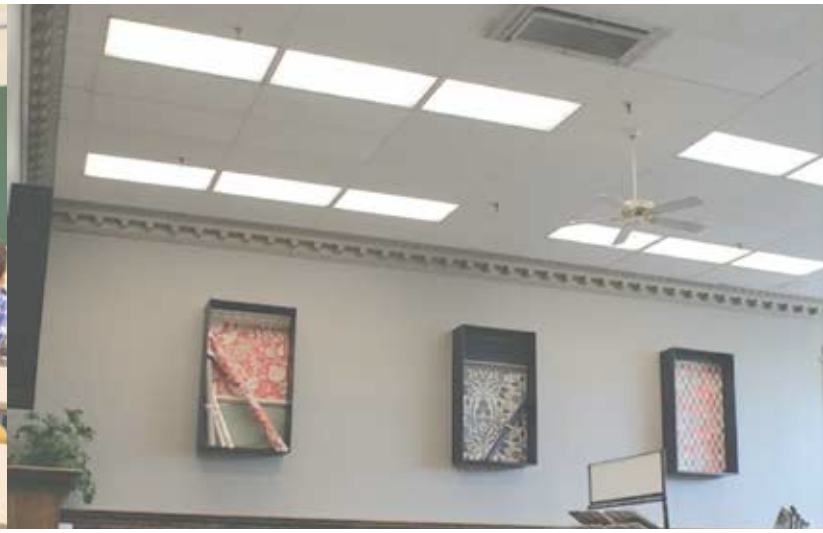

MAGNIBLEND

A Color Temperature Mixing Retrofit from the Creators of Magnilumen Plus

ZLED LIGHTING
ZLED-LIGHTING.COM

MAGNIBLEND

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from the Creators of Magnilumen Plus

Color Mixing is your solution to have products look **"true to color"** in a showroom **(Retail Store)** or to create an **educational or workplace** environment that benefits both the students and employees.

ZLEDLighting has added a special color temperature LED retrofit board to its Magnilumen product line. Understanding that in some cases 3000K is too warm, 4000K is too cold and 3500K does not always work, ZLEDLighting has created a new Magnilumen Plus board call **MagniBlend.**

This LED board has both 3000K and 4000K (or 3000K and 5000K) chips installed in every other color temperature pattern and has a high CRI of 90. Once installed, you will not only s**ave money on your energy cost, but your products will look much more appealing.**

This brings together the best of both worlds. The mixing brings out the color richness while the 90 CRI adds a crispness to the colors.

Education (All Levels) and MagniBlend:

Why is color mixing relevant to classroom lighting design?

Color is a key attribute in lighting. Correlated color temperature, defined in degrees Kelvin, is related to the warmth or coolness of white LED lighting. Warmer color temperatures, like in a fluorescent lamp, have a lower CCT and emit a yellowish-orange light. Cooler temperatures, such as those in a doctor's office or hospital setting, emit more of a sterile, blueish light and have a higher CCT.

Correlated color temperature is relevant in the K-12 school setting because light influences the way the classroom feels. The key is understanding and evaluating the needs of the environment you want to create. In a learning environment, it's crucial to be conscientious of any stimuli that are added to the environment, especially when you're working with students with autism, ADHD, or other neurodevelopmental conditions. With that said, any student, neurotypical or otherwise, is less likely to perform at his or her peak potential when asked to function in a classroom that is too dim, too cluttered, or too warm or cool.

What issues may arise from using classroom lighting with a less-than-optimal CCT?

For the past several decades, schools have been using fluorescent lighting controlled by a single on-off switch on the wall. But now, with the advent of products like MagniBlend offering mixed color temperatures on the same "Magnetic Board", we can better address the needs of students and teachers in the classroom. Schools often send the maintenance crew out to purchase new fluorescent tubes without knowing enough about lighting to look for the same Kelvin temperature for all the lamps. In turn, educational institutions may end up with a hodgepodge of color temperatures that aren't optimized for the space.

What correlated color temperatures are recommended for different areas of a school?

When considering CCT for schools, different color temperatures depend on the atmosphere you want to create. In the cafeteria, for example, where you want to convey an inviting, calm atmosphere, warmer temperatures in the 3000-3500K range work best. Deciding on color temperatures for classroom lighting is more complex than doing so for a cafeteria or hallway, as these spaces don't always require the same amount or intensity of light. That's where LED lighting and MagniBlend offer the most benefits to the education sector. MagniBlend offers a few common color temperature mixes that are being specified and recognized as the best choice for classrooms. The most common for K-12 use is the 3000K-5000K range.

While you may not want the lights at 4000K all the time, you do want to stay in that range, since classrooms are generally productivity-focused environments.

Now, we can make LED fixtures in classrooms respond to the activities people are doing in them. Cooler temperatures in the 4000-5000K range are great for keeping students energized and focused. For example, during a science lab that involves intricate observations, the optimum color temperature is 4500K, and the room feels really bright, and everyone is extremely alert. Students can perform the activity better than they would if the color temperature was simply fixed at 3500K. But when it's time for students to wind down, MagniBlend also has warmer temperatures in the 3000 to 3500K range. With the technology associated with today's LED luminaires, teachers are even able to use different color temperatures in the same room and blend them to achieve various CCTs. If students are testing on one side of the room but go to another area of the room to read quietly after the exam, MagniBlend helps achieve these differentiated atmospheres in the same space.

Once MagniBlend is installed in a school room students' performance and attentiveness will increase.

Retail Lighting and MagniBlend:

Choosing the right color temperature for retail typically varies based on the brand, atmosphere, and even location. With that said, most retailers in the US choose lighting within the 2700K to 4000K range. Some also choose to mix color temperatures, but when doing this a retailer would need different fixtures to have different color temperatures. **MagniBlend gives retailers the best of both worlds in one retrofit kit.**

When we asked retailers what kind of colors are they highlighting in their space, they typically answer with, *in what area of the store?* What does that mean? They are already using different color temperatures in different areas of the same building.

If you have blue, silver, or white colors in your retail space, you may want to consider cooler color temperatures. If you have wood tones, golds, or reds, you may want to consider warmer color temperatures. Of course, there are exceptions to the rule, it's often a good idea to select a color temperature that complements the color of the environment. It's also worth noting that if you have neutral tones in your space, the color of the lighting can easily swing the feel of your space from warm and inviting to energetic and active. Since many retail stores have various color temperatures, the simple answer is MagniBlend. Why not utilize MagniBlend and have one kit that offers both color temperatures and be able to achieve the color temperatures you need in various spaces throughout the store.

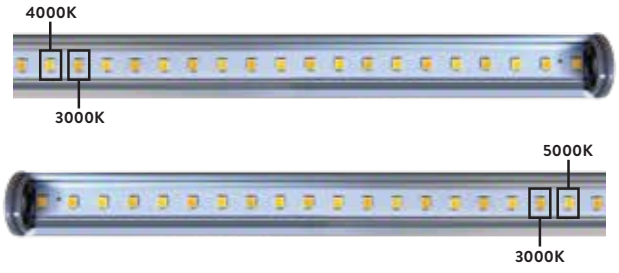
As you can tell, cooler color temperatures (3500-5000K+) work well in environments where you want to promote alertness and calm. Similarly, warmer color temperatures (2200-3000K), especially those with high R9 values, work well with giving a sense of warmth and comfort or with rich, warm woods to bring out the detail in the grain.

Before

After

Why Is Store Lighting Important?

The lighting you choose when opening or retrofitting a retail store is a major part of your merchandising strategy. Effective retail lighting will make your store well-lit and easy to explore and strengthen your displays by highlighting products. It can impact everything from how people shop to the way that customers feel about your business.



LED boards have either 30K/40K or 30K/50K chips installed in every other color temperature pattern.

Here are some of the reasons lighting is important for your business:

• **Guides customers to key areas of your store:** Illuminating displays and product areas will draw customers in and make them want to engage with your products.
• **Sets a mood:** The lighting you choose will determine the ambiance your store elicits, which also plays a role in crafting customer sentiment.
• **Creates a backdrop for any shopping experience:** good lighting is the basis upon which your store gets built or retrofitted. Without good lighting, nothing in your store will be visible and any other merchandising implementations will be wasted.
• **Draws customers in:** A well-lit space creates an inviting atmosphere that will entice customers to come and explore.
• **Determines how long people want to shop:** How well people can see and whether your lighting scheme promotes exploration are major factors in keeping customers engaged.

Just like with brightness, the tone you choose for your lighting will play a major role in setting the ambiance of your space. So, you will want to consider whether warmer or cooler tones will be better suited for your business. In many cases retailer need different color temperatures in the same space as discussed above, so why not utilize MagniBlend and have the best of both worlds in one single fixture and retrofit kit. Taking the same example as above, the massage parlor will likely opt for warmer tones to set a welcoming mood, where the hardware store will probably choose cooler tones to increase visibility and give a sense of cleanliness, however there are typically different areas in both above-mentioned examples that would need both color temperatures, and this is really where MagniBlend shines (no pun intended).

You can blend different color tones throughout your store, but smaller stores tend to choose one tone and stick with it, and if that is the case then MagniLumen PLUS is their answer. When choosing the right one for your store, consider natural light, wall color, and ceiling height. It is best to play around with different lighting options in your space before you settle on a particular lamp or retrofit kit to order in bulk.

What Color Temperature Should You Use for Your Commercial Space?

Finding the perfect balance of color and brightness to illuminate your commercial space is more important than the face-value aesthetic because, when used strategically, the right light bolsters the space's function and boosts profit. It's an essential factor in planning the space itself; the right light color can provide guests with a soothing environment, energize your workforce, or compel visitors to linger even longer. "Ultimately, "an investment in the right lighting pays for itself."

The color and temperature of office lighting should vary based on the function of the space. "The right amount of light and the health implications of different spectrums and intensity of light are tremendously important and are elements we consider when designing our products.

In general, warmer yellow or orange lights tend to be better for relaxing, whereas cooler blue and white lights are good for working, waking up, and concentrating. While designing MagniBlend, we kept asking ourselves, how can we come up with a product that gives the end user the best of both worlds in one single retrofit kit. The countless light fixtures that illuminate our world have different biological and psychological impacts on us, which is why it's important to understand how lighting affects mood, health, and productivity.

The truth is light tends to influence us more than other external stimuli. It has the power to impact sleep, happiness levels, and even cognitive performance. Therefore, humans need to be exposed to adequate lighting levels in the right settings at the right times of the day.

It's proven that natural light tends to make people happier, but since we rely heavily on artificial light, it's important for us to control the amount of it we need in multiple scenarios. Consider the following:

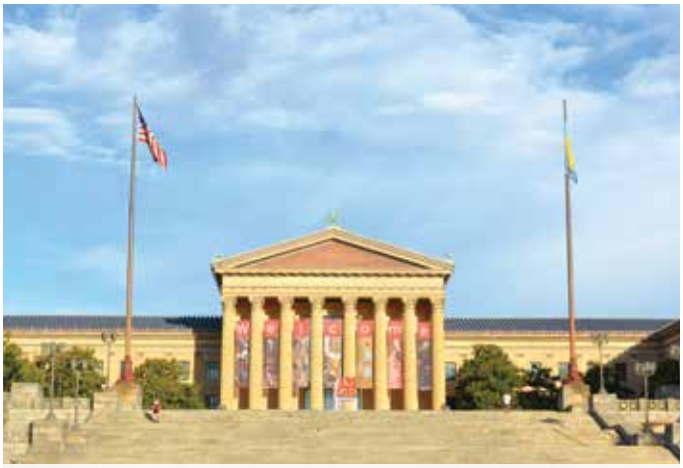
• **Light for day versus night:** We usually need higher levels of light to operate during the day and lower levels when we're winding down at night. Using bright lights at night usually decreases the body's melatonin levels, essentially throwing off your internal clock and hindering sleep, cognition, hormone release times, blood pressure and glucose levels. When there is a lack of melatonin, people can experience sleep problems that lead to behavioral changes.
• **Blue light can make us feel more energetic and alert.** (The most likely hue of light to impact our internal clocks.)
• **Red light is the least likely hue of light to impact our internal clocks.** (This helps increase melatonin levels.)
• **Warm lighting creates a more relaxing and intimate setting.**
• **White light is the most forgiving when it comes to personal appearance.** (However, warm, yellow lighting is flattering to the skin.)

MagniBlend is the best product available as it addresses giving the end-user all the positives from the cooler temperatures and the warmer temperatures at the same time within the same light fixture. Give MagniBlend a try. You will not be disappointed nor will your employees or your company's increased productivity.

MagniBlend is the perfect Retrofit for these applications:

Classrooms

Retail locations



Museums / Galleries

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