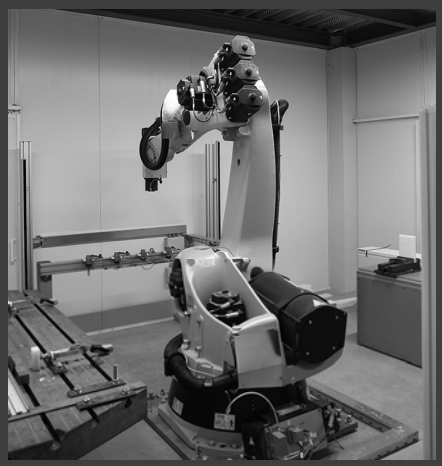
euluce

Lighting OFFICE

lightenjin



lightenjin

Lightenjin is a company that manufactures light fixtures and develops lighting solutions with high quality standards.

Our product range includes light fixtures and interior and exterior light management systems. With easy-to-install innovative solutions, a timeless design, and a very competitive price-performance ratio, Lightenjin provides «made in Portugal» quality.

Lighting must follow regulations and standards in every room; however, compliance with these regulations and standards is merely one of the goals to be achieved for proper lighting in an office environment.
You will find a combination of top quality light fixtures and an exclusive use of LED technology at Lightenjin with lighting experts who will project the lights towards those using office spaces and increase a sense of well-being through light.

The large portfolio of technologies provided by Lightenjin for developing professional lighting solutions not only ensure quality lighting but they also ensure energetically efficient and sustainable answers.

Lighting in **Workspaces**

Offices have been going through great changes from their traditional layout over the past years. Spaces are now shared, meetings no longer take place exclusively in rooms, and leisure has also become a part of the work-space.

Lightings have had to evolve technologically in order to adapt to the changes in the office working methods. Lighting management resorting to a light control system and software is indispensable in order to achieve greater energy efficiency and to better fit the real use of these spaces.

Lighting is also part of a company's identity. The concept of indirect lighting or light beams (focus) were not usual in an office space but they help to create a more harmonious and relaxed working environment.

Light is now seen as an element with the ability to increase profit earning capacity and the physical and psychological well-being of employees.

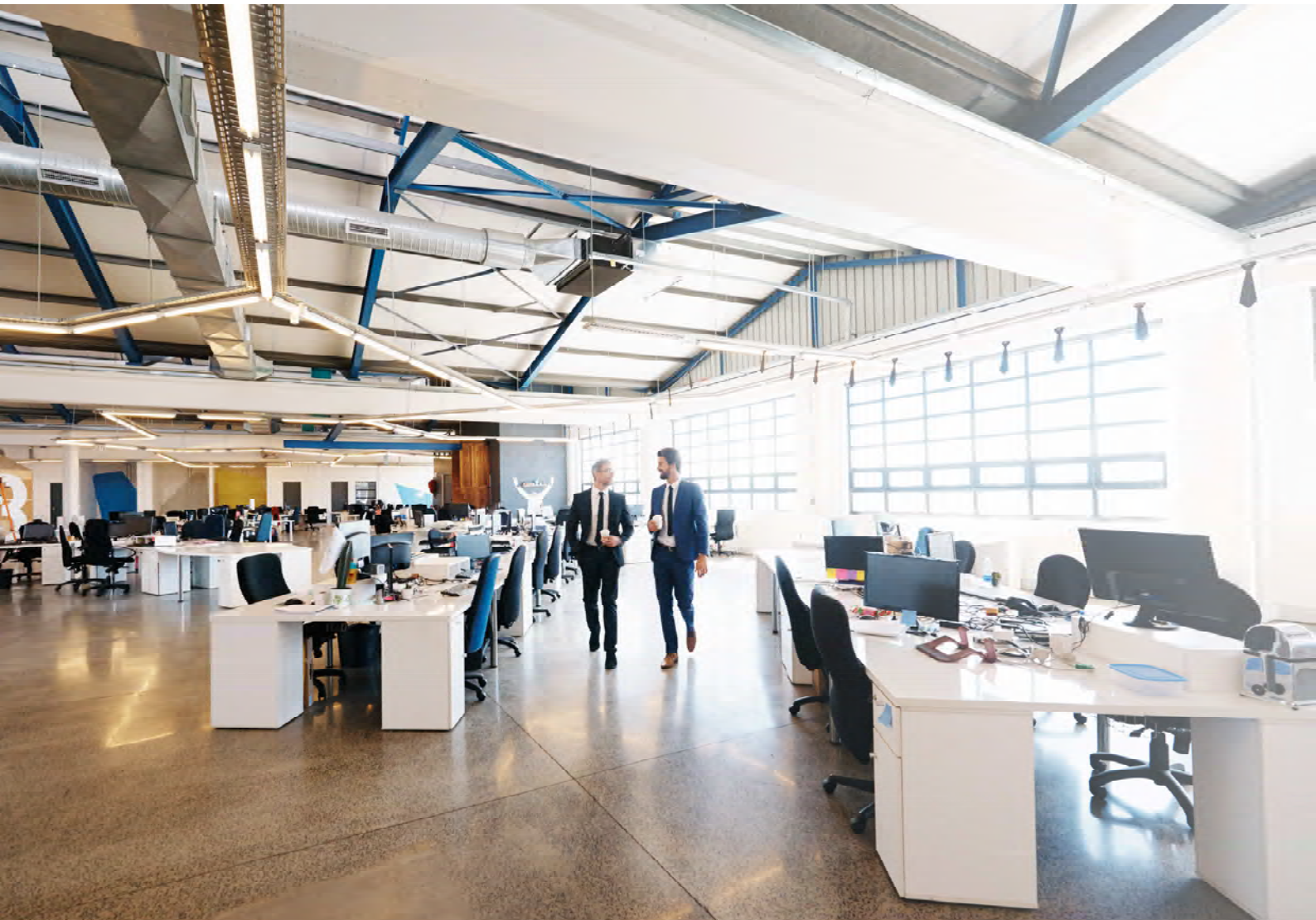
YellowDot

Lightenjin is a partner of Philips Signify, which includes light fixtures certified by YellowDot within the range of its products.

The Philips Signify YellowDot programme uses the 'Visible Light Communication' technology for enabling indoor geopositioning by means of a unique identity code in each point of light.

Light fixtures with this certification will communicate with the user's Smartphone cameras in the workspace, hence helping with the management and collection of analytical data on the use of open-plan offices and co-working environments.

VEconcept _ Matosinhos, Portugal



CIRCADIAN RHYTHM

The circadian rhythm is the capacity to adjust an individual's activity and resting periods. There are many factors that promote a deregulation of circadian rhythms, such as: working in shifts, changes in time zone, lack of natural light, neurological disturbances, medication, etc. These changes may cause major problems to human health.

Since a great part of the population is limited to confined spaces without natural light, it is important to promote adaptable lighting that will reduce the impact of such environments on an individual's circadian rhythm.

It is also crucial for employees who are subjected to changes in schedule between day and night shifts to simulate daytime during the shift to which they are subjected.

TUNABLE WHITE

8 AM
Simulating the morning light
Colour Temperature: 5000K
(combination of natural and artificial light)

12 AM
Simulating the noon light
Colour Temperature: 4000K
(combination of natural and artificial light)

6 PM
Simulating the evening light
Colour Temperature: 3000K
(combination of natural and artificial light)

The Tunable White technology appears within this scope in order to recreate the sunlight dynamics and pattern in buildings throughout the day by combining the light's colour temperature with light intensity.

It is common for there to be the need for more than one type of scenario in an office space. The Tunable White technology enables the creation of scenarios suited to the different dynamics taking place therein. A warm white light is soothing and welcoming in presentation environments. However, there are other times when the option will be to have a colder light in the same space because it has a stimulating effect, promotes concentration, and maintains a higher level of attention.

The Tunable White technology places people at the centre of the lighting project creating the perfect conditions for a positive working environment. The return of investment is effective and it is measured through a decrease in energy consumption and an increase in profit earning capacity.

A **simple solution** for complex tasks

MONITOR, ANALYSE, DECIDE

The correct management of internal resources as well as monitoring performance requires us to resort to the latest technologies.

The relation between adequate lighting in a shop and a decrease in energy consumption is seen as a determinant factor for the productivity and competitiveness of corporations. However, managers do not usually hold all the necessary information for making proactive and informed decisions on using the energy in their buildings.

Remote energy monitoring is an efficient and tested solution for reducing energy consumption and detecting anomalies, as well as implementing good using practices. Lightenjin has provided Global Energy Meter – **GEM** for monitoring energy.

HOW IT WORKS

GEM is a solution for monitoring and managing electrical energy consumption in single-phase and three-phase circuits.

Monitoring information and reports are provided through a dedicated web page, which may be accessed using a 3G/4G and/or Ethernet connection.

Information collected by the GEM may be directly looked up without the need to subscribe to any subscription or monthly services.

You can build reports using data export tools allowing for an analysis of the global consumption of your installation and providing the information needed for the optimisation and verification of energy efficacy measures and negotiation of energy supply contracts.

Consumption Analysis

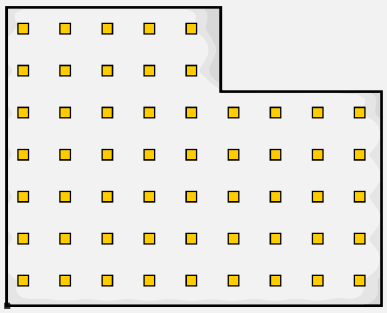
Open-Plan Offices

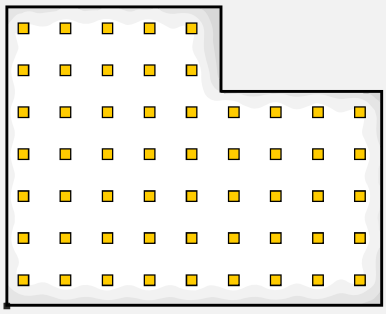
It is important for there to be consumption monitoring in existing open-plan offices. The decision between maintaining the existing lights and placing new ones is based on an analysis of consumption and photometric data of the installation in light of all possible alternatives.

There are usually two alternatives. The first is to use the existing points of light, which will result in the same number of light fixtures. The second alternative is the result of an optimised lighting project for the space without restricting the location of the points of light. The first alternative shows a higher value in the acquisition of light fixtures without an investment in terms of electrical installation. The second alternative is 19 light fixtures short but costs more due to changes in the electrical installation.

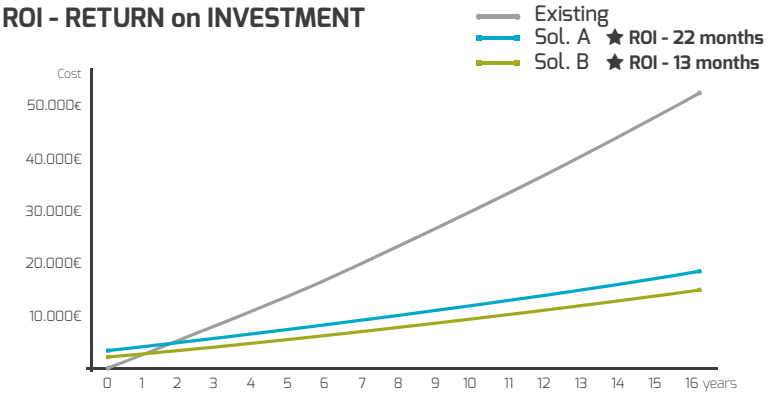
example Office

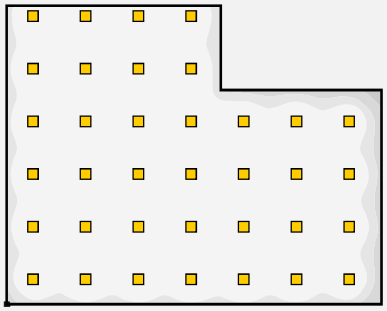
ceiling: 3 metres high
light fixtures height: 3m
area: 319 m^2





	EXISTING INSTALLATION	**LED - SOLUTION A**
		using existing points of light in the existing installation
Light Fixtures	Fluorescent 4x18W aluminium optics	Opus E 600x600 UGR <19 HE
Number of Lights	55	55
Lamp Wattage	72 W	31 W
Absorbed Power of the Equipment	93,6 W	31 W
System Efficacy	52 lm/W	133 lm/W
Luminous Flux / Light Fixtures	3.639 lm	4.170 lm
Work Plan Luminance	541 lux	549 lux
Energy Consumption	13.385 kWh/year	4.433 kWh/year
Emissions	0,685 Ton CO_2/ kWh year	0,227 Ton CO_2/ kWh year





LED - SOLUTION B

Time of Return on Investment
13 meses

Energy Savings
72 %

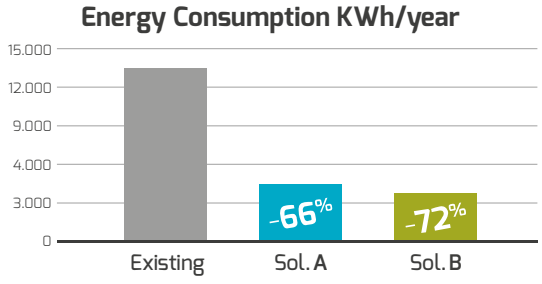
CO_2 Emission Reductions
72 %

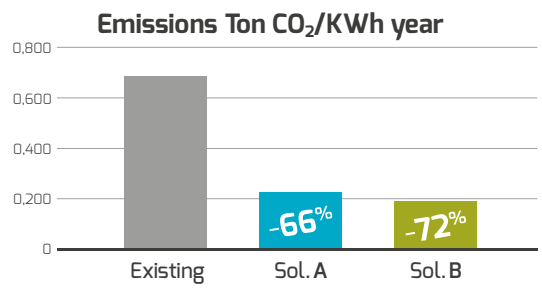
LED - SOLUTION B

Lighting project with a new distribution of the points of light

Opus E 600x600 UGR <19 HO
36
40 W
40 W
137 lm/W
4.170 lm
518Lux
3.744 Kwh/year
0,192 Ton CO_2/ KWh year

ANNUAL SAVINGS





Sonae BIT – Business Information Technology _ Porto, Portugal

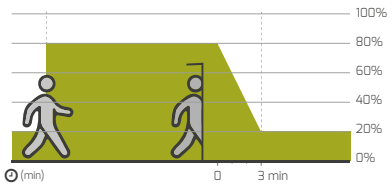
LIGHT CONTROL SYSTEMS

Lightenjin lights with LED technology generate energy saving, since they comply with the requirements for high lighting efficacy with low energy consumption.

Our engineering department provides a set of customised solutions for the functionalities sought by our clients for their installations.

Light fixtures together with additional mechanisms allow for more dynamic usage and substantially decrease consumption. Light control systems are electronic devices that enable us to add one or more tasks to a light fixture or set of light fixtures.

All light control systems are parameterised and interconnected by installing *software*.

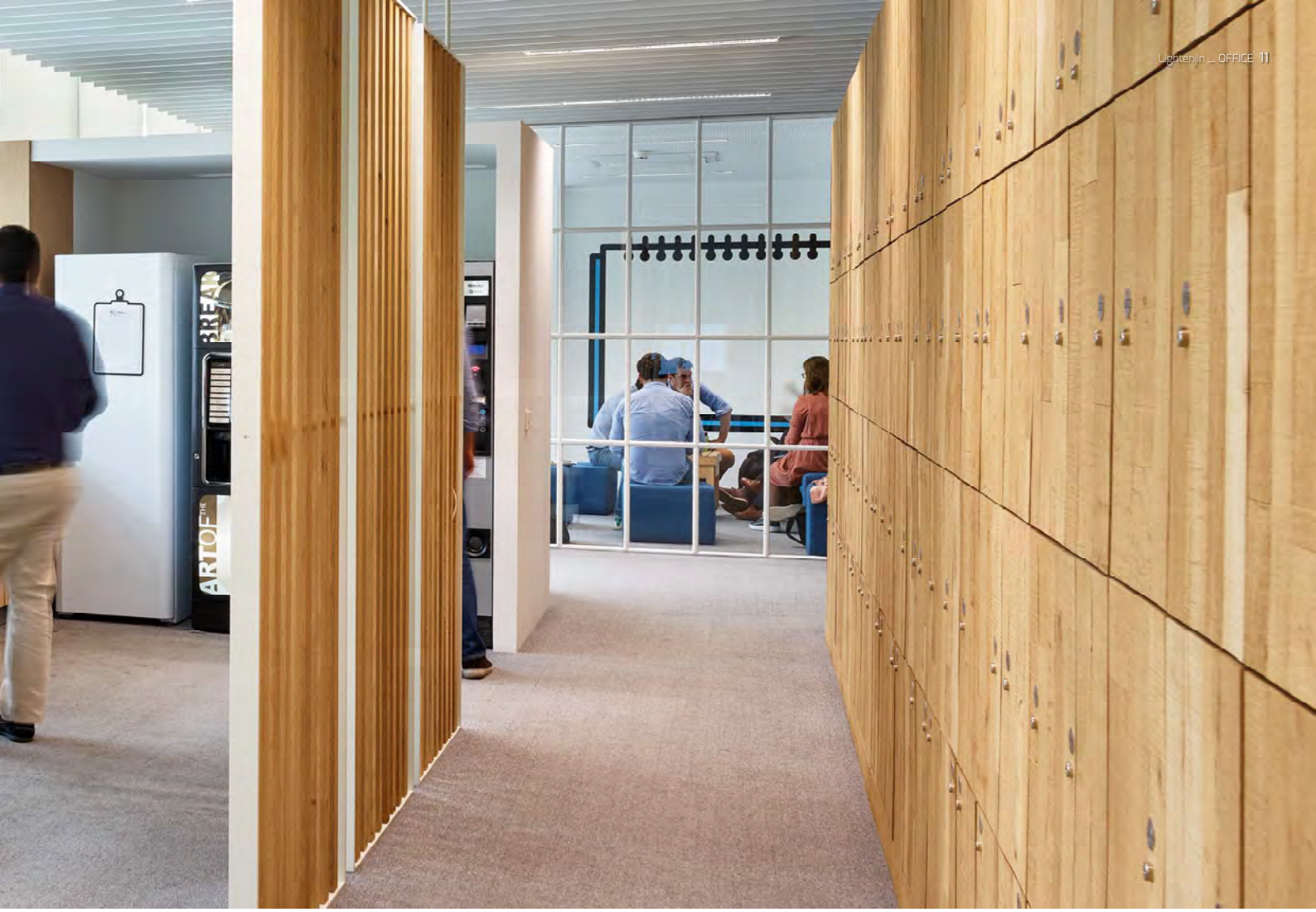


Flux Regulation

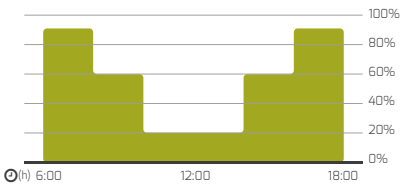
The user adjusts luminous intensity by means of a push button. For this decreased illumination to correspond to a reduction in light consumption, the light fixtures must come with specific electronic equipment.

Corridor FUNCTION

The system parameters are set to a constant level of lighting. Intensity is activated through the presence of people. In the absence of people passing by, lights shall be dimmed to previously set values.

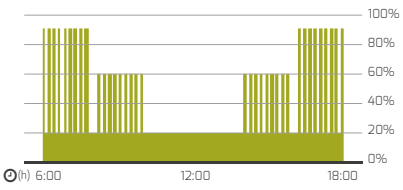


Average savings of **50%**



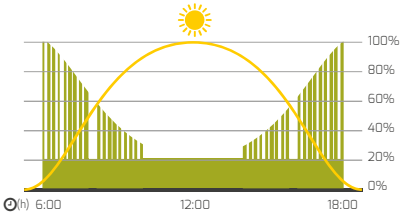
Timer

Lights are adjusted to a previously set time. In addition to the ON/OFF option, the parameters of luminous intensity may also be set using a timer.



Motion Sensor

The motion sensor activates lights when people are in the complex.



Daylight

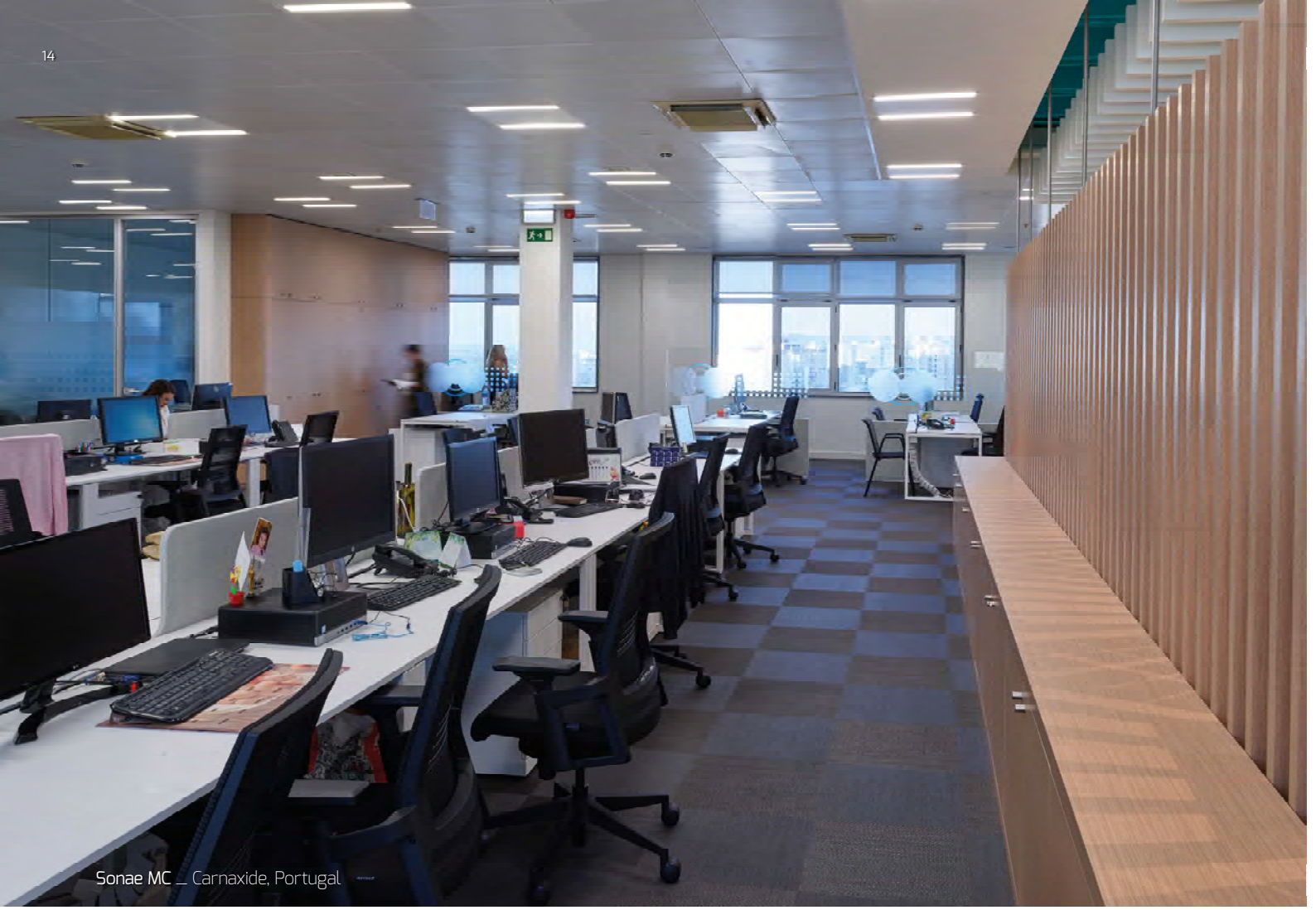
Illumination based on the natural light + people presence equation associated to the ON/OFF option adjusted using a timer.

Areas of intervention

We provide the right solution for each application. Every space has its own peculiarities and the development of Lightenjin lights complies with a strict group of assumptions to be fulfilled so that the choice is always perfect for every type of space.

Lighting

- Open-Plan Offices
- Informal Workspaces
- Executive Offices
- Meeting Room
- Canteen
- Social Areas
- Building Entrance
- Circulation areas and Stairs
- Lavatories
- Façade
- External Paths
- Car Parks



Sonae MC _ Carnaxide, Portugal

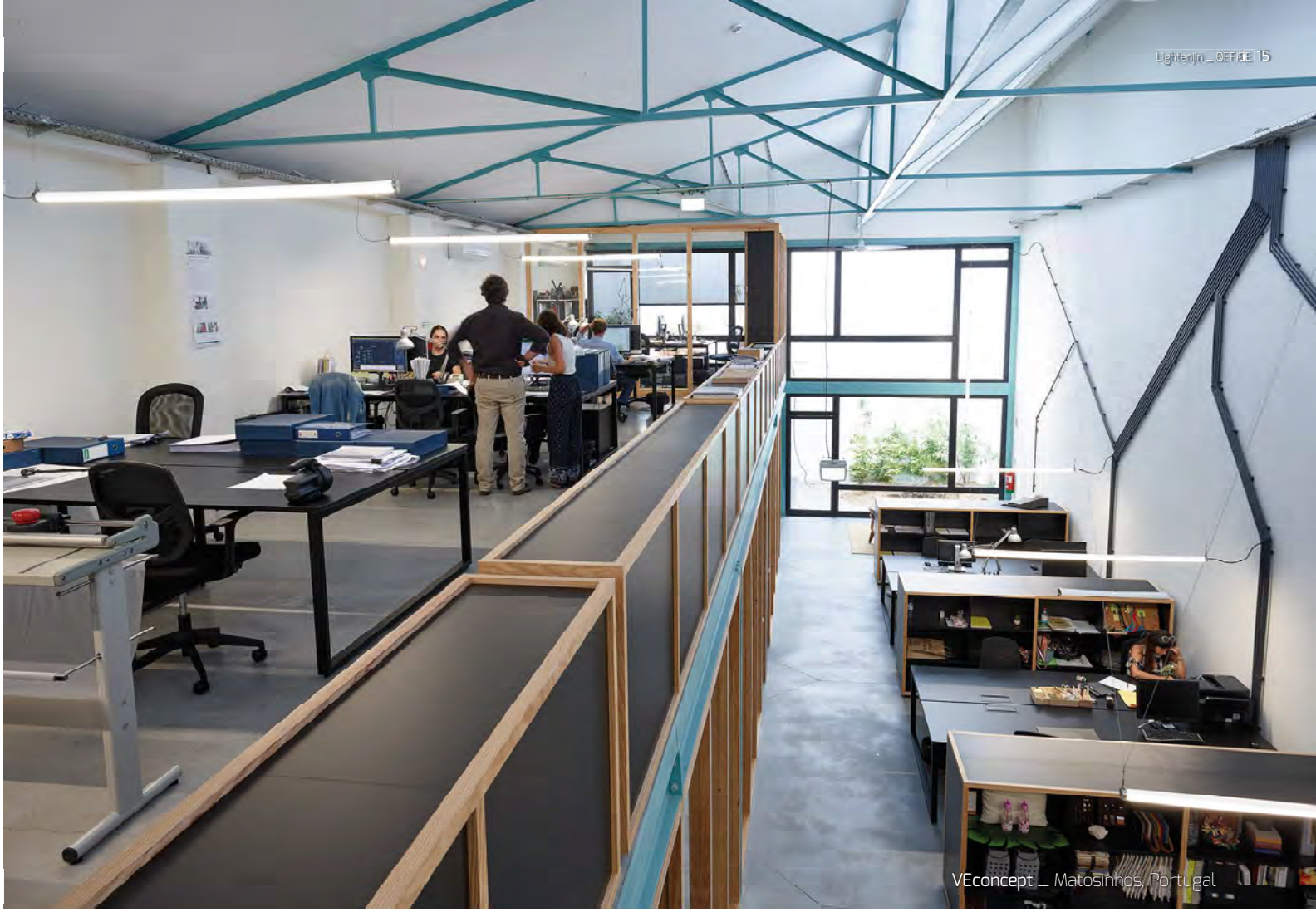
Open-Plan Offices

OPUS E ECO (UGR <16)

Especially designed for offices with an anti-glare micro prismatic diffuser (UGR <16) indicated for working with screens in accordance with standard 12464-1. Available in a wide range of fluxes (**3836-11081 lm**) associated with a maximum high efficiency of **137 lm/W**.

OPUS E PW45

Especially designed for offices with a PW45 diffuser indicated for working with screens in accordance with standard 12464-1. Available in a wide range of fluxes (**3836-11081 lm**) associated with a maximum high efficiency of **137 lm/W**.



VEconcept _ Matosinhos, Portugal

ELEMENTARE Q140

Recessed downlight with a square rim and a simple design. Available in a wide range of fluxes (**2436-4368 lm**) associated with a maximum high efficiency of **115 lm/W**.

LINNE 90

Linne 90 is a linear aluminium profile with a multifunctional suspended application designed for accommodating different lighting solutions. Its versatile width allows for the incorporation of diffusers (opal, transparent, or microprismatic), lenses with different configurations, and the possibility to promote direct, indirect, or both types of lighting.

Sonae MC _ Carnaxide, Portugal

Informal Workspaces

UNNO

Round polycarbonate projector applied to a three-phase rail. A versatile lighting solution with a variety of colour temperatures **(3000-5000 K)** and a high colour rendering index (>80) making it possible to use colour filters. This solution presents a wide range of fluxes **(2686-5407 lm)** and a maximum high efficiency of **122 lm/W**.

DUO

Round projector applied to a three-phase rail with integrated driver. A versatile lighting solution with a variety of colour temperatures **(3000-5000 K)** and a high colour rendering index (>80) making it possible to use colour filters. This presents a range of fluxes that may vary between **2293-2891 lm** associated with a maximum efficiency of **108 lm/W**.

Câmara Municipal de Albergaria-a-Velha _ Portugal

VEconcept _ Matosinhos, Portugal

Executive Offices & Meeting Rooms

CODEX E

Light fixtures with recessed mounting with an elegant and differentiating design. A versatile lighting solution with a variety of colour temperatures **(3000-5000 K)** and a high colour rendering index (>80). Available in a wide range of fluxes **(2550-3974 lm)** associated with a maximum high efficiency of **83 lm/W**.

LINNE E PW45

Light fixtures with recessed mounting with a PW45 low glare diffuser. A flux interval of **1419-11167 lm** associated with a maximum high efficiency of **108 lm/W**.

MODULUS L S

Linear suspended light fixtures with a differentiating design indicated for working with screens (**UGR<16**) in accordance with standard 12464-1. Versatility in terms of beam opening (10-60ºC) and flux.

Sonae, BIT – Business Information Technology – Porto, Portugal

Canteen & Social Areas

LIGNA

Suspended minimalist light fixtures that adapt easily to the surrounding environment. Developed for accommodating lamps with **E27** support with a recommended full power of **60W**.

OPUS S O

Surface mounted light fixtures with **IP40** suitable for dining areas serving as a neutral element in space. Available in a wide range of fluxes (**870-8438 lm**) associated with a maximum high efficiency of **108 lm/W**.

ALTUS Q 130

Surface mounted or suspended light fixtures. Enabling us to create a different environment within the general environment. Available in a wide range of fluxes (**1613-2519 lm**) associated with a maximum high efficiency of **144 lm/W**).

Sonae, Escritórios BIT _ Porto, Portugal

Sonae MC _ Carnaxide, Portugal

ORBIS R 160

A round downlight with recessed mounting designed in order to confer elegance without compromising lighting power and efficiency. Its frame with recessed mounting ensures lower glare. Equipment with **IP44**, a luminous flux that may vary between **2436- 4368 lm**, and a maximum efficiency of **115 lm/W**.

ELEMENTARE R 60

A round downlight with recessed mounting with simple and discrete integration. With a range of fluxes (**916-1702 lm**) and maximum efficiency of **98 lm/W**.

LINNE E O

Linne is a linear equipment that is simple to assemble and modular enabling us to create different configurations and lengths. This product is suitable for offices, shopping areas, and circulation areas due to its high energy efficiency (**120 lm/W**) and luminous flux regulation capacity **(1677- 14534) lm**.

Clínica Dentária das 5 Bicas _ Aveiro, Portugal

VEconcept _ Matosinhos, Portugal

Building Entrance

QUADRATUM S

The Quadratum S enables us to associate several devices with different sizes. A versatile lighting solution in terms of variety of colour temperatures (**3000-5000 K**) and a high colour rendering index (>80). With a wide range of fluxes (**6709-21116 lm**) associated with a maximum high efficiency of **128 lm/W**.

LINNE 90

Linne 90 is a linear aluminium profile with a multifunctional suspended application designed for accommodating different lighting solutions. Its versatile width allows for the incorporation of diffusers (opal, transparent, or microprismatic), lenses with different configurations, and the possibility to promote direct, indirect, or both types of lighting.

TAUPA

This product, which was designed by architect Adalberto Dias, has an elegant format associated with a technical component that ensures a uniform and constant light distribution. Available in three different sizes, wide fluxes (**862- 5667 lm**), and a maximum efficiency of **118 lm/W**.

Sonae, BIT – Business Information Technology _ Porto, Portugal

Circulation Areas & Stairs

FLAT

A small uplight designed by architect Adalberto Dias. Available in a wide range of fluxes (1350-1710 lm) associated with a maximum high efficiency of **121 lm/W**.

ELEMENTARE R 90

A downlight with recessed mounting that may be provided with a transparent or frosty diffuser, or without a diffuser. Available in a wide range of fluxes (**1510-2671 lm**) associated with a maximum high efficiency of **136 lm/W**.

CODEX S

Surface mounted light fixtures with an elegant and differentiating design. Available in a wide range of fluxes (**2550-3974 lm**) associated with a maximum high efficiency of **83 lm/W**).

Sonae MC _ Carnaxide, Portugal

ALUFAP _ Águeda, Portugal

Lavatories

ORBIS R 140

A round downlight with recessed mounting that provides the surrounding areas with simplicity without jeopardising the associated efficiency and power. Its frame with recessed mounting ensures lower glare. Equipment with **IP44**, a luminous flux that may vary between **820-1006 lm**, and a maximum efficiency of **87 lm/W**.

SHEER Q 80 GU10 O

A small downlight suitable for small spaces with light orientation capacity in two axes. Light fixtures with **IP20** designed for accommodating **GU10** lamps with a recommended full power of **10W**.

DRILED IP44

Ideal light fixtures for small areas like coves, handrail, and shelves. This profile enables for diffusers with 120º angles to be integrated. Light fixtures that may be used up to six metres high with a luminous flux that may vary between **738-11307 lm** obtaining a maximum efficiency of **161 lm/W**.

Plural _ Coimbra, Portugal

Façade

REDUCTA 175

REDUCTA 175 with **IP67 and IK10** is an equipment designed for exterior lighting with recessed mounting on the floor and suited for driving areas. Its high lighting power of **2180-3074 lm** ensures that objects are illuminated and walls are swept at low operational costs, hence rendering this product very competitive.

CITHARA XL

Highly protected light fixtures (**IP65**) indicated for loading and unloading docks. The swinging arm allows for the light beam to be controlled. Ensuring a variety of fluxes (**6845-14590 lm**) associated with a maximum high efficiency of **1434 lm/W**.

TULED 20

A minimalist family of products. Developed for highly symbolic and architectural spaces with luminous flux of **1066-4925 lm** allowing for different ranges in terms of façade. Its exterior mounting is ensured through the construction and use of materials conferring **IP68 and IK09**.

Plural _ Coimbra, Portugal

Footpaths

REDUCTA 30

REDUCTA 30 with **IP67** and **IK06** is a versatile point of light, which may be incorporated in a recessed manner into pavements, ceilings, and walls either inside or outside. This product is ideal for small beams of light, signs, and sweeping walls.

PALUS

Equipment available in two sizes, which was designed for the purpose of exterior illumination, such as sidewalks and parks. Its design, which projects light closer to the ground, allows for good lighting at a low cost together with a flux interval of **(427-726) lm**.

PHARUS

Lighting fixtures with a 360º amplitude light and high visual comfort due to the incorporation of an anti-glare gutter, which directs the light emitted to the ground. This product has a wood lacquered aluminium stem, contributing for better suitability in the space where it is incorporated.

Covered Car Park

STAGNUM PRO LED

Watertight light fixtures suitable for a very humid environment (**IP66**). A versatile lighting solution in terms of variety of colour temperatures (**3000-5000 K**) and a high colour rendering index (>80). With a wide range of fluxes (**4992-8253 lm**) associated with a maximum high efficiency of **136 lm/W**.

TULED 50

Watertight light fixtures intended for a very humid environment (**IP67**). A versatile lighting solution in terms of variety of colour temperatures (**3000-5000 K**) and a high colour rendering index (>80). With a wide range of fluxes (**1845-7642 lm**) associated with a maximum high efficiency of **161 lm/W**.

FRIGUS

Appropriate surface mounted light fixtures to be applied onto refrigerated chambers with **IP54**. Designed for a simple or double beam. A versatile lighting solution in terms of variety of colour temperatures (**3000-5000 K**) and a high colour rendering index (>80). This presents a luminous flux that varies between **4642-9023 lm** associated with a maximum efficiency of **168 lm/W**.

Products Index

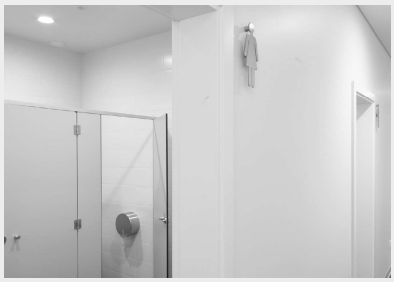
21 Circulation Areas and Stairs


FLAT


ELEMENTARE R 90


CODEX S

22 Lavatories

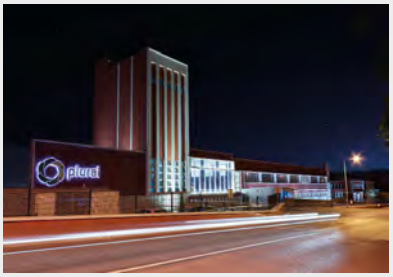


ORBIS R 140

SHEER Q 80 GU10 O


DRILED IP44

23 Façade




REDUCTA 175


CITHARA XL


TULED 20

24 Footpaths


REDUCTA 30


PALUS


PHARUS

25 Covered Car Park


STAGNUM PRO LED


TULED 50

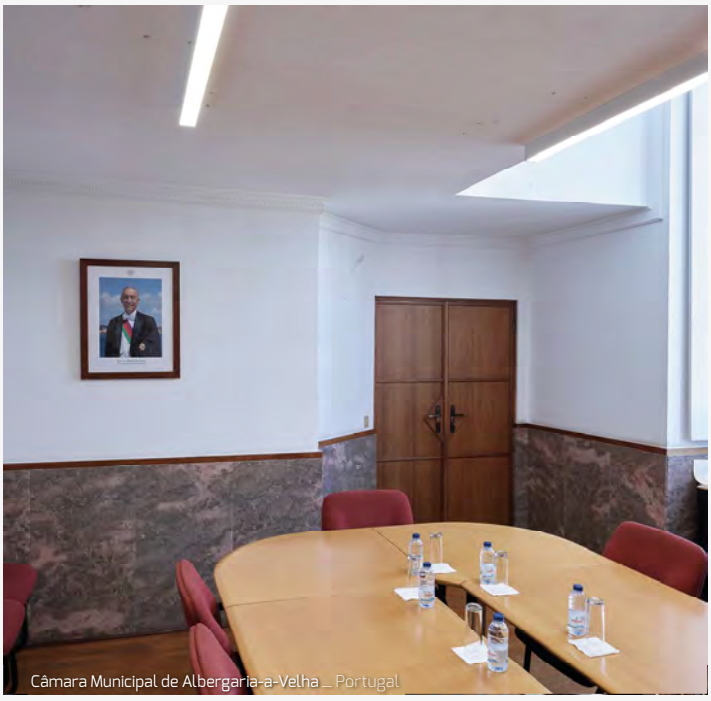

FRIGUS

Lightenjin Projects

ADOFF, Arquitetos _ Leça da Palmeira, Portugal

Sonae MC _ Carnaxide, Portugal

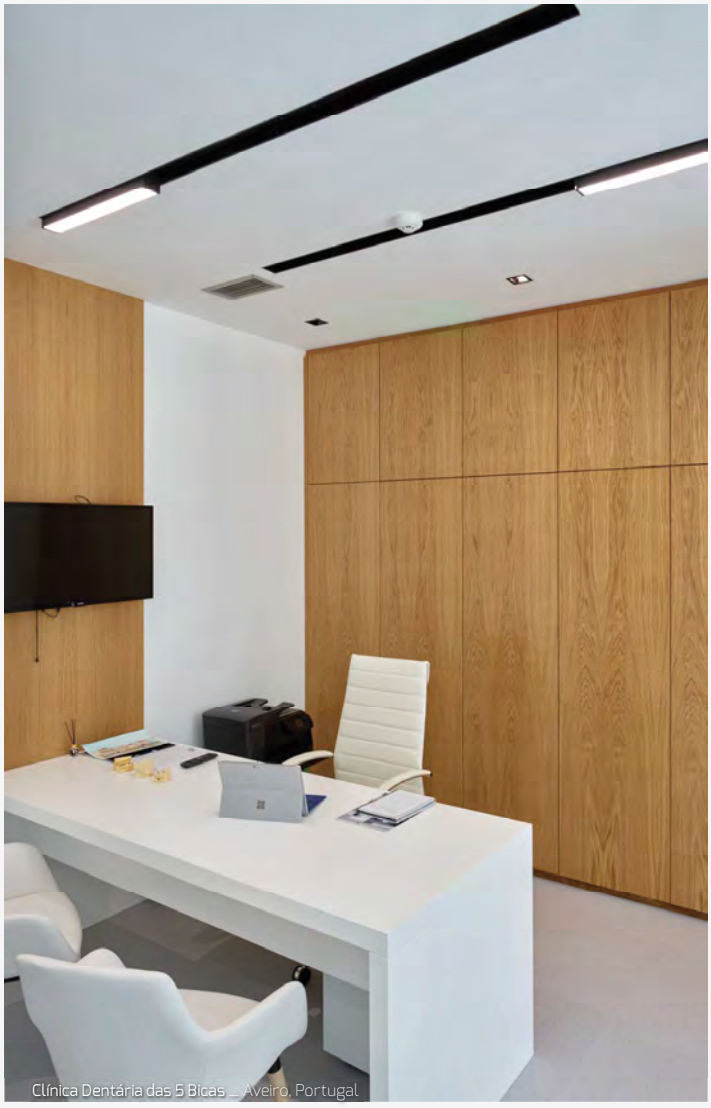
Plural _ Coimbra, Portugal



Câmara Municipal de Albergaria-a-Velha _ Portugal

Câmara Municipal de Albergaria-a-Velha _ Portugal

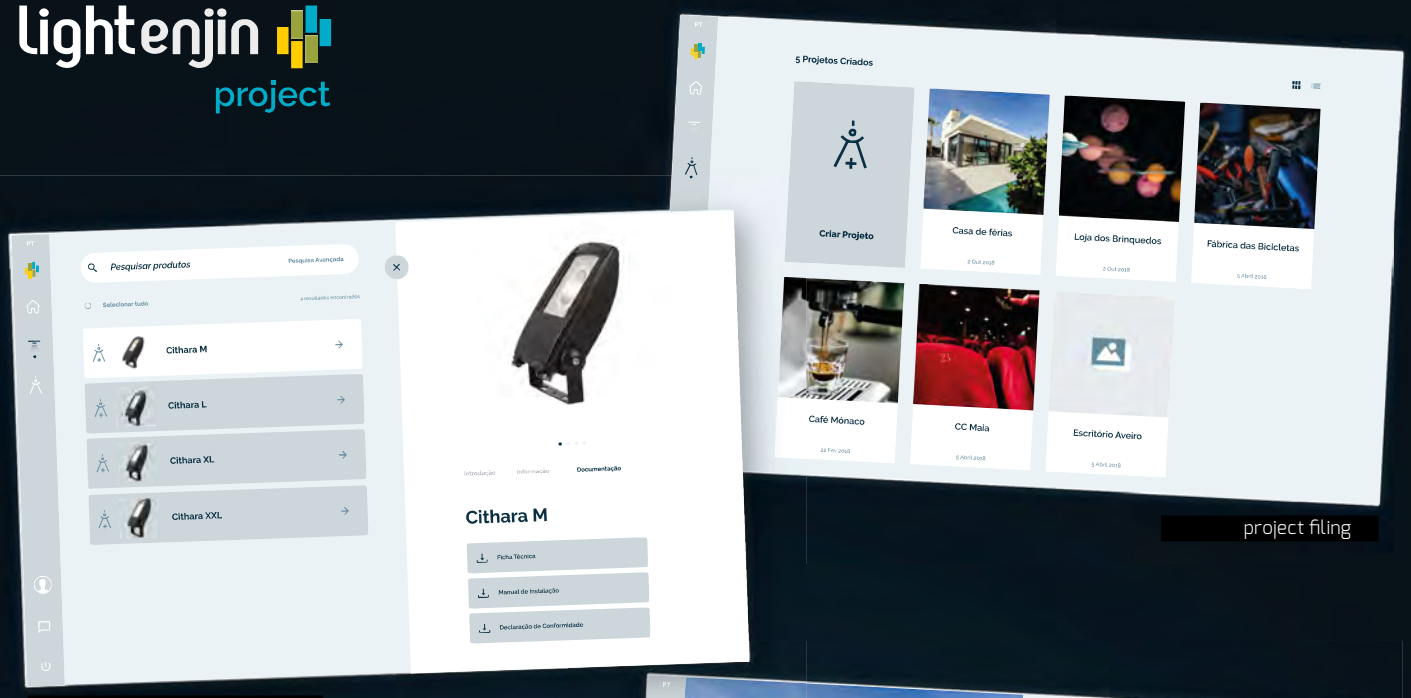
Legalmente _ Águeda, Portugal



Clínica Dentária das 5 Bicas _ Aveiro, Portugal

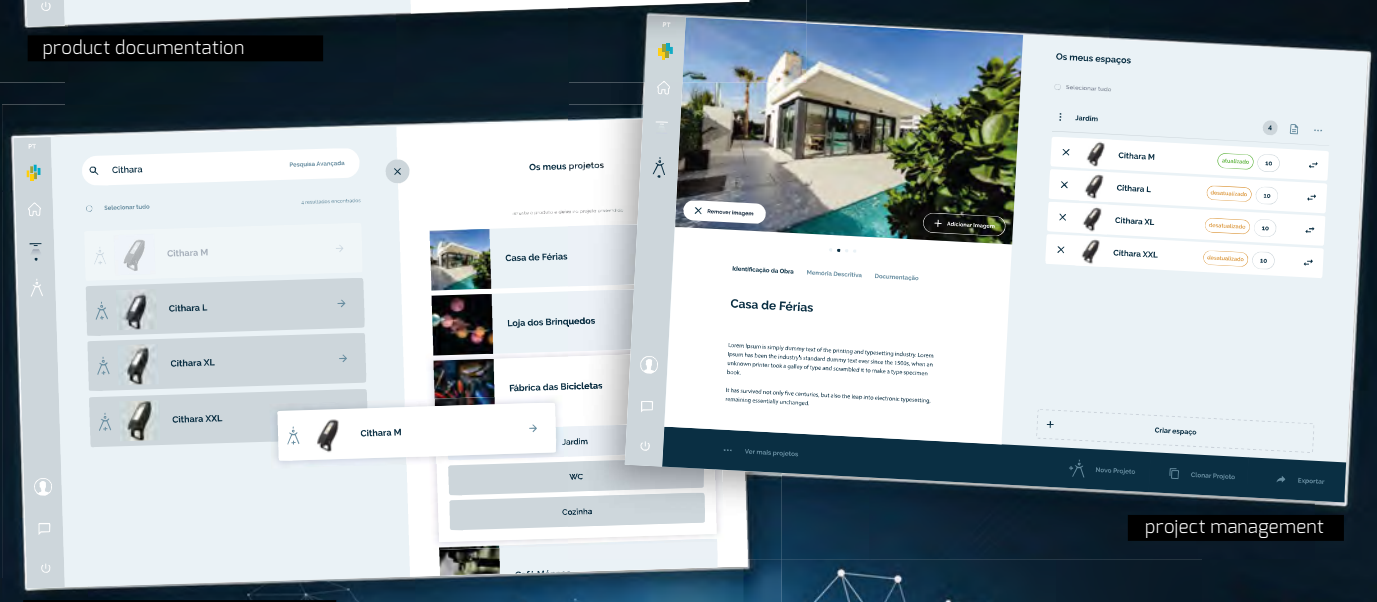
ALUFAP _ Águeda, Portugal

my lightenjin project



project filing

product documentation



project management

assigning a product to a project

My Lightenjin Project

Lightenjin has developed a reserved area designated as **My Lightenjin Project** for professional clients.

Clients may access it on Lightenjin's web page, for which purpose only an e-mail address and password will be required. This tool will enable you to easily organise and compile lighting file documents.

(mobile version coming soon)

Main Features

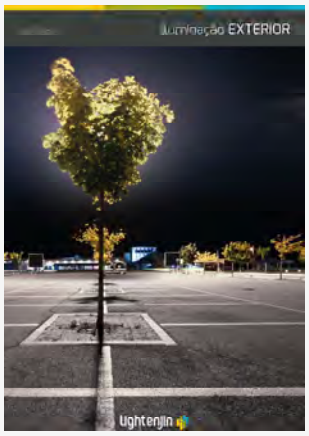
- Look up products and related technical information;
- Create and manage your own lighting products;
- Manage Lightenjin products to be used in each one of your projects;
- An assurance that you are using the most up-to-date information;
- Create a new project based on a previous project and adapt it to a new situation;
- Compile and access all project documentation in one place, per project:
  - Technical data;
  - Assembly instructions;
  - Declaration of conformity;
- Organise and keep up to date the files for each lighting project:
  - Cover page;
  - Data identifying the project;
  - Pictures of the works;
  - Brief;
  - Map of application places;
  - Map of quantities;
  - Product documentation;
  - Annexes;
- Technical support;

Lightenjin

Lightenjin manufactures professional lighting solutions to be applied in interiors and exteriors.

Lightenjin products combine technology, ergonomic design, lighting control, and energy efficiency always keeping in mind user well-being as the main goal.

If you do not find the technical solution you are looking for, please do not hesitate to contact our engineering department.



We are constantly updating our documentation. Whatever your business field, please read the related brochure, where you will find more detailed and specific information.

Documentation available on **www.lightenjin.pt/en/downloads**

DM.008.2018.01.EN

www.lightenjin.pt

Lightenjin II - Indústria de Iluminação, Lda.

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