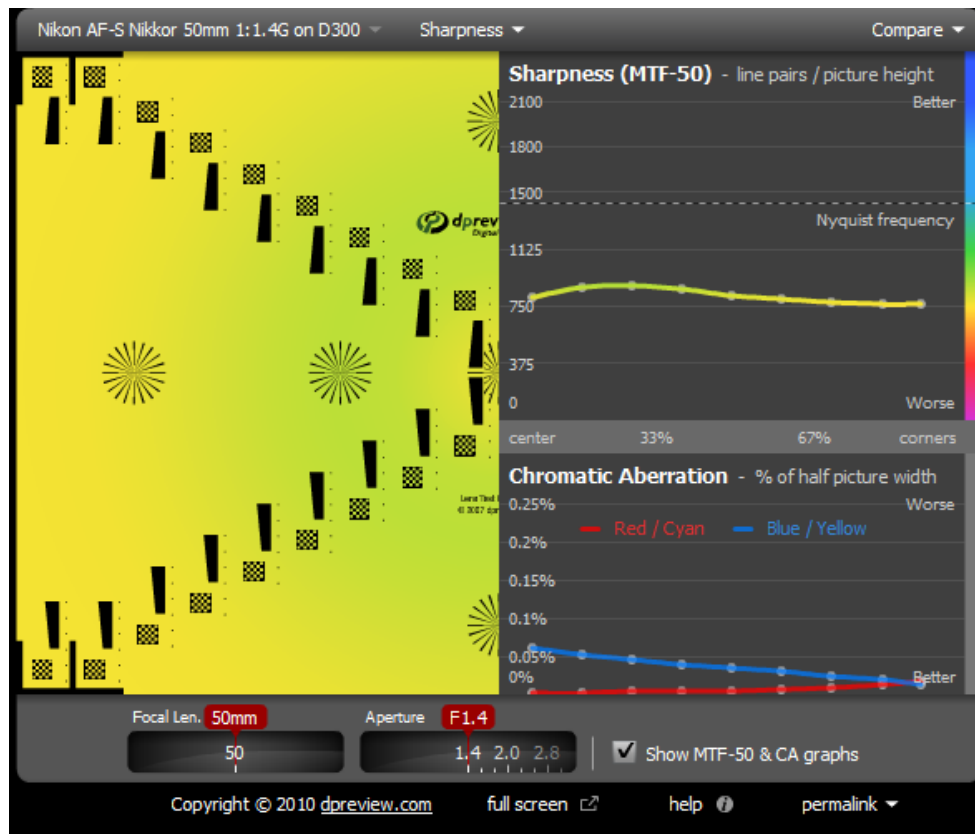


Studio Tests - DX format




NOTE the line marked 'Nyquist Frequency' indicates the maximum theoretical resolution of the camera body used for testing. Whenever the measured numbers exceed this value, this simply indicates that the lens out-resolves the sensor at this point - the calculated MTF values themselves become meaningless.

The AF-S Nikkor 50mm F1.4G struggles a little on DX at wider apertures, but improves rapidly on stopping down. It's a clear improvement over the AF-Nikkor 50mm F1.4 D at larger apertures (F1.4 - F2.8), and close in performance to the Sigma 50mm F1.4 EX DC HSM, with the Sigma holding a slight advantage at the largest apertures but the Nikon edging ahead when stopped down. As usual it benefits from the 'sweet spot' advantages of low distortion and minimal vignetting which are common to shooting full-frame lenses on DX.

Resolution	Sharpness wide open is nothing to write home about, but stopping down improves things dramatically. Performance is impressively consistent across the frame, with the corners only ever slightly softer than the centre. The very best results are obtained between F5.6 and F8, with exceptional sharpness right across the frame.
Chromatic Aberration	Lateral chromatic aberration is measurable, but unlikely to be visible in real-world shots unless you go out of your way to look for it. More problematic are the non-zero CA figures towards the centre at wide apertures, which betray blue 'color blur' as a result of color-specific spherical aberration. However this is much improved over the older 50mm F1.4D, and it essentially disappears by F2.
Falloff	We consider falloff to become perceptible when the corner illumination falls to more than 1 stop less than the centre. As usual for a full-frame lens used on DX, there's really nothing to worry about here; measured vignetting is one stop wide open, but disappears on stopping down to F1.8.
Distortion	Distortion is very low at just 0.4% barrel, which is most unlikely to have any significant impact in real-world use.

Macro Focus

	<p>50mm F1.4 primes are not intended as macro lenses, and the Nikon doesn't offer any surprises here. Maximum magnification is 0.16x, at a measured closest focus distance of 43.5cm, which gives a working distance of 33.5cm from the front of the lens to the subject.</p> <p>Image quality at large apertures (not surprisingly) isn't great, but the centre sharpens up well on stopping down to F4, with the corners a stop or so behind. There's a little barrel distortion and a tiny hint of red/cyan chromatic aberration.</p>
<p>Macro - 153 x 102 mm coverage Distortion: moderate barrel Corner softness: low Focal length: 50mm</p>	

Specific image quality issues

As always, our studio tests are backed up by taking hundreds of photographs with the lens across a range of subjects, and examining them in detail. This allows us to confirm our studio observations, and identify any other issues which don't show up in the tests.

Softness wide open

Shooting a fast full-frame lens wide open on a DX camera tends to be a recipe for soft images, as shown in our studio tests. Fortunately the AF-S 50mm F1.4G is a clear improvement over its predecessor in this regard, and the images below illustrate the difference between shooting the lens wide open and stopped-down close to its optimum aperture. At F1.4 fine detail is rendered quite well, but at low contrast and with some visible chromatic aberration (with a distinct red tint to the grays and blacks). Stop down to F4 and detail is rendered more crisply, with much higher contrast, and just the tiniest degree of red/cyan fringing from lateral chromatic aberration.

