

# The A, B, Cs of Classroom Lighting Trends and Solutions

Q

It would be helpful to explain how tunable white lighting will affect daylight harvesting. Currently we design classrooms to utilize the natural lighting in the classroom. The only option that I have come up with is that, when the teacher decides to utilize the tunable white controls, the windows must have motorized shades that close as the environment switches to tunable white.

A

*This is an interesting question. The issue will only come into play when you have a lot of direct daylight. Basically, you are color mixing between two sources at that point. The more daylight you have in terms of intensity, the greater the impact. Think of how your living room looks when you have lots of light coming through the window mixing with a 3000k downlight. It is quite different than the color you would see at night with no daylight. So, yes, I think your suggestion of adding shades that open/close based on the tunable luminaire is a viable solution.*

Q

How do you recommend saving energy in paths of egress (stairs, corridors) where NFPA 101 requires minimum light levels to be maintained at all times for egress? Related to this, it seems most/all occupancy sensors are not guaranteed fail-safe.

A

*Great question. The study from UC Davis that was referenced during the webinar shows that more than 30% of the lighting energy consumed is in corridors and hallways. In most cases, the lights are on at full output. Even with codes that require a certain light output, there is still an opportunity for energy savings. Simply reducing the full output to what is required by code for egress can deliver energy savings. For example, our WL series product for stairwells comes with occupancy sensing and sequential controls so that the lighting is dimmed when no one is in the stairwell, but goes to full-on when occupancy is detected. It is designed with a “fail-to-on” feature which prevents any disruption in operation. To learn more about this solution, click [here](#).*

Q

What are the recommended footcandle levels for K-12 classrooms?

A

*Based on the IES Edition 10 handbook, 50fc is recommended for classrooms. Of course, this varies based on the exact activity. For example, in Audio-Visual mode, this is reduced to 5fc. The 50fc level is for lecture/instruction time. Also, keep in mind that there is always a balance between quantity of light and quality of light. With the overall performance improvement of luminaires today and their ability to deliver volumetric lighting, light levels can sometimes be reduced in a classroom while still improving practical illumination.*



**Q** Have you offered any tunable lighting products or do you plan to offer any?

**A** *We launched our first tunable white solution geared toward classrooms in April. It is the **BLT with nTune technology**. The CCT ranges from 2800K to 5000K based on the activity in the space. nTune is built on the very intuitive nLight platform so it is “easy” to install and “easy” for the occupant in the space to use. In addition, the adder for tunable white is quite small compared to the BLT without this option. We added the tunable white (nTune) technology to a value-priced luminaire for competitive price positioning. We did this in order to make the technology financially accessible by K-12 facilities. For more information, click [here](#).*

**Q** What's the market in educational lighting for circadian light?

**A** *At this point, I am hearing a lot of interest and discussion in this area. I have not been directly involved with many projects that have actually installed circadian lighting systems in classrooms, but I do expect this to shift over time. The importance of positively impacting mood and behavior of students is a focus right now and this may be one possible solution.*