

Installation Results after Lens replacement

Customer	Alcatel
Machine	FPA-3000i4
Serial No.	#506496i4
Customer ID No.	Stepper 6
Period of Lens Replacement	31/01/00 - 03/03/00

Unit	Item	Parameter	Result	Spec	Judge
Lens	Performance	CD DOF @0.50um	1.62um	>1.20um	OK
		T/B DOF @0.50um, 80 deg	1.38um	>1.20um	OK
		CD Uniformity @0.50um	0.033um	0.050um	OK
		Field Curvature (Tilt Comp.)	0.060um	<0.40um	OK
		Image Field Deviation (Tilt Comp.)	0.16um	<0.40um	OK
		Astigmatism	0.10um	<0.25um	OK
		CD Linearity @0.50um	3.96%	<10%	OK
		CD DOF @0.35um	1.24um	>0.60um	OK
		T/B DOF @0.35um, 83.6 deg	0.98um	>0.60um	OK
		CD Uniformity @0.35um	0.029um	0.040um	OK
		Field Curvature (Tilt Comp.)	0.11um	<0.40um	OK
		Image Field Deviation (Tilt Comp.)	0.24um	<0.40um	OK
		Astigmatism	0.17um	<0.25um	OK
	Lens Heating (Mode 1 NA 0.52, Sig 0.60)	Focus change	0.20um	<0.30um	OK
COMA amount	Max Angle Difference	1.07 deg	<2 deg	OK	
XY Stage	Step Accuracy (Max of 3 wafers)	X-X	0.0169um	<0.040um	OK
		Y-X	0.0136um	<0.040um	OK
		X-Y	0.0204um	<0.040um	OK
		Y-Y	0.0188um	<0.040um	OK
	Repeatability (Max of 3 wafers)	X	0.0266um	<0.030um	OK
		Y	0.0245um	<0.030um	OK
	XYSA (Using Ref Wafer)	X Scaling	-0.002ppm	<0.50ppm	OK
		Y Scaling	-0.014ppm	<0.50ppm	OK
		Orthogonality	-0.002ppm	<0.50ppm	OK
Illumination	Standard Illumination (NA 0.63, Sig 0.65)	Intensity	10470W	>6500W	OK
		Uniformity	0.68%	<1.00%	OK
	Special Illumination (Mode 1 NA 0.52, Sig 0.60)	Intensity	9080W	>6500W	OK
		Uniformity	0.87%	<1.20%	OK
	Light Integrator Repeatability	Total Accuracy	0.53%	<1.00%	OK
	Masking Blades	Max	25um	0 - 100um	OK
		Min	5um	0 - 100um	OK
		Grey Zone	20um	<30um	OK
	Alignment	AGA Mode 1 (Using Ref Wafer)	X M+3 sig	0.0562um	<0.090um
YI M+3 sig			0.0482um	<0.090um	OK
Yr M+3 sig			0.0398um	<0.090um	OK
Reticle Rotation		Average	0.0051um	0.010um	OK
		Repeatability	0.009um	0.020um	OK
		ROC Repeatability Max	0.003um	0.010um	OK
Prealignment	Mechanical	XI	4.747um	<30um	OK
		YI	6.113um	<30um	OK
		Xr	11.013um	<30um	OK
		Yr	5.731um	<30um	OK
	TV	3 sigma X	0.546um	<3um	OK
		3 sigma Y	0.581um	<3um	OK
Focus System	TTLAF	Repeatability	0.04um	<0.07um	OK
	Uneven Focus	Tilt Offset	2.5ppm	<4ppm	OK
Throughput	Tilt ON	Wafers per hour	69.3	>67	OK
	Tilt OFF	Wafers per hour	71.6	>69	OK

Offsets changed during #6 Lens Replacement

Parameter	Editor	Page	Parameter	Old Offset	New Offset
Low Mag	System Offset	Autoalignment/OA Scope/OA Scope Adj Offset	X	-0.2017	-0.2081
			Y	-0.1077	-0.1073
Masking Blades	System Offset	Exposure/Shutter-MaskingBlade/Masking Blade	Bl	0.160	0.060
			Br	0.120	-0.030
			Bu	-0.150	-0.250
			Bd	-0.167	-0.200
A/S Position	System Offset	Autoalignment/A/S FRA/A/S unit for FRA	Xl	0.021	0.016
			Xr	0.018	0.011
			Y	-0.046	-0.040
XYSA	System Offset	Wafer Stage/XY Stage/Orthogonality + Scaling	X scal	-3.27	-
			Y scal	-3.55	-
			Y ortho	-150.847	-151.767
Reticle Rotation	System Offset	Wafer Stage/XY Stage/Orthogonality	X ortho	-138.527	-84.527
			Y ortho	-151.767	-93.467
Lens Mag	Machine Offset 1	Exposure/Lens/Mix and Match Calibration		-7.2	0.0
Lens Mag	System Offset	Exposure/Lens/Mix and Match Calibration		-4.0	5.0
Tilt Offset	System Offset	Focus/Tilt/Tilt Offset	X	-10.0	22.5
			Y	-4.0	-16.5
UC Detector Position	System Offset	Exposure/Unit Position	X	-0.779	-0.77
			Y	0.055	0.044



Uniformity Sorted Data.

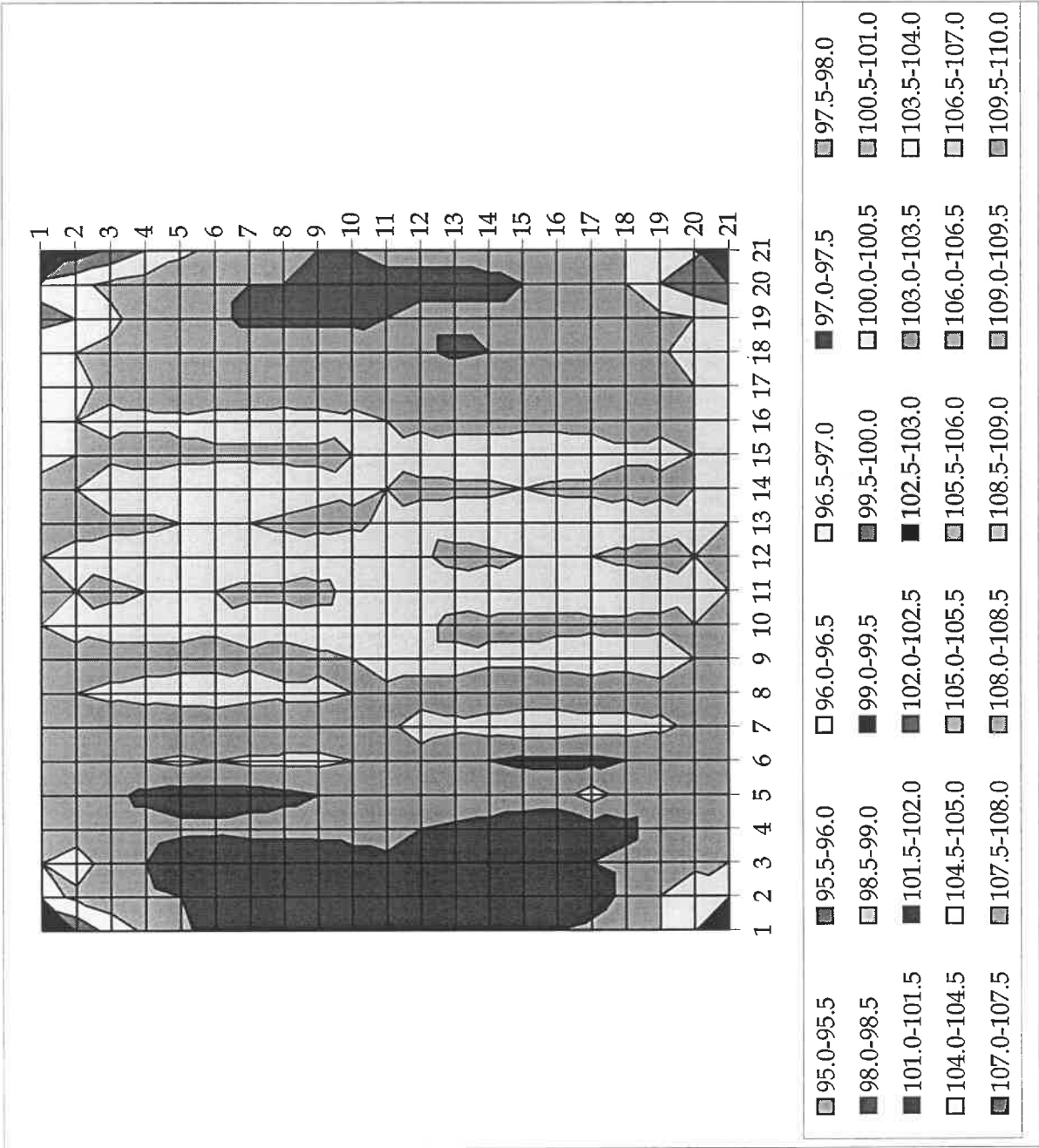
Alcatel #506496i4

Stepper 6

Field Size	X	20.0	mm	Pitch	X	1.00	mm	NA	0.52	ILL Mode	Special Multiple	1st Zoom	98.8	%	Intensity (UC) Uniformity	9101	W
	Y	22.6	mm		Y	1.13	mm	Sigma	0.60	Stopper		2nd Zoom	30.0	%		1.146	%
												Filter fitted	6	%			

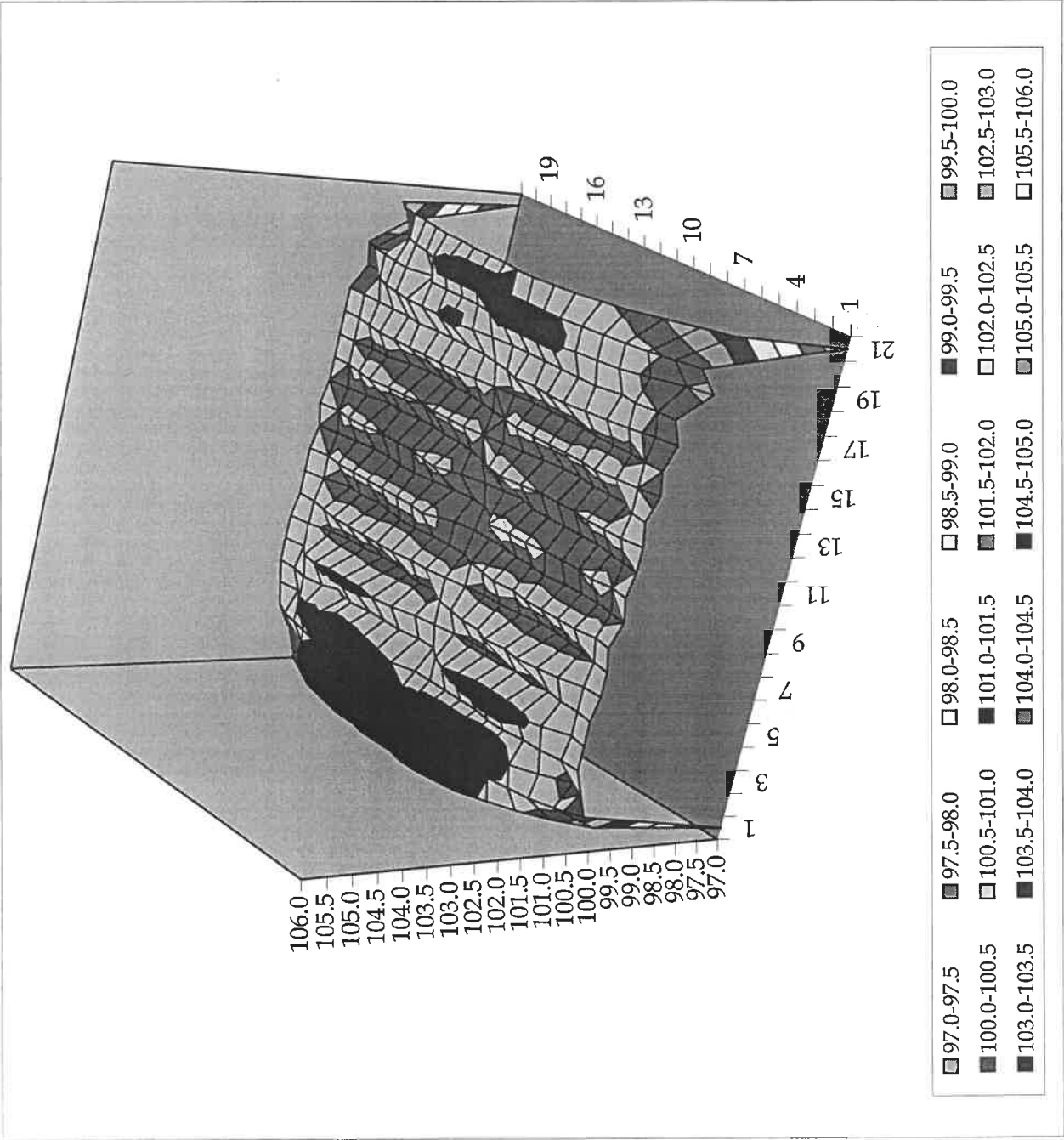
Machine	FPA-3000i4	Customer	Alcatel	Serial No.	#506496i4	Customer ID	Stepper 6
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1		99.6	100.2	100.6	100.9	101.2	101.3	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.1	101.0	100.9	100.7	100.5	100.3	
2	100.3	100.6	100.8	100.9	101.0	101.1	101.2	101.2	101.2	101.2	101.3	101.3	101.5	101.5	101.5	101.4	101.2	100.9	100.5	100.0	100.2
3	100.5	100.3	100.7	101.0	101.3	101.4	101.5	101.5	101.4	101.2	101.1	101.1	101.0	101.1	101.1	101.0	101.0	100.9	100.8	100.7	100.5
4	100.7	100.7	100.8	100.8	100.9	100.9	100.8	100.8	100.8	100.8	100.8	101.0	101.1	101.2	101.4	101.4	101.2	101.1	100.8	100.5	100.6
5	100.7	100.6	100.9	101.1	101.2	101.2	101.2	101.1	101.0	100.8	100.5	100.5	100.6	100.6	100.6	100.7	100.3	100.7	100.8	100.7	100.7
6	100.7	100.6	100.6	100.5	100.4	100.5	100.4	100.4	100.4	100.5	100.6	100.7	100.9	101.0	101.1	101.1	101.1	101.0	100.9	100.6	100.7
7	100.6	100.6	100.8	100.9	101.0	100.9	101.0	100.8	100.8	100.7	100.6	100.3	100.4	100.3	100.2	100.2	100.3	100.3	100.4	100.6	100.7
8	100.6	100.5	100.4	100.3	100.2	100.2	100.3	100.4	100.4	100.5	100.6	100.7	100.7	100.8	100.8	100.8	100.8	100.8	100.7	100.6	100.6
9	100.7	100.6	100.7	100.7	100.7	100.7	100.6	100.7	100.6	100.5	100.3	100.3	100.3	100.4	100.4	100.3	100.2	100.3	100.2	100.5	100.6
10	100.5	100.4	100.3	100.3	100.3	100.4	100.3	100.3	100.2	100.2	100.2	100.3	100.7	100.6	100.6	100.6	100.6	100.6	100.6	100.5	100.6
11	100.6	100.5	100.6	100.5	100.5	100.5	100.6	100.6	100.7	100.3	100.1	100.0	100.1	100.2	100.3	100.3	100.2	100.2	100.3	100.4	100.5
12	100.5	100.4	100.3	100.2	100.2	100.2	100.2	100.2	100.0	100.1	100.2	100.4	100.7	100.6	100.5	100.5	100.5	100.6	100.6	100.5	100.6
13	100.5	100.6	100.6	100.6	100.5	100.5	100.5	100.6	100.7	100.6	100.4	100.3	100.2	100.2	100.1	100.1	100.2	100.1	100.3	100.4	100.5
14	100.6	100.5	100.2	100.2	100.2	100.1	100.1	100.2	100.3	100.4	100.5	100.6	100.6	100.6	100.5	100.6	100.6	100.7	100.6	100.5	100.5
15	100.4	100.5	100.6	100.7	100.6	100.6	100.6	100.6	100.6	100.5	100.4	100.3	100.2	100.2	100.1	100.1	100.2	100.4	100.4	100.5	100.5
16	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3	100.3	100.4	100.5	100.6	100.7	100.7	100.7	100.7	100.7	100.7	100.6	100.5	100.5
17	100.3	100.4	100.6	100.7	100.8	100.9	100.9	100.8	100.9	100.7	100.6	100.5	100.5	100.5	100.5	100.6	100.5	100.5	100.5	100.5	100.5
18	100.5	100.5	100.6	100.5	100.7	100.7	100.7	100.7	100.7	100.7	100.8	100.9	101.1	101.0	101.0	101.0	100.9	100.8	100.6	100.2	100.2
19	99.8	100.0	100.4	100.7	100.8	100.9	101.1	101.1	101.1	101.1	101.0	100.9	100.9	100.9	100.9	100.5	100.8	100.7	100.6	100.5	100.3
20	100.2	100.4	100.6	100.7	100.8	100.9	101.0	101.0	101.0	101.0	101.1	101.1	101.1	101.1	101.0	100.8	100.7	100.5	100.0	99.7	99.5
21		99.2	99.6	100.0	100.4	100.6	100.8	100.9	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.7	100.6	100.5	100.4	100.1	



Machine Data

Machine Type	FPA-3000i4
Customer	Alcatel
Serial No.	#506496i4
Customer's ID	Stepper 6
Field X	20.00 mm
Field Y	22.60 mm
Pitch X	1.00 mm
Pitch Y	1.13 mm
NA	0.52
Sigma	0.60
ILL Mode	Special
Stopper	Multiple
1st Zoom	98.8 %
2nd Zoom	30.0 %
Filter Fitted	6 %
Uniformity	1.146 %
Intensity (UC)	9101 W



Machine Data

Machine Type FPA-3000i4

Customer Alcatel

Serial No. #506496i4

Customer's ID Stepper 6

Field X 20.00 mm
Y 22.60 mm

Pitch X 1.00 mm
Y 1.13 mm

NA 0.52
Sigma 0.60

ILL Mode Special
Stopper Multiple

1st Zoom 98.8 %
2nd Zoom 30.0 %
Filter Fitted 6 %

Uniformity 1.146 %
Intensity (UC) 9101 W



Uniformity Sorted Data.

Alcatel #506496i4

Stepper 6

Field Size	X	20.0	mm	Pitch	X	1.0	mm	NA	0.63	ILL Mode	Standard	1st Zoom	-	%	Intensity (UC) Uniformity	10513 W 0.747 %
	Y	22.6	mm		Y	1.1	mm	Sigma	0.65	Stopper	Multiple	2nd Zoom	95.0	%		
												Filter fitted	6	%		

Machine FPA-3000i4 Customer Alcatel Serial No. #506496i4 Customer ID Stepper 6

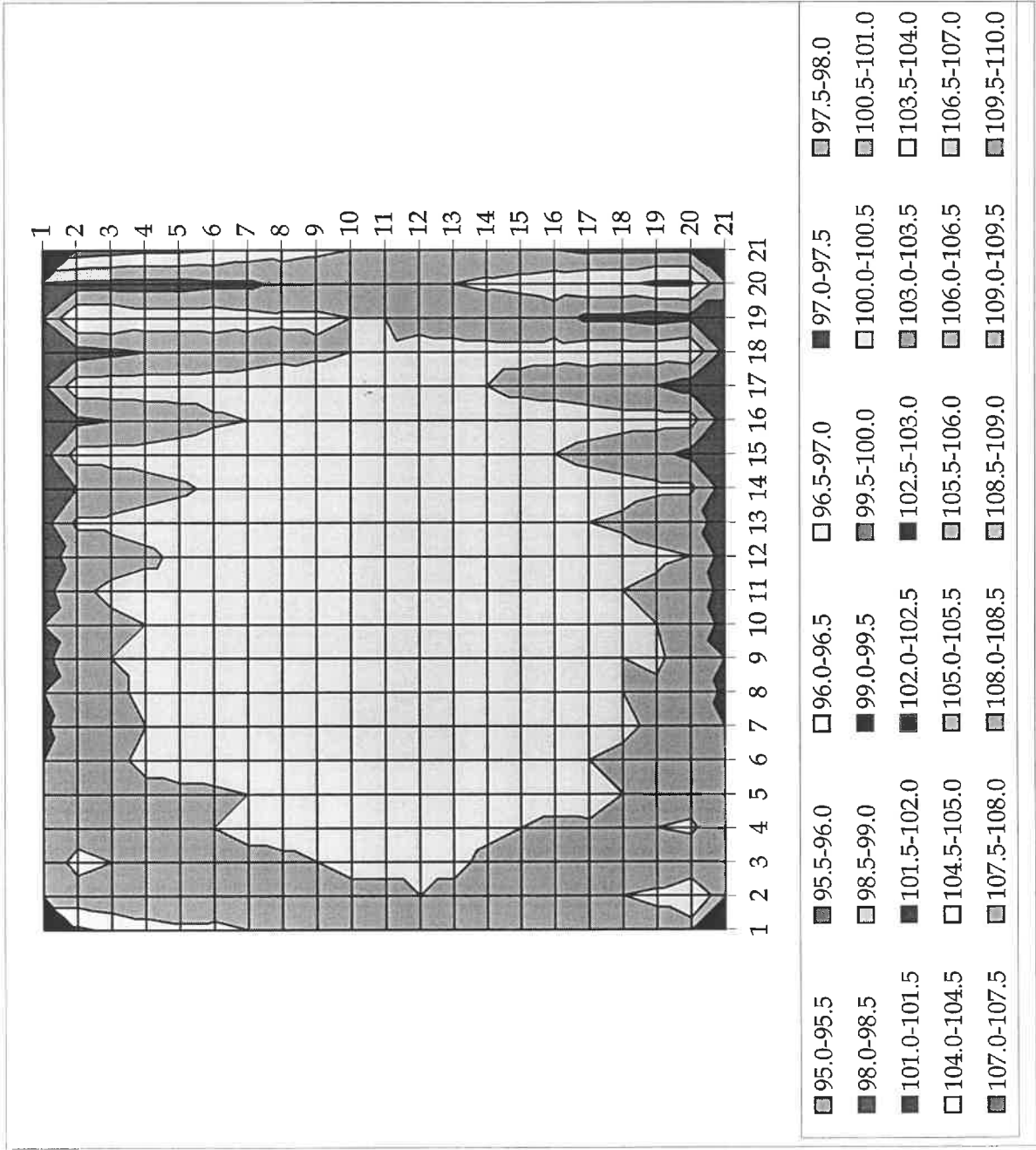
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1		99.9	100.1	100.3	100.4	100.4	100.5	100.5	100.5	100.5	100.5	100.6	100.6	100.8	100.7	100.8	100.8	100.8	100.7	100.7	
2	100.8	100.8	100.9	100.9	100.9	100.8	100.8	100.7	100.6	100.6	100.6	100.5	100.6	100.6	100.7	100.7	100.7	100.6	100.5	100.4	100.8
3	100.9	100.3	100.5	100.5	100.6	100.6	100.6	100.6	100.5	100.4	100.4	100.4	100.4	100.4	100.7	100.7	100.7	100.8	100.9	100.9	100.9
4	100.9	100.8	100.7	100.6	100.6	100.5	100.4	100.3	100.3	100.2	100.2	100.2	100.3	100.4	100.5	100.6	100.6	100.6	100.5	100.4	101.0
5	101.0	100.5	100.6	100.6	100.6	100.6	100.5	100.3	100.2	100.1	100.0	100.1	100.1	100.2	100.3	100.3	100.2	100.5	100.7	100.8	100.9
6	101.0	100.8	100.6	100.4	100.3	100.2	100.1	100.1	100.1	100.1	100.1	100.2	100.2	100.3	100.4	100.5	100.5	100.6	100.6	100.5	101.0
7	101.1	100.6	100.6	100.5	100.5	100.5	100.4	100.3	100.2	100.2	100.3	100.1	100.2	100.1	100.1	100.1	100.2	100.4	100.6	100.8	101.0
8	101.0	100.8	100.6	100.4	100.3	100.1	100.2	100.3	100.2	100.3	100.3	100.4	100.3	100.3	100.3	100.4	100.4	100.5	100.6	100.6	101.1
9	101.2	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3	100.3	100.1	100.1	100.2	100.3	100.4	100.3	100.3	100.5	100.4	100.8	101.0
10	101.0	100.8	100.6	100.5	100.4	100.4	100.4	100.2	100.1	100.1	100.1	100.1	100.3	100.3	100.3	100.3	100.3	100.4	100.5	100.5	101.2
11	101.2	100.6	100.4	100.3	100.3	100.2	100.3	100.3	100.4	100.1	100.1	100.0	100.1	100.2	100.4	100.5	100.5	100.5	100.6	100.8	101.1
12	101.1	100.9	100.7	100.6	100.4	100.4	100.4	100.3	100.1	100.1	100.1	100.2	100.4	100.3	100.2	100.2	100.2	100.3	100.4	100.5	101.2
13	101.2	100.4	100.4	100.3	100.2	100.1	100.1	100.2	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.5	100.6	100.8	100.9	101.1
14	101.2	101.0	100.8	100.7	100.6	100.4	100.3	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.0	100.4	100.2	100.3	100.4	100.4	101.2
15	101.2	100.3	100.3	100.3	100.2	100.1	100.0	100.1	100.1	100.1	100.2	100.2	100.2	100.3	100.4	100.5	100.7	100.8	100.9	101.1	101.2
16	101.2	101.1	101.0	100.9	100.8	100.6	100.5	100.4	100.3	100.2	100.2	100.1	100.1	100.1	100.1	100.1	100.2	100.3	100.3	100.3	101.2
17	101.1	100.2	100.2	100.2	100.2	100.2	100.2	100.1	100.2	100.2	100.2	100.3	100.4	100.5	100.7	100.8	100.9	101.0	101.0	101.2	101.2
18	101.2	101.2	101.1	101.0	101.0	100.9	100.8	100.7	100.6	100.5	100.4	100.3	100.3	100.3	100.3	100.3	100.2	100.2	100.2	100.1	101.1
19	101.0	100.0	100.0	100.2	100.2	100.2	100.3	100.4	100.4	100.5	100.5	100.7	100.8	100.9	101.0	100.8	100.8	101.1	101.2	101.1	101.1
20	101.1	101.2	101.2	101.2	101.2	101.1	101.1	100.9	100.9	100.7	100.6	100.6	100.5	100.4	100.3	100.2	100.1	100.1	99.9	99.9	100.9
21		99.7	99.8	99.9	99.9	100.0	100.2	100.3	100.4	100.5	100.5	100.7	100.8	100.9	101.0	101.0	101.1	101.1	101.1	101.1	

Canon.

IUC Data Map.

Alcatel #506496i4

Stepper 6



Machine Data

Machine Type FPA-3000i4

Customer Alcatel

Serial No. #506496i4

Customer's ID Stepper 6

Field X 20.00 mm
Y 22.60 mm

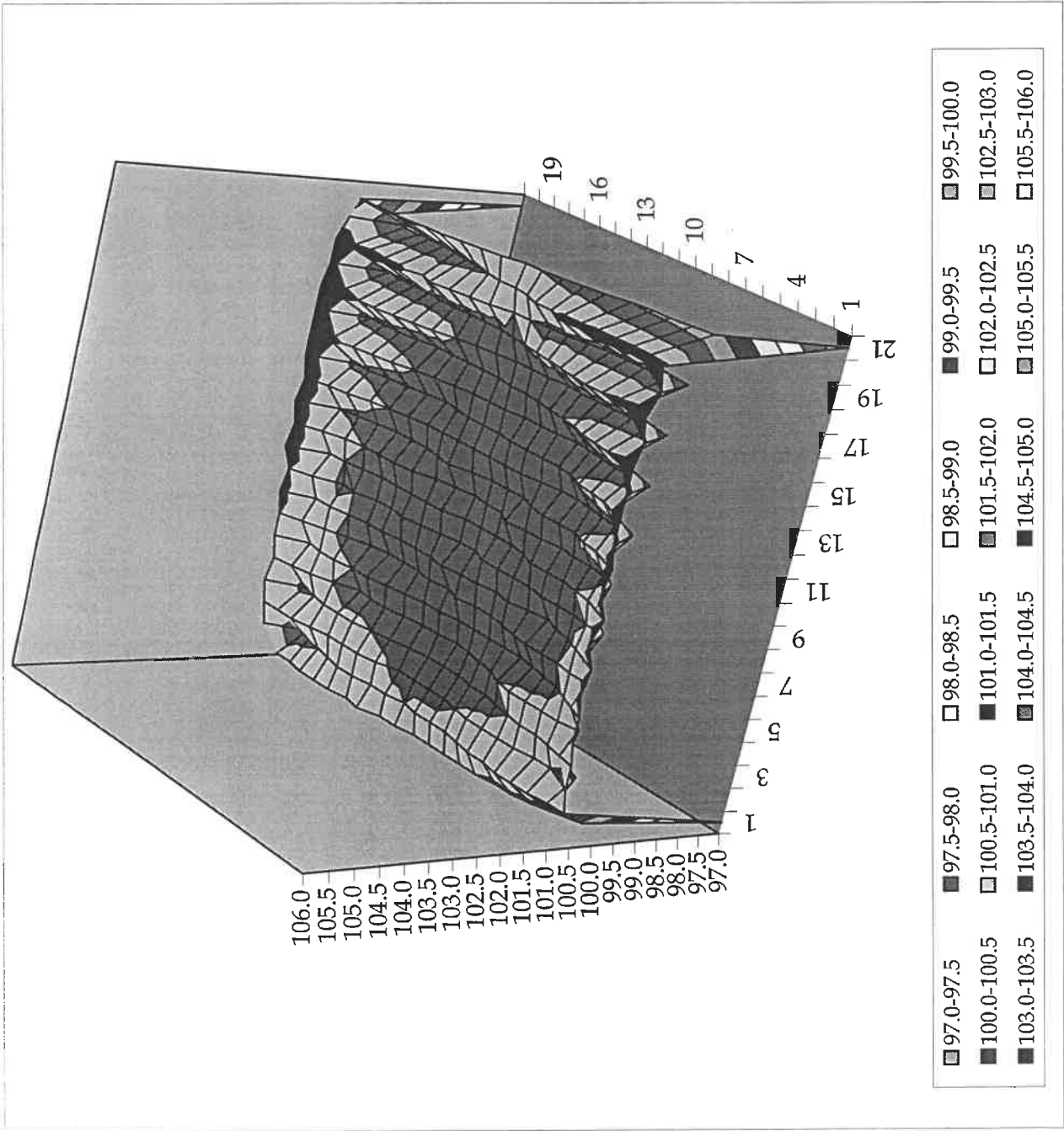
Pitch X 1.00 mm
Y 1.13 mm

NA 0.63
Sigma 0.65

ILL Mode Standard
Stopper Multiple

1st Zoom - %
2nd Zoom 95 %
Filter Fitted 6 %

Uniformity 0.747 %
Intensity (UC) 10513 W



Machine Data

Machine Type	FPA-3000i4
Customer	Alcatel
Serial No.	#506496i4
Customer's ID	Stepper 6
Field X	20.00 mm
Field Y	22.60 mm
Pitch X	1.00 mm
Pitch Y	1.13 mm
NA	0.63
Sigma	0.65
ILL Mode	Standard
Stopper	Multiple
1st Zoom	- %
2nd Zoom	95 %
Filter Fitted	6 %
Uniformity	0.747 %
Intensity (UC)	10513 W



Light Integrator Accuracy

Machine No.	#506496
Machine ID	Stepper 6
Customer	Alcatel
Date	23/02/00
NA	0.63
Sigma	0.65
II Mode	Standard

FPA-3000i4

INPUT LAMP POWER (W/m2)

11325.0

For Lamp Power = **11325.0**

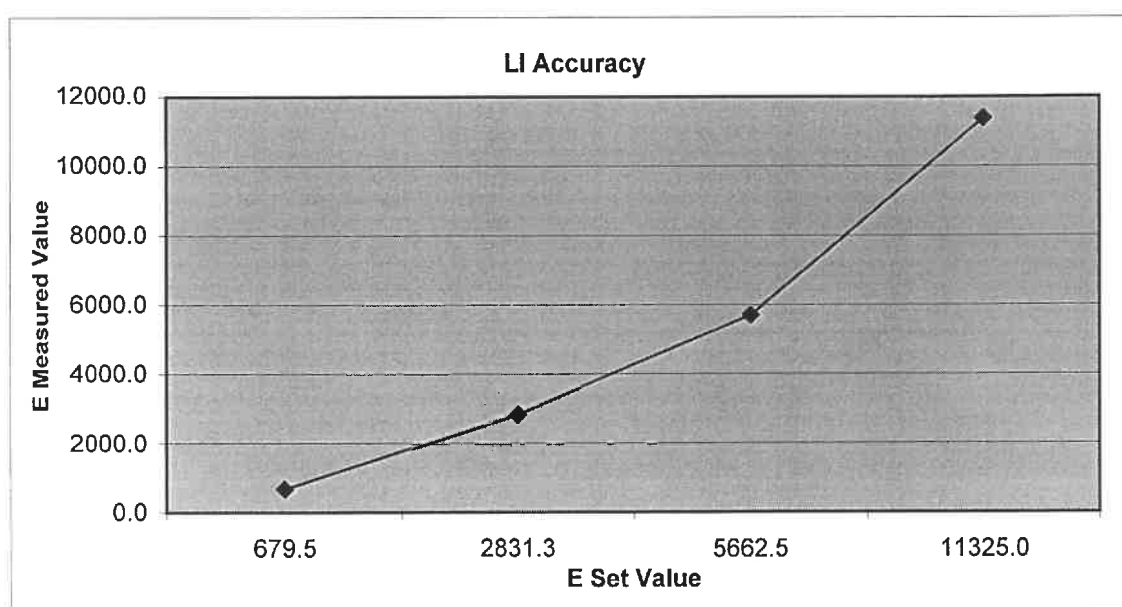
Values calculated to give actual exp. times of 60, 200, 500, 1000 ms

UC Coeff values

LI Set Value	E Max	E Min	E Mean	Repeatability %	Error	Linearity
679.5	688.0	684.0	686.4	0.292	1.015	
2831.3	2851.0	2846.0	2848.7	0.088	0.616	0.236
5662.5	5696.5	5692.5	5694.6	0.035	0.567	
11325.0	11389.5	11384.0	11386.6	0.024	0.544	

TOTAL ACCURACY =

0.527 %





Coma Adjustment Calculation.

Machine No. :	506 496 i4	Reticle Used :	700	Feature Type :	0.35	um	Site Layout			
Machine ID :	Stepper 6	Resist :	IX500	NA :	0.63		3	2	9	
Customer :	Mielec Alcatel	Resist Thickness :	1.185	um	0.65		4	1	8	
Date :	28th Feb 2000.	Exposure Dose :	230	mJ/cm2	1.8	um	5	6	7	
		Focus Site :	-0.4	um	-0.1	um				

Site	Horizontal.					Vertical.				
	Botm. CD	Left	Right	X Left	X Right	Left	Right	X Left	X Right	Ang. Diff
1 (CC)	0.330	0.134	0.145	0.142	0.153	83.16	82.63	0.145	0.153	0.131
2 (UC)	0.335	0.141	0.132	0.147	0.137	82.92	83.38	0.149	0.128	0.128
3 (UL)	0.355	0.142	0.140	0.140	0.137	83.25	83.39	0.168	0.134	0.171
4 (CL)	0.327	0.124	0.139	0.133	0.149	83.60	82.84	0.152	0.123	0.163
5 (DL)	0.341	0.127	0.152	0.130	0.156	83.72	82.49	0.147	0.123	0.153
6 (DC)	0.345	0.130	0.150	0.132	0.152	83.67	82.69	0.153	0.129	0.164
7 (DR)	0.333	0.127	0.155	0.134	0.163	83.55	82.17	0.156	0.126	0.166
8 (CR)	0.326	0.127	0.142	0.136	0.152	83.44	82.68	0.158	0.137	0.172
9 (UR)	0.337	0.145	0.142	0.151	0.147	82.75	82.91	0.150	0.118	0.127

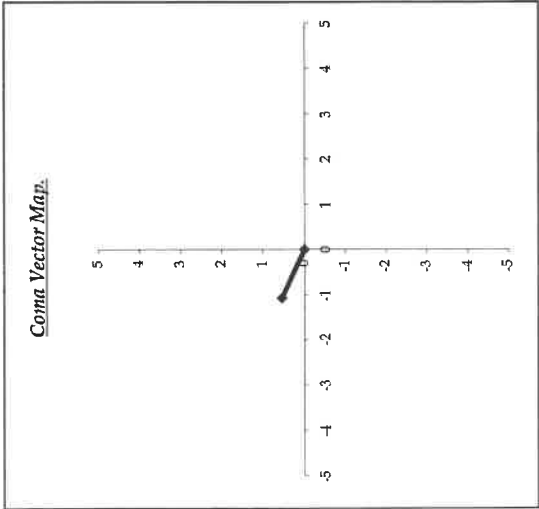
Maximum Coma Angle Error Horizontal	1.38	Degrees
Maximum Coma Angle Error Vertical	1.78	Degrees
Centre to Four Corners Horizontal	0.69	Degrees
Centre to Four Corners Vertical	1.41	Degrees

Specification : Centre and Four Corners <2.0 Degrees, Angle for All sites <3.5 Degrees.
Calculation of Coma Vector Angle and Magnitude For Calculation Software (Setch-Kun).

I	0.0
Angle	153.4

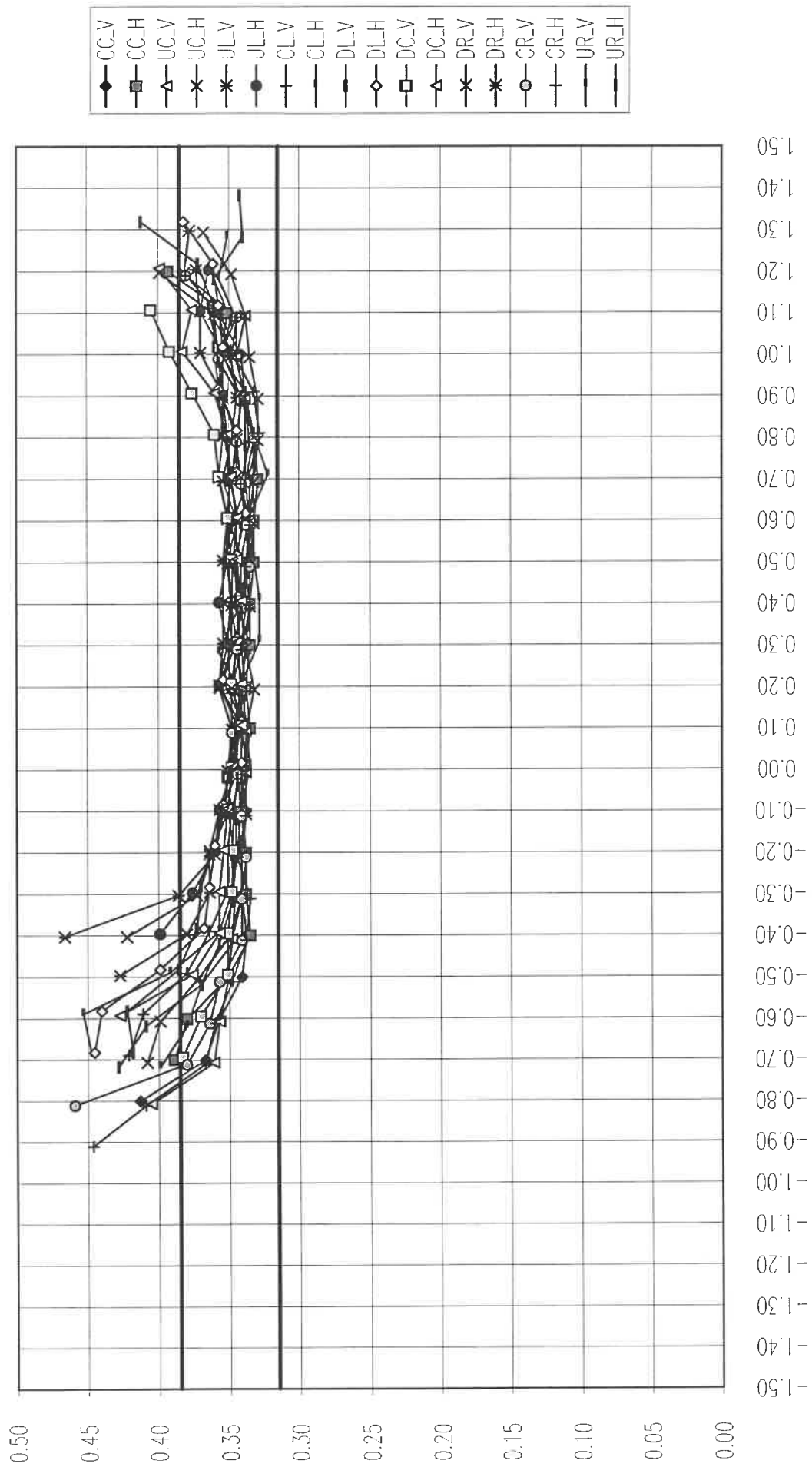
Centre Horizontal (Shift of Angle Ver)	0.54	< 2 degs	OK
Centre Vertical (Shift of Angle Hor)	-1.07	< 2 degs	OK
Angle	-53.4	Degrees	

0	-1.07
0.00	0.54

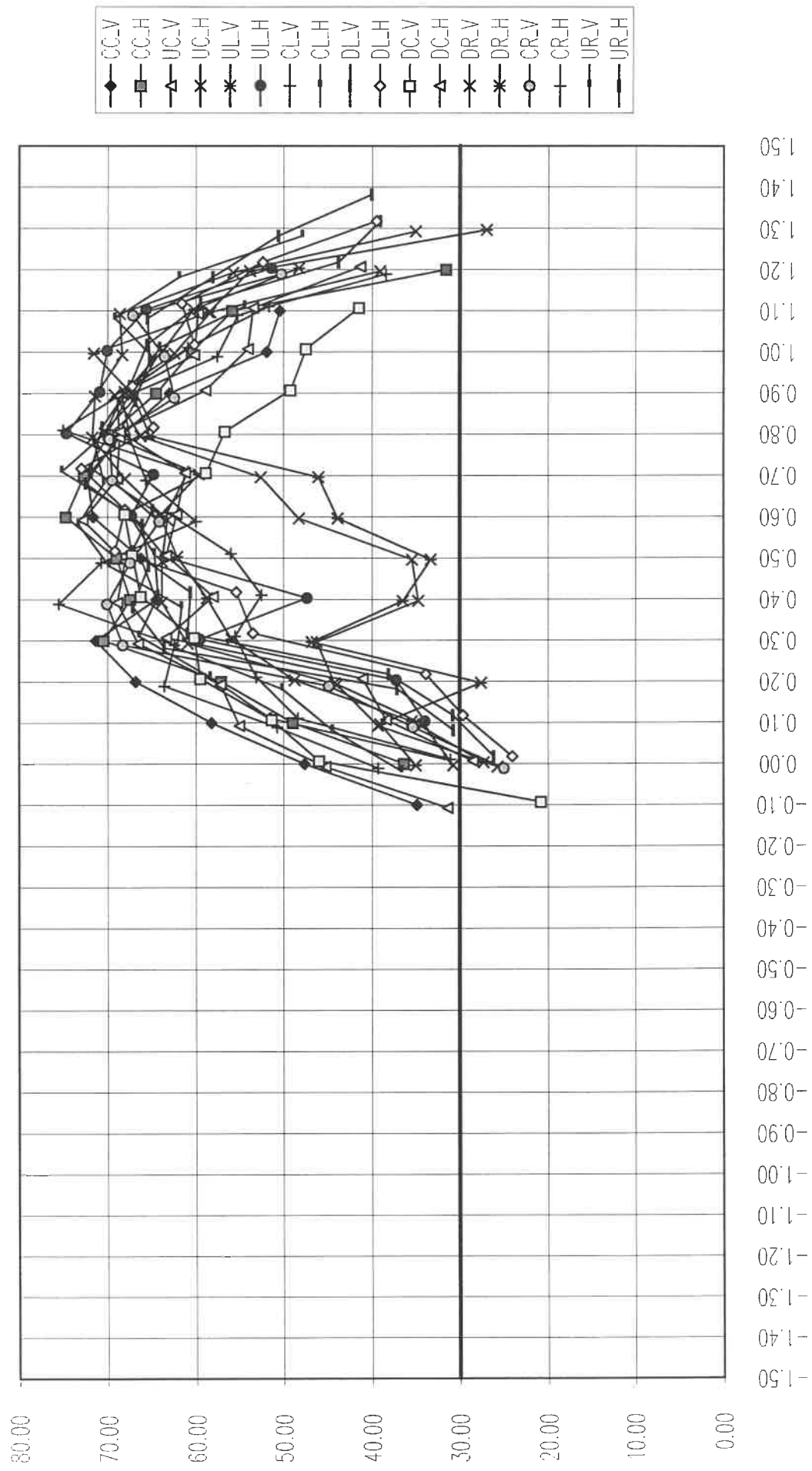


Measurement date : 10/March/00										Machine : FPA 3000i4 #6										Customer : Alcatel										Exposure Dose : patch5										722mm area Spot V H measurementAM										LineWidth : 0.35 um / US										CD upper limit : 0.385										CD lower limit : 0.315										T/B limit : 30 %																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Reticle : Measurement Tool : Hitech S628U(AMS)										Developer : NMD-3										Pitch: 3.1095um										Defocus										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF										DOF									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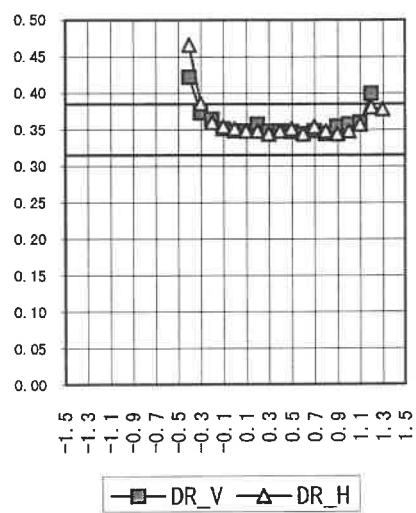
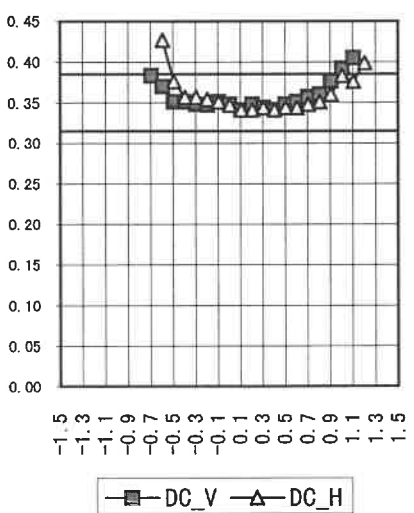
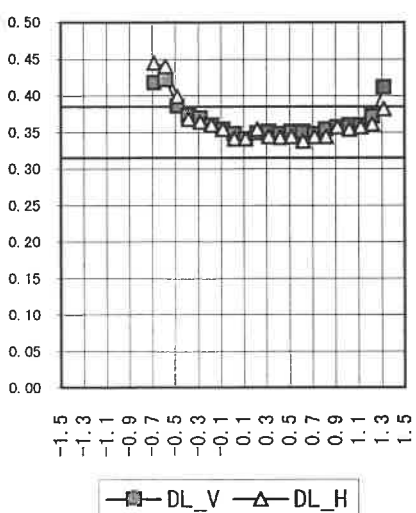
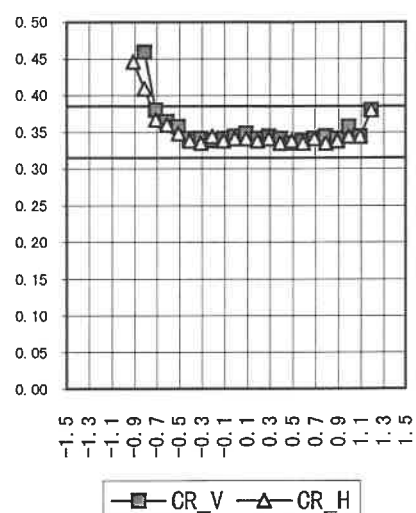
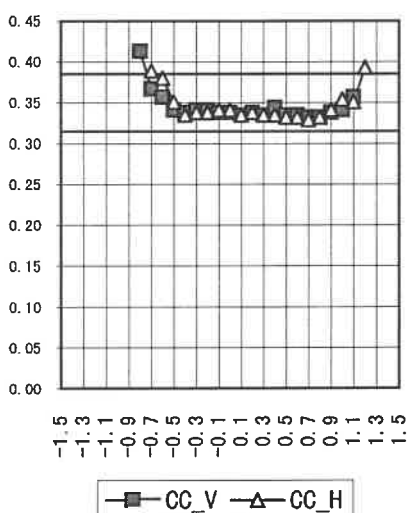
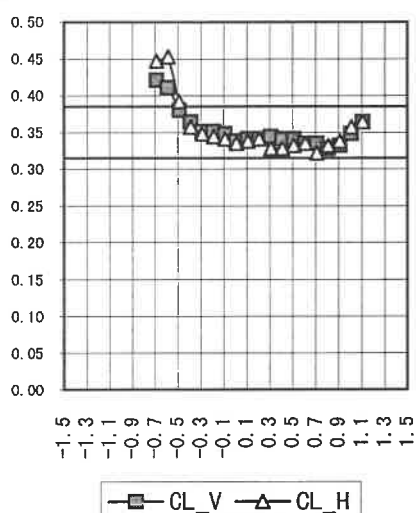
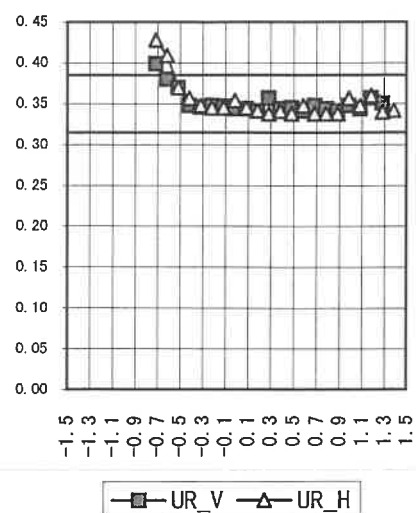
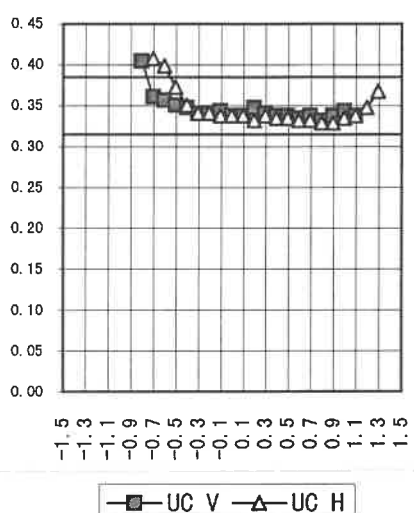
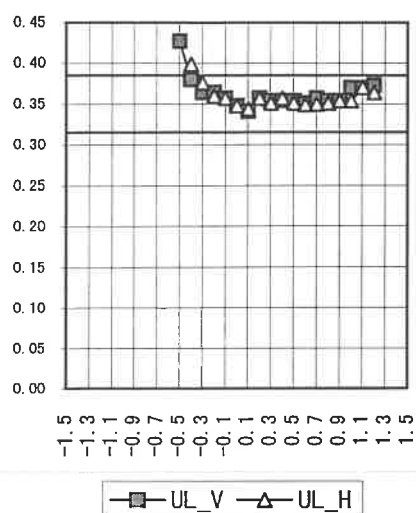
CD DOF (Tilt compensated)



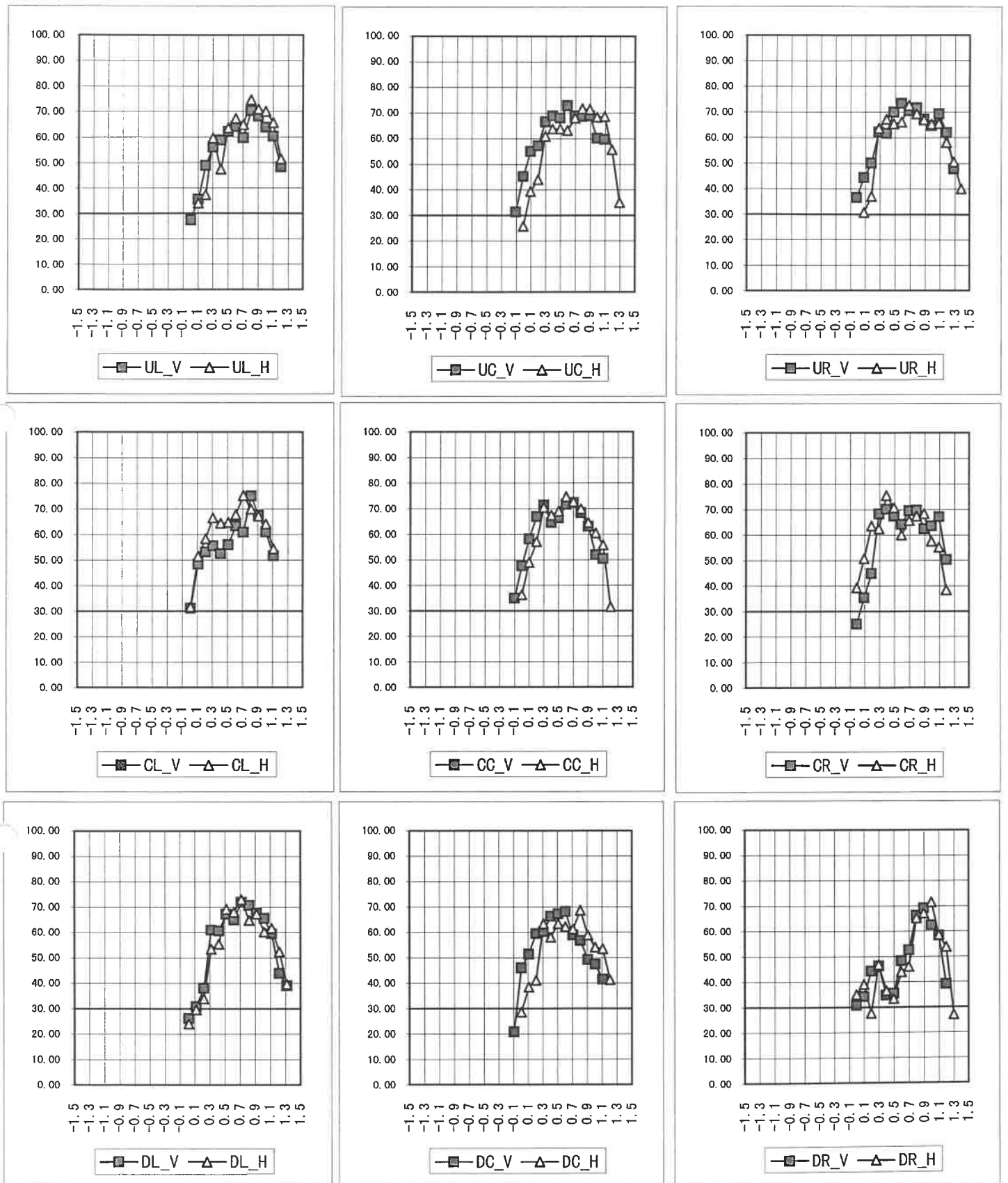
T/B DOF (Tilt Compensated)



Canon Lens Performance CD DOF Chart (Tilt Compensated)



Canon Lens Performance T/B DOF Chart (Tilt Compensated)



Canon

Alcatel #506 496 i4 (Stepper 6)

FPA-300014

[illegible]

UC	UC	Bottom	Top	TR	Angle	TS	Bottom	Top	TR	Angle	TS
1.40	1.30	0.14118	0.2431	0.5860	53.9	59.0	0.4408	0.2854	0.647	68.2	64.7
1.10	1.10	0.2419	0.2720	0.0445	86.4	84.5	0.4072	0.3043	0.886	88.1	88.8
0.80	0.80	0.3427	0.3020	-0.0407	85.8	87.7	0.4639	0.3610	0.968	96.5	97.2
0.50	0.480	0.4430	0.3330	0.1100	84.6	82.9	0.4609	0.2355	0.513	84.7	81.3
0.20	0.160	0.4717	0.3390	0.1326	84.5	84.2	0.4632	0.2859	0.594	85.4	85.4
0.10	0.0688	0.4846	0.3587	0.131	85.7	85.7	0.4724	0.3284	0.680	85.4	84.0
0.050	0.04752	0.5102	0.4835	0.0163	85.3	86.3	0.4783	0.3248	0.682	86.3	86.2
0.030	0.04712	0.5304	0.538	0.019	83.8	87.63	0.4763	0.3181	0.688	86.2	86.8
0.010	0.04690	0.5496	0.5647	0.0151	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
0.005	0.04688	0.56187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
0.002	0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
0.001	0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
0.000	0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.050	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.2	86.2
-0.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-0.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-1.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-2.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
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-3.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-3.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-4.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-5.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-6.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.50	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.60	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.70	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.80	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-7.90	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-8.00	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-8.10	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-8.20	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-8.30	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.3114	0.694	86.1	86.8
-8.40	-0.04688	0.58187	0.5818	0.014	83.4	88.0	0.4743	0.31			

V			H			H		
Score	Top	Age	Score	Top	Age	Score	Top	Age
1.20	0.7185		0.0714					
1.40	0.7185		0.0714					
1.60	0.7185		0.0714					
1.80	0.7185		0.0714					
2.00	0.7185		0.0714					
2.20	0.7185		0.0714					
2.40	0.7185		0.0714					
2.60	0.7185		0.0714					
2.80	0.7185		0.0714					
3.00	0.7185		0.0714					
3.20	0.7185		0.0714					
3.40	0.7185		0.0714					
3.60	0.7185		0.0714					
3.80	0.7185		0.0714					
4.00	0.7185		0.0714					
4.20	0.7185		0.0714					
4.40	0.7185		0.0714					
4.60	0.7185		0.0714					
4.80	0.7185		0.0714					
5.00	0.7185		0.0714					
5.20	0.7185		0.0714					
5.40	0.7185		0.0714					
5.60	0.7185		0.0714					
5.80	0.7185		0.0714					
6.00	0.7185		0.0714					
6.20	0.7185		0.0714					
6.40	0.7185		0.0714					
6.60	0.7185		0.0714					
6.80	0.7185		0.0714					
7.00	0.7185		0.0714					
7.20	0.7185		0.0714					
7.40	0.7185		0.0714					
7.60	0.7185		0.0714					
7.80	0.7185		0.0714					
8.00	0.7185		0.0714					
8.20	0.7185		0.0714					
8.40	0.7185		0.0714					
8.60	0.7185		0.0714					
8.80	0.7185		0.0714					
9.00	0.7185		0.0714					
9.20	0.7185		0.0714					
9.40	0.7185		0.0714					
9.60	0.7185		0.0714					
9.80	0.7185		0.0714					
10.00	0.7185		0.0714					
Mean	0.4935		0.5065					

CC	Section	Top	T/E	Angle	T/E	Bottom	H	T/E	Angle	T/E
1.20	0.4417	0.3953	0.6451	86.2	60.1	0.4258	0.3913	0.721	87.0	72.1
1.20	0.4810	0.3798	0.6451	86.2	60.1	0.4618	0.4214	0.648	87.0	64.8
1.10	0.4837	0.1620	0.349	92.3	47.3	0.4416	0.2268	0.481	94.3	49.1
1.10	0.4771	0.3758	0.473	83.3	47.3	0.4882	0.2711	0.578	85.2	37.8
0.80	0.4083	0.3080	0.392	85.2	59.2	0.4774	0.3108	0.631	86.0	65.1
0.80	0.4083	0.3080	0.392	85.2	59.2	0.4774	0.3108	0.631	86.0	65.1
0.70	0.4715	0.3311	0.468	86.2	60.1	0.4559	0.3333	0.685	86.1	68.5
0.60	0.4326	0.3390	0.625	95.1	45.8	0.4388	0.3265	0.661	96.0	66.1
0.50	0.4908	0.3296	0.685	96.0	66.1	0.501	0.3382	0.671	96.0	67.1
0.40	0.4908	0.3296	0.685	96.0	66.1	0.4982	0.3330	0.653	95.3	65.2
0.30	0.4747	0.3188	0.660	86.7	64.8	0.4682	0.3221	0.645	85.7	64.5
0.20	0.4747	0.3188	0.660	86.7	64.8	0.4682	0.3221	0.645	85.7	64.5
0.10	0.4480	0.3102	0.623	85.1	59.1	0.4505	0.3141	0.628	85.4	62.8
0.00	0.5003	0.3555	0.591	85.1	59.1	0.5023	0.3507	0.678	84.9	57.8
-0.10	0.4897	0.2742	0.548	84.3	44.3	0.5028	0.3880	0.533	84.3	53.3
-0.20	0.4918	0.2414	0.463	84.3	44.3	0.5037	0.4241	0.445	83.3	44.5
-0.30	0.4879	0.2391	0.418	83.0	41.8	0.5088	0.4624	0.390	82.2	39.0
-0.40	0.4879	0.2391	0.418	83.0	41.8	0.5088	0.4624	0.390	82.2	39.0
-0.50	0.4631	0.2283	0.383	82.3	38.3	0.4868	0.3960	0.353	80.3	35.3
-0.60	0.4421	0.0983	0.168	80.3	18.8	0.4954	0.5883	0.176	80.3	17.6
-0.70	0.4459	0.0438	0.090	79.4	8.0	0.4931	0.6518	0.106	79.6	10.6
-0.80	0.4718					0.4838				
-0.90	0.4753					0.4789				
-1.00	0.4753					0.4818				
-1.10	0.4718					0.4548				
-1.20	0.5566					0.6118				
-1.30	0.8238									
-1.40										
-1.50										
-1.60										
-1.70										
-1.80										
-1.90										
-2.00										
	0.4911					Mean	0.4850			

[illegible]

DC	Bottom			Top			H			T6			Angle			16k		
	Bottom	Top	T6	Bottom	Top	T6	Bottom	Top	T6	Bottom	Top	T6	Bottom	Top	T6	Bottom	Top	T6
1.40	0.4895	0.2911	0.620	0.617	0.2	0.4884	0.2878	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574
1.30	0.4581	0.2597	0.589	0.6	0.16	0.4573	0.257	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548
1.20	0.4267	0.2283	0.558	0.569	0.12	0.4259	0.226	0.517	0.517	0.517	0.517	0.517	0.517	0.517	0.517	0.517	0.517	0.517
1.10	0.4005	0.2109	0.569	0.56	0.08	0.4177	0.2344	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617
1.00	0.4746	0.2698	0.597	0.53	0.57	0.4624	0.3068	0.640	0.65	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
0.90	0.4546	0.267	0.633	0.57	0.53	0.4633	0.3182	0.599	0.6	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
0.80	0.4077	0.3137	0.643	0.6	0.48	0.483	0.3151	0.641	0.641	0.641	0.641	0.641	0.641	0.641	0.641	0.641	0.641	0.641
0.70	0.3815	0.3359	0.653	0.62	0.46	0.483	0.3265	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653
0.60	0.3553	0.3735	0.662	0.65	0.46	0.4818	0.3306	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
0.50	0.3291	0.4059	0.673	0.64	0.46	0.4618	0.3357	0.659	0.659	0.659	0.659	0.659	0.659	0.659	0.659	0.659	0.659	0.659
0.40	0.3029	0.4384	0.682	0.65	0.46	0.4671	0.3033	0.611	0.63	0.61	0.63	0.61	0.63	0.61	0.63	0.61	0.63	0.61
0.30	0.2765	0.4614	0.614	0.64	0.46	0.4691	0.2911	0.572	0.647	0.572	0.647	0.572	0.647	0.572	0.647	0.572	0.647	0.572
0.20	0.25015	0.2682	0.571	0.648	0.57	0.5698	0.2603	0.533	0.641	0.513	0.641	0.513	0.641	0.513	0.641	0.513	0.641	0.513
0.10	0.2237	0.2413	0.539	0.648	0.539	0.539	0.2301	0.5013	0.641	0.513	0.641	0.513	0.641	0.513	0.641	0.513	0.641	0.513
0.00	0.1975	0.244	0.53	0.643	0.53	0.539	0.2013	0.4713	0.538	0.513	0.538	0.513	0.538	0.513	0.538	0.513	0.538	0.513
-0.10	0.1713	0.2304	0.2650	0.617	0.62	0.47	0.1763	0.355	0.622	0.355	0.622	0.355	0.622	0.355	0.622	0.355	0.622	0.355
-0.20	0.1451	0.2089	0.351	0.623	0.51	0.4597	0.1384	0.278	0.614	0.278	0.614	0.278	0.614	0.278	0.614	0.278	0.614	0.278
-0.30	0.1189	0.1876	0.322	0.61	0.51	0.4598	0.1107	0.247	0.61	0.247	0.61	0.247	0.61	0.247	0.61	0.247	0.61	0.247
-0.40	0.0927	0.1651	0.320	0.615	0.50	0.4598	0.1158	0.233	0.608	0.233	0.608	0.233	0.608	0.233	0.608	0.233	0.608	0.233
-0.50	0.0665	0.144	0.318	0.616	0.49	0.4598	0.1107	0.219	0.608	0.219	0.608	0.219	0.608	0.219	0.608	0.219	0.608	0.219
-0.75	0.17	0.1881																
-0.80	0.16	0.1801																
-0.90	0.15	0.1646																
-1.00	0.1503																	
-1.10	0.1517																	
-1.20	0.1547																	
-1.30	0.1601																	
-1.40	0.1655																	
-1.50	0.17																	
-1.60	0.1755																	
-1.70	0.1829																	
-1.80	0.1901																	
-1.90	0.1975																	
-2.00	0.205																	
-2.10	0.2122																	
-2.20	0.2196																	
-2.30	0.227																	
-2.40	0.2344																	
-2.50	0.2413																	
-2.60	0.2481																	
-2.70	0.255																	
-2.80	0.2617																	
-2.90	0.2681																	
-3.00	0.2746																	
-3.10	0.2811																	
-3.20	0.2878																	
-3.30	0.2944																	
-3.40	0.3011																	
-3.50	0.3078																	
-3.60	0.3144																	
-3.70	0.3211																	
-3.80	0.3278																	
-3.90	0.3344																	
-4.00	0.3411																	
-4.10	0.3478																	
-4.20	0.3544																	
-4.30	0.3611																	
-4.40	0.3678																	
-4.50	0.3744																	
-4.60	0.3811																	
-4.70	0.3878																	
-4.80	0.3944																	
-4.90	0.4011																	
-5.00	0.4078																	
-5.10	0.4144																	
-5.20	0.4211																	
-5.30	0.4278																	
-5.40	0.4344																	
-5.50	0.4411																	
-5.60	0.4478																	
-5.70	0.4544																	
-5.80	0.4611																	
-5.90	0.4678																	
-6.00	0.4744																	
-6.10	0.4811																	
-6.20	0.4878																	
-6.30	0.4944																	
-6.40	0.5011																	
-6.50	0.5078																	
-6.60	0.5144																	
-6.70	0.5211																	
-6.80	0.5278																	
-6.90	0.5344																	
-7.00	0.5411																	
-7.10	0.5478																	
-7.20	0.5544																	
-7.30	0.5611																	
-7.40	0.5678																	
-7.50	0.5744																	
-7.60	0.5811																	
-7.70	0.5878																	
-7.80	0.5944																	
-7.90	0.6011																	
-8.00	0.6078																	
-8.10	0.6144																	
-8.20	0.6211																	
-8.30	0.6278																	
-8.40	0.6344																	
-8.50	0.6411																	
-8.60	0.6478																	
-8.70	0.6544																	
-8.80	0.6611																	
-8.90	0.6678																	
-9.00	0.6744																	
-9.10	0.6811																	
-9.20	0.6878																	
-9.30	0.6944																	
-9.40	0.7011																	
-9.50	0.7078																	
-9.60	0.7144																	

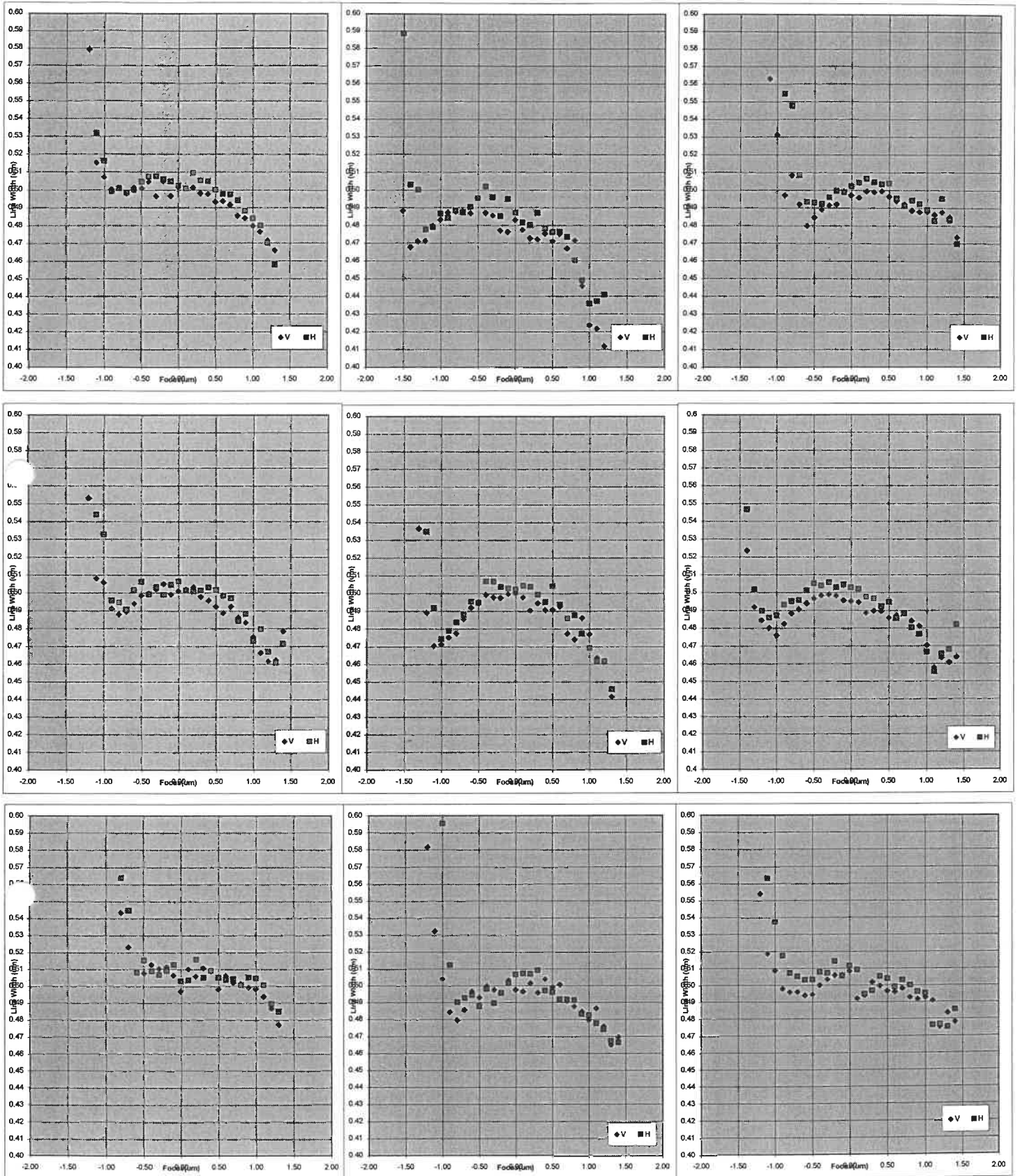
[illegible]

OR	Session	V	IE	ASPT	10%	Session	10%	ASPT	10%	
1.00	0.4554	0.3904	0.592	81.1	56.2	0.4559	0.219	0.202	85.7	61.8
1.10	0.4579	0.4262	0.544	80.0	54.4	0.4585	0.230	0.210	88.4	67.0
1.20	0.4604	0.4550	0.538	81.3	55.3	0.4688	0.2604	0.281	85.5	66.1
1.30	0.4629	0.4838	0.499	82.1	49.9	0.4708	0.2539	0.335	84.9	55.3
1.40	0.4654	0.5126	0.460	83.0	46.0	0.4728	0.2469	0.365	84.3	54.4
1.50	0.4680	0.5414	0.411	83.5	41.1	0.4748	0.2399	0.395	83.6	53.5
1.60	0.4705	0.5702	0.362	84.0	36.2	0.4768	0.2329	0.425	83.0	52.6
1.70	0.4730	0.5990	0.313	84.5	31.3	0.4788	0.2259	0.455	82.4	51.7
1.80	0.4755	0.6278	0.264	85.0	26.4	0.4808	0.2189	0.485	81.8	50.8
1.90	0.4780	0.6566	0.215	85.5	21.5	0.4828	0.2119	0.515	81.2	49.9
2.00	0.4805	0.6854	0.166	86.0	16.6	0.4848	0.2049	0.545	80.6	49.0
2.10	0.4830	0.7142	0.117	86.5	11.7	0.4868	0.1979	0.575	80.0	48.1
2.20	0.4855	0.7430	0.068	87.0	6.8	0.4888	0.1909	0.605	79.4	47.2
2.30	0.4880	0.7718	0.019	87.5	1.9	0.4908	0.1839	0.635	78.8	46.3
2.40	0.4905	0.8006	0.000	88.0	0.0	0.4928	0.1769	0.665	78.2	45.4
2.50	0.4930	0.8294	0.000	88.5	0.0	0.4948	0.1699	0.695	77.6	44.5
2.60	0.4955	0.8582	0.000	89.0	0.0	0.4968	0.1629	0.725	77.0	43.6
2.70	0.4980	0.8870	0.000	89.5	0.0	0.4988	0.1559	0.755	76.4	42.7
2.80	0.5005	0.9158	0.000	90.0	0.0	0.5008	0.1489	0.785	75.8	41.8
2.90	0.5030	0.9446	0.000	90.5	0.0	0.5028	0.1419	0.815	75.2	40.9
3.00	0.5055	0.9734	0.000	91.0	0.0	0.5048	0.1349	0.845	74.6	40.0
3.10	0.5080	1.0022	0.000	91.5	0.0	0.5068	0.1279	0.875	74.0	39.1
3.20	0.5105	1.0310	0.000	92.0	0.0	0.5088	0.1209	0.905	73.4	38.2
3.30	0.5130	1.0598	0.000	92.5	0.0	0.5108	0.1139	0.935	72.8	37.3
3.40	0.5155	1.0886	0.000	93.0	0.0	0.5128	0.1069	0.965	72.2	36.4
3.50	0.5180	1.1174	0.000	93.5	0.0	0.5148	0.0999	0.995	71.6	35.5
3.60	0.5205	1.1462	0.000	94.0	0.0	0.5168	0.0929	1.025	71.0	34.6
3.70	0.5230	1.1750	0.000	94.5	0.0	0.5188	0.0859	1.055	70.4	33.7
3.80	0.5255	1.2038	0.000	95.0	0.0	0.5208	0.0789	1.085	69.8	32.8
3.90	0.5280	1.2326	0.000	95.5	0.0	0.5228	0.0719	1.115	69.2	31.9
4.00	0.5305	1.2614	0.000	96.0	0.0	0.5248	0.0649	1.145	68.6	31.0
4.10	0.5330	1.2902	0.000	96.5	0.0	0.5268	0.0579	1.175	68.0	30.1
4.20	0.5355	1.3190	0.000	97.0	0.0	0.5288	0.0509	1.205	67.4	29.2
4.30	0.5380	1.3478	0.000	97.5	0.0	0.5308	0.0439	1.235	66.8	28.3
4.40	0.5405	1.3766	0.000	98.0	0.0	0.5328	0.0369	1.265	66.2	27.4
4.50	0.5430	1.4054	0.000			0.5348	0.0299	1.295	65.6	26.5
4.60	0.5455	1.4342	0.000			0.5368	0.0229	1.325	65.0	25.6
4.70	0.5480	1.4630	0.000			0.5388	0.0159	1.355	64.4	24.7
4.80	0.5505	1.4918	0.000			0.5408	0.0089	1.385	63.8	23.8
4.90	0.5530	1.5206	0.000			0.5428	0.0019	1.415	63.2	22.9
5.00	0.5555	1.5494	0.000			0.5448	0.0000	1.445	62.6	22.0
5.10	0.5580	1.5782	0.000			0.5468	0.0000	1.475	62.0	21.1
5.20	0.5605	1.6070	0.000			0.5488	0.0000	1.505	61.4	20.2
5.30	0.5630	1.6358	0.000			0.5508	0.0000	1.535	60.8	19.3
5.40	0.5655	1.6646	0.000			0.5528	0.0000	1.565	60.2	18.4
5.50	0.5680	1.6934	0.000			0.5548	0.0000	1.595	59.6	17.5
5.60	0.5705	1.7222	0.000			0.5568	0.0000	1.625	59.0	16.6
5.70	0.5730	1.7510	0.000			0.5588	0.0000	1.655	58.4	15.7
5.80	0.5755	1.7798	0.000			0.5608	0.0000	1.685	57.8	14.8
5.90	0.5780	1.8086	0.000			0.5628	0.0000	1.715	57.2	13.9
6.00	0.5805	1.8374	0.000			0.5648	0.0000	1.745	56.6	13.0
6.10	0.5830	1.8662	0.000			0.5668	0.0000	1.775	56.0	12.1
6.20	0.5855	1.8950	0.000			0.5688	0.0000	1.805	55.4	11.2
6.30	0.5880	1.9238	0.000			0.5708	0.0000	1.835	54.8	10.3
6.40	0.5905	1.9526	0.000			0.5728	0.0000	1.865	54.2	9.4
6.50	0.5930	1.9814	0.000			0.5748	0.0000	1.895	53.6	8.5
6.60	0.5955	2.0102	0.000			0.5768	0.0000	1.925	53.0	7.6
6.70	0.5980	2.0390	0.000			0.5788	0.0000	1.955	52.4	6.7
6.80	0.6005	2.0678	0.000			0.5808	0.0000	1.985	51.8	5.8
6.90	0.6030	2.0966	0.000			0.5828	0.0000	2.015	51.2	4.9
7.00	0.6055	2.1254	0.000			0.5848	0.0000	2.045	50.6	4.0
7.10	0.6080	2.1542	0.000			0.5868	0.0000	2.075	50.0	3.1
7.20	0.6105	2.1830	0.000			0.5888	0.0000	2.105	49.4	2.2
7.30	0.6130	2.2118	0.000			0.5908	0.0000	2.135	48.8	1.3
7.40	0.6155	2.2406	0.000			0.5928	0.0000	2.165	48.2	0.4
7.50	0.6180	2.2694	0.000			0.5948	0.0000	2.195	47.6	-0.5
7.60	0.6205	2.2982	0.000			0.5968	0.0000	2.225	47.0	-1.4
7.70	0.6230	2.3270	0.000			0.5988	0.0000	2.255	46.4	-2.3
7.80	0.6255	2.3558	0.000			0.6008	0.0000	2.285	45.8	-3.2
7.90	0.6280	2.3846	0.000			0.6028	0.0000	2.315	45.2	-4.1
8.00	0.6305	2.4134	0.000			0.6048	0.0000	2.345	44.6	-5.0
8.10	0.6330	2.4422	0.000			0.6068	0.0000	2.375	44.0	-5.9
8.20	0.6355	2.4710	0.000			0.6088	0.0000	2.405	43.4	-6.8
8.30	0.6380	2.5000	0.000			0.6108	0.0000	2.435	42.8	-7.7
8.40	0.6405	2.5290	0.000			0.6128	0.0000	2.465	42.2	-8.6
8.50	0.6430	2.5580	0.000			0.6148	0.0000	2.495	41.6	-9.5
8.60	0.6455	2.5870	0.000			0.6168	0.0000	2.525	41.0	-10.4
8.70	0.6480	2.6160	0.000			0.6188	0.0000	2.555	40.4	-11.3
8.80	0.6505	2.6450	0.000			0.6208	0.0000	2.585	39.8	-12.2
8.90	0.6530	2.6740	0.000			0.6228	0.0000	2.615	39.2	-13.1
9.00	0.6555	2.7030	0.000			0.6248	0.0000	2.645	38.6	-14.0
9.10	0.6580	2.7320	0.000			0.6268	0.0000	2.675	38.0	-14.9
9.20	0.6605	2.7610	0.000			0.6288	0.0000	2.705	37.4	-15.8
9.30	0.6630	2.7900	0.000			0.6308	0.0000	2.735	36.8	-16.7
9.40	0.6655	2.8190	0.000			0.6328	0.0000	2.765	36.2	-17.6
9.50	0.6680	2.8480	0.000			0.6348	0.0000	2.795	35.6	-18.5
9.60	0.6705	2.8770	0.000			0.6368	0.0000	2.825	35.0	-19.4
9.70	0.6730	2.9060	0.000			0.6388	0.0000	2.855	34.4	-20.3
9.80	0.6755	2.9350	0.000			0.6408	0.0000	2.885	33.8	-21.2
9.90	0.6780	2.9640	0.000			0.6428	0.0000	2.915	33.2	-22.1
10.00	0.6805	2.9930	0.000			0.6448	0.0000	2.945	32.6	-23.0
10.10	0.6830	3.0220	0.000			0.6468	0.0000	2.975	32.0	-23.9
10.20	0.6855	3.0510	0.000			0.6488	0.0000	3.005	31.4	-24.8
10.30	0.6880	3.0800	0.000			0.6508	0.0000	3.035	30.8	-25.7
10.40	0.6905	3.1090	0.000			0.6528	0.0000	3.065	30.2	-26.6
10.50	0.6930	3.1380	0.000			0.6548	0.0000	3.095	29.6	-27.5
10.60	0.6955	3.1670	0.000			0.6568	0.0000	3.125	29.0	-28.4
10.70	0.6980	3.1960	0.000			0.6588	0.0000	3.155	28.4	-29.3
10.80	0.7005	3.2250	0.000			0.6608	0.0000	3.185	27.8	-30.2
10.90	0.7030	3.2540	0.000			0.6628	0.0000	3.215	27.2	-31.1
11.00	0.7055	3.2830	0.000			0.6648	0.0000	3.245	26.6	-32.0
11.10	0.7080	3.3120	0.000			0.6668	0.0000	3.275	26.0	-32.9
11.20	0.7105	3.3410	0.000			0.6688	0.0000	3.305	25.4	-33.8
11.30	0.7130	3.3700	0.000			0.6708	0.0000	3.335	24.8	-34.7
11.40	0.7155	3.3990	0.000			0.6728	0.0000	3.365	24.2	-35.6
11.50	0.7180	3.4280	0.000			0.6748	0.0000	3.395	23.6	-36.5
11.60	0.7205	3.4570	0.000			0.6768	0.0000	3.425	23.0	-37.4
11.70	0.7230	3.4860	0.000			0.6788	0.0000	3.455	22.4	-38.3
11.80	0.7255	3.5150	0.000			0.6808	0.0000	3.485	21.8	-39.2
11.90	0.7280	3.5440	0.000			0.6828	0.0000	3.515	21.2	-40.1
12.00	0.7305	3.5730	0.000			0.6848	0.0000	3.545	20.6	-41.0
12.10	0.7330	3.6020	0.000			0.6868	0.0000	3.575	20.0	-41.9
12.20	0.7355	3.6310	0.000			0.6888	0.0000	3.605	19.4	-42.8
12.30	0.7380	3.6600	0.000			0.6908	0.0000	3.635	18.8	-43.7
12.40	0.7405	3.6890	0.000			0.6928	0.0000	3.665	18.2	-44.6
12.50	0.7430	3.7180	0.000			0.6948	0.0000	3.695	17.6	-45.5
12.60	0.7455	3.7470	0							

LR	Bottom		V		H		T		Age ¹ 10/85	
	LR	Bottom	Top	Age ¹ 10/85	Bottom	Top	Age ¹ 10/85	Bottom	Top	Age ¹ 10/85
1.40	0.47492	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.20	0.47533	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.00	0.47574	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.80	0.47615	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.60	0.47656	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.40	0.47697	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.20	0.47738	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.00	0.47779	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.00	0.47820	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.20	0.47861	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.40	0.47902	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.60	0.47943	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
0.80	0.47984	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.00	0.48025	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.20	0.48066	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.40	0.48107	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.60	0.48148	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
1.80	0.48189	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
2.00	0.48230	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
2.20	0.48271	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
2.40	0.48312	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
2.60	0.48353	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
2.80	0.48394	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
3.00	0.48435	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
3.20	0.48476	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
3.40	0.48517	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
3.60	0.48558	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
3.80	0.48599	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
4.00	0.48640	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
4.20	0.48681	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
4.40	0.48722	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
4.60	0.48763	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
4.80	0.48804	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
5.00	0.48845	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
5.20	0.48886	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
5.40	0.48927	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
5.60	0.48968	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
5.80	0.49009	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
6.00	0.49050	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
6.20	0.49091	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
6.40	0.49132	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
6.60	0.49173	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
6.80	0.49214	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
7.00	0.49255	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
7.20	0.49296	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
7.40	0.49337	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
7.60	0.49378	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
7.80	0.49419	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
8.00	0.49460	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
8.20	0.49501	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
8.40	0.49542	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
8.60	0.49583	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
8.80	0.49624	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
9.00	0.49665	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
9.20	0.49706	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
9.40	0.49747	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
9.60	0.49788	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
9.80	0.49829	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
10.00	0.49870	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
10.20	0.49911	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
10.40	0.49952	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
10.60	0.49993	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
10.80	0.50034	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
11.00	0.50075	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
11.20	0.50116	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
11.40	0.50157	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
11.60	0.50198	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
11.80	0.50239	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
12.00	0.50280	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
12.20	0.50321	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
12.40	0.50362	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
12.60	0.50403	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
12.80	0.50444	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
13.00	0.50485	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
13.20	0.50526	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
13.40	0.50567	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
13.60	0.50608	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
13.80	0.50649	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
14.00	0.50690	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
14.20	0.50731	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
14.40	0.50772	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
14.60	0.50813	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
14.80	0.50854	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
15.00	0.50895	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
15.20	0.50936	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
15.40	0.50977	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
15.60	0.51018	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
15.80	0.51059	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
16.00	0.51100	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
16.20	0.51141	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
16.40	0.51182	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
16.60	0.51223	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
16.80	0.51264	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
17.00	0.51305	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
17.20	0.51346	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
17.40	0.51387	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
17.60	0.51428	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
17.80	0.51469	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
18.00	0.51510	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
18.20	0.51551	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
18.40	0.51592	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
18.60	0.51633	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
18.80	0.51674	0.5927	0.549	0.549	0.4864	0.5022	0.623	0.551	0.623	0.551
19.00										

Performance Summary

CD Depth of Focus @ 0.50um	1.82	um
Wall Angle Depth of Focus for 0.50um @ 80.0 deg	1.38	um
Mean CD (All points included)	0.4854	um
Linewidth Reproducibility within Field 0.50um (Total Range Max 9 points)	0.0313	um
Min Wall Angle 9 points @ BF	85.1	Deg
Field Curvature (Tilt Compensation)	0.18	um
Distortion	0.10	um
Tilt X	-0.42	um
Tilt Y	4.17	um
T	4.19	um

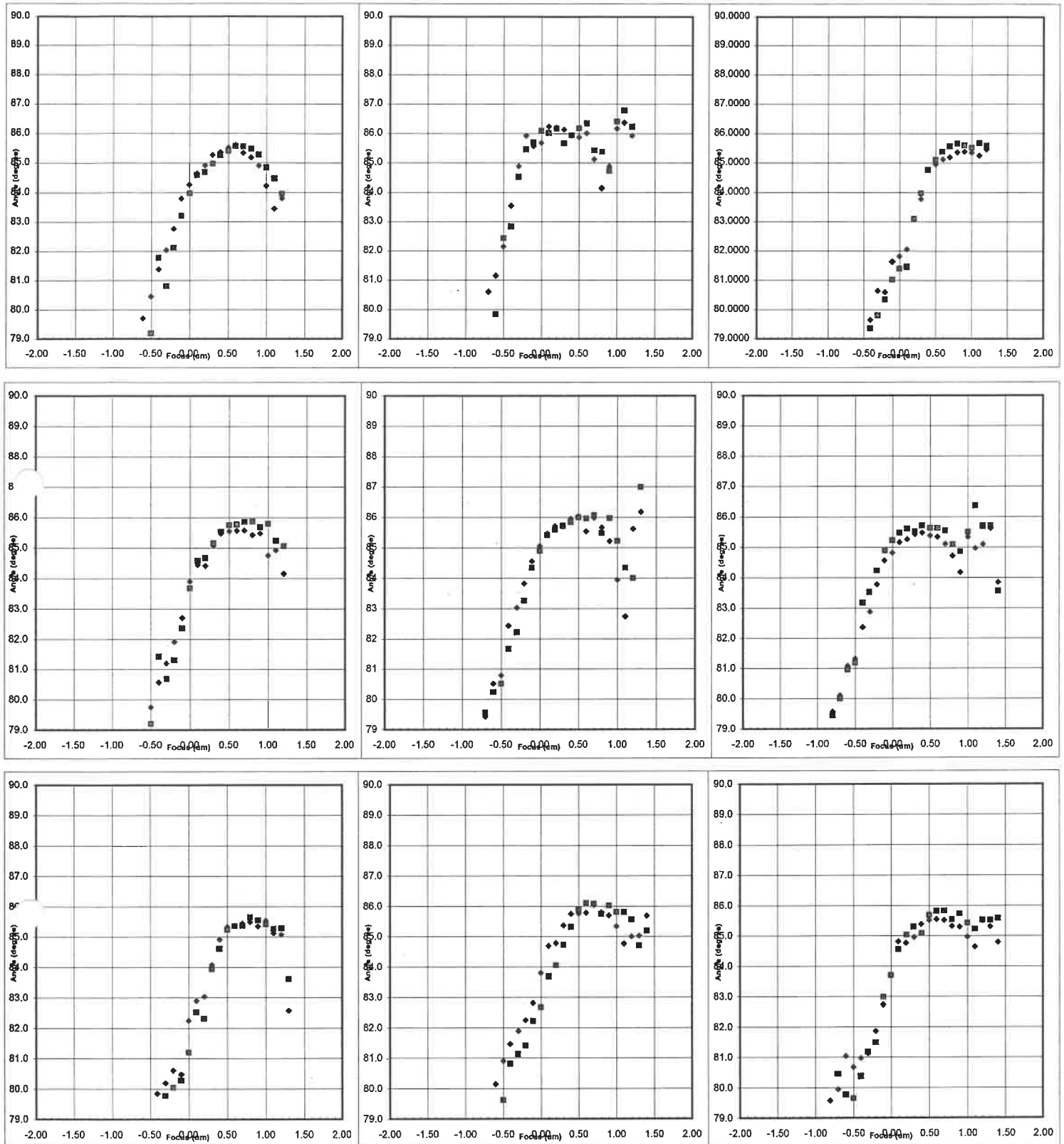


Rt	1.185 umt	Reticle	C700	Machine Type	3000i4	NA	0.52	Illumination	Special Mode
Resist	IX500	Exposure	2225 j/m2	Serial No.	506 496	Sigma	0.60	Line width	0.50 um

Canon

CD Performance - 9 Fields

Alcatel #506 496 i4 (Stepper 6)



Rt	1.185 umt	Reticle	C700	Machine Type	300014	NA	0.52	Illumination	Special Mode
Resist	IX500	Exposure	2225 j/m2	Serial No.	506 496	Sigma	0.50	Line width	0.50 um

Canon

Profile Performance - 9 Fields

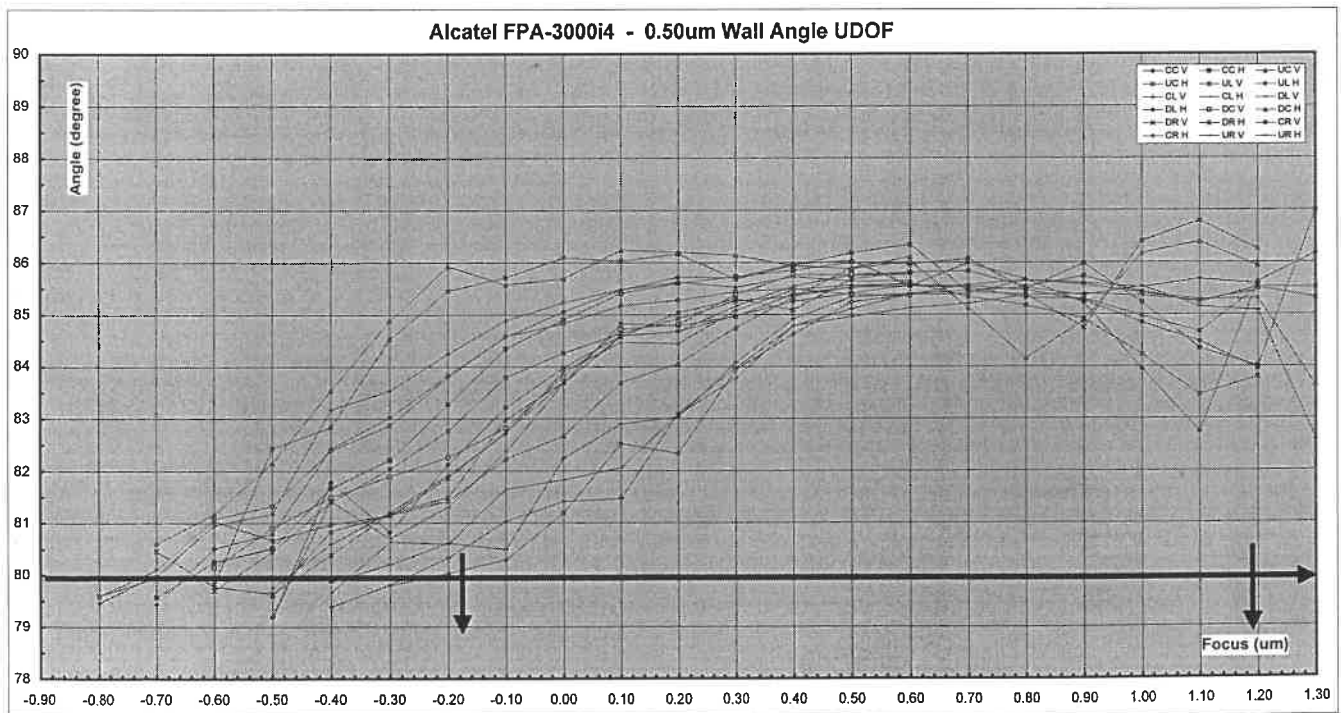
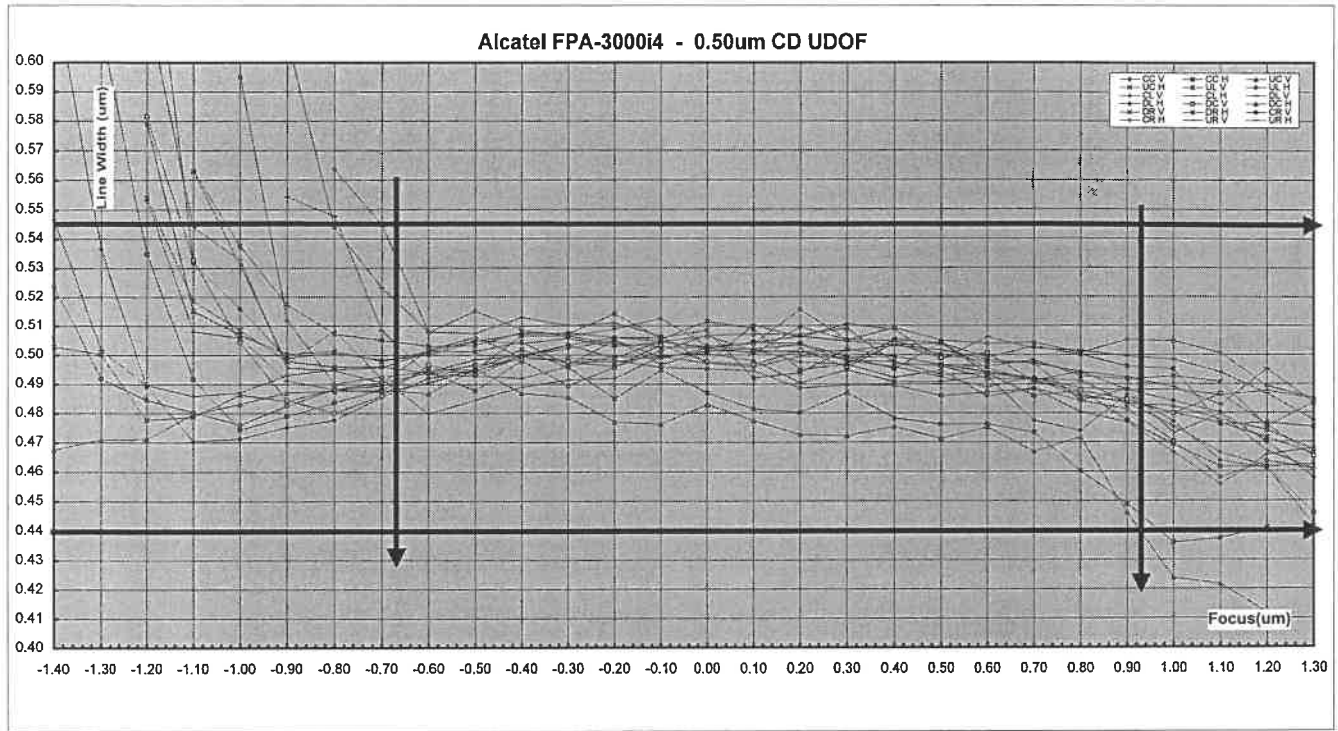
Alcatel #506 496 i4 (Stepper 6)

Canon

DOF performance

Alcatel #506 496 i4 (Stepper 6)

Rt	1.185 umt	Reticle	C700	Machine Type	3000i4	NA	0.52	Illumination	Special Mode
Resist	IX500	Exposure	2225 j/m2	Serial No.	506 496	Sigma	0.60	Line width	0.50 um

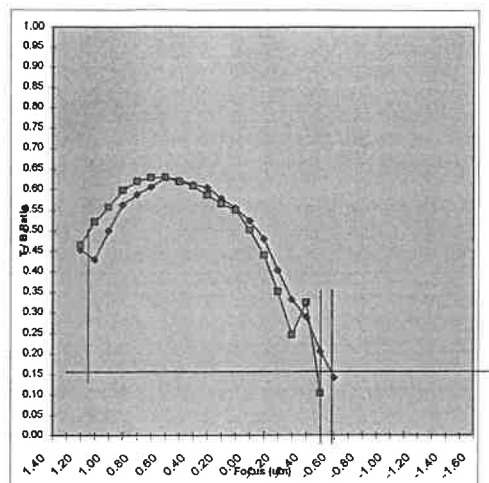


CD Depth of Focus @ 0.50um

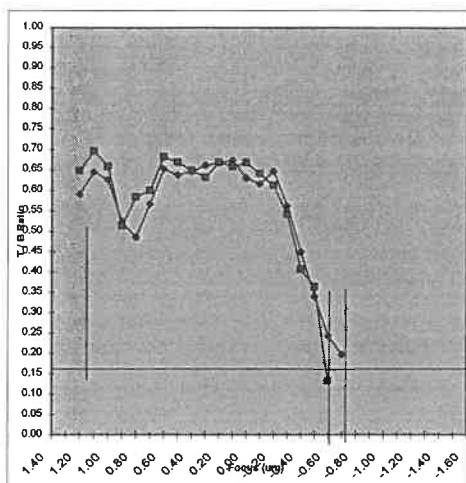
1.62 um

Wall Angle Depth of Focus for 0.50um @ 80.0 deg

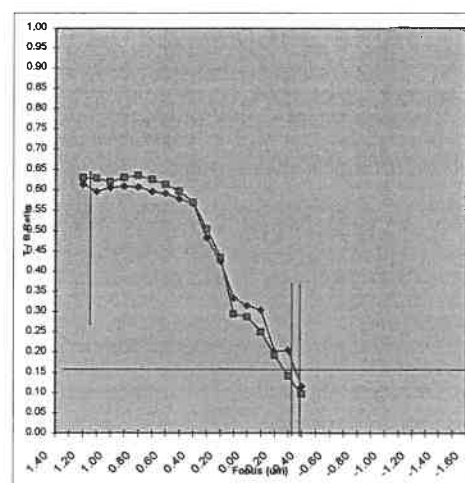
1.38 um



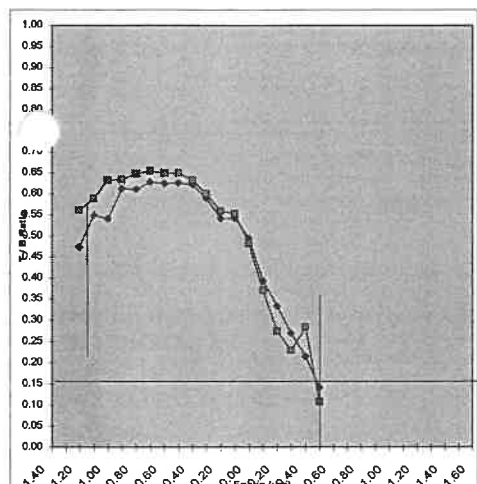
V L R BF
H 1.200 -0.550 0.325 Blue
1.200 -0.500 0.350 Pink



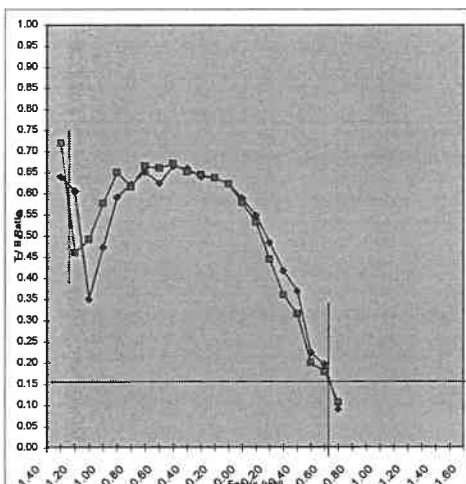
V L R BF
H 1.200 -0.700 0.250 Blue
1.200 -0.600 0.300 Pink



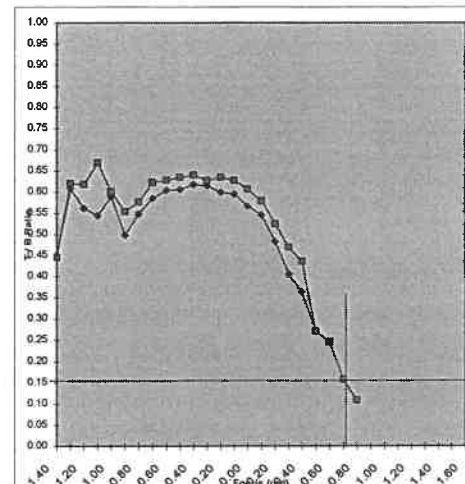
V L R BF
H 1.200 -0.350 0.425 Blue
1.200 -0.300 0.450 Pink



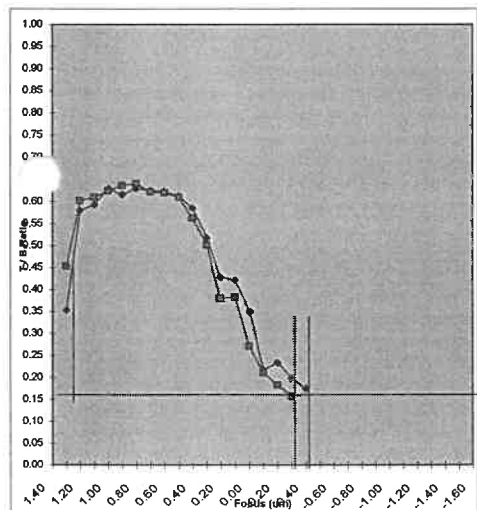
V L R BF
H 1.200 -0.500 0.350 Blue
1.200 -0.500 0.350 Pink



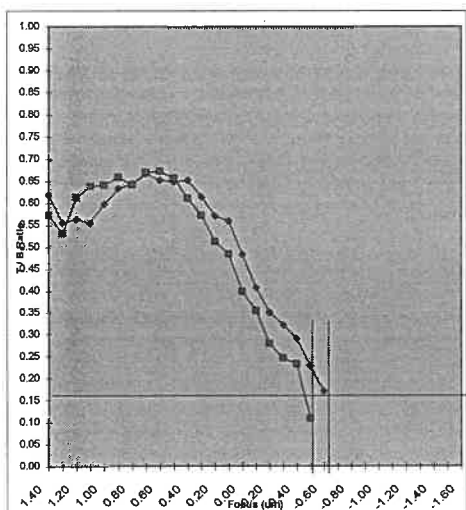
V L R BF
H 1.300 -0.600 0.350 Blue
1.300 -0.600 0.350 Pink



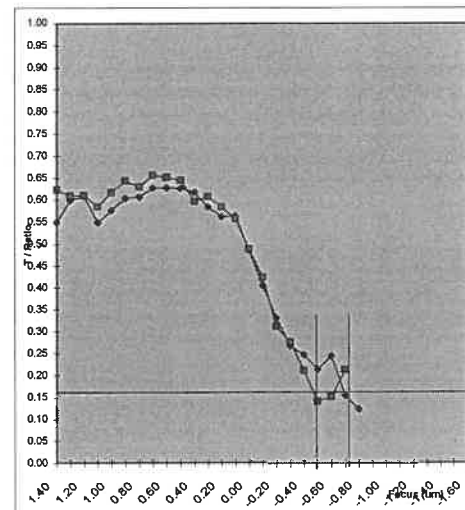
V L R BF
H 1.400 -0.700 0.350 Blue
1.400 -0.700 0.350 Pink



V L R BF
H 1.300 -0.400 0.450 Blue
1.300 -0.300 0.500 Pink



V L R BF
H 1.400 -0.500 0.450 Blue
1.400 -0.500 0.450 Pink



V L R BF
H 1.400 -0.500 0.450 Blue
1.400 -0.500 0.450 Pink

Rt	1.185 umt	Reticle	C700	Machine Type	3000i4	NA	0.52	Illumination	Special Mode
Resist	IX500	Exposure	2225 j/m2	Serial No.	506 496	Sigma	0.80	Line width	0.50 um

Canon

Image Surface Width - 9 Fields

(T / B vs Focus)

Alcatel #506 496 i4 (Stepper 6)

Canon

Lens Performance Data

Alcatel #506 496 i4 (Stepper 6)

Rt	1.185 umt	Reticle	C700	Machine Type	3000i4	NA	0.52	IlluminationSpecial Mode
Resist	1X500	Exposure	2225 J/m2	Serial No.	506 496	Sigma	0.60	Line width 0.50 um

From SEM measurement data :

Best Focus

Vertical	0.325	0.250	0.425
	0.350	0.350	0.350
	0.450	0.400	0.350

Compensation Amount for Tilt

	-10	0	10
10	0.046	0.042	0.038
0	0.004	0.000	-0.004
-10	-0.038	-0.042	-0.046

Horizontal	0.350	0.300	0.450
	0.350	0.350	0.350
	0.500	0.450	0.450

After compensation

	0.383	0.317	0.475	0.392
	0.354	0.350	0.346	0.392
	0.438	0.383	0.354	0.392
	0.392	0.392		

4 corners focus only

0.383	0.475
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0.438	0.354
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	-10	0	10	Ave Y
10	0.338	0.275	0.438	0.350
0	0.350	0.350	0.350	0.350
-10	0.475	0.425	0.400	0.433
Ave X	0.388	0.350	0.396	

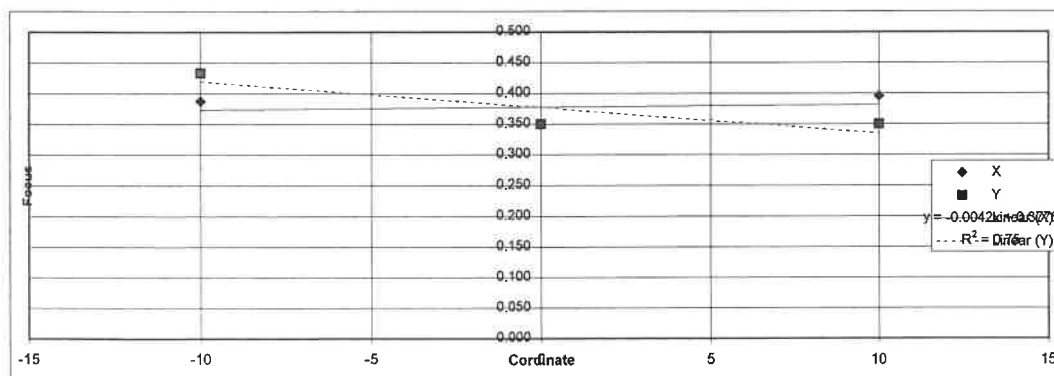
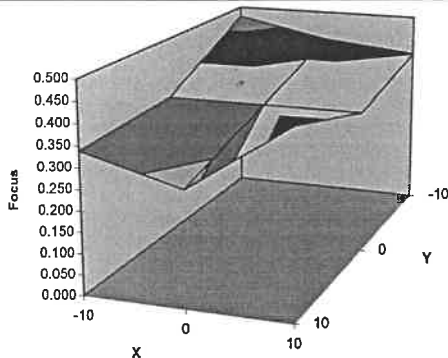
	X	Y
-10	0.388	0.433
0	0.350	0.350
10	0.396	0.350

Tilt V	-0.42	4.17 ppm
		4.19 ppm

HV Diff	-0.025	-0.050	-0.025
	0.000	0.000	0.000
	-0.050	-0.050	-0.100
			-0.100 um

Focus	Centre	0.350 um
	Average	0.378 um

Field Curvature - Tilt comp.	0.16 um
Field Curvature - Tilt Incl.	0.20 um
4 Corner Range	0.12 um
Image Surface Width (Centre - Max of 4 corners)	-0.13 um
4 Corner Mean minus Centre	0.06 um
Astigmatism	0.10 um





CD Uniformity

Alcatel #506 496 i4 (Stepper 6)

(Linewidth Repeatability within a Field)

Focus	V	Angle	H	Angle
0.1	0.4915	85.3	0.4972	85.5
BF	0.4937	85.6	0.4976	85.6
-0.1	0.4932	85.5	0.5000	85.4
Average	0.4928	85.5	0.4983	85.5

Focus	V	Angle	H	Angle
0.1	0.4669	85.1	0.4734	85.4
BF	0.4752	86.0	0.4763	86.3
-0.1	0.4712	85.9	0.4762	86.2
Average	0.4711	85.7	0.4753	86.0

Focus	V	Angle	H	Angle
0.1	0.4921	85.2	0.4912	85.6
BF	0.4941	85.1	0.4953	85.4
-0.1	0.4965	85.0	0.5039	85.1
Average	0.4942	85.1	0.4968	85.4

Focus	V	Angle	H	Angle
0.1	0.4924	85.6	0.4971	85.8
BF	0.4889	85.6	0.4984	85.8
-0.1	0.4924	85.6	0.5016	85.8
Average	0.4912	85.6	0.4990	85.8

Focus	V	Angle	H	Angle
0.1	0.4775	86.0	0.4859	86.1
BF	0.4926	85.5	0.4936	86.0
-0.1	0.4908	86.0	0.5041	86.0
Average	0.4870	85.9	0.4945	86.0

Focus	V	Angle	H	Angle
0.1	0.4885	85.1	0.4882	85.6
BF	0.4872	85.4	0.4857	85.6
-0.1	0.4860	85.4	0.4947	85.6
Average	0.4872	85.3	0.4895	85.6

Focus	V	Angle	H	Angle
0.1	0.5022	85.5	0.5043	85.4
BF	0.5062	85.4	0.5038	85.4
-0.1	0.4983	85.3	0.5051	85.2
Average	0.5022	85.4	0.5044	85.3

Focus	V	Angle	H	Angle
0.1	0.4909	86.0	0.4917	86.1
BF	0.5006	85.8	0.4919	86.1
-0.1	0.4989	85.8	0.4962	85.9
Average	0.4968	85.9	0.4933	86.0

Focus	V	Angle	H	Angle
0.1	0.4982	85.5	0.5030	85.8
BF	0.4961	85.5	0.4990	85.8
-0.1	0.4966	85.5	0.5039	85.7
Average	0.4970	85.5	0.5020	85.8

BF used

0.60

Total Range (H&V, 9 points)

0.0333

um

Minimum Wall Angle

85.1

deg



CD Linearity

Alcatel

Rt	1.185	umt	Reticle	C700	Machine Type
Resist	1X500		Exposure	2250	j/m2

UL

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4846	0.4902	0.50	-0.015	-0.010	-0.010	-3.08%	-1.96%	-0.35%	0.463	0.538
0.55	0.5460	0.5481	0.55	-0.004	-0.002	-0.002	-0.73%	-0.35%	0.509	0.591	
0.60	0.5993	0.6020	0.60	-0.001	0.002	-0.12%	0.33%	0.555	0.645		
0.65	0.6531	0.6580	0.65	0.003	0.008	0.48%	1.23%	0.601	0.699		
0.70	0.7076	0.7160	0.70	0.008	0.016	1.09%	2.29%	0.648	0.753		
0.75	0.7588	0.7695	0.75	0.009	0.020	1.17%	2.60%	0.694	0.806		
0.80	0.8129	0.8261	0.80	0.013	0.026	1.61%	3.26%	0.740	0.860		
0.90	0.9186	0.9321	0.90	0.019	0.032	2.07%	3.57%	0.833	0.968		
1.00	1.0247	1.0335	1.00	0.025	0.034	2.47%	3.35%	0.925	1.075		

UC

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4808	0.4835	0.50	-0.019	-0.017	-3.84%	-3.30%	0.463	0.538		
0.55	0.5341	0.5370	0.55	-0.016	-0.013	-2.89%	-2.36%	0.509	0.591		
0.60	0.5923	0.5915	0.60	-0.008	-0.008	-1.28%	-1.42%	0.555	0.645		
0.65	0.6453	0.6490	0.65	-0.005	-0.001	-0.72%	-0.15%	0.601	0.699		
0.70	0.6947	0.7037	0.70	-0.005	0.004	-0.76%	0.53%	0.648	0.753		
0.75	0.7522	0.7559	0.75	0.002	0.008	0.29%	0.79%	0.694	0.806		
0.80	0.8057	0.8131	0.80	0.006	0.013	0.71%	1.64%	0.740	0.860		
0.90	0.8943	0.9144	0.90	-0.006	0.014	-0.63%	1.60%	0.833	0.968		
1.00	1.0101	1.0196	1.00	0.010	0.020	1.01%	1.96%	0.925	1.075		

UR

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4846	0.4802	0.50	-0.015	-0.020	-3.08%	-3.96%	0.463	0.538		
0.55	0.5331	0.5433	0.55	-0.017	-0.007	-3.07%	-1.22%	0.509	0.591		
0.60	0.5865	0.5985	0.60	-0.014	-0.001	-2.25%	-0.25%	0.555	0.645		
0.65	0.6442	0.6570	0.65	-0.006	0.007	-0.89%	1.08%	0.601	0.699		
0.70	0.6879	0.7150	0.70	-0.002	0.015	-0.30%	2.14%	0.648	0.753		
0.75	0.7503	0.7685	0.75	0.000	0.019	0.04%	2.47%	0.694	0.806		
0.80	0.8044	0.8189	0.80	0.004	0.020	0.55%	2.49%	0.740	0.860		
0.90	0.9053	0.9210	0.90	0.005	0.021	0.59%	2.33%	0.833	0.968		
1.00	1.0022	1.0221	1.00	0.002	0.022	0.22%	2.21%	0.925	1.075		

CL

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4810	0.4844	0.50	-0.019	-0.016	-3.80%	-3.12%	0.463	0.538		
0.55	0.5326	0.5441	0.55	-0.017	-0.006	-3.16%	-1.07%	0.509	0.591		
0.60	0.5883	0.5987	0.60	-0.012	-0.001	-1.95%	-0.22%	0.555	0.645		
0.65	0.6408	0.6568	0.65	-0.009	0.007	-1.42%	1.05%	0.601	0.699		
0.70	0.6954	0.7148	0.70	-0.005	0.015	-0.66%	2.11%	0.648	0.753		
0.75	0.7474	0.7690	0.75	-0.003	0.018	-0.35%	2.40%	0.694	0.806		
0.80	0.8047	0.8172	0.80	0.005	0.017	0.59%	2.15%	0.740	0.860		
0.90	0.9107	0.9279	0.90	0.011	0.028	1.19%	3.10%	0.833	0.968		
1.00	1.0115	1.0323	1.00	0.012	0.032	1.15%	3.23%	0.925	1.075		

CC

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4846	0.4860	0.50	-0.015	-0.014	-3.08%	-2.80%	0.463	0.538		
0.55	0.5360	0.5445	0.55	-0.014	-0.006	-2.55%	-1.00%	0.509	0.591		
0.60	0.5856	0.6023	0.60	-0.014	0.002	-2.40%	0.38%	0.555	0.645		
0.65	0.6410	0.6573	0.65	-0.009	0.007	-1.38%	1.12%	0.601	0.699		
0.70	0.6974	0.7151	0.70	-0.003	0.015	-0.37%	2.16%	0.648	0.753		
0.75	0.7504	0.7691	0.75	0.000	0.019	0.05%	2.55%	0.694	0.806		
0.80	0.8084	0.8069	0.80	0.008	0.007	1.05%	0.86%	0.740	0.860		
0.90	0.9092	0.9315	0.90	0.009	0.033	1.02%	3.50%	0.833	0.968		
1.00	1.0100	1.0328	1.00	0.010	0.032	1.00%	3.28%	0.925	1.075		

CR

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4804	0.4900	0.50	-0.020	-0.010	-3.92%	-2.00%	0.463	0.538		
0.55	0.5305	0.5424	0.55	-0.020	-0.008	-3.55%	-1.36%	0.509	0.591		
0.60	0.5852	0.5938	0.60	-0.015	-0.006	-2.47%	-1.03%	0.555	0.645		
0.65	0.6385	0.6506	0.65	-0.012	0.001	-1.77%	0.09%	0.601	0.699		
0.70	0.6914	0.7083	0.70	-0.009	0.008	-1.23%	1.19%	0.648	0.753		
0.75	0.7453	0.7618	0.75	-0.005	0.012	-0.63%	1.57%	0.694	0.806		
0.80	0.8026	0.8200	0.80	0.003	0.020	0.32%	2.50%	0.740	0.860		
0.90	0.8999	0.9253	0.90	0.000	0.025	-0.01%	2.81%	0.833	0.968		
1.00	1.0047	1.0272	1.00	0.005	0.027	0.47%	2.72%	0.925	1.075		

DL

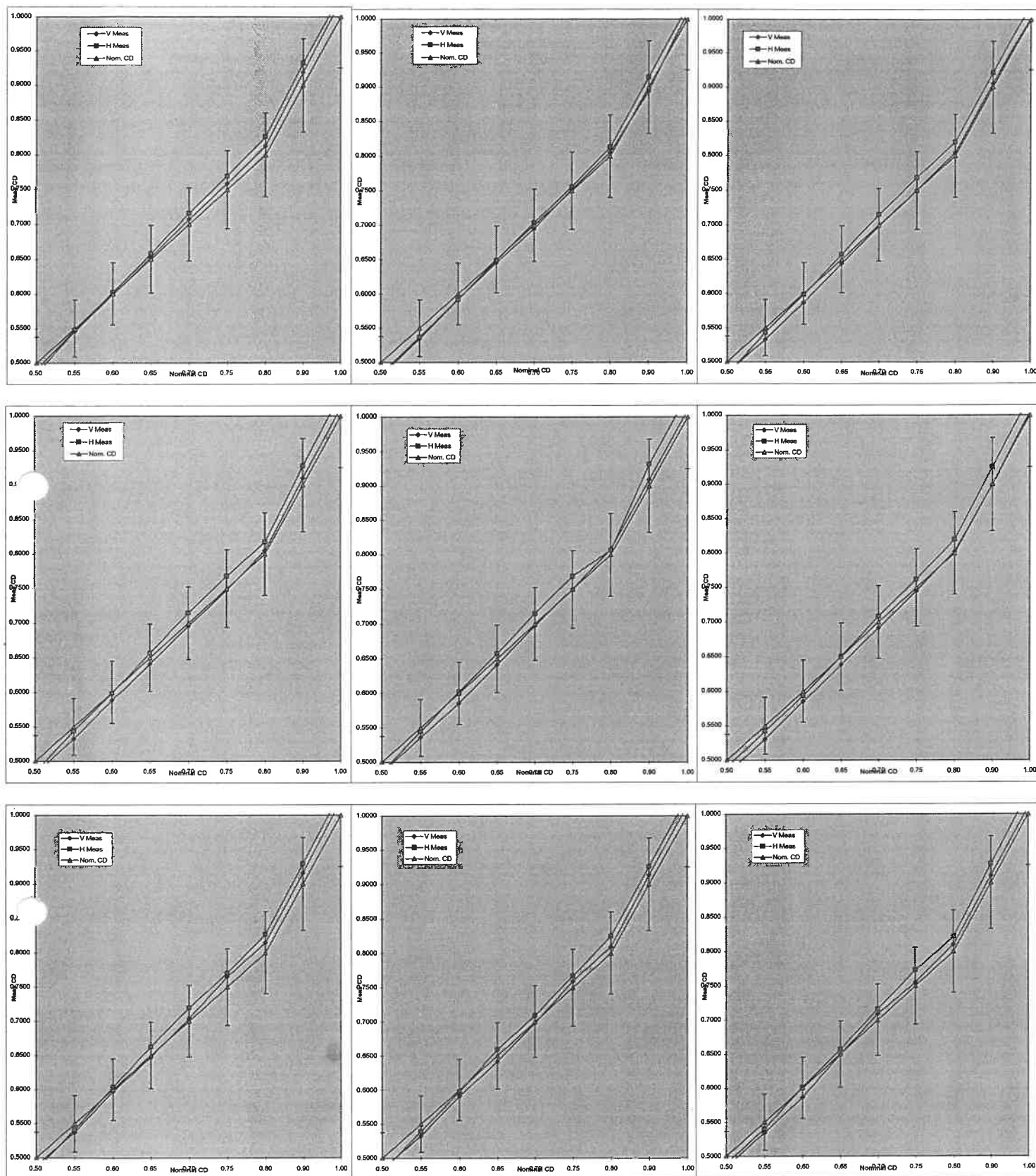
Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4889	0.4834	0.50	-0.011	-0.017	-2.22%	-3.32%	0.463	0.538		
0.55	0.5373	0.5415	0.55	-0.013	-0.009	-2.31%	-1.55%	0.509	0.591		
0.60	0.5973	0.6038	0.60	-0.003	0.004	-0.45%	0.63%	0.555	0.645		
0.65	0.6470	0.6624	0.65	-0.003	0.012	-0.46%	1.91%	0.601	0.699		
0.70	0.7044	0.7197	0.70	0.004	0.020	0.63%	2.81%	0.648	0.753		
0.75	0.7651	0.7704	0.75	0.015	0.020	2.01%	2.72%	0.694	0.806		
0.80	0.8145	0.8268	0.80	0.015	0.027	1.81%	3.35%	0.740	0.860		
0.90	0.9156	0.9292	0.90	0.016	0.029	1.73%	3.24%	0.833	0.968		
1.00	1.0217	1.0345	1.00	0.022	0.035	2.17%	3.45%	0.925	1.075		

DC

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4846	0.4812	0.50	-0.015	-0.019	-3.08%	-3.76%	0.463	0.538		
0.55	0.5325	0.5390	0.55	-0.018	-0.011	-3.18%	-2.00%	0.509	0.591		
0.60	0.5909	0.5972	0.60	-0.009	-0.003	-1.52%	-0.47%	0.555	0.645		
0.65	0.6411	0.6593	0.65	-0.009	0.009	-1.37%	1.43%	0.601	0.699		
0.70	0.6985	0.7094	0.70	-0.001	0.009	-0.21%	1.34%	0.648	0.753		
0.75	0.7591	0.7667	0.75	0.009	0.017	1.21%	2.23%	0.694	0.806		
0.80	0.8093	0.8246	0.80	0.009	0.025	1.16%	3.07%	0.740	0.860		
0.90	0.9133	0.9259	0.90	0.013	0.026	1.48%	2.88%	0.833	0.968		
1.00	1.0152	1.0280	1.00	0.015	0.028	1.52%	2.80%	0.925	1.075		

DR

Nom. CD	V		H	Nom. CD	V CD Range	H CD Range	V % CD		H % CD Diff	7.5% CD Ranges	
	Meas	Meas					Diff	Diff		Min	Max
0.50	0.4846	0.4895	0.50	-0.015	-0.011	-3.08%	-2.10%	0.463	0.538		
0.55	0.5344	0.5399	0.55	-0.016	-0.010	-2.84%	-1.84%	0.509	0.591		
0.60	0.5868	0.6014	0.60	-0.013	0.001	-2.20%	0.23%	0.555	0.645		
0.65	0.6496	0.6574	0.65	0.000	0.007	-0.06%	1.14%	0.601	0.699		
0.70	0.7088	0.7159	0.70	0.009	0.016	1.26%	2.27%	0.648	0.753		
0.75	0.7552	0.7732	0.75	0.005	0.023	0.69%	3.09%	0.694	0.806		
0.80	0.8099	0.8216	0.80	0.010	0.022	1.24%	2.70%	0.740	0.860		
0.90	0.9104	0.9270	0.90	0.010	0.027	1.16%	3.00%	0.833	0.968		
1.00	1.0102	1.0319	1.00	0.010	0.032	1.02%	3.19%	0.925	1.075		



Rt	1.185	umt	Reticle	C700	Machine Type	FPA-3000i4	NA	0.52	Illumination	Special 1	Customer	Alcatel
Resist	IX500		Exposure	2250	Serial No.	#506496	Sigma	0.60	Line width	0.5 um	Cust No.	Stepper 6

Canon

CD Linearity

0.00

Alcatel



Proximity Effect - 0.50um

Alcatel #506496i4 (Stepper 6)

Rt	1.185	Reticle	C700	NA	0.52	Illumination	Special Mode	Machine Type	3000i4
Resist	IX500	Dose	2350	Sigma	0.6	Line width	0.50 um	Serial No.	#601596

	V	H
Dense	532.7	548.1
Isolated	500.7	506.5
Range	32.0	41.6

	V	H
Dense	526.7	535.8
Isolated	491.6	502.2
Range	35.1	33.6

	V	H
Dense	543.3	543.7
Isolated	504.2	503.5
Range	39.1	40.2

	V	H
Dense	526.8	536.9
Isolated	500.1	501.7
Range	26.7	35.2

	V	H
Dense	521.8	536.2
Isolated	505.3	504.3
Range	16.5	31.9

	V	H
Dense	525.1	541.7
Isolated	499.2	501.1
Range	25.9	40.6

	V	H
Dense	530.0	535.7
Isolated	499.5	507.0
Range	30.5	28.7

	V	H
Dense	528.2	531.2
Isolated	506.2	503.2
Range	22.0	28.0

	V	H
Dense	524.2	544.2
Isolated	509.6	507.7
Range	14.6	36.5

Focus Used	0.40				
Range	<table><tr><td>41.6</td><td>nm</td></tr><tr><td>0.0416</td><td>um</td></tr></table>	41.6	nm	0.0416	um
41.6	nm				
0.0416	um				

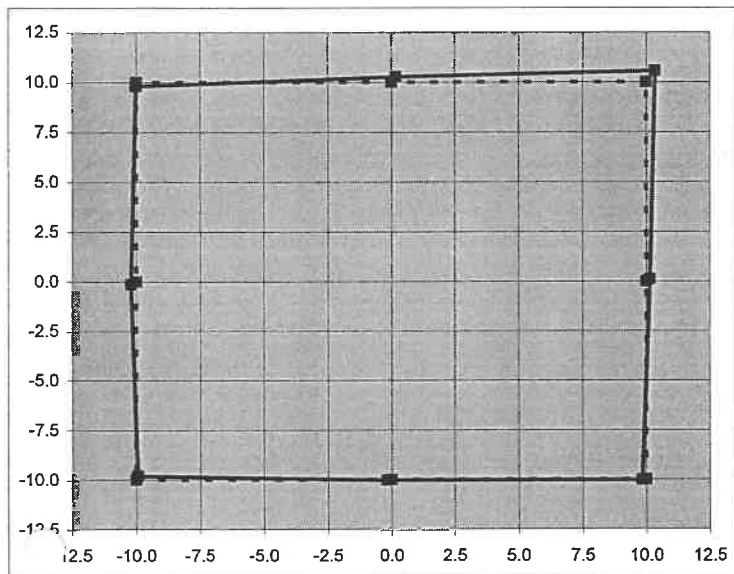


Lens Distortion Performance

Distortion Data - Including Magnification

X Data	-2	-1	0	1	2
2	-0.001	-0.012	0.009	0.024	0.017
1	0.022	0.023	0.004	-0.015	-0.011
0	-0.010	-0.025	-0.003	0.015	0.007
-1	-0.002	0.005	-0.007	-0.011	-0.003
-2	0.003	-0.005	-0.009	-0.010	-0.008

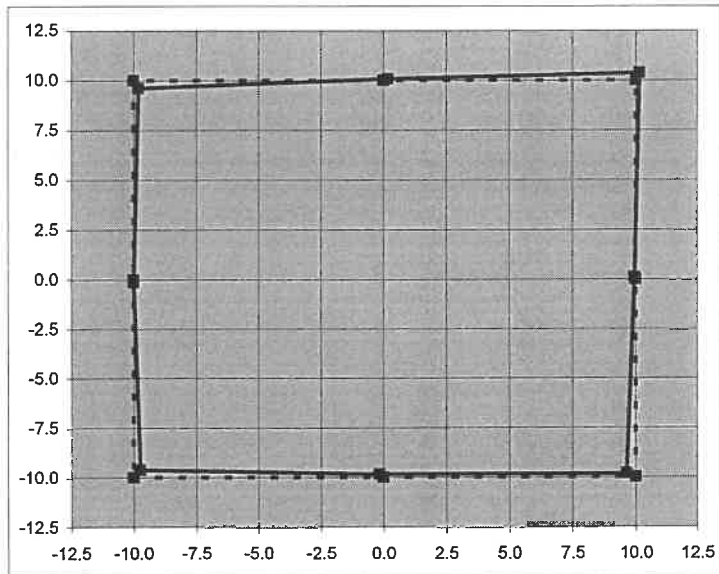
Y Data	-2	-1	0	1	2
2	-0.010	0.010	0.014	0.022	0.028
1	0.010	0.014	0.019	0.000	-0.006
0	-0.008	-0.012	-0.004	0.000	0.005
-1	-0.007	-0.015	-0.024	-0.024	-0.015
-2	0.010	0.000	-0.002	-0.005	0.000



Distortion Data - Excluding Magnification

X Data	-2	-1	0	1	2
2	0.009	-0.007	0.009	0.019	0.007
1	0.012	0.018	0.004	-0.010	-0.001
0	0.000	-0.021	-0.003	0.011	-0.002
-1	-0.011	0.000	-0.007	-0.006	0.007
-2	0.013	0.000	-0.009	-0.014	-0.018

Y Data	-2	-1	0	1	2
2	-0.020	0.000	0.004	0.013	0.019
1	0.005	0.009	0.014	-0.005	-0.010
0	-0.008	-0.012	-0.004	0.000	0.005
-1	-0.002	-0.010	-0.020	-0.020	-0.010
-2	0.019	0.010	0.008	0.005	0.009



Distortion Data - Including Magnification

Distortion	X	Y	
D20 Max	0.024	0.028	um
D20 Min	-0.025	-0.024	um

Compensation amounts

	X	Y	Average	
Mag	1.006	1.044	1.025	ppm
Rot	2.113	0.661	1.387	ppm

Field Symmetry (20mm)

	X	Y	
Sym.	0.025	0.038	(um)
Rotation		0.754	ppm

Distortion Data - Excluding Magnification

Distortion	X	Y	
D20 Max	0.019	0.019	um
D20 Min	-0.021	-0.020	um

Alcatel FPA-3000i4 #506496i4

Lens Distortion

Standard Illumination Mode

Illumination Mode	Standard
NA	0.63
Sigma	0.65



Lens Distortion Performance

Distortion Data - Including Magnification

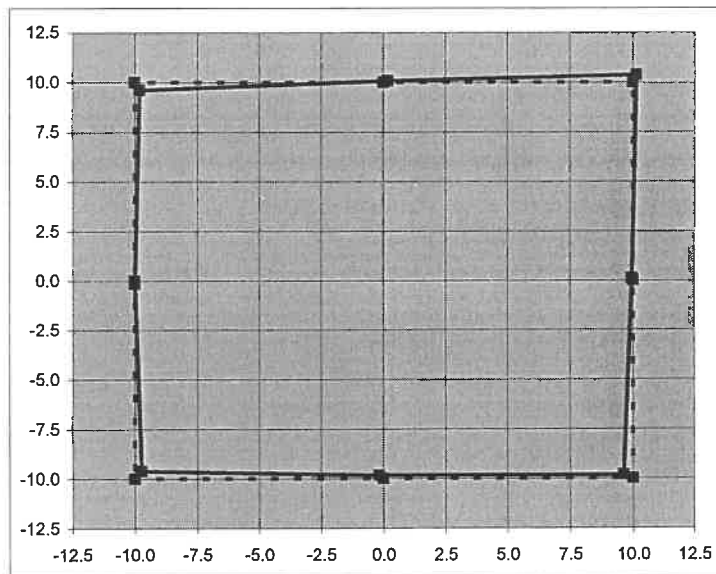
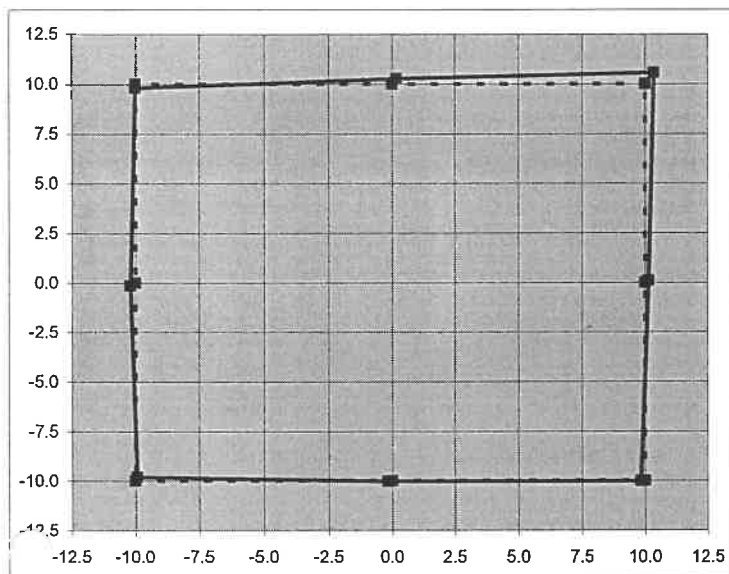
X Data	-2	-1	0	1	2
2	-0.001	-0.012	0.009	0.024	0.017
1	0.022	0.023	0.004	-0.015	-0.011
0	-0.010	-0.025	-0.003	0.015	0.007
-1	-0.002	0.005	-0.007	-0.011	-0.003
-2	0.003	-0.005	-0.009	-0.010	-0.008

Y Data	-2	-1	0	1	2
2	-0.010	0.010	0.014	0.022	0.028
1	0.010	0.014	0.019	0.000	-0.006
0	-0.008	-0.012	-0.004	0.000	0.005
-1	-0.007	-0.015	-0.024	-0.024	-0.015
-2	0.010	0.000	-0.002	-0.005	0.000

Distortion Data - Excluding Magnification

X Data	-2	-1	0	1	2
2	0.009	-0.007	0.009	0.019	0.007
1	0.012	0.018	0.004	-0.010	-0.001
0	0.000	-0.021	-0.003	0.011	-0.002
-1	-0.011	0.000	-0.007	-0.006	0.007
-2	0.013	0.000	-0.009	-0.014	-0.018

Y Data	-2	-1	0	1	2
2	-0.020	0.000	0.004	0.013	0.019
1	0.005	0.009	0.014	-0.005	-0.010
0	-0.008	-0.012	-0.004	0.000	0.005
-1	-0.002	-0.010	-0.020	-0.020	-0.010
-2	0.019	0.010	0.008	0.005	0.009



Distortion Data - Including Magnification

Distortion	X	Y	
D20 Max	0.024	0.028	um
D20 Min	-0.025	-0.024	um

Compensation amounts

	X	Y	Average	
Mag	1.006	1.044	1.025	ppm
Rot	2.113	0.661	1.387	ppm

Field Symmetry (20mm)

	X	Y	
Sym.	0.025	0.038	(um)
Rotation		0.754	ppm

Distortion Data - Excluding Magnification

Distortion	X	Y	
D20 Max	0.019	0.019	um
D20 Min	-0.021	-0.020	um

Alcatel FPA-3000i4 #506496i4

Lens Distortion

Standard Illumination Mode

Illumination Mode	Standard
NA	0.63
Sigma	0.65



Reticle Rotation Accuracy

SYSTEM IVS-1

Device-CANON Level-PREACCEP Job Plan-RETROTAT Lot #S6RR1

Wed Feb 23 17:20:53 2000

WAFER_ID 1

C1	R1	D1	S1	-0.3097	-0.0114
C2	R1	D2	S1	-0.2991	-0.0023
C3	R1	D3	S1	-0.3022	-0.0055
C4	R1	D4	S1	-0.3012	-0.0185
C5	R1	D5	S1	-0.3085	-0.0165

Average -0.30414 -0.01084

C5	R2	D6	S1	-0.302	-0.0172
C4	R2	D7	S1	-0.3034	-0.0005
C3	R2	D8	S1	-0.3043	-0.0122
C2	R2	D9	S1	-0.309	-0.012
C1	R2	D10	S1	-0.3091	-0.0052

Average -0.30556 -0.00942

C1	R3	D11	S1	-0.2918	-0.0126
C2	R3	D12	S1	-0.2988	-0.004
C3	R3	D13	S1	-0.3	-0.0054
C4	R3	D14	S1	-0.2967	-0.0094
C5	R3	D15	S1	-0.3059	-0.015

Average -0.29864 -0.00928

C5	R4	D16	S1	-0.298	-0.014
C4	R4	D17	S1	-0.2897	-0.0167
C3	R4	D18	S1	-0.295	-0.0139
C2	R4	D19	S1	-0.2959	-0.0097
C1	R4	D20	S1	-0.3067	-0.0134

Average -0.29706 -0.01354

C1	R5	D21	S1	-0.2935	-0.0078
C2	R5	D22	S1	-0.2967	-0.0022
C3	R5	D23	S1	-0.2997	-0.0057
C4	R5	D24	S1	-0.2899	-0.0102
C5	R5	D25	S1	-0.3027	-0.0157

Average -0.2965 -0.00832

Total Ave -0.30038 -0.01028

Offset **-0.59** ppm

Y/2	-0.00514
Y max	-0.0005
Y min	-0.0185
Range /2	0.009



AGA Accuracy - Mode 1

Alcatel #506496i4

Stepper 6

Device-CANON Level-AGA Job Plan-SILICON Lot # S6M1RW1

Wed Mar 02 20:31:13 2000

Device-CANON Level-AGA Job Plan-SILICON Lot # S6M1RW1

Wed Mar 02 20:31:13 2000

WAFER_1 1			Xi	Yi	Xr	Yr	(Xi+Xr/2)	WAFER_1 2			Xi	Yi	Xr	Yr	(Xi+Xr/2)	
C1	R1	D1	-0.0256	0.0124	-0.0169	-0.0128	-0.0213	-0.0002	C1	R1	D1	0.0030	0.0167	-0.0239	0.0097	(Xi+Xr/2)
C2	R1	D2	-0.0049	-0.0037	-0.0072	-0.0191	-0.0061	-0.0114	C2	R1	D2	0.0013	0.0154	-0.0049	-0.0152	-0.0018
C3	R1	D3	0.0150	-0.0112	-0.0066	-0.0152	0.0042	-0.0132	C3	R1	D3	0.0192	-0.0090	0.0022	-0.0080	0.0107
C4	R1	D4	-0.0046	-0.0121	0.0072	-0.0189	0.0013	-0.0155	C4	R1	D4	0.0245	0.0102	0.0077	-0.0125	0.0161
C5	R1	D5	0.0119	-0.0176	0.0252	-0.0187	0.0186	-0.0182	C5	R1	D5	0.0176	-0.0136	0.0109	-0.0207	0.0143
C6	R1	D6	0.0199	0.0056	0.0147	-0.0232	0.0173	-0.0088	C6	R1	D6	0.0150	-0.0066	0.0160	-0.0070	0.0155
C7	R1	D7	0.0140	-0.0001	0.0025	-0.0075	0.0083	-0.0038	C7	R1	D7	0.0157	-0.0105	0.0062	-0.0264	0.0110
C7	R2	D8	-0.0146	0.0113	0.0038	-0.0071	-0.0054	0.0021	C7	R2	D8	0.0054	-0.0036	-0.0036	-0.0094	0.0009
C6	R2	D9	0.0038	0.0009	-0.0176	0.0098	-0.0069	0.0054	C6	R2	D9	0.0201	-0.0119	-0.0043	-0.0010	0.0079
C5	R2	D10	-0.0389	0.0207	-0.0287	-0.0142	-0.0338	0.0033	C5	R2	D10	-0.0124	0.0007	-0.0196	0.0040	-0.0160
C4	R2	D11	-0.0203	0.0074	-0.0361	0.0023	-0.0282	0.0049	C4	R2	D11	-0.0080	0.0020	-0.0050	-0.0150	-0.0065
C3	R2	D12	-0.0296	0.0130	-0.0018	0.0053	-0.0157	0.0092	C3	R2	D12	-0.0073	-0.0033	-0.0049	-0.0140	-0.0061
C2	R2	D13	-0.0083	0.0160	-0.0334	0.0026	-0.0209	0.0093	C2	R2	D13	0.0028	-0.0029	-0.0168	-0.0095	-0.0070
C1	R2	D14	-0.0143	-0.0018	-0.0092	-0.0174	-0.0118	-0.0096	C1	R2	D14	0.0027	-0.0122	-0.0156	-0.0240	-0.0065
C1	R3	D15	0.0044	-0.0182	-0.0070	-0.0120	-0.0013	-0.0151	C1	R3	D15	0.0108	-0.0246	0.0132	-0.0266	0.0120
C2	R3	D16	0.0334	-0.0108	0.0243	-0.0176	0.0289	-0.0142	C2	R3	D16	0.0340	-0.0138	0.0065	-0.0341	0.0203
C3	R3	D17	0.0262	-0.0144	0.0108	-0.0002	0.0185	-0.0073	C3	R3	D17	0.0130	-0.0039	-0.0027	-0.0334	0.0052
C4	R3	D18	0.0083	0.0163	0.0134	-0.0105	0.0109	0.0029	C4	R3	D18	-0.0021	-0.0056	0.0100	-0.0020	0.0040
C5	R3	D19	0.0064	0.0211	0.0170	0.0172	0.0117	0.0192	C5	R3	D19	0.0057	-0.0013	-0.0086	-0.0013	-0.0015
C6	R3	D20	-0.0023	0.0202	0.0054	0.0055	0.0016	0.0129	C6	R3	D20	-0.0095	-0.0045	-0.0080	-0.0092	-0.0088
C7	R3	D21	-0.0143	0.0196	-0.0022	0.0035	-0.0083	0.0116	C7	R3	D21	0.0002	-0.0034	-0.0187	-0.0110	-0.0093
C7	R4	D22	-0.0060	0.0378	-0.0240	0.0217	-0.0150	0.0298	C7	R4	D22	-0.0152	0.0279	-0.0281	-0.0167	-0.0217
C6	R4	D23	-0.0440	0.0201	-0.0341	0.0079	-0.0391	0.0140	C6	R4	D23	-0.0168	0.0050	-0.0237	-0.0112	-0.0203
C5	R4	D24	-0.0268	0.0122	-0.0224	0.0020	-0.0246	0.0071	C5	R4	D24	-0.0065	-0.0106	-0.0200	-0.0093	-0.0133
C4	R4	D25	-0.0164	0.0120	-0.0103	0.0123	-0.0134	0.0122	C4	R4	D25	-0.0128	-0.0049	-0.0189	-0.0122	-0.0159
C3	R4	D26	0.0097	0.0263	-0.0056	-0.0039	0.0021	0.0112	C3	R4	D26	-0.0100	-0.0230	0.0139	0.0440	0.0020
C2	R4	D27	0.0108	0.0078	-0.0039	0.0072	0.0035	0.0075	C2	R4	D27	-0.0157	0.0356	-0.0087	-0.0170	-0.0122
C1	R4	D28	0.0091	0.0216	0.0264	-0.0214	0.0178	0.0001	C1	R4	D28	0.0000	0.0003	0.0143	-0.0291	0.0072
C1	R5	D29	0.0123	0.0218	0.0086	0.0154	0.0105	0.0186	C1	R5	D29	0.0066	-0.0133	0.0087	-0.0281	0.0077
C2	R5	D30	0.0222	0.0306	0.0147	-0.0030	0.0185	0.0138	C2	R5	D30	0.0117	0.0093	-0.0162	-0.0196	-0.0023
C3	R5	D31	0.0002	0.0321	-0.0034	0.0211	-0.0016	0.0266	C3	R5	D31	-0.0076	-0.0115	-0.0273	-0.0046	-0.0175
C4	R5	D32	-0.0220	0.0371	-0.0137	0.0216	-0.0179	0.0294	C4	R5	D32	-0.0145	-0.0012	-0.0183	-0.0253	-0.0164
Mean			-0.0027	0.0104	-0.0034	-0.0021	-0.0031	0.0042	Mean			0.0022	-0.0023	-0.0059	-0.0124	-0.0018
3 Sigma			0.0572	0.0471	0.0523	0.0413	0.0508	0.0398	3 Sigma			0.0396	0.0389	0.0409	0.0443	0.0355
M + 3 Sig			0.0598	0.0576	0.0557	0.0434	0.0539	0.0398	M + 3 Sig			0.0418	0.0412	0.0468	0.0567	0.0373

AGA Accuracy - Mode 1 Alcatel #506496i4 Stepper 6

Device-CANON Level-AGA Job Plan-SILICON Lot #S6M1RW1

Wed Mar 02 20:31:13 2000

WAFER_I			3	Xi	Yl	Xr	Yr	(Xi+Xr/2)
C1	R1	D1		-0.0166	0.0166	-0.0256	0.0188	-0.0211
C2	R1	D2		-0.0099	0.0067	-0.0085	-0.0190	-0.0092
C3	R1	D3		0.0045	-0.0043	-0.0116	-0.0092	-0.0036
C4	R1	D4		-0.0004	-0.0051	0.0012	-0.0179	0.0004
C5	R1	D5		0.0302	-0.0166	0.0138	-0.0300	0.0220
C6	R1	D6		0.0129	0.0044	0.0081	-0.0288	0.0105
C7	R1	D7		0.0079	-0.0011	0.0006	-0.0066	0.0043
C7	R2	D8		0.0015	0.0105	-0.0128	-0.0172	-0.0057
C6	R2	D9		0.0155	0.0065	-0.0096	-0.0032	0.0030
C5	R2	D10		-0.0102	0.0206	-0.0293	0.0051	-0.0198
C4	R2	D11		0.0030	0.0045	-0.0380	0.0134	-0.0175
C3	R2	D12		-0.0080	0.0130	-0.0048	-0.0071	-0.0064
C2	R2	D13		0.0057	-0.0049	-0.0113	0.0103	-0.0028
C1	R2	D14		0.0142	0.0126	-0.0046	-0.0082	0.0048
C1	R3	D15		0.0149	-0.0001	0.0220	-0.0081	0.0185
C2	R3	D16		0.0503	-0.0135	0.0223	-0.0202	0.0363
C3	R3	D17		0.0269	-0.0051	0.0184	-0.0169	0.0227
C4	R3	D18		0.0204	0.0283	0.0149	0.0018	0.0177
C5	R3	D19		-0.0100	0.0077	-0.0044	0.0122	-0.0072
C6	R3	D20		0.0032	0.0146	-0.0188	0.0077	-0.0078
C7	R3	D21		0.0033	0.0260	-0.0159	0.0091	-0.0063
C7	R4	D22		0.0063	0.0553	-0.0381	0.0260	-0.0159
C6	R4	D23		-0.0258	0.0240	-0.0188	0.0100	-0.0223
C5	R4	D24		0.0033	0.0150	-0.0208	0.0061	-0.0088
C4	R4	D25		0.0014	0.0229	-0.0150	0.0085	-0.0068
C3	R4	D26		0.0066	0.0126	-0.0043	0.0077	0.0012
C2	R4	D27		0.0083	0.0090	-0.0030	0.0123	0.0027
C1	R4	D28		0.0119	0.0144	0.0208	-0.0068	0.0164
C1	R5	D29		0.0245	-0.0009	0.0068	0.0001	0.0157
C2	R5	D30		0.0132	0.0214	-0.0082	-0.0022	0.0025
C3	R5	D31		0.0034	0.0119	-0.0259	0.0199	-0.0113
C4	R5	D32		-0.0057	0.0224	-0.0130	0.0041	-0.0094
Mean				0.0065	0.0103	-0.0067	-0.0009	-0.0001
3 Sigma				0.0440	0.0421	0.0496	0.0425	0.0425
M + 3 Sig				0.0504	0.0524	0.0563	0.0434	0.0426

Device-CANON Level-AGA Job Plan-SILICON Lot #S6M1RW1

Wed Mar 02 20:31:13 2000

WAFER_I		4	Xi	Yl	Xr	Yr	(Xi+Xr/2)
C1	R1	D1	-0.0118	0.0141	-0.0070	-0.0060	-0.0094
C2	R1	D2	-0.0108	-0.0025	-0.0116	-0.0212	-0.0112
C3	R1	D3	-0.0094	-0.0069	-0.0124	-0.0270	-0.0109
C4	R1	D4	-0.0198	-0.0087	-0.0118	-0.0334	-0.0158
C5	R1	D5	-0.0038	-0.0038	-0.0129	-0.0246	-0.0084
C6	R1	D6	-0.0145	-0.0067	-0.0068	-0.0102	-0.0107
C7	R1	D7	0.0007	0.0034	-0.0013	-0.0116	-0.0003
C7	R2	D8	-0.0038	0.0023	0.0024	-0.0084	-0.0007
C6	R2	D9	-0.0015	0.0177	0.0021	0.0016	0.0003
C5	R2	D10	-0.0044	0.0250	-0.0006	0.0018	-0.0025
C4	R2	D11	0.0020	0.0406	0.0084	0.0163	0.0052
C3	R2	D12	-0.0018	0.0255	0.0017	0.0059	-0.0001
C2	R2	D13	-0.0098	0.0265	-0.0036	0.0081	-0.0067
C1	R2	D14	-0.0065	0.0158	-0.0114	-0.0008	-0.0090
C1	R3	D15	-0.0060	0.0054	-0.0148	-0.0138	-0.0104
C2	R3	D16	-0.0108	-0.0084	-0.0138	-0.0240	-0.0123
C3	R3	D17	-0.0109	0.0058	-0.0196	-0.0087	-0.0153
C4	R3	D18	-0.0122	0.0094	-0.0097	-0.0004	-0.0110
C5	R3	D19	-0.0043	0.0119	0.0006	-0.0004	-0.0019
C6	R3	D20	-0.0006	0.0235	-0.0029	0.0027	-0.0018
C7	R3	D21	0.0078	0.0348	0.0073	0.0123	0.0076
C7	R4	D22	0.0045	0.0333	0.0010	0.0218	0.0028
C6	R4	D23	0.0009	0.0479	0.0036	0.0281	0.0023
C5	R4	D24	0.0142	0.0414	0.0030	0.0174	0.0086
C4	R4	D25	-0.0151	0.0305	-0.0052	0.0101	-0.0102
C3	R4	D26	-0.0113	0.0312	-0.0061	0.0115	-0.0087
C2	R4	D27	-0.0186	0.0106	-0.0099	-0.0049	-0.0143
C1	R4	D28	-0.0096	0.0044	-0.0118	-0.0011	-0.0107
C1	R5	D29	-0.0137	0.0251	-0.0152	0.0028	-0.0145
C2	R5	D30	0.0018	0.0233	0.0040	0.0093	0.0029
C3	R5	D31	-0.0084	0.0356	0.0078	0.0155	-0.0003
C4	R5	D32	-0.0091	0.0432	0.0072	0.0219	-0.0010
Mean			-0.0061	0.0172	-0.0044	-0.0003	-0.0052
3 Sigma			0.0228	0.0502	0.0238	0.0459	0.0210
M + 3 Sig			0.0290	0.0674	0.0281	0.0462	0.0263



AGA Accuracy - Mode 1

Alcatel #506496i4

Stepper 6

Device-CANON Level-AGA Job Plan-SILICON Lot #-S6M1RW1

Wed Mar 02 20:31:13 2000

WAFER_1		5	Xl	Yl	Xr	Yr	(Xl+Xr/2)
C1	R1	D1	0.0031	-0.0015	-0.0174	-0.0054	-0.0072
C2	R1	D2	0.0045	0.0009	-0.0212	-0.0103	-0.0084
C3	R1	D3	0.0100	0.0002	-0.0022	-0.0112	0.0039
C4	R1	D4	0.0239	-0.0053	-0.0104	-0.0302	0.0068
C5	R1	D5	0.0103	-0.0141	0.0028	-0.0227	0.0066
C6	R1	D6	0.0141	-0.0061	-0.0061	-0.0318	0.0040
C7	R1	D7	0.0051	0.0009	-0.0052	-0.0077	0.0000
C7	R2	D8	0.0005	-0.0029	-0.0164	-0.0155	-0.0080
C6	R2	D9	0.0052	0.0008	-0.0191	-0.0066	-0.0070
C5	R2	D10	-0.0022	-0.0030	-0.0164	-0.0091	-0.0093
C4	R2	D11	-0.0047	0.0105	-0.0190	0.0078	-0.0119
C3	R2	D12	-0.0128	0.0161	-0.0116	-0.0007	-0.0122
C2	R2	D13	0.0036	-0.0018	-0.0290	0.0032	-0.0127
C1	R2	D14	0.0002	-0.0043	-0.0084	-0.0215	-0.0041
C1	R3	D15	-0.0036	-0.0069	-0.0093	-0.0091	-0.0065
C2	R3	D16	0.0300	-0.0059	-0.0025	-0.0222	0.0138
C3	R3	D17	0.0210	-0.0106	-0.0105	-0.0263	0.0053
C4	R3	D18	0.0102	0.0070	-0.0039	0.0002	0.0032
C5	R3	D19	0.0145	0.0066	-0.0100	-0.0019	0.0023
C6	R3	D20	0.0009	0.0086	-0.0155	0.0045	-0.0073
C7	R3	D21	0.0032	0.0141	-0.0051	0.0000	-0.0010
C7	R4	D22	-0.0052	0.0377	-0.0302	0.0119	-0.0177
C6	R4	D23	-0.0021	0.0124	-0.0130	0.0054	-0.0076
C5	R4	D24	-0.0102	0.0093	-0.0275	0.0082	-0.0189
C4	R4	D25	-0.0029	0.0086	-0.0279	0.0037	-0.0154
C3	R4	D26	0.0125	0.0131	-0.0167	-0.0018	-0.0021
C2	R4	D27	-0.0060	-0.0009	-0.0293	0.0026	-0.0177
C1	R4	D28	0.0019	0.0054	-0.0101	-0.0149	-0.0041
C1	R5	D29	0.0144	0.0125	-0.0154	0.0055	-0.0005
C2	R5	D30	0.0155	0.0207	-0.0092	-0.0014	0.0032
C3	R5	D31	-0.0047	0.0096	-0.0341	0.0160	-0.0194
C4	R5	D32	-0.0053	0.0047	-0.0250	0.0096	-0.0152
Mean			0.0045	0.0043	-0.0148	-0.0054	-0.0052
3 Sigma			0.0301	0.0309	0.0283	0.0377	0.0258
M + 3 Sig			0.0346	0.0352	0.0431	0.0431	0.0310

FPA-3000i4

Chris Howells

3/23/00

5 wafer average

	Yl	Yr	(Xl+Xr/2)
Mean	0.0080	-0.0042	-0.0031
3 Sigma	0.0482	0.0440	0.0368
M + 3s	0.0562	0.0482	0.0398



XY Stage Accuracy

Alcatel #506496i4

Stepper 6

Device-CANON Level-PREACCCEP Job Plan-XYSTACCX Lot #S6WAFER1
Thu Feb 24 09:08:48 2000

WAFER_ID	0		X-X	Y-X	X-Y	Y-Y
	C1	R1				
C1	R1	D1	0.0353	-0.0081	-0.0003	0.0674
C2	R1	D2	0.0405	-0.0026	0.0096	0.0544
C3	R1	D3	0.0287	-0.0062	0.0053	0.0522
C4	R1	D4	0.0325	-0.0082	0.0052	0.0554
C5	R1	D5	0.0346	-0.0040	0.0150	0.0456
C6	R1	D6	0.0348	-0.0009	0.0154	0.0491
C7	R1	D7	0.0302	-0.0028	0.0083	0.0495
C7	R2	D8	0.0380	-0.0065	0.0106	0.0602
C6	R2	D9	0.0385	0.0104	0.0080	0.0589
C5	R2	D10	0.0324	-0.0027	0.0058	0.0633
C4	R2	D11	0.0329	0.0000	0.0033	0.0517
C3	R2	D12	0.0369	-0.0058	0.0097	0.0544
C2	R2	D13	0.0429	-0.0060	0.0047	0.0514
C1	R2	D14	0.0474	-0.0033	0.0155	0.0592
C1	R3	D15	0.0447	-0.0042	-0.0051	0.0541
C2	R3	D16	0.0484	-0.0075	-0.0044	0.0606
C3	R3	D17	0.0439	-0.0121	-0.0001	0.0584
C4	R3	D18	0.0234	-0.0056	-0.0120	0.0644
C5	R3	D19	0.0427	-0.0049	-0.0009	0.0624
C6	R3	D20	0.0415	-0.0040	0.0041	0.0562
C7	R3	D21	0.0401	-0.0011	0.0003	0.0578
C7	R4	D22	0.0366	0.0020	0.0065	0.0600
C6	R4	D23	0.0317	-0.0071	0.0050	0.0606
C5	R4	D24	0.0359	-0.0091	0.0059	0.0537
C4	R4	D25	0.0420	-0.0024	0.0078	0.0573
C3	R4	D26	0.0405	-0.0035	-0.0056	0.0661
C2	R4	D27	0.0421	-0.0003	0.0035	0.0569
C1	R4	D28	0.0379	0.0007	0.0015	0.0612
C1	R5	D29	0.0420	-0.0040	-0.0032	0.0600
C2	R5	D30	0.0304	0.0010	-0.0072	0.0632
C3	R5	D31	0.0285	-0.0024	-0.0055	0.0695
C4	R5	D32	0.0365	-0.0011	-0.0079	0.0663
C5	R5	D33	0.0402	-0.0087	0.0003	0.0741
C6	R5	D34	0.0417	-0.0014	0.0073	0.0671
C7	R5	D35	0.0328	-0.0020	0.0044	0.0618
C7	R6	D36	0.0398	-0.0132	0.0114	0.0684
C7	R7	D37	0.0346	-0.0117	-0.0041	0.0596
C7	R8	D38	0.0437	-0.0092	-0.0028	0.0617
C7	R9	D39	0.0465	-0.0053	0.0006	0.0623
C7	R10	D40	0.0419	-0.0032	-0.0004	0.0583
C7	R11	D41	0.0405	-0.0045	0.0018	0.0552
C7	R12	D42	0.0344	-0.0044	-0.0063	0.0599
Average			0.0375	-0.0038	0.0034	0.0592
3 Sigma			0.0169	0.0129	0.0204	0.0188

Average	0.0375	-0.0038	0.0034	0.0592
3 Sigma	0.0169	0.0129	0.0204	0.0188

Average	0.0303	-0.0058	0.0060	0.0474
3 Sigma	0.0169	0.0136	0.0191	0.0187

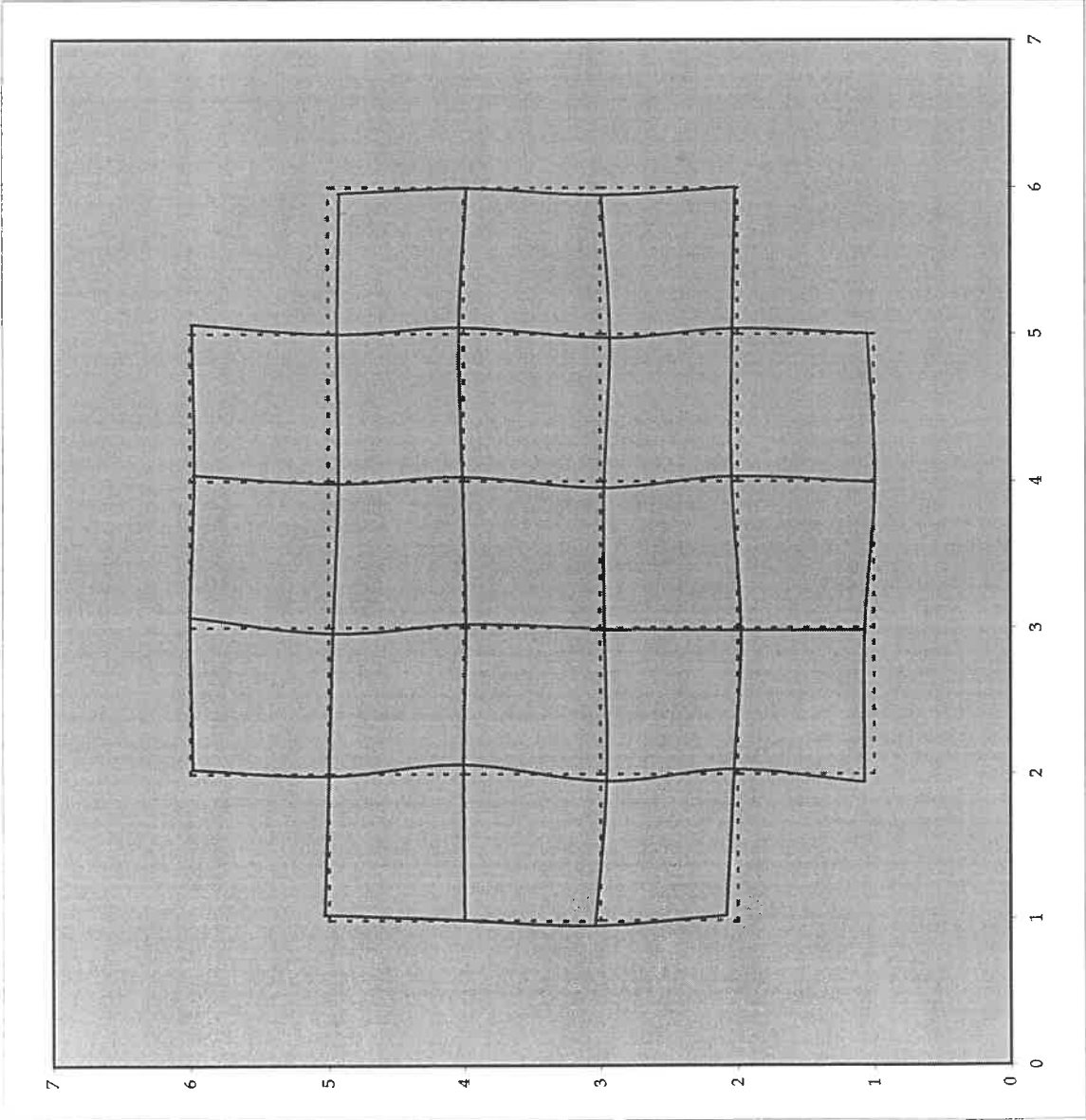
Average	0.0179	-0.0024	0.0041	0.0370
3 Sigma	0.0168	0.0129	0.0197	0.0169



XYSA Performance

Alcatel #506496i4

Stepper 6



Measured Data.

Shift X	-2	nm.
Shift Y	-1	nm.
Mag X	-0.002	ppm.
Mag Y	-0.014	ppm.
Rot X	-0.008	ppm.
Rot Y	-0.007	ppm.
Orth	-0.002	ppm.
3 Sigma X	22	nm.
3 Sigma Y	25	nm.
Linear Correction	Yes	
Shot Size	20	mm.
Map Magnification	2	



XY Stage Repeatability

Alcatel #506496i4
Stepper 6

Device-CANON Level-STARTUP Job Plan-REPEATAB Lot #-XYSR

Thu Feb 24 10:24:58 2000

Wafer 1			X	Y	Wafer 2			X	Y	Wafer 3			X	Y
C1	R1	D1	-0.0361	0.0088	D1	-0.0310	0.0131	D1	-0.0313	0.0163				
C2	R1	D2	-0.0254	0.0009	D2	-0.0252	0.0126	D2	-0.0220	0.0146				
C3	R1	D3	-0.0260	-0.0018	D3	-0.0246	0.0091	D3	-0.0191	0.0138				
C4	R1	D4	-0.0221	-0.0016	D4	-0.0222	0.0074	D4	-0.0059	0.0016				
C5	R1	D5	-0.0188	-0.0128	D5	-0.0144	-0.0046	D5	-0.0171	0.0063				
C6	R1	D6	-0.0361	0.0055	D6	-0.0191	0.0149	D6	-0.0269	0.0032				
C7	R1	D7	-0.0316	0.0073	D7	-0.0421	0.0065	D7	-0.0337	0.0098				
C7	R2	D8	-0.0444	0.0044	D8	-0.0409	0.0113	D8	-0.0426	0.0103				
C6	R2	D9	-0.0390	0.0083	D9	-0.0342	0.0102	D9	-0.0385	0.0140				
C5	R2	D10	-0.0428	0.0107	D10	-0.0431	0.0095	D10	-0.0394	0.0141				
C4	R2	D11	-0.0419	0.0009	D11	-0.0425	0.0001	D11	-0.0442	0.0056				
C3	R2	D12	-0.0375	0.0089	D12	-0.0431	0.0017	D12	-0.0464	0.0002				
C2	R2	D13	-0.0358	0.0010	D13	-0.0389	0.0035	D13	-0.0385	0.0028				
C1	R2	D14	-0.0228	0.0019	D14	-0.0291	0.0042	D14	-0.0291	0.0034				
C1	R3	D15	-0.0214	0.0004	D15	-0.0305	0.0040	D15	-0.0212	0.0034				
C2	R3	D16	-0.0233	-0.0057	D16	-0.0204	-0.0107	D16	-0.0204	0.0012				
C3	R3	D17	-0.0226	0.0042	D17	-0.0335	-0.0023	D17	-0.0246	0.0013				
C4	R3	D18	-0.0270	0.0076	D18	-0.0342	0.0014	D18	-0.0239	-0.0001				
C5	R3	D19	-0.0235	0.0020	D19	-0.0239	0.0006	D19	-0.0375	-0.0041				
C6	R3	D20	-0.0243	-0.0011	D20	-0.0323	-0.0036	D20	-0.0318	-0.0067				
C7	R3	D21	-0.0322	-0.0066	D21	-0.0380	-0.0106	D21	-0.0374	-0.0029				
C7	R4	D22	-0.0320	0.0087	D22	-0.0411	-0.0006	D22	-0.0400	-0.0043				
C6	R4	D23	-0.0374	0.0006	D23	-0.0312	-0.0031	D23	-0.0393	-0.0033				
C5	R4	D24	-0.0302	0.0016	D24	-0.0260	-0.0086	D24	-0.0324	-0.0063				
C4	R4	D25	-0.0264	-0.0009	D25	-0.0317	-0.0116	D25	-0.0297	-0.0047				
C3	R4	D26	-0.0202	-0.0028	D26	-0.0281	-0.0046	D26	-0.0322	-0.0049				
C2	R4	D27	-0.0307	0.0039	D27	-0.0211	-0.0086	D27	-0.0338	-0.0023				
C1	R4	D28	-0.0408	0.0119	D28	-0.0279	-0.0071	D28	-0.0361	-0.0013				
C1	R5	D29	-0.0301	-0.0005	D29	-0.0364	-0.0082	D29	-0.0292	-0.0052				
C2	R5	D30	-0.0397	0.0051	D30	-0.0470	0.0000	D30	-0.0338	-0.0003				
C3	R5	D31	-0.0362	-0.0001	D31	-0.0350	-0.0088	D31	-0.0356	-0.0068				
C4	R5	D32	-0.0333	-0.0019	D32	-0.0266	-0.0099	D32	-0.0374	-0.0068				

Average	-0.0310	0.0022	Average	-0.0317	0.0002	Average	-0.0316	0.0019
3 Sigma	0.0222	0.0162	3 Sigma	0.0245	0.0240	3 Sigma	0.0266	0.0214