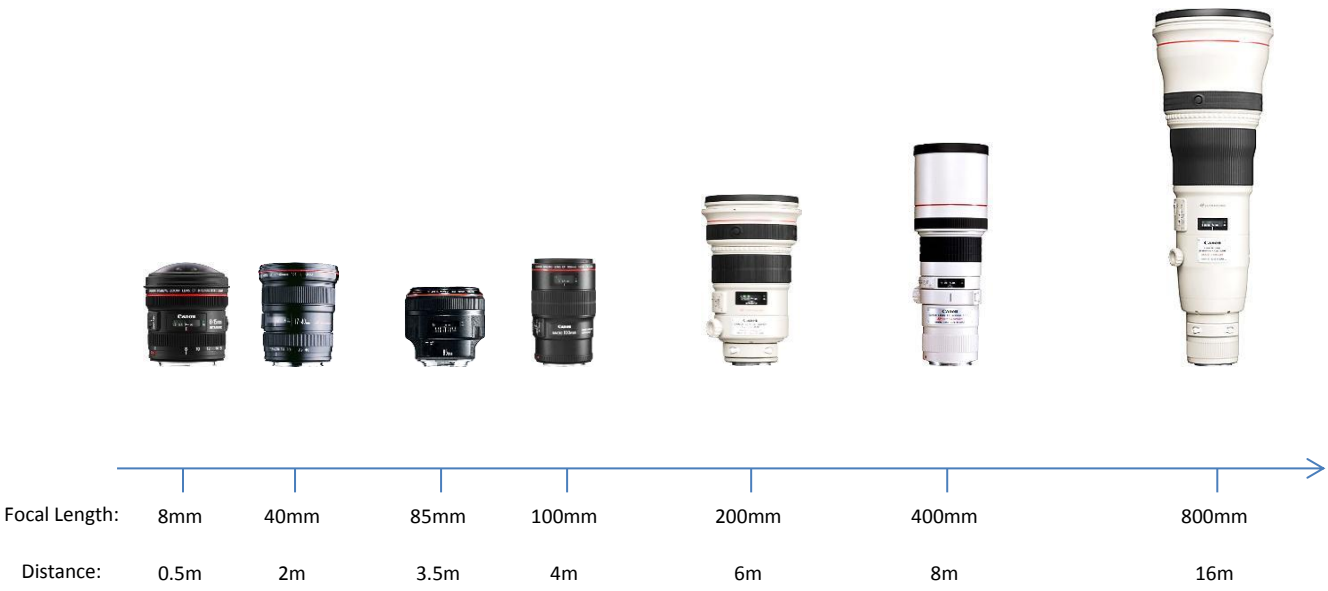
http://www.fo-cal.co.uk

FoCal Test Distance Chart

Focal Length	Recommended *minimum* test distance
<10mm	0.5m (50x or greater)
24mm	1.2m (50x)
50mm	2.5m (50x)
85mm	3.5m (40x)
100mm	4m (40x)
200mm	6m (30x)
300mm	7.5m (25x)
400mm	8m (20x)
500mm	10m (20x)
600mm	12m (20x)
800mm	16m (20x)
1000mm	20m (20x)
Macro lenses	Typical working distance – e.g. 0.3m for 1:1 shooting.

Note that Focal length is the actual focal length of the lens (and teleconverter combination if applicable) – the sensor "crop factor" can be ignored.

The chart below shows this visually (not to scale):



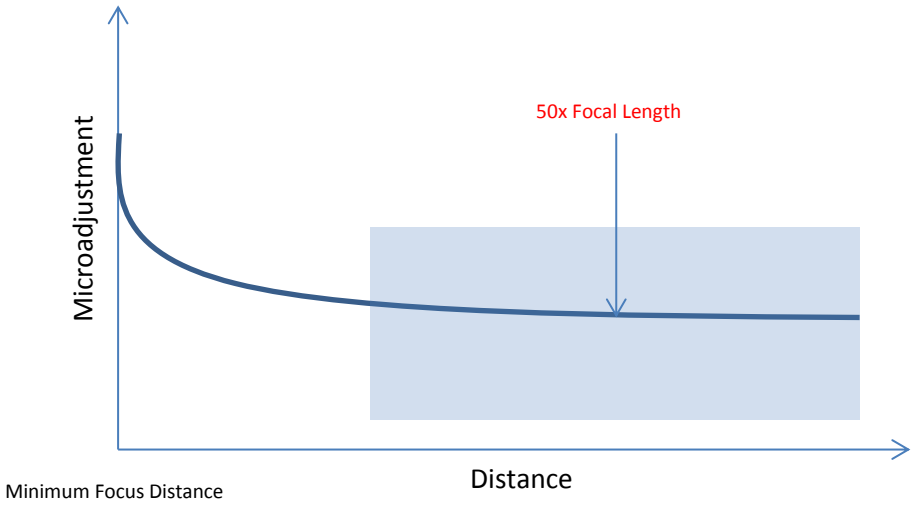
FoCal Test Distance Explanation

FoCal allows you to calibrate the combined AF system of your camera and lens in order to achieve the best possible performance. The result of the testing is a single value which is applied to the AF Microadjustment setting (Canon) or AF Fine Tune setting (Nikon) of the camera.

Unfortunately, this single number is applied to the camera-and-lens combination for *all* focus distances, whether the subject is 1m or 100m from the camera, but each distance often requires a slightly different value.

In reality, as you move the focus point towards infinity, the required microadjustment/fine tune value stabilises, so generally the rule is to calibrate at a "far" distance from the camera.

The following graph shows an example of the change. When the distance is close to the minimum focus distance (the far left of the graph), the microadjustment value can change a large amount with small changes in distance, making calibration both difficult and not very useful for general shooting. However, as you focus further from the minimum focus distance, the value stabilises – the shaded region has about the same AF microadjustment value required for all the focus distances out to infinity.



As a rule-of-thumb, testing at around 50x the focal length of the lens gives good results (so for a 50mm lens you test with the target around 2.5m from the camera). However, for longer focal lengths, this can prove impractical, but luckily also unnecessary.

When you start testing with longer telephoto lenses – e.g. 300mm and above – you can generally test at around 20x the focal length as the curve starts to stabilise earlier for longer lenses.