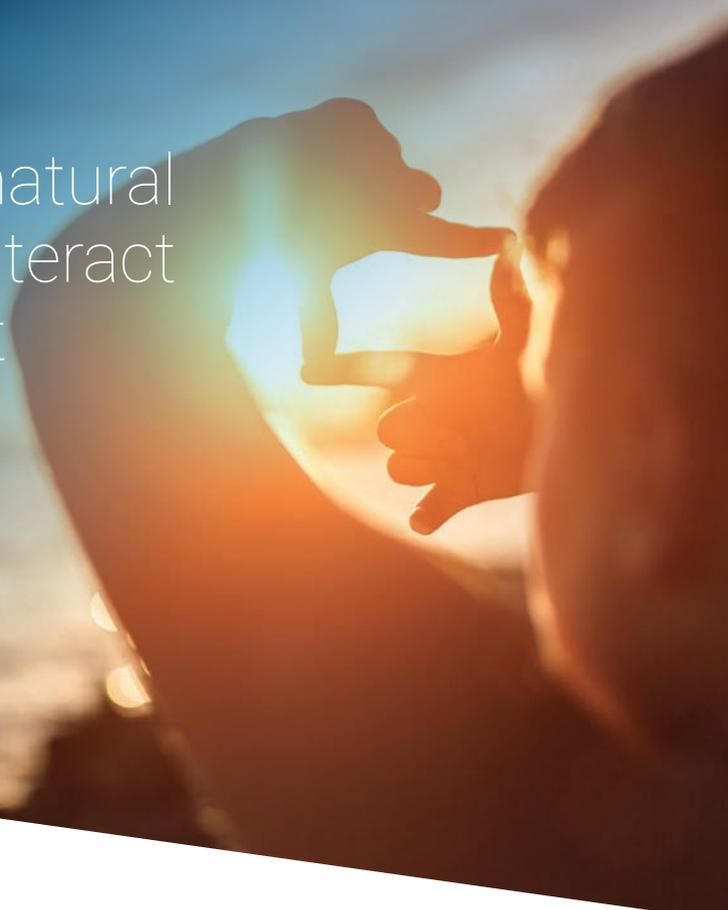




NORMAGRUP  
POCKET  
SOLUTIONS

A more natural  
way to interact  
with light



salUZ®

Technology inspired by the sun

**NORMALIT**

by Normagrup





SaLUZ<sup>®</sup> is the technology from Normalit that creates healthy, comfortable and efficient environments.

SaLuz<sup>®</sup> luminaires are inspired by the sun to adapt to the biological cycles. **No network or external device connection is required.**



# Why some lighting makes us feel good while others create stress?

Light does have an impact on our vital rhythms, as well as on our physiological processes, our mood, our capacity to focus, our emotions and of course, our health.

And, even though artificial lighting is quite useful, our biology is still programmed to adapt to natural lighting, to its cycles and its features.





SaLuz® technology is inspired by natural light.

Thanks to its features, luminaires with SaLuz® technology offer important advantages:

- They adapt to our vital natural rhythms.
- They prevent damages to eyes and skin.
- They prevent headaches, nausea and dizziness.

# How does the SaLuz® technology work?

SaLuz® is a technology that stresses some aspects of the light.



## Adapts to the circadian rhythm.

SaLuz® modifies the temperature colour of light through the day, to match our natural biological rhythms, improving the activation level, the mood and the sleep / awake cycle.



## Flickering control (under 8%):

Flickering are small brightness fluctuations in the artificial lighting that can be perceived as blinks. Prolonged exposure to lights with high flickering can cause headaches, even migraines and nausea. SaLuz® guarantees a flickering level under 8%.





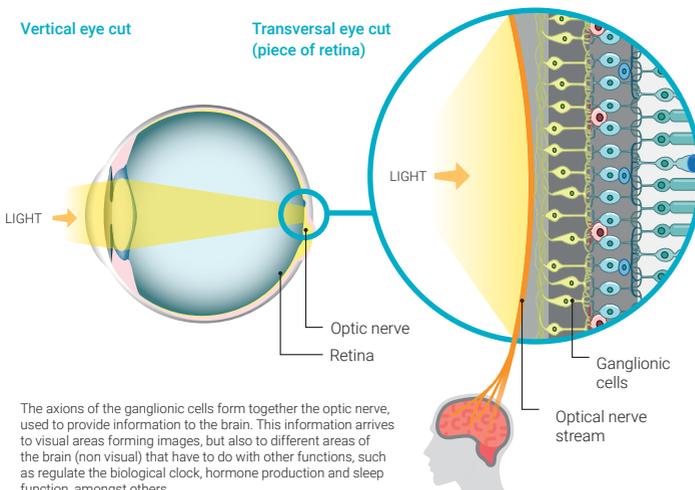
## Controls the photobiological safety.

Luminaires equipped with SaLuz® technology are considered to be risk free for the eye and the skin, according to the European Norm about photobiological safety (EN 62471).

### THE INFLUENCE OF LIGHT IN OUR BRAIN

#### Vertical eye cut

#### Transversal eye cut (piece of retina)



Light with a high predominance of blue stimulates the ganglionic cells in charge of producing the following hormones:

- **Dopamine:** involved in the muscular coordination, attention and pleasure.
- **Serotonin:** stimulant and motivator, increasing the levels of energy.
- **Cortisol:** (Stress hormone), stimulates the metabolism and prepares the body for the day.

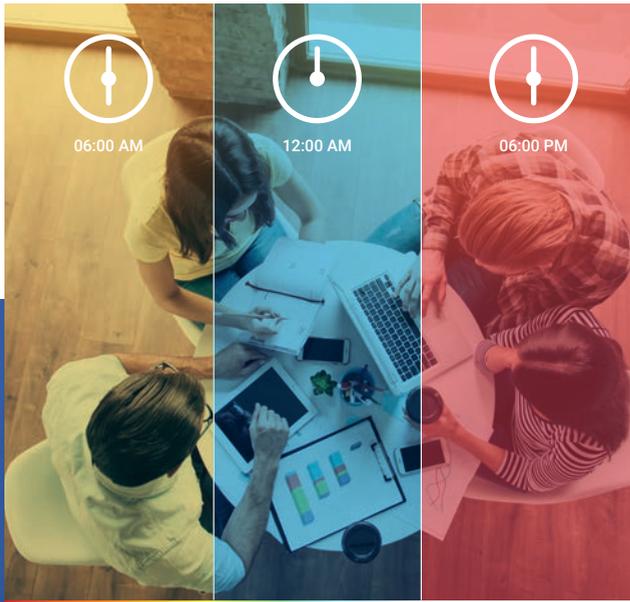
This type of light rich in blue content also suppresses the production of melatonin, the hormone that causes tiredness, slows down the activity of the body and reduces activity for a better rest.

# Do you know what Circadian Rythm is and how does it affect your life?

People are naturally synchronized with the sun.



In the mornings, the intensity of the light and the proportion of blue light shades help us to be more active. In the evenings, the intensity and the proportion of the blue light shades decreases, which helps us to relax and get ready to rest.



In indoors atmospheres where we usually spend most our our day (offices, schools, etc.), artificial light does not change its tone or its intensity and there is a desynchronization from our vital rythms.

Science has proven that this directly affects our performance, our mood and our sleep.

SaLuz® synchronizes with our natural rhythms and automatically modifies the colour temperature during the day.

18:00 19:00 20:00 21:00 22:00 23:00 24:00 01:00

2700°K

.....

SaLuz® luminaires reproduce by themselves the luminic cycle of the sun. To do this, we have considered as a reference the sunrise and sunset of Madrid each day of the year, and this has been associated to a light spectrum for each time of the day. This variation of spectra takes place continuously, but is imperceptible with the naked eye. Out of the day cycle, the luminaires emit a spectrum that has been designed to minimize the melatonin inhibition.

# Areas of installation

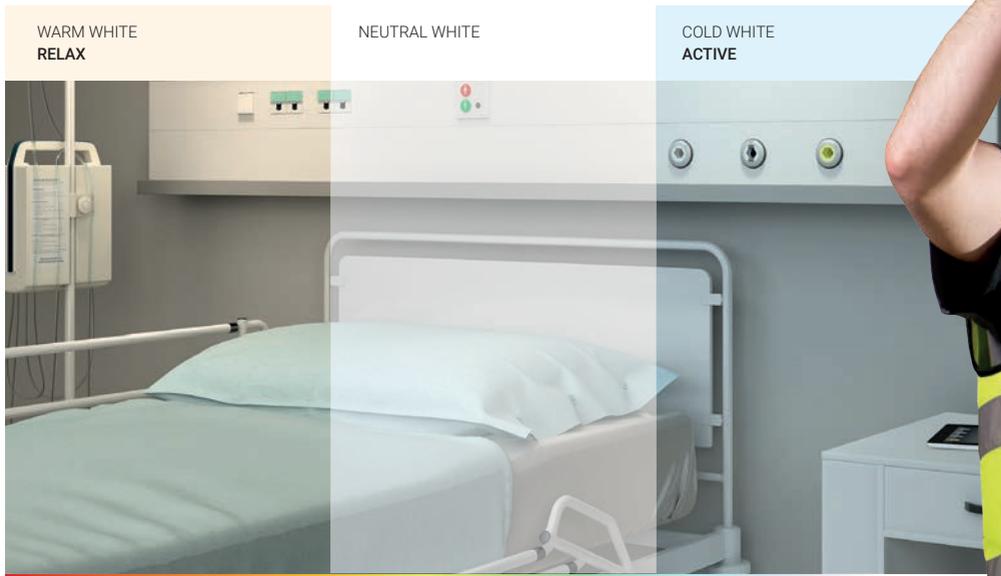
SaLuz® technology has been specially thought for indoor atmospheres where there is a constant artificial light all over the day.

## Hospitals

There are patients with a limited movility that have little exposure to natural light and, hence, to the stimulus that help them to synchronize their internal clocks.

SaLuz® technology stabilizes their circadian rythm. It relaxes or activates them as the sunlight would do, according to the time of the day, and also helps them to improve their sleep.

The professionals looking after them will also improve their performance and well-being.



## Schools

There are many kids that are subject to a lighting which is not healthy. Even in places where photobiological risks, flickering and UGR have been considered, they are still exposed to an unsuitable and/or constant colour temperature that makes them loose biological rythm.

This affects their attention capacity, alters their coordination, their reaction capacity, etc.



# Self-contained and universal luminaires



## Ready to mains

Luminaires including SaLuz® technology are the first ones in the market that can simulate circadian cycle without connection to any other fittings.

The luminaire includes a clock and a calendar with the date, the time and the season of the year. It is only necessary to connect it to mains.



### Just installation to mains

- Without additional wiring
- Without control elements
- Without commissioning
- Without configuration



### Automatic synchronization with the sunlight

Luminaires with SaLuz®

# Hat HR saLUZ®



Hat HR is a reviewed version of the recessed popular downlight of Normalit. This has a new design keeping the essence of the standard model and achieves a lower glaring.



Ceiling mounted



Photobiological risk	<b>0</b>
Flickering	<b>&lt; 8%</b>
UGR	<b>21</b>



## Versions

saLUZ® **Self-contained**

Once the luminaire has been connected to mains, it automatically modifies the intensity and the tone of the light all over the day.

saLUZ® **Tunable white**

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

# Hat HR saLUZ®



Ceiling  
recessed mounted



IP  
**20-54**

CRI  
**>80**

UGR  
**21**

**84°**

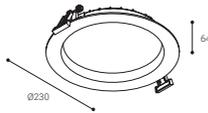
Expectancy  
**72000 h.**  
L70B10

Performance (%)  
**75,1**

Photobiological risk

RG0	<b>0 Exempt from risk</b>
RG1*	Low risk
RG2	Moderate risk
RG3	High risk

\*Less than 3h



Minimum height  
for ceiling  
installation  
**94**

Cut range  
**Ø220-225**

Ideal cut  
**Ø215**  
Round cut

- RAL9016
- RAL7001
- RAL9005

LED		W	K	LUMEN	COLOR	⚙️	
LED	<b>EH12ZB</b>	●	1x17W	2700-5600	2600 lm	○	0,8
LED	<b>EH12ZG</b>	●	1x17W	2700-5600	2600 lm	●	0,8
LED	<b>EH12ZN</b>	●	1x17W	2700-5600	2600 lm	●	0,8
LED	<b>EH12TWB</b>	●	1x17W	2700-6500	2600 lm	○	0,8
LED	<b>EH12TWG</b>	●	1x17W	2700-6500	2600 lm	●	0,8
LED	<b>EH12TWN</b>	●	1x17W	2700-6500	2600 lm	●	0,8



Installation	Ceiling mounted
Cover	⊗
Light source	LED
Photobiological security	0
UGR	21
CRI	> 80
Macadam ellipses	3
Light beam	84
Power (W)	17
Colour temperature (°K)	2700 - 6500
Lumen output	2600
Power factor	0,95
Performance (%)	75,1
Life expectancy	72000 h L70B10
Maintained operation 24h	✓
IP	20-54
Category	II
Ideal cut (mm)	ø 215

⊗ Microprismatic cover

⊕ More information on [normalit.com](http://normalit.com)

Luminaires with SaLuz®

# Nassel Avant saLUZ®



NASSEL AVANT is a Led panel made with a metal housing and a plastic multi-reflector system that provides a uniform and comfortable lighting in the working area.



Ceiling mounted



Photobiological risk	0
Flickering	< 8%
UGR	16



## Versions

saLUZ® **Self-contained**

Once the luminaire has been connected to mains, it automatically modifies the intensity and the tone of the light all over the day.

saLUZ® **Self-contained +**

+ LIGHT SENSOR

Same features as the self-contained version but additionally including a sensor which makes it possible to regulate the amount of light.

saLUZ® **Tunable white**

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

# Nassel Avant **salUZ**



Ceiling  
recessed mounted



IP  
**20-44**

CRI  
**>80**

UGR  
**16**

**77°**

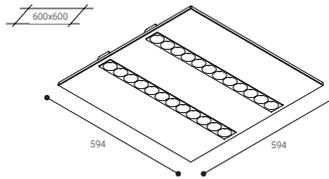
Expectancy  
**72000 h.**  
L70B10

Performance (%)  
**68,75**

Photobiological risk

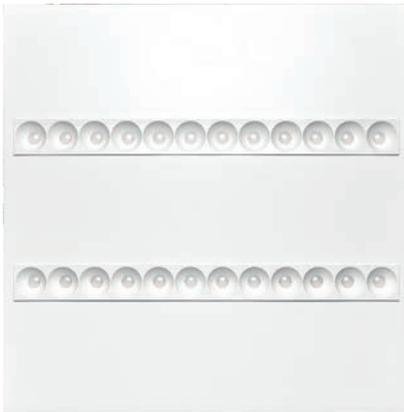
RG0	<b>0 Exempt from risk</b>
RG1+	Low risk
RG2	Moderate risk
RG3	High risk

\*Less than 3h



○ RAL9016

		W	K	LUMEN	COLOR	
<b>NX3ZB</b>		1x25,9W	2700-5600	3345 lm	○	2,9
<b>NX3ZSB</b>		1x25,9W	2700-5600	3345 lm	○	2,9
<b>NX3TWB</b>		1x25,9W	2700-6500	3345 lm	○	2,9



Installation	Ceiling mounted
Cover	○
Light source	LED
Photobiological security	0
UGR	16
CRI	> 80
Macadam ellipses	3
Light beam	77
Power (W)	25,9
Colour temperature (°K)	2700 - 6500
Lumen output	3345
Power factor	0,96
Performance (%)	68,75
Life expectancy	72000 h L70B10
Maintained operation 24h	✓
IP	20-44
Category	II
Ideal cut (mm)	600x600 modular ceiling

○ Opal cover

More information on [normalit.com](http://normalit.com)

Luminaires with SaLuz®



# Trazzo Avant saLuz®

TRAZZO AVANT is a linear system for surface or suspension mounting. Made of extruded aluminium, it is available in 1,126 and 1,688 mm. configurations. It includes a LED multi-reflector system that improves the visual comfort of the luminaire.



Ceiling surface mounted



Ceiling suspended



Photobiological risk	0
Flickering	< 8%
UGR	16



## Versions

saLuz® **Tunable white**

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

# Trazzo Avant saLuz®



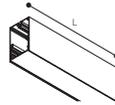
Photobiological risk

RG0	0 Exempt from risk
RG1*	Low risk
RG2	Moderate risk
RG3	High risk

Expectancy  
**50000 h.**  
L70B10

Performance (%)  
**68,75**

\*Less than 3h



○ RAL9016  
● RAL9005

		W	K	LUMEN	COLOUR	L(mm)	△	
LED	TX4TWRB	●	1x25,9W	2700-6500	3345 lm	○	1126	2,5
LED	TX4TWRN	●	1x25,9W	2700-6500	3345 lm	●	1126	2,5
LED	TX6TWRB	●	1x38,9W	2700-6500	5020 lm	○	1688	2,5
LED	TX6TWRN	●	1x38,9W	2700-6500	5020 lm	●	1688	2,5



Length 1,126 mm. Length 1,688 mm.

	Ceiling mounted Ceiling suspended	Ceiling mounted Ceiling suspended
Installation	○	○
Cover	○	○
Light source	LED	LED
Photobiological security	0	0
UGR	16	16
CRI	> 80	> 80
Macadam ellipses	3	3
Light beam	77	77
Power (W)	25,9	38,9
Colour temperature (°K)	2700 - 6500	2700 - 6500
Lumen output	3345	5020
Power factor	0,95	0,95
Performance (%)	68,75	68,75
Life expectancy	50000 h L70B10	50000 h L70B10
Maintained operation 24h	✓	✓
IP	30	30
Category	I	I
Dimensions (mm)	L=1126 (85 height x 56 width)	L=1688 (85 height x 56 width)

○ Opal cover

More information on [normalit.com](http://normalit.com)





**Normagrup**

Dermatological Technology



# NORMALIT

Technical and architectural lighting  
[normalit.com](http://normalit.com)



**100%**

Diseñado y fabricado íntegramente en España

*Entirely designed and manufactured in Spain*

[More information >](#)  
**sa-luz.com**



**SaLuz® Video**

SaLuz® is a registered Trademark.

SaLuz® technology has been protected by utility model number 201931533.

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