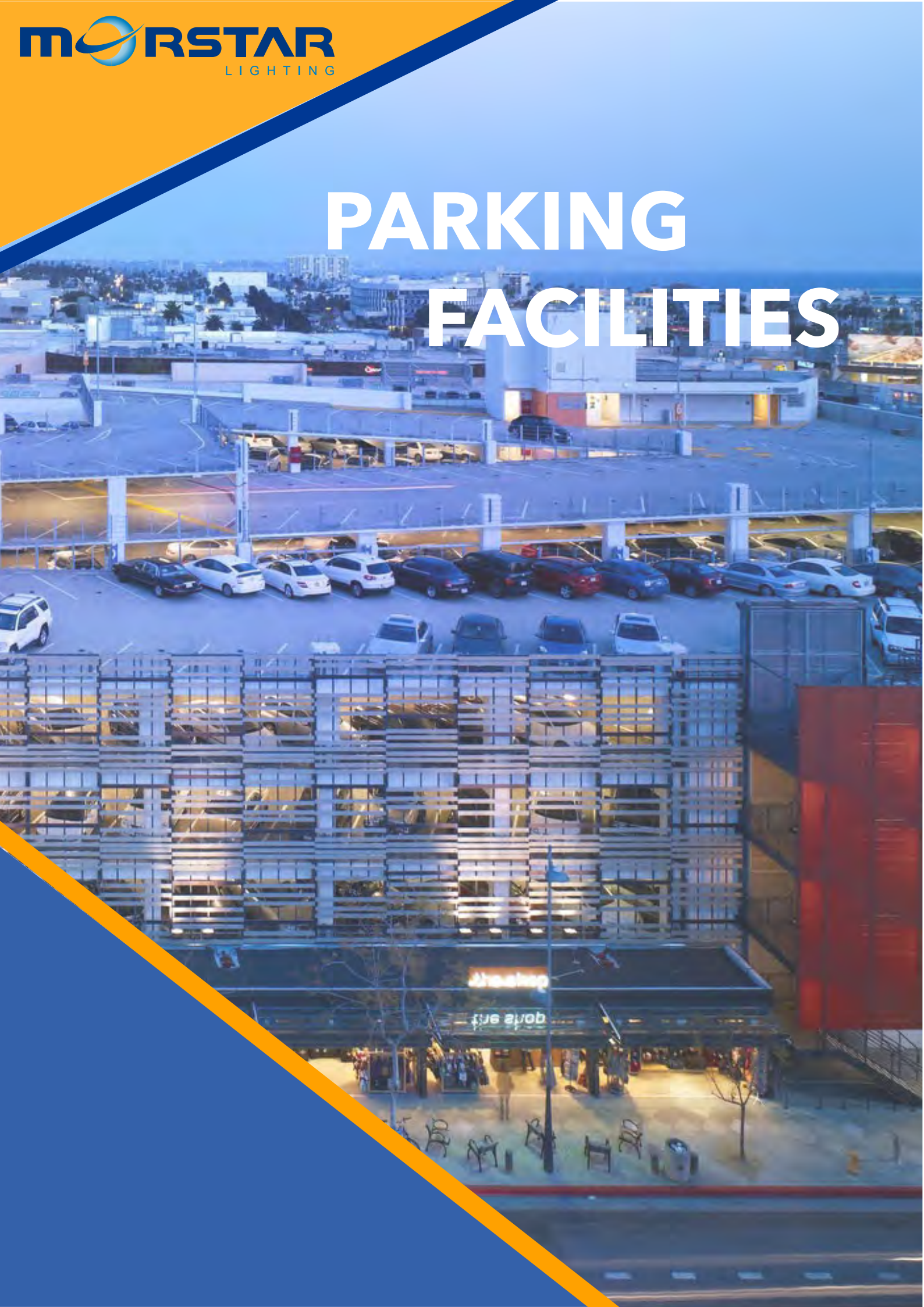
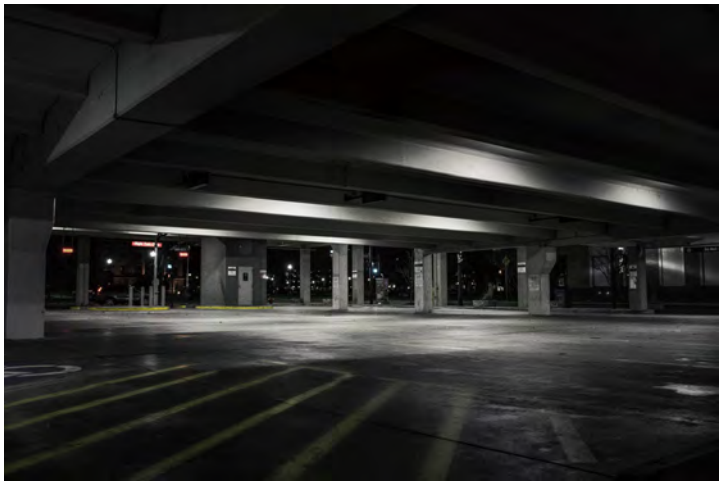
MORSTAR LIGHTING

PARKING FACILITIES

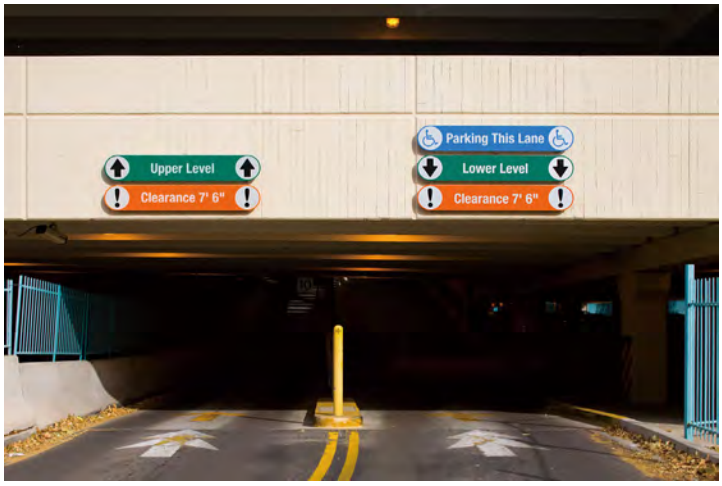


In the past, parking facilities looked like this



The lighting tended to be yellow and could cast shadows that created a murky effect throughout the structure.

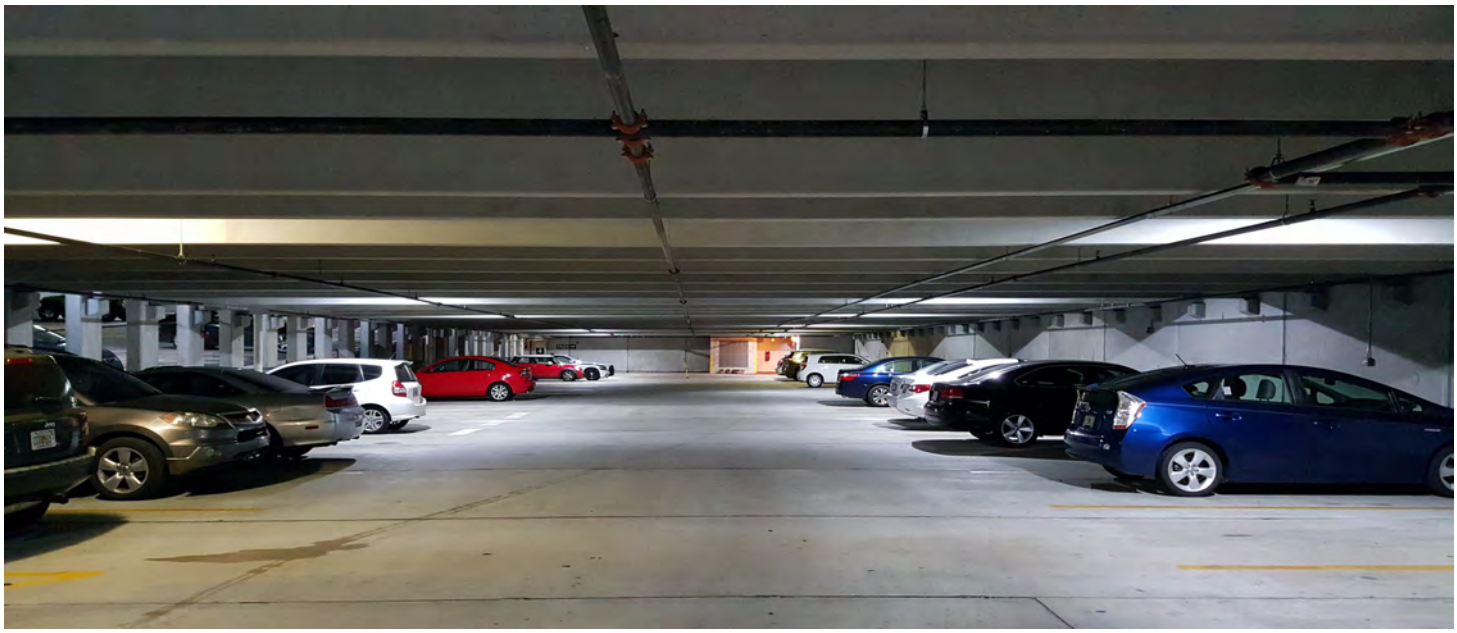
In General, garages have been lit to very high illuminance levels. Over-lighting above-ground parking facilities with open exterior sides can create trespassing issues as well as an glare nuisance for adjoining property owners.



Dim light or shadows could cause pedestrians to go undetected by drivers. Thus it is important to avoid creating dark areas with low-quality luminaires.

Now, the design concept of parking facilities ABSOLUTELY needs to be changed.

Here are 4 reasons why



1 **The improved lighting can improve the comfort, safety and pleasure of drivers and pedestrians.**

Scientific lighting makes the parking facilities cleaner.

The improved lighting can save operating and maintenance costs to the greatest extent.

2

Annual Savings

For an example, parking facilities using 300 metal halide luminaires. if LED luminaires are used, the expected cost will be saved by:

$41,250-$55,441

*Figure range is based on the conversion from 175W lamp metal halide luminaires luminaires operating 24/7 to 70W LEDs with a networked wireless control system (highest savings), dimming occupancy sensors (moderate savings), or without additional controls (lowest savings). Costs assume $0.10/kWh utility rate,$40 per metal halide lamp change and typical energy reduction from occupancy sensing and advanced wireless control (where applicable).

LED Fixture, dimmable and automatic control can save substantial energy and operating costs.

3 The improved lighting makes parking facilities smarter and more promising.

The parking facilities will be more than just bricks and plaster, it can meet the requirements of people who want safety and comfort.

4 Morstar is the best choice to help you.

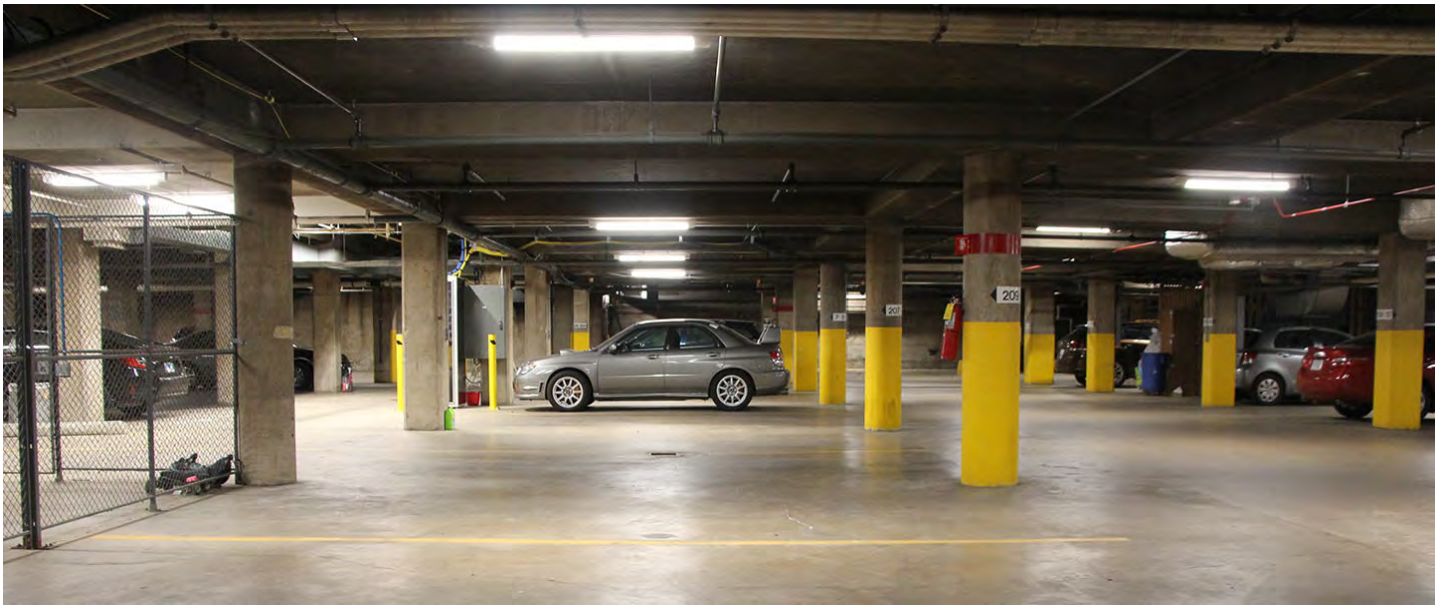
MORSTAR

Luminaire offerings include both LED and traditional light sources to cover the entire parking lot, from pedestrian walkways through to the top deck.
Control options run the gamut from fully wireless networked systems, to luminaires with integrated sensing capabilities or intelligent relay panels.

Visit www.morstar.com to learn more.

More Comfortable And Safer

WALL SWITCH



0-10V controlled lamps are the simplest lighting scheme. Traditional HID and HPS turn the parking facilities into a dark cave, causing uneven and deep shadows between cars and the environment. And LED can create a well-lit, warm space, and higher brightness and low glare, making occupants feel more **pleasant and safer**.

Annual Savings

TYPE	175W METAL HALIDE (AVG)	70W LED
ENERGY COST	$184 (per fixture)	$65 (per fixture)
LAMP & LABOR COST	$32 (per fixture)	$ 0

$41,250= ↓ 70%*

*Figures are based on the conversion from 175W lamp metal halide luminaires operating 24/7 to 70W LEDs. Costs assume $0.10/kWh utility rate, $40 per metal halide lamp change and 24 x 7 operation.

Simpler And More Efficient

INTEGRATED SENSORS

Using sensors at key points of entry and throughout the garage can increase **energy-saving** opportunities. The detector on each luminaire can alert pedestrians to the movement in the garage space, which has the added **benefit of enhancing personal safety.** The result of this is excellent energy efficiency and fast return on investment, as well as an **excellent visual experience.**

Annual Savings

TYPE	175W METAL HALIDE (AVG)	70W LED
ENERGY COST	$184 (per fixture)	$46 (per fixture)
LAMP & LABOR COST	$32 (per fixture)	$0

$46,440= ↓ 79%*

*Figures are based on the conversion from 175W lamp metal halide luminaires operating 24/7 to 70W LEDs with dimming occupancy sensors. Costs assume $0.10/kWh utility rate, $40 per metal halide lamp change and typical energy reduction from dimming during unoccupied periods.

Less Cost And Maximum Energy Saving

BLUETOOTH CONTROLLER SYSTEM

The parking facilities are more suitable for networking, and the interactive operating system can also monitor, diagnose and report on individual luminaire problems, including the time when the incident started. The combination of smart systems and luminaires can **maximize service life and save energy,** while improving the experience of drivers and pedestrians. In addition, it can help you **get the most benefit** from lighting.

Annual Savings

TYPE	175W METAL HALIDE (AVG)	40W LED
ENERGY COST	$184 (per fixture)	$33 (per fixture)
LAMP & LABOR COST	$32 (per fixture)	$0

$55,441= ↓ 80%*

*Figures are based on the conversion from 175W lamp metal halide luminaires operating 24/7 to 70W LEDs with dimming occupancy sensors. Costs assume $0.10/kWh utility rate, $40 per metal halide lamp change and typical energy reduction from dimming during unoccupied periods.

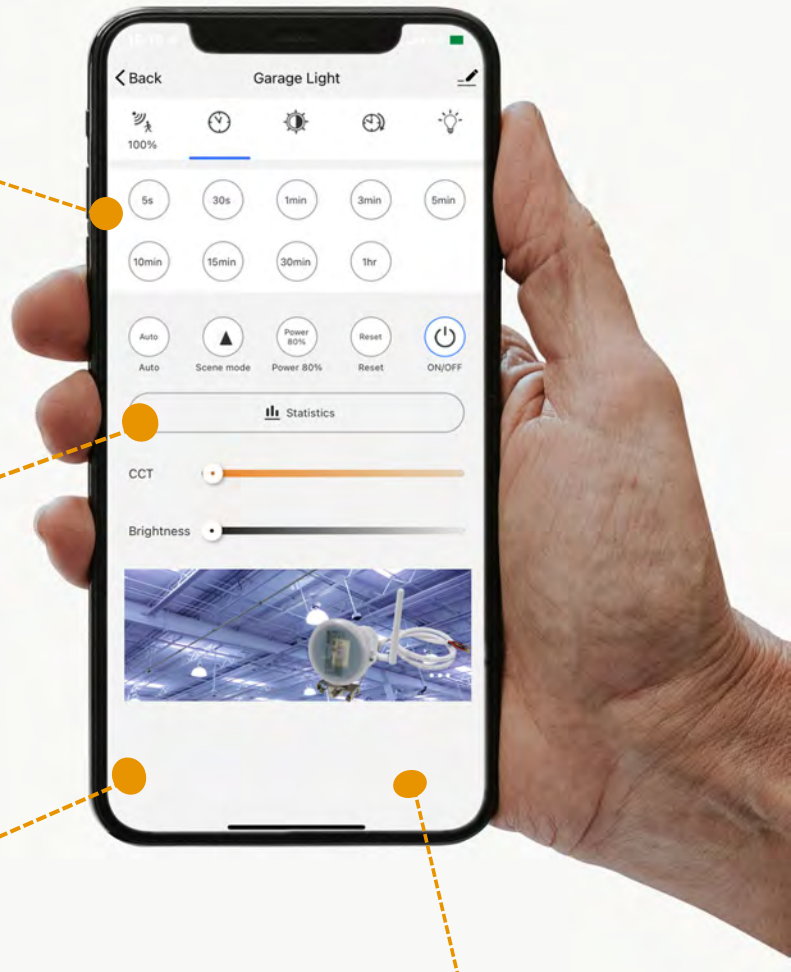
What Can The Bluetooth Control System Do?

An easytouse mobile application can help you make better use of the wireless control system, and provide flexibility and possibilities for parking garage management and an ultimate smart experience. Morstar's helps user reach sustainable energy reduction goals with tremendous energy savings and costs.

Support multi-dimensional devices and areas to respond immediately, providing a better control experience.

Support custom or adaptive lighting, providing different levels of light intensity and color temperature at different times of the day*.

Use software can collect real-time energy consumption data, and can choose different groups of fixtures for a comparative analysis.



When the device changes to an abnormal status, the system automatically sends a notification message.

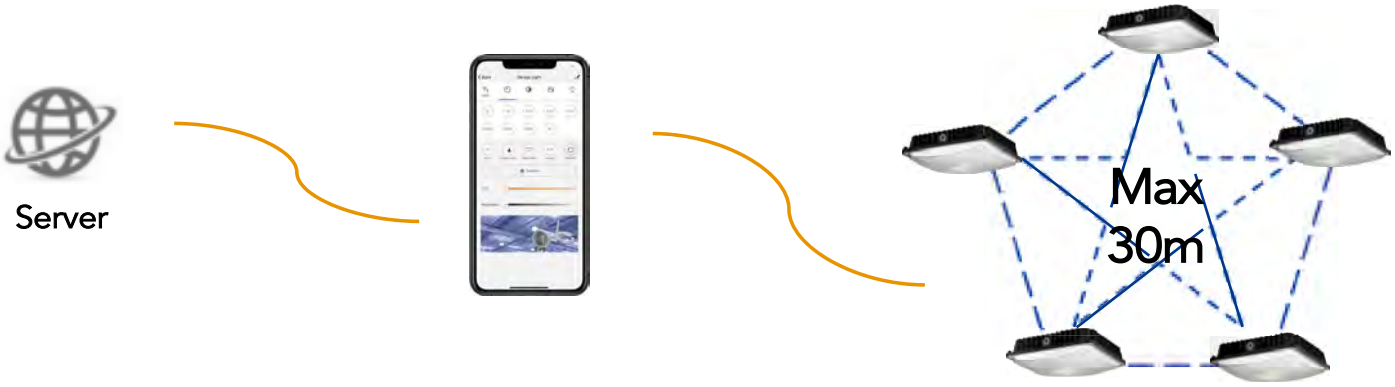
*Over-lighting above-ground parking garages with open exterior sides can create light trespass issues and create a glare nuisance for adjoining property owners.
Light is one of many factors influencing security, and nighttime offenses are more likely to occur in areas with little or no lighting.

Lighting Control Methods

Morstar provides three lighting solutions, users can choose according to their needs and requirements. Thus the parking facilities will be more than just bricks and plaster, it can meet the requirements of people who want safety and comfort.

If use **Integrated Sensors**- Sensors reduce electrical costs by automatically turning a light on when someone walks into aroom, then turning off when a spaceis vacated.

If use **Wall Switch**-This is the simplest and basic control of the lighting circuit.



If use **Bluetooth Controller System**- Control signal with a "cloud-based" system can convey commands to the luminaires, but the central control can be located in the garage office.

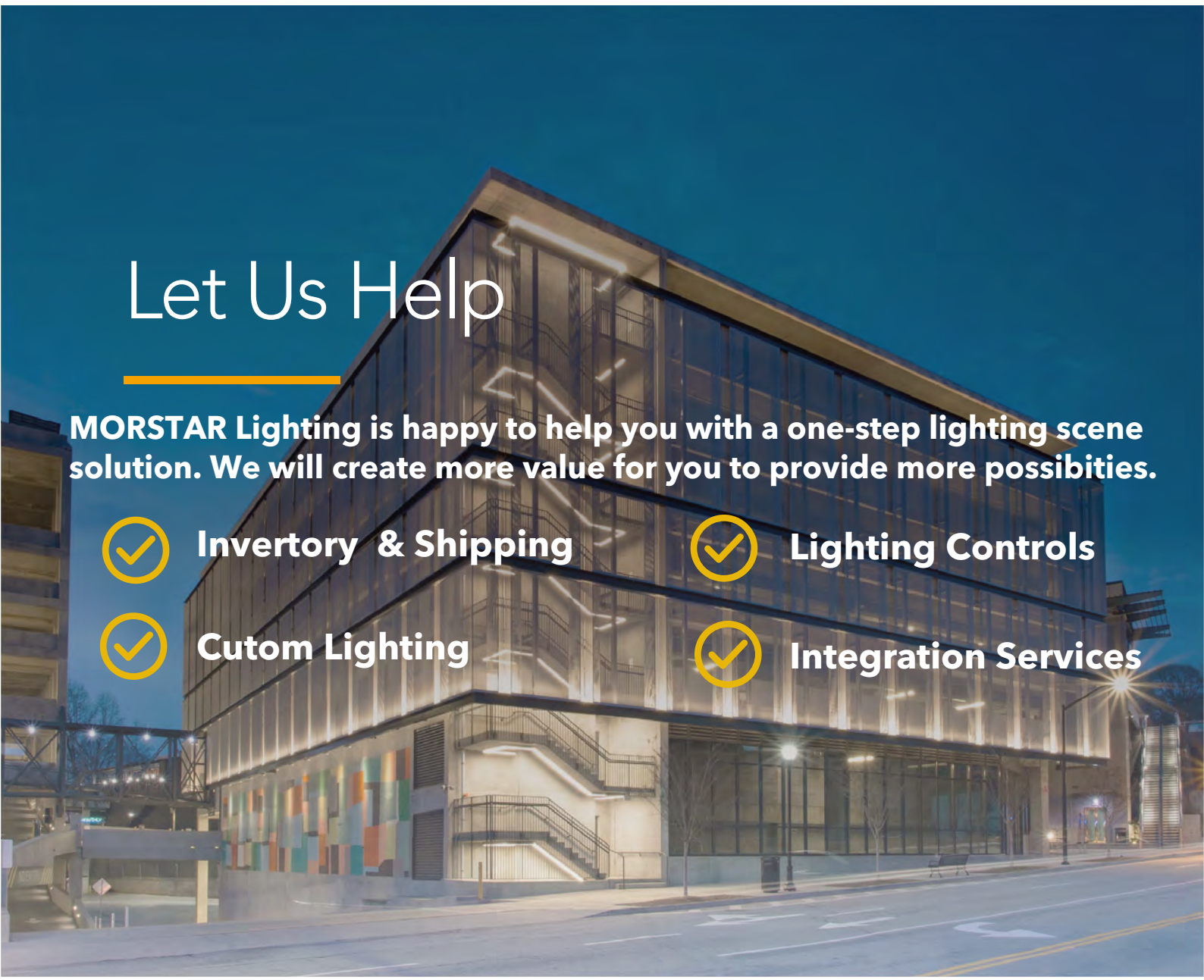
Products For Parking Facilities

The LED products of these examples can used parking indoors and outdoors.
Our Lights are ideal for quickly and easily illuminating parking garage space while dramatically reducing energy consumption.

LED Area LIght Series

LED Vapor Tight Series

LED Canopy Series



Let Us Help

MORSTAR Lighting is happy to help you with a one-step lighting scene solution. We will create more value for you to provide more possibities.

- **Invertory & Shipping**
- **Lighting Controls**
- **Cutom Lighting**
- **Integration Services**

MORSTAR LIGHTING

Call Morstar Lighting today for the ideal energy-efficient lighting solution for your parking facilities.

(877)977-3732

www.morstar.com