

# ***The Long March Towards Revolution: AFS 70-200 mm f/2.8 G ED IF VR Nikkor Reviewed***

3. Optical Performance

*by Bjørn Rørslett*

## ***3. Optical Performance***

Sharpness is traditionally one of the more important criteria for photographic lenses. We all want our lenses to be tack sharp, period end period. Yet sharpness by itself cannot guarantee anything, and I repeat any thing, in terms of the ensuing pictorial outcome. The world is flooded with sharp, dull, and uninspiring images, simply because the photographer believed his job only was to press the button and let the camera and lens do the rest. This is a paradox the handling of which each and every one of us has to balance in our own chosen manner.

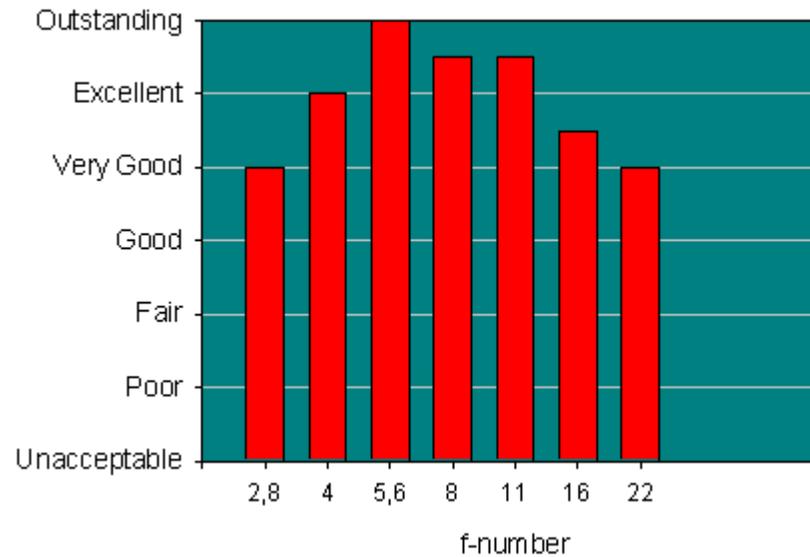
I for one strive for visual impression - not visual accuracy - in my photography, so spend considerable time on assignment to circumvent restrictions imparted by a dull photographic life-likeness. I do care about lens sharpness by all means, but not as the panacea to solve all photographic problems. Commitment to the process of creating images will outperform any MTF plot any time. It's nice to have a sharp lens but better still to know to which ends it can best be used. Oh well, I continue to evaluate visual quality by shooting test pictures of brick walls outside my office, I always have and probably always shall do assessments this way. At least this procedure provides me with a guideline as to how the lens performs. I always cross reference my observations with original slides (or files) from similar lenses so to have a consistency on my rankings.

After a few day's worth of testing, it became painfully obvious that my D1X had developed a severe "back-focus" issue. Critical sharpness simply was not present on my test images unless the lens was stopped down beyond f/11. Initially, I suspected the lens itself might be the culprit causing of unsharpness so repeated painstakingly all my test shots (hundreds of them) with my D1H and was relieved - and saddened - by the fact that all of these were in sharp focus, as they should. My D1X eventually was revived in the premises of my Nikon repair shop and

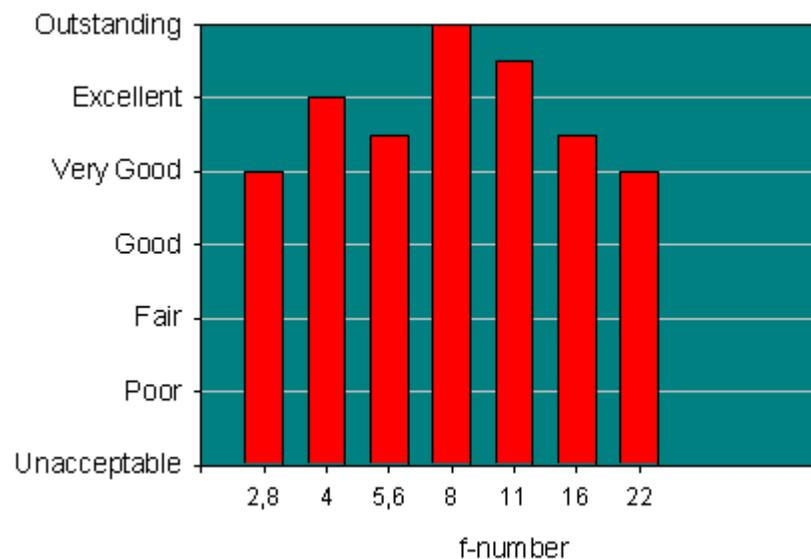
enabled me to finalise my sharpness tests. For what they are worth, they are depicted below,

### Subjective Evaluation of the AFS 70-200 mm f/2.8 G VR ED-IF Nikkor

(for test setup, and criteria, see [here](#). Remember these values give qualitative - not quantitative - data, and thus averaging the values is meaningless)



Performance at 70 mm



Performance at 200 mm

All tests obtained with Nikon D1X using NEF raw files processed in Bibble 3.04.  
Lens mounted on a Sachtler ENG 2 CF carbon tripod with Burzynski head.

Overall the AFS 70-200 mm f/2.8 lens delivers an excellent image quality across its entire focal range. The slight drop noted at f/5.6 towards 200 mm might be a quirk particular to my lens sample and should not cause any major concern. Since I only had a single lens available for testing, the deviation has no statistical foundation on its own either. Only when I can reproduce wiggles like this with other lenses (such as I did on samples of the 400/3.5 Nikkor, for example) do I put any emphasis on them. I would characterise the 70-200 VR as giving professional class performance at all focal lengths.

The decline in performance at smaller f-numbers is inherent in all lenses and is caused by diffraction. If anything, image quality of the VR 70-200 hold up better than expected when the lens was stopped well down.

Chromatic aberration (CA) was virtually absent from any of the brick wall test images at any aperture and focal setting. This in its turn resulted in a high-contrast rendition with vibrantly saturated colours, typical of the best of the optics in which ED glass is employed.

Illumination was even across the entire digital frame at f/2.8 at all focal settings, so corner light fall-off was absolutely negligible. I guess there may be some extreme corner fall-off with the lens set wide open on an F5, however (I no longer use film for ordinary testing).

Geometric distortion is of the barrel type at 70 mm and is clearly visible there. As you zoom the lens to longer focal lengths, distortion is reduced and around 105 mm you have a lens eminently suitable for architecture work. Predictably, at 200 mm there is some, but not excessive, pincushion distortion.

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