

Lucernarium

Biodynamic lighting



Lucernarium

Lucernarium is the result of a joint venture between Ewinlight and Good Night, a shared R&D operation in lighting technology focused on promoting the quality and health of interior environments. Lucernarium's innovation consists of a new kind of lighting that provides health benefits and an improved interior experience.

The proposal of Lucernarium is to reproduce the daylight atmosphere, as if the room was lit by direct sunshine through a window. That's the main goal of our product: by providing a dynamic daylight sensation, you get the kind of lighting that is often mentioned as the most qualified and healthy.

Ewinlight is an innovative company focused on bringing the most comfortable daylight experience to human beings.



Why develop Lucernarium?

Daylight is the most important lighting source. Many studies show that daylight has a great impact on our health, both physically and psychologically. But daylight varies significantly depending on the time, the seasons, the latitude, the climate and the architectural structure we live in.

That's why we developed Lucernarium, the first artificial daylight System. It reproduces daylight in the interior, bringing sunshine to us whenever we want; thus, daylight is no longer restricted by environmental factors.



Bright sunshine

Dozens of lenses-groups and a microstructure are used to collimate and filter the stray light, after several optical transformation procedures. The light comes out and acts the same way as sunshine, very bright and oriented from above. Under Lucernarium, as in real daylight, light and shades are clearly defined.

Imitating 3D sky

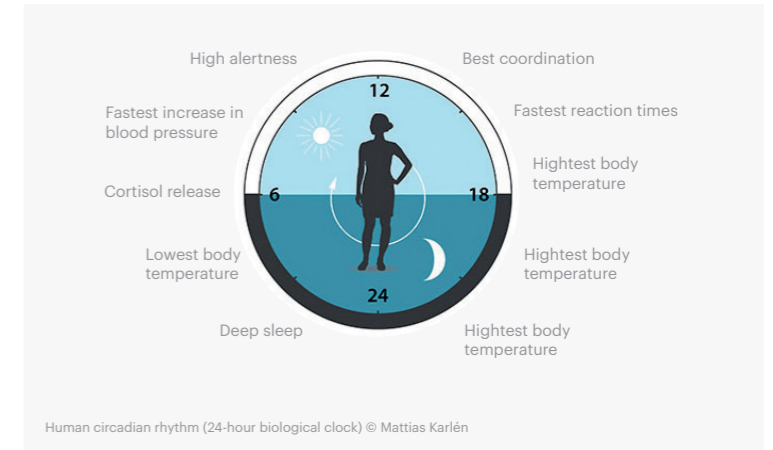
Its special LEDs are used to light up the sky and the clouds, to then transform them to a translucence and 3D vision appearance, with the result of a very high-quality skylight.

How Lucernarium works

Lucernarium is a brand-new lighting product that imitates the features of daylight. It presents us with the very natural atmosphere of a day with a blue sky, clear clouds and bright sunshine. It integrates perfectly the latest LED technology with the optical design and an intelligent control system. It's designed as a panel light, easy to operate and mount.

Natural clock

After simply setting up the local date, time and latitude, the control system is able to synchronize the lighting ambient of the Sun in cycles of 24-hours. It is, thus, synchronized with the natural cycle, corresponding to our circadian rhythm. The user has also the option to set a "preferred mode."



Human circadian rhythm (24-hour biological clock) © Mattias Karlén

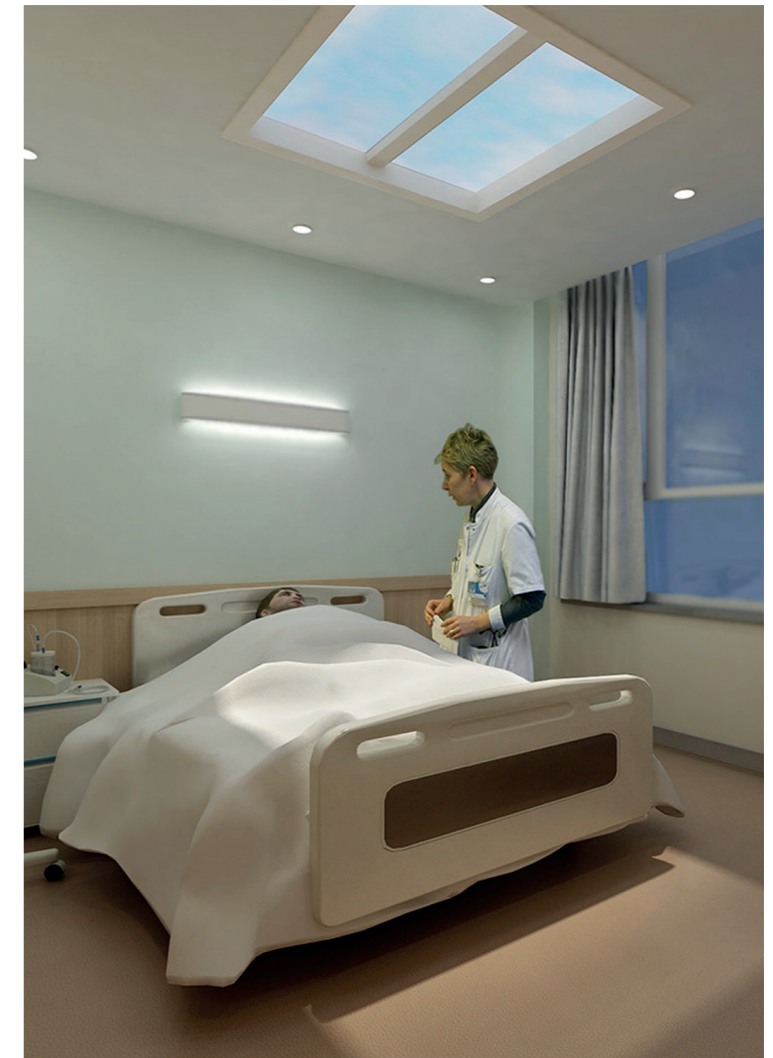
Benefits

Natural lighting environment

We spend most of our time indoor, but our true nature is that of an outdoor creature. We enjoy hiking, climbing and other outdoor activities. Every once in a while, our body needs to feel fresh air, and our eyes need to see the sky and feel the sunshine. Lucernarium creates a natural lighting environment that mimics the sky and the sunshine. It provides a natural atmosphere, and meets our physical and psychological needs.

Smart control system

The Smart control system can synchronize the indoor ambience with real sunlight at different times, different seasons and different latitudes.



Improvement in health

It helps to balance our inner clock with our physiology on the different phases of the day. It improves our performance during the daytime as promotes rest and a good night's sleep. Light therapy with exposure levels of 2500 lux for 2 hours a day has proved to be an effective cure against Seasonal Affective Disorder (Sloane, 2008).



Lighting ambiance comparison

Midday ambiance

Maximum light output, cool light colour. Creates a bright and clear atmosphere, enhances people's alertness, reaction rate, productivity, etc.

Afternoon ambiance

Dimming down light output, warm light colour. Creates a warm and relaxing atmosphere, people feel comfortable and at ease.



Midday ambient

Afternoon ambient

Control approach

Controller

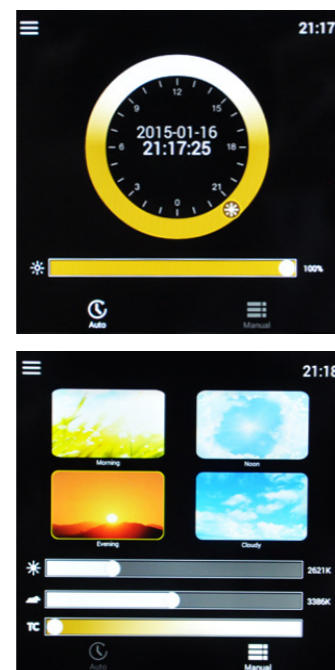
1. **Automatic mode** – Lighting ambient will synchronize to the sun 24 hours a day.
2. **Manual mode** – Users can set the lighting features according to their preferences.
3. **A controller is able to control up to 64 Lucernariums.**

App Control

1. Automatic mode may be customized.
2. Set groups to manage multiple Lucernariums.

DALI Control

1. Support DALI protocol only dimming.
2. Compatible with main brands of DALI control system in the market.
3. Meets the standards of IEC62386-102 and IEC62386-207.
4. Supports DALI DT8 control for colour temperature control and dimming.

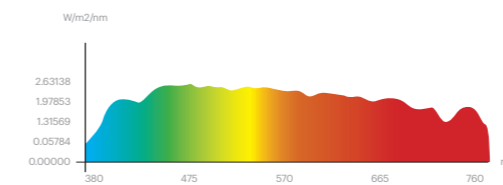


Features

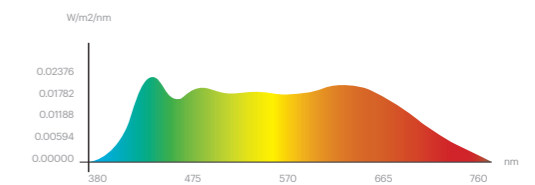
Lucernarium is the first artificial daylight system. It mimics daylight shinning into a room through a window.

1. **Natural appearance of high-quality sky simulation.**
2. **Natural light effect including skylight and sunshine.**
3. **Dynamic light effect that synchronizes to the real sun.**

Visible sunlight spectrum
Wide spectrum



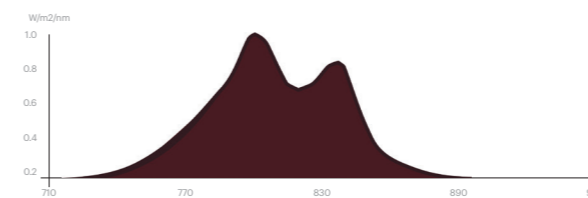
Lucernarium LED spectrum
Most similar to sunlight



IR benefits

- Enhance skin collagen
- Improve metabolism
- Promote blood circulation

Lucernarium IR spectrum
(Infrared radiation)



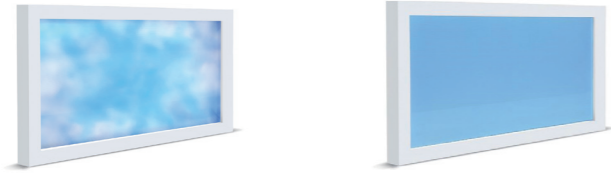
Lucernarium LED cri



Lucernarium

120/60

GOOD NIGHT



Items	Unit	Minimum	Typical	Maximum
Dimensions	mm	-	1170 x 570 x 73	-
Weight	Kg	-	16	-
Power	W	236	248	260
Voltage	V	90	230	277
Current	A	0.9	1.1	3
Mains frequency	Hz	/	50 / 60	/
Power Factor	Pf	0.93	0.95	0.99
Dimmable Range	%	1	/	100
3m Flux	Lux	4000	4500	5000
Luminous Intensity	cd	108,000	120,000	132,000
CCT	K	2500	/	10000
Ra	-	93	95	98
Control Approach	-	-	Controller / APP / DALI	-
APP	-	-	IOS9.0 / ANDROID4.3 or later	-
Operating Temperature	°C	-25	25	45
Life Time	H	-	50000	-
Certification	-	-	CE / UL / CCC (plan)	-
IP	-	-	50	-

Note: the value of Wattage, Current, Luminous flux and Intensity is the value under Auto mode at 12:00.
5-year warranty



Format

120/60

60/60

Cloudy sky



Blue sky



GOOD NIGHT

60/60



Items	Unit	Minimum	Typical	Maximum
Dimensions	mm	-	570 x 570 x 73	-
Weight	Kg	-	7.7	-
Power	W	105	115	125
Voltage	V	90	230	277
Current	A	0.45	0.53	1.37
Mains frequency	Hz	47	50 / 60	63
Power Factor	Pf	0.93	0.95	0.98
Dimmable Range	%	1	/	100
3m Flux	Lux	2500	3000	3500
Luminous Intensity	cd	37600	41800	45900
CCT	K	2500	/	10000
Ra	-	93	95	98
Control Approach	-	-	Controller / APP / DALI	-
APP	-	-	IOS9.0 / Android4.3or later	-
Operating Temperature	°C	-25	25	45
Life Time	H	-	50000	-
Certification	-	-	CE / FCC / SAA	-
IP	-	-	50	-

Note: the value of Power, Current, Luminous Flux, and Intensity is the value under Auto Model at 12:00.
5-year warranty

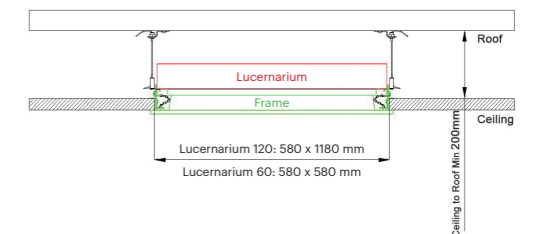


Installation

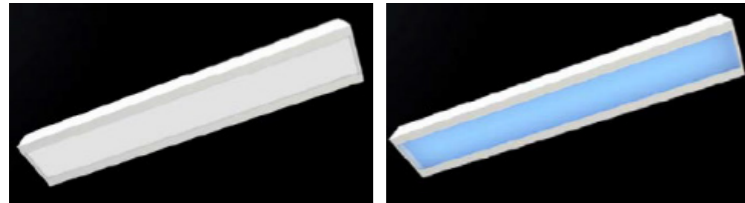
Recessed mounting frame

Surface mounting frame

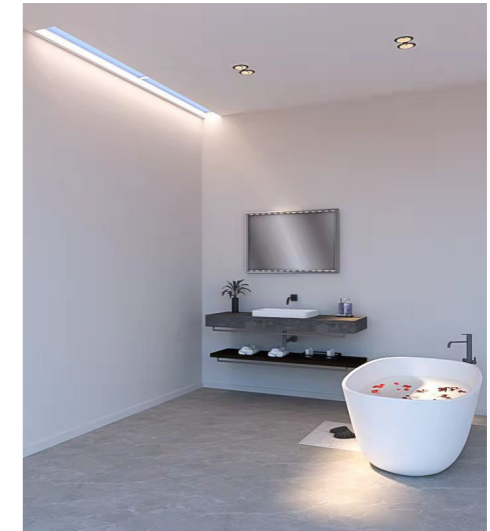
Frame section



Slim



The new generation of Lucernarium creates linear polarizing light to simulate sunshine passing through the window by a 30° angle. It helps to balance our inner clock with our physiology on the different phases of the day



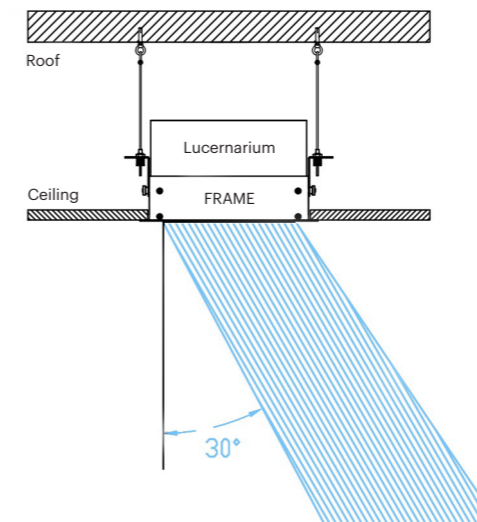
Product Dimensions

Items	Unit	Dimensions
Open Hole	mm	1496 x 282
Holding Frame	mm	1521 x 309 x 79.5
Lucernarium	mm	1481 x 270 x 116
Sky Size	mm	1459 x 181
Roof Spacing	mm	350

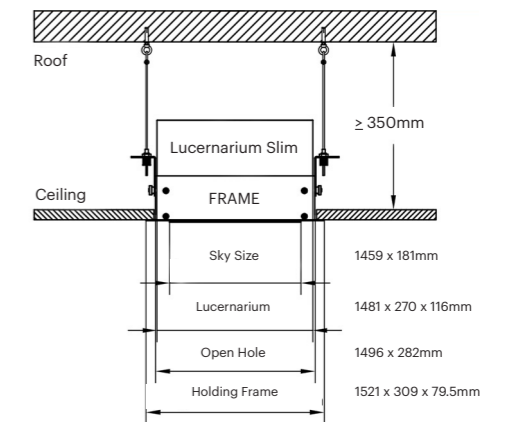
Product Description

Items	Unit	Minimum	Typical	Maximum
Dimensions	mm	-	1521 x 309 x 79,5	-
Weight	Kg	-	16,4	-
Power	W	100	100	100
Voltage	V	90	230	277
Current	A	0.45	0.53	1.37
Mains frequency	Hz	47	50 / 60	63
Power Factor	Pf	0.93	0.95	0.98
Dimmable Range	%	1	/	100
3m Flux	Lux	2500	300	3500
Luminous Intensity	cd	37600	41800	45900
CCT	K	2500	/	10000
Ra	-	93	95	98
Control Approach	-	-	Controller / APP / DALI	-
APP	-	-	IOS9.0 / ANDROID4.3 or later	-
Operating Temperature	°C	-25	25	45
Life Time	H	-	50000	-
Certification	-	-	CE / UL / CCC (plan)	-
IP	-	-	50	-

Frame section



Frame section





The radiotherapy room in the Vall d'Hebron Hospital

Humanization of the radiotherapy room

At the radiotherapy room in the Vall d'Hebron Hospital two Lucernarium have been recently installed. Lucernarium is the artificial daylight system by GOOD NIGHT.

Throughout the many conversations held with the Radiotherapy Department staff at the Vall d'Hebron Hospital, they expressed that, what they sought with the installation of this system was, basically, **HUMANIZATION** –to look a bit beyond the patients' treatment and try to offer them some comfort, warmth and an overall feeling of confidence in an environment that feels a little hostile.

Patients' circumstances were taken into account –many of them are subject to long-term treatments and, thus, to establish a humane relationship with them is key. We started by giving them a pleasant environment. The natural light feeling achieved with Lucernarium affects both staff and patients very positively.

“Professionals have a very positive opinion, they all want to do their shifts in this box! They have the feeling that they just left the basement and got up to the flat roof. People who work on the top floors, with natural day light, are definitely privileged.”

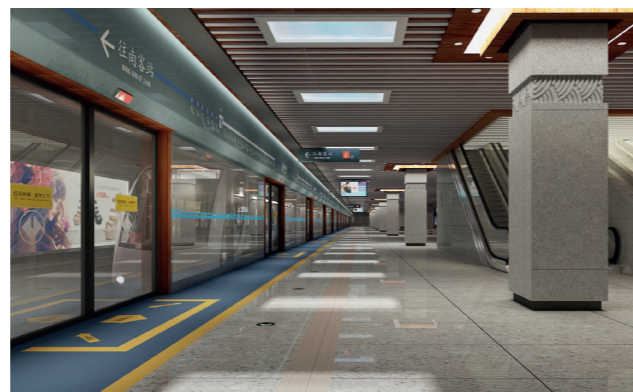
“We recommend it to everyone. Patients would positively feel the daylight changes throughout the day if we installed it in the darker hospital bedrooms.”



Daylight in stores provides a unique lighting experience that attracts customers, and the comfortable atmosphere makes them want to stay.



Daylight in the office relieves the tensions of the working atmosphere and improves working efficiency.



WORKING OFFICES IN BARCELONA



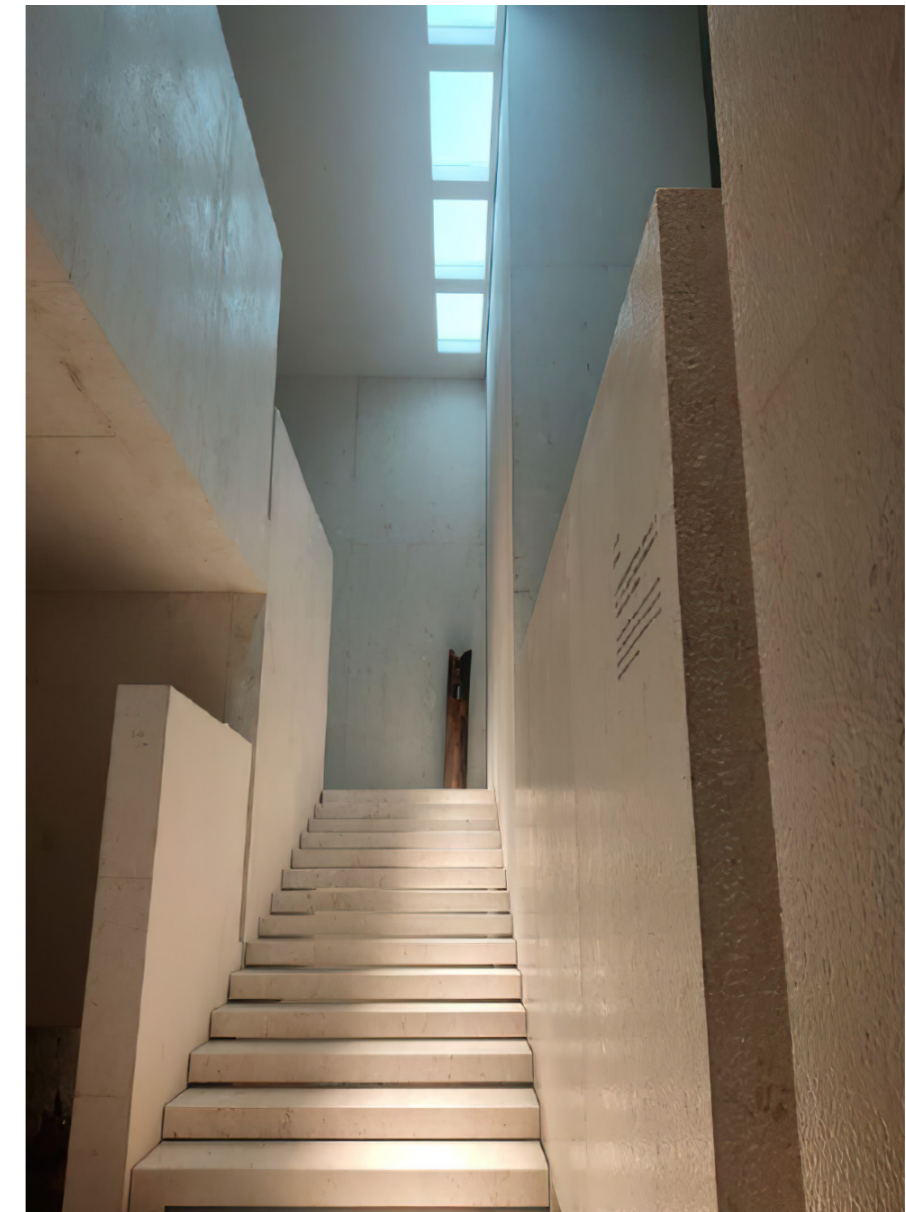
The radiotherapy room in the Quiron Salud Torrevieja hospital



Lucernarium Slim



Lucernarium Slim



Lucernarium 120/60