

Nikkor AF 10.5mm f/2.8G ED DX Fisheye - Review / Test Report

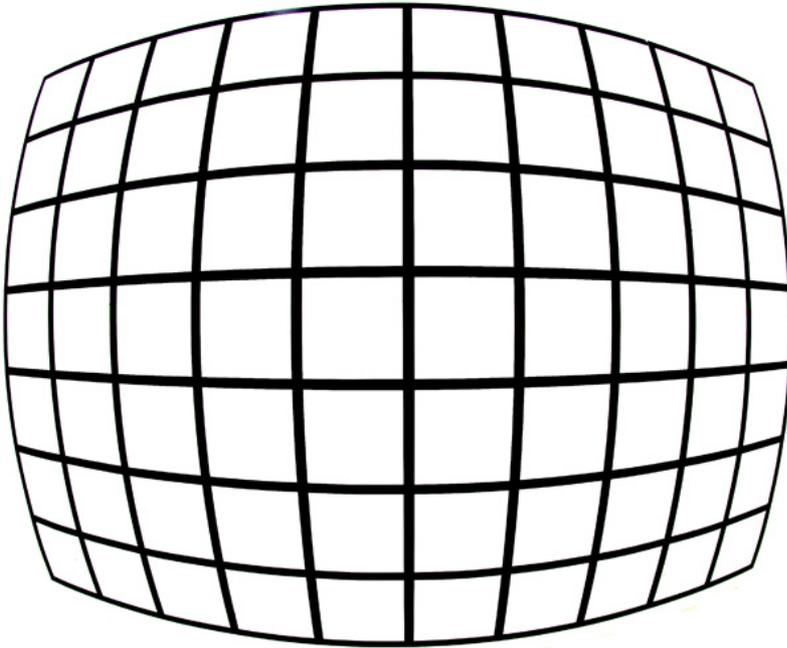
Lens Reviews - Nikon / Nikkor (APS-C)
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Distortions

The fisheye effect of the Nikkor cannot be measured via the Imatest toolkit but the reference image below should give you an idea about the degree of barrel distortions. Remember that the lens is supposed to do just that. This is not a design problem.



The chart above has a real-world size of about 120x80cm.

Vignetting

Sorry - no vignetting figures this time. I'm absolutely clueless how to produce an evenly lit plane for a lens with a field-of-view of 180 degrees ... 8-)

MTF (resolution)

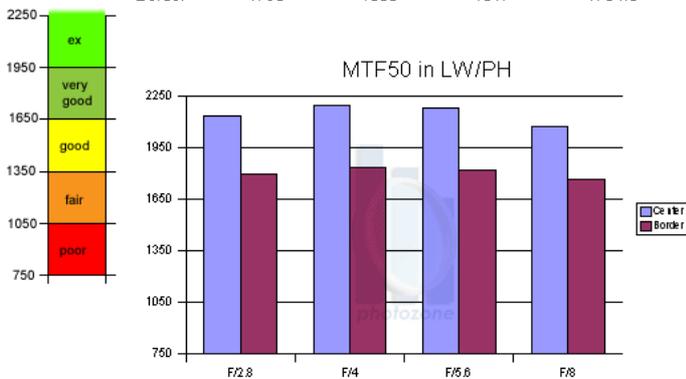
Testing a fisheye lens is a bit experimental. The Imatest toolkit freaked out regarding all the wild curves at the image borders and it was impossible to measure the "extreme corners" for obvious reasons.

Keeping this in mind the Nikkor Fisheye produced very good results in the lab. The center performance is already excellent at wide-open aperture and the borders follow on very good levels. Stopping down produces only insignificantly better results. Looking at the sample images below the extreme-most edges can be a bit soft.

Below is a simplified summary of the formal findings. The chart shows in line widths per picture height (LW/PH) which can be taken as a quantity for sharpness. The chart is limited to the visually relevant LW/PH range of [850, 2350]. If you want to know more about the MTF50 figures you may check out the corresponding [Imatest Explanations](#). **Please note that the results are only comparable within the Nikon lens test group!**

Rating Scale: **Nikkor AF 10.5mm f/2.8G ED Fisheye**
Nikon (10mp)

10.5mm	F/2.8	F/4	F/5.6	F/8
max: Center	2130.5	2198	2175.5	2075
Border	1795	1835	1817	1764.5

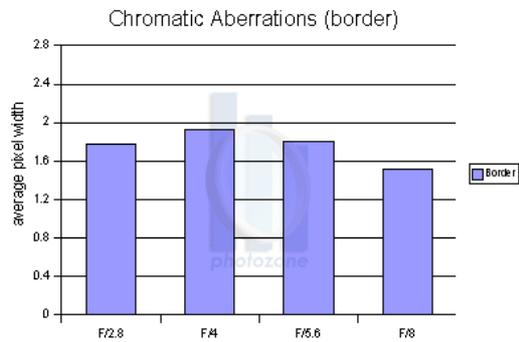


Chromatic Aberrations (CAs)

Lateral CAs (color shadows at harsh contrast transitions) are very pronounced and easily visible in field images. The CAs can be as high as ~2px on the average at the image borders. However, this is still a bit better than the only competing lens - the Tokina 10-17mm AT-X DX Fisheye zoom.

Please note that lateral CAs are correctable via imaging tools.

CAs	F/2.8	F/4	F/5.6	F/8
Border	1.77	1.93	1.8	1.51



Purple Fringing

The Nikkor can also show its share of purple fringing which cannot be removed as easily as lateral CAs. Here's a 100% sample portion:



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