

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: P331757-935

Luminaire Tested: **SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331757-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

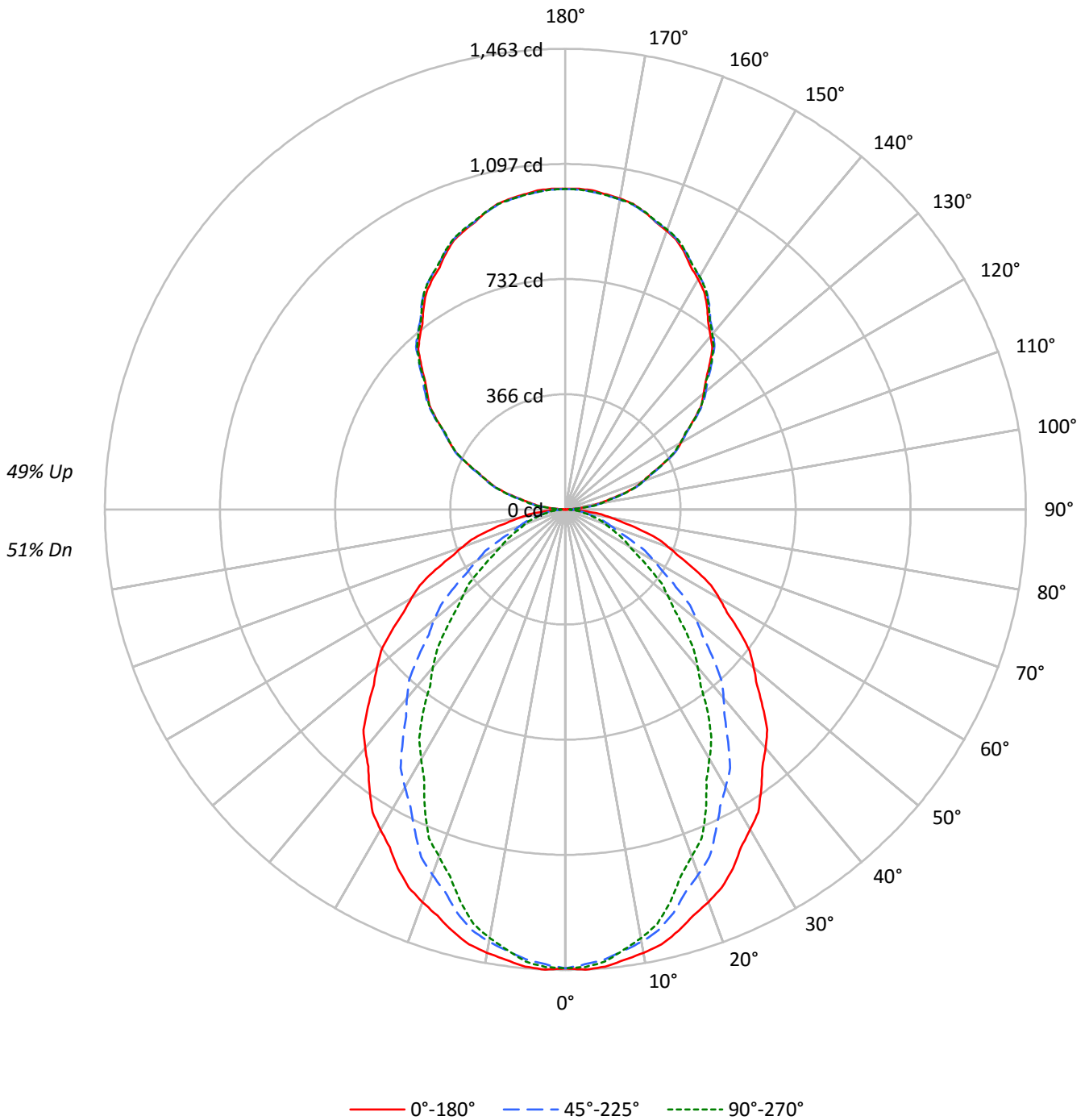
Lumens per Lamp: N/A  
Luminaire Lumens: 5850.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): 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: P331757-935  
CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**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	99	94	91	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	83	77	72	83	77	72	68	66	62	59	55	53	50	46	44	42	38
3	83	73	66	61	76	68	62	57	58	54	50	49	46	43	41	39	37	33
4	76	65	58	52	70	61	54	49	52	47	43	44	41	37	37	34	32	28
5	70	58	51	45	64	54	47	42	47	42	37	40	36	33	34	31	28	25
6	64	53	45	39	59	49	42	37	43	37	33	36	32	29	31	28	25	22
7	60	48	40	34	55	45	38	33	39	33	29	33	29	26	28	25	22	20
8	55	43	36	31	51	41	34	29	35	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	31	26	33	27	24	28	24	21	24	21	18	16
10	48	37	29	25	45	34	28	24	30	25	21	26	22	19	22	19	17	15

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

	0°	45°	90°
0°	23541	23541	23541
5°	23631	23246	23376
10°	23451	22866	22673
15°	23181	22188	21549
20°	22807	21220	20155
25°	22425	20122	18805
30°	21895	18990	17074
35°	21378	17763	15554
40°	20858	16493	13793
45°	20247	15066	12202
50°	19623	13622	10638
55°	18978	12073	9137
60°	18235	10440	7585
65°	17391	8772	6907
70°	16386	7227	6354
75°	15147	6588	5926
80°	13371	5895	5393
85°	10504	4650	4650



TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.5	2.3
10°-20°	374.7	6.4
20°-30°	526.2	9.0
30°-40°	573.8	9.8
40°-50°	527.6	9.0
50°-60°	414.4	7.1
60°-70°	270.2	4.6
70°-80°	139.3	2.4
80°-90°	40.2	0.7
90°-100°	64.5	1.1
100°-110°	200.4	3.4
110°-120°	342.5	5.9
120°-130°	450.4	7.7
130°-140°	505.6	8.6
140°-150°	495.7	8.5
150°-160°	415.8	7.1
160°-170°	275.8	4.7
170°-180°	96.4	1.6
0°-30°	1037.4	17.7
0°-40°	1611.3	27.5
0°-60°	2553.2	43.6
0°-90°	3002.9	51.3
90°-120°	607.4	10.4
90°-150°	2059.1	35.2
90°-180°	2847.0	48.7
0°-180°	5850.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1458	1451	1434	1445	1442	138
15°	1387	1371	1327	1303	1289	390
25°	1259	1214	1130	1077	1056	579
35°	1085	1015	901	821	789	678
45°	887	796	660	570	534	684
55°	674	569	429	353	325	602
65°	455	348	230	187	181	451
75°	243	153	106	97	95	257
85°	57	30	25	25	25	67
90°	1	12	30	28	29	5
95°	45	53	55	55	53	51
105°	185	187	189	191	191	195
115°	344	348	347	346	344	340
125°	500	507	505	503	502	447
135°	647	656	658	657	655	500
145°	785	791	796	797	794	490
155°	898	900	903	907	905	413
165°	977	976	976	982	978	275
175°	1016	1014	1012	1018	1013	97
180°	1018	1018	1018	1018	1018	



TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1463.4	1462.2	1460.9	1459.8	1458.6	1456.7	1454.1	1451.6	1449.1	1446.5	1448.8
5°	1458.0	1456.6	1455.1	1453.6	1452.2	1449.6	1445.7	1441.9	1438.1	1434.3	1436.9
7.5°	1443.0	1441.2	1439.4	1437.5	1435.7	1432.6	1428.1	1423.7	1419.3	1414.8	1415.6
10°	1430.4	1428.3	1426.2	1424.2	1422.1	1418.2	1412.3	1406.4	1400.6	1394.7	1393.9
12.5°	1414.5	1412.0	1409.5	1407.0	1404.5	1399.4	1391.9	1384.4	1376.9	1369.4	1367.8
15°	1386.8	1383.5	1380.4	1377.1	1373.9	1367.3	1357.4	1347.4	1337.4	1327.4	1321.9
17.5°	1352.7	1347.8	1342.9	1338.0	1333.1	1324.2	1311.4	1298.6	1285.8	1273.1	1266.4
20°	1327.4	1321.5	1315.7	1309.8	1304.0	1293.7	1279.0	1264.4	1249.7	1235.0	1227.7
22.5°	1299.9	1293.4	1286.9	1280.3	1273.7	1262.1	1245.6	1229.1	1212.5	1196.0	1186.5
25°	1258.8	1249.4	1240.0	1230.6	1221.2	1206.9	1187.6	1168.2	1148.8	1129.5	1117.5
27.5°	1209.2	1199.0	1188.8	1178.6	1168.4	1152.4	1130.6	1108.7	1086.9	1065.1	1051.1
30°	1174.4	1163.2	1152.1	1140.9	1129.8	1112.5	1089.0	1065.6	1042.2	1018.6	1003.7
32.5°	1140.6	1127.6	1114.6	1101.6	1088.5	1070.1	1046.1	1022.2	998.2	974.3	957.3
35°	1084.6	1069.7	1054.7	1039.7	1024.8	1004.4	978.6	952.9	927.0	901.2	882.8
37.5°	1028.7	1012.3	995.8	979.4	963.0	941.1	913.5	886.1	858.5	831.0	810.7
40°	989.6	972.1	954.4	936.9	919.3	896.2	867.8	839.4	810.9	782.5	761.6
42.5°	949.5	931.0	912.5	893.9	875.4	851.4	822.1	792.6	763.3	733.9	712.4
45°	886.7	867.0	847.4	827.8	808.1	782.9	752.1	721.3	690.5	659.8	638.9
47.5°	825.4	804.7	783.9	763.0	742.2	715.9	684.2	652.3	620.5	588.8	568.1
50°	781.2	760.3	739.5	718.7	697.8	671.3	639.1	606.8	574.5	542.3	522.1
52.5°	737.9	716.1	694.4	672.6	650.8	624.2	592.6	561.1	529.5	498.0	478.5
55°	674.2	651.4	628.5	605.6	582.8	555.5	523.8	492.1	460.5	428.9	411.2
57.5°	609.1	585.7	562.1	538.7	515.2	488.3	457.9	427.4	397.0	366.5	350.4
60°	564.7	541.3	517.8	494.4	470.9	444.1	413.9	383.7	353.4	323.3	308.3
62.5°	521.5	498.0	474.6	451.1	427.7	401.5	372.7	343.9	315.1	286.4	272.1
65°	455.2	431.4	407.8	384.0	360.2	335.2	308.8	282.4	256.0	229.6	219.6
67.5°	391.3	367.8	344.2	320.6	297.0	273.4	249.7	225.9	202.2	178.4	173.8
70°	347.1	324.2	301.3	278.4	255.5	234.0	213.8	193.6	173.3	153.1	150.2
72.5°	304.8	282.8	261.0	239.0	217.1	197.9	181.8	165.5	149.2	133.0	130.5
75°	242.8	222.2	201.7	181.2	160.7	145.4	135.4	125.5	115.5	105.6	103.5
77.5°	181.8	163.8	145.9	127.9	109.8	98.4	93.6	88.8	83.9	79.2	78.0
80°	143.8	128.9	113.9	98.9	84.0	75.1	72.2	69.2	66.3	63.4	62.2
82.5°	109.0	97.3	85.7	74.0	62.3	55.4	53.5	51.5	49.5	47.5	46.8
85°	56.7	50.5	44.4	38.2	32.1	28.6	27.7	26.9	25.9	25.1	25.1
87.5°	17.0	15.7	14.2	12.8	11.4	11.1	12.0	12.7	13.6	14.5	14.1
90°	0.9	3.2	5.4	7.7	10.0	13.3	17.5	21.7	25.8	30.0	29.7
92.5°	15.3	17.0	18.7	20.3	22.0	23.3	24.4	25.3	26.3	27.3	27.4
95°	44.7	46.6	48.5	50.4	52.3	53.5	53.8	54.2	54.6	55.0	55.0
97.5°	81.6	83.3	85.0	86.7	88.3	89.5	90.3	91.0	91.7	92.5	92.5
100°	109.1	110.6	112.2	113.7	115.2	116.3	116.8	117.4	118.0	118.6	118.6
102.5°	138.0	139.2	140.4	141.6	142.8	143.9	144.6	145.3	146.0	146.8	146.9
105°	184.8	185.3	185.9	186.5	187.0	187.5	187.9	188.3	188.6	189.0	189.4
107.5°	231.8	232.6	233.5	234.4	235.2	235.6	235.6	235.6	235.6	235.6	235.7
110°	262.1	263.2	264.3	265.5	266.7	267.3	267.3	267.3	267.3	267.3	267.3



TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.1	296.2	297.4	298.5	299.6	300.1	300.0	299.8	299.7	299.5	299.1
115°	343.7	344.8	345.9	347.2	348.3	348.6	348.3	347.9	347.5	347.2	347.0
117.5°	392.2	393.6	395.2	396.7	398.3	398.5	397.4	396.3	395.3	394.3	393.7
120°	424.5	426.0	427.5	429.0	430.6	430.6	429.0	427.5	426.0	424.5	424.5
122.5°	454.0	455.8	457.7	459.5	461.3	461.8	460.6	459.6	458.6	457.4	457.0
125°	500.1	501.8	503.5	505.2	507.0	507.6	507.0	506.4	505.8	505.2	504.6
127.5°	544.9	547.1	549.3	551.5	553.6	554.4	553.7	553.0	552.3	551.6	551.0
130°	573.1	575.6	578.1	580.6	583.1	584.1	583.7	583.3	583.0	582.6	582.2
132.5°	604.8	606.7	608.8	610.8	612.9	613.9	614.0	614.1	614.1	614.2	613.4
135°	647.0	649.1	651.2	653.3	655.4	656.7	657.0	657.4	657.8	658.1	658.0
137.5°	691.6	693.2	694.9	696.6	698.4	699.5	700.0	700.5	701.0	701.5	701.4
140°	718.3	720.1	721.8	723.5	725.2	726.5	727.5	728.4	729.4	730.4	730.4
142.5°	745.8	747.5	749.2	751.0	752.7	753.9	754.5	755.2	755.8	756.5	756.6
145°	785.3	786.7	788.0	789.4	790.7	791.9	793.1	794.2	795.4	796.5	796.7
147.5°	820.5	822.2	823.8	825.4	827.0	828.2	829.0	829.7	830.4	831.2	831.6
150°	844.6	845.8	846.9	848.1	849.2	850.2	850.9	851.7	852.5	853.3	853.8
152.5°	865.9	867.1	868.2	869.4	870.6	871.6	872.5	873.4	874.3	875.2	876.0
155°	897.9	898.5	899.1	899.7	900.2	900.8	901.4	901.9	902.5	903.0	904.0
157.5°	925.2	925.6	926.0	926.3	926.8	927.1	927.5	927.8	928.2	928.5	929.8
160°	941.8	942.1	942.5	942.9	943.2	943.6	943.7	943.9	944.1	944.3	945.5
162.5°	956.8	956.9	957.0	957.1	957.2	957.3	957.5	957.7	957.9	958.0	959.3
165°	977.0	976.8	976.5	976.4	976.2	976.1	976.1	976.1	976.1	976.1	977.4
167.5°	993.8	993.2	992.6	992.0	991.5	991.2	991.2	991.1	991.1	991.0	992.4
170°	1002.7	1002.1	1001.6	1001.0	1000.4	1000.1	999.9	999.7	999.4	999.3	1000.7
172.5°	1008.9	1008.3	1007.8	1007.2	1006.6	1006.3	1006.1	1005.8	1005.6	1005.5	1006.9
175°	1016.5	1015.9	1015.3	1014.8	1014.2	1013.7	1013.3	1013.0	1012.5	1012.2	1013.5
177.5°	1019.6	1019.1	1018.6	1018.2	1017.7	1017.4	1017.0	1016.8	1016.4	1016.2	1017.0
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2



TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1451.1	1453.5	1455.9	1456.7	1456.3	1455.9	1455.3	1454.9
5°	1439.6	1442.3	1444.8	1445.7	1444.8	1444.0	1443.1	1442.3
7.5°	1416.3	1417.0	1417.8	1417.5	1415.9	1414.4	1412.9	1411.4
10°	1392.9	1392.1	1391.2	1389.9	1388.1	1386.4	1384.6	1382.9
12.5°	1366.2	1364.6	1363.0	1360.8	1357.9	1355.0	1352.0	1349.1
15°	1316.3	1310.7	1305.1	1300.9	1298.0	1295.0	1292.1	1289.2
17.5°	1259.8	1253.2	1246.6	1240.7	1235.7	1230.6	1225.5	1220.6
20°	1220.4	1213.1	1205.7	1198.9	1192.4	1185.9	1179.5	1173.0
22.5°	1177.2	1167.7	1158.2	1151.1	1146.3	1141.5	1136.7	1131.9
25°	1105.4	1093.5	1081.4	1073.2	1068.8	1064.4	1060.0	1055.6
27.5°	1037.1	1023.0	1009.0	998.5	991.5	984.6	977.6	970.6
30°	988.8	973.8	958.8	947.4	939.5	931.6	923.7	915.8
32.5°	940.2	923.2	906.0	893.8	886.4	878.9	871.4	864.0
35°	864.3	845.8	827.3	814.9	808.4	801.9	795.5	789.1
37.5°	790.3	770.0	749.6	735.7	728.4	721.0	713.6	706.2
40°	740.8	720.0	699.2	685.0	677.3	669.7	662.1	654.4
42.5°	690.9	669.3	647.8	633.4	625.9	618.5	611.2	603.8
45°	618.1	597.3	576.4	562.6	555.5	548.5	541.4	534.4
47.5°	547.3	526.7	505.9	492.4	486.0	479.7	473.2	466.8
50°	501.9	481.6	461.4	448.2	442.0	435.8	429.7	423.5
52.5°	458.9	439.4	419.9	407.3	401.6	395.9	390.2	384.5
55°	393.6	376.1	358.4	346.9	341.3	335.7	330.2	324.6
57.5°	334.3	318.1	302.0	291.6	287.0	282.2	277.6	272.9
60°	293.3	278.4	263.5	253.7	248.9	244.3	239.5	234.9
62.5°	257.9	243.6	229.4	220.8	218.0	215.2	212.3	209.6
65°	209.7	199.7	189.7	184.3	183.4	182.5	181.7	180.8
67.5°	169.3	164.7	160.1	157.3	156.4	155.5	154.5	153.6
70°	147.2	144.3	141.4	139.3	138.1	136.9	135.8	134.6
72.5°	128.1	125.6	123.1	121.6	120.9	120.2	119.4	118.7
75°	101.4	99.4	97.4	96.2	95.9	95.6	95.3	95.0
77.5°	76.8	75.7	74.5	73.6	73.2	72.8	72.2	71.8
80°	61.0	59.8	58.6	58.0	58.0	58.0	58.0	58.0
82.5°	46.1	45.4	44.7	44.3	44.3	44.3	44.3	44.3
85°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
87.5°	13.9	13.5	13.2	13.1	13.1	13.2	13.2	13.3
90°	29.3	28.9	28.6	28.4	28.7	28.8	29.0	29.2
92.5°	27.5	27.6	27.6	27.7	27.7	27.7	27.8	27.8
95°	55.0	55.0	55.0	54.8	54.4	54.1	53.6	53.3
97.5°	92.5	92.5	92.5	92.5	92.4	92.4	92.3	92.3
100°	118.6	118.6	118.6	118.5	118.3	118.1	117.9	117.7
102.5°	147.1	147.2	147.4	147.3	147.1	147.0	146.8	146.6
105°	189.8	190.2	190.5	190.7	190.7	190.7	190.7	190.7
107.5°	235.9	236.1	236.2	235.8	235.0	234.1	233.2	232.3
110°	267.3	267.3	267.3	266.9	266.4	265.8	265.2	264.7





TEST NUMBER: P331757-935

CATALOG NUMBER: SA2XXRDIP-C1005D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	298.6	298.2	297.7	297.2	296.9	296.4	296.0	295.6
115°	346.7	346.6	346.4	345.9	345.4	344.8	344.2	343.7
117.5°	393.3	392.9	392.4	391.8	391.3	390.7	390.1	389.6
120°	424.5	424.5	424.5	424.2	423.6	423.0	422.5	421.9
122.5°	456.5	456.1	455.6	455.2	454.8	454.3	453.9	453.5
125°	504.1	503.5	502.9	502.6	502.4	502.1	502.0	501.8
127.5°	550.3	549.6	548.9	548.2	547.6	547.0	546.4	545.8
130°	581.8	581.4	581.0	580.5	579.7	578.9	578.2	577.4
132.5°	612.5	611.7	610.8	610.1	609.5	608.9	608.3	607.7
135°	657.8	657.6	657.4	657.0	656.4	655.9	655.3	654.7
137.5°	701.2	701.0	700.9	700.4	699.6	698.9	698.1	697.3
140°	730.4	730.4	730.4	730.0	729.2	728.4	727.7	726.9
142.5°	756.8	756.9	757.1	756.8	756.0	755.3	754.5	753.7
145°	796.9	797.1	797.3	797.0	796.3	795.5	794.7	793.9
147.5°	832.1	832.5	832.9	832.8	832.1	831.3	830.6	829.8
150°	854.4	855.0	855.5	855.5	855.0	854.4	853.8	853.3
152.5°	876.7	877.4	878.1	878.1	877.4	876.7	876.0	875.2
155°	905.0	905.9	906.9	907.1	906.5	905.9	905.3	904.7
157.5°	931.1	932.4	933.7	933.8	933.0	932.0	931.1	930.2
160°	946.6	947.7	948.9	949.1	948.3	947.5	946.8	946.0
162.5°	960.6	961.9	963.2	963.5	962.5	961.6	960.7	959.8
165°	978.8	980.1	981.5	981.6	980.7	979.7	978.8	977.8
167.5°	993.7	995.1	996.3	996.5	995.6	994.5	993.6	992.6
170°	1001.9	1003.3	1004.6	1004.7	1003.6	1002.5	1001.3	1000.1
172.5°	1008.1	1009.5	1010.8	1010.9	1009.8	1008.7	1007.5	1006.3
175°	1014.9	1016.2	1017.5	1017.6	1016.5	1015.3	1014.2	1013.1
177.5°	1018.0	1018.9	1019.8	1019.8	1018.9	1018.0	1017.0	1016.2
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2

(END OF REPORT)