

WHAT IS CORRELATED COLOR TEMPERATURE (CCT)



So what is color temperature anyway? As a review, color temperature (Correlated Color Temperature, or CCT, in lighting tech jargon) is essentially a gauge of how yellow or blue the color of light emitted from a light bulb appears. It's measured in the Kelvin unit and is most commonly found between 2200 Kelvin degrees and 6500 Kelvin degrees.

Warm light sources, such as incandescent bulbs, have a low color temperature (2200-3000K) and feature more light in the red/ orange/ yellow range. When you think of a warm color temperature, think of the warm, inviting light of a fire in the fireplace or a nice high-end restaurant with classy dim lighting.

Cool light sources, such as some HID or fluorescent lamps, have a high color temperature (>4000K) and feature more light in the blue range. When you think of a cool color temperature, think of the crisp white or blue light of school hallways or hospitals. Recent studies looked at the effect of color temperature on visual acuity in schoolchildren. Optometrists conducted vision and reading tests for children under 3 different scenarios: 5000K (white) light at normal light level, 3500K (warm white) light at normal light level, and 5000K light at half the level of the first two scenarios.

The researchers found that the children performed significantly better at 5000K than 3500K at the same light level, with the results being almost the same between the 3500K and low level 5000K groups. The optometrists observed that the pupils of the children are more constricted at higher color temperatures, which resulted in improved vision and higher visual acuity.

What does this mean for lighting in schools? Lights in the 5000K range are optimal for tasks that involve high levels of focus and concentration, typical for most school situations. But what if students are engaged in group activities or classroom discussions? The LED Color Tuning from Green Systems is perfect for this. You can set the optimal color temperature in a classroom to 5000K when the students are taking a test or working on math or science, change it to a slightly warmer 4000K for classroom discussions and group activities, and tune it to 3000K to calm the students down after lunch and recess.

You no longer have to compromise by selecting a single color temperature light for your classrooms. Educators can tune the light to their OWN unique needs from the easy to use touch fader controller.