

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: P331453-935

Luminaire Tested: **SA2XXDIP-C1005D925U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331453-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

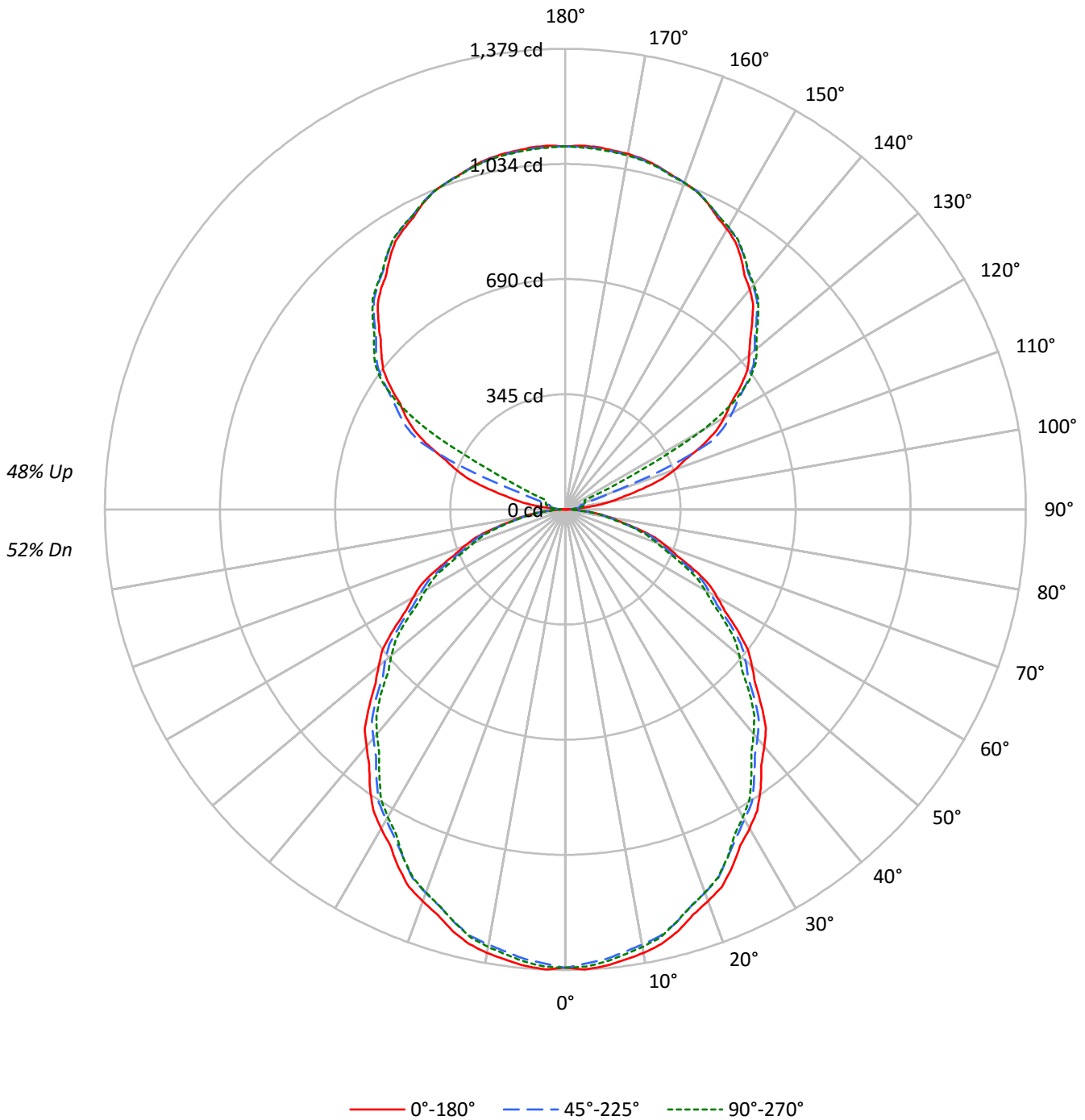
Lumens per Lamp: N/A
Luminaire Lumens: 6678.7 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P331453-935
CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

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	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	98	94	90	87	91	87	84	81	74	72	69	62	61	59	51	50	49	44
2	90	82	76	71	83	76	71	66	65	61	58	55	52	49	45	43	41	37
3	82	72	65	59	75	67	61	55	57	52	48	48	45	42	40	38	35	31
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	30	27
5	69	57	49	43	63	53	46	40	46	40	36	39	34	31	32	29	27	23
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	20
7	58	46	38	33	54	43	36	31	37	32	27	32	27	24	27	23	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22157	22157	22157
5°	22242	21921	22049
10°	22109	21697	21807
15°	21835	21417	21396
20°	21448	20993	20972
25°	21063	20475	20475
30°	20566	19999	19827
35°	20103	19429	19141
40°	19524	18858	18493
45°	18952	18287	17838
50°	18329	17698	17071
55°	17681	17011	16380
60°	16956	16191	15594
65°	16180	15373	14670
70°	15196	14389	13704
75°	13830	13250	12926
80°	12273	11901	11288
85°	10022	9541	8540



TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.0	1.9
10°-20°	363.1	5.4
20°-30°	533.7	8.0
30°-40°	619.9	9.3
40°-50°	619.3	9.3
50°-60°	540.0	8.1
60°-70°	399.3	6.0
70°-80°	226.2	3.4
80°-90°	63.5	1.0
90°-100°	36.2	0.5
100°-110°	132.9	2.0
110°-120°	355.3	5.3
120°-130°	586.6	8.8
130°-140°	623.8	9.3
140°-150°	579.8	8.7
150°-160°	466.2	7.0
160°-170°	300.4	4.5
170°-180°	103.4	1.5
0°-30°	1025.8	15.4
0°-40°	1645.7	24.6
0°-60°	2805.0	42.0
0°-90°	3494.0	52.3
90°-120°	524.5	7.9
90°-150°	2314.7	34.7
90°-180°	3185.0	47.7
0°-180°	6678.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1366	1352	1362	1360	130
15°	1306	1298	1281	1286	1280	368
25°	1182	1171	1149	1152	1149	544
35°	1020	1006	986	978	971	637
45°	830	820	801	787	781	640
55°	628	620	604	589	582	561
65°	424	415	402	391	384	419
75°	222	219	212	205	207	237
85°	54	53	52	48	46	62
90°	1	9	16	20	21	5
95°	51	27	31	34	34	63
105°	239	249	48	56	60	255
115°	452	466	485	138	64	445
125°	639	650	664	670	672	570
135°	791	803	811	818	817	611
145°	918	918	930	935	932	574
155°	1010	1004	1013	1017	1011	465
165°	1065	1060	1062	1067	1062	301
175°	1089	1084	1085	1090	1083	104
180°	1087	1087	1087	1087	1087	



TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1378.6	1377.4	1376.3	1375.1	1373.9	1372.1	1369.5	1366.9	1364.3	1361.8	1364.1
5°	1372.3	1371.1	1369.9	1368.7	1367.6	1365.4	1362.2	1358.9	1355.7	1352.5	1354.9
7.5°	1360.1	1358.3	1356.5	1354.7	1352.9	1350.3	1347.0	1343.8	1340.5	1337.2	1339.5
10°	1348.5	1346.5	1344.5	1342.4	1340.3	1337.6	1334.0	1330.5	1327.0	1323.4	1325.9
12.5°	1332.7	1330.8	1329.0	1327.2	1325.4	1322.8	1319.2	1315.7	1312.3	1308.7	1310.4
15°	1306.3	1304.6	1302.8	1301.1	1299.2	1296.5	1292.7	1288.8	1285.0	1281.3	1282.5
17.5°	1272.6	1270.7	1269.0	1267.2	1265.5	1262.7	1258.8	1254.9	1251.0	1247.2	1248.5
20°	1248.3	1246.5	1244.7	1242.9	1241.2	1238.3	1234.2	1230.1	1226.0	1221.8	1222.7
22.5°	1224.0	1221.5	1219.1	1216.6	1214.1	1211.0	1207.1	1203.2	1199.4	1195.5	1195.7
25°	1182.3	1179.9	1177.6	1175.3	1172.9	1169.2	1164.2	1159.3	1154.3	1149.3	1149.9
27.5°	1134.8	1132.6	1130.6	1128.4	1126.4	1123.3	1119.4	1115.4	1111.6	1107.6	1106.7
30°	1103.1	1100.8	1098.4	1096.1	1093.7	1090.4	1086.0	1081.6	1077.2	1072.7	1071.9
32.5°	1069.4	1067.5	1065.6	1063.7	1061.8	1058.6	1054.0	1049.3	1044.7	1040.0	1038.5
35°	1019.9	1017.0	1014.1	1011.2	1008.2	1004.4	999.7	995.1	990.4	985.7	984.0
37.5°	964.3	961.7	959.2	956.6	954.0	950.4	945.6	941.0	936.3	931.6	929.4
40°	926.3	923.9	921.6	919.3	916.9	913.4	908.7	904.0	899.3	894.7	892.0
42.5°	889.3	887.0	884.7	882.4	879.9	876.4	871.8	867.0	862.4	857.6	854.8
45°	830.0	827.9	825.9	823.8	821.7	818.6	814.2	809.8	805.4	800.9	797.7
47.5°	770.9	769.0	767.0	765.1	763.1	759.8	755.3	750.7	746.1	741.6	738.1
50°	729.7	728.2	726.8	725.3	723.8	721.0	717.0	712.8	708.7	704.6	700.5
52.5°	689.6	687.7	685.7	683.8	681.8	678.9	675.0	671.1	667.4	663.5	660.0
55°	628.1	626.3	624.6	622.8	621.0	618.4	614.9	611.4	607.9	604.3	600.8
57.5°	566.4	564.9	563.5	562.1	560.7	558.1	554.2	550.4	546.5	542.6	539.2
60°	525.1	524.0	522.8	521.7	520.5	517.8	513.8	509.6	505.5	501.4	498.2
62.5°	485.1	483.2	481.3	479.4	477.5	475.0	471.8	468.7	465.5	462.4	459.3
65°	423.5	421.8	420.1	418.3	416.6	414.1	411.2	408.3	405.4	402.4	399.8
67.5°	361.0	359.6	358.2	356.8	355.4	353.4	350.7	348.1	345.4	342.9	340.8
70°	321.9	320.8	319.6	318.5	317.3	315.4	312.7	310.0	307.5	304.8	302.7
72.5°	281.8	280.7	279.5	278.4	277.2	275.7	274.1	272.3	270.6	268.9	266.8
75°	221.7	221.1	220.5	219.9	219.3	218.3	216.8	215.3	213.9	212.4	210.7
77.5°	167.8	166.9	165.8	164.9	163.8	163.1	162.5	161.9	161.3	160.7	159.8
80°	132.0	131.6	131.4	131.0	130.8	130.4	129.8	129.2	128.5	128.0	127.1
82.5°	98.2	98.2	98.1	98.0	97.9	97.7	97.4	97.0	96.7	96.3	95.2
85°	54.1	53.8	53.6	53.2	53.0	52.6	52.3	52.0	51.7	51.5	50.5
87.5°	19.2	19.1	19.0	18.9	18.9	18.7	18.5	18.3	18.1	17.9	17.4
90°	0.8	2.7	4.6	6.5	8.4	10.2	11.5	12.9	14.3	15.8	16.6
92.5°	15.8	15.7	15.5	15.3	15.2	15.4	16.2	16.9	17.6	18.3	18.7
95°	51.1	45.4	39.6	33.8	28.1	25.7	27.0	28.2	29.4	30.7	31.5
97.5°	101.4	85.2	69.0	52.7	36.4	29.7	32.5	35.4	38.2	41.1	41.8
100°	139.2	115.2	91.3	67.3	43.4	33.0	35.9	38.9	41.8	44.9	46.2
102.5°	180.7	175.6	170.6	165.5	160.4	145.5	120.6	95.7	70.9	46.1	47.9
105°	239.0	244.3	249.5	254.8	260.0	238.8	191.1	143.4	95.7	48.0	49.9
107.5°	305.6	309.8	314.0	318.2	322.5	296.0	238.8	181.6	124.3	67.2	65.2
110°	348.4	352.1	355.7	359.4	363.0	339.6	289.1	238.6	188.1	137.6	120.1



TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	388.6	391.8	395.1	398.4	401.6	397.0	384.5	372.0	359.6	347.1	283.4
115°	452.1	455.1	458.1	461.1	464.0	467.7	472.1	476.5	480.8	485.2	404.2
117.5°	508.9	512.2	515.6	518.9	522.2	525.4	528.4	531.4	534.4	537.4	517.8
120°	550.4	553.0	555.7	558.3	560.9	563.8	567.0	570.1	573.3	576.4	578.5
122.5°	585.7	588.4	591.2	593.9	596.7	599.8	603.2	606.7	610.1	613.5	614.8
125°	639.3	641.5	643.9	646.1	648.4	651.2	654.5	657.8	661.2	664.4	665.7
127.5°	687.9	690.4	692.9	695.4	697.9	700.4	702.9	705.4	707.9	710.4	712.1
130°	718.8	721.5	724.3	727.1	729.9	732.3	734.2	736.1	738.0	739.9	741.8
132.5°	750.2	752.5	754.9	757.3	759.7	761.8	763.8	765.7	767.6	769.5	771.2
135°	791.1	793.8	796.7	799.4	802.3	804.4	806.0	807.6	809.2	810.7	812.4
137.5°	832.4	834.4	836.4	838.3	840.2	842.1	843.9	845.7	847.5	849.3	850.9
140°	859.5	860.9	862.3	863.7	865.0	866.8	868.7	870.6	872.5	874.4	876.0
142.5°	882.1	883.4	884.7	885.9	887.2	888.9	891.0	893.3	895.5	897.7	899.1
145°	917.7	917.5	917.3	917.1	917.0	918.3	921.4	924.3	927.3	930.2	931.4
147.5°	948.6	948.0	947.4	946.7	946.0	947.1	950.0	953.0	956.0	958.9	959.8
150°	968.8	967.6	966.3	965.1	963.9	964.7	967.5	970.3	973.1	975.9	976.9
152.5°	985.8	984.4	983.0	981.7	980.3	980.9	983.6	986.3	988.9	991.6	992.6
155°	1010.5	1008.9	1007.3	1005.7	1004.2	1004.4	1006.5	1008.7	1010.7	1012.8	1013.8
157.5°	1029.8	1028.5	1027.2	1025.8	1024.5	1024.6	1026.1	1027.5	1029.0	1030.4	1031.7
160°	1041.1	1040.1	1039.1	1037.9	1036.9	1036.9	1037.9	1039.1	1040.1	1041.1	1042.2
162.5°	1051.2	1050.2	1049.1	1048.0	1047.0	1046.9	1047.8	1048.7	1049.6	1050.6	1051.7
165°	1064.7	1063.7	1062.6	1061.5	1060.5	1060.2	1060.8	1061.3	1061.9	1062.4	1063.6
167.5°	1074.8	1073.8	1072.7	1071.6	1070.6	1070.3	1070.8	1071.3	1071.8	1072.3	1073.5
170°	1080.5	1079.3	1078.3	1077.3	1076.2	1075.9	1076.2	1076.6	1076.9	1077.3	1078.5
172.5°	1084.2	1083.1	1082.1	1081.1	1080.0	1079.7	1080.0	1080.4	1080.7	1081.1	1082.3
175°	1089.1	1087.9	1086.7	1085.4	1084.2	1083.7	1084.1	1084.4	1084.8	1085.1	1086.4
177.5°	1089.9	1088.9	1088.0	1086.9	1086.0	1085.5	1085.7	1085.8	1086.0	1086.1	1087.1
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8



TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1366.4	1368.7	1371.1	1372.1	1371.6	1371.1	1370.6	1370.2
5°	1357.2	1359.5	1361.8	1362.8	1362.2	1361.6	1361.0	1360.4
7.5°	1341.9	1344.2	1346.6	1347.5	1346.8	1346.2	1345.5	1344.9
10°	1328.2	1330.5	1332.8	1333.6	1332.7	1331.8	1330.9	1330.1
12.5°	1312.0	1313.6	1315.3	1315.8	1315.1	1314.5	1313.8	1313.2
15°	1283.6	1284.8	1285.9	1285.8	1284.4	1282.9	1281.4	1280.0
17.5°	1249.9	1251.3	1252.6	1252.6	1251.1	1249.7	1248.4	1246.9
20°	1223.7	1224.5	1225.4	1225.2	1224.1	1222.9	1221.8	1220.6
22.5°	1195.8	1196.0	1196.2	1195.9	1195.2	1194.6	1193.8	1193.1
25°	1150.5	1151.1	1151.7	1151.7	1151.1	1150.5	1149.9	1149.3
27.5°	1105.9	1104.9	1104.1	1102.9	1101.6	1100.1	1098.7	1097.3
30°	1071.0	1070.1	1069.3	1068.2	1067.0	1065.8	1064.7	1063.5
32.5°	1036.9	1035.3	1033.7	1032.3	1031.1	1030.0	1028.8	1027.6
35°	982.1	980.4	978.6	977.1	975.6	974.1	972.6	971.1
37.5°	927.2	925.1	922.9	921.1	919.7	918.3	916.9	915.5
40°	889.3	886.7	884.1	882.2	881.0	879.9	878.7	877.4
42.5°	852.0	849.0	846.2	844.0	842.3	840.7	839.0	837.3
45°	794.5	791.3	788.1	785.8	784.6	783.5	782.3	781.2
47.5°	734.8	731.3	728.0	725.4	723.7	722.0	720.3	718.6
50°	696.4	692.3	688.2	685.4	684.0	682.5	681.1	679.6
52.5°	656.7	653.2	649.9	647.2	645.2	643.3	641.4	639.5
55°	597.3	593.7	590.3	587.8	586.3	584.9	583.4	581.9
57.5°	535.6	532.2	528.7	526.4	525.4	524.3	523.1	522.0
60°	495.0	491.7	488.5	486.5	485.6	484.7	483.8	482.9
62.5°	456.4	453.4	450.4	448.3	447.2	446.1	445.0	443.8
65°	397.2	394.5	391.9	389.9	388.4	386.9	385.5	384.0
67.5°	338.7	336.7	334.6	332.9	331.8	330.6	329.5	328.3
70°	300.7	298.7	296.6	295.0	293.8	292.7	291.4	290.3
72.5°	264.8	262.8	260.7	259.2	258.3	257.4	256.4	255.5
75°	209.0	207.2	205.4	204.8	205.4	206.0	206.6	207.2
77.5°	158.9	158.1	157.2	156.4	155.5	154.7	153.9	153.1
80°	126.2	125.4	124.5	123.7	123.1	122.6	122.0	121.4
82.5°	94.1	93.0	91.9	91.3	91.1	91.0	90.9	90.7
85°	49.7	48.8	48.0	47.4	47.1	46.8	46.5	46.1
87.5°	16.9	16.4	15.8	15.5	15.3	15.2	15.0	14.8
90°	17.5	18.3	19.2	19.8	20.1	20.5	20.9	21.3
92.5°	19.1	19.6	20.1	20.4	20.6	20.8	21.0	21.3
95°	32.4	33.3	34.2	34.5	34.4	34.2	34.0	33.8
97.5°	42.4	43.1	43.8	44.3	44.5	44.7	44.9	45.1
100°	47.6	49.0	50.5	51.3	51.7	52.0	52.3	52.7
102.5°	49.7	51.6	53.4	54.5	55.0	55.4	56.0	56.5
105°	51.8	53.7	55.6	57.0	57.7	58.4	59.1	59.8
107.5°	63.2	61.3	59.3	58.7	59.4	60.1	60.8	61.5
110°	102.6	85.2	67.7	59.3	60.0	60.7	61.4	62.2



TEST NUMBER: P331453-935

CATALOG NUMBER: SA2XXDIP-C1005D925U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	219.6	155.8	92.1	60.5	61.0	61.6	62.2	62.8
115°	323.4	242.5	161.5	114.8	102.2	89.6	77.1	64.5
117.5°	498.3	478.7	459.1	428.6	387.3	345.9	304.6	263.3
120°	580.6	582.7	584.8	574.0	550.4	526.8	503.3	479.7
122.5°	616.0	617.3	618.5	616.9	612.3	607.7	603.1	598.6
125°	666.9	668.1	669.3	670.2	670.7	671.2	671.8	672.4
127.5°	713.9	715.7	717.6	718.4	718.6	718.7	718.8	718.8
130°	743.8	745.7	747.6	748.6	748.4	748.1	748.0	747.8
132.5°	772.8	774.5	776.1	776.8	776.6	776.4	776.3	776.1
135°	814.2	816.0	817.7	818.4	818.0	817.7	817.3	817.0
137.5°	852.6	854.4	856.1	856.7	856.1	855.5	854.9	854.3
140°	877.5	879.2	880.7	881.1	880.2	879.3	878.5	877.5
142.5°	900.5	902.0	903.4	903.7	902.8	902.0	901.1	900.2
145°	932.7	933.9	935.1	935.3	934.4	933.6	932.7	931.9
147.5°	960.7	961.6	962.5	962.6	961.8	961.1	960.4	959.7
150°	977.9	979.0	980.1	980.2	979.3	978.4	977.5	976.6
152.5°	993.7	994.7	995.7	995.7	994.5	993.4	992.3	991.1
155°	1014.9	1016.0	1017.0	1016.8	1015.5	1014.0	1012.6	1011.2
157.5°	1032.8	1034.0	1035.2	1035.1	1033.7	1032.3	1031.0	1029.7
160°	1043.2	1044.3	1045.3	1045.3	1044.0	1042.8	1041.6	1040.3
162.5°	1052.9	1054.1	1055.3	1055.2	1053.7	1052.1	1050.7	1049.1
165°	1064.8	1066.0	1067.2	1067.2	1066.0	1064.8	1063.6	1062.4
167.5°	1074.7	1075.9	1077.2	1076.9	1075.4	1073.8	1072.3	1070.7
170°	1079.8	1081.0	1082.2	1082.0	1080.5	1078.8	1077.3	1075.7
172.5°	1083.5	1084.8	1086.0	1085.8	1084.2	1082.6	1081.1	1079.5
175°	1087.6	1088.8	1090.0	1089.8	1088.0	1086.3	1084.5	1082.8
177.5°	1088.0	1089.1	1090.0	1089.9	1088.6	1087.4	1086.1	1084.9
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8

(END OF REPORT)