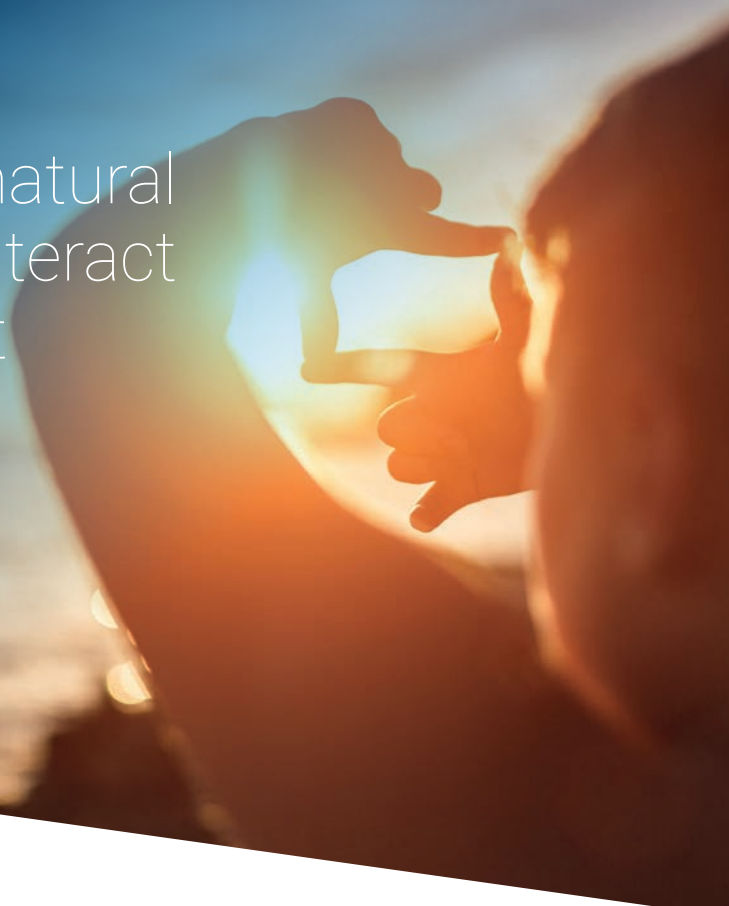




NORMAGRUP
POCKET
SOLUTIONS

A more natural
way to interact
with light



salUZ®

Technology inspired by the sun

NORMALIT

by Normagrup





SaLUZ[®] is the technology from Normalit that creates healthy, comfortable and efficient environments.

SaLuz[®] 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 adapt to the nature of the task being carried out where they are installed.
- 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%.





It adapts the glare index (UGR) to the type of activity.

Tasks more visually demanding call for specific luminaires, specially prepared to avoid glare without giving up a good luminic performance.



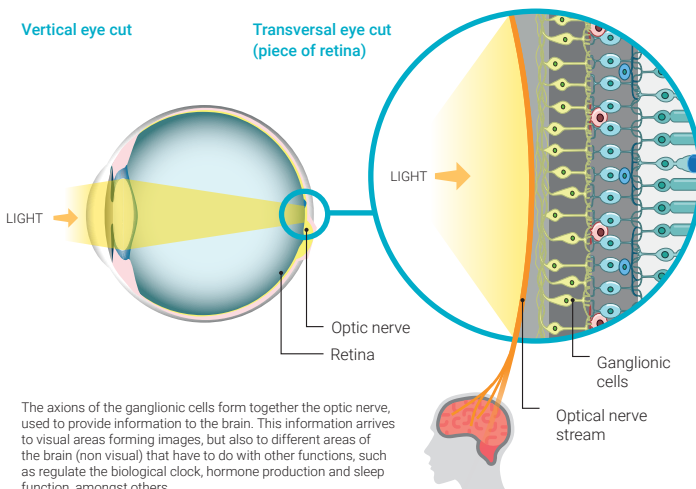
Controls the photobiological safety.

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)



The axons of the ganglionic cells form together the optic nerve, used to provide information to the brain. This information arrives to visual areas forming images, but also to different areas of the brain (non visual) that have to do with other functions, such as regulate the biological clock, hormone production and sleep function, amongst others.

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.

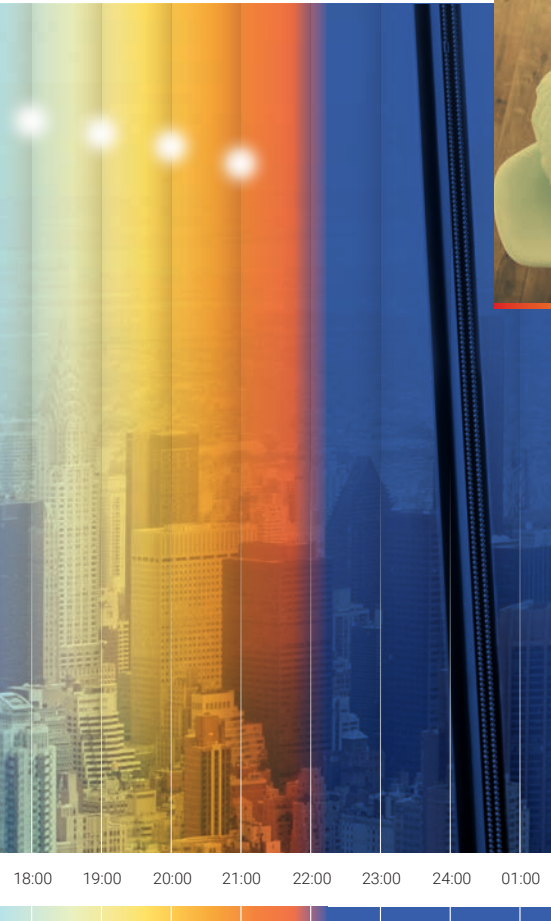
This type of light rich in blue content also suppresses the production of melatonin, the hormone that causes tiredness, slows down the activity of the body and reduces activity for a better rest.

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.



2700°K



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.

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Reproduction of the Circadian Cycle from dusk until dawn. Depending on the season of the year, it will get light or dark before or after. In the moments of dusk and dawn the light source will emit a 2700 °K colour temperature. Out of this interval, the luminaires will have 4000 °K colour temperature. The transition from 2700 to 4000 in the evenings and from 4000 to 2700 in the mornings will be carried out progressively during one hour.

Areas of installation

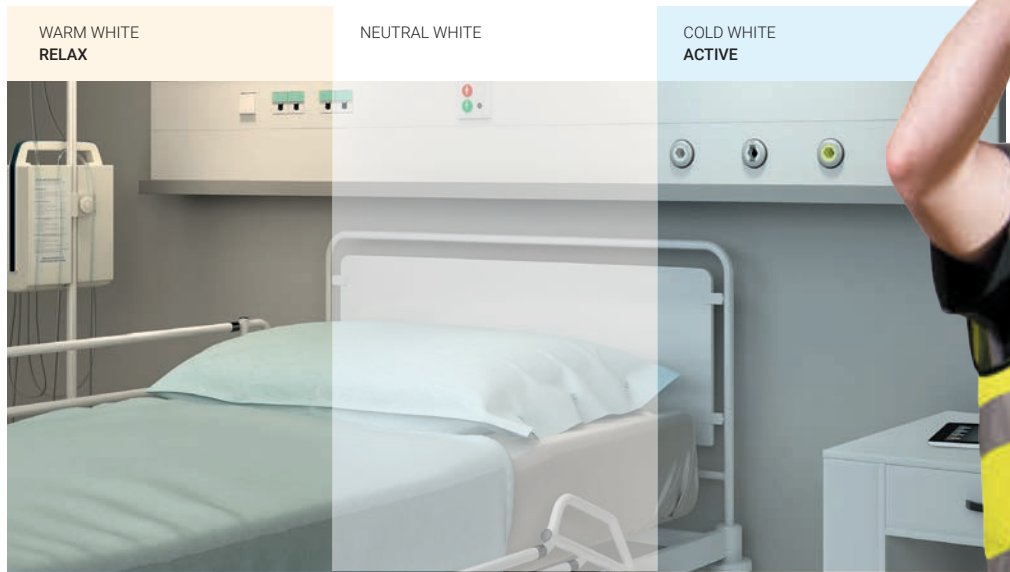
SaLuz® technology has been specially thought for indoor atmospheres where there is a constant artificial light all over the day.

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.



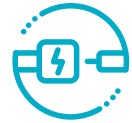
Self-contained and universal luminaires



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.



Photobiological risk	0
Flickering	< 8%
UGR	21



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
54

CRI
>80

UGR
21

84°

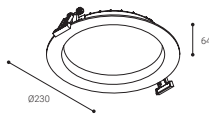
Expectancy
70000 h.
L70B10

Performance (%)
75,1

Photobiological risk

RG0	0 Exempt from risk
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

		W	K	LUMEN	COLOUR	
EH12ZB	●	1x20,5W	2700-6500	2600 lm	○	0,8
EH12ZG	●	1x20,5W	2700-6500	2600 lm	●	0,8
EH12ZN	●	1x20,5W	2700-6500	2600 lm	●	0,8
EH12TWB	●	1x20,5W	2700-6500	2600 lm	○	0,8
EH12TWG	●	1x20,5W	2700-6500	2600 lm	●	0,8
EH12TWN	●	1x20,5W	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)	16
Colour temperature (°K)	2700 - 6500
Lumen output	2028
Power factor	0,95
Performance (%)	75,1
Life expectancy	70000 h L70B10
Maintained operation 24h	✓
IP	20-54
Category	II
Ideal cut (mm)	ø 215

Microprismatic cover

More information on 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
44

CRI
>80

UGR
16

76°

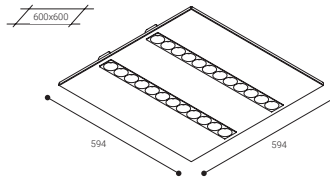
Expectancy
50000 h.
L70B10

Performance (%)
82

Photobiological risk

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

*Less than 3h



		W	K	LUMEN	COLOUR	
NX3ZB		1x22,5W	2700-6500	2910 lm	○	2,9
NX3ZSB		1x22,5W	2700-6500	2910 lm	○	2,9
NX3TWB		1x22,5W	2700-6500	2910 lm	○	2,9



Installation	Ceiling mounted
Cover	
Light source	LED
Photobiological security	0
UGR	16
CRI	> 80
Macadam ellipses	3
Light beam	76
Power (W)	30
Colour temperature (°K)	2700 - 6500
Lumen output	2910
Power factor	0,96
Performance (%)	82
Life expectancy	50000 h L70B10
Maintained operation 24h	✓
IP	20-44
Category	II
Ideal cut (mm)	600x600 modular ceiling

Opal cover

More information on 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 1,125 and 1,685 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® **Self-contained**

Once the luminaire has been connected to mains, it autonomously 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.

Trazzo Avant saLuz®



Ceiling surface mounted



Ceiling suspended



IP
30

CRI
>80

UGR
16

100°

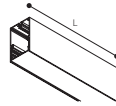
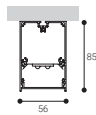
Expectancy
50000 h.
L70B10

Performance (%)
82

Photobiological risk

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

*Less than 3h



		W	K	LUMEN	COLOUR	L(mm)	⚠	
LED	TX4ZRB	●	1x22,5W	2700-6500	3170 lm	○	1125	2,5
LED	TX4ZRN	●	1x22,5W	2700-6500	3170 lm	●	1125	2,5
LED	TX4TWRB	●	1x24W	2700-6500	3620 lm	○	1125	2,5
LED	TX4TWRN	●	1x22,5W	2700-6500	3170 lm	●	1125	2,5
LED	TX6TWRB	●	1x36W	2700-6500	5450 lm	○	1685	2,5
LED	TX6TWRN	●	1x36W	2700-6500	5450 lm	●	1685	2,5



Length 1,125 mm. Length 1,685 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	76	76
Power (W)	22,5	33,7
Colour temperature (°K)	2700 - 6500	2700 - 6500
Lumen output	2600	3900
Power factor	0,95	0,95
Performance (%)	82	82
Life expectancy	50000 h L70B10	50000 h L70B10
Maintained operation 24h	✓	✓
IP	30	30
Category	I	I
Dimensions (mm)	L=1125 (85 height x 56 width)	L=1685 (85 height x 56 width)

○ Opal cover

More information on normalit.com

Handwriting practice lines consisting of 20 horizontal dotted lines.





Normagrup

Dermatological Technology



NORMALIT

Technical and architectural lighting
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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