

Introduction

CoeLux

About CoeLux

The essence of CoeLux is the ability to give value to spaces and the people who inhabit them, reproducing the sky and creating the natural light with great visual comfort.

Every day look for the most beautiful sky you have ever seen in the smallest details.
Learn how to observe it.
Reconnect with nature by experiencing the sky.

#experiencethesky
#skyhunters
#lighthunters

CoeLux technology enables the physical reconstruction of natural light

In nature, **Rayleigh scattering** is produced by the very weak air-molecule density fluctuations, that require tens of kilometers to produce the sky light as we know. CoeLux, has managed to reproduce exactly the same scattering in a much more effective way, through Rayleigh diffusers which are as thin as few tens of micrometers.

About CoeLux Products

The essence of CoeLux products is the ability to **replicate the experience of the sky** through a hyper-realistic window, offering the possibility to **illuminate spaces in a natural way**, emphasizing sophisticated interior designs, textures and materials and **create well-being**.

Unique technology, the full effect of the sky and sun in an artificial device

- Custom-made **high-brightness LEDs**.
- A sophisticated system of **optics**.
- A randomised dispersion of **nanoparticles** in a thin transparent material

Unique technology, true sensations

From day one, CoeLux has been making significant investments to make its products **unique with more than 160 IP rights** between patents and patent applications filed worldwide, along the whole value chain of sun-sky simulating devices and related technologies.

The windows, the line, the spot

The windows, the line, the spot

Introduction to the new CoeLux Downlight, Sky Spot

The windows.

CoeLux skylight are opening to the endless sky, recreating the emotion of a sunset and the possibility of recreating a perfect sunny day in the cold of winter.



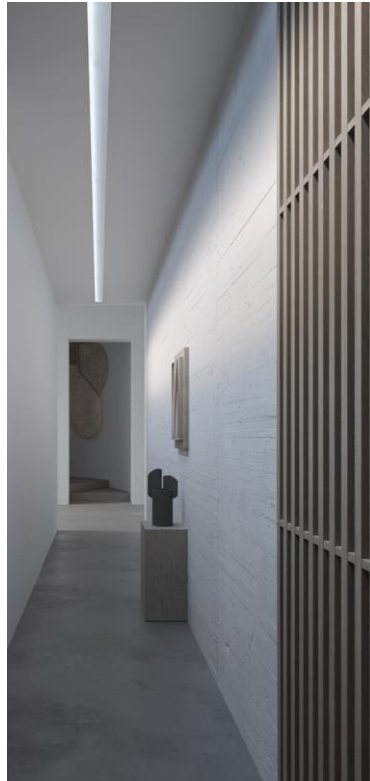
The iconic CoeLux Skylights create a unique perception of wide-open space thanks to the interaction between direct, warm sunlight, which illuminates objects and casts their shadows, and the diffuse, bluish light of the sky, which tints all shadows blue.

3 product families, CoeLux High End, Long Sky and High Tech

7 product with multiple option

The line.

A slit that projects sunlight in harmonious contrast to the diffuse light of the sky.



Sky Line is a visible reminder of the invisible sky, an intense beam of light at a 45-degree angle will suggest the presence of the sky on the ceiling. By allowing the beam to reflect on a wall at the appropriate distance, the room or corridor will be flooded with pleasant natural light.

CoeLux Sky Line

The spot.

CoeLux has expanded its product portfolio with the first downlight that reproduces natural light to illuminate spaces and create well-being.

CoeLux Sky Spot





CoeLux Sky Spot

Sky Spot

Concept

Coelux Sky Spot is a compact lighting system that reproduces natural indoor lighting with patented CoeLux® technology.

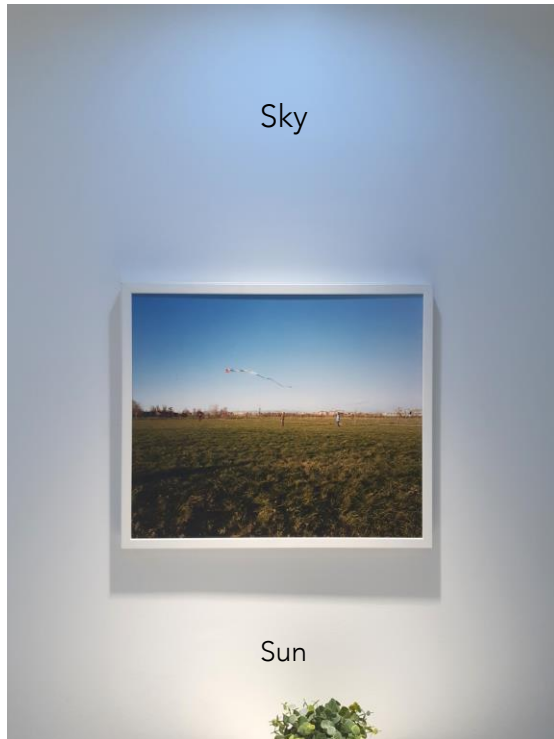


Using the Rayleigh scattering reproduction principle, light takes on a warm sun-like hue, while shadows take on a blue color. The result is a natural harmony between light and shadow areas and a substantial increase in perceived space.

Sky Spot

Concept

CoeLux Sky Spot diffuses the original CoeLux light in a **vertical light beam**, creating a **natural effect** comparable to outdoors.



Main Features

- Compact size
- Reproduces natural light
- Bichromatic light
- Reproduces the entire course of the day
- Available in further versions in the future
- From Sunrise to Late Evening
- Dimmable from 1 to 100%
- Zenith orientation
- Complementing the iconic CoeLux products
- Stand-alone

When traditional light sources, with relatively collimated beams (e.g. spot lights) are used (top figure), standard shadows, i.e. regions deprived from illumination, are perceived as hostile and a source of discomfort.



The traditional-artificial lighting

Sky Spot Illuminate spaces with a “natural” CoeLux®-like illumination, i.e. with the correct illuminance and chromatic contrasts, using an object which is cost-effective and not recognizable as a lamp; avoid the need to use traditional lighting solutions to complement the illumination created by Iconic CoeLux products.



CoeLux Sky Spot



The traditional-artificial lighting



Interplay between the direct, warm sun-light, which illuminates objects and cast their shadows, and the diffused, bluish sky light, which tinges all shadows in blue.



Unfortunately, when the illumination provided by CoeLux does not suffice for the desired tasks, clients tend to add traditional lighting solutions, mainly because of the relatively low cost per lumen that these solutions may guarantee.

Sky Spot

Complementing the iconic CoeLux products with Sky Spot





Preliminary Datasheet

Light emission divided in sun-light (on average 85% of total luminous flux) and sky-light (on average 15% of total luminous flux).

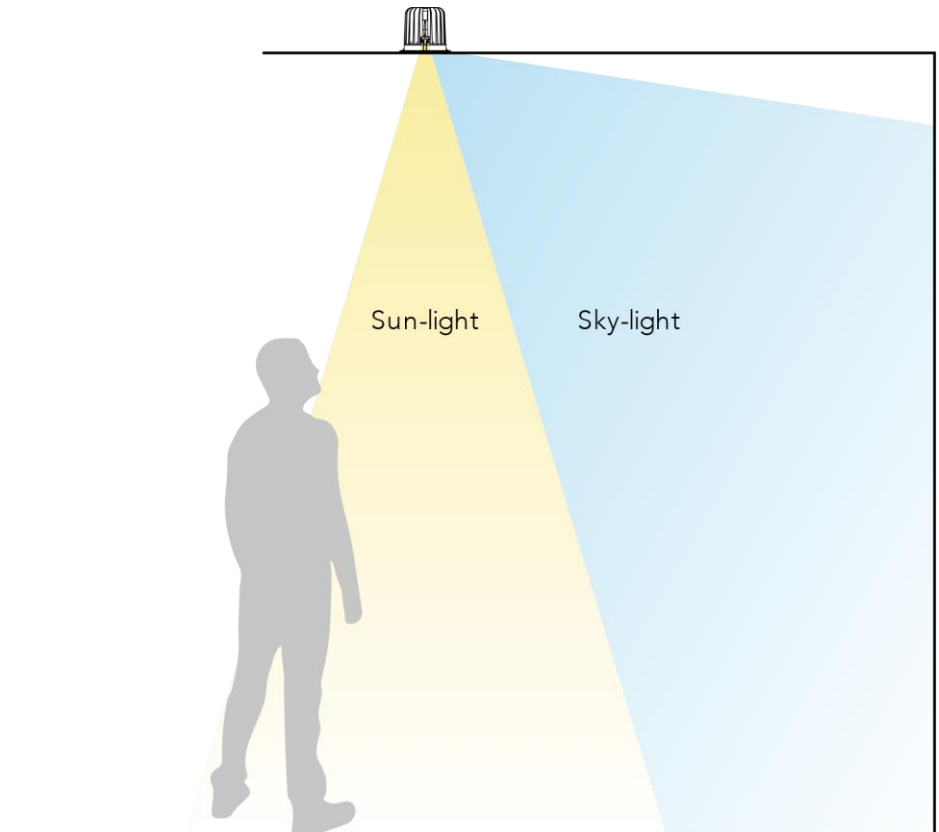
Coelux Sky Spot features high quality tunable-white technology, with emitted color temperature ranging (for sun-light) from 5700K, replicating a mid-day situation -noon- down to 2200K for night usage, best supporting the circadian rhythm of the users. In combination with high CRI values, the **tunable-white LED source** is especially designed to maintain the emitted light color close to the daylight locus.

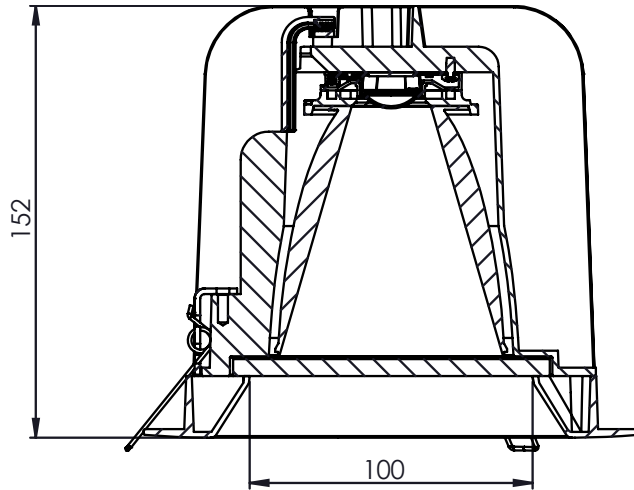
Proprietary technologies

Available in further versions in the future (different light source and beam divergence).

All data are preliminary

Some of the information may differ depending on the versions.





LED:
TOTAL LIGHT OUTPUT
DIMMING
BEAM DIRECTION
SUN-LIGHT BEAM DIVERGENCE
UGR
TUNABLE CCT

CRI

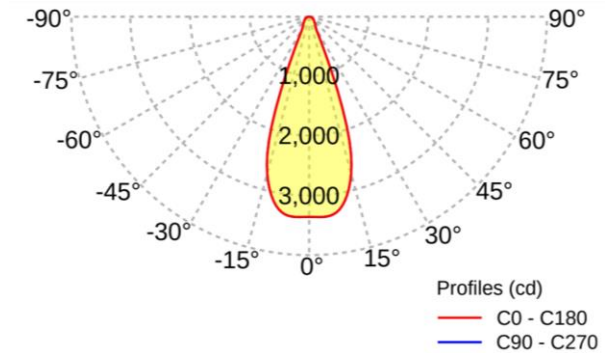
PHOTOMETRIC CURVES

POWER CONSUMPTION
POWER SUPPLY
LIGHTING CONTROL:

LUMEN MAINTENANCE (L90B10)
IP GRADE:

Tunable-white
1800 lm
1-100%
Zenithal
Rotationally symmetric 2x27° (FWTM)
<19
Sun-light 2200 K – 5700 K
Sky-light 3000 K – 18000 K

>90 (Sun-light, CCT range 2200 K – 5700 K)



Proprietary technologies

Available in further versions in the future (different light source and beam divergence).

All data are preliminary

Some of the information may differ depending on the versions.

<45 W
Driver included
DALI dt8
Casambi
ZigBee 3.0
>50000 h
IP20

Project sample

Artificial Traditional light compared with CoeLux device

Traditional Lighting

- No bichromatism
- Flattening of textures
- Unnatural perception of light in space
- Uneven lighting in terms of colour and quality
 - Discomfort



Traditonal Lighting
Standard Downlight and Wallwasher lamps



CoeLux
Sky Spot, Sky Line

CoeLux

- **Bichromatic light:** Yellow directional light and Blue diffuse light
- **Natural perception** of space illumination
- **Lighting consistency** as colour and quality in all functional areas of the space
- **Texture enhancement**
- **Visual comfort**



Project sample

Light output and calculation

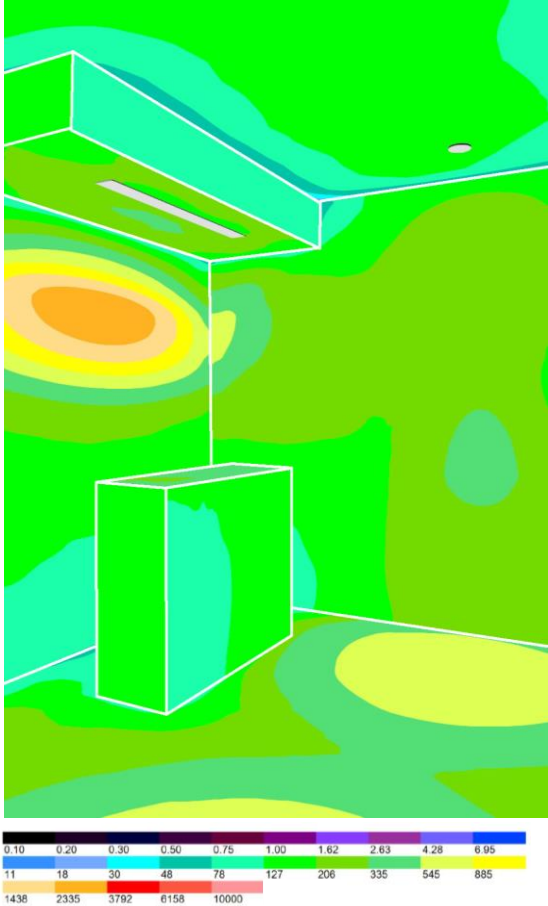
Light Calculation - DIALUX



Sunrise - Unmanned reception during the early morning hours



Noon - Daytime reception



Late evening - Night reception

The Sky Experience

Use Sky Spot products together with the iconic CoeLux Skylights.
Guarantee a CoeLux sky experience, using only CoeLux products.

Project sample

Traditional lighting vs CoeLux

Traditional lighting vs The CoeLux Experience

Sensation of depth and
openness.
Pleasant colours given by the
blue diffused light of the sky and
the yellow directional light of the
sun.
Texture enhancement.
Visual comfort.



Traditional lighting



The CoeLux Experience

Project sample

Amplifying the effect of CoeLux Skylight

The wrong mix

CoeLux skylight (HT25) and conventional downlights

The CoeLux Experience

CoeLux skylight (HT25, Sky Spot and Sky Line)



The wrong mix



The CoeLux Experience

Project sample

Amplifying the effect of CoeLux Skylight

CoeLux skylight (HT25) and conventional downlights VS a full CoeLux Experience

- Integrating traditional CoeLux products with new Sky Spot spotlights
- Using CoeLux lighting to increase the value of space and the comfort of people

CoeLux skylight (HT25) and conventional downlights



Full CoeLux Experience

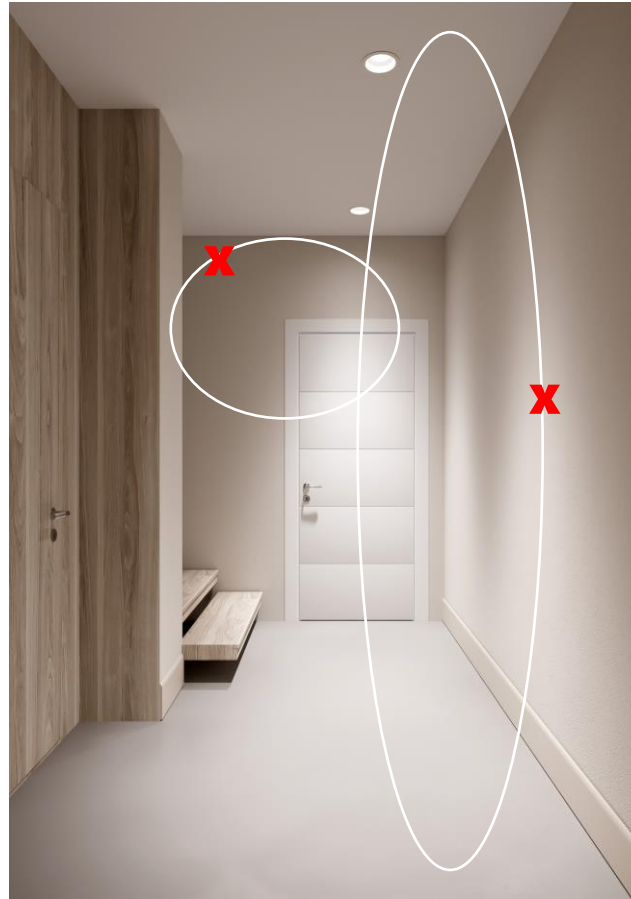
Project sample

Lighting and colour effects in a space lit uniquely by CoeLux Sky Spot

As we can observe in a traditionally lit environment the space (first pics.) appears flat and constricted. >

In the second image (Sky Spot):

- Colour effects on the wall that clearly distinguish yellow directional light (on the ground) and blue diffuse light, especially in the side wall.
- Highlighting of wall finishes and natural finishes such as wood and stone.



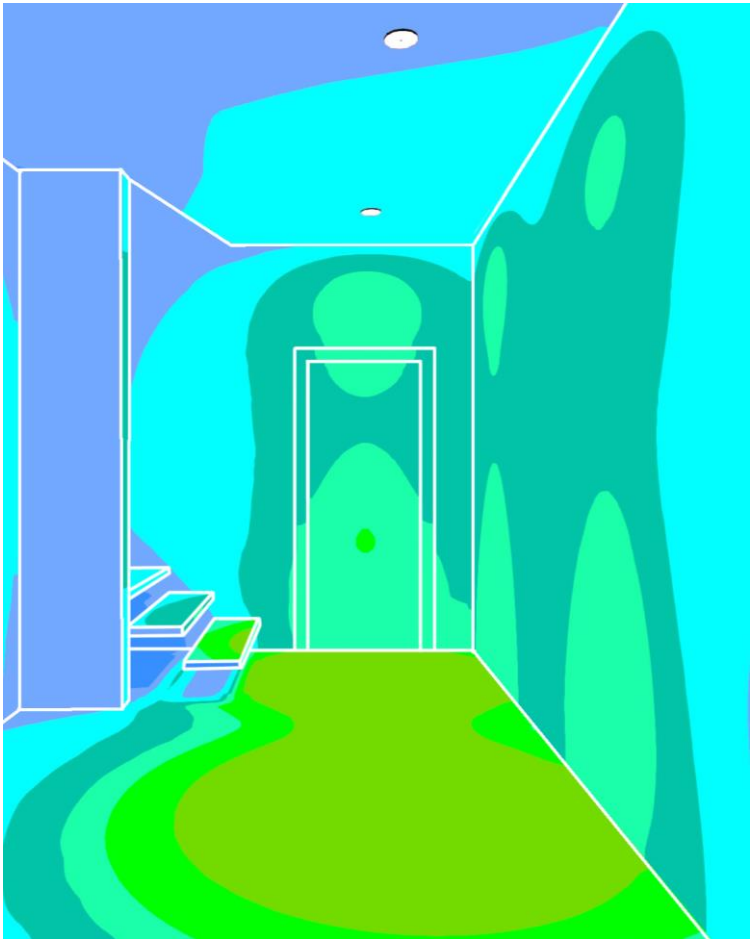
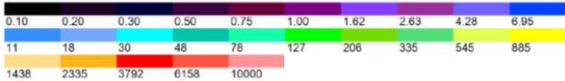
Traditonal Lighting
Standard Downlight



CoeLux
Sky Spot

Project sample

Light distribution



Light Calculation - DIALUX



Light distribution in a neutral set

Project sample



Set the atmosphere closest to your needs and emotions



A functional light that represents the liveliness of the day.

The soft tones of a warm, bright and welcoming light

The warm afternoon sun, the slow fading of the brightness

Every night, the moonlight





All data are preliminary

- Some of the information may differ depending on the versions.
 - Available in further versions in the future
- The colours of some images may vary depending on the device with which the presentation is viewed