

# PROJECTBOK

# HOW THE WORLD OF LIGHTING IS CHANGING: BETWEEN ARTIFICIAL INTELLIGENCE, HUMAN VALUE AND SUSTAINABILITY

As we prepare to celebrate 60 years of Fael LUCE excellence in the lighting sector, we reflect on the significant milestones of our past and the future that lies ahead, aware that the true value of a company resides in its ability to adapt and innovate.

The new decade stands as a stage where sustainability and progress merge in a harmonious dance. After having embraced digital transformation in our production processes by operating according to the Circular Economy model, our commitment to environmental, economic and social protection has taken the form of the development of technologically advanced products that are increasingly oriented towards the customer, their experiences and conscious living.

However, the future calls us to do even better, to explore new horizons. "Do it better" resonates like an anthem urging us to push the boundaries and raise the standards. We embark on this journey by focusing on industrial automation, embracing artificial intelligence as an ally in our mission to provide superior lighting. However, at the heart of our strategy remain the people and their invaluable know-how. We are aware that the real driving force behind our success is the talent, expertise and experience of our employees. In an increasingly automated World, we are committed to keeping the human connection alive, to cultivate the intrinsic value of the skills that each person brings to our team.

In this Project Book, we invite you to explore the tangible results of our vision: international projects that improve energy performance, protect the environment and enhance people's well-being. We look forward with confidence, knowing that, with light as our guide and the commitment of our brilliant minds, we can shape an ever brighter, sustainable and pioneering future.

Enjoy the reading!

Board of Chairman Fael Spa

Luciano Parravicini



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### CHALLENGE CITY

### **TEXACO SERVICE STATION**

Bruxelles - Belgium



In view of the redevelopment of the Texaco Service Station (EG Group), the company decided to use the **CHALLENGE CITY** luminaire for lighting transit areas and parking spaces of nearby businesses.

A discreet and versatile choice for the lighting of an outdoor area characterized by a strong transit: the minimalist aesthetic uses the **SAFEWAY** optics that guarantees great visibility and visual comfort.

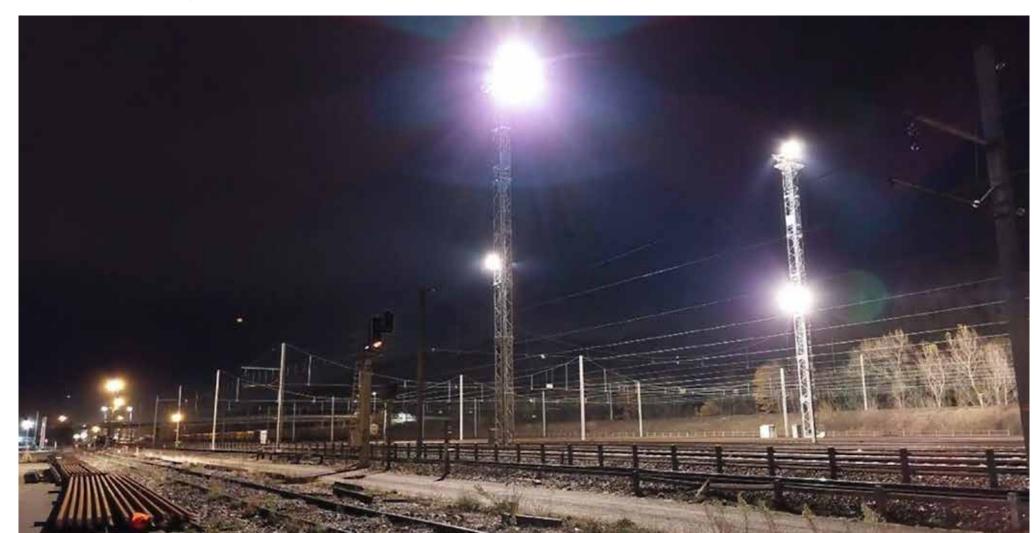
### LEDMASTER ONE & TWO JUST

### **FRENCH RAILWAYS**

Lyon - France

Railway stations are places of connection between people characterized by a happy frenzy in full motion 24/7. For this reason, proper lighting of platforms, transit areas and station tracks is essential. SNCF, French national railway company, in collaboration with Fael LUCE, has chosen the **LEDMASTER JUST** floodlights for the lighting of railway station tracks.

The railway environment requires robust luminaires, resistant to external factors such as heat, cold and humidity, and adaptable to existing infrastructure. Solid, precise and reliable, **LEDMASTER JUST** floodlights meet all these requirements. Moreover, thanks to the different electrical configurations they adapt perfectly to the existing infrastructure.





### PROXIMO CITY LEDMASTER SERIES

### VITTORIA PARK

Brembate - Italy





Running on a bike park circuit is pure adrenaline. To safely enjoy the speed and stunts in spite of gravity, the track must ensure high levels of safety and comfort, starting with proper lighting.

The VITTORIA PARK, in the north of Italy, a theme park dedicated to cycling, has chosen Fael LUCE for the lighting of the 4 km of cycle paths, which include road and off road tracks, with different routes on various levels of difficulty.

The bike park VITTORIA is an innovative circuit in the Italian panorama. The track offers many scenarios to have fun and train. There is in fact a paved track, which surrounds the whole park, with a detour on gravel and two parallel tracks that replicate iconic cycling roads, such as White Roads and the Pavé of Paris-Roubaix as well as a 380-metre long jump line with gradients of up to 2 meters. Inside, an articulated mountain bike path, with sections with stones, roots and rocks and various obstacles. In addition, a jump airbag, an obstacle course for experts, and a pump track, meeting the standards for hosting UCI races, were built outside these tracks.

A particular project, which embraces the road and sports field, thus combining two lighting areas in which Fael LUCE has decades of experience. For this reason, the **PROXIMO CITY** luminaires with **SAFEWAY** optics and **LEDMASTER SERIES** floodlights with **PROFESSIONAL** optics have been chosen, with a significant result in terms of visual comfort, light uniformity and drastic reduction of glare, to the full benefit on the visual acuity of the drivers and the general safety of the circuit.







### PROXIMO SERIES DOMINO SERIES

# MUNICIPALITY OF ARGANDA DEL REY

Madrid - Spain





The goal of Arganda del Rey, a town of over 60,000 inhabitants 28 kilometers from the capital Madrid, was to become one of the first Spanish municipalities to reduce its energy dependency, in terms of public lighting, and obtain certification of "Sustainable City", exceeding the strictest standards set by the European Union. Environmental protection and sustainable development are the real challenges of the future and a sine qua non for the sake of the community.

### THE SOLUTION

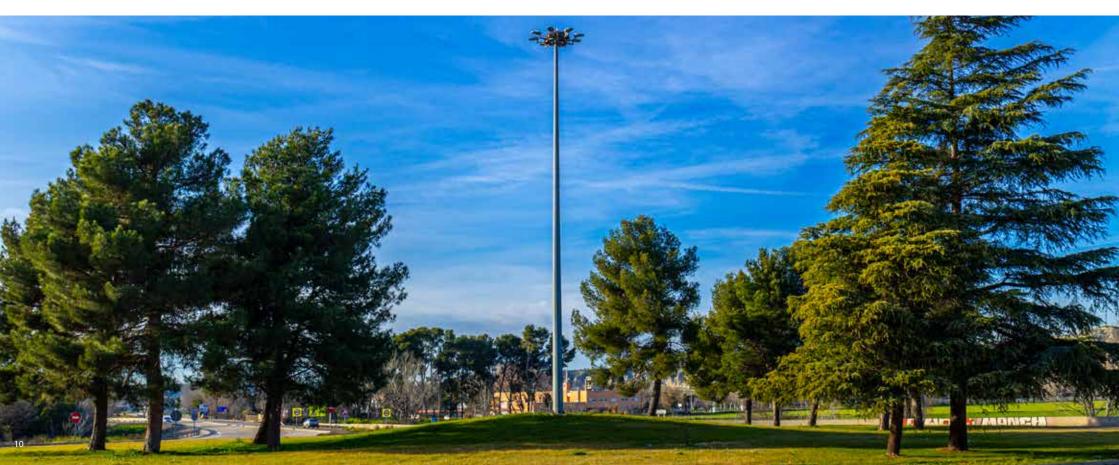
Fael LUCE drove the municipality of Arganda del Rey towards this goal by providing the street and urban lighting with the luminaries of **PROXIMO** and **DOMINO SERIES**.

All luminaires have been equipped with **WISE solution** for point-to-point management of each streetlights. With this solution, each light point is able to communicate with the gateway of the lighting system. The gateways, mounted inside the electrical panels near the lighting system, exchange information via GSM network to the central server, thus laying the foundation for the development of a Smart City.

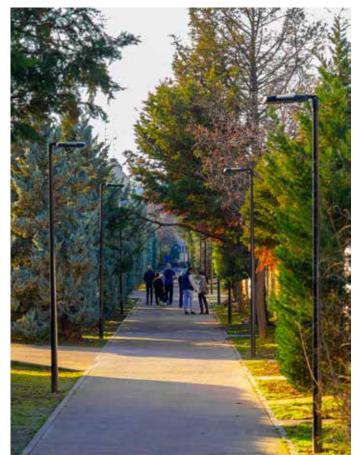
### **Environmental protection**

and sustainable development are the real challenges of the future and a sine qua non for the sake of the community











The community of Arganda del Rey will be the first to benefit from this innovation as it will be able to obtain real-time indications on energy consumption,  $CO_2$  emissions and information of public interest and be an active part in the community itself, with the possibility of reporting any incidents or anomalies in the public lighting service. The public lighting network then becomes the carrier to communicate in real time to the citizen or tourist information of public interest, increasing the citizen's sense of belonging to the Community.

A new lighting management model that will allow the municipality to save almost 80% of energy and be the first municipalities in Spain to comply with the 20-20-20 plan for reducing energy consumption and energy efficiency agreed by European municipalities, cutting CO<sub>2</sub> emissions to zero.

In this way, Arganda del Rey will be one of the first municipalities to respect the commitments made in the Covenant of Mayors at European level to curb climate change and reduce its energy dependence.

### LEDMASTER SERIES

# MINING IN QUEENSLAND

Queensland - Australia





Used for electricity generation and steel production, coal is consistently among Australia's top exports.

The project involved the upgrade of the mine's lighting system to energy-efficient LED technology, allowing the miners to work daily and in complete safety in the biggest charcoal mining and deposit in Queensland. The right solution has been provided by Fael LUCE with a custom lighting solution that met their specific needs with the **LEDMASTER SERIES** floodlights. These robust floodlights allow the maximum reliability in terms of long lasting, quality of light and highest performance, resulting in significant cost savings and improved safety for workers

The lighting project proposes an absolute control of the spill-light value and therefore sustainable from the environmental point of view.

This new lighting equipment ensure workers a comfortable and always optimal visibility, with significant cost savings.











# ARCALED SERIES ITALIAN TUNNELS

Italy

Light up a road tunnel while ensuring traffic safety and visual comfort is a matter of not an easy solution. The road tunnel is defined by legislation as a dangerous environment and, for this reason, legislation or industry rules oblige those responsible for the management and maintenance of the Infrastructure to build and operate a series of facilities to ensure safety for users passing through it, regardless of the conditions that may occur during day and night operation of the Infrastructure. In this context, the lighting system plays a key role.

#### A BRIGHT PERFORMANCE

Italy is one of the European countries with the highest concentration of motorway tunnels. Fael LUCE has been chosen as lighting partner for the renovation of about one third of the motorway tunnels on Italian soil.

The wide project needed a lighting renewal that would replace the old high-pressure sodium-based lighting system, which was not energy efficient. The aim of the project was threefold:

- ✓ modernize the lighting network to improve safety;
- ✓ ensure greater energy savings and greater visual comfort;
- ✓ reduce maintenance costs while maintaining the infrastructure.

#### THE SOLUTION

Fael LUCE, thanks to the experience and know-how acquired in the high-power professional lighting sector, has been able to achieve very well the objectives requested by the Customer with **ARCALED**, the innovative and advanced series of luminaires for tunnel lighting.

The series is the expression of the typical modus operandi of Fael LUCE: the care of the smallest design details, from the optical group to the available electrical configurations, the constant search for innovative and more and more avant-garde solutions, have given rise to a technologically advanced solution.



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The **EASY FIX** system, designed for the adjustment of the lighting device, has allowed the rapid and precise installation of the luminaire on the channel placed, in this precise project, is located in a decentralized position with respect to the center of the roadway, ensuring perfect adaptability to the most heterogeneous road layout within the same tunnel.

The perfect photometric distribution of the **SAFE-TUNNEL** optics blended with the excellent uniformity, allows greater glare control, while the high color rendering of the light source, combined with the high performance of the luminaire, It increases the visual comfort that results in a clearer reading of those details, such as road retro-reflectors and vertical markings, as an essential condition for greater safety of drivers.

#### SMART4TUNNEL.EMPOWERINGYOURDIGITALTRANSFORMATION

The renovation of the lighting system of the Massino Visconti Tunnel obviously also covered the connectivity part. The luminaires are complete with **SMART4TUNNEL** solutions for remote lighting management, ensuring users comfort, safety, efficiency and significant energy savings.

With **ARCALED** it is now possible to create a real data transmission network and able to connect and dialogue with the most technologically advanced remote control infrastructures. The intelligent control of tunnel lighting offers a dynamic approach to the realization of project objectives, with the possibility of making the infrastructure more and more connected with the vehicles with consequent benefits for the various stakeholders.



### **HIGHLIGHTS**

- **More than 100** are the number of certificates, test results, declarations of conformity and certifications certifying the quality of ARCALED SERIES.
- More than 10.000: the number of ARCALED tunnel lights being installed.
- 100% reliability thanks to end-of-line testing conducted on all parts produced at the Fael LUCE production plant, which verifies the colorimetric, electrical and dimming parameters at three power levels.

### LEDMASTER SERIES

# LOFTUS ROAD STADIUM

London - United Kingdom





Loftus Road is a football stadium located in London, home to the Queens Park Rangers football club. Regularly filled, the iconic LOFTUS ROAD STADIUM is considered a special place for the Club and its loyal supporters. To meet the needs of the Team, in constant progress and growth, and for the fans, active part of the show, the Club Management decided to invest in the renovation of the lighting system to be compliant with the matches of the Premier League.

Fael LUCE, with a significant experience in sports lighting at international level, has proposed the installation of **LEDMASTER SERIES** floodlights on existing light towers, ensuring significant energy savings and the control of the luminous flux. An intervention that looks to the football future of this first-class club.











### LEDMASTER ONE HP DOMINO WORK



### PALMA DE MALLORCA AIRPORT

Palma de Mallorca - Spain

The airport Son Sant Joan, the main airport of the Balearic Islands, is located near the town of Palma de Mallorca, in the island of Majorca. Third Spanish airport, after the ones of Madrid and Barcelona, this infrastructure in the summer months becomes the first Spanish airport in terms of importance and volume of passengers in transit. The airport complex occupies an area of 6.3 km2 and consists of 4 terminals.

#### THE PROJECT

AENA, Aeropuertos Españoles y Navegación Aérea S.A., the Spanish company operating in the airport sector, has intentionally embarked on the path of requalification of lighting technology of the entire airport of Son Sant Joan, imposing design criteria totally focused on energy efficiency, low operating costs at a competitive price.

#### THE SOLUTION

The Fael LUCE team proposed a solution perfectly in line with these criteria. Thanks to the experience gained in the lighting sector, the technical department proposed the **LEDMASTER ONE HP** high-power luminaires with **PROFESSIONAL** asymmetric optics, for the installation on light towers, and **DOMINO WORK** luminaires with **GLARE-FREE** optics, for the external corridord and the inside of the terminals.

The **PROFESSIONAL** optics, asymmetric type patented internally, allow to maintain a very low level of glare, despite the strong constraints dictated by the low heights of the light towers.

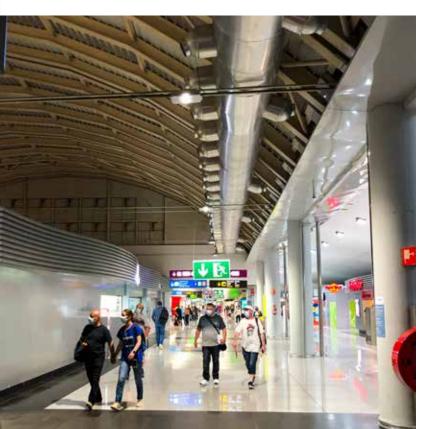




The PROFESSIONAL optics, asymmetric type patented internally, allow to maintain a very low level of glare, despite the strong constraints dictated by the low heights of the light towers







**LEDMASTER ONE HP** with **PROFESSIONAL** asymmetric optics has allowed to meet all the requirements in terms of design, ensuring maximum luminous efficiency combined with high uniformity and great energy savings.

In the passenger transit areas, external corridors and inside the terminals, the contemporary **DOMINO WORK** was chosen with **GLARE-FREE** optics that guarantee perfect visibility. The particular flexibility of installation allowed the placement of recessed luminaires along the path of the corridors, possible thanks to the dissipation system through large cooling fins.

### **HIGHLIGHTS**

- **High visibility and safety** during maintenance and loading/unloading operations.
- No glare in the eyes of pilots, passengers and service personnel.
- High level of uniformity.
- Perfectly comfortable to the illuminance levels required by ICAO.

### LEDMASTER ONE

### **ESTADI NOVA CREU ALTA SABADELL**

Sabadell - Barcelona - Spain





Sabadell City, in the region of Barcelona, Spain, has a great sporting tradition and has always paid particular attention to the welfare of the sport community.

Estadi Municipal de la Nova Creu Alta is a multi-use stadium, the reference point for the sports activities of the whole community. It is currently used mostly for football matches and hosts the home matches of CE Sabadell FC.

The renovation of the lighting systems were made entirely with **LEDMASTER ONE HP** floodlights, the quality choice that brings countless advantages. Thanks to customized optics, you get perfect stability and outstanding light quality (with color temperature 5700K and CRI90), high energy efficiency and maximum visual comfort for both players

and spectators. In addition, the lighting system meets the needs of many TV broadcasters and football federations that require high quality lighting for HDTV and slow motion shootings.

Fael LUCE also offered a full package solution: all the products are indeed integrated with **WISE SYSTEM** solution, the system with which it is possible to combine, thanks to IoT, management systems of the luminous flux and energy consumption with DALI control system. Moreover, it processes in real time the failure messages on the monitored systems, showing the current values for each situation and potential warning making the sport venue more efficient.

The final result is commendable from all points of view: glare, ground illuminance and energy savings.











### PROXIMO SERIES

### **MUNICIPALITY OF DALMINE**

Dalmine - Italy



Today home to one of the most important centers for technological innovation, Dalmine, Italian town of the province of Bergamo in Lombardy, is nationally known for the illustrious metallurgical company, one of the flagships of Italian industry that contributed to the economic revival after World War II.

#### THE PROJECT

The Municipal Administration has decided to undertake the path of energy efficiency throughout entire territory, with clear and specific objectives: the reduction of light pollution and energy consumption, enhancing road safety, improving the lighting of architectural details, increasing the rational use of available urban spaces.



The PROXIMO
SERIES of luminaires,
manufactured according
to the requirements of the
circular economy,
represent the benchmark in

the field of street lighting











The executive project has provided for the replacement of the luminaires, still with sodium or mercury vapor technology, with 3000 new streetlights with high-efficiency LED sources. A project divided into several lots that involved citizenship for almost a year: a minimum period compared to the long-term benefits that derive.

#### **TECHNICAL SOLUTION**

In selecting the products, the Municipal Administration examined elements of efficiency, effectiveness, lighting performance and durability. The best solution was the **PROXIMO SERIES** proposed by Fael LUCE.

The choice, in addition to the lighting performance, was also dictated by the quality of the product proposed and the resulting long-term guarantees. Fael LUCE luminaires are in fact the only ones in the market able to ensure a resistance to corrosion of more than 3000 hours according to ISO 9227, resulting thus on a high resistance to atmospheric agents.

### <u>HIGHLIGHTS</u>

- **Energy efficiency:** using LED sources means consuming less electricity and reducing maintenance costs.
- **Visual comfort:** excellent uniformity, allow greater glare control, while the high color rendering of the light source, combined with the high performance of the luminaire, increases the visual comfort that results in a clearer reading of road details.
- **Urban development:** thanks to high-quality lighting, it is possible to enhance the public areas and streets of the city, increasing visual perception at night with Fael LUCE street lighting solutions.



### LEDMASTER ONE HP

### **DÜSSELDORF AIRPORT**

Düsseldorf - Germany



Düsseldorf Airport, Flughafen Düsseldorf International in German, is the largest and most important passenger and freight hub in North Rhine-Westphalia.

Fael LUCE has taken care of the renovation of the outdoor lighting and, with the support of our technical staff and lighting designers, has planned the installation of high-power floodlights of the **LEDMASTER** series on light towers, to provide timely lighting of storage areas.

Some of the advantages of these products are the uniformity of lighting, the low impact of visual glare and ensure visibility and safety during maintenance and loading/unloading operations.





# NEXT 8 **SKI RESORT TYLICZ**



Tylicz - Poland

The slopes of the Tylicz ski resorts are also illuminated with **NEXT 8** floodlights with circular optics.

NEXT is the highest performance lighting solution that combines technology, modernity, flexibility and efficiency for a truly revolutionary lighting!





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