

## Defocus Image Control - Nikon AF DC-Nikkor 135mm f/2D



Nikon lens line-up features two great Defocus Image Control lenses. The reviewed Nikon AF DC-Nikkor 135mm f/2D is the longer and a bit more expensive than its sibling Nikon AF DC-Nikkor 105mm f/2D.

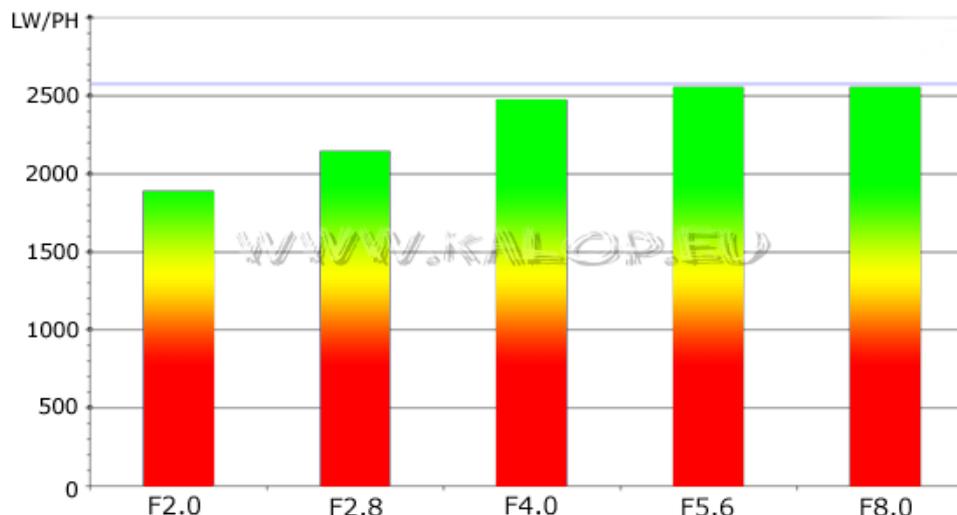
The lens was released in 1995 so it is one of the oldest Nikkors still in production today. It is a full format lens so on a DX (APS-C) dSLR its field of view is equivalent to 202 mm on the classical FX format. The build quality of the lens is superb and it handles great. It features rear focusing so the front element does not rotate and the length of the lens remains constant regardless of the focused distance.

### Specifications:

Lens optical construction:	7 elements in 6 groups
Lens coating:	SIC - Nikon Super Integrated Coating
Picture angle:	FX: 18°; DX: 12°
Number of diaphragm blades:	9 rounded
Minimum f/stop:	16
Closest focusing distance:	1.1 m
Maximum reproduction ratio:	1:7.1
Weight (measured with lens caps):	807 g +- 1g
Dimensions (approx.):	79x120 mm
External front filter thread:	72 mm
Aperture ring:	Does have
Distance scale:	Does have
Material of bayonet ring:	metal
Other features:	Lens provides distance information to the camera. Defocus Image Control.

**Sharpness:** Testing this lens for sharpness was a joy. The resolution is good wide open (F2.0) even though the contrast is low. At F2.8 the resolution is very good and excellent beyond. At its best (F5.6, F8) the lens is sharper than the 10Mpix sensor of the D200 can measure.

## Sharpness of Nikkor 135 F2 DC (center)



I didn't test for the boarder resolution since it's quite unimportant in portrait photography. The worst result someone could possibly find is that a portrait lens is too sharp in the edges. It is interesting to notice that other famous portrait lens Nikkor AF 85mm f/1.4D is pretty soft close to the edges until F4 and this softness with shallow depth of field (DOF) is the key to its success. The DC Nikkor 135 f/2D allow more: you may shift the DOF, which is stunning.

I periodically test the sharpness of lenses but I have to point out that **sharpness is generally an exaggerated parameter**. Some people do study 10 or 12 MPix images magnified at 200% on their monitor screens. They are omitting the fact that the size of the whole picture at this magnification would be over 2 meters.



**Distortion, vignetting and chromatic aberrations:** According to other reliable tests, the lens shows extremely low barrel distortion and vignetting lower than 0.35 EV even wide open (on a DX format camera). The test also states that the chromatic aberrations are very low (0.014% of frame height at image boarders). These results are close to stellar, even for a prime lens

and my general shooting experience is in accordance with that.

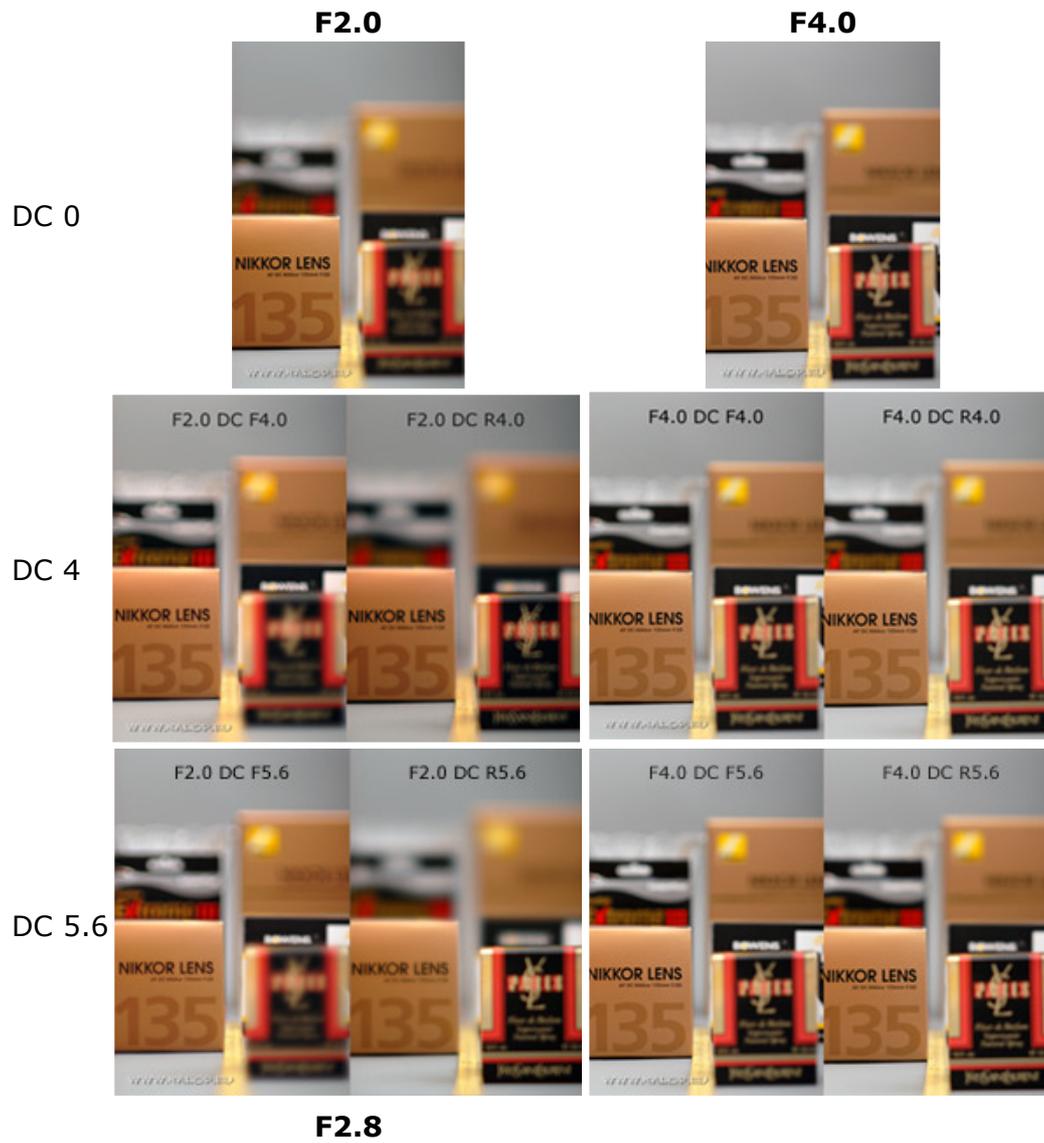


But the most interesting and unique feature is the **Defocus Image Control**: It is accomplished by altering spherical aberration of the lens. The lens features a dedicated control ring similar to an aperture ring to alter the defocus effect (spherical aberration). The DC control ring has a neutral setting where the lens behaves just like a normal telephoto lens. The ring can

be rotated to the right or to the left to emphasize the background (R letter for rear) or foreground (F letter for front) defocus. The ring locks at every full stop between f/2 and f/5.6. Turning the ring beyond the aperture

in use lets us create an overall soft-focus effect. Some say that the DC effect is only subtle and the defocus effect can be obtained cheaper with soft focus filters or via digital post processing. Although we can argue about the first statement, the other two are nonsense. **The soft focus created by this lens** gradually alter either background or foreground which **is impossible to obtain with a filter or from a single 2D image in software post processing.**

In test setup I arranged 5 boxes at distances of 150, 170, 190, 210 and 230 cm from the camera (focal plane). At distance of 230 cm I also put a crystal vase lit by a Nikon portable speedlight to create out of focus highlites on some images. I used Nikon D200 camera, Bowens Esprit studio flashes and a Seconic flash meter. Lens had been focused at distance of 170 cm and refocused with every shot. In this setup I shot nearly every possible combination of aperture and defocus setting. To cut a long story short I will present you with only some of the pictures.



As you can see the defocus effect

DC 0



of this lens is obvious and perfectly under photographers control. The bokeh is kind of a dreamy-creamy one. The soft-focus achieved by DC setting exceeding current aperture in use is also very pleasant. It lowers contrast but touch of sharpness is still present at the focus plane.

DC 2.8

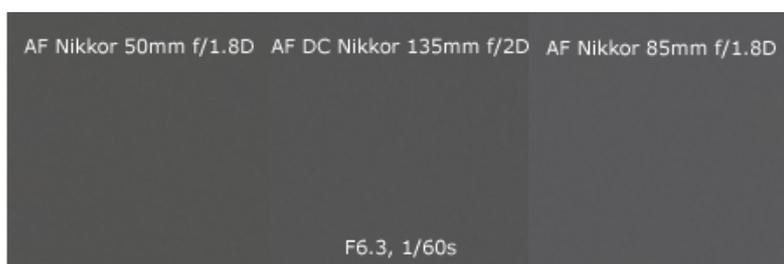


Side effects of defocusing either foreground or background are light edged circles at spots of high contrast in the opposite side (background or foreground) - see in picture below (F2.0 DC F5.6). Even though it can be used in a creative photography, it is a bit distracting. But don't worry. In normal photographic situations it won't be a big problem. If we try

defocus background (*or foreground*) of image it is mostly because it is busy and distracting. The other side ie. foreground (*or background*) is therefore less busy and in most portrait situations clear of any objects that could possibly cause these light edged circles. It's always possible not to use the DC at extreme situations. The out of focus highlites don't feature the bright edge at neutral DC setting.



The **colour transmission** of this lens compared to standard Nikkor 50 F/1.8D is neutral. The AF Nikkor 85 F/1.8D is a bit cooler (bluer) and a fraction of an EV lighter but the colour difference is minimal (see picture below).



**Conclusion:** The Nikon AF DC Nikkor 135 F/2D is a masterpiece lens. Although the auto focus (which relies on the in-camera motor) is a bit dated, it works fast and accurately. Sharpness, CA, vignetting and distortions are showing very good to excellent values. The colour transmission is neutral. If we sum this up altogether, we get a very good telephoto lens. In addition to this the Defocus Control feature gives us unique control over the bokeh (out of focus blur).

The Nikon AF DC Nikkor 135 F/2D is a fine jewel that is worth its price. But as other magnificent jewels it shines only at certain occasions and is

not intended as an all-purpose wear.

I'm very satisfied owner of this lens and I do recommend it to every portrait photographer.

  
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Editor: *Michele Cartwright*