

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: P331463-927

Luminaire Tested: **SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331463-927
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: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6265.6 lumens
Efficiency: N/A
Efficacy: 87.4 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

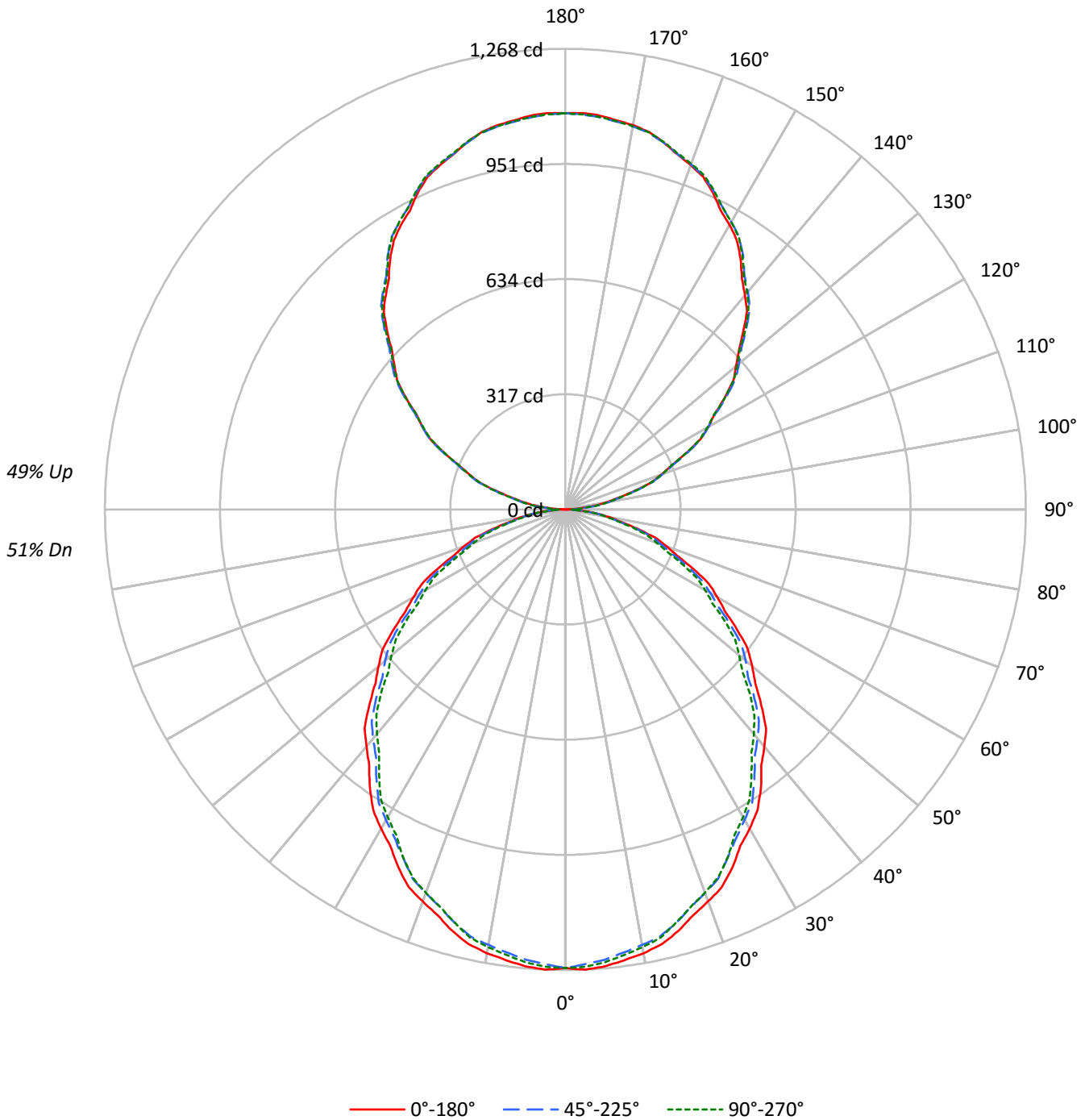
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	51	
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	43	43	43	
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41	36	36	36	36	
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31	31	31	31	
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	26	26	26	
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23	23	23	23	
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20	20	20	20	
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18	18	18	18	
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	16	
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	17	14	14	14	14	
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	17	15	13	13	13	13	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20386	20386	20386
5°	20464	20169	20285
10°	20341	19964	20064
15°	20090	19704	19686
20°	19734	19316	19295
25°	19379	18838	18838
30°	18921	18401	18243
35°	18496	17875	17611
40°	17962	17351	17015
45°	17438	16826	16411
50°	16865	16284	15707
55°	16268	15651	15071
60°	15603	14899	14347
65°	14888	14147	13498
70°	13983	13237	12609
75°	12726	12190	11890
80°	11288	10953	10386
85°	9207	8781	7873



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.7	1.9
10°-20°	334.1	5.3
20°-30°	491.0	7.8
30°-40°	570.4	9.1
40°-50°	569.8	9.1
50°-60°	496.9	7.9
60°-70°	367.4	5.9
70°-80°	208.1	3.3
80°-90°	60.3	1.0
90°-100°	69.1	1.1
100°-110°	214.6	3.4
110°-120°	366.8	5.9
120°-130°	482.4	7.7
130°-140°	541.4	8.6
140°-150°	530.9	8.5
150°-160°	445.3	7.1
160°-170°	295.3	4.7
170°-180°	103.2	1.6
0°-30°	943.8	15.1
0°-40°	1514.2	24.2
0°-60°	2580.8	41.2
0°-90°	3216.6	51.3
90°-120°	650.5	10.4
90°-150°	2205.2	35.2
90°-180°	3049.0	48.7
0°-180°	6265.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1263	1257	1244	1253	1252	120
15°	1202	1194	1179	1183	1178	338
25°	1088	1078	1057	1060	1057	500
35°	938	926	907	900	894	586
45°	764	755	737	724	719	589
55°	578	570	556	542	535	517
65°	390	382	370	360	353	385
75°	204	201	195	189	191	218
85°	50	49	47	44	42	57
90°	1	12	32	31	31	5
95°	48	57	59	59	57	55
105°	198	201	202	204	204	209
115°	368	373	372	371	368	364
125°	536	543	541	538	537	478
135°	693	703	705	704	701	535
145°	841	847	853	854	850	525
155°	962	964	967	971	969	442
165°	1046	1045	1045	1051	1047	295
175°	1089	1086	1084	1090	1085	103
180°	1090	1090	1090	1090	1090	



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6
2.5°	1268.4	1267.3	1266.3	1265.2	1264.1	1262.4	1260.0	1257.7	1255.3	1252.9	1255.1
5°	1262.6	1261.6	1260.4	1259.3	1258.3	1256.2	1253.3	1250.3	1247.4	1244.4	1246.6
7.5°	1251.4	1249.7	1248.1	1246.4	1244.8	1242.4	1239.4	1236.4	1233.3	1230.3	1232.5
10°	1240.7	1238.9	1237.0	1235.1	1233.2	1230.7	1227.4	1224.2	1220.9	1217.7	1219.9
12.5°	1226.2	1224.5	1222.8	1221.1	1219.5	1217.0	1213.8	1210.5	1207.4	1204.1	1205.6
15°	1201.9	1200.3	1198.7	1197.1	1195.4	1192.9	1189.4	1185.8	1182.3	1178.8	1180.0
17.5°	1170.8	1169.2	1167.6	1165.9	1164.3	1161.7	1158.2	1154.6	1151.0	1147.6	1148.7
20°	1148.5	1146.8	1145.3	1143.6	1142.0	1139.3	1135.5	1131.8	1128.0	1124.2	1125.0
22.5°	1126.2	1123.9	1121.7	1119.4	1117.1	1114.2	1110.6	1107.1	1103.5	1099.9	1100.1
25°	1087.8	1085.6	1083.5	1081.3	1079.2	1075.8	1071.2	1066.6	1062.0	1057.4	1058.0
27.5°	1044.1	1042.1	1040.2	1038.2	1036.3	1033.6	1029.9	1026.3	1022.7	1019.1	1018.3
30°	1014.9	1012.8	1010.6	1008.4	1006.3	1003.2	999.2	995.1	991.1	987.0	986.2
32.5°	983.9	982.1	980.4	978.7	976.9	974.0	969.7	965.4	961.2	956.9	955.5
35°	938.4	935.7	933.0	930.3	927.6	924.2	919.8	915.5	911.2	906.9	905.3
37.5°	887.2	884.9	882.5	880.1	877.7	874.4	870.1	865.8	861.4	857.1	855.1
40°	852.2	850.1	848.0	845.8	843.6	840.4	836.1	831.8	827.4	823.2	820.7
42.5°	818.2	816.1	814.0	811.8	809.6	806.4	802.1	797.7	793.4	789.1	786.5
45°	763.7	761.8	759.9	758.0	756.1	753.1	749.1	745.0	741.0	736.9	734.0
47.5°	709.2	707.5	705.7	703.9	702.1	699.1	694.9	690.7	686.5	682.3	679.1
50°	671.4	670.0	668.7	667.3	666.0	663.4	659.7	655.8	652.0	648.3	644.5
52.5°	634.5	632.7	630.9	629.2	627.3	624.6	621.1	617.5	614.0	610.5	607.3
55°	577.9	576.2	574.6	573.1	571.4	568.9	565.8	562.5	559.3	556.0	552.8
57.5°	521.1	519.8	518.5	517.2	515.9	513.5	509.9	506.4	502.8	499.2	496.1
60°	483.2	482.1	481.0	480.0	478.9	476.4	472.7	468.9	465.1	461.4	458.4
62.5°	446.3	444.6	442.8	441.1	439.3	437.0	434.1	431.3	428.3	425.4	422.6
65°	389.7	388.1	386.5	384.8	383.3	381.0	378.3	375.7	373.0	370.3	367.9
67.5°	332.2	330.9	329.5	328.3	327.0	325.1	322.7	320.3	317.8	315.4	313.5
70°	296.2	295.2	294.1	293.0	291.9	290.2	287.7	285.3	282.9	280.4	278.5
72.5°	259.3	258.3	257.1	256.1	255.0	253.7	252.2	250.6	249.0	247.4	245.5
75°	204.0	203.4	202.9	202.3	201.8	200.8	199.5	198.1	196.8	195.4	193.8
77.5°	154.4	153.5	152.6	151.7	150.8	150.0	149.5	148.9	148.4	147.9	147.0
80°	121.4	121.1	120.9	120.6	120.3	119.9	119.4	118.8	118.3	117.8	116.9
82.5°	90.3	90.3	90.2	90.2	90.1	89.9	89.6	89.3	89.0	88.6	87.6
85°	49.7	49.5	49.3	49.0	48.7	48.4	48.2	47.8	47.6	47.4	46.5
87.5°	17.7	17.7	17.8	17.8	17.9	18.1	18.6	19.1	19.6	20.0	19.3
90°	1.0	3.4	5.9	8.3	10.8	14.2	18.7	23.2	27.7	32.2	31.8
92.5°	16.4	18.1	20.0	21.8	23.6	25.0	26.1	27.2	28.2	29.2	29.3
95°	47.8	49.9	52.0	53.9	56.0	57.3	57.7	58.1	58.5	58.9	58.9
97.5°	87.5	89.2	91.0	92.8	94.6	95.9	96.6	97.4	98.2	99.0	99.0
100°	116.8	118.5	120.2	121.8	123.4	124.5	125.2	125.7	126.4	127.0	127.0
102.5°	147.8	149.1	150.4	151.7	153.0	154.1	154.9	155.6	156.4	157.2	157.3
105°	197.8	198.4	199.1	199.7	200.3	200.8	201.2	201.6	202.0	202.4	202.9
107.5°	248.3	249.1	250.1	251.0	251.8	252.3	252.3	252.3	252.3	252.3	252.5
110°	280.7	281.9	283.1	284.3	285.6	286.2	286.2	286.2	286.2	286.2	286.2



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	316.0	317.2	318.5	319.6	320.9	321.5	321.2	321.1	320.9	320.8	320.3
115°	368.0	369.3	370.5	371.8	373.0	373.4	373.0	372.6	372.2	371.8	371.5
117.5°	419.9	421.6	423.3	424.8	426.5	426.7	425.6	424.5	423.3	422.2	421.7
120°	454.6	456.2	457.9	459.5	461.1	461.1	459.5	457.9	456.2	454.6	454.6
122.5°	486.2	488.2	490.1	492.1	494.1	494.5	493.4	492.2	491.1	489.9	489.4
125°	535.5	537.4	539.2	541.1	542.9	543.5	542.9	542.3	541.7	541.1	540.4
127.5°	583.6	585.9	588.3	590.6	592.9	593.7	592.9	592.2	591.5	590.7	590.0
130°	613.8	616.4	619.1	621.7	624.4	625.5	625.1	624.7	624.3	623.9	623.4
132.5°	647.6	649.8	652.0	654.1	656.3	657.4	657.5	657.6	657.7	657.7	656.9
135°	692.9	695.1	697.4	699.7	701.9	703.2	703.6	704.0	704.5	704.9	704.6
137.5°	740.5	742.4	744.3	746.1	747.9	749.1	749.6	750.2	750.7	751.2	751.1
140°	769.3	771.1	772.9	774.8	776.7	778.1	779.1	780.1	781.2	782.1	782.1
142.5°	798.8	800.6	802.4	804.2	806.0	807.3	808.0	808.7	809.5	810.2	810.3
145°	841.1	842.5	843.9	845.3	846.8	848.1	849.3	850.6	851.8	853.0	853.2
147.5°	878.8	880.5	882.2	883.9	885.7	886.9	887.7	888.6	889.4	890.2	890.7
150°	904.5	905.8	907.0	908.2	909.4	910.5	911.3	912.1	912.9	913.8	914.3
152.5°	927.3	928.6	929.8	931.1	932.2	933.3	934.4	935.3	936.4	937.3	938.1
155°	961.6	962.2	962.8	963.5	964.1	964.6	965.3	965.9	966.5	967.1	968.1
157.5°	990.9	991.3	991.7	992.0	992.5	992.8	993.2	993.6	994.0	994.3	995.8
160°	1008.5	1008.9	1009.3	1009.7	1010.2	1010.4	1010.7	1010.9	1011.1	1011.3	1012.5
162.5°	1024.7	1024.8	1024.8	1024.9	1025.1	1025.2	1025.4	1025.6	1025.8	1026.0	1027.4
165°	1046.2	1046.1	1045.8	1045.6	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1046.8
167.5°	1064.3	1063.7	1063.0	1062.5	1061.8	1061.5	1061.4	1061.4	1061.4	1061.4	1062.8
170°	1073.9	1073.2	1072.6	1072.0	1071.4	1071.0	1070.8	1070.6	1070.4	1070.2	1071.6
172.5°	1080.5	1079.9	1079.3	1078.6	1078.0	1077.6	1077.4	1077.2	1077.0	1076.8	1078.2
175°	1088.6	1088.0	1087.3	1086.7	1086.2	1085.6	1085.2	1084.8	1084.4	1083.9	1085.4
177.5°	1091.9	1091.4	1090.9	1090.4	1090.0	1089.5	1089.2	1088.9	1088.5	1088.2	1089.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6
2.5°	1257.2	1259.3	1261.6	1262.4	1261.9	1261.6	1261.1	1260.7
5°	1248.7	1250.9	1253.0	1253.9	1253.3	1252.8	1252.2	1251.6
7.5°	1234.6	1236.8	1239.0	1239.8	1239.1	1238.6	1237.9	1237.4
10°	1222.0	1224.2	1226.3	1227.0	1226.2	1225.3	1224.6	1223.8
12.5°	1207.1	1208.6	1210.1	1210.6	1210.0	1209.4	1208.8	1208.2
15°	1181.0	1182.1	1183.1	1183.0	1181.7	1180.4	1179.0	1177.7
17.5°	1150.0	1151.3	1152.5	1152.5	1151.1	1149.9	1148.6	1147.2
20°	1125.8	1126.6	1127.4	1127.3	1126.2	1125.1	1124.1	1123.0
22.5°	1100.3	1100.4	1100.6	1100.3	1099.7	1099.1	1098.4	1097.7
25°	1058.5	1059.1	1059.6	1059.6	1059.1	1058.5	1058.0	1057.4
27.5°	1017.5	1016.6	1015.8	1014.8	1013.5	1012.2	1010.9	1009.6
30°	985.4	984.6	983.8	982.9	981.8	980.6	979.6	978.5
32.5°	954.0	952.5	951.1	949.8	948.7	947.7	946.6	945.5
35°	903.6	902.1	900.4	899.0	897.6	896.3	894.8	893.5
37.5°	853.1	851.1	849.1	847.5	846.2	844.9	843.6	842.3
40°	818.2	815.9	813.4	811.7	810.6	809.5	808.4	807.3
42.5°	783.9	781.2	778.6	776.5	775.0	773.5	772.0	770.4
45°	731.0	728.0	725.1	723.0	721.9	720.9	719.8	718.7
47.5°	676.0	672.9	669.8	667.4	665.8	664.3	662.7	661.2
50°	640.7	637.0	633.2	630.7	629.3	628.0	626.6	625.3
52.5°	604.2	601.0	597.9	595.5	593.7	591.9	590.1	588.4
55°	549.5	546.3	543.1	540.8	539.5	538.1	536.8	535.4
57.5°	492.8	489.6	486.5	484.3	483.4	482.4	481.3	480.3
60°	455.4	452.4	449.5	447.6	446.8	446.0	445.1	444.3
62.5°	419.9	417.2	414.4	412.5	411.5	410.4	409.4	408.4
65°	365.4	363.0	360.6	358.7	357.4	356.0	354.7	353.3
67.5°	311.6	309.7	307.8	306.3	305.3	304.2	303.2	302.1
70°	276.6	274.8	272.9	271.4	270.3	269.3	268.2	267.1
72.5°	243.7	241.8	239.9	238.5	237.7	236.8	235.9	235.0
75°	192.3	190.6	189.0	188.5	189.0	189.5	190.0	190.6
77.5°	146.2	145.4	144.7	143.9	143.1	142.4	141.6	140.9
80°	116.1	115.3	114.5	113.8	113.3	112.8	112.3	111.7
82.5°	86.6	85.6	84.5	84.0	83.8	83.7	83.7	83.5
85°	45.7	44.9	44.1	43.6	43.3	43.0	42.8	42.5
87.5°	18.6	17.8	17.1	16.6	16.5	16.3	16.2	16.0
90°	31.4	31.0	30.6	30.5	30.7	30.9	31.1	31.3
92.5°	29.4	29.5	29.6	29.6	29.7	29.7	29.8	29.8
95°	58.9	58.9	58.9	58.7	58.3	57.9	57.4	57.0
97.5°	99.0	99.0	99.0	99.0	98.9	98.9	98.9	98.9
100°	127.0	127.0	127.0	126.9	126.7	126.5	126.3	126.0
102.5°	157.5	157.6	157.8	157.8	157.6	157.4	157.2	157.0
105°	203.3	203.7	204.1	204.3	204.3	204.3	204.3	204.3
107.5°	252.6	252.8	252.9	252.5	251.7	250.7	249.8	248.8
110°	286.2	286.2	286.2	285.9	285.3	284.6	284.0	283.4



TEST NUMBER: P331463-927

CATALOG NUMBER: SA2XXDIP-C1005D1080U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.8	319.3	318.9	318.4	317.9	317.4	317.0	316.6
115°	371.4	371.1	370.9	370.5	369.9	369.3	368.7	368.0
117.5°	421.2	420.7	420.3	419.7	419.1	418.4	417.8	417.2
120°	454.6	454.6	454.6	454.2	453.7	453.0	452.4	451.8
122.5°	488.9	488.5	487.9	487.5	487.0	486.6	486.2	485.7
125°	539.9	539.2	538.6	538.2	538.0	537.8	537.6	537.4
127.5°	589.3	588.5	587.8	587.1	586.5	585.8	585.2	584.5
130°	623.1	622.7	622.3	621.6	620.8	620.0	619.2	618.4
132.5°	655.9	655.1	654.2	653.4	652.8	652.0	651.4	650.8
135°	704.5	704.3	704.0	703.6	703.0	702.4	701.8	701.2
137.5°	750.9	750.8	750.6	750.1	749.2	748.5	747.7	746.8
140°	782.1	782.1	782.1	781.7	780.9	780.1	779.3	778.5
142.5°	810.5	810.6	810.8	810.5	809.6	808.8	808.0	807.2
145°	853.4	853.7	853.8	853.5	852.7	851.9	851.0	850.2
147.5°	891.1	891.5	892.0	891.8	891.0	890.3	889.5	888.7
150°	915.0	915.6	916.2	916.2	915.6	915.0	914.3	913.8
152.5°	938.9	939.6	940.4	940.4	939.6	938.9	938.1	937.3
155°	969.2	970.2	971.2	971.4	970.8	970.2	969.6	968.9
157.5°	997.1	998.5	999.9	1000.1	999.1	998.1	997.2	996.2
160°	1013.8	1014.9	1016.2	1016.4	1015.6	1014.8	1013.9	1013.1
162.5°	1028.8	1030.2	1031.6	1031.7	1030.8	1029.8	1028.8	1027.9
165°	1048.2	1049.6	1051.1	1051.2	1050.3	1049.2	1048.2	1047.2
167.5°	1064.2	1065.6	1067.1	1067.2	1066.2	1065.1	1064.1	1063.0
170°	1073.0	1074.4	1075.9	1076.0	1074.8	1073.6	1072.3	1071.1
172.5°	1079.7	1081.1	1082.5	1082.6	1081.4	1080.1	1079.0	1077.7
175°	1086.9	1088.3	1089.7	1089.8	1088.6	1087.3	1086.2	1084.9
177.5°	1090.2	1091.2	1092.1	1092.1	1091.2	1090.2	1089.2	1088.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

(END OF REPORT)