COLOUR CONTROL (CCT) & BRIGHTNESS (LUX) CONTROL

Understanding Colour Control (CCT) and Brightness Control (Lux)

Lighting quality depends on two key factors: colour control (CCT) and brightness control (lux).

Correlated Colour Temperature (CCT) describes the colour appearance of light, measured in kelvins (K). Lower CCT values (around 3000K) produce a warm, yellowish light, while higher values (5000–6500K) create cooler, bluish light.

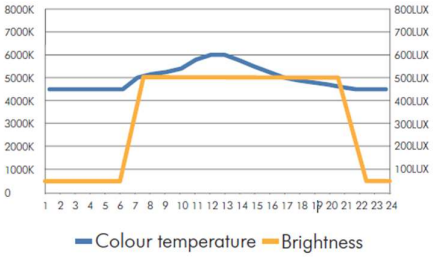
- Example: In offices, a neutral white light (around 4000K) helps maintain alertness and reduce eye strain.
- Example: In hospitals, cooler white light (5000–6500K) is often used in treatment areas to support visibility and focus, while warmer light (3000K) is used in patient rooms for comfort and relaxation.

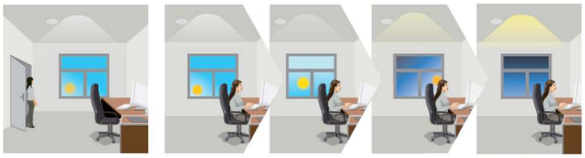
Illuminance (lux) measures how much light reaches a surface. Different tasks require different brightness levels to ensure safety and efficiency.

- Example: Offices typically need 300–500 lux on desks for reading and computer work.
- Example: Hospital operating rooms may require 1000 lux or more for precision, while corridors and waiting areas are often lit to 200–300 lux for comfortable navigation.

By balancing CCT and lux, lighting designers can create environments that enhance performance, comfort, and wellbeing.

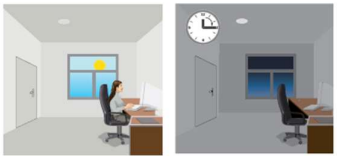
For office applications





The light switches on automatically with presence when natural light is insufficient.

The light turns on at full or dims to maintain the lux level. The light output regulates accroding to the level of natural light available.



For healthcare applications