

Nikkor AF 50mm f/1.4 D - Review / Lab Test Report

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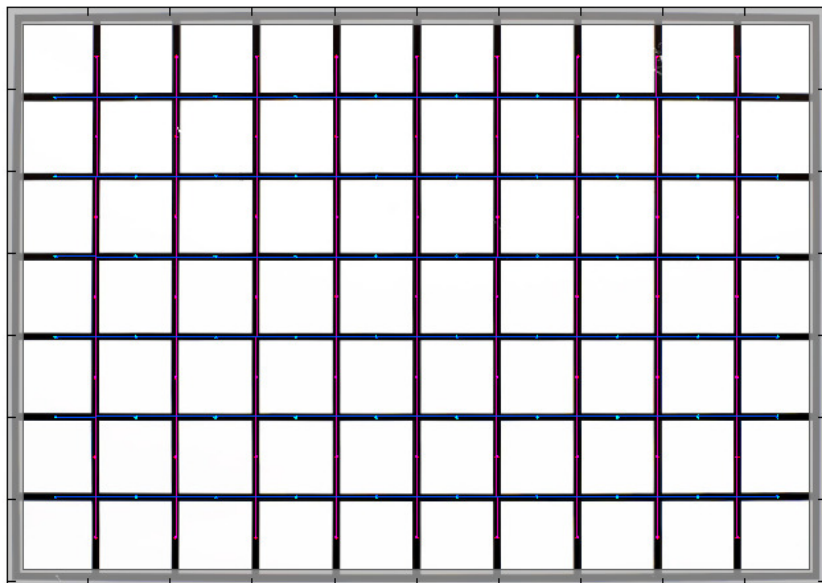
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**Distortions**

At around 0.5% the level of (barrel) distortions is relatively high for a standard lens but still very low in absolute terms and nothing to worry about in the field.

**Distortion: 3rd order correction 10-May-2006 21:16:02**  
50mm



SMIA TV Distortion = -0.487%  
 $k_1 = 0.00775$  ( $r_u = r_d + k_1 r_d^3$ )  
 (r in center-corner units.)  
 $h_1, h_2 = 0.0136, -0.00616$   
 PW Pro Coeff. = 0.01519  
 PW Pro Scale = 0.9974  
 Line calc: 3rd order

**Selected EXIF data**  
 File: 2006:05:10 21:15:55  
 Make: NIKON CORPORATION  
 Model: NIKON D200  
 Taken: 2006:05:10 18:02:29  
 Res: 1000 x 706  
 FL:  
 Exp: 1.000 s

Aper: f/11.0  
ISO: 200

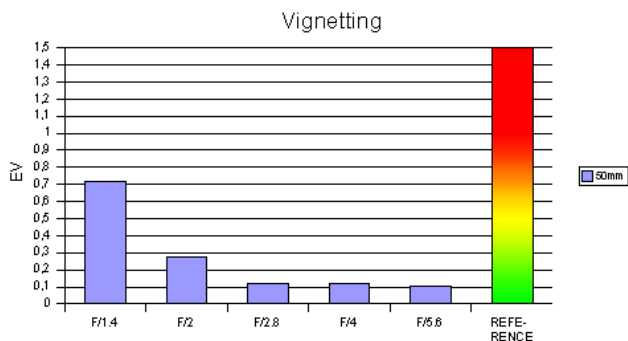


The chart above has a real-world size of about 120x80cm.

**Vignetting**

Thanks to the sweet spot behavior on the D200 vignetting is very well controlled. Wide-open vignetting is a little stronger at ~0.72EV which may be visible in very critical scenes. From f/2 and up the problem is negligible.

Vignetting	F/1.4	F/2	F/2.8	F/4	F/5.6
50mm	0,72	0,27	0,12	0,12	0,11



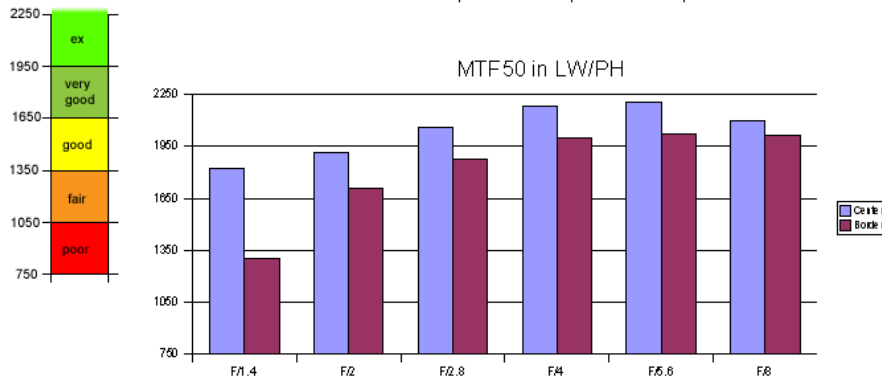
**MTF (resolution)**

Standard lenses are simple optical designs that survived the tides of time without any major updates during the last 25 years. Nonetheless they're as good as it gets at medium aperture settings and the AF 50mm f/1.4 D performs in-line to these expectations. At f/1.4 the center resolution is already very good whereas the borders are somewhat soft. The contrast level is also quite low at this setting. This is quite typical for high-speed standard lenses. At f/2 the borders are already significantly improved. From f/2.8 to f/8 the resolution figures are excellent across the image field.

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 [750, 2250]. If you want to know more about the MTF50 figures you may check out the corresponding [Imatest Explanations](#).

Rating Scale: **Nikkor AF 50mm f/1.4 D**  
Nikon (10mp)

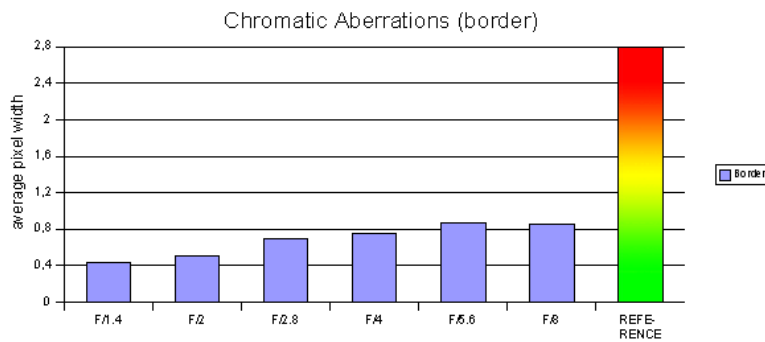
50mm	F/1.4	F/2	F/2.8	F/4	F/5.6	F/8
Center	1822,5	1913	2058,5	2184,5	2207,5	2097,5
Border	1298	1707,5	1879,5	1995,5	2022	2016,5



**Chromatic Aberrations (CAs)**

Chromatic aberrations (color shadows at harsh contrast transitions) are very low at large aperture settings but increase a little when stopping down. However, in the tested aperture range CAs never exceed 1px on the average at the image borders so the problem isn't really significant.

CAs	F/1.4	F/2	F/2.8	F/4	F/5.6	F/8
Border	0,43	0,51	0,7	0,76	0,86	0,85



**Verdict**

Similar to its cousin (AF 50mm f/1.8 D) the Nikkor AF 50mm f/1.4 D is a very good performer. At f/1.4 the contrast is a little on the low side and the borders may be a little soft but from f/2.8 & up the performance is really superb. Distortions are detectable in the lab but not really significant enough to be relevant in the real life. CAs are very low and vignetting is a non-issue except at f/1.4 (on APS-C DSLRs). The build quality of the lens is very decent and the AF performance leaves nothing to be desired.

Optical Quality: ★★★★★  
Mechanical Quality: ★★★★★  
Price/Performance: ★★★★★



[What does this mean ?](#)

Highly Recommended

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