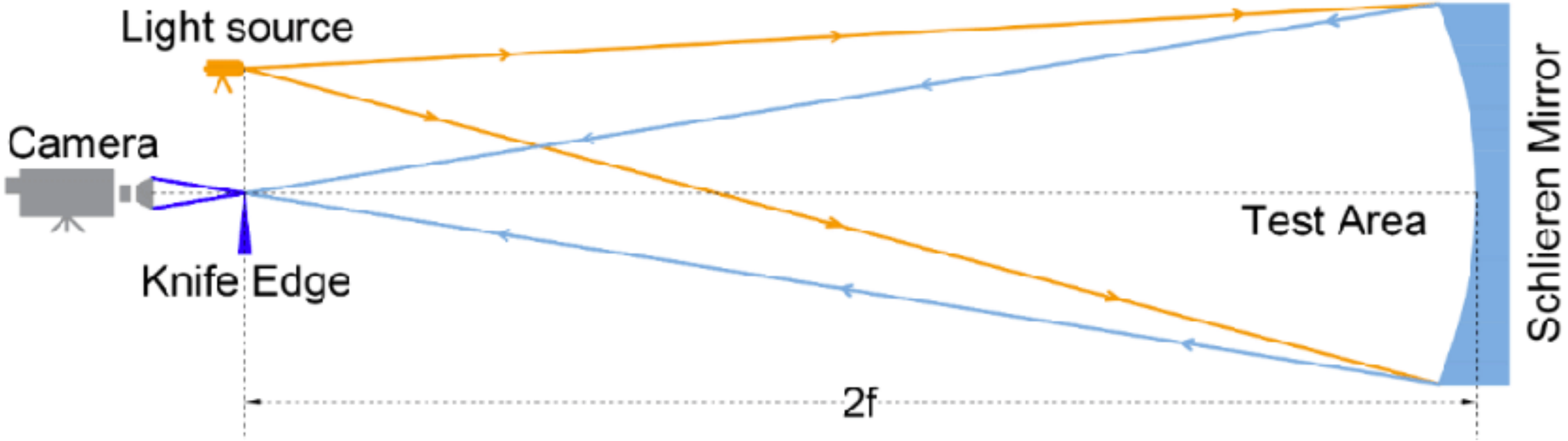
Single-Mirror Configurations



In the single mirror configuration, we treat light from a point source as collimated at the test area. The mirror and camera lens serves the same purpose as the second mirror and lens in the previous configuration (i.e. to image the test area).

Why 2f for Single-Mirror Configuration?

The knife blade must be placed at the image of the point source. However, why must we require that the image be at 2f—though Schlieren will work despite a different image distance?

<u>If the object is placed after 2f</u>: it is a better approximation that the light is collimated at the mirror. However, the image is small and in-front of the object. Thus, we would require a stronger imaging lens after the knife. Furthermore, the knife will clip some light from the point source.

<u>If the object is placed before 2f</u>: it is a worse approximation that the light at the mirror is collimated. The image appears now after the object and is magnified. Because the image is magnified, I suspect the shadows cast will be less prominent (i.e. less sensitive)