

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1001290

Luminaire Tested: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1001290
REPORT IS A COMBINATION OF REPORTS P995909 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K
Description: Define 4 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

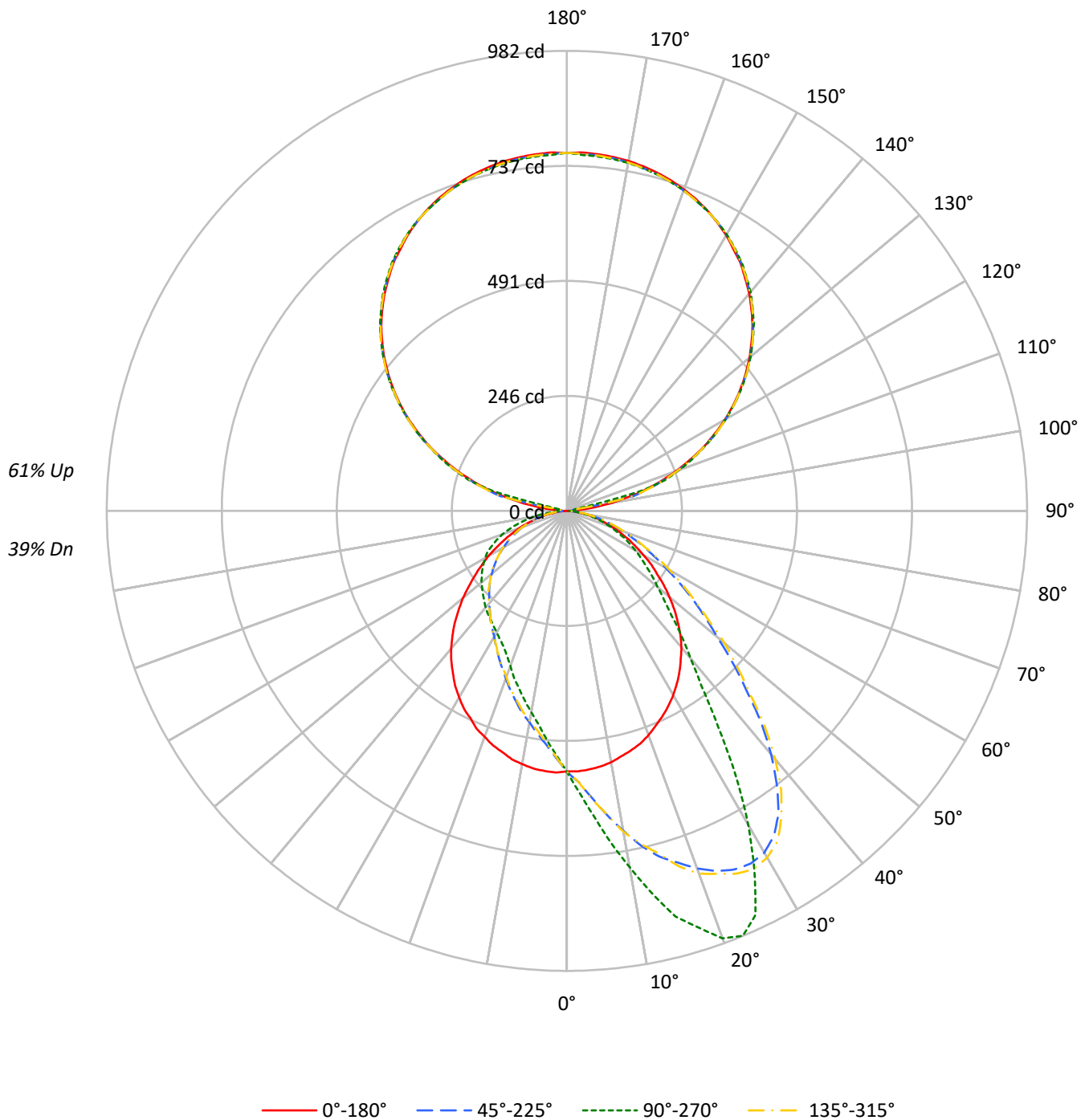
Lumens per Lamp: N/A
Luminaire Lumens: 3901.0 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.3 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 28.4
Input Voltage (V):
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: 24 FT

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

Luminous Intensity Polar Plot



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39		
1	96	91	88	84	87	83	80	77	68	66	64	54	53	51	41	40	39	34		
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	36	35	33	28		
3	80	70	63	58	72	64	58	53	53	48	45	42	39	37	32	30	29	24		
4	73	62	55	49	66	57	50	45	47	42	38	38	34	31	29	27	25	21		
5	67	56	48	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18		
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16		
7	57	45	37	32	52	41	34	30	34	29	25	28	24	21	22	19	17	14		
8	53	41	33	28	48	38	31	26	31	26	23	26	22	19	20	17	15	13		
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	19	16	14	12		
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	13	11		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4536	4536	4536	4536
5°	4525	5204	4551	3911
10°	4491	6071	4525	3430
15°	4437	6999	4468	3069
20°	4380	7590	4412	2752
25°	4296	7503	4337	2518
30°	4214	6201	4265	2397
35°	4098	4621	4143	2324
40°	3964	3481	4003	2288
45°	3759	2794	3806	2239
50°	3515	2354	3565	2216
55°	3226	2049	3277	2191
60°	2947	1804	3033	2154
65°	2685	1552	2709	2064
70°	2376	1278	2427	1901
75°	2072	982	2058	1615
80°	1629	644	1612	1226
85°	1070	289	1004	715

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 145°

Vertical Angle: 45°

Luminance: 5865 cd/sqm

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.1	1.4
10°-20°	167.1	4.3
20°-30°	265.5	6.8
30°-40°	295.0	7.6
40°-50°	268.3	6.9
50°-60°	219.2	5.6
60°-70°	156.5	4.0
70°-80°	86.1	2.2
80°-90°	24.8	0.6
90°-100°	25.4	0.7
100°-110°	167.0	4.3
110°-120°	319.0	8.2
120°-130°	404.9	10.4
130°-140°	433.2	11.1
140°-150°	405.0	10.4
150°-160°	326.6	8.4
160°-170°	210.7	5.4
170°-180°	72.6	1.9
0°-30°	486.7	12.5
0°-40°	781.7	20.0
0°-60°	1269.2	32.5
0°-90°	1536.6	39.4
90°-120°	511.4	13.1
90°-150°	1754.5	45.0
90°-180°	2364.0	60.6
0°-180°	3901.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	556	556	556	556	556	
5°	554	653	557	490	554	53
15°	529	896	533	393	529	149
25°	483	952	488	319	483	223
35°	419	563	424	283	419	262
45°	334	316	338	253	334	258
55°	235	206	239	221	235	211
65°	147	133	148	176	147	145
75°	72	66	71	109	72	76
85°	15	14	14	34	15	17
90°	2	17	2	17	2	3
95°	31	17	31	17	31	39
105°	172	163	172	163	172	180
115°	321	324	321	324	321	316
125°	452	455	452	455	452	403
135°	560	564	560	564	560	432
145°	646	649	646	649	646	404
155°	708	708	708	708	708	327
165°	747	744	747	744	747	211
175°	764	760	764	760	764	73
180°	764	764	764	764	764	

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	556.3	561.8	564.1	566.0	571.9	573.8	574.2	577.0	579.3	579.8	579.8
5°	554.0	562.7	569.6	576.1	585.8	589.9	595.0	600.5	607.9	612.5	614.8
7.5°	550.3	563.2	573.8	584.8	598.2	606.5	611.1	625.9	636.0	644.3	654.4
10°	544.8	561.3	576.6	592.7	611.6	621.7	631.9	649.8	664.1	680.2	693.2
12.5°	536.5	558.1	576.6	599.1	622.6	634.6	646.6	677.9	694.5	708.8	731.9
15°	529.1	550.7	577.0	600.1	629.1	647.1	664.6	684.9	711.1	742.0	764.1
17.5°	520.8	548.0	572.4	604.7	636.9	654.0	668.3	699.6	736.5	766.9	787.2
20°	509.3	536.9	569.2	603.3	641.5	654.9	673.8	715.7	748.9	778.9	812.1
22.5°	495.9	528.2	562.3	595.0	634.6	662.7	683.5	720.3	760.4	795.0	832.3
25°	483.0	518.0	548.0	592.7	634.6	653.5	677.0	720.8	764.6	806.5	844.8
27.5°	469.2	501.9	542.4	577.9	625.4	646.1	671.5	719.4	766.0	807.9	848.9
30°	454.0	489.0	522.6	564.6	610.7	637.4	660.9	713.0	760.4	804.2	842.5
32.5°	436.9	470.1	506.0	545.7	594.1	621.3	650.8	704.2	754.9	792.7	822.2
35°	418.9	452.6	483.9	524.5	574.2	601.4	630.0	689.0	739.2	770.1	787.2
37.5°	399.1	430.9	461.8	501.9	551.7	580.7	609.7	666.9	714.4	740.2	735.6
40°	380.2	408.8	437.4	475.2	527.2	558.1	583.5	641.1	682.6	693.6	678.4
42.5°	358.6	383.0	410.6	449.4	500.0	529.1	560.9	613.4	644.3	639.7	613.9
45°	334.1	355.8	383.4	419.9	471.5	501.4	528.2	577.9	600.5	589.0	542.0
47.5°	310.6	331.8	354.4	390.8	441.1	466.4	493.6	538.3	551.2	526.8	479.8
50°	285.3	302.8	326.3	360.9	407.9	434.6	457.2	493.1	497.7	467.8	418.9
52.5°	260.9	275.6	298.2	332.3	376.1	397.3	419.4	451.2	447.5	416.6	369.6
55°	235.0	248.9	269.6	301.0	339.7	359.9	378.8	407.0	399.1	367.3	326.3
57.5°	213.4	223.1	243.3	272.4	304.2	326.3	342.4	364.6	352.6	320.8	282.5
60°	188.5	200.5	217.5	241.0	272.4	287.1	301.4	316.2	307.9	277.4	243.3
62.5°	165.9	175.1	189.9	212.5	236.9	250.3	265.5	274.7	266.4	238.3	209.7
65°	146.6	153.9	165.5	183.9	207.4	218.5	227.2	236.0	229.1	202.8	182.0
67.5°	125.4	131.8	141.5	156.2	176.1	183.9	192.2	198.2	190.3	172.8	152.5
70°	106.5	111.1	120.3	131.3	145.2	152.5	159.5	165.5	158.5	143.8	128.6
72.5°	87.1	90.8	99.1	106.9	119.4	124.4	129.5	134.1	131.8	118.0	105.5
75°	71.9	73.3	78.8	85.3	93.1	98.6	102.3	105.1	103.2	92.2	84.3
77.5°	54.4	56.2	60.4	65.4	72.4	75.6	77.9	80.7	78.3	69.6	64.1
80°	39.6	40.1	42.4	47.0	51.6	52.1	54.4	58.1	56.7	50.7	46.5
82.5°	25.3	26.7	27.7	30.4	33.6	34.6	35.9	36.9	36.4	32.7	31.3
85°	14.7	14.7	15.7	17.5	18.4	19.8	20.3	20.7	21.7	19.4	18.0
87.5°	6.5	6.9	6.9	7.4	8.3	8.3	8.8	9.2	9.7	9.2	7.8
90°	1.7	3.1	4.5	5.9	7.3	8.0	8.5	9.5	10.6	11.6	12.6
92.5°	8.6	8.3	8.1	7.8	7.5	7.4	7.9	8.9	10.0	11.0	12.0
95°	31.4	27.1	22.8	18.5	14.2	12.0	12.1	12.2	12.3	12.5	12.6
97.5°	60.0	62.8	65.6	68.4	71.2	72.6	65.9	52.6	39.3	25.9	12.6
100°	93.7	96.0	98.3	100.6	102.9	104.0	95.2	77.7	60.2	42.6	25.1
102.5°	131.4	132.9	134.5	136.0	137.5	138.3	139.1	140.6	142.1	143.7	145.2
105°	172.0	172.8	173.6	174.3	175.1	175.5	175.8	176.4	177.1	177.7	178.3
107.5°	209.2	209.6	210.0	210.3	210.7	210.9	211.3	212.2	213.1	214.0	214.9
110°	246.9	247.3	247.7	248.0	248.4	248.6	249.0	249.7	250.5	251.2	252.0



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	283.5	284.3	285.0	285.8	286.5	286.9	287.0	287.3	287.5	287.8	288.0
115°	321.2	321.6	322.0	322.3	322.7	322.9	322.8	322.7	322.6	322.4	322.3
117.5°	354.9	355.4	355.9	356.4	356.9	357.2	357.4	357.8	358.1	358.5	358.9
120°	389.2	389.7	390.2	390.7	391.2	391.5	391.4	391.3	391.2	391.0	390.9
122.5°	421.2	421.4	421.7	421.9	422.2	422.3	422.4	422.7	423.0	423.2	423.5
125°	451.5	452.0	452.5	453.0	453.5	453.8	453.7	453.4	453.1	452.9	452.6
127.5°	480.6	480.7	480.9	481.0	481.1	481.2	481.5	482.2	482.8	483.5	484.1
130°	508.6	508.7	508.9	509.0	509.1	509.2	509.4	509.8	510.1	510.5	510.9
132.5°	534.4	534.6	534.9	535.1	535.4	535.5	535.8	536.3	536.8	537.3	537.8
135°	560.1	560.0	559.8	559.7	559.6	559.5	559.8	560.3	560.8	561.3	561.8
137.5°	582.9	582.9	582.9	582.9	582.9	582.9	583.2	583.9	584.5	585.2	585.8
140°	605.2	605.5	605.7	606.0	606.3	606.4	606.5	606.8	607.0	607.3	607.5
142.5°	625.2	625.7	626.2	626.7	627.2	627.5	627.6	627.7	627.8	628.0	628.1
145°	645.8	646.2	646.6	646.9	647.3	647.5	647.5	647.5	647.5	647.5	647.5
147.5°	661.8	662.6	663.3	664.1	664.8	665.2	665.1	665.0	664.9	664.8	664.7
150°	679.5	680.0	680.5	681.0	681.5	681.8	681.7	681.6	681.5	681.3	681.2
152.5°	694.4	694.8	695.2	695.5	695.9	696.1	696.0	695.7	695.5	695.2	695.0
155°	708.1	708.2	708.4	708.5	708.6	708.7	708.5	708.1	707.8	707.4	707.0
157.5°	720.1	720.1	720.1	720.1	720.1	720.1	719.8	719.3	718.8	718.3	717.8
160°	730.4	730.0	729.6	729.3	728.9	728.7	728.6	728.5	728.4	728.2	728.1
162.5°	739.5	739.0	738.5	738.0	737.5	737.2	737.1	737.0	736.9	736.8	736.7
165°	747.0	746.4	745.7	745.1	744.4	744.1	744.1	744.1	744.1	744.1	744.1
167.5°	753.3	752.7	752.0	751.4	750.7	750.4	750.3	750.2	750.1	749.9	749.8
170°	758.4	757.6	756.9	756.1	755.4	755.0	755.1	755.2	755.3	755.4	755.5
172.5°	761.8	761.0	760.3	759.5	758.8	758.4	758.5	758.6	758.7	758.9	759.0
175°	764.1	763.3	762.6	761.8	761.1	760.7	760.8	760.9	761.0	761.2	761.3
177.5°	765.8	764.9	764.0	763.1	762.2	761.8	761.9	762.2	762.5	762.7	763.0
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	581.2	589.5	593.1	594.1	599.1	595.9	597.3	596.8	600.5	601.0	601.0
5°	623.6	633.2	636.5	641.1	648.0	649.8	648.4	651.2	656.3	652.6	658.1
7.5°	668.3	678.9	686.2	696.4	698.7	704.7	708.4	711.6	712.5	713.0	713.9
10°	709.7	723.1	733.3	750.3	754.0	757.2	773.3	766.9	775.2	772.4	773.3
12.5°	743.4	769.7	778.0	806.5	809.3	820.4	819.4	829.6	831.4	835.1	831.4
15°	787.6	818.1	831.4	847.5	856.8	869.7	872.0	885.8	891.3	896.4	891.3
17.5°	828.2	844.3	878.4	891.3	897.3	904.2	921.7	926.8	935.1	931.9	941.1
20°	848.5	871.5	907.5	929.6	938.8	945.3	960.0	967.8	971.1	971.1	972.0
22.5°	866.4	899.6	926.4	951.7	960.0	964.6	973.4	979.4	980.7	981.7	982.6
25°	882.6	912.5	934.2	948.5	951.7	951.7	956.8	953.1	947.1	951.7	954.5
27.5°	882.6	903.8	913.5	918.5	918.5	906.1	898.7	883.5	870.6	866.9	875.2
30°	867.8	877.5	864.1	851.7	842.0	833.7	804.7	781.6	777.0	773.8	786.3
32.5°	833.7	821.3	795.0	759.1	744.8	725.9	703.3	685.8	675.2	671.5	668.7
35°	773.3	741.1	707.0	658.6	648.4	624.5	593.6	580.7	563.2	562.7	568.7
37.5°	707.4	657.7	620.8	574.7	560.4	535.1	506.0	492.7	480.7	471.5	482.5
40°	630.5	587.2	530.9	493.1	472.9	459.5	435.1	420.3	414.8	410.2	417.1
42.5°	558.6	511.1	467.3	428.6	412.0	396.8	380.7	366.4	362.2	361.8	366.9
45°	487.1	440.6	400.0	366.9	356.3	347.0	331.4	327.2	320.3	315.7	318.0
47.5°	430.0	382.1	348.4	323.1	313.9	306.0	295.9	289.0	283.0	281.1	283.9
50°	373.8	341.5	306.9	285.7	278.8	271.5	263.6	257.2	254.4	252.6	254.4
52.5°	328.6	294.0	270.5	253.5	246.6	241.0	235.5	232.7	229.1	230.0	231.8
55°	288.0	257.6	237.8	225.4	221.2	218.9	212.0	208.8	207.4	206.5	207.4
57.5°	249.8	227.7	212.9	202.3	196.8	195.4	189.9	189.9	188.5	187.1	187.6
60°	219.4	200.5	186.2	177.9	177.0	174.7	171.0	170.5	167.3	168.7	169.1
62.5°	188.5	173.3	163.6	158.5	155.3	154.4	152.1	151.6	150.2	150.7	149.8
65°	164.1	151.6	141.9	137.8	136.4	136.0	134.1	132.7	131.8	132.7	131.8
67.5°	139.6	131.3	124.0	119.8	118.0	117.5	116.1	115.2	115.7	114.3	115.2
70°	116.6	108.3	103.7	101.4	100.5	99.1	99.1	99.1	99.1	98.2	97.7
72.5°	98.2	89.9	86.6	85.3	84.3	83.9	82.5	83.0	82.5	82.0	83.9
75°	77.9	72.8	69.6	68.2	69.1	67.7	66.4	67.3	65.9	66.4	68.2
77.5°	59.0	56.7	54.8	53.9	53.0	52.1	52.1	51.2	51.2	51.2	51.2
80°	42.9	42.4	39.2	38.7	38.7	37.8	37.8	37.8	37.8	37.3	37.8
82.5°	28.6	28.1	27.2	26.7	25.8	26.3	26.3	25.3	25.3	24.9	25.3
85°	16.6	16.6	15.7	15.2	14.7	15.2	14.3	13.8	14.3	13.8	14.3
87.5°	7.8	6.9	7.4	6.9	6.0	6.5	5.5	6.0	5.5	5.1	6.0
90°	13.4	14.1	14.9	15.6	16.0	16.1	16.4	16.6	16.9	17.1	16.9
92.5°	12.8	13.5	14.3	15.0	15.4	15.4	15.4	15.4	15.4	15.4	15.4
95°	13.4	14.1	14.9	15.6	16.0	16.1	16.2	16.3	16.5	16.6	16.5
97.5°	13.2	13.8	14.5	15.1	15.4	15.5	15.6	15.7	15.9	16.0	15.9
100°	22.9	20.8	18.6	16.5	15.4	15.5	15.6	15.7	15.9	16.0	15.9
102.5°	116.6	88.0	59.5	30.9	16.6	16.6	16.6	16.6	16.6	16.6	16.6
105°	179.5	180.6	181.8	182.9	183.5	181.2	176.6	172.1	167.5	162.9	167.5
107.5°	215.5	216.1	216.8	217.4	217.7	218.0	218.5	219.0	219.5	220.0	219.5
110°	252.3	252.5	252.8	253.1	253.2	253.4	253.8	254.1	254.5	254.9	254.5



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	287.9	287.8	287.7	287.6	287.5	287.8	288.3	288.8	289.3	289.8	289.3
115°	322.6	322.8	323.1	323.4	323.5	323.5	323.5	323.5	323.5	323.5	323.5
117.5°	358.8	358.6	358.5	358.4	358.3	358.3	358.3	358.3	358.3	358.3	358.3
120°	391.2	391.4	391.7	392.0	392.1	392.0	391.7	391.4	391.2	390.9	391.2
122.5°	423.6	423.8	423.9	424.0	424.1	424.0	423.7	423.4	423.2	422.9	423.2
125°	453.0	453.4	453.8	454.2	454.4	454.5	454.6	454.7	454.8	454.9	454.8
127.5°	484.0	483.8	483.7	483.6	483.5	483.4	483.3	483.2	483.0	482.9	483.0
130°	511.0	511.2	511.3	511.4	511.5	511.5	511.5	511.5	511.5	511.5	511.5
132.5°	537.9	538.1	538.2	538.3	538.4	538.3	538.2	538.1	537.9	537.8	537.9
135°	562.0	562.3	562.5	562.8	562.9	563.0	563.3	563.6	563.8	564.1	563.8
137.5°	586.0	586.3	586.5	586.8	586.9	586.8	586.7	586.6	586.5	586.4	586.5
140°	607.9	608.3	608.6	609.0	609.2	609.3	609.4	609.5	609.7	609.8	609.7
142.5°	628.3	628.6	628.8	629.1	629.2	629.2	629.2	629.2	629.2	629.2	629.2
145°	647.6	647.8	647.9	648.0	648.1	648.2	648.5	648.7	649.0	649.2	649.0
147.5°	664.8	664.9	665.0	665.1	665.2	665.3	665.4	665.5	665.7	665.8	665.7
150°	681.2	681.2	681.2	681.2	681.2	681.3	681.4	681.5	681.7	681.8	681.7
152.5°	695.2	695.5	695.7	696.0	696.1	696.0	695.9	695.8	695.6	695.5	695.6
155°	707.5	708.0	708.5	709.0	709.2	709.0	708.6	708.3	707.9	707.5	707.9
157.5°	718.4	719.1	719.7	720.4	720.7	720.4	719.7	719.1	718.4	717.8	718.4
160°	728.9	729.6	730.4	731.1	731.5	731.1	730.4	729.6	728.9	728.1	728.9
162.5°	737.5	738.2	739.0	739.7	740.1	739.7	738.8	737.9	737.0	736.1	737.0
165°	745.1	746.1	747.2	748.2	748.7	748.1	747.0	745.8	744.7	743.5	744.7
167.5°	751.0	752.1	753.3	754.4	755.0	754.4	753.1	751.8	750.5	749.2	750.5
170°	756.5	757.5	758.6	759.6	760.1	759.5	758.2	756.9	755.7	754.4	755.7
172.5°	760.0	761.0	762.0	763.0	763.5	762.8	761.4	760.1	758.7	757.3	758.7
175°	762.4	763.6	764.7	765.8	766.4	765.6	764.1	762.6	761.0	759.5	761.0
177.5°	764.0	765.0	766.0	767.0	767.5	766.7	765.2	763.7	762.2	760.7	762.2
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	600.1	598.7	596.8	596.8	594.5	594.5	590.8	584.4	578.9	577.0	577.9
5°	651.2	651.7	648.9	646.6	642.5	639.2	633.2	621.7	618.0	610.7	605.6
7.5°	709.7	707.9	702.8	699.1	698.2	690.8	677.9	664.1	653.1	645.7	635.1
10°	775.7	768.3	760.9	758.6	753.1	740.6	725.9	710.7	695.5	679.3	661.4
12.5°	831.0	816.7	816.2	810.7	800.1	793.2	775.7	754.0	727.7	709.7	689.5
15°	890.4	877.0	866.0	855.8	850.8	830.5	815.7	788.6	757.2	737.9	724.0
17.5°	932.8	926.8	907.9	903.3	896.4	872.9	849.4	822.7	795.5	768.3	730.9
20°	966.9	963.2	950.8	944.3	933.3	914.8	886.3	855.4	824.0	785.3	750.3
22.5°	981.7	977.1	966.9	961.4	954.5	938.8	914.4	879.3	838.3	803.8	766.4
25°	952.6	960.9	958.2	955.9	953.1	943.9	925.4	894.6	854.5	815.3	768.7
27.5°	887.2	901.5	915.3	917.1	921.7	925.4	918.1	895.9	862.3	820.8	769.7
30°	799.2	805.6	833.7	842.0	848.5	872.0	885.8	880.3	854.5	817.1	770.1
32.5°	686.2	703.3	731.9	751.7	769.2	795.5	831.4	845.7	836.5	806.1	759.5
35°	579.3	599.6	632.8	658.1	675.6	713.0	755.4	786.3	797.8	782.6	741.1
37.5°	491.8	516.2	545.7	555.4	575.6	621.7	680.2	723.1	751.2	752.6	720.3
40°	425.8	438.3	461.8	476.5	496.4	535.1	592.2	648.9	691.3	705.6	688.5
42.5°	370.1	379.8	397.3	415.2	433.2	462.7	515.3	568.3	625.4	654.0	653.5
45°	325.8	336.0	348.0	362.7	375.2	407.0	448.4	502.8	552.1	596.4	607.4
47.5°	287.1	295.9	310.6	317.1	325.4	355.3	391.3	442.0	493.1	543.8	556.7
50°	258.6	265.9	276.1	280.2	289.4	311.6	341.0	382.1	438.8	485.3	509.3
52.5°	232.7	238.3	246.1	249.3	255.8	272.4	299.1	331.4	378.4	426.3	460.0
55°	210.6	214.3	219.8	223.5	228.1	242.9	262.7	291.7	332.3	373.8	406.5
57.5°	189.9	192.6	198.2	200.0	203.7	215.2	229.1	253.5	290.8	327.7	359.5
60°	170.5	172.4	175.6	179.7	182.5	190.3	203.2	223.5	253.5	287.1	312.9
62.5°	152.1	154.9	155.8	157.6	159.9	167.3	177.4	192.2	218.5	246.1	273.3
65°	133.2	135.5	137.3	137.8	140.1	145.6	154.9	167.8	184.8	208.8	234.1
67.5°	115.7	117.1	118.0	119.8	122.1	124.9	132.3	141.9	157.6	177.0	197.3
70°	99.5	99.5	100.9	101.4	104.2	107.4	110.6	119.8	133.7	149.3	163.1
72.5°	82.0	84.3	83.9	86.2	85.7	88.0	92.2	98.2	108.3	120.7	134.1
75°	66.8	68.2	68.2	68.2	69.1	71.0	73.3	78.8	86.6	96.8	104.6
77.5°	52.1	53.0	53.0	53.0	53.5	55.3	57.6	61.3	66.8	72.8	77.4
80°	37.3	38.3	38.3	39.2	39.2	39.6	41.9	43.8	46.5	51.2	55.8
82.5°	25.3	25.8	26.7	26.7	26.3	27.2	27.7	29.5	32.3	33.2	36.4
85°	13.8	14.3	14.7	14.7	15.2	16.1	15.7	17.5	17.5	19.4	20.3
87.5°	5.5	6.5	6.5	6.0	6.5	6.5	6.5	7.4	7.8	8.3	7.8
90°	16.6	16.4	16.1	16.0	15.6	14.9	14.1	13.4	12.6	11.6	10.6
92.5°	15.4	15.4	15.4	15.4	15.0	14.3	13.5	12.8	12.0	11.0	10.0
95°	16.3	16.2	16.1	16.0	15.6	14.9	14.1	13.4	12.6	12.5	12.3
97.5°	15.7	15.6	15.5	15.4	15.1	14.5	13.8	13.2	12.6	25.9	39.3
100°	15.7	15.6	15.5	15.4	16.5	18.6	20.8	22.9	25.1	42.6	60.2
102.5°	16.6	16.6	16.6	16.6	30.9	59.5	88.0	116.6	145.2	143.7	142.1
105°	172.1	176.6	181.2	183.5	182.9	181.8	180.6	179.5	178.3	177.7	177.1
107.5°	219.0	218.5	218.0	217.7	217.4	216.8	216.1	215.5	214.9	214.0	213.1
110°	254.1	253.8	253.4	253.2	253.1	252.8	252.5	252.3	252.0	251.2	250.5



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	288.8	288.3	287.8	287.5	287.6	287.7	287.8	287.9	288.0	287.8	287.5
115°	323.5	323.5	323.5	323.5	323.4	323.1	322.8	322.6	322.3	322.4	322.6
117.5°	358.3	358.3	358.3	358.3	358.4	358.5	358.6	358.8	358.9	358.5	358.1
120°	391.4	391.7	392.0	392.1	392.0	391.7	391.4	391.2	390.9	391.0	391.2
122.5°	423.4	423.7	424.0	424.1	424.0	423.9	423.8	423.6	423.5	423.2	423.0
125°	454.7	454.6	454.5	454.4	454.2	453.8	453.4	453.0	452.6	452.9	453.1
127.5°	483.2	483.3	483.4	483.5	483.6	483.7	483.8	484.0	484.1	483.5	482.8
130°	511.5	511.5	511.5	511.5	511.4	511.3	511.2	511.0	510.9	510.5	510.1
132.5°	538.1	538.2	538.3	538.4	538.3	538.2	538.1	537.9	537.8	537.3	536.8
135°	563.6	563.3	563.0	562.9	562.8	562.5	562.3	562.0	561.8	561.3	560.8
137.5°	586.6	586.7	586.8	586.9	586.8	586.5	586.3	586.0	585.8	585.2	584.5
140°	609.5	609.4	609.3	609.2	609.0	608.6	608.3	607.9	607.5	607.3	607.0
142.5°	629.2	629.2	629.2	629.2	629.1	628.8	628.6	628.3	628.1	628.0	627.8
145°	648.7	648.5	648.2	648.1	648.0	647.9	647.8	647.6	647.5	647.5	647.5
147.5°	665.5	665.4	665.3	665.2	665.1	665.0	664.9	664.8	664.7	664.8	664.9
150°	681.5	681.4	681.3	681.2	681.2	681.2	681.2	681.2	681.2	681.3	681.5
152.5°	695.8	695.9	696.0	696.1	696.0	695.7	695.5	695.2	695.0	695.2	695.5
155°	708.3	708.6	709.0	709.2	709.0	708.5	708.0	707.5	707.0	707.4	707.8
157.5°	719.1	719.7	720.4	720.7	720.4	719.7	719.1	718.4	717.8	718.3	718.8
160°	729.6	730.4	731.1	731.5	731.1	730.4	729.6	728.9	728.1	728.2	728.4
162.5°	737.9	738.8	739.7	740.1	739.7	739.0	738.2	737.5	736.7	736.8	736.9
165°	745.8	747.0	748.1	748.7	748.2	747.2	746.1	745.1	744.1	744.1	744.1
167.5°	751.8	753.1	754.4	755.0	754.4	753.3	752.1	751.0	749.8	749.9	750.1
170°	756.9	758.2	759.5	760.1	759.6	758.6	757.5	756.5	755.5	755.4	755.3
172.5°	760.1	761.4	762.8	763.5	763.0	762.0	761.0	760.0	759.0	758.9	758.7
175°	762.6	764.1	765.6	766.4	765.8	764.7	763.6	762.4	761.3	761.2	761.0
177.5°	763.7	765.2	766.7	767.5	767.0	766.0	765.0	764.0	763.0	762.7	762.5
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	573.8	571.9	570.6	570.6	566.4	562.3	560.0	559.0	558.1	554.4	549.4
5°	597.3	591.3	587.2	583.0	576.1	568.7	561.3	557.2	551.2	542.9	536.9
7.5°	623.6	609.3	604.7	599.6	585.8	573.3	563.2	554.4	544.8	534.2	523.6
10°	645.7	630.5	620.3	611.6	593.6	577.0	561.8	548.9	536.5	522.6	509.7
12.5°	666.9	645.2	634.6	621.7	602.8	578.9	559.0	542.9	524.5	510.2	494.5
15°	696.4	660.0	642.5	634.2	608.8	580.7	556.7	532.8	517.6	495.9	482.1
17.5°	701.0	671.5	660.0	638.8	608.4	576.6	548.9	524.9	501.9	482.5	464.6
20°	717.1	678.4	660.0	646.6	606.5	574.2	543.8	513.0	490.8	470.1	449.8
22.5°	727.3	683.5	664.1	642.9	604.7	566.0	530.0	503.3	476.1	454.9	438.8
25°	724.5	680.7	659.0	639.2	592.7	554.0	521.7	487.6	462.3	439.2	418.0
27.5°	723.1	673.8	650.8	628.6	584.8	544.3	503.7	476.1	448.0	421.2	405.6
30°	719.4	665.0	638.3	614.3	568.7	526.3	491.8	459.5	431.4	407.0	386.2
32.5°	707.0	650.3	624.5	598.7	551.2	508.8	473.8	443.8	415.7	390.4	370.5
35°	690.4	632.8	604.7	577.5	530.0	487.1	454.9	423.5	397.3	372.8	354.0
37.5°	673.8	612.5	586.2	554.9	511.1	466.4	433.2	405.1	380.7	355.3	334.6
40°	649.8	588.5	559.5	532.8	481.6	439.7	409.3	383.9	359.9	336.0	318.5
42.5°	617.1	562.3	532.3	502.8	454.9	413.4	383.9	361.3	338.7	318.9	299.6
45°	583.9	530.5	503.7	477.5	425.4	386.2	359.0	338.3	319.4	297.7	282.1
47.5°	543.8	498.7	471.9	446.1	396.8	357.6	332.8	313.4	295.9	277.9	263.2
50°	502.8	463.6	439.2	412.5	365.5	330.0	305.6	289.4	275.1	258.1	246.1
52.5°	458.6	424.5	403.7	377.9	336.4	303.7	278.8	262.7	250.7	238.3	227.7
55°	411.6	386.7	364.6	343.8	304.6	275.1	253.0	238.7	230.4	218.9	209.7
57.5°	369.2	345.2	331.8	308.3	274.2	245.2	227.7	215.7	206.0	199.1	191.7
60°	324.9	305.6	290.8	273.8	243.8	219.4	200.9	194.0	183.9	178.8	175.6
62.5°	282.5	268.7	254.9	242.0	215.2	192.2	178.4	169.6	163.6	158.5	155.8
65°	242.4	229.5	219.8	208.3	186.2	167.8	154.9	147.9	141.9	140.6	137.3
67.5°	203.2	197.7	187.1	177.9	159.0	144.7	135.0	126.3	123.1	121.7	118.9
70°	170.1	163.6	155.3	147.5	133.2	120.7	112.0	108.8	104.2	103.7	100.5
72.5°	140.1	132.3	126.3	120.3	109.7	98.6	94.0	89.4	87.1	85.3	83.9
75°	111.1	105.5	101.4	96.3	87.1	79.7	73.3	71.4	70.1	69.6	68.7
77.5°	83.0	79.3	77.4	72.4	65.9	59.5	56.7	53.9	53.9	53.0	53.5
80°	59.0	56.7	54.4	51.6	46.1	43.3	41.0	39.2	38.3	37.8	38.3
82.5°	37.3	35.9	35.5	33.6	30.0	28.6	26.7	25.3	25.3	25.3	25.3
85°	20.7	20.7	20.7	18.0	16.6	15.2	14.3	13.8	13.8	13.8	14.3
87.5°	8.8	8.8	7.4	7.4	6.9	6.0	5.5	5.5	6.0	6.0	6.5
90°	9.5	8.5	8.0	7.3	5.9	4.5	3.1	1.7	3.1	4.5	5.9
92.5°	8.9	7.9	7.4	7.5	7.8	8.1	8.3	8.6	8.3	8.1	7.8
95°	12.2	12.1	12.0	14.2	18.5	22.8	27.1	31.4	27.1	22.8	18.5
97.5°	52.6	65.9	72.6	71.2	68.4	65.6	62.8	60.0	62.8	65.6	68.4
100°	77.7	95.2	104.0	102.9	100.6	98.3	96.0	93.7	96.0	98.3	100.6
102.5°	140.6	139.1	138.3	137.5	136.0	134.5	132.9	131.4	132.9	134.5	136.0
105°	176.4	175.8	175.5	175.1	174.3	173.6	172.8	172.0	172.8	173.6	174.3
107.5°	212.2	211.3	210.9	210.7	210.3	210.0	209.6	209.2	209.6	210.0	210.3
110°	249.7	249.0	248.6	248.4	248.0	247.7	247.3	246.9	247.3	247.7	248.0

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
112.5°	287.3	287.0	286.9	286.5	285.8	285.0	284.3	283.5	284.3	285.0	285.8
115°	322.7	322.8	322.9	322.7	322.3	322.0	321.6	321.2	321.6	322.0	322.3
117.5°	357.8	357.4	357.2	356.9	356.4	355.9	355.4	354.9	355.4	355.9	356.4
120°	391.3	391.4	391.5	391.2	390.7	390.2	389.7	389.2	389.7	390.2	390.7
122.5°	422.7	422.4	422.3	422.2	421.9	421.7	421.4	421.2	421.4	421.7	421.9
125°	453.4	453.7	453.8	453.5	453.0	452.5	452.0	451.5	452.0	452.5	453.0
127.5°	482.2	481.5	481.2	481.1	481.0	480.9	480.7	480.6	480.7	480.9	481.0
130°	509.8	509.4	509.2	509.1	509.0	508.9	508.7	508.6	508.7	508.9	509.0
132.5°	536.3	535.8	535.5	535.4	535.1	534.9	534.6	534.4	534.6	534.9	535.1
135°	560.3	559.8	559.5	559.6	559.7	559.8	560.0	560.1	560.0	559.8	559.7
137.5°	583.9	583.2	582.9	582.9	582.9	582.9	582.9	582.9	582.9	582.9	582.9
140°	606.8	606.5	606.4	606.3	606.0	605.7	605.5	605.2	605.5	605.7	606.0
142.5°	627.7	627.6	627.5	627.2	626.7	626.2	625.7	625.2	625.7	626.2	626.7
145°	647.5	647.5	647.5	647.3	646.9	646.6	646.2	645.8	646.2	646.6	646.9
147.5°	665.0	665.1	665.2	664.8	664.1	663.3	662.6	661.8	662.6	663.3	664.1
150°	681.6	681.7	681.8	681.5	681.0	680.5	680.0	679.5	680.0	680.5	681.0
152.5°	695.7	696.0	696.1	695.9	695.5	695.2	694.8	694.4	694.8	695.2	695.5
155°	708.1	708.5	708.7	708.6	708.5	708.4	708.2	708.1	708.2	708.4	708.5
157.5°	719.3	719.8	720.1	720.1	720.1	720.1	720.1	720.1	720.1	720.1	720.1
160°	728.5	728.6	728.7	728.9	729.3	729.6	730.0	730.4	730.0	729.6	729.3
162.5°	737.0	737.1	737.2	737.5	738.0	738.5	739.0	739.5	739.0	738.5	738.0
165°	744.1	744.1	744.1	744.4	745.1	745.7	746.4	747.0	746.4	745.7	745.1
167.5°	750.2	750.3	750.4	750.7	751.4	752.0	752.7	753.3	752.7	752.0	751.4
170°	755.2	755.1	755.0	755.4	756.1	756.9	757.6	758.4	757.6	756.9	756.1
172.5°	758.6	758.5	758.4	758.8	759.5	760.3	761.0	761.8	761.0	760.3	759.5
175°	760.9	760.8	760.7	761.1	761.8	762.6	763.3	764.1	763.3	762.6	761.8
177.5°	762.2	761.9	761.8	762.2	763.1	764.0	764.9	765.8	764.9	764.0	763.1
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	548.0	546.1	547.1	542.4	538.3	532.3	527.2	526.3	525.4	528.2	526.3
5°	532.3	530.0	527.7	522.2	513.9	508.8	501.4	501.0	498.2	494.1	495.0
7.5°	515.3	513.9	510.6	501.9	494.5	485.8	479.8	474.7	472.4	468.7	467.3
10°	501.4	496.4	493.6	483.9	475.2	465.9	458.1	454.4	450.3	447.0	444.7
12.5°	482.5	481.2	473.3	465.5	458.1	447.5	441.5	430.9	425.4	428.2	427.2
15°	470.1	463.6	461.8	450.7	438.3	431.4	420.3	413.4	411.1	407.0	401.9
17.5°	453.5	449.4	442.9	432.8	418.5	408.8	401.0	394.5	391.7	386.2	382.1
20°	437.8	430.9	425.8	416.6	402.8	390.4	380.7	376.5	369.6	365.0	362.7
22.5°	423.5	418.5	411.1	397.3	385.3	373.3	361.8	355.8	349.3	346.6	342.9
25°	406.0	397.7	392.7	377.5	364.6	354.9	344.3	336.4	332.8	328.1	327.2
27.5°	389.0	381.1	375.2	361.8	346.1	333.7	327.2	321.7	315.2	315.2	312.9
30°	371.9	366.4	357.2	344.3	329.5	317.5	310.2	305.1	302.8	301.0	300.5
32.5°	354.9	347.5	342.0	324.5	313.4	302.3	296.8	292.7	289.9	289.4	289.9
35°	337.4	329.1	323.5	307.9	296.8	286.7	284.4	280.7	279.3	278.8	281.1
37.5°	318.9	312.5	305.6	292.7	280.2	274.2	269.6	268.2	267.8	270.5	271.5
40°	301.9	296.3	289.9	276.1	266.8	260.4	258.1	256.7	258.6	261.3	262.7
42.5°	285.7	277.9	272.8	260.4	252.1	248.4	245.6	245.6	247.5	250.7	253.0
45°	268.7	262.7	257.6	246.6	239.2	235.0	234.6	235.0	237.4	239.7	242.4
47.5°	252.1	246.1	240.6	231.4	224.9	222.6	222.1	222.6	226.3	229.5	232.7
50°	236.9	230.4	225.4	216.6	211.5	208.8	209.2	211.5	214.3	218.9	223.1
52.5°	218.9	214.3	209.7	201.9	197.3	195.4	196.8	198.6	203.7	206.9	212.0
55°	201.4	197.3	193.6	187.6	183.9	182.5	183.4	186.2	190.3	195.9	201.9
57.5°	185.3	180.7	177.0	172.8	168.7	169.1	169.6	173.3	178.4	183.4	190.3
60°	167.3	164.5	161.3	156.2	154.4	154.4	155.8	159.9	164.5	172.8	178.8
62.5°	151.2	147.5	145.2	141.9	139.2	139.6	142.9	146.6	152.1	159.0	166.8
65°	134.6	130.4	128.6	125.8	124.9	125.4	127.7	133.2	139.2	145.2	152.5
67.5°	116.1	114.8	112.9	110.1	111.1	111.5	113.8	118.4	124.9	130.9	139.2
70°	100.5	97.7	97.2	94.9	94.9	96.3	100.9	104.2	110.1	116.6	125.4
72.5°	83.9	81.6	81.6	79.7	81.1	82.5	84.8	89.4	94.9	101.4	108.8
75°	66.8	65.9	66.8	65.9	65.9	68.2	71.0	74.7	80.7	87.6	93.6
77.5°	51.6	51.6	51.2	52.5	52.5	53.9	57.6	61.3	65.9	71.4	77.9
80°	37.8	37.8	37.8	39.2	40.6	40.6	42.9	47.5	51.6	55.3	61.3
82.5°	25.8	25.8	25.8	26.7	28.6	28.6	31.3	34.1	38.7	41.9	44.7
85°	15.7	15.7	15.2	16.1	16.6	18.0	20.3	22.1	24.4	27.2	30.0
87.5°	6.9	6.9	7.4	7.8	8.3	9.2	10.1	11.1	13.4	14.3	15.7
90°	7.3	8.0	8.5	9.5	10.6	11.6	12.6	13.4	14.1	14.9	15.6
92.5°	7.5	7.4	7.9	8.9	10.0	11.0	12.0	12.8	13.5	14.3	15.0
95°	14.2	12.0	12.1	12.2	12.3	12.5	12.6	13.4	14.1	14.9	15.6
97.5°	71.2	72.6	65.9	52.6	39.3	25.9	12.6	13.2	13.8	14.5	15.1
100°	102.9	104.0	95.2	77.7	60.2	42.6	25.1	22.9	20.8	18.6	16.5
102.5°	137.5	138.3	139.1	140.6	142.1	143.7	145.2	116.6	88.0	59.5	30.9
105°	175.1	175.5	175.8	176.4	177.1	177.7	178.3	179.5	180.6	181.8	182.9
107.5°	210.7	210.9	211.3	212.2	213.1	214.0	214.9	215.5	216.1	216.8	217.4
110°	248.4	248.6	249.0	249.7	250.5	251.2	252.0	252.3	252.5	252.8	253.1



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
112.5°	286.5	286.9	287.0	287.3	287.5	287.8	288.0	287.9	287.8	287.7	287.6
115°	322.7	322.9	322.8	322.7	322.6	322.4	322.3	322.6	322.8	323.1	323.4
117.5°	356.9	357.2	357.4	357.8	358.1	358.5	358.9	358.8	358.6	358.5	358.4
120°	391.2	391.5	391.4	391.3	391.2	391.0	390.9	391.2	391.4	391.7	392.0
122.5°	422.2	422.3	422.4	422.7	423.0	423.2	423.5	423.6	423.8	423.9	424.0
125°	453.5	453.8	453.7	453.4	453.1	452.9	452.6	453.0	453.4	453.8	454.2
127.5°	481.1	481.2	481.5	482.2	482.8	483.5	484.1	484.0	483.8	483.7	483.6
130°	509.1	509.2	509.4	509.8	510.1	510.5	510.9	511.0	511.2	511.3	511.4
132.5°	535.4	535.5	535.8	536.3	536.8	537.3	537.8	537.9	538.1	538.2	538.3
135°	559.6	559.5	559.8	560.3	560.8	561.3	561.8	562.0	562.3	562.5	562.8
137.5°	582.9	582.9	583.2	583.9	584.5	585.2	585.8	586.0	586.3	586.5	586.8
140°	606.3	606.4	606.5	606.8	607.0	607.3	607.5	607.9	608.3	608.6	609.0
142.5°	627.2	627.5	627.6	627.7	627.8	628.0	628.1	628.3	628.6	628.8	629.1
145°	647.3	647.5	647.5	647.5	647.5	647.5	647.5	647.6	647.8	647.9	648.0
147.5°	664.8	665.2	665.1	665.0	664.9	664.8	664.7	664.8	664.9	665.0	665.1
150°	681.5	681.8	681.7	681.6	681.5	681.3	681.2	681.2	681.2	681.2	681.2
152.5°	695.9	696.1	696.0	695.7	695.5	695.2	695.0	695.2	695.5	695.7	696.0
155°	708.6	708.7	708.5	708.1	707.8	707.4	707.0	707.5	708.0	708.5	709.0
157.5°	720.1	720.1	719.8	719.3	718.8	718.3	717.8	718.4	719.1	719.7	720.4
160°	728.9	728.7	728.6	728.5	728.4	728.2	728.1	728.9	729.6	730.4	731.1
162.5°	737.5	737.2	737.1	737.0	736.9	736.8	736.7	737.5	738.2	739.0	739.7
165°	744.4	744.1	744.1	744.1	744.1	744.1	744.1	745.1	746.1	747.2	748.2
167.5°	750.7	750.4	750.3	750.2	750.1	749.9	749.8	751.0	752.1	753.3	754.4
170°	755.4	755.0	755.1	755.2	755.3	755.4	755.5	756.5	757.5	758.6	759.6
172.5°	758.8	758.4	758.5	758.6	758.7	758.9	759.0	760.0	761.0	762.0	763.0
175°	761.1	760.7	760.8	760.9	761.0	761.2	761.3	762.4	763.6	764.7	765.8
177.5°	762.2	761.8	761.9	762.2	762.5	762.7	763.0	764.0	765.0	766.0	767.0
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	524.9	524.5	522.2	523.1	520.3	521.2	522.6	523.1	524.9	523.6	523.1
5°	492.7	491.8	490.4	489.0	488.5	490.4	487.1	488.1	489.0	490.4	492.2
7.5°	466.4	465.9	464.6	462.3	461.3	460.4	460.9	464.1	463.6	463.2	466.4
10°	442.4	442.9	440.1	439.7	436.9	436.4	436.9	437.8	439.2	441.1	441.5
12.5°	417.6	423.5	418.5	416.6	412.5	414.8	415.7	411.6	413.9	415.2	422.2
15°	401.9	399.1	395.9	395.9	394.0	393.1	390.8	394.0	395.9	398.7	397.7
17.5°	380.2	375.6	373.8	371.9	372.4	374.2	369.2	376.5	376.5	377.9	375.6
20°	361.3	357.6	355.3	354.4	353.0	352.1	351.6	353.5	356.3	357.2	359.5
22.5°	341.5	341.5	337.8	336.4	335.5	334.1	336.4	335.1	336.9	338.7	342.4
25°	324.9	324.9	323.5	321.7	320.3	319.4	320.8	320.3	321.7	324.0	324.9
27.5°	311.6	310.2	309.7	309.2	308.8	309.2	308.8	310.2	311.6	312.0	311.1
30°	300.0	298.6	299.1	299.1	299.6	299.1	298.6	300.0	300.5	299.6	300.0
32.5°	289.4	289.4	290.4	290.8	290.8	291.3	291.7	290.8	291.3	289.9	290.4
35°	280.7	281.6	282.5	283.0	283.4	283.0	283.9	283.4	282.5	281.6	281.1
37.5°	271.9	272.8	274.7	275.1	276.5	277.0	276.1	276.1	275.6	273.8	272.8
40°	262.7	263.6	265.9	267.3	268.2	269.6	268.7	268.7	266.8	265.0	263.6
42.5°	253.9	255.8	258.1	259.5	261.3	261.3	261.3	260.4	258.1	256.2	254.9
45°	245.2	245.6	248.9	251.2	253.0	253.0	253.0	251.6	250.3	246.6	244.7
47.5°	235.5	236.9	240.6	242.9	244.7	245.2	245.2	243.8	241.0	237.8	235.5
50°	224.9	227.2	231.4	234.6	236.9	237.8	236.4	235.5	232.3	228.6	225.8
52.5°	214.8	217.5	222.6	225.4	228.6	229.1	228.6	227.2	223.5	218.5	216.1
55°	204.6	206.9	212.5	217.1	219.8	220.8	219.8	217.5	212.9	207.9	205.5
57.5°	193.6	196.8	202.8	207.4	210.6	211.1	210.2	207.9	204.2	197.7	194.5
60°	182.0	186.2	192.2	196.8	200.9	201.4	200.5	197.3	192.6	186.2	183.4
62.5°	170.5	173.7	180.7	185.7	189.0	191.3	189.4	186.2	181.6	175.1	171.0
65°	157.2	161.8	167.8	172.4	176.1	176.5	175.6	172.8	167.8	160.8	157.6
67.5°	144.3	147.5	153.5	159.5	160.8	162.2	160.8	158.1	153.9	147.9	143.3
70°	128.6	131.3	138.7	142.9	144.7	146.1	145.2	142.4	138.7	133.2	129.5
72.5°	112.9	115.2	122.1	125.4	129.0	128.6	128.1	126.3	121.2	117.5	115.2
75°	96.3	99.1	103.7	107.8	109.2	109.2	109.2	107.8	104.6	98.6	96.3
77.5°	81.1	82.5	86.2	88.5	89.9	90.3	89.9	87.6	85.7	81.6	80.2
80°	62.2	65.9	68.7	69.1	71.0	71.0	71.0	70.1	68.2	64.1	63.6
82.5°	47.0	47.9	50.7	52.1	53.0	52.5	52.5	50.7	50.2	47.9	47.0
85°	31.8	33.2	32.7	34.6	35.0	34.1	34.1	35.0	32.7	33.2	31.8
87.5°	17.5	17.5	18.4	18.0	19.8	19.8	18.9	19.4	18.4	18.0	17.5
90°	16.0	16.1	16.4	16.6	16.9	17.1	16.9	16.6	16.4	16.1	16.0
92.5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
95°	16.0	16.1	16.2	16.3	16.5	16.6	16.5	16.3	16.2	16.1	16.0
97.5°	15.4	15.5	15.6	15.7	15.9	16.0	15.9	15.7	15.6	15.5	15.4
100°	15.4	15.5	15.6	15.7	15.9	16.0	15.9	15.7	15.6	15.5	15.4
102.5°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
105°	183.5	181.2	176.6	172.1	167.5	162.9	167.5	172.1	176.6	181.2	183.5
107.5°	217.7	218.0	218.5	219.0	219.5	220.0	219.5	219.0	218.5	218.0	217.7
110°	253.2	253.4	253.8	254.1	254.5	254.9	254.5	254.1	253.8	253.4	253.2

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
112.5°	287.5	287.8	288.3	288.8	289.3	289.8	289.3	288.8	288.3	287.8	287.5
115°	323.5	323.5	323.5	323.5	323.5	323.5	323.5	323.5	323.5	323.5	323.5
117.5°	358.3	358.3	358.3	358.3	358.3	358.3	358.3	358.3	358.3	358.3	358.3
120°	392.1	392.0	391.7	391.4	391.2	390.9	391.2	391.4	391.7	392.0	392.1
122.5°	424.1	424.0	423.7	423.4	423.2	422.9	423.2	423.4	423.7	424.0	424.1
125°	454.4	454.5	454.6	454.7	454.8	454.9	454.8	454.7	454.6	454.5	454.4
127.5°	483.5	483.4	483.3	483.2	483.0	482.9	483.0	483.2	483.3	483.4	483.5
130°	511.5	511.5	511.5	511.5	511.5	511.5	511.5	511.5	511.5	511.5	511.5
132.5°	538.4	538.3	538.2	538.1	537.9	537.8	537.9	538.1	538.2	538.3	538.4
135°	562.9	563.0	563.3	563.6	563.8	564.1	563.8	563.6	563.3	563.0	562.9
137.5°	586.9	586.8	586.7	586.6	586.5	586.4	586.5	586.6	586.7	586.8	586.9
140°	609.2	609.3	609.4	609.5	609.7	609.8	609.7	609.5	609.4	609.3	609.2
142.5°	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2
145°	648.1	648.2	648.5	648.7	649.0	649.2	649.0	648.7	648.5	648.2	648.1
147.5°	665.2	665.3	665.4	665.5	665.7	665.8	665.7	665.5	665.4	665.3	665.2
150°	681.2	681.3	681.4	681.5	681.7	681.8	681.7	681.5	681.4	681.3	681.2
152.5°	696.1	696.0	695.9	695.8	695.6	695.5	695.6	695.8	695.9	696.0	696.1
155°	709.2	709.0	708.6	708.3	707.9	707.5	707.9	708.3	708.6	709.0	709.2
157.5°	720.7	720.4	719.7	719.1	718.4	717.8	718.4	719.1	719.7	720.4	720.7
160°	731.5	731.1	730.4	729.6	728.9	728.1	728.9	729.6	730.4	731.1	731.5
162.5°	740.1	739.7	738.8	737.9	737.0	736.1	737.0	737.9	738.8	739.7	740.1
165°	748.7	748.1	747.0	745.8	744.7	743.5	744.7	745.8	747.0	748.1	748.7
167.5°	755.0	754.4	753.1	751.8	750.5	749.2	750.5	751.8	753.1	754.4	755.0
170°	760.1	759.5	758.2	756.9	755.7	754.4	755.7	756.9	758.2	759.5	760.1
172.5°	763.5	762.8	761.4	760.1	758.7	757.3	758.7	760.1	761.4	762.8	763.5
175°	766.4	765.6	764.1	762.6	761.0	759.5	761.0	762.6	764.1	765.6	766.4
177.5°	767.5	766.7	765.2	763.7	762.2	760.7	762.2	763.7	765.2	766.7	767.5
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3	556.3
2.5°	523.1	525.9	523.1	524.9	525.9	528.2	529.1	533.2	534.6	537.8	537.8
5°	491.8	493.1	493.6	495.4	497.3	501.9	505.1	511.1	518.0	518.9	523.1
7.5°	466.4	468.7	472.4	471.0	474.2	481.2	485.3	492.7	499.6	503.3	508.3
10°	443.8	446.6	448.0	449.4	455.3	461.3	467.8	472.9	482.1	487.6	491.8
12.5°	425.4	423.1	425.8	430.9	437.8	441.5	450.3	458.1	465.0	471.0	474.7
15°	401.4	403.3	406.0	414.8	416.6	425.8	429.1	437.8	450.7	456.3	460.9
17.5°	378.4	384.4	389.9	393.1	398.7	406.0	415.2	424.9	433.2	439.7	445.2
20°	359.9	365.9	369.2	371.5	377.0	387.1	395.9	407.9	418.5	423.5	430.9
22.5°	345.2	345.2	349.8	356.7	359.9	369.6	377.0	389.9	401.4	407.9	414.8
25°	326.8	329.5	333.2	339.2	343.8	351.6	362.2	373.3	385.8	391.3	400.0
27.5°	311.6	314.8	319.8	321.2	325.8	332.8	343.8	355.8	368.7	374.7	382.1
30°	300.0	301.9	303.7	306.5	310.6	316.6	325.8	336.4	352.1	356.7	365.9
32.5°	289.9	290.8	291.7	294.0	296.3	302.3	309.7	321.2	334.1	341.0	349.3
35°	280.7	279.8	280.2	281.6	283.9	286.2	294.0	303.7	315.7	324.0	330.4
37.5°	271.9	270.1	269.6	269.6	270.5	273.3	279.3	287.6	300.5	307.4	313.9
40°	262.2	260.4	259.5	259.0	258.6	260.4	265.0	273.3	283.4	289.9	297.3
42.5°	253.0	251.2	248.9	248.4	247.5	248.4	251.6	259.5	268.2	274.7	280.7
45°	243.8	240.6	237.8	236.0	236.4	235.0	237.4	243.3	253.5	257.6	263.6
47.5°	233.7	230.0	226.3	224.4	222.6	223.5	224.4	229.5	238.3	242.4	248.4
50°	224.0	218.9	214.8	212.5	211.1	210.2	211.1	216.1	222.6	226.3	231.4
52.5°	212.9	207.9	203.7	200.0	198.2	196.8	197.3	201.9	207.9	211.5	216.6
55°	202.8	196.3	190.8	186.2	184.8	184.3	183.9	187.1	192.2	195.9	200.0
57.5°	191.3	184.8	178.8	173.3	170.5	170.1	170.1	171.0	177.4	180.2	182.5
60°	179.7	172.8	166.4	161.3	157.2	155.8	155.3	157.2	160.4	163.1	166.4
62.5°	166.8	159.9	152.1	147.5	143.3	139.6	141.0	141.5	146.1	147.5	150.2
65°	154.4	146.6	140.1	132.7	128.1	125.8	124.9	125.8	129.5	130.0	131.8
67.5°	140.1	132.7	124.9	119.8	115.7	111.5	110.6	110.6	112.5	113.8	116.1
70°	126.3	118.9	110.1	104.6	100.5	96.8	95.4	94.9	96.3	97.2	99.5
72.5°	110.1	102.8	96.3	90.3	85.3	82.5	81.1	80.2	81.6	82.5	83.0
75°	93.1	87.1	80.7	74.7	71.4	68.7	66.8	65.4	66.4	66.4	66.4
77.5°	77.0	71.0	65.9	61.8	57.6	54.4	53.0	51.6	52.1	52.1	53.0
80°	59.9	55.8	51.6	47.9	44.2	41.5	40.6	39.2	38.3	37.8	37.8
82.5°	44.2	41.0	37.3	34.1	32.3	29.5	28.6	26.7	26.7	26.3	26.3
85°	29.5	27.7	24.0	21.7	20.3	18.9	18.0	17.1	15.7	15.7	15.2
87.5°	15.7	14.7	13.8	11.1	11.1	9.7	9.2	8.8	7.4	7.8	7.8
90°	15.6	14.9	14.1	13.4	12.6	11.6	10.6	9.5	8.5	8.0	7.3
92.5°	15.0	14.3	13.5	12.8	12.0	11.0	10.0	8.9	7.9	7.4	7.5
95°	15.6	14.9	14.1	13.4	12.6	12.5	12.3	12.2	12.1	12.0	14.2
97.5°	15.1	14.5	13.8	13.2	12.6	25.9	39.3	52.6	65.9	72.6	71.2
100°	16.5	18.6	20.8	22.9	25.1	42.6	60.2	77.7	95.2	104.0	102.9
102.5°	30.9	59.5	88.0	116.6	145.2	143.7	142.1	140.6	139.1	138.3	137.5
105°	182.9	181.8	180.6	179.5	178.3	177.7	177.1	176.4	175.8	175.5	175.1
107.5°	217.4	216.8	216.1	215.5	214.9	214.0	213.1	212.2	211.3	210.9	210.7
110°	253.1	252.8	252.5	252.3	252.0	251.2	250.5	249.7	249.0	248.6	248.4

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
112.5°	287.6	287.7	287.8	287.9	288.0	287.8	287.5	287.3	287.0	286.9	286.5
115°	323.4	323.1	322.8	322.6	322.3	322.4	322.6	322.7	322.8	322.9	322.7
117.5°	358.4	358.5	358.6	358.8	358.9	358.5	358.1	357.8	357.4	357.2	356.9
120°	392.0	391.7	391.4	391.2	390.9	391.0	391.2	391.3	391.4	391.5	391.2
122.5°	424.0	423.9	423.8	423.6	423.5	423.2	423.0	422.7	422.4	422.3	422.2
125°	454.2	453.8	453.4	453.0	452.6	452.9	453.1	453.4	453.7	453.8	453.5
127.5°	483.6	483.7	483.8	484.0	484.1	483.5	482.8	482.2	481.5	481.2	481.1
130°	511.4	511.3	511.2	511.0	510.9	510.5	510.1	509.8	509.4	509.2	509.1
132.5°	538.3	538.2	538.1	537.9	537.8	537.3	536.8	536.3	535.8	535.5	535.4
135°	562.8	562.5	562.3	562.0	561.8	561.3	560.8	560.3	559.8	559.5	559.6
137.5°	586.8	586.5	586.3	586.0	585.8	585.2	584.5	583.9	583.2	582.9	582.9
140°	609.0	608.6	608.3	607.9	607.5	607.3	607.0	606.8	606.5	606.4	606.3
142.5°	629.1	628.8	628.6	628.3	628.1	628.0	627.8	627.7	627.6	627.5	627.2
145°	648.0	647.9	647.8	647.6	647.5	647.5	647.5	647.5	647.5	647.5	647.3
147.5°	665.1	665.0	664.9	664.8	664.7	664.8	664.9	665.0	665.1	665.2	664.8
150°	681.2	681.2	681.2	681.2	681.2	681.3	681.5	681.6	681.7	681.8	681.5
152.5°	696.0	695.7	695.5	695.2	695.0	695.2	695.5	695.7	696.0	696.1	695.9
155°	709.0	708.5	708.0	707.5	707.0	707.4	707.8	708.1	708.5	708.7	708.6
157.5°	720.4	719.7	719.1	718.4	717.8	718.3	718.8	719.3	719.8	720.1	720.1
160°	731.1	730.4	729.6	728.9	728.1	728.2	728.4	728.5	728.6	728.7	728.9
162.5°	739.7	739.0	738.2	737.5	736.7	736.8	736.9	737.0	737.1	737.2	737.5
165°	748.2	747.2	746.1	745.1	744.1	744.1	744.1	744.1	744.1	744.1	744.4
167.5°	754.4	753.3	752.1	751.0	749.8	749.9	750.1	750.2	750.3	750.4	750.7
170°	759.6	758.6	757.5	756.5	755.5	755.4	755.3	755.2	755.1	755.0	755.4
172.5°	763.0	762.0	761.0	760.0	759.0	758.9	758.7	758.6	758.5	758.4	758.8
175°	765.8	764.7	763.6	762.4	761.3	761.2	761.0	760.9	760.8	760.7	761.1
177.5°	767.0	766.0	765.0	764.0	763.0	762.7	762.5	762.2	761.9	761.8	762.2
180°	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1	764.1

TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	556.3	556.3	556.3	556.3
2.5°	541.1	545.7	549.8	556.3
5°	529.1	535.5	544.3	554.0
7.5°	515.3	525.4	536.9	550.3
10°	502.4	513.9	528.6	544.8
12.5°	489.0	502.8	518.9	536.5
15°	473.8	487.6	505.6	529.1
17.5°	460.0	476.5	495.9	520.8
20°	443.8	459.5	480.7	509.3
22.5°	429.5	447.5	471.0	495.9
25°	413.9	429.5	453.0	483.0
27.5°	398.2	417.6	440.1	469.2
30°	383.0	399.1	423.5	454.0
32.5°	366.4	385.8	408.3	436.9
35°	348.4	366.9	388.1	418.9
37.5°	332.3	350.3	371.9	399.1
40°	314.3	333.2	353.0	380.2
42.5°	296.8	313.9	333.7	358.6
45°	279.8	294.5	312.5	334.1
47.5°	262.2	274.7	291.3	310.6
50°	243.3	256.7	269.2	285.3
52.5°	225.8	237.4	247.5	260.9
55°	208.8	216.6	224.9	235.0
57.5°	190.8	196.8	202.8	213.4
60°	172.8	178.4	181.6	188.5
62.5°	155.3	157.6	161.8	165.9
65°	136.0	139.2	141.5	146.6
67.5°	118.4	119.8	122.1	125.4
70°	100.0	103.2	104.2	106.5
72.5°	84.3	85.7	86.6	87.1
75°	66.8	68.2	69.1	71.9
77.5°	52.5	52.1	53.9	54.4
80°	38.7	37.3	37.8	39.6
82.5°	25.3	25.8	25.3	25.3
85°	15.7	15.2	14.3	14.7
87.5°	6.9	6.9	6.5	6.5
90°	5.9	4.5	3.1	1.7
92.5°	7.8	8.1	8.3	8.6
95°	18.5	22.8	27.1	31.4
97.5°	68.4	65.6	62.8	60.0
100°	100.6	98.3	96.0	93.7
102.5°	136.0	134.5	132.9	131.4
105°	174.3	173.6	172.8	172.0
107.5°	210.3	210.0	209.6	209.2
110°	248.0	247.7	247.3	246.9



TEST NUMBER: P1001290

CATALOG NUMBER: SA4XXDIP-B350D590UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
112.5°	285.8	285.0	284.3	283.5
115°	322.3	322.0	321.6	321.2
117.5°	356.4	355.9	355.4	354.9
120°	390.7	390.2	389.7	389.2
122.5°	421.9	421.7	421.4	421.2
125°	453.0	452.5	452.0	451.5
127.5°	481.0	480.9	480.7	480.6
130°	509.0	508.9	508.7	508.6
132.5°	535.1	534.9	534.6	534.4
135°	559.7	559.8	560.0	560.1
137.5°	582.9	582.9	582.9	582.9
140°	606.0	605.7	605.5	605.2
142.5°	626.7	626.2	625.7	625.2
145°	646.9	646.6	646.2	645.8
147.5°	664.1	663.3	662.6	661.8
150°	681.0	680.5	680.0	679.5
152.5°	695.5	695.2	694.8	694.4
155°	708.5	708.4	708.2	708.1
157.5°	720.1	720.1	720.1	720.1
160°	729.3	729.6	730.0	730.4
162.5°	738.0	738.5	739.0	739.5
165°	745.1	745.7	746.4	747.0
167.5°	751.4	752.0	752.7	753.3
170°	756.1	756.9	757.6	758.4
172.5°	759.5	760.3	761.0	761.8
175°	761.8	762.6	763.3	764.1
177.5°	763.1	764.0	764.9	765.8
180°	764.1	764.1	764.1	764.1

(END OF REPORT)