Nodernising public lighting



Light in your image

Transform your old street lights into sustainable lighting solutions

Public lighting is an important sobriety challenge.

Public lighting is a high expenditure item for communities. Street lights with old technologies consume a lot of energy and, when not maintained, they result in high electricity bills. The replacement of the aging street lights with sustainable solutions is therefore a key step on the road to economic, ecological and environmental transition.

To ensure the effectiveness of an installation, part of the solution is the use of intelligent modules.

In search of savings and darkness, some communities are switching off their public lighting, which doesn't meet with everyone's approval: poor visibility when travelling and a feeling of insecurity are often mentioned.

Retrofit addresses these problems by redimensioning lighting while meeting the expectations of all stakeholders. Combined with "smart" technologies, the system reaches a level of optimum performance and satisfaction, while guaranteeing mindful and economic lighting management.

Find out about the Ragni Group's solutions to meet the environmental, energy and economic challenges.



Advantages of RETROFIT

Modernising public lighting



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Mindful lighting

For the Ragni Group, mindful lighting means approaching each project with the right balance between the need for human comfort and safety as well as the the need for darkness that is vital for our natural ecosystem.

This crucial element is a key ecological and digital transition tool for our communities. It enables us to keep in mind the need for a balanced lighting level in our territories.

Designing a street light is no longer limited to the creation of a mould and a lighting source. Economical, technical, technological, societal and environmental criteria have to be combined in a sustainability and performance approach. Mindful lighting is lighting that minimises any disturbance of all ecosystems, whether before, during or after the lighting utilisation phase.

Since the initial formulation of our reason for being, we continue to question the meaning and vision that we wish to communicate to our stakeholders. By adopting a CSR policy effectively built around dialogue with stakeholders, we have actively promoted the concept of mindful lighting, and we are starting to think about the corporate mission that we could declare as a strong, firm and permanent commitment to all the stakeholders in our ecosystem.

> FRENCH ORDER DATED 27/12/2018 Concerning the prevention, reduction and limiting of light pollution.

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Refer to our brochure on the Directive of 27/12/2018 at www.ragni.com

ww.ragni.com

Sizing a project

To ensure that a public lighting renovation or installation project meets all demands, the precise lighting requirements of a zone should be defined through a photometric survey that will precisely determine the appropriate distributions. This phase can be an opportunity to refine the precision of the existing lighting and to reduce pollution. This action can then lead to the removal of lighting points that are no longer needed, resulting in both energy and financial gains.

PHOTOMETRY

Good lighting is lighting that is precise. LED sources offer a variety of precise photometry allowing only what is strictly necessary to be lit, thus limiting light pollution.

LIGHT SPECTRUM





Choosing the color temperature is an important step in the scope of a lighting project.

Artificial white light is rich in blue waves and is damaging to nocturnal biodiversity. It causes changes in species' behaviour and chronic exposure can lead to their extinction.

The selection of temperature is therefore crucial to ensuring both the respect of nocturnal wildlife as well the circadian cycle.

To ensure continuity of color temperature between an old and a new installation, the amber and 2200K solutions, which are the closest to incandescent lamps, are the most recommended. While the 3000K is the best compromise between efficiency, comfort and respect for the environment.



White Control dynamic control of the light spectrum

With WhiteControl, Ragni is addressing ecological problems by designing an adaptable solution that, as necessary, can provide safe lighting for users, or an amber type lighting that preserves nocturnal biodiversity. With LEDs of different light spectra on one PCB and controlled by a system based on time and/or presence detection, the street light automatically modulates the color temperature diffused, to minimise its ecological impact.

Lighting with biocompatible light spectrum (e.g. 2200K or amber)

Lighting with efficient light spectrum (e.g. 3000K)



LIGHTING MANAGEMENT

To combine economy and optimisation, it is recommended that intelligent functions, compatible with your installations and needs, be installed. The integration of astronomical grading, lighting management based on the circadian cycle, presence detection or light level control systems optimises the energy and economic performance of an installation.



CASE STUDY

13 light points activated for 11 hours on a residence car park.

-15 lux

COMPARISON: Between 2 lamp systems (Fluo Ball - B.F. and Sodium High Pressure - SHP) with a ferromagnetic system and 1 LED system with lighting management system (100% for 6 hours and 50% for 5 hours).

*kWh price in France on 01/01/ 2016: € 0.1503

Average brightness

Maintenance cost/year

€0

RETROFIT LANTERNS & STREET LIGHTS EVO2

THE LED, A SOURCE OF SUSTAINABLE SAVINGS

Consider retrofit kits to keep your street lights while providing optimum performance lighting. The LED life cycle is 12 to 15 times longer than that of lamps. It generates savings and is the only lighting source that qualifies your renovation operations for the energy saving Certificate. Retrofit is the ideal solution. It combines minimum waste with energy savings and less light pollution.

Dimensions (mm): $265 \times 207 \times 42/303 \times 272 \times 55$. Protection in tempered glass IK08. From 8 to 48 LEDs, up to 135 lm/W max and 13800 lm in Ragni retrofit kits. PCB, Driver and LEDs compliant with Zhaga standards to allow future technological upgrades. 970 im V 13800 im

Zhaga standard

> <u>ンマ</u> IK08 IP66

<u>200</u>

CE

EVO2 documentation

Ready to use **retrofit kits** for **heritage caged street lights**

TIONS

- compatible with a large number of caged heritage street lights
- luminaire compatibility: max width 210 mm and height 118 mm (inside dimensions)
- length adjustment: from 280 mm to 380 mm
- stainless steel black RAL 9005

- economical
- compatible with a large number of caged heritage street lights
 attractive with a fully swaged LED module
- and no visible assembly screws
- installation requires no tools
- luminaire compatibility: max width 273 mm and height 112 mm (inside dimensions)
- length adjustment: from 280 mm to 455 mm
- stainless steel black RAL 9005

RETROSMART - Linkso

Offset Zhaga socket support

The Zhaga socket support box has been developed to allow the deployment of a smart solution on Zhaga connectors. Compatible with both old (retrofit) and new fixtures, it is a solution for installations where the integration of a smart connector is impossible or unattractive.

RAGNI SAS

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