



WATTSTOPPER®  
HUMAN CENTRIC LIGHTING

# ADVANCED TUNABLE LIGHTING MADE SIMPLE

## Wattstopper®

**Customer Care**  
7 am - 6 pm CST  
800.927.9287

**Technical Support**  
8 am - 7 pm CST  
800.879.8585

**Service & Support**  
[www.legrand.us/  
support/wattstopper](http://www.legrand.us/support/wattstopper)

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designed to be better.™



Legrand, North & Central America  
[www.legrand.us/wattstopper](http://www.legrand.us/wattstopper)



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A photograph of a modern interior space, likely a lobby or hallway, featuring a high ceiling with a complex arrangement of pendant lights and recessed lighting. The floor is highly reflective, showing the lights and the surrounding environment. A large green rectangular overlay is positioned on the left side of the image, containing the text 'BEAUTIFUL LIGHTING IS JUST THE BEGINNING' in white, bold, sans-serif capital letters.

# BEAUTIFUL LIGHTING IS JUST THE BEGINNING

## Introducing Wattstopper Human Centric Lighting

In the next phase of lighting innovation, light and art come together to create beautifully illuminated spaces.

Introducing Wattstopper Human Centric Lighting (HCL) from Legrand. A precision dimming and tunable lighting system with industry-leading quality of light that transforms any space.

Wattstopper combines their digital lighting control excellence in an exclusive partnership with Lumileds, a recognized leader in LED technology. This partnership enables new lighting experiences while reducing the complexity of design, installation, and operation of tunable LED lighting systems. This combination enables lighting fixture manufacturers and specifiers to reliably address new market demands for precision dimming and tunable-white applications.

Easily replicate the visual comfort of natural light with Wattstopper Human Centric Lighting: a turnkey HCL system of tunable LED light engines and accompanying HCL controls.



# Tunable lighting just got simpler

Wattstopper takes the complexity out of tunable lighting projects with an integrated, turnkey system of tunable LED light engines designed to be integrated into luminaires and controlled by Wattstopper's Digital Lighting Management (DLM).

The result is a new level of simplicity of design, installation, and occupant control for tunable lighting projects.



## THE WATTSTOPPER DIFFERENCE

- Light engines that deliver a higher quality of light
- Adjust color temperature to precisely follow the blackbody locus, replicating the color changes of natural daylight
- Accurate color rendering with a Color Rendering Index (CRI) of 90+ through the full range of color temperatures
- Closed loop thermal feedback ensures both color and lumen maintenance delivering consistency between fixtures over their entire life
- Precision, flicker-free dimming from 100% to 0.1%

## QUICK INSTALLATION AND EASY CONTROL

- DLM's Plug n' Go™ automatic configuration eliminates the need for additional programming making installing an HCL system easier than ever before
- Simple-to-use interfaces for easy and intuitive adjustment of intensity and color temperature



# INTRODUCING WATTSTOPPER HUMAN CENTRIC LIGHTING SOLUTIONS



LED Light Engines

The essential component that makes Wattstopper HCL unique is the light engines that enable fixtures from any manufacturer to deliver industry-leading quality of light. These light engines can be integrated into a broad range of fixtures to provide zone or fixture-based control and deliver a range of lighting color temperatures.

- Unparalleled consistency from any lighting manufacturer
- DLM control makes installing and controlling tunable lighting easier than ever
- Easy start up and commissioning significantly reduce the cost of HCL applications

## THE WATTSTOPPER HCL LIGHT ENGINES

- **Blanco 3**  
*Natural Tunable White*  
Three-color LED tunable white  
(2700K – 6500K)  
Precision dimming from 100% to 0.1%
- **Blanco 2**  
*Tunable White*  
Two-color LED tunable white  
(3000K – 5000K)  
Precision dimming from 100% to 0.1%



# A new way to deliver natural light

Not all light is created equal. High-quality electric light should replicate the characteristics of natural daylight, including:

- Dynamic intensity—daylight changes in intensity during the day and so should electric light
- Correlated color temperature (CCT)—ability to adjust the color of the white light along the blackbody locus to reproduce the same color temperatures as daylight
- High CRI—ability of a light source to reveal the true colors of various objects in a similar way to a natural light source



## NATURAL SUNLIGHT

Color temperature changes  
Consistent CRI of 100



## LAMP

Static color temperature  
Lower CRI

# HCL

## HUMAN CENTRIC LIGHTING

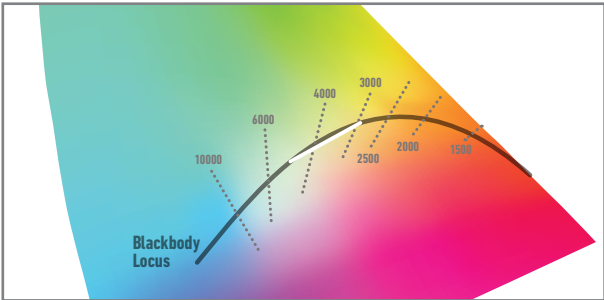
Ability to control color temperature  
High CRI



The chromaticity diagram represents the mapping of human color perception. For the highest quality of color, the Blanco LED light engines follow the path of the blackbody locus as the temperature changes from a warm amber color at low temperatures to cool bluish white at very high temperatures.

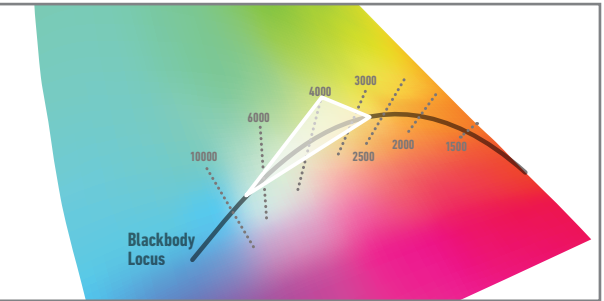
Wattstopper offers two options for light engines using two or three channels of white to provide different ranges of available color temperatures.

Regardless of which engine is selected, be assured the output will be an industry-leading quality of light.



**Blanco 2**  
Two white LEDs  
(3000K – 5000K)

Tunable range is along the white line.



**Blanco 3**  
Three white LEDs  
(2700K – 6500K)

Tunable range is within the white shaded gamut.

# ADVANCED DRIVER TECHNOLOGY ENABLES HIGHER QUALITY TUNABLE LIGHT



# DLM Tunable White Control

The Wattstopper DLM system makes installation and control of tunable white SIMPLE



**COLOR CONTROL SCHEDULE SWITCH**  
LMTS-101-CCT

- Automated time based color temperature control
- Daylight cycling based on building's longitude and latitude
- Real time CCT display
- Easy Plug n' Go™ automatic configuration

*LMTS-101-CCT and LMSW-105-CCT control color temperature only. A separate DLM dimming switch is also needed for intensity (e.g. LMDM-101).*



**COLOR CONTROL PRESET SWITCH**  
LMSW-105-CCT

- Master raise/lower paddle to adjust color temperature levels between cool and warm light
- Scene buttons to set and recall up to four preset color temperature scenes
- Easy Plug n' Go™ automatic configuration

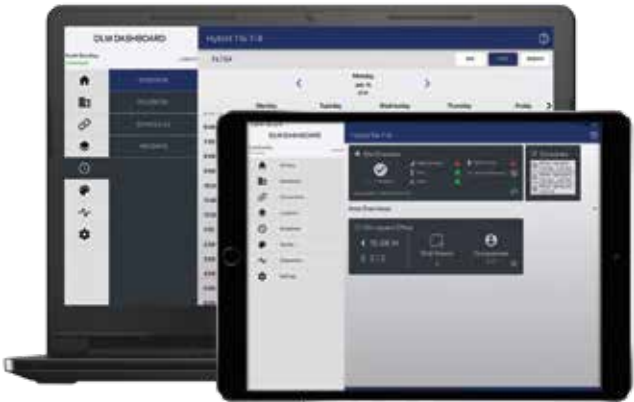


**DLM TOUCHSCREEN**  
LMEQ-41

- Beautiful 4.3" glass to edge LCD touchscreen
- Designed to work seamlessly with DLM via the new LMTI touchscreen injector
- Easy to use tunable white and intensity control with intuitive sliders or customizable scenes
- Easy Plug n' Go™ automatic configuration

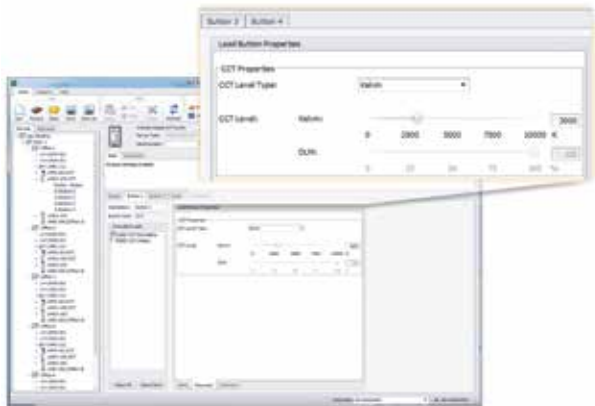


The Wattstopper light engines integrate seamlessly with DLM ensuring simple and intuitive control. DLM's Plug n' Go™ automatic configuration ensures these switches control the CCT channel and intensity immediately, bringing a new level of simplicity to tunable lighting projects.



**DLM DASHBOARD**

- The DLM Dashboard is an iPad, Android tablet, or Windows 10 PC installed software environment that brings Wattstopper's industry leading networked lighting control technologies into a single, powerful platform.
- With DLM Wireless and DLM Hybrid rooms working together seamlessly, DLM Dashboard provides users with a simple and easy-to-use interface for configuring and managing the behavior of the lighting system to meet the dynamically changing needs of the building.



**LMCS SOFTWARE**

- Wattstopper's free LMCS Software makes it easy to build, design, document, and configure tunable white projects
- Create and edit tunable white preset buttons tailored for each room and room type
- Schedule and edit tunable white levels throughout the day

# Blanco 3

## Natural Tunable White

This precise, three-color solution combines precision dimming with tunable white. Blanco 3 mixes three different colors of white LEDs to precisely trace the blackbody locus while delivering a wide range of color temperatures. With the ability to replicate natural daylight, Blanco 3 appeals to lighting designers who are seeking to personalize a space with customizable white light.

### CCT RANGE

- 2700K - 6500K

### KEY APPLICATIONS

- Conference Rooms
- Lobbies
- Patient Rooms

### TECHNICAL FEATURES

- Blackbody Dimming
- 90+ CRI
- 0.1% Dimming
- Tunable White
- Thermal Feedback

### SOFTWARE TOOLS

- DLM Dashboard
- LMCS-100

### EXAMPLE CONTROL OPTIONS



LMTS-101-CCT



LMSW-105-CCT



LMDM-101



LEMQ-41

### EXAMPLE

- Blanco 3
- DLM control
- Controls: LMSW-105-CCT, LMDM-101



2700K

6500K



# Blanco 2

## Tunable White

This high-quality, two-color solution combines precision dimming with tunable white. Blanco 2 mixes two colors of white LEDs to closely approximate the blackbody locus for tunable white applications.

### CCT RANGE

- 3000K - 5000K

### KEY APPLICATIONS

- Classrooms
- Corridors
- Nurses Stations

### TECHNICAL FEATURES

- 90+ CRI
- 0.1% Dimming
- Tunable White
- Thermal Feedback

### SOFTWARE TOOLS

- DLM Dashboard
- LMCS-100

### EXAMPLE CONTROL OPTIONS



LMTS-101-CCT



LMSW-105-CCT



LMDM-101



LEMQ-41

### EXAMPLE

- Blanco 2
- DLM control
- Controls: LMSW-105-CCT, LMDM-101



3000K

5000K



# Wattstopper Human Centric Lighting

## The Ideal Solution for any Space

### KEY APPLICATIONS



HEALTHCARE



EDUCATION



COMMERCIAL OFFICE

### OTHER APPLICATIONS



HOSPITALITY



RETAIL



MUSEUMS

## How to specify Wattstopper HCL

- ① Choose an LED Light Engine (Blanco 2 or Blanco 3) and the array form factor (linear or round)

Sold to fixture partners & integrated into fixtures

Browse fixture partners that have integrated our solutions: [legrand.us/WattstopperOEMPartners](http://legrand.us/WattstopperOEMPartners)



- ② Specify with the fixture manufacturer of choice

If the fixture cannot be found on [legrand.us/wattstopper](http://legrand.us/wattstopper), please contact the Lighting Agent to request Legrand's Wattstopper tunable-white LED light engine.



- ③ Enabled fixtures will work seamlessly with Wattstopper controls based on the interface selected



Traditional wall switches



Glass touchscreen