Reikan Technology

FoCal
Focus Calibration and Analysis Software

Reikan FoCal Fully Automatic Test Report

for Canon EOS 6D Mark II (serial number 23021002042) with EF85mm f/1.8 USM

Test run on: 2017.11.10. 13:13:16 with FoCal 2.5.0.3700W

Report created on: 2017.11.10. 13:17:35 with FoCal 2.5.0W

Overview

Test Information

Property	Description
Data Creation FoCal Version	2.5.0.3700W
Data Analysis FoCal Version	2.5.0W
OS Version	Microsoft Windows NT 6.1.7601 Service Pack 1
Source Mode	Camera Mode
Image Capture Mode	JPEG
Analysis Method	Multi-ESH (RGB)
Camera Model	Canon EOS 6D Mark II
Firmware Version	1.0.2
Serial Number	23021002042
Camera Temperature	26C
Test Colour Temp	5200K
Lens	EF85mm f/1.8 USM
Focal Length	85mm
Termination Reason	Success
Test Aperture	f/1,8
Test ISO	100
Defocus Method	Large defocus away from the camera
Distance to Target	1,2m
Starting AF Microadjustment	0
Tested AF Microadjustment Range	Full (-20 to 20)
AF Microadjustment Step Size	Auto
AF Consistency Constraint	6%
Total Shot Count	13
Calculated AF Microadjustment	-6
Result Confidence	Excellent
Consistency of Focus	99,4%

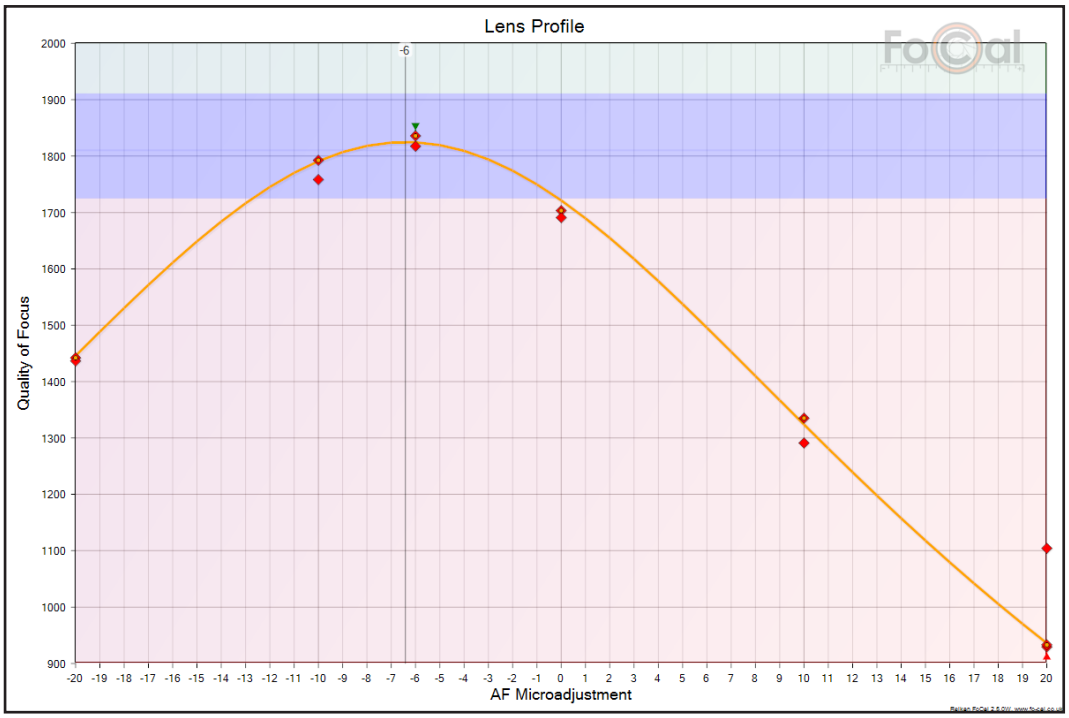
Test Details

Lens Profile Chart

The Lens Profile chart shows how the image quality changes as the AF Microadjustment changes. The orange line represents how the sharpness is expected to change through all values, so the highest point on this line corresponds to the best predicted AF Microadjustment value.

Each point on the chart represents the result of a single shot:

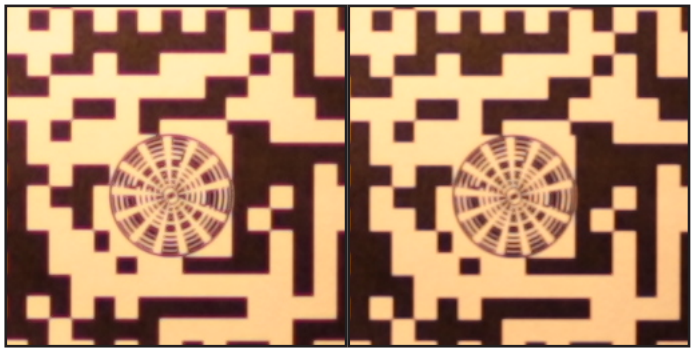
- Red marker: unoptimised sharpness
- Green marker: optimised sharpness
- Orange circle within marker - this is the representative sharpness for this AFMA
- Orange curve - the predicted sharpness across the AFMA range
- Green triangle - highest value
- Red triangle - lowest value



Before/After Comparison

The images show the before and after shots.

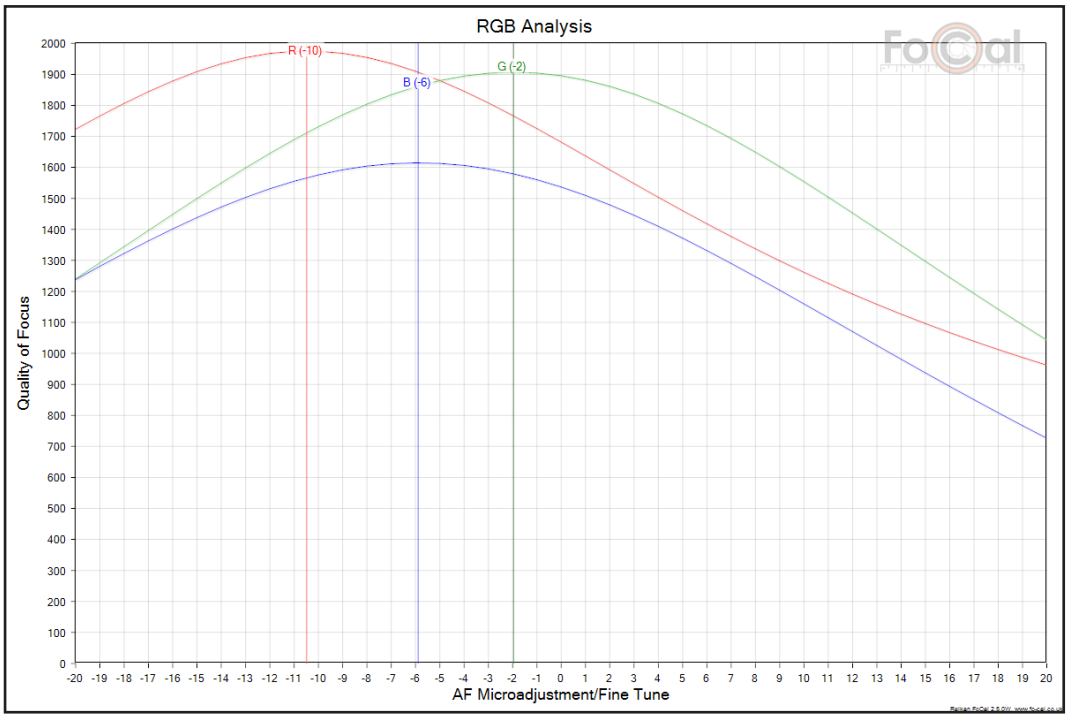
	AF Microadjustment
Before	0
After	-6



RGB Analysis Chart

The RGB Analysis chart shows the predicted sharpness across the AF Microadjustment range for red, green and blue light. The vertical lines indicate the predicted best AF Microadjustment for each of the 3 colours.

It is important to note that when run in JPEG mode, there is some contamination between the colours so the result is not truly representative.



RGB Analysis Details

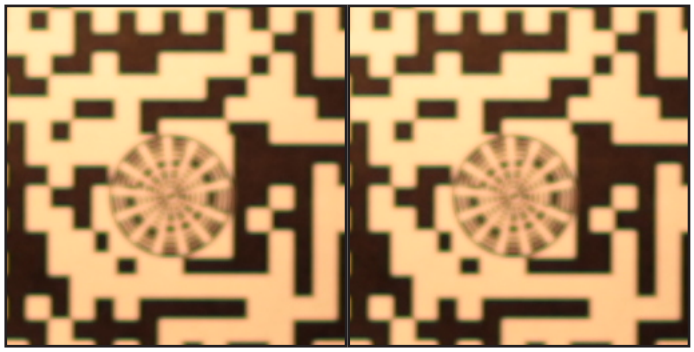
Property	Description
Red:	
Red Result	-10
Red Confidence	Excellent
Green:	
Green Result	-2
Green Confidence	Excellent
Blue:	
Blue Result	-6
Blue Confidence	Excellent

AF Microadjustment: -20

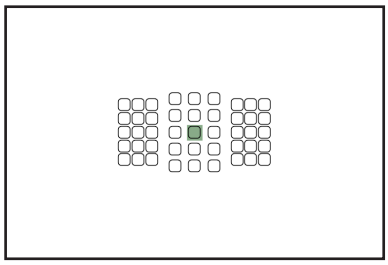
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/1,8	**f/1,8**
Shutter Speed	1/200s	**1/200s**
EV	9,3	**9,3**
Colour Temperature	5200K	**5200K**
Camera Temperature	26C	**26C**
Quality Measure	1436,7	**1442,2**
Optimised	No	**No**
Ignored	No	**No**
Spectral Power (R/G/B)	42/34/24	**42/34/24**
Red Quality	1716,8	**1727,2**
Green Quality	1222,6	**1227,5**
Blue Quality	1243,5	**1242,4**
HVR	-8,2%	**-8,0%**

The following image is a crop of the section of image analysed by FoCal:



The following image is a crop of the section of image analysed by FoCal:



AF Microadjustment: -10

The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/1,8	**f/1,8**
Shutter Speed	1/200s	**1/200s**
EV	9,3	**9,3**
Colour Temperature	5200K	**5200K**
Camera Temperature	26C	**26C**
Quality Measure	1758,4	**1792,7**
Optimised	No	**No**
Ignored	No	**No**
Spectral Power (R/G/B)	42/33/24	**43/33/24**
Red Quality	1951,0	**1953,9**
Green Quality	1684,2	**1751,2**
Blue Quality	1508,7	**1560,0**
HVR	-2,3%	**-1,1%**

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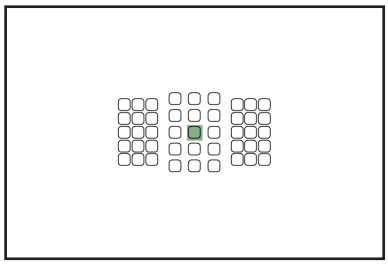

AF Microadjustment: -6

The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	**f/1,8**	f/1,8
Shutter Speed	**1/200s**	1/200s
EV	**9,3**	9,3
Colour Temperature	**5200K**	5200K
Camera Temperature	**26C**	26C
Quality Measure	**1836,0**	1817,6
Optimised	**No**	No
Ignored	**No**	No
Spectral Power (R/G/B)	**43/33/24**	42/33/25
Red Quality	**1942,5**	1966,3
Green Quality	**1859,7**	1806,9
Blue Quality	**1629,8**	1560,4
HVR	**1,5%**	-0,7%

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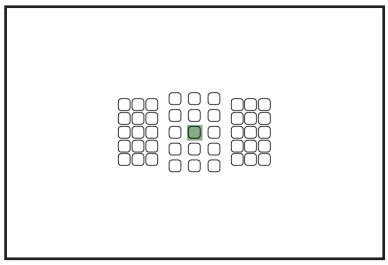
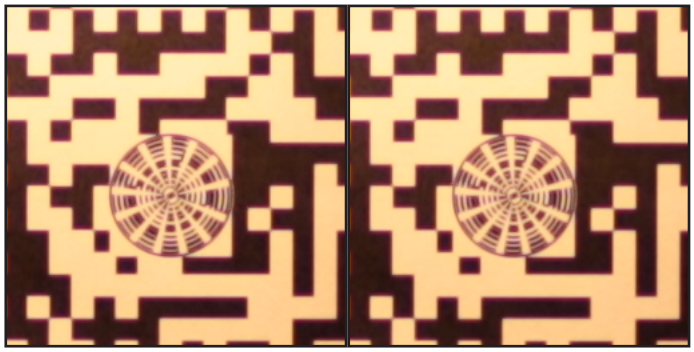


AF Microadjustment: 0

The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	**f/1,8**	f/1,8
Shutter Speed	**1/200s**	1/200s
EV	**9,3**	9,3
Colour Temperature	**5200K**	5200K
Camera Temperature	**26C**	26C
Quality Measure	**1703,4**	1691,0
Optimised	**No**	No
Ignored	**No**	No
Spectral Power (R/G/B)	**42/33/25**	43/33/25
Red Quality	**1661,3**	1636,0
Green Quality	**1885,2**	1867,1
Blue Quality	**1534,8**	1560,4
HVR	**6,8%**	7,2%

The following image is a crop of the section of image analysed by FoCal:



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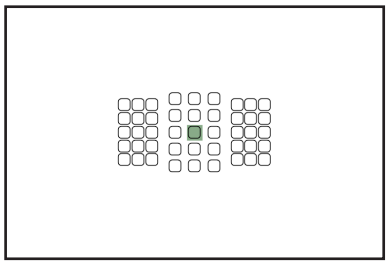

AF Microadjustment: 10

The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/1,8	**f/1,8**
Shutter Speed	1/200s	**1/200s**
EV	9,3	**9,3**
Colour Temperature	5200K	**5200K**
Camera Temperature	26C	**26C**
Quality Measure	1291,1	**1335,2**
Optimised	No	**No**
Ignored	No	**No**
Spectral Power (R/G/B)	43/32/24	**43/32/24**
Red Quality	1239,3	**1269,3**
Green Quality	1505,2	**1550,5**
Blue Quality	1100,9	**1159,0**
HVR	5,3%	**5,6%**

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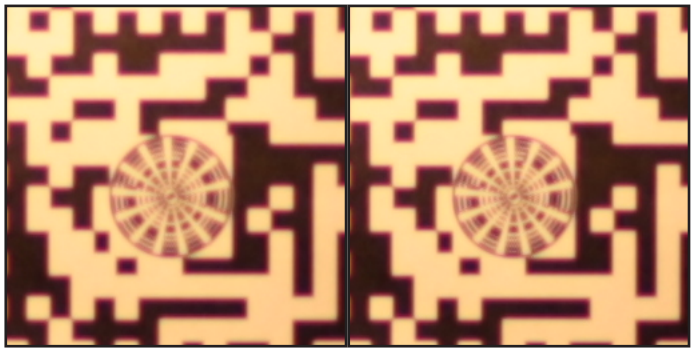

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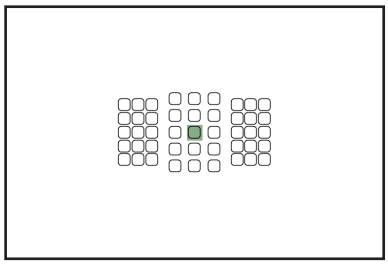

AF Microadjustment: 20

The following table shows information obtained for this test point:

	Shot 1	Shot 2	Shot 3
Aperture	f/1,8	**f/1,8**	f/1,8
Shutter Speed	1/200s	**1/200s**	1/200s
EV	9,3	**9,3**	9,3
Colour Temperature	5200K	**5200K**	5200K
Camera Temperature	26C	**26C**	26C
Quality Measure	1104,2	**933,0**	929,4
Optimised	No	**No**	No
Ignored	No	**No**	No
Spectral Power (R/G/B)	44/32/24	**44/32/24**	44/32/24
Red Quality	1091,2	**959,8**	955,0
Green Quality	1265,8	**1050,6**	1046,3
Blue Quality	895,1	**725,8**	719,8
HVR	5,5%	**3,8%**	3,8%

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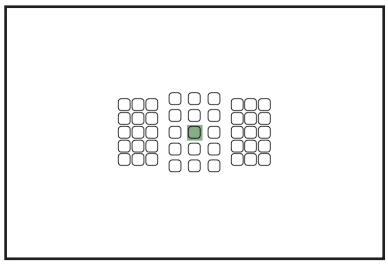

Lens Profile

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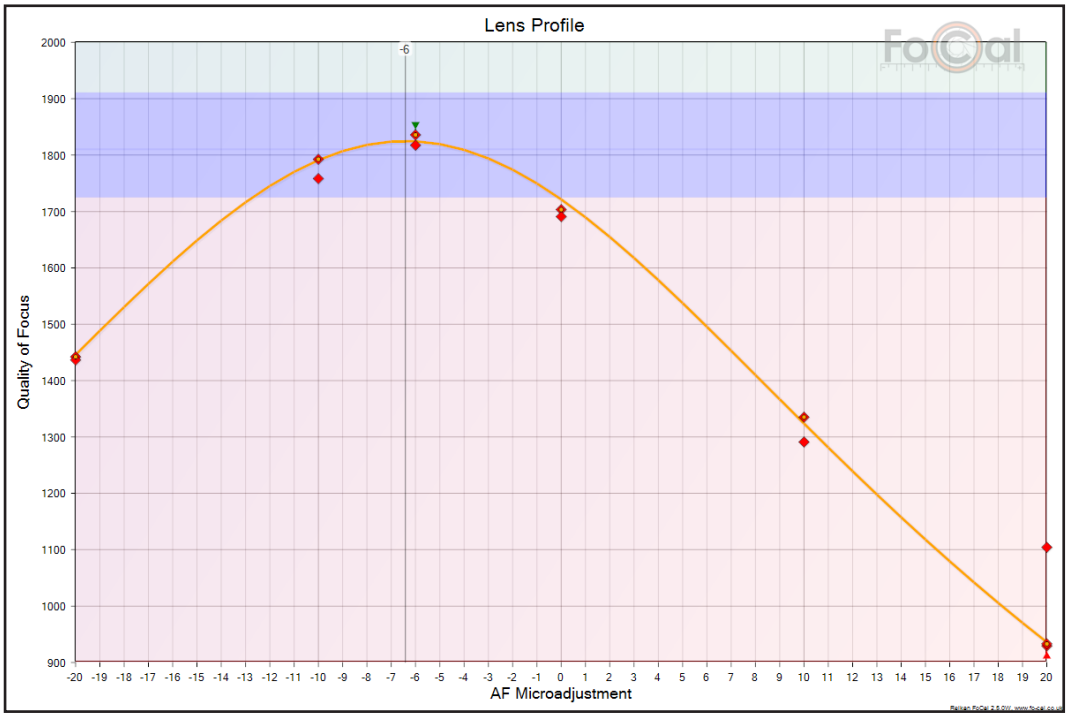


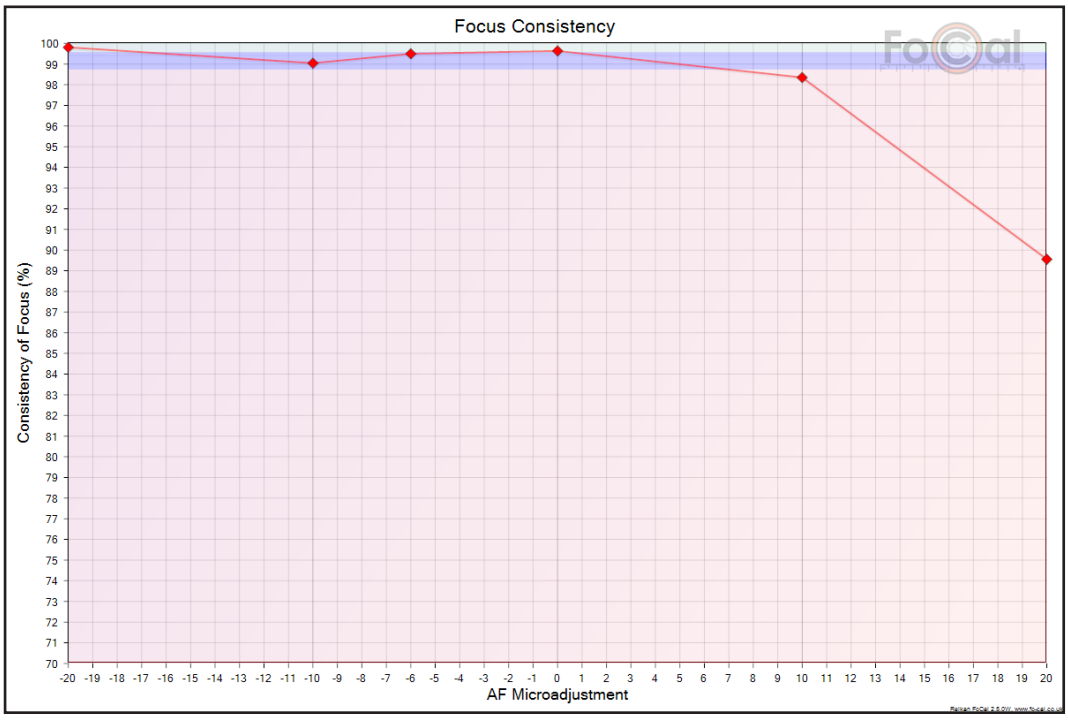
Focus Consistency

The Focus Consistency chart shows the focus variability at each tested point where available. This is calculated from the spread in sharpness values from shots at a single AF Microadjustment value.

A value of 100% indicated perfect repeatability. In normal use, a values above 97% indicate acceptable autofocus repeatability, and above 99% indicate very good repeatability. Note that the consistency of focus measurement is less relevant far from the best AF Microadjustment value.

If FoCal Comparison Data is available for this camera and lens a red/blue/green overlay will be added to indicate how your camera and lens performance compares with other users as follows:

- Red: indicates below-average performance,
- Blue: typical performance experienced by other users
- Green: above average performance.



Astigmatism Factor

The Astigmatism Factor chart shows the image quality ratio between the horizontal and vertical analysis directions. If this value varies by more than 10% across the range, or the average value is more than +/- 5% then your lens may be suffering from some decentering or lens element alignment issues.

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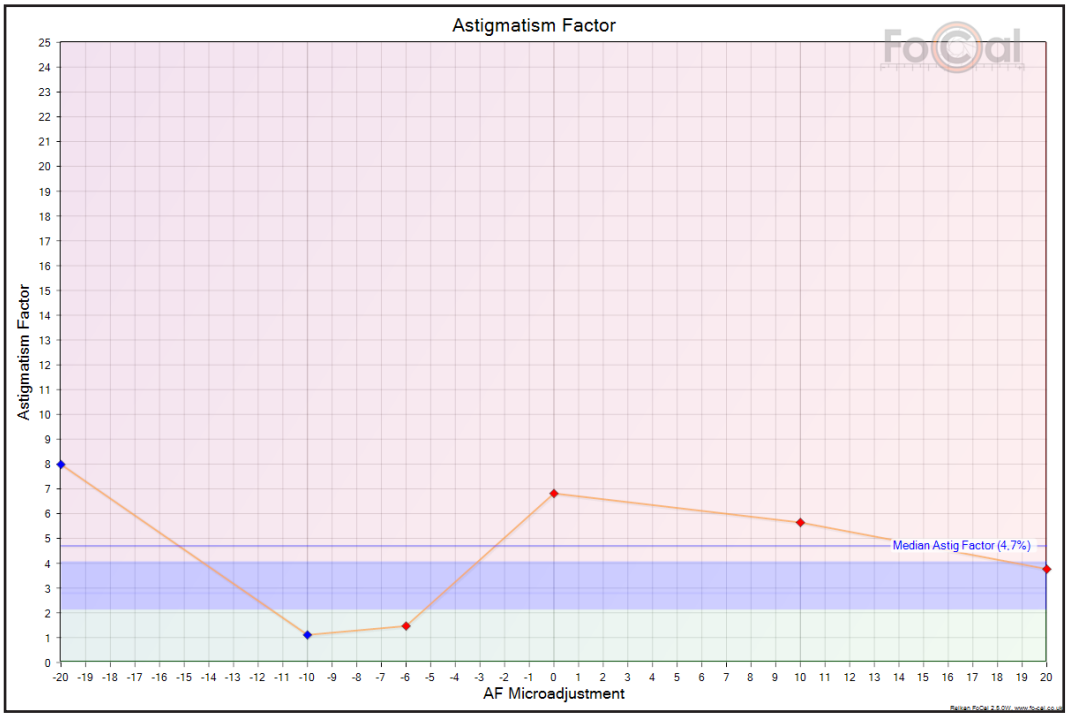

Result Convergence

The Result Convergence chart indicates how FoCal determined the best AF Microadjustment value as more points were added to the data. There is no result for the first few points, then the result should stabilise as more points are added towards the end of the test (the right side of the chart).

The size of the green area gives an indication of the confidence in the result at that point. A large green area spreading across many AF Microadjustment values indicates poor data that will not give an acceptable final result.

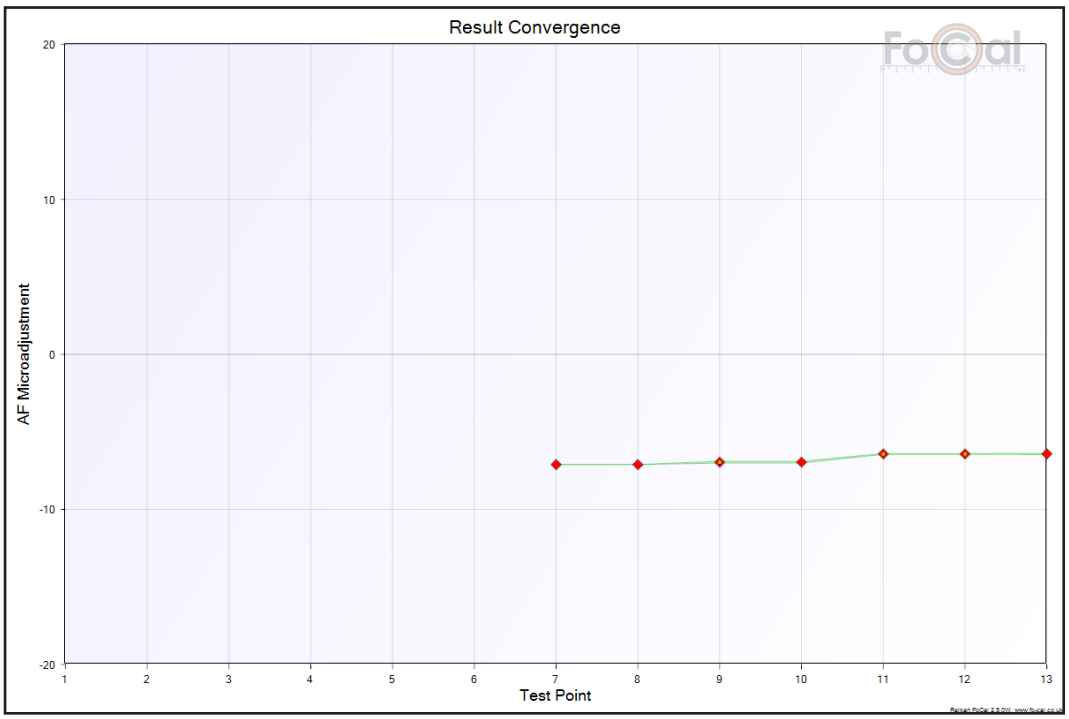

Image Motion

As changes are made inside a lens (e.g. focussing or aperture change), the image projected onto the sensor can move slightly. The Image Motion chart shows the absolute number of pixels moved for each image compared to the first image captured.

Typically, the Image Motion should be significantly less than 10 pixels, and a repeatable higher value could indicate misaligned lens optics, camera movement or vibration during the test or other environmental or lens issues.

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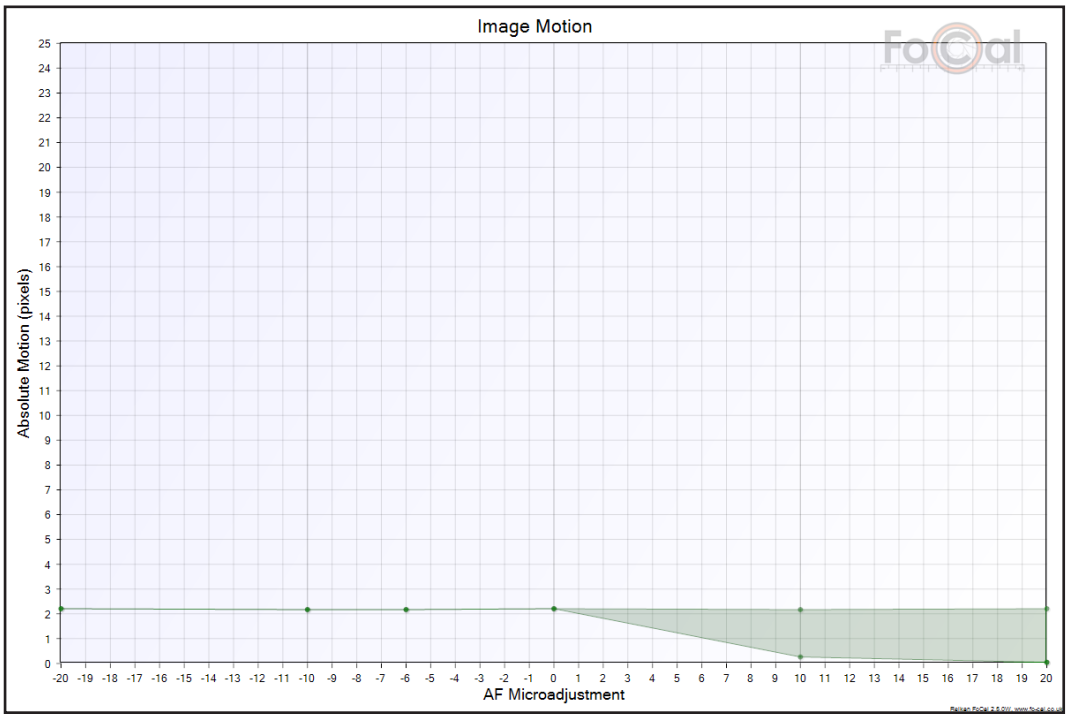

Front/Back Focus

The Front/Back Focus chart gives an indication of the amount of front or back focus would be experienced at any particular AF Microadjustment value.

The green band down the centre is very approximately the range of the depth-of-field, so AF Microadjustment values within this range should give reasonable focus results.

Note: The line is fitted to the average of the data points, and poor quality data can lead to significant deviations of this curve from real focus positions. It's important to interpret this metric in conjunction with the quality of the data - poor focus consistency or poor overall results will mean this metric is of little value.