

The only circadian lighting with clinically documented effects

# **Chromaviso Circadian Lighting**

Lower cost than traditional LED solutions and with significant annual savings

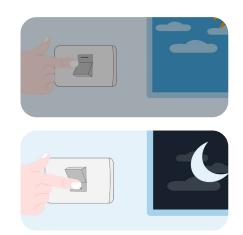


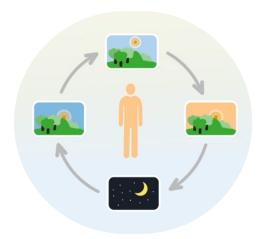
# **About Chromaviso Circadian Lighting**

#### Too little light during the day and too much at night

Even though we don't need extra light during the day to orient ourselves indoors, our bodies biologically require much more light than we usually get. Since we spend around 90% of our time indoors, we are not exposed to the amount of light that is necessary, which disrupts our circadian rhythm.

In the evening and at night, the opposite happens. We are often exposed to far too much light, even though the body biologically needs very little – or none at all.





#### Light that follows our biological circadian

Chromaviso's circadian lighting has been developed with a light protocol based on clinically documented evidence, ensuring the right amount and quality of light throughout the entire day and night.

The lighting automatically changes in sync with the time of day. It gently increases in the morning like a sunrise to promote energy and well-being, intensifies at midday to provide optimal bright daylight, and gradually dims in the evening like a sunset, allowing the body to recover and prepare for rest. The night lighting has been developed in practice and adapted to specific work situations.

# Who are we addressing

#### **HOSPITALS**



#### NURSING



#### OTHER SECTORS



Chromaviso's circadian lighting is used in hospitals, nursing homes, and other work environments across Scandinavia.

The light follows the body's natural rhythm and creates a health-promoting and safe environment that benefits patients, residents, and staff alike.

For residents and patients, it means better health, higher quality of life, more energy, improved sleep, less aggressive behavior, and a greater sense of security.

For staff, it means fewer sick days, better sleep, reduced stress, increased well-being, and more energy in everyday life.

In offices and other work environments, circadian lighting contributes to a stable daily rhythm, improved concentration and energy, and fewer complaints – which together enhance both well-being and productivity.

## The effect

Chromaviso's circadian lighting is the only solution in the world with health-promoting effects, based on clinically documented evidence.

#### User surveys in hospitals and nursing homes show the following effects



#### **PATIENT**

**78**%

More energy Better sleep

80%

89%

**78**%

More calmness

Better quality of life

#### **Clinical study at Rigshospitalet** in Denmark:

A clinical study with Chromaviso's circadian lighting among 90 patients admitted after a stroke showed the following results:

- 49% reduction in depression
- 46% increase in well-being
- 28% reduction in anxiety
- 20% reduction in stress
- 20% reduction in fatigue



#### **STAFF**

**79**%

**75%** 

Improved well-being More energy

**21**%

**75**%

Reduced sick leave Less fatigue

#### **User survey** from Lundtoft Nursing Home:

A staff survey at Lundtoft Nursing Home showed the following results:

- 99% experience improved mood
- 91% experience less tired eyes
- 91% feel less groggy
- 99% experience less stress
- 73% experience better sleep

### References



#### Clinical studies



#### Qualitative studies

- Stroke Unit, Rigshospitalet, Denmark
  Anders Sode West
- Neurosurgical Intensive Care Unit, Aarhus University Hospital
- ROOM-LIGHT, Psychiatric Center Copenhagen
- Clinical Research Center, Hvidovre Hospital

- Aarhus University Hospital and Rigshospitalet Leanne Langstrøm
- Stimulation Room, Dementia Center Jeanette Jepsen
- Herluf Trolle Nursing Home

#### A selection of installations with practical evidence

#### **Nursing homes**

- Herluf Trolle Nursing Home, Odense, Denmark
- Bauneparken, Hillerød, Denmark
- Dementia Center, Aarhus, Denmark
- Sønderskovhus, Lystrup, Denmark
- Lundtoft Nursing Home, Lundtoft, Denmark

#### Hospitals

- Skåne University Hospital, Malmö, Sweden
- Hudiksvall Hospital, Sweden
- Rigshospitalet, Copenhagen, Denmark
- Kolding Hospital, Denmark

See documented evidence here

See a selection of our 3,000+ projects here



# Two lighting solutions

Chromaviso's circadian lighting based on DALI is available as 12- and 24-hour solutions. Both are based on clinically documented effects and ensure that the body receives the right light at the right time – in line with our biological circadian rhythm and needs.

#### 12 HOUR

12-hour circadian lighting is designed for areas with activity and occupancy during the daytime. The lighting automatically follows a typical workday and naturally aligns with the circadian rhythm from 06:00 to 18:00.

This solution is suitable for functions and departments operating only during daytime hours.

#### **24 HOUR**

24-hour circadian lighting is designed for areas with activity and occupancy around the clock.

The lighting automatically follows the natural circadian rhythm. This solution is particularly relevant for departments with continuous occupancy and staffing.

## **Fixtures and variants**

Chromaviso's circadian lighting is available in two types of fixtures, each offered in several different mounting options. The lighting solution supports both DALI and DMX. You can read more about our DALI and DMX solutions on the following pages.

#### **FIXTURES**

### **HALO**







### **GLOW**







## The economic benefit

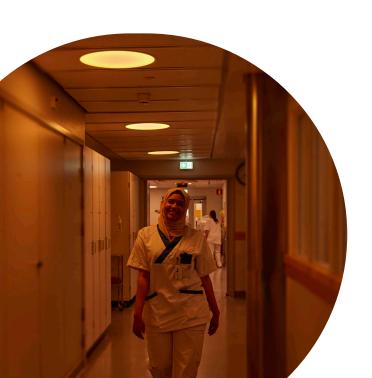
When you invest in Chromaviso's circadian lighting, the payback period is typically less than one year compared to a traditional LED solution. The investment provides long-term benefits – both economically and for health.

By implementing Chromaviso's circadian lighting, a department with 300 employees can achieve an annual operational saving of DKK 3,750,000. This means the investment is paid back in just 7 months.

Over 10 years, a total saving of DKK 35,400,000 is achieved, even when the additional cost compared to traditional LED is included.







PAYBACK PERIOD OF LESS THAN ONE YEAR

# A complete solution – 3 elements

With Chromaviso's circadian lighting based on DALI, you get a complete package consisting of three elements. With these three mandatory elements, we ensure that the solution meets both technical standards and clinical requirements. The solution functions like any other standard lighting system.



CALCULATION OF FIXTURE COMPOSITION

Armaturet er forprogrammeret med vores lysprotokol, baseret på klinisk dokumenteret evidens.

A calculation of the number of fixtures and their placement is necessary both to achieve the clinically documented effect and to ensure compliance with applicable standards.

The calculation determines which types of fixtures should be used – for example, whether the solution should be based on Halo, Glow, 12, 24, or a combination thereof.

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**FIXTURE & CONTROL** 

**GLOW 12** 

**GLOW 24** 

HALO 12

HALO 24

CHROMA CONTROL

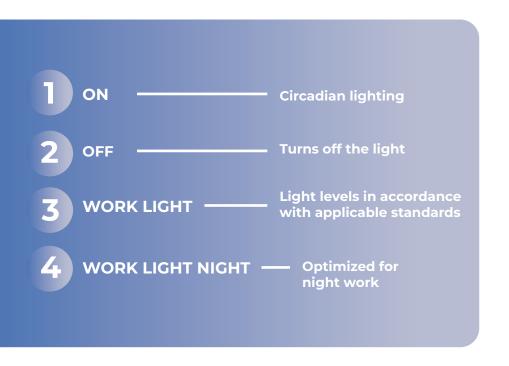
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SYSTEM APPROVAL AND TRAINING

We assist with implementation and staff training in the use of the solution to achieve optimal value.

## **Chroma Control**

Circadian lighting based on DALI is controlled with Chroma Control, an intuitive control panel that can easily be used by staff, patients, and residents. The control panel consists of 4 settings.





# Solution tailored to special needs

A DMX-based solution that ensures the right lighting environment and the documented effect. In addition, the solution can be customized for specific needs, such as lighting settings, controls, and operating solutions.

This is a more advanced alternative, incorporating specialized controls and advanced system integration.

We manage the entire process – from design and planning to implementation.



100,000 people enjoy the benefits of Chromaviso's circadian

3,000+ projects across Scandinavia

20 years of experience



#### **20 YEARS OF EXPERIENCE**

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