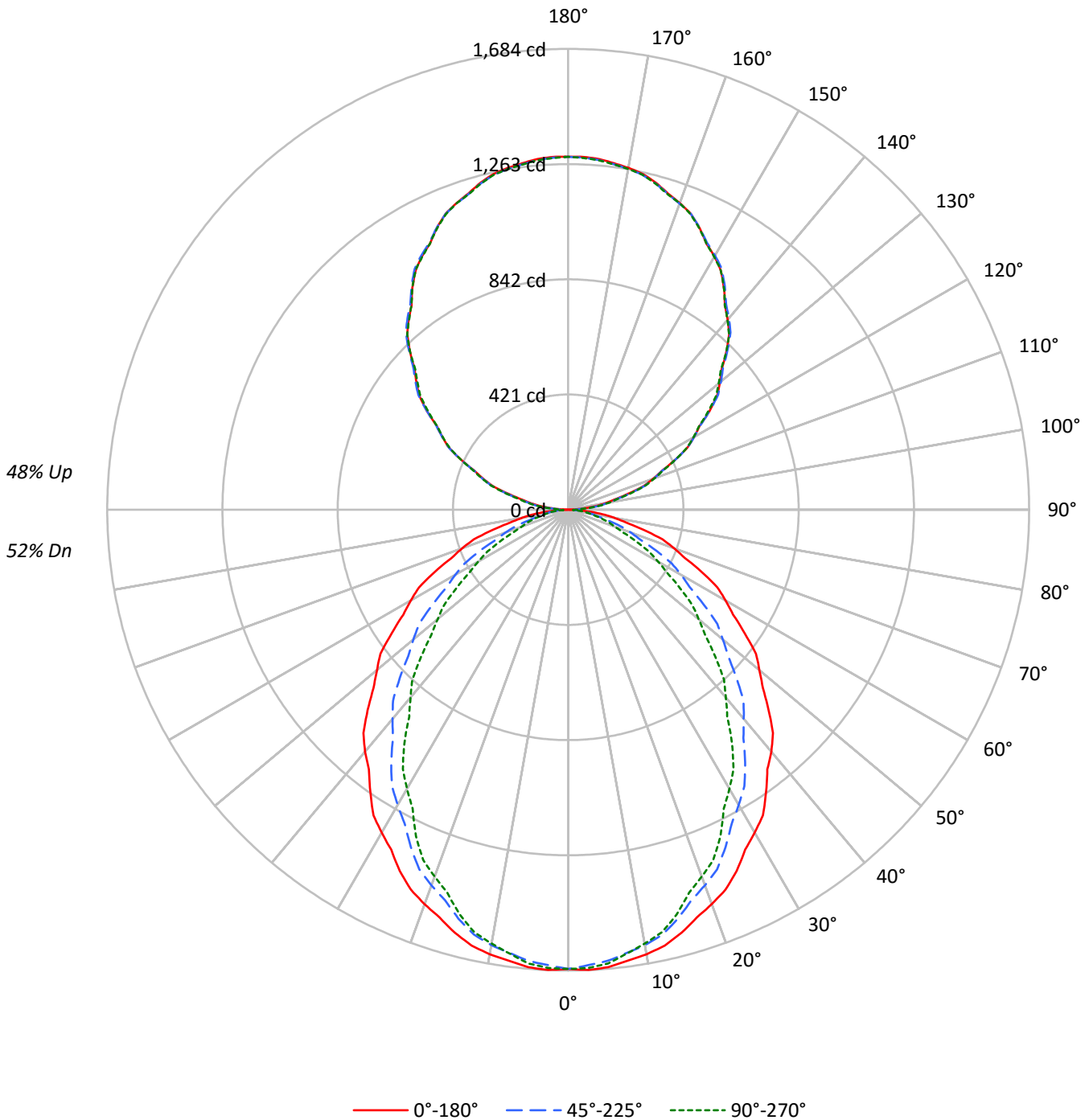
Input Watts (W): 61.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	83	77	72	83	77	72	67	65	62	58	55	52	50	46	44	42	37
3	82	73	66	60	76	68	62	56	58	53	49	49	46	43	41	38	36	32
4	75	65	57	51	69	60	53	48	52	47	42	44	40	37	37	34	31	28
5	69	58	50	44	64	54	47	42	46	41	37	40	35	32	33	30	27	24
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	24	21
7	59	47	39	34	55	44	37	32	38	33	28	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	22	25	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	23	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

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

	0°	45°	90°
0°	18064	18064	18064
5°	18133	17882	17986
10°	18030	17658	17598
15°	17836	17245	17063
20°	17570	16728	16339
25°	17296	16149	15631
30°	16933	15479	14633
35°	16561	14808	13717
40°	16218	14018	12584
45°	15767	13239	11561
50°	15270	12353	10416
55°	14763	11340	9348
60°	14299	10256	8174
65°	13692	9082	7002
70°	12935	7626	5655
75°	11832	6001	5319
80°	10544	5312	4891
85°	8904	4705	4372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.6	2.1
10°-20°	438.5	6.0
20°-30°	631.4	8.6
30°-40°	711.2	9.7
40°-50°	680.4	9.2
50°-60°	557.2	7.6
60°-70°	375.9	5.1
70°-80°	189.1	2.6
80°-90°	53.8	0.7
90°-100°	84.0	1.1
100°-110°	251.5	3.4
110°-120°	427.7	5.8
120°-130°	562.6	7.6
130°-140°	632.3	8.6
140°-150°	621.6	8.4
150°-160°	523.3	7.1
160°-170°	348.3	4.7
170°-180°	122.0	1.7
0°-30°	1227.4	16.7
0°-40°	1938.6	26.3
0°-60°	3176.1	43.1
0°-90°	3794.9	51.5
90°-120°	763.2	10.4
90°-150°	2579.7	35.0
90°-180°	3573.0	48.5
0°-180°	7368.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1678	1671	1655	1666	1665	159
15°	1601	1584	1548	1541	1531	451
25°	1456	1421	1360	1332	1316	669
35°	1260	1209	1127	1070	1044	788
45°	1036	972	870	795	760	799
55°	787	717	604	528	498	705
65°	538	461	357	293	275	532
75°	284	219	144	131	128	303
85°	72	44	38	36	35	81
90°	1	11	24	28	30	7
95°	60	67	75	79	79	67
105°	228	230	239	239	241	244
115°	431	433	432	432	432	426
125°	630	633	631	627	623	562
135°	818	823	823	819	817	630
145°	992	994	997	996	992	619
155°	1136	1136	1137	1140	1134	523
165°	1237	1234	1234	1239	1233	349
175°	1287	1283	1283	1288	1282	122
180°	1290	1290	1290	1290	1290	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1683.6	1682.6	1681.7	1680.7	1679.7	1677.8	1674.9	1672.0	1669.1	1666.2	1668.8
5°	1678.2	1676.6	1675.1	1673.6	1672.1	1669.5	1665.9	1662.3	1658.7	1655.0	1657.7
7.5°	1662.6	1661.0	1659.4	1657.7	1656.1	1652.9	1648.2	1643.5	1638.8	1634.1	1635.6
10°	1649.6	1647.5	1645.3	1643.2	1641.1	1637.3	1631.9	1626.4	1621.0	1615.6	1615.9
12.5°	1631.1	1628.7	1626.4	1624.0	1621.6	1617.1	1610.5	1603.8	1597.2	1590.5	1590.3
15°	1600.6	1597.3	1593.9	1590.6	1587.3	1581.4	1572.9	1564.4	1556.0	1547.5	1546.0
17.5°	1562.2	1558.3	1554.5	1550.6	1546.7	1539.4	1528.6	1517.9	1507.1	1496.3	1493.1
20°	1533.9	1529.1	1524.2	1519.4	1514.5	1506.4	1494.9	1483.4	1471.9	1460.4	1456.5
22.5°	1502.3	1496.8	1491.2	1485.6	1480.1	1471.2	1458.9	1446.7	1434.5	1422.3	1417.4
25°	1456.3	1448.8	1441.2	1433.6	1426.1	1415.3	1401.4	1387.5	1373.6	1359.7	1353.3
27.5°	1400.5	1392.2	1383.8	1375.5	1367.1	1355.2	1339.7	1324.2	1308.7	1293.3	1284.4
30°	1362.4	1353.3	1344.3	1335.2	1326.1	1313.1	1296.2	1279.2	1262.3	1245.4	1235.1
32.5°	1324.3	1314.0	1303.7	1293.4	1283.2	1269.1	1251.2	1233.3	1215.3	1197.4	1186.2
35°	1260.3	1249.4	1238.5	1227.7	1216.8	1201.9	1183.2	1164.4	1145.7	1126.9	1113.9
37.5°	1195.5	1183.4	1171.3	1159.2	1147.1	1131.1	1111.1	1091.0	1071.0	1051.0	1036.2
40°	1154.2	1140.9	1127.5	1114.2	1100.9	1083.5	1062.1	1040.6	1019.1	997.6	981.9
42.5°	1107.3	1094.0	1080.7	1067.4	1054.1	1036.4	1014.2	992.0	969.8	947.6	930.4
45°	1035.8	1022.1	1008.5	994.9	981.3	962.9	939.6	916.3	893.0	869.7	852.5
47.5°	964.2	949.2	934.3	919.3	904.4	885.3	862.0	838.7	815.4	792.1	773.4
50°	911.9	897.7	883.5	869.3	855.0	835.7	811.2	786.7	762.2	737.7	718.9
52.5°	865.1	849.7	834.2	818.8	803.4	783.5	759.3	735.0	710.8	686.5	667.0
55°	786.7	771.9	757.0	742.2	727.4	707.1	681.4	655.7	630.0	604.3	586.8
57.5°	714.3	698.1	682.0	665.8	649.7	628.7	602.8	577.0	551.2	525.4	508.8
60°	664.2	647.6	630.9	614.3	597.6	576.8	551.7	526.6	501.5	476.4	460.0
62.5°	614.1	597.5	580.8	564.2	547.6	526.7	501.6	476.5	451.4	426.3	410.9
65°	537.6	521.0	504.3	487.7	471.1	451.0	427.4	403.8	380.2	356.6	341.8
67.5°	461.1	444.3	427.5	410.7	393.9	374.1	351.5	328.9	306.3	283.6	272.6
70°	411.0	394.7	378.4	362.0	345.7	327.0	305.8	284.6	263.4	242.3	231.7
72.5°	360.9	344.9	328.8	312.7	296.6	278.9	259.7	240.5	221.2	202.0	193.3
75°	284.5	269.9	255.4	240.9	226.4	210.8	194.2	177.5	160.9	144.3	141.2
77.5°	214.8	201.6	188.5	175.4	162.3	150.3	139.6	128.9	118.2	107.5	105.9
80°	170.1	157.7	145.3	132.9	120.5	111.2	104.8	98.4	92.1	85.7	84.8
82.5°	127.7	117.0	106.3	95.5	84.8	78.0	75.0	72.1	69.1	66.1	65.2
85°	72.1	65.5	58.8	52.2	45.5	41.7	40.8	39.9	39.0	38.1	37.5
87.5°	26.3	24.1	21.9	19.7	17.5	16.7	17.3	17.8	18.4	19.0	19.0
90°	1.0	3.3	5.5	7.8	10.0	12.6	15.5	18.5	21.4	24.3	25.2
92.5°	24.5	26.0	27.6	29.1	30.6	32.2	33.9	35.6	37.2	38.9	39.6
95°	59.8	61.3	62.9	64.5	66.1	67.8	69.6	71.4	73.2	75.0	75.9
97.5°	106.2	107.3	108.5	109.7	110.9	112.1	113.4	114.7	116.0	117.3	118.4
100°	137.8	139.1	140.5	141.8	143.2	144.4	145.6	146.7	147.8	148.9	149.6
102.5°	174.3	175.1	175.9	176.7	177.5	178.6	180.1	181.6	183.1	184.6	185.3
105°	228.0	228.4	228.9	229.3	229.8	231.0	233.0	235.0	237.1	239.1	239.1
107.5°	290.4	290.6	290.9	291.2	291.4	292.0	292.8	293.6	294.4	295.2	295.9
110°	329.3	329.7	330.2	330.6	331.1	331.5	332.0	332.4	332.9	333.3	334.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	369.8	370.1	370.3	370.6	370.9	371.0	371.1	371.2	371.3	371.4	372.5
115°	430.6	431.2	431.9	432.6	433.3	433.4	432.9	432.5	432.0	431.6	431.8
117.5°	491.8	492.2	492.7	493.1	493.6	493.5	492.9	492.3	491.7	491.2	491.1
120°	529.9	531.2	532.6	533.9	535.3	535.4	534.2	533.1	532.0	530.9	530.6
122.5°	569.6	570.6	571.6	572.5	573.5	573.7	573.2	572.6	572.0	571.4	570.8
125°	630.2	630.8	631.5	632.2	632.9	633.0	632.5	632.1	631.6	631.2	630.3
127.5°	686.1	687.5	689.0	690.4	691.8	692.3	691.8	691.3	690.8	690.3	689.1
130°	723.4	725.2	727.0	728.8	730.6	731.1	730.5	729.8	729.1	728.4	727.5
132.5°	760.6	762.4	764.2	766.1	767.9	768.5	768.0	767.5	767.0	766.5	765.4
135°	817.6	818.9	820.3	821.6	823.0	823.5	823.3	823.1	822.9	822.6	821.7
137.5°	870.3	871.4	872.5	873.6	874.8	875.6	876.2	876.8	877.4	878.0	877.0
140°	906.7	907.9	909.0	910.1	911.2	911.9	912.1	912.4	912.6	912.8	912.6
142.5°	940.0	941.1	942.2	943.3	944.5	945.2	945.6	946.0	946.5	946.9	946.6
145°	991.8	992.3	992.7	993.2	993.6	994.2	994.9	995.6	996.2	996.9	996.7
147.5°	1037.2	1038.0	1038.8	1039.7	1040.5	1041.2	1041.8	1042.5	1043.1	1043.7	1043.7
150°	1068.8	1069.3	1069.7	1070.2	1070.6	1071.1	1071.5	1072.0	1072.4	1072.9	1072.9
152.5°	1094.8	1095.4	1096.0	1096.7	1097.3	1097.7	1098.0	1098.3	1098.6	1098.8	1099.2
155°	1135.7	1135.7	1135.7	1135.7	1135.7	1135.8	1136.0	1136.3	1136.5	1136.7	1137.6
157.5°	1170.6	1170.3	1170.0	1169.7	1169.5	1169.4	1169.6	1169.8	1170.0	1170.1	1171.1
160°	1192.4	1192.0	1191.5	1191.1	1190.6	1190.4	1190.4	1190.4	1190.4	1190.4	1191.5
162.5°	1211.9	1211.3	1210.6	1210.0	1209.4	1209.1	1209.3	1209.5	1209.7	1209.9	1211.0
165°	1237.0	1236.3	1235.7	1235.0	1234.3	1234.0	1234.0	1234.0	1234.0	1234.0	1235.3
167.5°	1257.1	1256.2	1255.3	1254.4	1253.5	1253.1	1253.3	1253.5	1253.7	1253.8	1255.2
170°	1268.4	1267.5	1266.6	1265.7	1264.8	1264.4	1264.4	1264.4	1264.4	1264.4	1265.9
172.5°	1277.3	1276.4	1275.5	1274.6	1273.7	1273.3	1273.3	1273.3	1273.3	1273.3	1274.7
175°	1286.7	1285.8	1284.9	1284.0	1283.1	1282.6	1282.6	1282.6	1282.6	1282.6	1284.0
177.5°	1290.5	1289.8	1289.1	1288.3	1287.6	1287.3	1287.3	1287.3	1287.3	1287.3	1288.3
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1671.5	1674.2	1676.8	1677.9	1677.4	1677.0	1676.5	1676.0
5°	1660.5	1663.2	1665.9	1667.0	1666.4	1665.8	1665.2	1664.6
7.5°	1637.1	1638.6	1640.1	1640.4	1639.3	1638.3	1637.3	1636.2
10°	1616.2	1616.5	1616.8	1616.2	1614.6	1613.1	1611.6	1610.1
12.5°	1590.1	1590.0	1589.8	1588.8	1587.1	1585.3	1583.6	1581.8
15°	1544.5	1543.0	1541.5	1539.6	1537.5	1535.4	1533.3	1531.2
17.5°	1489.9	1486.7	1483.5	1480.3	1477.2	1474.0	1470.9	1467.7
20°	1452.5	1448.6	1444.7	1440.9	1437.3	1433.6	1430.0	1426.4
22.5°	1412.5	1407.6	1402.7	1398.5	1395.2	1391.8	1388.4	1385.0
25°	1347.0	1340.6	1334.3	1329.4	1326.1	1322.8	1319.5	1316.1
27.5°	1275.6	1266.8	1257.9	1251.0	1245.9	1240.8	1235.7	1230.7
30°	1224.8	1214.5	1204.2	1196.7	1191.8	1187.0	1182.1	1177.3
32.5°	1174.9	1163.7	1152.4	1144.3	1139.2	1134.1	1129.0	1123.9
35°	1100.9	1087.9	1074.9	1065.7	1060.3	1054.8	1049.4	1043.9
37.5°	1021.5	1006.7	992.0	981.2	974.5	967.8	961.1	954.4
40°	966.2	950.5	934.7	923.4	916.4	909.5	902.5	895.6
42.5°	913.2	896.0	878.8	867.1	860.9	854.7	848.4	842.2
45°	835.2	818.0	800.7	788.5	781.2	774.0	766.7	759.5
47.5°	754.6	735.9	717.1	704.5	698.0	691.6	685.1	678.6
50°	700.2	681.4	662.7	649.8	642.9	635.9	629.0	622.0
52.5°	647.6	628.1	608.6	595.7	589.5	583.3	577.1	570.8
55°	569.2	551.7	534.1	522.3	516.3	510.2	504.2	498.1
57.5°	492.2	475.6	459.1	448.2	443.1	437.9	432.8	427.6
60°	443.7	427.4	411.0	400.3	395.2	390.0	384.9	379.7
62.5°	395.5	380.2	364.8	354.4	349.1	343.7	338.3	332.9
65°	327.0	312.1	297.3	288.2	284.9	281.6	278.3	274.9
67.5°	261.5	250.4	239.4	232.0	228.5	224.9	221.3	217.8
70°	221.1	210.5	199.9	193.0	189.6	186.3	183.0	179.7
72.5°	184.7	176.0	167.4	162.4	161.0	159.6	158.2	156.8
75°	138.2	135.2	132.2	130.4	129.8	129.1	128.5	127.9
77.5°	104.3	102.6	101.0	99.9	99.3	98.7	98.1	97.5
80°	83.9	83.0	82.1	81.4	80.8	80.2	79.5	78.9
82.5°	64.3	63.4	62.5	62.0	61.9	61.8	61.6	61.5
85°	36.9	36.3	35.7	35.4	35.4	35.4	35.4	35.4
87.5°	18.9	18.8	18.8	18.7	18.5	18.4	18.2	18.1
90°	26.1	27.0	27.9	28.6	29.0	29.5	29.9	30.4
92.5°	40.3	41.1	41.8	42.0	41.7	41.5	41.2	40.9
95°	76.8	77.7	78.6	79.0	79.0	79.0	79.0	79.0
97.5°	119.4	120.4	121.5	121.9	121.8	121.8	121.7	121.6
100°	150.3	151.0	151.6	152.2	152.6	153.1	153.5	154.0
102.5°	185.9	186.6	187.3	187.6	187.5	187.4	187.3	187.2
105°	239.1	239.1	239.1	239.3	239.8	240.2	240.7	241.1
107.5°	296.7	297.4	298.1	298.3	298.1	297.8	297.5	297.2
110°	335.1	336.0	336.9	337.1	336.7	336.2	335.8	335.3





TEST NUMBER: P332461

CATALOG NUMBER: S123RDIW-S1000D1030U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	373.6	374.6	375.7	376.2	376.1	376.0	376.0	375.9
115°	432.0	432.3	432.5	432.5	432.3	432.0	431.8	431.6
117.5°	491.1	491.0	491.0	490.6	490.0	489.4	488.7	488.1
120°	530.4	530.2	530.0	529.6	529.2	528.7	528.3	527.8
122.5°	570.2	569.6	569.1	568.4	567.8	567.2	566.6	565.9
125°	629.4	628.5	627.6	626.7	625.8	624.9	624.0	623.1
127.5°	687.8	686.6	685.3	684.1	683.1	682.1	681.0	680.0
130°	726.6	725.7	724.8	723.6	722.0	720.4	718.9	717.3
132.5°	764.4	763.3	762.2	761.1	759.8	758.6	757.4	756.2
135°	820.8	819.9	819.0	818.4	817.9	817.5	817.0	816.6
137.5°	876.1	875.1	874.2	873.3	872.4	871.6	870.7	869.9
140°	912.4	912.1	911.9	911.0	909.4	907.9	906.3	904.7
142.5°	946.4	946.2	946.0	945.2	944.0	942.8	941.6	940.4
145°	996.5	996.2	996.0	995.4	994.5	993.6	992.7	991.8
147.5°	1043.7	1043.7	1043.7	1043.0	1041.7	1040.3	1039.0	1037.6
150°	1072.9	1072.9	1072.9	1072.2	1070.9	1069.5	1068.2	1066.8
152.5°	1099.5	1099.9	1100.3	1099.9	1098.7	1097.5	1096.3	1095.2
155°	1138.5	1139.4	1140.3	1140.0	1138.4	1136.8	1135.3	1133.7
157.5°	1172.0	1173.0	1173.9	1173.8	1172.5	1171.3	1170.0	1168.7
160°	1192.7	1193.8	1194.9	1195.0	1194.1	1193.2	1192.3	1191.4
162.5°	1212.1	1213.2	1214.4	1214.2	1212.8	1211.3	1209.9	1208.4
165°	1236.7	1238.0	1239.4	1239.3	1237.7	1236.1	1234.5	1233.0
167.5°	1256.6	1258.0	1259.4	1259.4	1258.0	1256.6	1255.2	1253.8
170°	1267.5	1269.1	1270.7	1270.7	1269.1	1267.5	1265.9	1264.4
172.5°	1276.1	1277.5	1278.9	1278.8	1277.2	1275.6	1274.0	1272.5
175°	1285.3	1286.7	1288.0	1287.9	1286.3	1284.7	1283.2	1281.6
177.5°	1289.4	1290.5	1291.6	1291.5	1290.2	1289.0	1287.7	1286.5
180°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7

(END OF REPORT)