# LIGHT COGNITIVE

Leading the next disruption in lighting

Light Cognitive creates premium lighting solutions for personal well-being and performance.

Company Introduction 2017



\.MTRODUCT

# Big Sky®

Our solution, Big Sky, is a biologically effective LED-based and IoT-enabled lighting system.

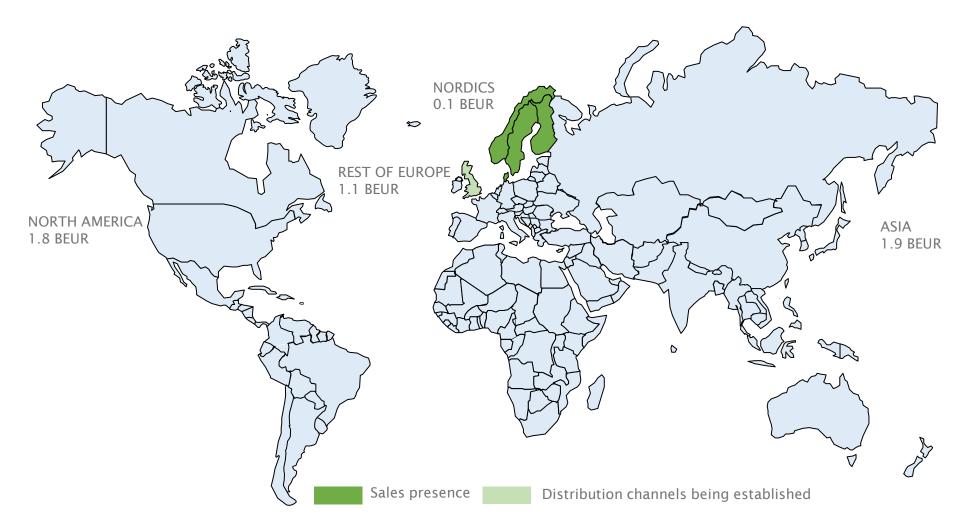
Big Sky reproduces a beautiful natural light and a stunning dynamic sky view, from dawn to dusk, designed to enhance wellbeing and performance in an energy efficient way.

Big Sky's smart features ensure ease of use and adaptability to different audiences.



# We started sales in the Nordics and are expanding globally

Our goal: be a leader in the growing human centric lighting market





### Light Cognitive technologies

### i. Custom LEDs and module design

Our LEDs are designed specifically for us, based on our requirements. No similar spectra are found in the market. Modules are designed to optimize light field uniformity and smooth transitions.

### ii. Light spectrum reproduction and optimization

Machine learning algorithms are used to create spectra that imitate outdoor conditions and spectral distributions. Optimal light fields are created using sophisticated optimization algorithms.

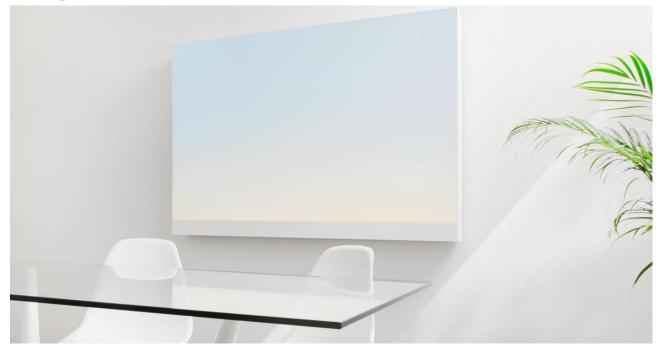
### iii. Software and analytics

Luminaires are controlled for optimal biological impact during the day. IoT will enable us to analyze usage and contextual data\*.



<sup>\*</sup>not sold yet

# Big Sky® HORIZON (Wide or One)



Big Sky Horizon is easy to install on a wall like a painting. Its aesthetically pleasing elegant design is easy to adapt to variety of spaces and it creates a pleasant view into the horizon, just like looking out from a skyscraper or an airplane window. Big Sky Horizon will provide you with a luxury view every day.

Big Sky Horizon is optimal for spaces that need additional light, which is biologically effective and close to daylight. It complements your existing lighting, and it can vitalize your day or bring a relaxing warm light towards the evening.

TYPE OF INSTALLATION:

Supplemental light & virtual window

MOUNTING:

Wall or stand installation with VESA mount

WIDTH AND HEIGHT: 1500 mm x 1050 mm

DEPTH:

125 mm & floating 20 mm VESA attachment

WEIGHT: 30 kg

LIGHT SOURCE:

Light Cognitive LED module (G5)

CONTROL:

Digital spectrum control (0-100%)

POWER INPUT: 100-240V 50/60Hz

MAXIMUM POWER CONSUMPTION: 320 W

TYPICAL POWER CONSUMPTION: 180 W

LIGHT INTENSITY AT 1m: 2980 lux

IP Class: IP 20

Made in Finland C6

### Big Sky® DOME



Perfect for creating general light fields. Big Sky Dome can be attached to the ceiling as a skylight and does not require structural changes.

Big Sky Dome generates a sky view upwards into the sky dome and its soft immersive light surface creates a feeling of space. Big Sky dome is ideal for transforming any space where structural changes are not possible. It is our most compact solution to make you feel like you are under a glass roof on a beautiful day.

TYPE OF INSTALLATION:

General, supplemental light & virtual sky light

MOUNTING:

Suspension from ceiling

WIDTH AND HEIGHT: 1680 mm x 2120 mm

DEPTH: 130 mm

WEIGHT: 70 kg

LIGHT SOURCE:

Light Cognitive LED module (G5)

CONTROL:

Digital spectrum control (0-100%)

POWER INPUT: 100-240V 50/60Hz

MAXIMUM POWER CONSUMPTION: 640 W

TYPICAL POWER CONSUMPTION: 360 W

LIGHT INTENSITY AT 1m: 2930 lux

IP Class: IP 20

Made in Finland **CE** 

### Big Sky® LIMITLESS



Big Sky Limitless is our large custom solution completely replacing general lighting. Big Sky Limitless enables building light fields of any size, which one can currently only experience in winter gardens or terraces. Large light surfaces have minimal glare and they are immersive.

Like all Light Cognitive products, Limitless is tunable with all hues of the sky with natural color rendering, and multiple areas work seamlessly together. TYPE OF INSTALLATION:

General lighting & virtual window/skylight

MOUNTING:

Recessed ceiling or wall

WIDTH:

50 cm increments

HEIGHT:

Minimum 100 cm

DEPTH:

Minimum 15 cm

AREA:

Starting from 6 sqm

LIGHT SOURCE:

Light Cognitive LED module (G5)

CONTROL:

Digital spectrum control (0-100%)

POWER INPUT:

100-240V 50/60Hz

MAXIMUM POWER CONSUMPTION: 200 W/m2

TYPICAL POWER CONSUMPTION: 100 W/m2

IP Class:

Depending on surface installation, up to IP 67

Made in Finland **CE** 

# Big Sky for the office

#### **ENHANCE WELLNESS & PERFORMANCE**

Daylight and biologically effective blue light are critical for well-being and performance at work<sub>1</sub>. Big Sky enables employers to bring these benefits into all office spaces in a controlled manner regardless of access to outdoor light.

#### **CUSTOMIZE**

With Sky Player you easily set the right light for the right audience: consultants and lawyers working around the clock, shift workers, business travelers suffering from jet lag or managers negotiating a difficult contract.



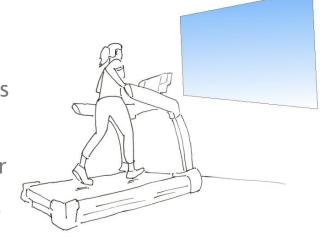
Like a new window, but easier to install, Big Sky guarantees daylight everywhere. It complements existing light sources and offers a pleasant lighting experience with no glare or eye strain, even at high intensity.

1. Boubekri et al. 2014, Heschong 2013, Romm & Browning 1994, Sleegers et al. 2013, Keis et al. 2014

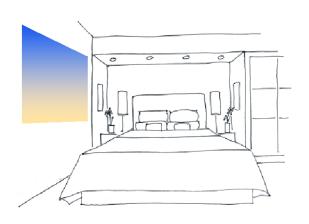
# Big Sky for hospitality

#### OFFER NEW VITALITY & RELAXATION EXPERIENCES

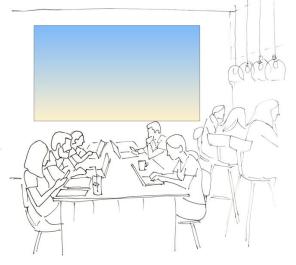
Blue light can reduce fatigue by up to 42%1. Big Sky's natural sky blue light is ideal to enhance vitality and its evening light is optimized for relaxation. Ideal for spas, gyms, lounges, wellness centers and in hotels.



### DIFFERENTIATE WITH DESIGN & A BETTER SLEEP EXPERIENCE



Room design and sleeping experience are essential to hotels' customers. Big Sky prepares the body for sleep and allows for a peaceful awakening. At night, moonlight mode protects from unwanted light.



ENGAGE CUSTOMERS, INCREASE SALES

Turn on the sky in your cafe or store and let the magic of Big Sky's natural daylight occur. Research shows that sales can increase even up to 40% in skylit environments.

# Big Sky for health

#### OFFER BETTER CARE RESULTS AND HAPPIER CUSTOMERS

Healthcare environments are evolving into a combination of hospitality and work spaces. Treatment results improve if patients are more relaxed, and staff performance benefits from the right kind of light. Investing in lighting and the working environment is a way to attract the best employees.

Big Sky supports patient and staff well-being with its beautiful infinite natural colors and relaxing views, and the spectrally designed light has all the necessary qualities for a high performance work environment: biologically effective, high color rendering and minimal glare/diffuse light.



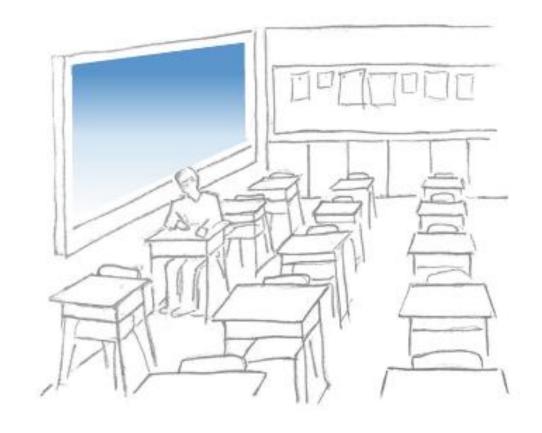
Market size in 2020: 1390 M EUR

# Big Sky for education

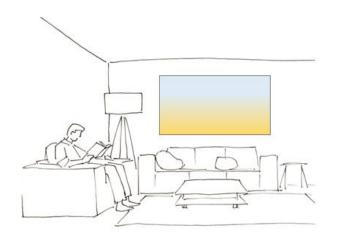
#### INCREASE ATTENDANCE AND RESULTS

Research shows that students' attendance and scores improve when exposed to natural light.

With Big Sky teachers can control the class environment light field to influence students activity levels and to accommodate to varying cognitive tasks. Big Sky can help by delivering the right light at the right time thanks to its easy-to-use programs.



### Big Sky for the home

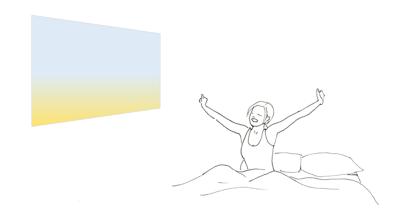


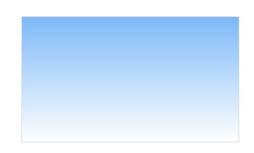
#### STAY IN BALANCE

A balanced wake-sleep cycle is central to a healthy life. Big Sky energizes and resets the circadian clock in the morning and prepares the body for sleep in the evening. At home Big Sky is your new wellness companion.

#### **RELAX BETTER & IMPROVE YOUR SLEEP**

Sleepiness increases in the evening 42 % faster under warmer light: Big Sky's Evening Light will ensure you get the right light when it is time to relax.







#### FEEL GOOD EVERY DAY

Daylight improves cognitive performance up to 18 %. Blue light and bright light help treat winter blues with up to 60 % improvement, reduce fatigue by 11 % or reduce body fat<sub>1</sub>. Big Sky helps you get energy from light.

### Selected references



 PEAB is a construction company and has Big Sky panels in their headquarters meeting room. General lighting pilot in progress.



Echo Polska Properties is a Dutch real estate investment company and have Big Sky in their main office to be tested for real estate development.



 Leading gaming company Supercell was excited to bring the benefits of Big Sky to its employees in public space.



 Inkron has years of experience in nanotechnology and LED technology, and is a Big Sky customer.



 Dental Clinic Levy is one of Southern France's largest dental clinics with Big Sky installed.



 Nordic office interior specialist Martela has Big Sky in their main office cafeteria.



Large multinational chemical company installed Big Sky in their office premises.



• Cityspace is a real estate investment company and have Big Sky in their main office to be tested for real estate development.

### Resellers

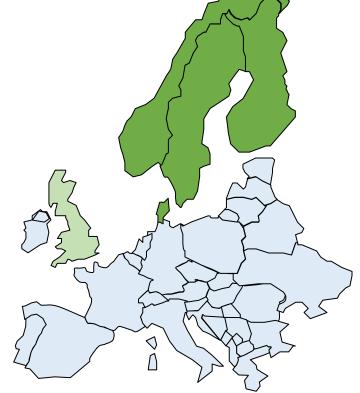


- Largest corporate workspace servicing company
- Distributing to large companies Finland, Sweden, Norway, Denmark

- **artek** Famous design furniture manufacturer, owned by Vitra
  - Distributing in Finland to high end retail clients



- **Swefico** A Swedish lighting reseller
  - Distributing to private and public sector





Projects sales and installations



### For more information

www.lightcognitive.com



Esa Paldanius CEO, Swefico AB

+46 70 590 08 64

esa@swefico.se



Janne Malmio
Head of Sales, Light Cognitive Oy

+358 40 545 5561

janne@lightcognitive.com