

# Circadian Lighting Control

Our daily lives revolve around our internal clock, also known as the circadian rhythm. It tells our bodies when to wake up, charge up, wind down, and sleep. Light plays a key role in the circadian rhythm. Bright light suppresses production of melatonin, our body's natural sleep-aid, so we can be alert during the day. Low light has the opposite effect; it increases melatonin production to help us wind down and sleep.

## How does lighting control fit in?

Research suggests that automatically adjusting the color temperature and intensity of light to synchronize with the natural circadian rhythm can create an optimal environment and trick our bodies; by simulating natural daylight, melatonin production is suppressed. By simulating twilight and nighttime, melatonin is increased. This can be applied to great effect in many environments:

- In office spaces it can help drive greater concentration, productivity, and creativity among workers
- In healthcare environments, such as in a patient's room, it can promote faster healing, which translates into better outcomes, faster patient out-time, and cost savings
- In classrooms it can lead to better student behavior and concentration
- In hotels it can reduce jet lag for guests so they're more alert and productive during the day

In addition, the new WELL Building Standard™ provides building owners and managers cost-saving deployment guidelines for building features that impact health and well-being, including lighting.

## How it works

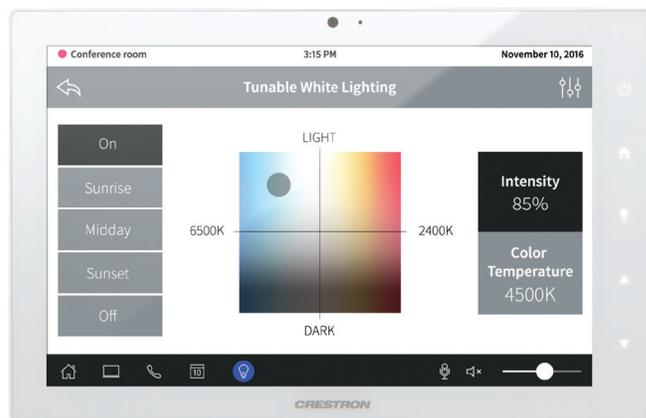
Crestron Circadian Lighting Control makes it easy to tune color temperature of white fixtures based on preferences and activities. It can be deployed using a variety of methods, each offering specific advantages:

- **Phase Control:** easy to deploy; can be integrated with architectural system; wired or wireless
- **0 – 10V:** most common, most consistent performance, and least expensive
- **DALI\*:** granular control; cost-effective, flexible and easy to manage
- **DMX:** similar to DALI; universe-based; DMX over Ethernet; eliminates need for show controller

## Multiple control options

White light tuning can be accomplished via:

- **Auto Control:** based on astronomical time clock
- **Manual Override:** using keypads and touch screens



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