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Warm, inviting light to get you on your way...
Crisp, bright light to choose the right path...
Intimate, relaxing light to welcome the night…
Anyone that has ever watched a sun rise would be able to tell you the impact light has on their mood. But lately, science has started to back that up, showing how light can impact behavior, alertness, sleep patterns, and even our perception of the world.

When designed in the right way, light can improve concentration and efficiency in the workplace or schools; promote wellbeing and recovery in hospitals and clinics; and signal the time to relax in restaurants, bars or hotels.

With Lumenpulse technology, light can now be dynamic and flexible, mimicking our natural relationship with light, and making sure we are always at our best.

**Human-centric lighting**

**What is human-centric lighting?**

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What is color temperature?

Correlated color temperature (CCT) is the relative color appearance of a white light source. Does it appear warm and golden, cool and bluish or a shade in between?

Adjusting the color temperature of your light source can completely change the look and mood of a space:

Cooler color temperatures offer a bluer white light, helping to create brighter, more energetic spaces. Warmer color temperatures impart a more golden light, creating a warmer, friendlier ambience.
How do I select the right color temperature?

When selecting the right color temperature, consider two factors:

1. What material are you lighting?
   The color temperature you select should complement the materials in the space you are lighting. Blues, silvers and metallic colors, for example, are often best matched with cooler color temperatures. Woods, golds and reds, meanwhile, respond well to warmer color temperatures.

2. What atmosphere are you seeking to create?
   Whether you’re trying to create a sense of intimacy in a restaurant or aiming to increase alertness in a classroom, each application requires a different color temperature. Understanding how the space will be used will influence your choice.
Does color temperature affect the appearance of clothing? A bowl of apples? A heritage red-brick facade? The answer is yes. Bringing out the best in the materials that make up your space requires the right choice of color temperature.
Cooler color temperatures are preferred for activities requiring concentration.

Use cooler color temperatures to simulate daylight and increase alertness during the day.
WARMING IT UP

Warmer color temperatures create a place of calm and reflection.

Warm white light signals a time to relax and feel comfortable.

Canadian Museum for Human Rights, Winnipeg, MB, Canada
Lighting Design: Mulvey+Banani International Inc.
Enhance the color of specific materials using the appropriate color temperature.

- Sandstone 3000K
- Granite 4000K

Customs House, Montreal, QC, Canada
Lighting Design: Éclairage Public
A dramatic contrast

Use warm light to bring important elements to the fore.

Notre-Dame Basilica of Montreal, Montreal, QC, Canada
Lighting Design: Éclairage Public
What is Dynamic White?

Thanks to the flexibility of LED technology, projects no longer have to settle for a single unchanging color temperature. With tuneable white, you can vary color temperatures over the course of a day, creating different moods or ambiences.

You now have the freedom to set a classroom’s CCT to 3300K during tests, 4000K for classroom discussions, and 3000K after lunch breaks and recess.
Lumenpulse offers two separate tuneable white systems, allowing you to change the character of a space using variable color temperature.

1. Dynamic White encompasses a full range of color temperatures from warm 2700K to cool 6500K.

2. Dynamic Warm allows variations at the warmer end of the spectrum from 2200K to 3000K.

Dynamic white color temperature range

- 1. Dynamic White
  - 2700K
  - 6500K

- 2. Dynamic Warm
  - 2200K
  - 3000K

Dim to Warm Control

- 2700K
- 2200K
Lumenpulse’s Dim to Warm is offered as part of the Dynamic Warm color option. The technology reduces a luminaire’s color temperature when dimmed, allowing for natural dimming of warm white light (from 2700K to 2200K). Dim to Warm was designed to replicate the familiar, natural feeling of dimmed incandescent, while still providing modern LED efficiency and versatility.

Dim to warm control

Lumenpulse Dim to Warm dimming curve compared to halogen

- Color temperature warms as it dims
- Replicates dimmed incandescent
- Feels natural
Why dynamic lighting?

Circadian rhythm

Human circadian clocks are set by light, and timing, as they say, is everything. Our circadian rhythm is hardwired with the light cycle of the solar day, which means exposure to cool bright light at the wrong time can have a disruptive effect. By adjusting light intensity and color temperature over the course of the day, we can simulate the drama and variety of natural light.

Easy scene setting

When it comes to smart, modern lighting, flexibility is key. By allowing easy scene setting, dynamic lighting provides much needed versatility, allowing the setting of specific moods for different events, exhibits, displays, promotions, and more.
Lumenpulse’s dynamic lighting solutions offer a full range of control options – from no-programming behaviors to highly sophisticated control using DMX.

1-channel control – dim to warm
Use for simple warm dimming.
Solutions for hotels and restaurants.
No programming required.
- 0–10V
- 1 channel DMX
- Dim to Warm

3-channel control – dynamic warm and dynamic white
For highly sophisticated circadian rhythm and scene setting applications.
- 3 channels DMX/RDM
- Lumentalk*

*Consult factory for product availability.

Casino Lac-Leamy, Gatineau, ON, Canada
Lighting Design: Lightemotion

![CCT and Dynamic Lighting Fundamentals](image-url)
Choosing the right color

You now have the option of choosing RGBW as a more nuanced alternative to RGB. RGBW provides a mix of RGB with cool white diodes at 4000K, enabling:

- Extended color control
- Brighter whites and pastels
- Enhanced white light with higher CRI

Use RGB for decorative color applications requiring high-intensity colors.

Use RGBW for multifunctional applications requiring a mix of white and colored light.
Adjustable, dynamic lighting lets New York’s Building Energy Exchange change the look and feel of its multifunctional space for different classes, events, and times of the day.

Dynamic branding, at all hours.

The right color can bring logos and facades to life at night, helping to reinforce and enhance your brand.

1. Building Energy Exchange, New York, NY, USA
2. GM Renaissance Center, Detroit, MI, USA

Lighting Design: YESCO