

# Indoor Photography without Flash

*Tips and Techniques from The Louisiana Photographic Society  
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To get correct color in a photograph, the film or digital setting must match the light source. Electric light is not the same as sunlight. The *color* of light is measured in degrees Kelvin (K). Direct sunlight has a color temperature of 5200 K; incandescent bulbs produce about 3200 K; fluorescent about 4000 K and shaded sunlight about 7000 K. The light from a flash is about 6000 K. Low color temperatures tend towards red (*warm*); higher temperatures tend towards blue (*cold*). Fortunately, we don't have to know the exact numeric value of the color temperature.

Light sources and temperatures may be classified broadly as: daylight, cloudy, shade, incandescent bulb (tungsten filament), fluorescent bulb and flash. Here's a summary of how to deal with matching film or digital to the light source.

## Film

Film is usually designed for daylight or tungsten light sources; fine-tuning is accomplished with filters during exposure or printing. If present, a "T" in the film name will signify tungsten light sources; however, all product names do not include the T. For example, Kodak Ektachrome 160T and Fujichrome 64T are transparency films for tungsten lighting. Kodak Portra 100T is a color print film for tungsten lighting but so is Fuji color NPL 160 (no T). Fluorescent light is in-between incandescent and daylight. Fuji color print film is regarded by some as being better with fluorescent or mixed lighting than Kodak print film. However, additional filtration will probably be needed with either the Fuji or Kodak films when used in mixed lighting.

If daylight film is used indoors, a filter such as a Tiffen 80A or 80B (bluish color) can be used to compensate for tungsten lighting. A Tiffen FL-D filter will compensate for fluorescent light.

When using tungsten film outdoors, a Tiffen 85, 85B or 85C filter can compensate for sunlight.

## Digital

With a digital camera, the color temperature can be chosen in the menu. Because the reference point is the color white, this is known as *white balance*. In some cameras, a numeric value can be entered for the color temperature but most of the time one of the broad classifications, such as "cloudy", is selected. In fact, most of the time, "Automatic White Balance" is the selection and works very well.

Some digital cameras can be calibrated for a custom white balance. The procedure involves taking a photograph of a (truly) white (although some recommend gray) object. Check your instruction manual for details.

For cameras and editing software capable of dealing with the Raw format, the white balance can be adjusted during editing. This is by far the most versatile option and is highly recommended.