

ORION WILL CHANGE THE WAY YOU  
THINK ABOUT A LIGHTING COMPANY.

# CASE STUDY

## MANUFACTURING

Orion's LED high bay fixtures are designed to provide light where it's needed, a safe working environment for employees, while saving operating and maintenance costs.

# WHY ORION

From the very first handshake to the final fixture installed, our energy is the difference we bring to every retrofit. Ingenuity guides us to new solutions. Dedication helps you at every step. And our products illuminate your world in ways you might not have imagined.



## LOWER COST INSTALL

- Modular, plug and play design
- Lower overall labor costs
- Install more fixtures in less time



## 2-3 WEEK SHIP

- Quick ship, 10 days
- Overnight shipment of additional materials



## CLEAN JOB-SITE MANAGEMENT

- Fixtures in trays
- Packaging doubles for recycling
- No need for a dumpster
- Debris-free install



## TRUSTED AMERICAN PARTNER

- Clear warranties with excellent coverage
- Quality manufacturing base with domestic and international partners
- 40 years retrofit experience

## VISION

Orion will change the way you think about a commercial and industrial lighting company. Full service offerings, friendly and competent staff, an unexpected customer experience, and the best performance around; giving you a solution that will make you a hero in your organization.

## MISSION

Lead the transformation of commercial and industrial facilities to solid state LED lighting technology and drive financial, environmental, and workspace benefits, while dominating the building retrofit market by providing more profit for the installer and more value for the end user.

## VALUE

### ALLY IN ACCOUNTABILITY

#### EXPERTISE

Our relationships go beyond shipping you the latest fixture. Your goals become our goals, which means we share responsibility to help you keep your promises and make your project successful.

### PRACTICAL INGENUITY

#### PRODUCT

When you've been on the job site or up on the lift, you build in-the-trenches know-how. That expertise inspires more creative products that maximize real-world performance for your lighting investment.

### UNCOMMON DEDICATION

#### SERVICE

Our customers tell us we have more capable teams that deliver results, not just on paper, but in the day-to-day work of the people we serve. Some say it's our Midwestern roots; we think it's our energy.

## Efficient lighting to boost reliability, quality, safety and performance

### OVERVIEW

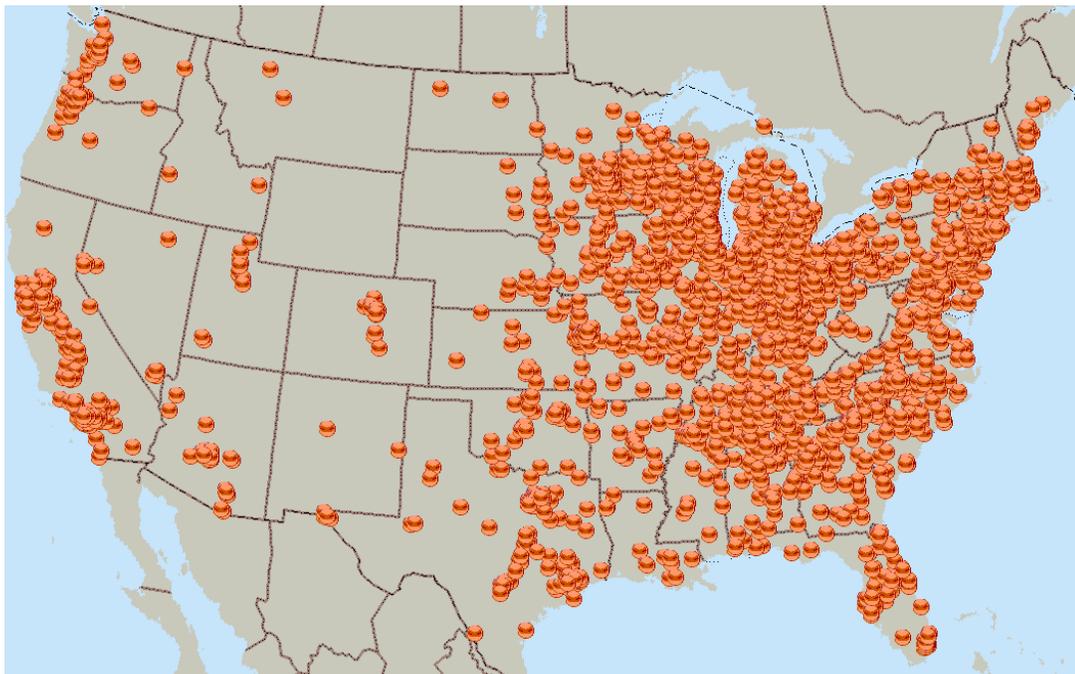
While lighting is not your primary business, it can significantly impact the performance of your manufacturing facility. You can ensure improved efficiencies and increased morale, while reducing maintenance costs with our industry leading high bay suite of products. Our products will improve the quality and quantity of light in your facility. This will typically increase your workers' productivity, improve their comfort, reduce production errors, provide better quality assurance and improve workplace safety.

### PROJECT BENEFITS

- Improved quality assurance by allowing your team to identify and address production errors earlier in the process.
- Industry leading fixture performance that efficiently meets your facility's lighting requirements.
- Durable fixtures designed to withstand the challenges of your unique operating environment.
- Reduced operating costs by reducing your energy consumption and usage.
- Reduced maintenance costs with some of the longest lasting fixtures on the market.
- Spend less time repairing fixtures and replacing burnt out lamps.
- Reduced OSHA/waste concerns by eliminating need for fluorescent lamp disposal.
- Reduced installation fees and facility disruption with fixtures that are lightweight and easy to install.
- Improved worker productivity, performance and morale by improving lighting.
- Adjust to changing facility needs with modular fixtures that reconfigured to meet changing lighting requirements.
- Optimized performance by integrating your fixtures with most commercially available control technologies.



The map below displays Orion's manufacturing projects in the contiguous United States.





Manufacturing

200+ employees

Green Cove Springs, FL

www.vac-con.com



BEFORE



AFTER

“Lighting is not a sexy subject, but it hits bottom line costs. Good quality lighting improves people’s attitudes and how they approach work in a well-lit space. There is nobody who doesn’t like the Orion lighting.”

Bill Barnes,  
Continuous Improvement  
Mgr., Vac-Con, Inc.

Since 1986, Vac-Con, Inc. has manufactured more than 7,000 custom-built, truck-mounted machines, including sewer vacuums and hydro excavators, to serve the public and private environmental markets worldwide, and now employs nearly 300 people at its single location in Green Cove Springs, Florida. Vac-Con, Inc. is a subsidiary of Holden Industries, Inc. of Deerfield, IL, and is 100% employee owned.

## CHALLENGE

Vac-Con, Inc. faced a challenge common to many manufacturing facilities in multiple buildings on their campus. The complex lighting system, varying from metal halide to sodium vapor to fluorescent, had become a burden on the company, requiring significant investments in terms of technical knowledge, warehouse space, and capital spending to light their facilities. “Lighting is a part of our continuous improvement efforts, a strategic initiative launched in 2006 to replace old, latent technology that is energy consuming and wasting dollars that the business can use in a better format. Across our 17-acre site, those lighting dollars add up,” said Bill Barnes, Continuous Improvement Manager at Vac-Con.

“We have every kind of lighting that existed and from a facility management standpoint, we had to be able to fix every kind that existed. We needed to have the technical details and the on-hand, ready spare lamps to make that possible. Those dollars were not well spent sitting on shelves as replacements. From business process to physical processes, it was a huge administrative burden to have to find those parts,” said Barnes. Prior to the lighting upgrade, Vac-Con found that their poor lighting was causing them to miss flaws in their products during production, which led to more time and resources being spent on product re-work, rather than on new business.

Vac-Con’s multiple light systems also created work priority issues for the maintenance teams, who had to choose whether to spend time replacing burnt out lights or providing maintenance on the machinery. In addition, OSHA compliance required that Vac-Con document each lamp that comes into the facility and when each lamp was removed from a fixture, maintain receipts for every lamp in their inventory, and properly recycle lamps within a given timeframe or face fines.

“We have every kind of lighting that existed and from a facility management standpoint, we had to be able to fix every kind that existed. We needed to have the technical details and the on hand, ready spare lamps to make that possible. Those dollars were not well spent sitting on shelves as replacements.”

Bill Barnes  
Continuous Improvement  
Mgr., Vac-Con, Inc.

## PRODUCTS USED

ISON™ LED Open  
High Bay | LED

ISON™ LED High Bay  
Cold Environment | LEDE

## SOLUTION

Over the last ten years, Vac-Con implemented higher efficiency interior fluorescent lighting fixtures from Orion to replace the mixture of sodium vapor and metal halide. The company found further improvement using inductive fluorescent fixtures provided by Orion to replace their aging metal halide exterior fixtures across the 17-acre campus. “We selected Orion because they are the subject matter experts in energy-efficient retrofit lighting, particularly in demanding environments. Together we engaged in assessing our power usage and the wide array of divergent lighting types in use at our facility,” said Bill Barnes, Six Sigma Black Belt and Continuous Improvement Manager at Vac-Con. “Orion helped us meet our energy reduction goals as we have incrementally engaged in continuous improvement projects by both standardizing our installed lighting types and in reducing our power footprint.”

In fact in many places, Vac-Con replaced previously installed Orion fluorescent technology with both LED High bay products in many of Vac-Con’s existing manufacturing spaces.

When the company decided to move forward on a major new construction project last year, it again turned to Orion to provide the LED lighting for the 60,000 square foot expansion that would increase its production capacity by 15 percent. For the project, Vac-Con chose Orion’s High Bay products because they met Vac-Con’s performance, efficiency and construction timelines. “For this new construction project, we returned to Orion because they got us the light levels and energy efficiency we needed, and in the timeline we required. It’s about getting the best value, and Orion has always been there to support us,” said Barnes.

## RESULT

“Vac-Con experienced greater than 48% energy demand reduction through both of these evolutions, and the current implementation of Orion LED technology furthers these ongoing energy savings efforts,” continued Barnes. “Our partnership with a dedicated and tireless vendor continues to pay forward as we complete our plant expansion project currently underway. Real project data makes lighting savings more beneficial and we’ve been able to think more strategically about lighting by providing measurable results with Orion.”

In addition to a nearly 50% increase in light levels, the Vac-Con project also shows that the benefits of a lighting retrofit cannot be measured in energy savings alone. Since upgrading to Orion’s LED fixtures, Vac-Con surveyed their employees who report they are able to pay better attention to their work and more cognizant of errors. The lighting led to quality and productivity improvements in the work they do and reduced the amount of re-work projects that Vac-Con must undertake. “Lighting is not a sexy subject, but it hits bottom line costs. Good quality lighting improves people’s attitudes and how they approach work in a well-lit space. There is nobody who doesn’t like the Orion lighting,” said Barnes.

The Orion LED lighting design not only met the operational and performance needs of the Vac-Con team and their varied facilities, but also allowed Vac-Con to standardize so as to significantly reduce their lighting inventory, waste stream, and maintenance at the same time. Barnes said, “Lots of people sell lights, but can you get me the light levels and energy savings I need and can you get it to me on time? I do my homework, and buy from the guy who gives me the best value, and that’s not always the lowest price. We return to Orion because of what they have taught us about lighting, because they are subject matter experts, and are always there to support us.”



Manufacturing

75+ employees

Colby, Wisconsin

www.colbymetal.com



BEFORE



AFTER

“Before Orion, our Metal Manufacturing Plant was poorly lit and seemed dull, and now it is radiant with a crisp and invigorating appearance.”

Mark Viegut  
Vice-President/Owner  
Colby Metal

Located in Colby, Wisconsin, Colby Metal is a comprehensive metal fabricator and manufacturer specializing in products ranging from health care to agricultural equipment. Their goal is to differentiate themselves through quality and their customer focused approach. Colby Metal's ISO 9000:2008 Certification is a testament to their commitment to quality and they specialize in metal fabrication and powder coating.

### CHALLENGE

On a recent visit to Orion, the team from Colby Metal was intrigued by the differences in product quality that they noticed. “We do a lot of painted parts, and we noticed how different the painted parts looked at Orion as compared to how they did in our plant,” said Travis Kind, Operations Manager. This led the Colby Metal's team to review their existing lighting system, and they were able to identify areas that could be improved by upgrading to an LED energy efficient lighting retrofit, which included:

- Light quality - the yellowish hue from their existing fluorescent lighting system was impacting their worker productivity and their ability to identify issues with product quality.
- Light quantity - their existing lighting system was not meeting the needs of their workers and Colby Metal had to install task lights to ensure that the workers had enough light to safely and accurately complete their jobs.
- Operating costs - they also identified that the cost of operating their lighting system was increasing due to the increased cost of electricity.

### SOLUTION

Working with Orion Lighting and their partner, Mueller Electric of Central Wisconsin, Colby Metal assessed their existing lighting system and hung a number of demo fixtures in their facility to conduct performance testing. Based on the test results and the projected energy savings to upgrade to an LED retrofit, Colby Metals selected Orion Lighting's industry leading APOLLO® LED High Bay fixtures for their facility.

“Payback is just one slice of the pie. Our decision was based on more than just payback. It was also about the other benefits of the project, like improved quality, productivity and employee morale that helped us choose Orion.”

Mark Viegut  
Vice-President/Owner  
Colby Metal

## PRODUCTS USED

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APOLLO® High Bay HBAC2

By replacing over one-hundred T5 and T8 fluorescent high bay fixtures, Colby Metal reduced their electrical demand by over 20 kW and their electricity consumption by over 60,000 kWh each year, all while increasing their light levels by over 30%.

Due to the modularity of Orion’s products, Colby Metal reconfigured their lighting system to deliver light to where their employees needed it. They significantly reduced their reliance on task lighting. “We used to have tons of task lighting, but we removed piles of it because the light in the facility is now as clear as it can be,” said Kind. Removing task lighting represented almost 20% of the total demand reduction for the project.

Due to the ease of installation of the fixtures, Colby Metal was able to complete the project with limited disruption to the site. The entire facility was retrofitted over the course of two weekends. “We were surprised how quick the system went in,” said Mark Viegut, Vice-President and Owner of Colby Metals. The flexibility and ease of installation of Orion’s products allowed Colby Metal to retrofit their entire lighting system as one project rather than in phases as they had originally planned.

## RESULT

“The project had a five year payback and we had no trepidation at all about doing it,” said Viegut, “not with all its other benefits.” Colby Metal has already seen a reduction in the electric consumption on their electric bill since the installation of the new LED lighting system. Additionally, the company has seen product quality improvements, particularly in their powder coat and paint line work.

There has also been a noticeable improvement in employee morale, according to Viegut. The LED lighting retrofit has significantly improved the working environment, which in turn had led to both increased product quality and employee productivity - noticed by both customers and employees. So by retrofitting with Orion’s LED products, Colby Metal has:

- Raised the light levels in their facility
- Improved product quality
- Increased employee productivity and morale
- Reduced the cost to operate and maintain their systems

“We are very happy with the project,” concludes Viegut, “and I would recommend Orion to others. The minute the first light goes up, you can see the difference immediately.”

## Vac-Con Selects Orion Lighting for Major Facility Expansion

By

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Orion Energy Systems, Inc. , a leading designer and manufacturer of high-performance, energy-efficient retrofit lighting platforms, today announced Vac-Con®, Inc., a Florida-based manufacturer, has again selected Orion lighting for a major facility expansion. The project features a combination of first and second generation HARRIS LED High Bays.



*Vac-Con® again selects Orion as partner for major facility expansion.  
(Orion/LEDinside)*

“We selected Orion because they are the subject matter experts in energy-efficient retrofit lighting, particularly in demanding environments. Together we engaged in assessing our current state power usage and wide array of divergent lighting types in use at our facility,” said Bill Barnes, Six Sigma Black Belt and Continuous Improvement Manager at Vac-Con. “Orion helped us meet our energy reduction goals as we have incrementally engaged in continuous improvement projects by both standardizing our installed lighting types and in reducing our power footprint.”

Through previous expansions and building acquisitions, the company had become burdened with maintaining a varied and complex lighting system that required significant investments in technical knowledge, warehouse space for spare parts and waste, as well as capital spending.

Over the last ten years, Vac-Con implemented higher efficiency fluorescent lighting from Orion to replace the mixture of sodium vapor and metal halide on all interior fixtures. The company found further improvement using inductive fluorescent fixtures provided by Orion to replace their aging metal halide exterior fixtures across the 17-acre campus. The lighting upgrades also boosted productivity and reduced flaws in finished products due to inadequate light levels, avoiding time and resources spent on paint, assembly, and fabrication re-work.

When the company decided to move forward on a major new construction project last year, it again turned to Orion to provide the LED lighting for the 60,000 square foot expansion that would increase its production capacity by 15 percent.

“Vac-Con experienced greater than 48% energy demand reduction through both of these evolutions, and the current implementation of Orion LED technology furthers these ongoing energy savings efforts,” continued Barnes. “Our partnership with a dedicated and tireless vendor continues to pay forward as we complete our plant expansion project currently underway. Real project data makes lighting savings more beneficial and we’ve been able to think more strategically about lighting by providing measurable results with Orion.”

“For this new construction project, we returned to Orion because they got us the light levels and energy efficiency we needed, and on the timeline we required. It’s about getting the best value, and Orion has always been there to support us,” said Barnes.

Vac-Con has been recognized by Florida Governor Rick Scott and regional business associations for its contributions to both Florida economic development and sustainability. For two consecutive years, Vac-Con received the prestigious Manufacturer of the Year Award from the First Coast Manufacturers Association.

“Orion is delighted to continue our long-standing partnership with Vac-Con,” said E.W. Dovel, Divisional Vice President of Orion Energy Systems, Inc. “Lighting technology continues to evolve, with more exponential change in the last few years than perhaps the last fifty, making it increasingly important to choose expert partners with deep understanding of the unique requirements of the industrial sector. The projects we’ve undertaken together over the last decade are a testament to the results you can achieve with a true lighting partnership.”

The HARRIS High Bay, the lowest up front cost offering in Orion’s latest LED High Bay Suite, sets a new standard for performance in its class with up to 148 lumens per watt. The fixture is upgradeable and interchangeable, allowing maintenance crews to meet changing light distribution requirements, such as moving from an open area to aisle lighting. By simply turning off the power to the luminaire, internal teams can use quick attachments to easily switch out aisle illuminators and modular power packs for driver replacement.

Keywords: Lighting project Vac-Con Orion Lighting

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Home / Building Systems / Orion Introduces High-Performing High Bays

# Orion Introduces High-Performing High Bays

October 12, 2015 By [Karen Henry](#)



Orion Energy Systems has introduced a new suite of high bay LED industrial light fixtures. The ISON LED High Bay delivers 179 lumens per watt and a 10-year total cost of ownership. The APOLLO LED High Bay offers up to 148 lumens per watt, and the HARRIS LED High Bay also delivers up to 148 lumens per watt and the lowest up-front cost in the suite.

The fixtures are upgradeable and interchangeable, allowing maintenance crews to meet changing light distribution requirements, such as moving from an open area to aisle lighting, or from high bay to low bay or even retail applications by adding a lens. Internal teams can use quick attachments to switch out the light engine panels by turning off the power to the luminaire.

Other features include:

- Thermal management.
- High-performing LED chips and drivers paired with cooler operating luminaires.
- Fixture designs that allow for maximum light output.
- Lightweight body.
- Greater potential for wattage reduction rebates.

According to the company, a typical facility installing the ISON LED High Bay would save more than \$100,000 a year and more than \$1.15 million in the next decade over the majority of legacy lighting systems.

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## Videos

# Orion Energy Systems Wins \$1 Million Order to Install a New LED Lighting Solution and Light Pipes for a Leading Designer and Manufacturer of Mobile Devices, Tablets, and Personal Computers

 [www.businesswire.com/news/home/20150414006053/en/Orion-Energy-Systems-Wins-1-Million-Order](http://www.businesswire.com/news/home/20150414006053/en/Orion-Energy-Systems-Wins-1-Million-Order)

MANITOWOC, Wis.--(BUSINESS WIRE)--

Orion Energy Systems, Inc. (NYSE MKT:OESX) - a leading designer and manufacturer of high-performance, energy-efficient lighting platforms, today announced that it recently received a contract award of approximately \$1.0 million to retrofit a Northern California-based location of a globally-known designer and manufacturer of mobile devices, tablets, and personal computers. The award represented repeat business for Orion from this customer, which was upgrading fluorescent fixtures with a comprehensive lighting solution that included Orion's ISON LED High Bay lighting fixtures (approximately 660 units), solar light pipes (approximately 1150 units) and Orion's InteLite control system.

The Company was chosen over competitors due to its past successful history with Orion products, speed of delivery and ease of installation. In recent weeks, the Company has displaced a number of legacy products from competitors with Orion LED and light pipe technology. Orion's ISON LED High Bay offers a superior LED lifetime over other competing products. Each ISON High Bay product proprietary design is constructed for optimum light output with two optical elements, that provides better lighting direction and glare diffusion.

John Scribante, Chief Executive Officer of Orion, stated, "Orion worked closely with this customer to create an all-encompassing lighting solution for their facility. There is a definitive cost advantage for those customers to upgrade to our LED lighting solution, largely due to less labor and material cost compared to competitors. Today, we are leveraging our positive history with past Orion clients and have won a growing share of upgrade business as these customers transition to LED solutions in facilities throughout North America."

## About Orion Energy Systems

Orion is leading the transformation of commercial and industrial buildings with state-of-the-art energy efficient lighting systems. Orion manufactures and markets a cutting edge portfolio of products encompassing LED Solid-State Lighting and high intensity fluorescent lighting. Many of Orion's 100+ granted patents and pending patent applications relate to lighting systems that provide exceptional optical and thermal performance, which drive financial, environmental, and work-space benefits for a wide variety of customers in the retrofit markets.



**CI Actuation**

Houston, TX

Replaced legacy lighting system consisting of metal halide fixtures with Orion's LED high bay fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$13,800</b>
Annual Kilowatt Hour Reduction	<b>172,500</b>
Load Reduction	<b>33.9 kW</b>
Annual Carbon Dioxide Reduction	<b>106 Tons</b>



Before



After



**SoPakCo Packaging**

Mullins, SC

Replaced legacy lighting system consisting of metal halide fixtures and T12's with Orion's T8 fluorescent Compact Modular, LED and Retrofit Kits.

**Project Metrics**

Annual Cost Savings	<b>\$52,031</b>
Annual Kilowatt Hour Reduction	<b>635,775</b>
Load Reduction	<b>154 kW</b>
Annual Carbon Dioxide Reduction	<b>387 Tons</b>



Cypress Street Before



Cypress Street After



Mullins Street Before



Mullins Street After



**Grupo Antolin Illinois**

Belvidere, IL

Replaced legacy lighting system consisting of metal halide fixtures with Orion's LED High Bay fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$17,358</b>
Annual Kilowatt Hour Reduction	<b>267,045</b>
Load Reduction	<b>35.7 kW</b>
Annual Carbon Dioxide Reduction	<b>165 Tons</b>



Before



After



**Industrial Steel Construction, Inc.**

Gary, IN

Replaced legacy lighting system consisting of 1000w metal halide fixtures with Orion's 303w LED high bay fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$11,797</b>
Annual Kilowatt Hour Reduction	<b>168,527</b>
Load Reduction	<b>27.7 kW</b>
Annual Carbon Dioxide Reduction	<b>103 Tons</b>



Before



After



**Brother International Corporation**

Bartlett, TN

Replaced legacy lighting system consisting of High Pressure Sodium fixtures with Orion's T5 fluorescent Compact Modular fixtures, LED's and standard motion controls.

**Project Metrics**

Annual Cost Savings	<b>\$20,832</b>
Annual Kilowatt Hour Reduction	<b>320,489</b>
Load Reduction	<b>73 kW</b>
Annual Carbon Dioxide Reduction	<b>195 Tons</b>



Before



After



**"This project is a winner."**

Bob Kluber – Plant Engineer  
Henkel Corporation – Bay Point, CA

**Project Scope**

Replace legacy lighting system consisting High Pressure Sodium and Metal Halide fixtures with Orion's T8 Fluorescent Compact Modular fixtures.

**Project Economics**

Displaced Energy:	428,370 kWh
Displaced Capacity:	49 kW
Annual Cost Reduction:	\$55,688
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	277 tons/year
Acres of Trees Planted (Equivalency):	79 Acres



Before



After



**“Equally important to us were the intangible benefits from Orion’s lighting.”**

Don Yahnke – Director of Operations  
Toro Company – Tomah, WI

**Project Scope**

Replace legacy lighting system consisting of High Intensity Discharge fixtures with Orion’s T8 Fluorescent Compact Modular High Bay fixtures.

**Project Economics**

Displaced Energy:	167,831 kWh
Displaced Capacity:	34.89 kW
Annual Cost Reduction:	\$17,286
Light Level Improvement:	

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	109 tons/year
Acres of Trees Planted (Equivalency):	31 Acres



Before



After



**“We are pleased to partner with Orion continue our commitment to reducing our energy consumption.”**

Todd Teske – President and COO  
Briggs and Stratton – Poplar Bluff, MO

**Project Scope**

Replace legacy lighting system consisting of Metal Halide, T12 Fluorescent and T12 HO Fluorescent fixtures with Orion’s T8 Fluorescent Compact Modular High Bay, Conversion Kit and Retrofit Kit fixtures with standard motion and ambient control technologies.

**Project Economics**

Displaced Energy:	1,694,678 kWh
Displaced Capacity:	241.9 kW
Annual Cost Reduction:	\$91,004
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	tons/year
Acres of Trees Planted (Equivalency):	Acres



Before



After

# BUNN®

## Bunn

White Hall, IL

Replaced existing fluorescent T12's with Orion's fluorescent T8 conversion kits with optically enhanced white reflectors and replaced 400w metal halides in warehouse with Orion's T8 Compact Modular Enclosed fluorescent fixtures.

### Project Metrics

Annual Cost Savings	<b>\$11,601</b>
Annual Kilowatt Hour Reduction	<b>127,058</b>
Load Reduction	<b>53 kW</b>
Annual Carbon Dioxide Reduction	<b>77 Tons</b>

"We are very pleased with our new retrofit lighting from Innovative Facilities. The installation was completed very professionally and without any interruption to our production. Not only is the facility brighter, but it has created a safer and more pleasant work environment. We have seen a 13% reduction in energy consumption in the first two months."

– **Steven R. Bickhaus**  
Plant Manager



Before - 28 Foot candles



After - 42 Foot candles



**"The overall results were more than satisfactory and several areas exceeded our expectations. The quality of our lighting in the evening is now vastly superior to our previous lighting."**

Tim Zielinski – Operations Manager  
Oil States Industries – Lampasas, TX

### Project Scope

Replace legacy system consisting of High Pressure Sodium fixtures with Orion's Compact Modular T8 Fluorescent High Bay fixtures with standard motion control technologies.

### Project Economics

Displaced Energy:	177,581 kWh
Displaced Capacity:	32.8 kW
Annual Cost Reduction:	\$17,136
Light Level Improvement:	200% (13 to 39 avg. fc)

### Environmental Impact

Carbon Dioxide Emissions Displaced:	108 tons/year
Acres of Trees Planted (Equivalency):	33 Acres



Before – 13 Average Foot-candles



After – 39 Average Foot-candles

## RALPH LAUREN

### Polo Ralph Lauren Greensboro, NC

#### Project Scope

Replace legacy lighting system consisting of Metal Halide and T12 Fluorescent fixtures with Orion's T8 Fluorescent Compact Modular High Bay Fixtures and Conversion Kits, Orion's Apollo® Solar Light Pipes and standard motion and ambient control technologies.

#### Project Economics

Displaced Energy:	5,320,060 kWh
Displaced Capacity:	341.9 kW
Annual Cost Reduction:	\$272,870
Light Level Improvement:	N/A

#### Environmental Impact

Carbon Dioxide Emissions Displaced:	3,440 tons/year
Acres of Trees Planted (Equivalency):	976 Acres



Before



After



**"We are pleased that the results we saw here in Effingham were leveraged throughout the nation."**

Brad Withhiem – CIP Manager  
Sherwin Williams – Effingham, IL

#### Project Scope

Replace legacy lighting systems consisting of High Intensity Discharge and T12 Fluorescent fixtures with Orion's T8 Fluorescent Compact Modular High Bay and Retrofit Kit fixtures.

#### Project Economics

Displaced Energy:	1,976,554 kWh
Displaced Capacity:	287.4 kW
Annual Cost Reduction:	\$110,647
Light Level Improvement:	N/A

#### Environmental Impact

Carbon Dioxide Emissions Displaced:	1,278 tons/year
Acres of Trees Planted (Equivalency):	363 Acres



Before



After



## Capstan Rockwood, TN

### Project Scope

**Interior:** Replace legacy lighting system consisting of High Pressure Sodium and T12 Fluorescent fixtures with Orion's T8 Fluorescent Compact Modular High Bay Compact Modular Ultra High Bay, Conversion Kit and Retrofit Kit fixtures with Intelite® energy management and standard motion control technologies.

**Exterior:** Replace legacy lighting system consisting of High Pressure Sodium fixtures with Orion's T5 Fluorescent Exterior fixtures.

### Project Economics

Displaced Energy:	917,657 kWh
Displaced Capacity:	103.15 kW
Annual Cost Reduction:	\$73,412
Light Level Improvement:	N/A

### Environmental Impact

Carbon Dioxide Emissions Displaced:	558 tons/year
Acres of Trees Planted (Equivalency):	168 Acres



Before



After



**"This project helps keep us competitive in the marketplace by reducing our overhead expenses and is good for the environment at the same time."**

Herbert Rubenstein – President and Chief Executive Officer  
Associated Bag – Milwaukee, WI

### Project Scope

Replace legacy lighting system consisting of High Pressure Sodium fixtures with Orion's T8 Fluorescent Compact Modular High Bay fixtures.

### Project Economics

Displaced Energy:	222,549 kWh
Displaced Capacity:	62 kW
Annual Cost Reduction:	\$15,690
Light Level Improvement:	N/A

### Environmental Impact

Carbon Dioxide Emissions Displaced:	144 tons/year
Acres of Trees Planted (Equivalency):	41 Acres



Before



After

**MarquipWardUnited**

**“In a nutshell, this energy efficient project was awesome. From the ease of installation and rapid delivery of our order to the verifiable energy savings, we couldn’t be happier.”**

Mike Hennigfeld – Maintenance Supervisor  
MarquipWardUnited – Phillips, WI

**Project Scope**

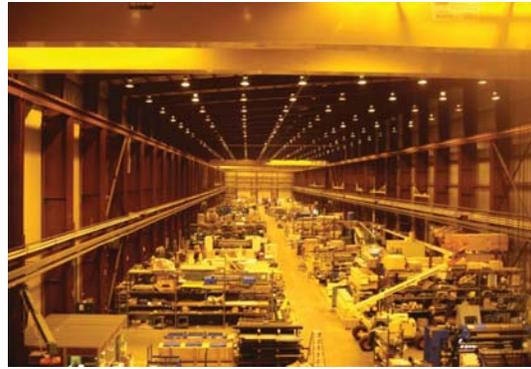
Replace legacy lighting system consisting of High Intensity Discharge fixtures with Orion’s T8 Fluorescent Compact Modular High Bay fixtures.

**Project Economics**

Displaced Energy:	1,185,138 kWh
Displaced Capacity:	172.3 kW
Annual Cost Reduction:	\$60,544
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	766 tons/year
Acres of Trees Planted (Equivalency):	217 Acres



Before



After



**“The new lighting system conserves energy, reduces waste, makes our plant more competitive and creates a more comfortable and productive environment for our employees.”**

Alan Antoniewicz – VP of Operations,  
Dresser Rand (Waukesha Engine) – Waukesha, WI

**Project Scope**

Replace legacy lighting system consisting of High Pressure Sodium fixtures with Orion’s T8 Fluorescent Compact Modular High Bay fixtures.

**Project Economics**

Displaced Energy:	3,663,222 kWh
Displaced Capacity:	418 kW
Annual Cost Reduction:	\$252,762
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	2,368 tons/year
Acres of Trees Planted (Equivalency):	672 Acres



Before



After



**Berkshire Hathaway  
Kent, WA**

**Shaw Industries**

**Project Scope**

Replace legacy lighting system consisting of Metal Halide and High Pressure Sodium fixtures with Orion's T8 Fluorescent Compact Modular fixtures with InteLite® energy management and standard motion control technologies.

**Project Economics**

Displaced Energy:	573,057 kWh
Displaced Capacity:	49,283 kW
Annual Cost Reduction:	\$49,283
Light Level Improvement:	76.5

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	370 tons/year
Acres of Trees Planted (Equivalency):	105 Acres



Before



After



**Meco Corporation**

Greenville, TN

Replaced legacy lighting system consisting of metal halide fixtures and T12's with Orion's T8 fluorescent Compact Modular fixtures and standard motion controls.

**Project Metrics**

Annual Cost Savings	<b>\$117,309</b>
Annual Kilowatt Hour Reduction	<b>1,232,273</b>
Load Reduction	<b>389 kW</b>
Annual Carbon Dioxide Reduction	<b>749 Tons</b>



Before



After



**Nudo Products**

Springfield, IL

Replaced interior 400-watt metal halide fixtures with Orion's T8 Compact Modular fluorescent fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$70,436</b>
Annual Kilowatt Hour Reduction	<b>612,484</b>
Load Reduction	<b>178.8 kW</b>
Annual Carbon Dioxide Reduction	<b>372 Tons</b>

*"This lighting project has been a big win for Nudo Products. It has not only improved the overall brightness of the plant, but has also improved safety, quality and employee morale. This lighting job is a very environmentally friendly green project and will help decrease air pollution also."*

**– Kevin Kowalski**  
Maintenance Manager



Before-29 Foot-candles



After-49 Foot-candles



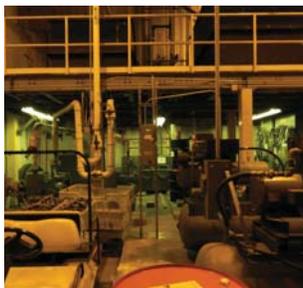
**Tranzonic CCP Industries Inc**

Knoxville, TN

Replaced legacy lighting system consisting of HID lights, T12's and a few T5 fixtures with Orion's T8 fluorescent Compact Modular fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$68,164</b>
Annual Kilowatt Hour Reduction	<b>757,320</b>
Load Reduction	<b>102.59 kW</b>
Annual Carbon Dioxide Reduction	<b>461 Tons</b>



Compressor Room Before



Compressor Room After



Back WH Dock Before



Back WH Dock After



**Columbia Steel Casting Co, Inc.**

Portland, OR

Replaced legacy lighting system consisting of metal halide fixtures with Orion's T8 fluorescent Compact Modular fixtures including standard motion control, retrofit and exterior fixtures.

**Project Metrics**

Annual Cost Savings	<b>\$45,217</b>
Annual Kilowatt Hour Reduction	<b>844,855</b>
Load Reduction	<b>147.6 kW</b>
Annual Carbon Dioxide Reduction	<b>514 Tons</b>



Before



After



**Novelis Corporation  
Oswego, NY**

**Project Scope**

Replace legacy lighting system consisting of Metal Halide fixtures and T12 Fluorescent Task Lighting fixtures with Orion's T5 Fluorescent Compact Modular High Bay fixtures, and T8 Fluorescent Conversion Kit fixtures.

**Project Economics**

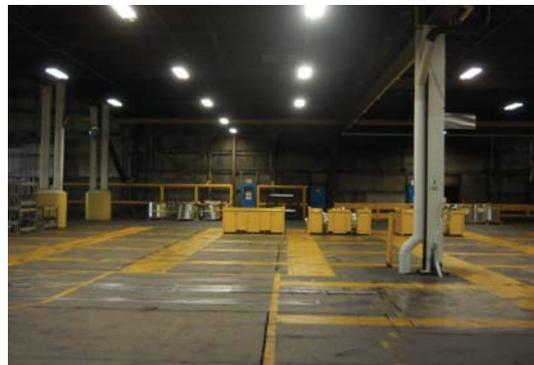
Displaced Energy:	6,047,151 kWh
Displaced Capacity:	648.33 kW
Annual Cost Reduction:	\$362,831
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	3,677 tons/year
Acres of Trees Planted (Equivalency):	1,110 Acres



Before



After



### Enprotech Steel Services, LLC

Cleveland, OH

Replaced legacy lighting system consisting of metal halide fixtures and T12's with Orion's T8 fluorescent Compact Modular fixtures.

#### Project Metrics

Annual Cost Savings	<b>\$32,967</b>
Annual Kilowatt Hour Reduction	<b>445,510</b>
Load Reduction	<b>72 kW</b>
Annual Carbon Dioxide Reduction	<b>271 Tons</b>



Before



After



### Houston Chronicle

Houston, TX

Replaced legacy lighting system consisting of metal halide fixtures with Orion's T8 fluorescent Compact Modular fixtures.

#### Project Metrics

Annual Cost Savings	<b>\$14,193</b>
Annual Kilowatt Hour Reduction	<b>181,963</b>
Load Reduction	<b>21 kW</b>
Annual Carbon Dioxide Reduction	<b>111 Tons</b>



Before



After



QUAD/GRAPHICS

**“Quad/Graphics has long believe what is good for business is good for the environment, and this energy efficient lighting project is positive proof.”**

Thomas A. Quadracci – President and Chief Executive Officer  
 Quad/Graphics - US Locations

**Project Scope**

Replace legacy lighting system consisting of High Intensity Discharge fixtures with Orion’s T8 Fluorescent Compact Modular High Bay fixtures.

**Project Economics**

Displaced Energy:	30,611,820 kWh
Displaced Capacity:	3,495 kW
Annual Cost Reduction:	\$1,683,650
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	19,791 tons/year
Acres of Trees Planted (Equivalency):	5,617 Acres



Before



After



**Volvo North America  
 Lewis Center, OH**

Highfield Building

**Project Scope**

Replace legacy lighting system consisting of High Intensity Discharge fixtures with Orion’s T5 Fluorescent Compact Modular High Bay fixtures with standard motion control technology.

**Project Economics**

Displaced Energy:	1,265,791 kWh
Displaced Capacity:	158.8 kW
Annual Cost Reduction:	\$93,268
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	770 tons/year
Acres of Trees Planted (Equivalency):	7232 Acres



Before



After



**“After trying several times to get the lighting project approved in recent years, we had given up hope that we could get the required payback to fund the project. Orion came in and was able to use their superior design efficiencies to get the ROI under 1 year and meet our lighting requirements. Tony was easy to work with and the plant looks great.”**

Jeffery Greene – Engineering Manager  
Cooper Standard Automotive – Surogoinsville, TN

**Project Scope**

Replace legacy lighting system consisting of Metal Halide fixtures with Orion’s T8 Fluorescent Compact Modular High Bay Fixtures and standard motion control devices.

**Project Economics**

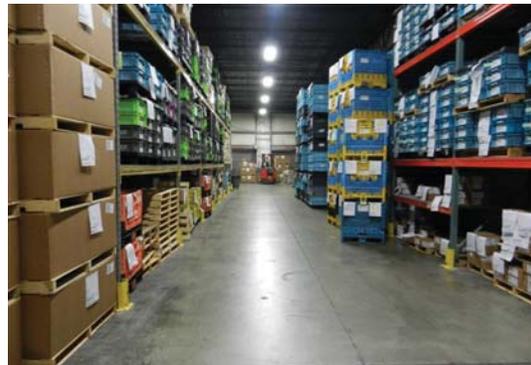
Displaced Energy:	1,150,433 kWh
Displaced Capacity:	126.63 kW
Annual Cost Reduction:	\$92,034
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	700 tons/year
Acres of Trees Planted (Equivalency):	211 Acres



Before



After



**Chrysler Company  
Kenosha, WI**

**Project Scope**

Replace legacy lighting system consisting of High Intensity Discharge fixtures with Orion’s T8 Fluorescent Compact Modular High Bay fixtures.

**Project Economics**

Displaced Energy:	662,604 kWh
Displaced Capacity:	76 kW
Annual Cost Reduction:	\$33,145
Light Level Improvement:	N/A

**Environmental Impact**

Carbon Dioxide Emissions Displaced:	428 tons/year
Acres of Trees Planted (Equivalency):	122 Acres



Before



After

# ORION | Market Overview – Manufacturing and Industrial

As of March 31, 2017, Orion has completed over 4,800 projects with nearly 3,300 customers in the Manufacturing and Industrial market. The following table shows customers who have retrofitted at least five of their facilities.

Customer	Site Count	Customer	Site Count
International Paper/Temple-Inland	61	PPG Industries	8
General Electric Company	49	The Ames Companies	8
Parker Hannifin Corporation	45	The Dow Chemical Company	8
Ball Corporation	37	Bemis Manufacturing Co.	7
Gannett Publishing Company	36	Charter Steel	7
Dana Corporation	35	Emerson	7
Sherwin William Co.	35	Emser Tile LLC	7
United Stationers Supply Co.	32	Graham Packaging Company	7
Sealed Air/Cryovac/Diversey	31	Honeywell International, Inc.	7
Quad/Graphics, Inc.	26	Marubeni-Itochu Steel, Inc.	7
Illinois Tool Works (ITW)	25	Nashville Wire Products	7
RockWest (MeadWestvaco/Rock-Tenn)	23	Siemens/Dresser Rand	7
Chrysler Company, LLC	20	Stanley-Black and Decker	7
Worthington Industries, Inc.	19	Tecumseh Products Co.	7
Rexam	18	Toro Company	7
Newell Rubbermaid Inc.	17	Univar Corporation	7
Sonoco Products Company	17	BWAY Corporation	6
Henkel Corporation	16	Coilplus	6
Avery Dennison	15	Deere and Company	6
Ecolab, Inc.	15	MNP Corporation	6
Berkshire Hathaway	13	Oshkosh Corporation	6
Caterpillar Inc.	12	Pactiv Corporation	6
Green Bay Packaging Inc.	12	Ply Gem Windows	6
Koch Industries	12	Sauder Woodworking Co	6
Leggett & Platt Co.	12	SoPakCo. Inc	6
Proctor & Gamble Inc.	12	Svenska Cellulosa Aktiebolaget	6
RR Donnelley and Sons	12	Twin City Fans	6
ThyssenKrupp AG	12	3M Company	5
Toyota Motor Mfg.	12	Boise Cascade	5
Universal Forest Products	12	BorgWarner, Inc.	5
Airgas, Inc.	11	Brady Corporation	5
GREIF Corporation	11	Bridgestone/Firestone	5
Scholastic, Inc.	11	Canfor Corporation	5
Briggs & Stratton	10	Cenveo Inc	5
Donaldson Co., Inc.	10	Chassix Inc	5
General Motors Corporation	10	Deluxe Corporation	5
Silgan Container Corporation	10	Emser Tile	5
Simmons Bedding Inc	10	Federal-Mogul Corporation	5
Textron Corporation	10	Ford Motor Company	5
The Goodyear Tire & Rubber Company	10	Harland Clarke Holdings Corp	5
Thermo Fisher Scientific	10	Honda Motor Company	5
Trane Company	10	INX International Ink Co.	5
Volvo North America	10	MTD Consumer Group	5
Brunswick Corporation	9	Mygrant Glass	5
Carrier Corporation	9	Novelis Corporation	5
CNH Global	9	Polo Ralph Lauren	5
Kimberly-Clark Corp.	9	Propex Inc	5
National Oilwell Varco	9	Saint Gobian Performance Plastics Corp.	5
Nissan North America Inc.	9	Van Guard	5
Kohler Company	8		

# ORION | Featured Products – ISON™

## ISON™ LED HIGH BAY GENERATION III | HBIF3

- Future-proof modular design allows for ease of field maintenance and is upgradeable for performance enhancements.
- Superior thermal management leads to longer life and enhanced performance.
- Intelligent control options offered to gain additional energy savings.
- LED panel allows interchangeability between open or aisle light distribution.
- Lens options: Acrylic frosted lens that provides glare control to enhance low bay applications. Also available in a polycarbonate clear lens for dusty environments.
- Emergency fixture identifier option available.
- Voltage: 120-277, 347, and 480v
- Rated Life: 150,000 hours
- Ten Year Limited Warranty



## ISON™ LED HIGH BAY, GENERATION II | HBIF2

- Future-proof modular design allows for ease of field maintenance and is upgradeable for performance enhancements.
- Superior thermal management leads to longer life and enhanced performance.
- Intelligent control options offered to maximize additional energy savings.
- LED panel allows interchangeability between open or aisle light distribution.
- Lens options: Acrylic frosted lens that provides glare control to enhance low bay applications. Also available in a polycarbonate clear lens for dusty environments.
- Optional Orange painted end caps for high visibility of emergency circuits and battery back-up fixtures
- Voltage: 120-277, 347, and 480v
- Rated Life: 150,000 hours
- Ten Year Limited Warranty



## ISON™ LED HIGH BAY HIGH LUMEN

- Unique modular design allows for ease of field maintenance and is upgradeable for performance enhancements.
- Superior thermal management leads to longer life and enhanced performance.
- LED panel allows interchangeability between open or aisle light distribution.
- Various control options offered up to 40' ceiling heights for additional energy savings.
- Optional Orange painted end caps for high visibility of emergency circuits and battery back-up fixtures
- Voltage: 120-277, 347, and 480v
- Rated Life: 150,000 hours
- Ten Year Limited Warranty



## ISON™ RETROFIT MODULAR | LDRM

- The industry's first patented LED troffer retrofit contained within the door frame that retrofits existing 2'x2' and 2'x4' fluorescent troffers to LED and can be installed in under two minutes with minimal disruption to the workplace.
- Integrated, intelligent control options that measure ambient temperature and brightness, distributing an aesthetically pleasing showcase specific to the needs of individual environments.
- Patent pending modular light engine allows for color temperature and light output upgrades in the field.
- Future-proof, interchangeable design delivers the benefits of replaceable LED lamps or tubes without the performance and safety risks.
- Matte finish, acrylic contour lens diffuses glare in the work environment.



# ORION | Featured Products – ISON™

- Aluminum frame with powder coat white finish.
- Multiple bracket options to fit specific application requirements.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Ten Year Limited Warranty

## ISON™ RETROFIT MODULAR HEALTHCARE | LDRMH

- First to market LED troffer retrofit with Britex™, Orion's proprietary white coating that includes antimicrobial properties, which suppresses the growth of microorganisms and limit the transmission of harmful microbes in healthcare applications.
- The industry's first patented LED troffer retrofit contained within the door frame that retrofits existing 2'x2' and 2'x4' fluorescent troffers to LED and can be installed in under two minutes with minimal disruption to the workplace.
- Integrated, intelligent control options that measure ambient temperature and brightness, distributing an aesthetically pleasing showcase specific to the needs of individual environments.
- Patent pending modular light engine allows for color temperature and light output upgrades in the field.
- Future-proof, interchangeable design delivers the benefits of replaceable LED lamps or tubes without the performance and safety risks.
- Matte finish, acrylic contour lens diffuses glare in the work environment.
- Unique mounting brackets allow the LDR® to fit nearly all existing troffers.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Ten Year Limited Warranty.



## ISON™ RETROFIT MODULAR GOURMET | LDRMG

- First to market LED troffer retrofit with Britex™, Orion's proprietary white coating that includes antimicrobial properties, which can suppress the growth of microorganisms and limit the transmission of harmful microbes in food display and preparation applications.
- The industry's first patented LED troffer retrofit contained within the door frame that retrofits existing 2'x2' and 2'x4' fluorescent troffers to LED and can be installed in under two minutes with minimal disruption to the workplace.
- Integrated, intelligent control options that measure ambient temperature and brightness, distributing an aesthetically pleasing showcase specific to the needs of individual environments.
- Patent pending modular light engine allows for color temperature and light output upgrades in the field.
- Future-proof, interchangeable design delivers the benefits of replaceable LED lamps or tubes without the performance and safety risks.
- Matte finish, acrylic contour lens diffuses glare in the work environment.
- Unique mounting brackets allow the LDR® to fit nearly all existing troffers.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Ten Year Limited Warranty.



## APOLLO® LED HIGH BAY, GENERATION III | HBAC3

- Designed to exceed high and low bay illumination requirements for industrial, commercial, and retail applications.
- Unique modular design allows for easy field maintenance and performance enhancement upgrades.
- Superior thermal management leads to longer life and enhanced performance.
- Intelligent control options offered to achieve additional energy savings or to solve other business challenges like heating and cooling variances, space utilization inefficiencies and more.
- Designed to connect wirelessly to the IoT, and compatible with leading wireless protocols.
- Optional acrylic frosted lens available to reduce glare and enhance low bay applications.
- Aluminum powder coated body for superior thermal management.
- Available in 120-277v, 347v and 480v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® LED HIGH BAY, GENERATION II | HBAC2

- Designed to exceed high and low bay illumination requirements for industrial, commercial, and retail applications.
- Unique modular design allows for ease of field maintenance and is upgradeable for performance enhancements.
- Superior thermal management leads to longer life and enhanced performance. Intelligent control options offered to achieve additional energy savings. Optional glare control lens system to enhance low bay applications.
- Aluminum powdered coated body for thermal management.
- Tandem accessories for double the light output utilizing two fixtures.
- Available in 120-277v, 347v and 480v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® HIGH LUMEN HIGH BAY | ALHB1

- Designed to meet high bay and low bay illumination requirements for industrial, warehouse, manufacturing, commercial, wholesale, and retail applications.
- Aluminum powder coated frame for superior thermal management.
- Optional acrylic frosted lens available to reduce glare and enhance low bay applications.
- Multiple mounting methods for ease of installation in various environments.
- Unique modular design allows for easy field maintenance and performance enhancement upgrades.
- Available in 120-277v, 347v and 480v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® HIGH BAY PLUS | ALHB1

- Ideal for interior applications including retail, commercial, distribution and industrial facilities.
- Aluminum powder coated frame for superior thermal management.
- Optional acrylic frosted lens available to reduce glare and enhance low bay applications.
- Multiple mounting methods for easy installation in various environments.
- Unique modular design allows for easy field maintenance and performance enhancement upgrades.
- Available in 120-277v, 347v and 480v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® LED VAPORTIGHT NARROW BODY SERIES | VTON1

- Ideal for commercial kitchens, breweries, under awnings, laundries, car washes, utility tunnels, and livestock containment buildings where the application requires a waterproof and/or dust proof fixture
- Bi-level, dual circuit option allows for high and low lumen light levels for safety
- UL Listed for Wet Locations.
- IP67 Certified.
- High pressure wash-down up to 1500 PSI.
- TVSS and Wet Location sensor options available
- Voltage: 120-277v
- Rated Life: 125,000 hours
- Five Year Limited Warranty.



## APOLLO® LED VAPORTIGHT WIDE BODY SERIES | VTOD1

- Ideal for commercial kitchens, breweries, under awnings, car washes, utility tunnels, and livestock containment buildings where the application requires a waterproof and/or dust proof fixture
- Bi-level, dual circuit option allows for high and low lumen light levels for safety
- UL Listed for Wet Locations.
- IP67 Certified.
- High pressure washdown up to 1500 PSI.
- TVSS and Wet Location sensor options available
- Voltage: 120-277v
- Rated Life: 125,000 hours
- Five Year Limited Warranty.



## APOLLO® NARROW BODY VAPORTIGHT-NSF | VTON1-NSF

- Designed for demanding environments that require a watertight seal such as food-processing facilities, milking parlor, wash down applications and cooler/freezer environments.
- NSF/ANSI Standard 2, Non Food Zone and Splash Zone Certified.
- Available in 4' and 8'.
- Bi-level, dual circuit allows for high and low lumen light levels in one fixture.
- Acrylic, impact resistant, linear ribbed frosted lens.
- Durable, lightweight, white UL 5VA reinforced fiberglass body.
- Stainless steel 316 Marine Grade latches with stainless steel mounting brackets come standard with fixture.
- UL Listed for Wet Locations.
- IP67 Certified.
- High pressure washdown up to 1500 PSI.
- Available in 120-277v.
- Rated Life: 125,000 hours.
- Five Year Limited Warranty.



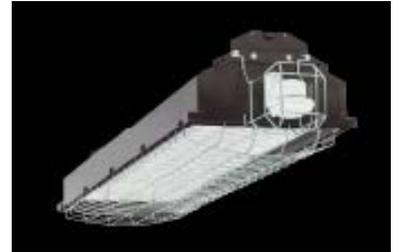
## APOLLO® WIDE BODY VAPORTIGHT-NSF | VTOD1-NSF

- Designed for demanding environments that require a watertight seal such as food-processing facilities, milking parlor, wash down applications and cooler/freezer environments.
- NSF/ANSI Standard 2, Non Food Zone and Splash Zone Certified.
- Offered in both 2' and 4' lengths
- Stainless steel 316 Marine Grade latches with stainless steel mounting brackets come standard with fixture
- Durable, lightweight, white, UL 5VA (f1) reinforced fiberglass body
- Acrylic, impact resistant, shallow ribbed frosted lens.
- Available in 120-277v, 347v and 480v.
- Rated Life: 125,000 hours.
- Five Year Limited Warranty.



## APOLLO® WET LISTED ENCLOSURE, GENERATION II | WTLED2

- Designed for demanding interior environments that require a wet-rated or enclosed and gasket fixture.
- UL Listed for Wet Locations
- IP65 Certified
- Sealed and gasketed powder coated aluminum body and lens frame.
- Bi-level, dual circuit option allows for high and low lumen light levels for safety
- All zinc plated hardware.
- Clear acrylic lens.
- Available in bronze or granite thermoset powder-coat finish.
- Fixture is impact resistant up to IK04 and is impact resistant with wireguard and sensor guard up to IK10.
- Single or bulk packaging options available to meet job installation needs.
- Available in 120-277V and 480V.
- Rated Life: 100,000 Hours
- Five Year Limited Warranty.



## APOLLO® WET LISTED ENCLOSURE

- Designed for demanding interior environments that require a wet-rated or enclosed and gasket fixture.
- UL Listed for Wet Locations
- IP65 Certified
- Sealed and gasketed aluminum body and lens frame.
- All zinc hardware.
- Bronze or Granite thermoset powder-coat options.
- Acrylic clear lens.
- Available in 120-277V and 480V.
- Rated Life: 100,000 Hours
- Five Year Limited Warranty.



## APOLLO® TROFFER RETROFIT LDR® F-SERIES CONTOUR | LDRF

- Patented LDR® retrofits existing 2'x2' and 2'x4' fluorescent troffers to LED in as little as two minutes.
- Industry's first LED troffer retrofit contained within the door frame.
- White powder coated, aluminum frame.
- LDR fits most existing fluorescent troffer fixtures with either prismatic lens or parabolic louvers.
- Required mounting brackets adapt the LDR to fit nearly all existing troffers.
- Matte finish polycarbonate contour lens diffuses glare in the work environment.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® TROFFER RETROFIT LDR® 1'X4' L-SERIES FLAT | LDRL

- Retrofits existing 1' x 4' fluorescent troffers to LED in as little as two minutes. Industry's first LED troffer retrofit contained within the door frame.
- LDR® fits most existing fluorescent troffer fixtures with either prismatic lens or parabolic louvers.
- Low environmental impact.
- Ultra-light, highly efficient troffer retrofit solution.
- Multiple bracket options to fit specific application requirements.
- Seismic cable kit options that is Title 24 compliant.
- Aluminum frame with proprietary white powder coat finish.
- LDR® fits most existing fluorescent troffer fixtures with either prismatic lens or parabolic louvers.
- Matte finish flat lens diffuses glare in the work environment.
- Integrated intelligent control options.
- Available in 120-277v and 347v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® JETSON RECESSED TROFFER | OLRL F-SERIES

- Designed specifically to maximize rebate and incentive potential for 2'x2' and 2'x4' ceiling grids.
- Aluminum frame with proprietary white powder coating.
- Lightweight lens and enclosed aluminum frame.
- Lift brackets come standard.
- Matte finish contour lens provides glare diffusion in the work environment.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® LINEAR MULTIPURPOSE | MPAL

- Ideal for low bay, assembly line, strip, surface mount, continuous run or task options in warehouse and retail environments where linear lighting is needed.
- Innovative design allows for a continuous run in four foot increments. Wire harness option provides "quick connect system" between fixtures for labor savings and ease of installation.
- Contour frosted lens or baffle steel louver option reduce glare and spread light evenly.
- White heavy gauge cold rolled steel body.
- Surface mounting comes standard. Suspended mounting option available.
- Battery backup option available.
- Single or bulk packaging available to meet the needs of job installation.
- Available in 120-277v.
- Rated Life: 125,000 Hours.
- Five Year Limited Warranty.



## APOLLO® LED SUSPENDED SLIMLINE SERIES | SPTS1

- Versatile slim design lends itself to many low bay, interior lighting applications
- Internal and External Driver options
- Suspended and surface mounting options
- Opaque matte lens aids in distribution of light and reduction of glare
- Voltage: 120-277v
- Rate life: 100,000 hours
- Five Year Limited Warranty.



# ORION | Featured Products – HARRIS

## HARRIS HIGH BAY, GENERATION II | HBHC2

- Designed to meet high and low bay illumination requirements for industrial, commercial, and retail applications.
- Unique, modular design allows for easy field maintenance.
- Various control options offered to achieve additional energy savings or to solve other business challenges like heating and cooling variances, space utilization inefficiencies and more.
- Designed to connect wirelessly to the IoT, and compatible with leading wireless protocols.
- White aluminum painted body comes standard.
- Rigid and suspended mounting options available.
- Optional acrylic frosted lens available to reduce glare and enhance low bay applications.
- Available in 120-277v, 347v, and 480v.
- Rated Life: 100,000 hours.
- Five Year Limited Warranty.



## HARRIS LED HIGH BAY | HBHC1

- Designed to meet high and low bay illumination requirements for industrial, commercial, and retail applications.
- Modular power pack is field replaceable for ease of fixture maintenance.
- Various control options offered to achieve additional energy savings.
- Aluminum powder coated body for thermal management.
- Tandem accessories for double the light output.
- Available in 120-277v, 347v, and 480v.
- Rated Life: 100,000 hours.
- Five Year Limited Warranty.



## HARRIS TROFFER RETROFIT EDGE | LDRE1

- Retrofits existing 2'x2' and 2'x4' fluorescent troffers to LED. Industry's first patented LED troffer retrofit contained within the door frame with less than a two minute install and with minimal disruption to the workplace.
- Low environmental impact.
- Ultra-light, highly efficient troffer retrofit solution.
- Multiple bracket options to fit various application requirements.
- Seismic cable kit options that is Title 24 compliant.
- Aluminum frame with white powder coat finish.
- LDR® fits most existing fluorescent troffer fixtures with either prismatic lens or parabolic louvers.
- Matte finish, acrylic contour lens diffuses glare in the work environment.
- Integrated intelligent control options.
- Available in 120-277v.
- Rated Life: 100,000 Hours.
- Five Year Limited Warranty.



## HARRIS MULTIPURPOSE LINEAR | MPHL1

- Designed to replace low bay, assembly line, strip, surface mount, continuous run or task options in warehouse and retail environments where linear lighting is needed.
- Innovative design allows for a continuous run in four foot increments. Wire harness option provides "quick connect system" between fixtures for labor savings and ease of installation.
- White heavy gauge cold rolled steel body.
- Surface mounting comes standard. Suspended mounting option available.
- Battery back-up option.
- Single or bulk packaging available to suit job installation needs.
- Available in 120-277v.
- Rated Life: 100,000 Hours
- Five Year Limited Warranty.



## HARRIS STRIP RETROFIT | SFHR1

- Designed to retrofit existing linear fluorescent strip fixtures to LED in manufacturing, distribution, warehouse, retail application.
- Available in 3', 4' and 8' fixture lengths.
- Battery back-up option available.
- Fixture comes with tethers to hold cover, to allow for one-person installation.
- Optional acrylic matte finish, contoured lens provides glare diffusion in work environment
- Single pack and job pack options available.
- LED light engine is made of lightweight aluminum, pre-coated white finish for better thermal dissipation.
- Retrofit light engine is designed to fit over existing linear fluorescent strip fixture channel with various locations on cover to secure to existing channel.
- Available in 120-277v.
- Rated Life: 100,000 Hours
- Five Year Limited Warranty.



## HARRIS STRIP FIXTURE | SFHC1

- Designed for use in areas such as manufacturing, distribution, warehouse, and retail settings.
- Available in 3', 4' and 8' fixture lengths that can connect in tandem to create electrical raceway.
- End mounted sensor available.
- Fixture comes with tethers to hold cover, to allow for one-person installation.
- Single pack and job pack options available
- Optional matte finish, acrylic contour lens provides glare diffusion in task application.
- Available in 120-277v.
- Rated Life: 100,000 Hours
- Five Year Limited Warranty.



ORION WILL CHANGE THE WAY YOU  
THINK ABOUT A LIGHTING COMPANY.

# WHY ORION

From the very first handshake to the final fixture installed, our energy is the difference we bring to every retrofit. Ingenuity guides us to new solutions. Dedication helps you at every step. And our products illuminate your world in ways you might not have imagined.

## ALLY IN ACCOUNTABILITY

Our relationships go beyond shipping you the latest fixture. Your goals become our goals, which means we share responsibility to help you keep your promises and make your project successful.

## PRACTICAL INGENUITY

When you've been on the job site or up on the lift, you build in-the-trenches know-how. That expertise inspires more creative products that maximize real-world performance for your lighting investment.

## UNCOMMON DEDICATION

Our customers tell us we have more capable teams that deliver results, not just on paper, but in the day-to-day work of the people we serve. Some say it's our Midwestern roots; we think it's our energy.

# LIGHT YEARS AHEAD®

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