HUMAN CENTRIC LIGHTING

Improves your life

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light & design

For a long time we have known that light allows us to see and to look, but light does much more. Light has the power to energize, relax, increase alertness, cognitive performance and mood, and to improve the day-night-rhythm of people. These biological and emotional benefits of light should not be underestimated. Recent research has shown these benefits in nearly every area of application.

At the beginning of this millennium a third photo receptor in the eye (in addition to rods and cones) was discovered. With this discovery it became evident, that human biological rhythms and cognitive performance are influenced by specific light conditions. In other words, light has tremendous effects on human health, productivity, and well-being.

Despite current trends in legislation and practice, light is concerned much more than visual energy efficiency. (lumen/Watt). The true value lies in the combination of excellent visual, biological and emotional benefits. Within **Lighting Europe** (The voice of the European light industry) lighting combining all three benefits is called **HUMAN CENTRIC LIGHTING.**
The **Iris Trilight** is a lighting solution which includes these benefits of light.

Initial potential benefits of **Human centric lighting** include improved sleep/wake cycles, dailey changes in alertness, performance and mood (circadian changes), as well as responses to seasonal changes. These benefits are now achieved with the **Iris Trilight,** that allows for greater adaptation of color temperature, illuminance levels, and distribution so it more closely resembles natural conditions. Applications where these benefits are achieved include healthcare, education, workplace, smart cities and domestic lighting.

Light of the Iris Trilight is adjustable along the lines of the natural glow light, like candles, bulbs, halogen and the sun. In the color diagram the light of the lamp is along the line of the black body radiator .
In the diagram of light intensity/color temperature (Kruithof curve) the light of the lamp is also along the line of the heat radiator, like the incandescent lamp.
This is done by (microprocessor controlled) mixing of the light of three different colour temperature leds: extra warm 2200 K, middle colour 3000 K and cool 6500 K.
Light on the table can range from 50 lux at 2200 K (candle light) till 2000 lux at 4200 K (office light) .

Motto for the users manual is: **follow the daylight.** Start the day with maximum cool high and during the day cool light above 3000 K. After sunset warm light below 3000 K with low illuminance level. Adjust within these constraints such that you experience the light as pleasant.
Another rule of thumb is:

Warm white at low iluminance level relaxes
Cool white at high level activates

In the evening we have the dimmable warm white light of the incandescent lamp back. We can relax as preparation for sleep. During the day we have the cool light ,not only to see better, but above all, to be alert, so hat young people can learn better, adults can work more efficient, and elderly people have an improved day/night rhythm and sleep better.