

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: P331745-935

Luminaire Tested: **SA2XXRDIP-C1005D530U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331745-935  
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-C1005D530U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

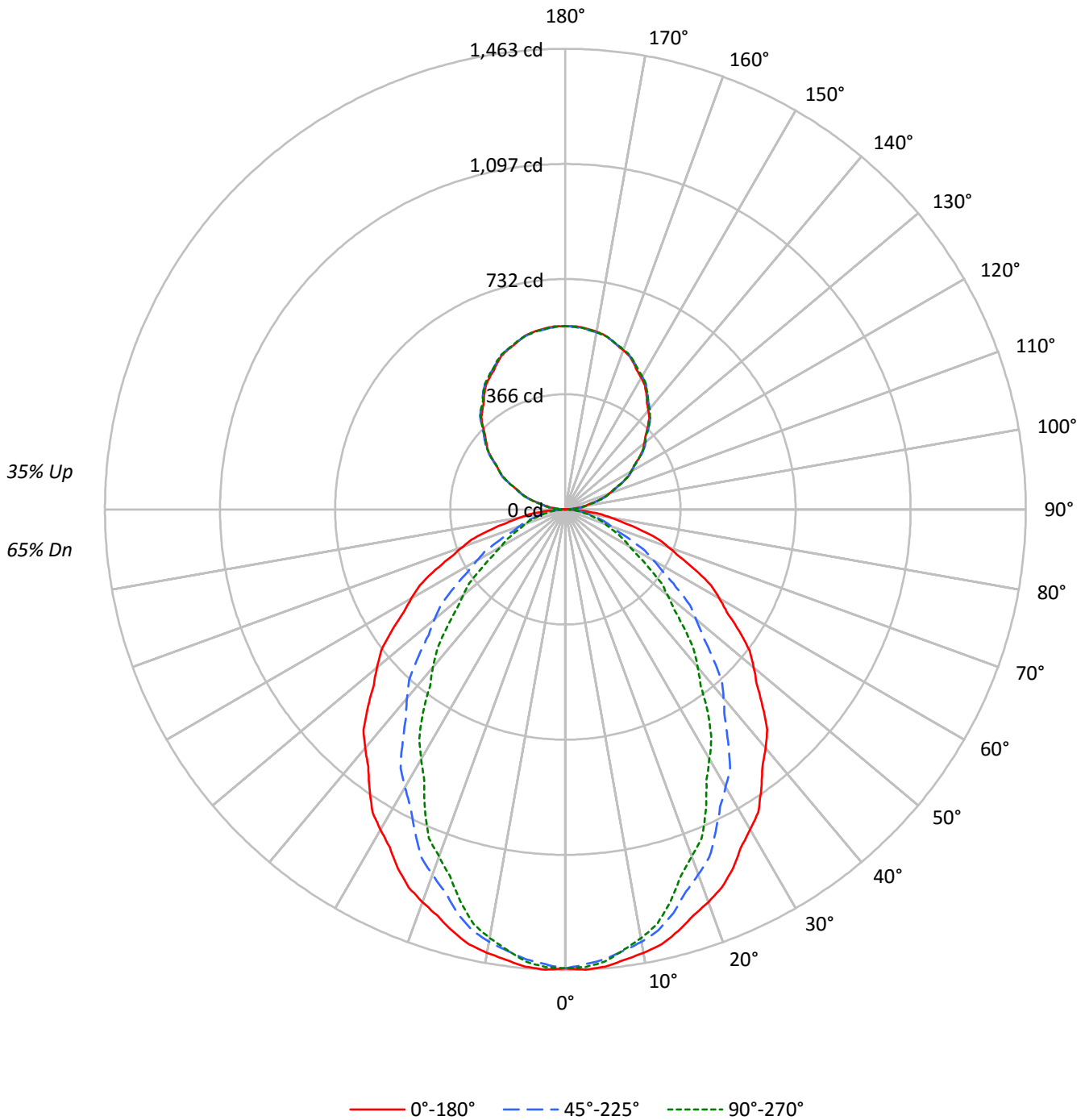
Lumens per Lamp: N/A  
Luminaire Lumens: 4628.0 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 55.1  
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: P331745-935  
CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-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	50	30	10	0	
RCR																						
0	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65				
1	102	98	94	90	96	92	89	86	81	79	77	72	70	68	63	61	60	56				
2	93	86	80	75	87	81	76	71	72	68	64	64	61	58	56	54	52	48				
3	85	76	69	63	80	72	66	60	64	59	55	57	53	50	50	47	45	41				
4	78	68	60	54	74	64	57	52	57	52	47	51	47	43	45	42	39	36				
5	72	61	53	47	68	58	50	45	52	46	41	46	42	38	41	37	34	32				
6	67	55	47	41	63	52	45	40	47	41	37	42	37	34	37	34	31	28				
7	62	50	42	36	58	47	40	35	43	37	33	38	34	30	34	30	28	25				
8	58	46	38	33	54	43	36	31	39	33	29	35	31	27	32	28	25	23				
9	54	42	34	29	51	40	33	28	36	30	26	33	28	25	29	26	23	21				
10	51	39	31	27	48	37	30	26	34	28	24	30	26	22	27	24	21	19				

**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: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.5	2.9
10°-20°	374.7	8.1
20°-30°	526.2	11.4
30°-40°	573.8	12.4
40°-50°	527.6	11.4
50°-60°	414.4	9.0
60°-70°	270.2	5.8
70°-80°	139.3	3.0
80°-90°	38.5	0.8
90°-100°	36.9	0.8
100°-110°	114.5	2.5
110°-120°	195.7	4.2
120°-130°	257.4	5.6
130°-140°	288.9	6.2
140°-150°	283.3	6.1
150°-160°	237.6	5.1
160°-170°	157.6	3.4
170°-180°	55.1	1.2
0°-30°	1037.4	22.4
0°-40°	1611.3	34.8
0°-60°	2553.2	55.2
0°-90°	3001.2	64.8
90°-120°	347.1	7.5
90°-150°	1176.6	25.4
90°-180°	1627.0	35.2
0°-180°	4628.0	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°	0	7	17	16	17	4
95°	26	30	31	31	30	29
105°	106	107	108	109	109	112
115°	196	199	198	198	196	194
125°	286	290	289	287	287	255
135°	370	375	376	376	374	285
145°	449	452	455	456	454	280
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



TEST NUMBER: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-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	15.4	13.8	12.1	10.5	10.0	10.4	10.9	11.4	11.9	11.6
90°	0.5	1.8	3.1	4.4	5.8	7.6	10.0	12.4	14.8	17.2	17.0
92.5°	8.8	9.7	10.7	11.6	12.6	13.3	13.9	14.5	15.1	15.6	15.7
95°	25.6	26.6	27.7	28.8	29.9	30.6	30.7	31.0	31.2	31.4	31.4
97.5°	46.7	47.6	48.6	49.5	50.5	51.1	51.6	52.0	52.4	52.9	52.9
100°	62.3	63.2	64.1	65.0	65.9	66.5	66.8	67.1	67.4	67.8	67.8
102.5°	78.9	79.6	80.2	80.9	81.6	82.2	82.7	83.0	83.4	83.9	83.9
105°	105.6	105.9	106.2	106.5	106.9	107.1	107.4	107.5	107.8	108.1	108.2
107.5°	132.5	132.9	133.5	133.9	134.4	134.7	134.7	134.7	134.7	134.7	134.7
110°	149.7	150.4	151.0	151.7	152.4	152.7	152.7	152.7	152.7	152.7	152.7



TEST NUMBER: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	169.3	169.9	170.6	171.3	171.5	171.4	171.3	171.3	171.2	170.9
115°	196.4	197.1	197.7	198.4	199.0	199.2	199.0	198.8	198.5	198.4	198.3
117.5°	224.1	225.0	225.8	226.7	227.6	227.7	227.1	226.4	225.8	225.2	225.0
120°	242.5	243.4	244.3	245.1	246.1	246.1	245.1	244.3	243.4	242.5	242.5
122.5°	259.4	260.5	261.6	262.6	263.6	263.8	263.2	262.6	262.0	261.4	261.1
125°	285.8	286.7	287.7	288.7	289.6	290.0	289.6	289.4	289.0	288.7	288.3
127.5°	311.3	312.6	313.8	315.1	316.3	316.8	316.4	316.0	315.6	315.2	314.8
130°	327.5	328.9	330.3	331.7	333.1	333.7	333.6	333.3	333.1	332.9	332.7
132.5°	345.5	346.7	347.8	349.0	350.2	350.8	350.9	350.9	350.9	350.9	350.5
135°	369.7	370.9	372.1	373.3	374.5	375.2	375.4	375.7	375.9	376.1	376.0
137.5°	395.1	396.1	397.1	398.1	399.1	399.7	400.0	400.3	400.5	400.8	400.7
140°	410.4	411.5	412.4	413.4	414.4	415.2	415.7	416.2	416.8	417.3	417.3
142.5°	426.2	427.1	428.2	429.1	430.1	430.8	431.2	431.5	431.9	432.2	432.3
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.2
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.2
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



TEST NUMBER: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-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°	11.4	11.0	10.8	10.7	10.7	10.7	10.7	10.8
90°	16.8	16.5	16.3	16.3	16.4	16.4	16.6	16.7
92.5°	15.7	15.8	15.8	15.8	15.8	15.8	15.9	15.9
95°	31.4	31.4	31.4	31.3	31.1	30.9	30.7	30.5
97.5°	52.9	52.9	52.9	52.8	52.8	52.8	52.8	52.7
100°	67.8	67.8	67.8	67.7	67.6	67.5	67.4	67.2
102.5°	84.0	84.1	84.2	84.2	84.1	83.9	83.9	83.8
105°	108.5	108.7	108.9	109.0	109.0	109.0	109.0	109.0
107.5°	134.8	134.9	135.0	134.7	134.2	133.8	133.3	132.8
110°	152.7	152.7	152.7	152.6	152.2	151.9	151.5	151.2





TEST NUMBER: P331745-935

CATALOG NUMBER: SA2XXRDIP-C1005D530U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	170.7	170.4	170.1	169.9	169.6	169.4	169.1	168.9
115°	198.1	198.0	197.9	197.7	197.3	197.1	196.7	196.4
117.5°	224.7	224.5	224.2	223.9	223.6	223.3	222.9	222.6
120°	242.5	242.5	242.5	242.4	242.0	241.8	241.4	241.1
122.5°	260.9	260.6	260.4	260.1	259.8	259.6	259.4	259.2
125°	288.0	287.7	287.4	287.1	287.1	287.0	286.8	286.7
127.5°	314.4	314.0	313.7	313.2	312.9	312.5	312.2	311.9
130°	332.4	332.3	332.0	331.7	331.2	330.8	330.4	329.9
132.5°	350.0	349.5	349.0	348.6	348.3	347.9	347.6	347.2
135°	375.9	375.7	375.7	375.4	375.1	374.8	374.4	374.1
137.5°	400.6	400.5	400.5	400.2	399.8	399.3	398.9	398.5
140°	417.3	417.3	417.3	417.2	416.6	416.2	415.8	415.3
142.5°	432.4	432.5	432.6	432.4	432.0	431.5	431.1	430.7
145°	455.4	455.5	455.6	455.4	455.0	454.5	454.1	453.7
147.5°	475.4	475.7	476.0	475.9	475.4	475.0	474.6	474.2
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)