



A brighter future

BrainLit's goal is to improve life through Biocentric lighting. We see ourselves as a change agent in the lighting industry, focusing on all three aspects of light (visual, emotional, biological). We take pride in acting responsibly in everything we do, helping customers to improve their lighting environments in sustainable ways. We agree with the United Nations 17 Sustainable Development Goals¹, also referred to as Agenda 2030, following a set of guidelines to help us act in a sustainable manner when it comes to the social, economic and climate aspects of creating growth in responsible ways.

Biocentric lighting contributes to highly effective use of energy for lighting.

Circadian efficiency

Circadian efficiency is a measure of the biological influence of light on the human sleep/wake cycle and is measured as a percentage relative to standard daylight (Daylight Efficacy Ratio, or DER).

A high DER value means a stronger impact, which is desirable during the morning and daytime. In the evening, a high circadian influence should be avoided, to promote better sleep.

BrainLit luminaires achieve a large range of between 18-108% relative circadian efficiency (DER) in a single luminaire. The wide range allows BCL to provide appropriate light exposure during the day and during evening and night for improved wellbeing.

Energy efficiency

At BrainLit, we continuously work to improve the energy efficiency of our luminaires by utilizing optimal LED technology and smart solutions for light control. Energy efficiency is most often expressed as light exchange in lumens/Watts (lm/W). Our BCL luminaires today reach above 120lm/W with maintained CRI Ra above 90. Our next generation light sources, now under development, extend beyond these limits both in terms of circadian impact and energy efficiency.



Components

Our Biocentric light systems use wireless and self powered keypads, light switches and motion sensors. There is no need for replacing batteries in these components as they are self-powered. BrainLit luminaires meet EU requirements and the Ecodesign Directive² by being registered in the European Product Database for Energy Labeling (EPREL) database³. The EU Ecodesign Directive aims to achieve more efficient energy use in new products. Together with the Energy Labeling Directive, these regulations drive the development of light sources and luminaires towards more energy-efficient products and a reduced environmental impact.



Luminaires

BrainLit's Biocentric luminaires are developed to achieve the optimum balance between maximum circadian impact and maximum energy efficiency.

Motion sensors

- Bluetooth Low Energy (BLE)
- Self-powered
- No cables, no battery

Light switch

- Bluetooth Low Energy (BLE)
- Energy harvesting by the push
- No cables, no battery

Environmental certifications and standards

We collaborate with contractors and property owners in planning and implementing lighting solutions that comply with a variety of environmental certifications, depending on the building owner's or tenants' needs. We have received a number of environmental certifications as well as registered products in SundaHus and Byggvarubedömningen.

BREEAM

BREEAM⁴ is a global sustainability assessment method for masterplanning projects, infrastructure and buildings. It highlights the need for zoning (of a maximum of four workplaces) in order to meet a reasonable degree of control for a user over his or her own workspace. BREEAM recommends that higher numbers can be justified based on current lighting strategy**. Different areas of activity such as teaching areas, libraries, dining rooms, auditoriums, etc. are also zoned.

Biocentric lighting supports all BREEAM criteria.



WELL Standard

The WELL standard⁵ is a certification program that aims to set a standard for buildings, interior spaces and communities seeking to implement, validate and measure features that support and advance human health and wellness. The WELL standard focuses on the areas of air, water, diet, exercise, light, comfort and well-being.

A WELL certification represents the highest pinnacle of health achievement across all 10 concepts. Projects must achieve all preconditions, as well as a certain number of points towards different levels of WELL Certification: Projects may earn no more than 12 points per concept.

Biocentric lighting has been certified with WELL Gold of 60 points of which 12 points is related to our lighting system.



LEED

LEED⁶ is an environmental certification system from the U.S. Green Building Council that, like BREEAM, covers areas of land use, energy use, water use, choice of materials, indoor environment, transportation, degree of innovation and waste. The total assessment may result in Certified, Silver, Gold or Platinum. LEED includes lighting under the Interior Lighting category.

Biocentric lighting is LEED-certified.



*CS and EDI values assumes 1/3 illuminance level at the cornea compared to the horizontal plane

**BREEAM 6.0 Health and well-being, Hea 01 Visual comfort, CN3.13 p.96

BrainLit's sustainability efforts also support the future environmental certifications of buildings through lighting plans that meet the requirements of European standard EN-12464-12, which highlights the minimum illuminance requirements of indoor working areas to meet the needs for visual comfort and performance of people having normal visual capacity. The standard takes into account the Unified Glare Rating (UGR), lux values, and color rendering (Ra) of a lighting solution for a working area.⁷

Biocentric lighting aligns with future environmental certifications as well as exceeds the upcoming ISO standard

A new ISO standard for indoor lighting to enhance our health

ISO is working on launching an update of the indoor lighting standard 8995-1, which promotes higher requirements for indoor lighting, with focus on the healthy lighting. The standard outlines the criteria for lighting solutions in most indoor workplaces and their related areas, covering the amount and quality of illumination. This means that indoor workplace lighting needs to meet certain requirements.

Biocentric lighting is modeled, specified and validated in circadian measurement values. It has proven health impact. Biocentric light is controlled by light recipes that ensure the right type of light at the right time of day, both in terms of intensity and spectrum. This means that Biocentric lighting not only meets, but exceeds the upcoming ISO standard recommendations.⁸

References

1. <https://sdgs.un.org/goals>
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3. https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-andrequirements/energy-label-and-ecodesign/product-database_en
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