

Hot Tips

[SOLUTIONS AT WORK]

LIGHTING CLASSROOMS WITH LEDS HELP STUDENTS SHINE

TIRED, UNFOCUSED AND LACKING DISCIPLINE:

These are all negative marks students may see on a report card. But what if it's the school's design — and not the individual — that is to blame for triggering these behavioral traits?

Lighting is a big part of the academic picture. According to the study "Effects of Color and Light on Selected Elementary Students" conducted by Dr. Ellen Mannel Grangaard, fluorescent lights can contribute to off-task behavior, including talking to others and daydreaming during a lesson. Studies also show exposure to light, or lack thereof, has a significant impact on students' sleep cycles — affecting attendance, test scores and overall behavior.

While fluorescent lighting has been the source of classroom lighting for the past 75 years, mercury-free LED (light-emitting diode) technology is transforming the landscape with bright ideas.

The cycle of fluorescent is constantly moving as the phosphors are excited by gases to create light, a process that may be distracting for some individuals. However, LED lighting does not employ these features and instead is able to evenly and consistently distribute color in the visible spectrum. Mimicking the stimulating powers of natural light, LED technology enables increased alertness by offering steady color temperatures in the warmer range of 2,700 Kelvins up to daylight color as high as 6,500 Kelvins.

To incorporate this eco-friendly technology into classrooms, designers are now using LED lamp technologies integrated into a variety of fixtures, including direct indirect lighting from pendants and accent lighting for the front of the classroom. Additionally, designers are implementing wall wash fixtures to highlight the vertical surface of a whiteboard and balance the illumination of the room with the vertical brightness of the window wall.

With LED technology, classrooms not only receive the cost-saving benefits of energy-efficient, long-lasting, recyclable lighting, but the benefit of students reaching their full potential. ■

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