

# Explaining Human Centric Lighting

*Human Centric Lighting supports performance, health and well-being of humans by combining visual, biological and emotional benefits of light, following the principle of bio-mimicry, the imitation of nature.*

## WHAT IS HUMAN CENTRIC LIGHTING?

Human Centric Lighting is intended to enhance human well-being, mood and health. Recent research has discovered that lighting is not only about visual functions, and it is now known that lighting has strong biological and emotional impacts on human beings, and it can improve concentration, safety and productivity in workplaces and educational applications.

## WHAT HAS CHANGED?

About fifteen years ago it was discovered that there is an additional photoreceptor in the eye that affects human biological rhythms and brain performance, and this is influenced by certain light conditions. It has become evident that lighting has a tremendous effect on human productivity, health and well-being.



## WHY IS IT IMPORTANT?

Humans need light and darkness. There is a period of the day when we are active, a period when we are relaxed, and a period when we are sleeping. Light is the most important timer of our internal clock, but there has been a historic mismatch between natural light and electric light with regard to light colour, spectrum, intensity, and timing.

Human Centric Lighting brings:

- Visual benefits – good visibility, comfort, safety, orientation
- Biological benefits – alertness, concentration, performance, regular sleep/wake cycles
- Emotional benefits – enhanced mood, energising and relaxation effects

For all activities, we need the right light, at the right place, at the right time, so we can wakeup/energise/concentrate/relax/sleep in accord with our bodily cycle.

## HOW IS IT ACHIEVED?

This biologically attuned lighting is delivered by new luminaire and controls technologies that provide dynamic adaptation of light colour, spectrum, and illuminance levels so it more closely resembles the dynamic cycle of natural lighting. This is achieved with tuneable intelligent luminaires in conjunction with sensors and smart control systems.



Each lighting application - home, office, factory, school, shop, hospital, etc, has its own specific needs and new generation design and application skills are required.

Designers of buildings that place people first should be engaging with progressive lighting suppliers who can demonstrate the new interior environments that Human Centric Lighting can deliver.

Lighting Council New Zealand is the industry association for lighting manufacturing, importing, and distribution companies in New Zealand, and associated lighting industry participants. [www.lightingcouncil.org.nz](http://www.lightingcouncil.org.nz)

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