

Reikan FoCal Fully Automatic Test Report

for Canon EOS 7D Mark II (serial number 165053000003) with EF-S17-55mm f/2.8 IS USM

Test run on: 05/03/2018 16:26:40 with FoCal 2.6.0.3742W

Report created on: 05/03/2018 16:33:53 with FoCal 2.6.0W

Overview

Test Information

Property	Description
Data Creation FoCal Version	2.6.0.3742W
Data Analysis FoCal Version	2.6.0W
OS Version	Microsoft Windows NT 6.2.9200.0
Source Mode	Camera Mode
Image Capture Mode	JPEG
Analysis Method	Multi-ESH (RGB)
Camera Model	Canon EOS 7D Mark II
Firmware Version	1.1.0
Serial Number	165053000003
Camera Temperature	31C
Test Colour Temp	5200K
Lens	EF-S17-55mm f/2.8 IS USM
Focal Length	17mm
Termination Reason	Success
Test Aperture	f/2,8
Test ISO	100
Defocus Method	Large defocus away from the camera
Distance to Target	0,9m
Starting AF Microadjustment	-2
Tested AF Microadjustment Range	Full (-20 to 20)
AF Microadjustment Step Size	Auto
AF Consistency Constraint	6%
Total Shot Count	13
Calculated AF Microadjustment	-2
Result Confidence	Excellent
Consistency of Focus	99,0%

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:

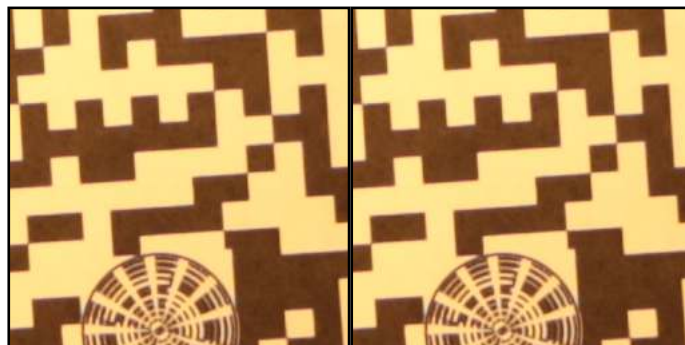
- Red marker: unoptimised sharpness
- Green marker: optimised sharpness
- Orange circle within marker - this is the representative sharpness for this AFMA
- Orange curve - the predicted sharpness across the AFMA range
- Green triangle - highest value
- Red triangle - lowest value



Before/After Comparison

The images show the before and after shots.

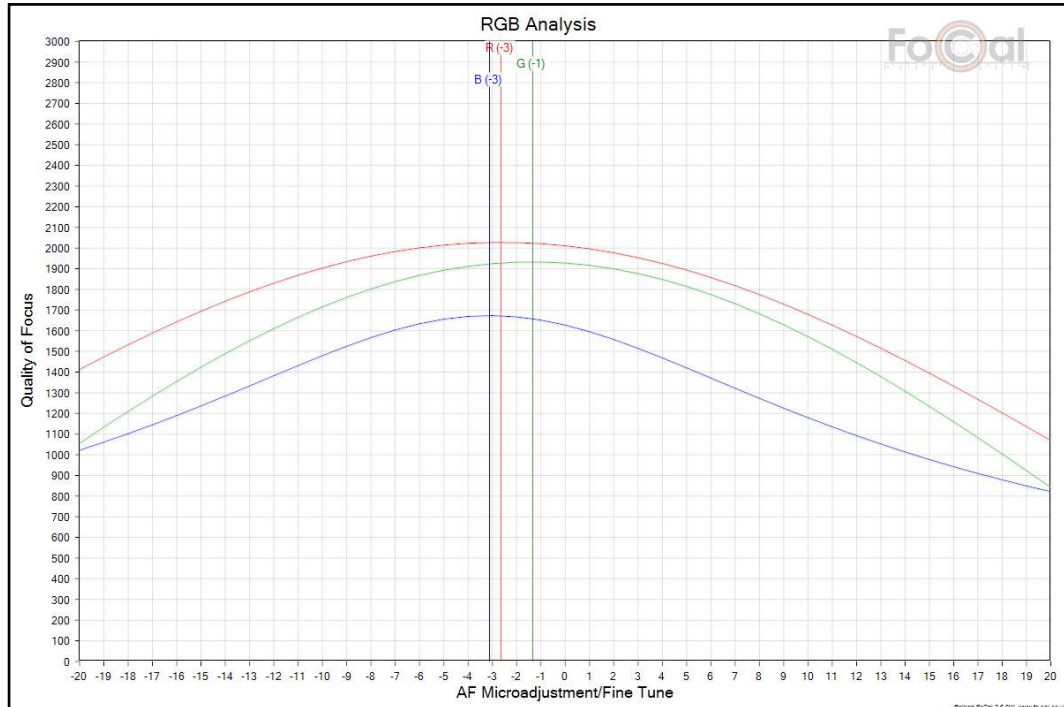
	AF Microadjustment
Before	-2
After	-2



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

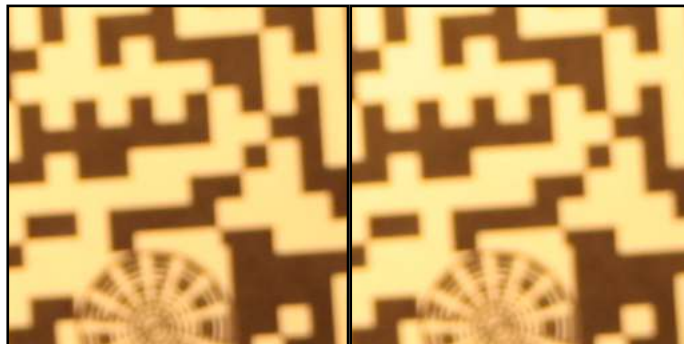
Property	Description
Red:	
Red Result	-3
Red Confidence	Excellent
Green:	
Green Result	-1
Green Confidence	Excellent
Blue:	
Blue Result	-3
Blue Confidence	Acceptable

AF Microadjustment: -20

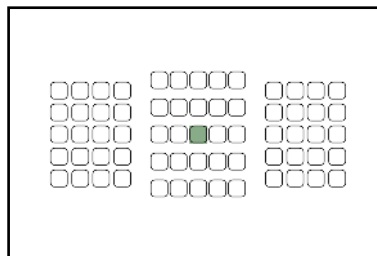
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s
EV	9,2	9,2
Colour Temperature	5200K	5200K
Camera Temperature	29C	30C
Quality Measure	1193,5	1181,3
Optimised	No	No
Ignored	No	No
Spectral Power (R/G/B)	44/35/21	44/35/21
Red Quality	1403,8	1430,3
Green Quality	1029,6	1012,4
Blue Quality	1019,0	942,3
HVR	-3,7%	-2,9%

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



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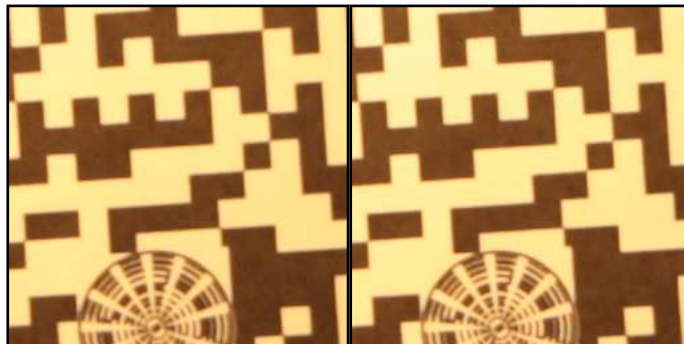


AF Microadjustment: -10

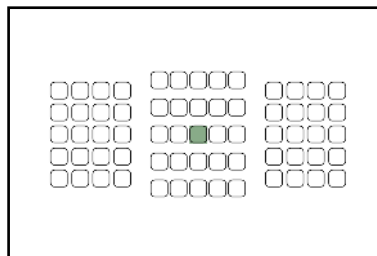
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s
EV	9,2	9,2
Colour Temperature	5200K	5200K
Camera Temperature	29C	30C
Quality Measure	1776,1	1787,9
Optimised	No	No
Ignored	No	No
Spectral Power (R/G/B)	44/35/21	43/35/22
Red Quality	1919,3	1926,5
Green Quality	1727,1	1768,8
Blue Quality	1557,9	1522,3
HVR	-1,2%	-1,1%

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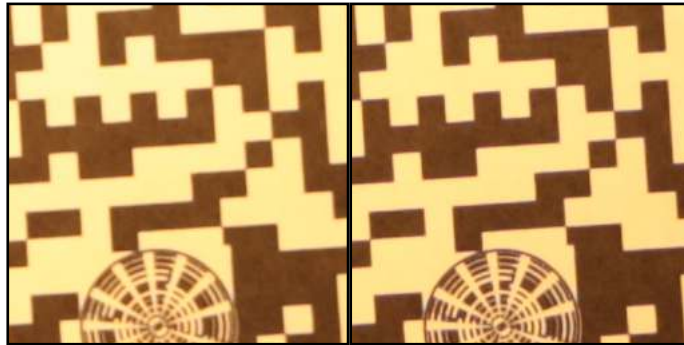


AF Microadjustment: -2

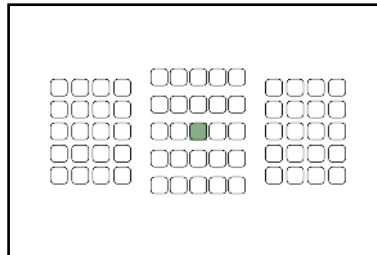
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s
EV	9,2	9,2
Colour Temperature	5200K	5200K
Camera Temperature	30C	30C
Quality Measure	1819,0	1895,8
Optimised	No	No
Ignored	No	No
Spectral Power (R/G/B)	43/35/22	44/35/21
Red Quality	1944,7	2008,3
Green Quality	1786,3	1907,6
Blue Quality	1625,8	1625,6
HVR	-1,2%	2,6%

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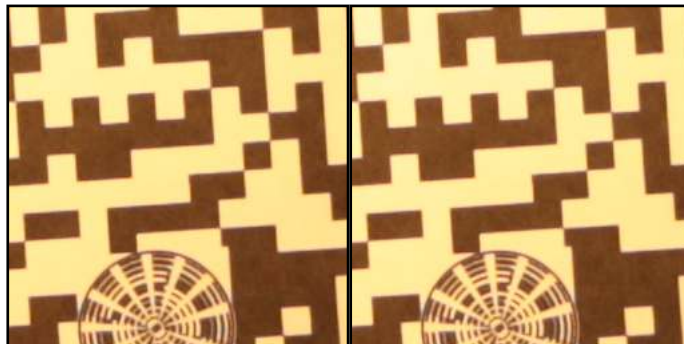


AF Microadjustment: 0

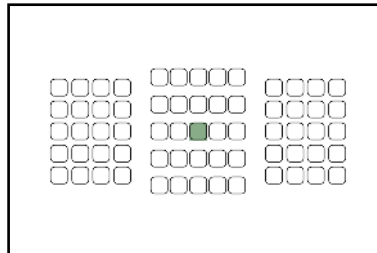
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s
EV	9,2	9,2
Colour Temperature	5200K	5200K
Camera Temperature	30C	30C
Quality Measure	1894,8	1869,3
Optimised	No	No
Ignored	No	No
Spectral Power (R/G/B)	43/35/22	43/35/22
Red Quality	2014,7	1972,2
Green Quality	1928,4	1923,6
Blue Quality	1596,4	1580,5
HVR	1,7%	2,4%

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



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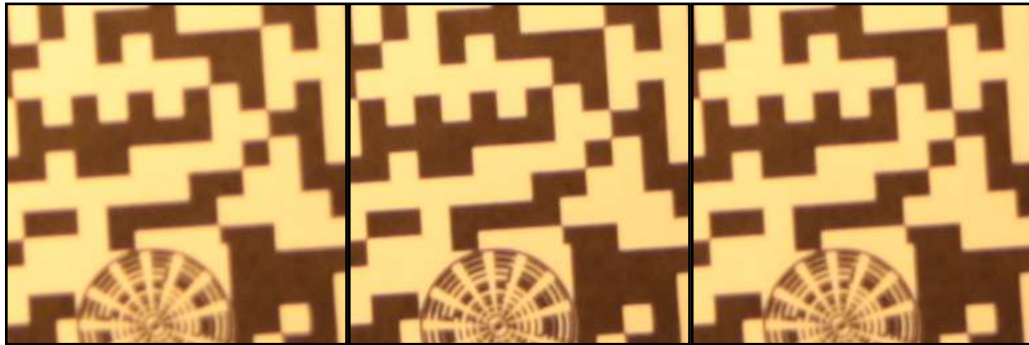


AF Microadjustment: 10

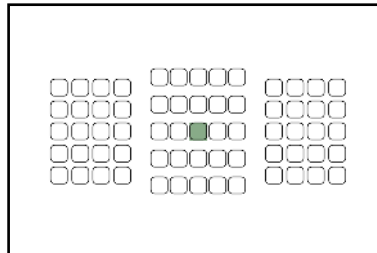
The following table shows information obtained for this test point:

	Shot 1	Shot 2	Shot 3
Aperture	f/2,8	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s	1/80s
EV	9,2	9,2	9,2
Colour Temperature	5200K	5200K	5200K
Camera Temperature	30C	30C	31C
Quality Measure	1477,9	1674,9	1572,1
Optimised	No	No	No
Ignored	No	No	No
Spectral Power (R/G/B)	44/35/21	44/35/21	45/35/21
Red Quality	1628,0	1781,7	1677,6
Green Quality	1466,4	1651,6	1552,4
Blue Quality	1179,1	1478,7	1360,9
HVR	7,3%	7,6%	8,5%

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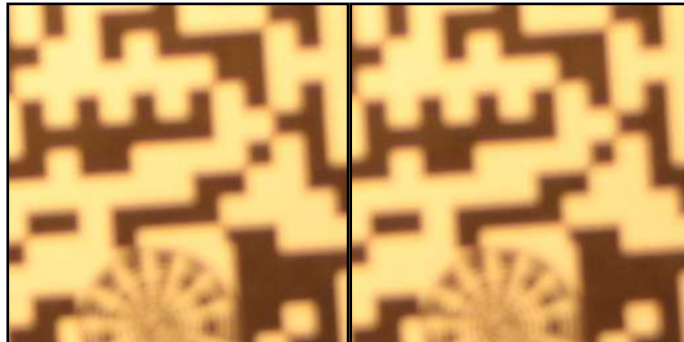


AF Microadjustment: 20

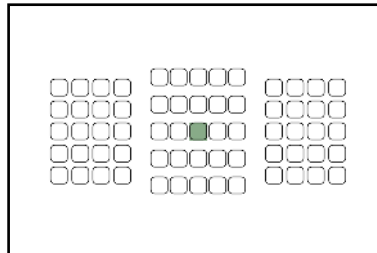
The following table shows information obtained for this test point:

	Shot 1	Shot 2
Aperture	f/2,8	f/2,8
Shutter Speed	1/80s	1/80s
EV	9,2	9,2
Colour Temperature	5200K	5200K
Camera Temperature	30C	31C
Quality Measure	909,7	883,6
Optimised	No	No
Ignored	No	No
Spectral Power (R/G/B)	44/35/21	44/35/21
Red Quality	1072,7	1027,6
Green Quality	859,9	833,0
Blue Quality	635,6	637,1
HVR	5,0%	5,1%

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:

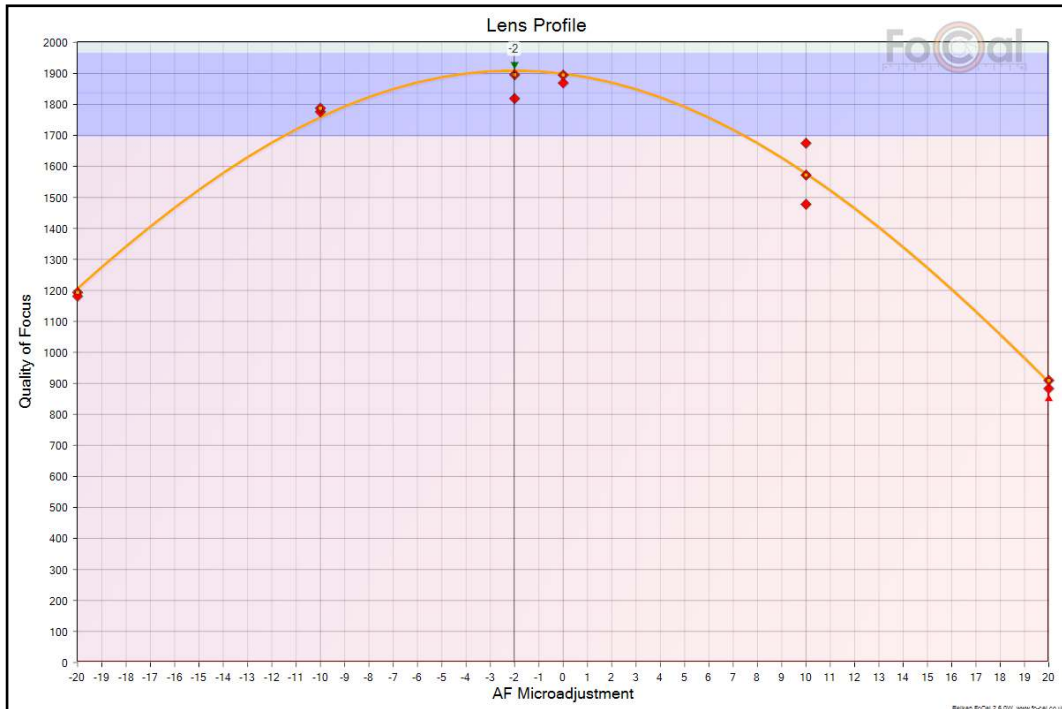


Lens Profile

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:

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- Green triangle - highest value
- Red triangle - lowest value



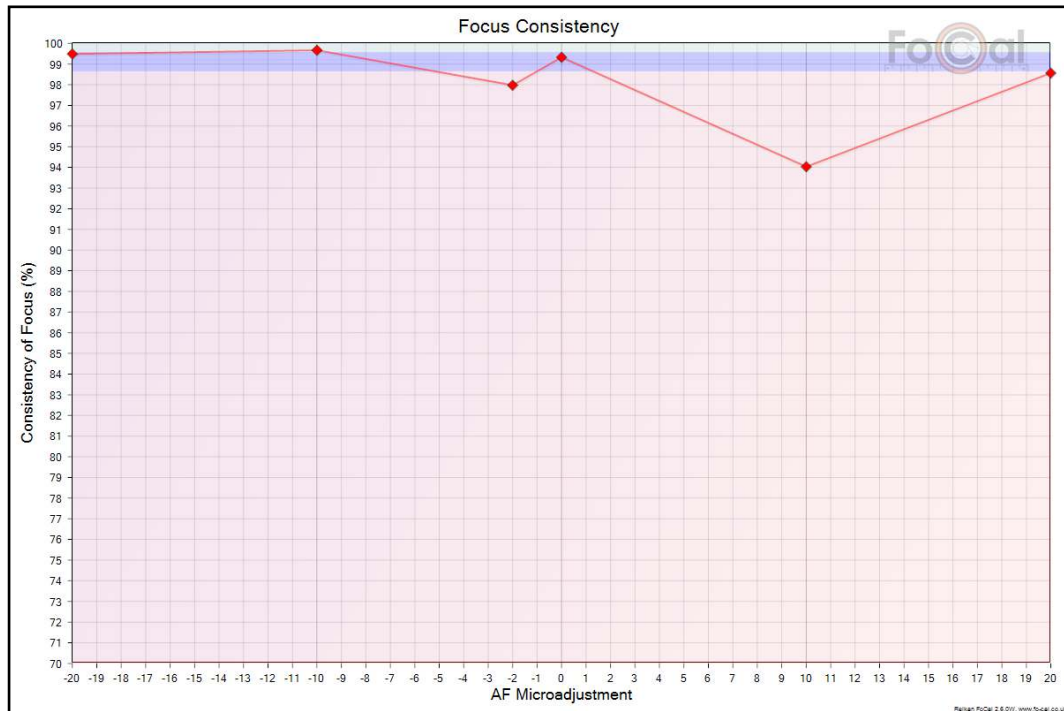
Focus Consistency

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.

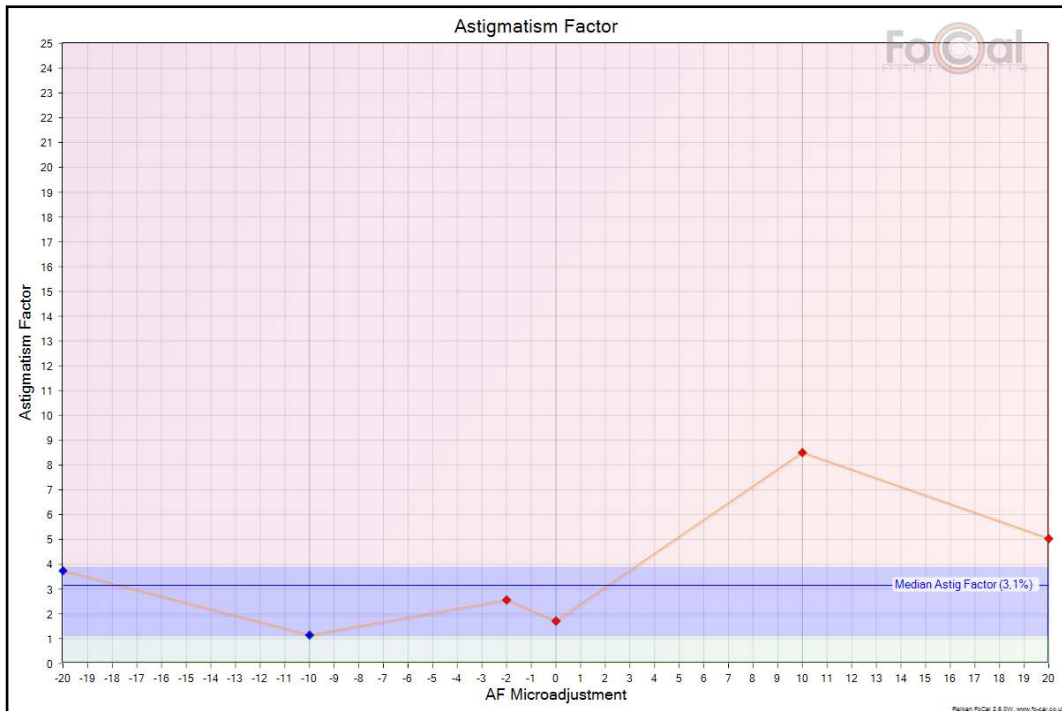


Astigmatism Factor

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 camera and lens performance compares with other users as follows:

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:

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- Green: above average performance.



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.

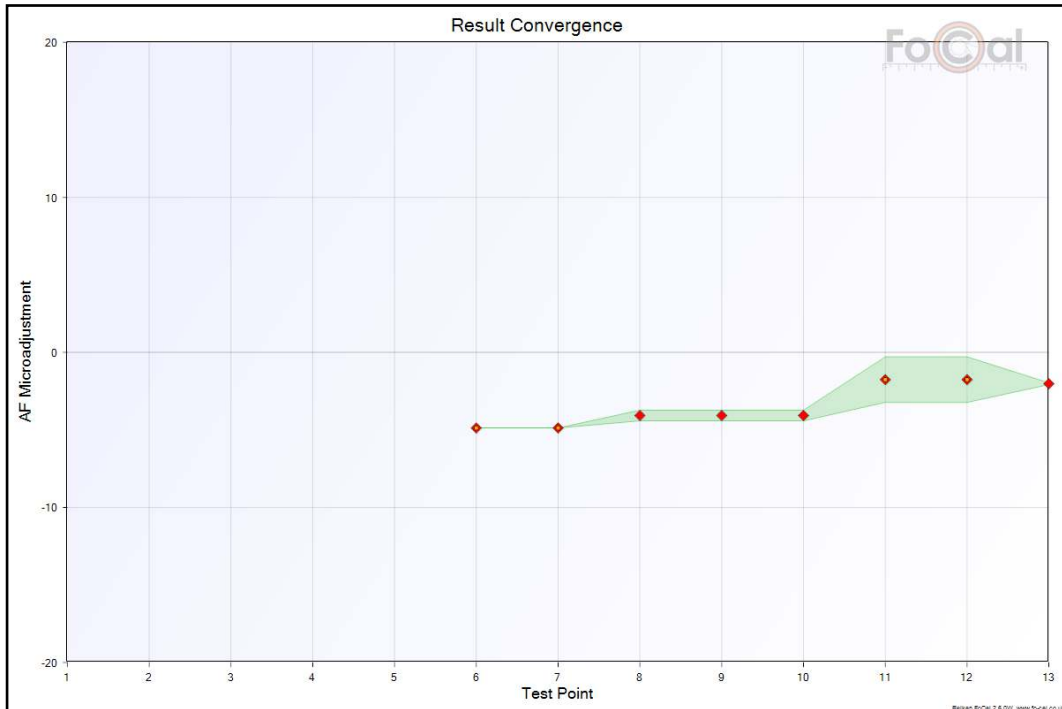


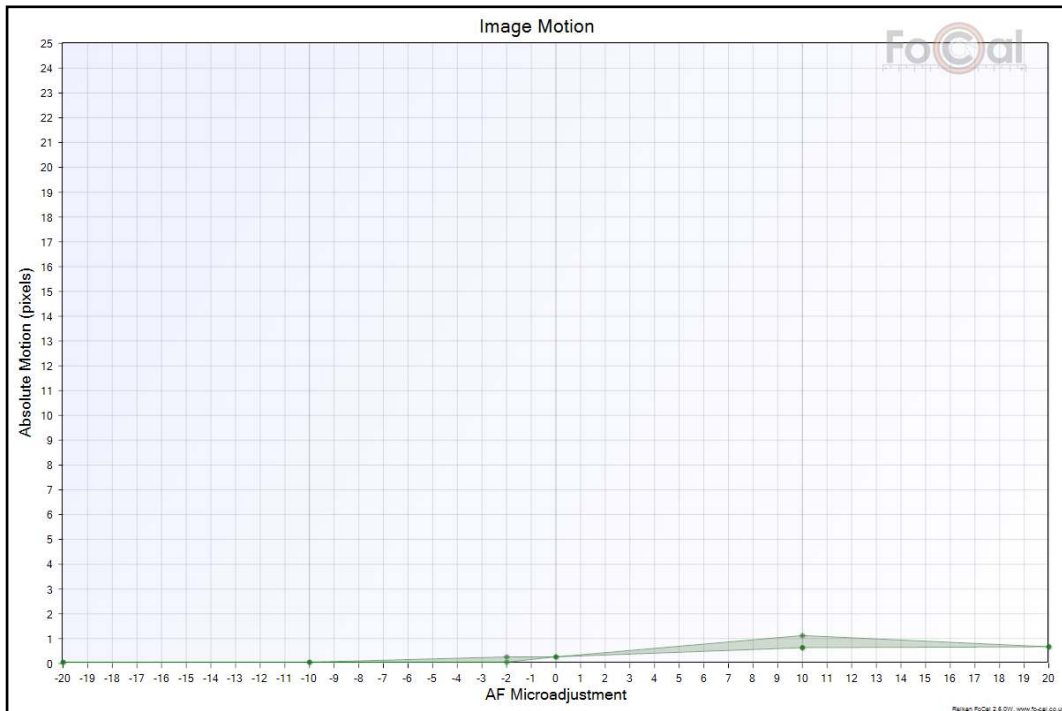
Image Motion

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.

