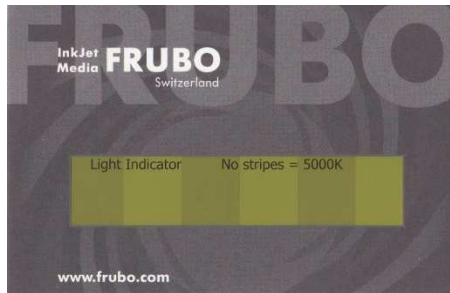


Color temperature indicator – Judgment of ambient illumination



The colors of a print depend very strong on the light source used. It is therefore important that they are always assessed under a standard light of D50 (5000 K). If a light source with an incorrect color temperature is used, the colors of the print shift and an assessment is meaningless.

With the color temperature indicator it can be easily detected whether the light source corresponds to standard lighting and whether an assessment is valid.



If the indicator is viewed under standard illumination of 5000K, all patches show the same color.



If the indicator is viewed under a non-standard illumination, the patches show different colors.

The color temperature indicator is a good tool to control the lighting conditions. However, it cannot replace a precise spectral measurement and can only tell if the ambient lighting is suited for evaluating your prints. It cannot tell how “well” a light is. This has to be measured by other spectral based tools.

D50 standardized light should simulate the average Daylight with 5000 Kelvin very precisely and repeatable. Different D50 light sources will have different spectral ranges and response curves. So it is quite normal if you encounter slight banding in the color temperature indicator even with a D50 viewing booth. This normally is no cause for concern. Only if you encounter clearly visible banding and therefore a higher difference between the two colors, your lighting environment is not well suited for evaluating colors and printouts.

Some background

Colors that have the same spectral composition always appear the same to the human eye by whatever means of lighting. However, also different colors can seem absolutely identical to the human eye. As the human eye is limited to three tonal response curves, the same color impression can be achieved with different spectra. Colors that have the same visual appearance, however a different spectral composition, are called metameric.

The color temperature indicator uses two metameric colors. Under standard illumination of 5000K these colors appear the same and under non-standard illumination these two

colors behave different. With the color temperature indicator, you can simply proof if your lighting conditions are valid for assessment or not. It will indicate with two metameric colors if the light does or does not comply with the D50 standard.

Source:

1) „Intelli Light Test“, <http://www.quato.de/english/lighttest.php>, 07.09.2010

2) „Ugra Light Indicator“, <http://www.ugra.ch/ugra-light-indicator.phtml>, 07.09.2010