

WINE & CHAMPAGNE CELLARS

Cellars demand lighting solutions that take care of wine and champagne natural properties



THE CHALLENGES OF CELLARS

Photo-sensitivity

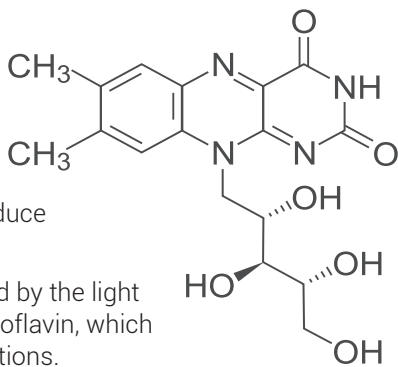
Wine and champagne are negatively affected by natural light and fluorescent or halogen lamps, due to UV rays and heat.

This is why cellars and bottles are usually dark.

Riboflavin

During alcoholic fermentation, yeasts produce riboflavin.

Part of the energy emitted by the light source is absorbed by riboflavin, which unleashes chemical reactions.



COLOUR	It causes progressive discolouration, so wine and champagne may become colourless.
OLFACTORY AND VISUAL PROPERTIES	Sensory characteristics can be modified, and flavours which reduce aromatic or fruity characters appear.
AGEING	It causes new compounds that contribute to light-struck taste and an atypical ageing, with accumulative effect.

The right light level and colour protect wine and champagne against riboflavin effects from photosensitivity.

UV radiation

LED technology does not emit UV rays, but their blue wavelengths are harmful because riboflavin spectrum has an absorption peak at 440 nm (between violet and blue), which can increase negative effects.

The absence of UV radiation and blue wavelengths benefits storage of wines.

Cool areas

Temperatures higher than 21°C cause premature ageing and flat aromas and flavours.

LED light sources does not generate significant heat, so they contribute to a cool ambient, while improving its lifetime.

Humidity and dust

Wines are stored in cellars with 50-80% humidity during long times, so bottles accumulate dust.

Sealed luminaires are protected against the income of solid and liquid elements, to last long and ensure light quality.

Safety

In working areas it is needed to combine the protection of the wines with workers safety.

Light must guarantee visual comfort, flicker-free and low glare, to avoid visual fatigue and allow a clear risks identification.

Maintenance

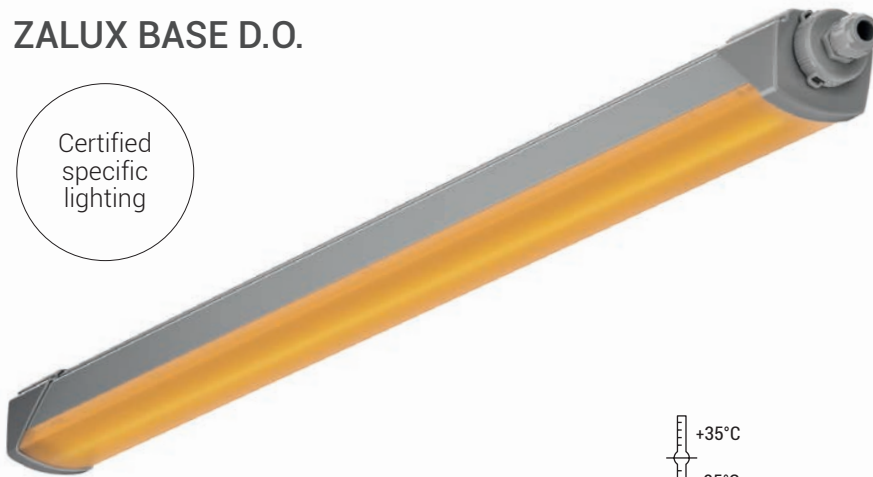
Cellars can have very high ceilings or specific layouts that makes luminaires are installed out of reach.

Robust LED luminaires with long lifetime and easy installation save maintenance costs.

"Wine in a white bottle exposed to direct fluorescence light can suffer deviations of its sensory profile between 1 and 3 hours"

ZALUX BASE D.O.

Certified specific lighting



Amber LED colour

Dominant wavelength (>95%) 590 nm

Up to 2,400lm

L80 50,000 hours

Diffuse light

IP66 / IP69K

IK10



The right light for a real protection

- Specific amber LED with very narrow spectrum.
- **Certified by the Champagne Committee** under the requirements of amber luminaire qualification protocol for bottle storage.

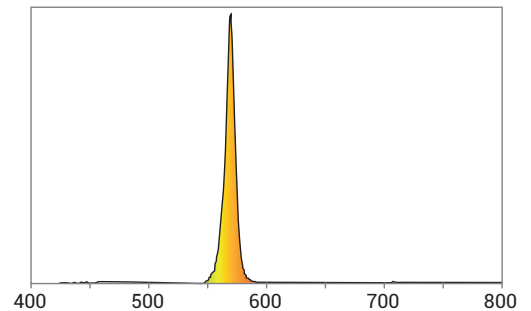
Quality lighting with guarantee

- It complies with the light spectrum and working specifications for champagne and wine cellars.
- Qualified by an independent laboratory under ISO 17025 for EN13032-4.
- Included in the accredited list of luminaires.

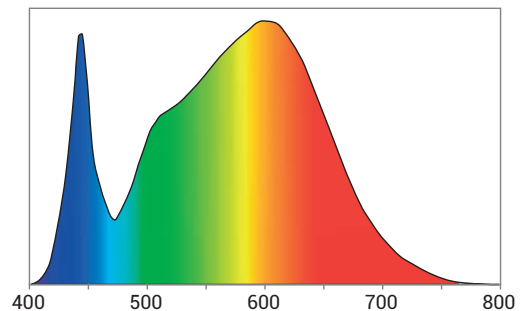
High resistance to ambient conditions

- Extruded polycarbonate profile and end caps.
- Easy and quick mounting with stainless steel fixing clips.
- It contributes to keep a cool environment.

Ambar LED spectrum



Standard 4000K spectrum





Understanding wine and champagne production processes and its relationship with light guarantee an extra care.

ZALUX BASE D.O. is certified and safe for wine and champagne cellars, according to the strict validation procedures of the Champagne Committee.

- The right LED spectrum minimizes the effects of the photosensitivity from riboflavin, avoids defects in wine and champagne properties and its premature ageing.
- Robust luminaires are protected against humidity and dust over long times.
- Stainless steel fixing clips and a quick mounting facilitates installation also in challenging areas.

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