Cold Storage Lighting and Controls Product Guide

CONSERVE ENERGY AND SAVE MONEY WITH ORION'S FACILITY-WIDE LED LIGHTING AND CONTROLS IN YOUR COLD STORAGE FACILITY

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Upgrade Your Cold Storage Facilities

Cold storage is a critical component of our supply chain. Lighting in this setting must be able to withstand damp conditions and bitter temperatures while maintaining required light levels.

Keeping products cold 24/7 is an expensive undertaking. As technology advances, facility owners invest in efficient lighting and automation solutions to lower energy costs and reduce greenhouse gas emissions. This has a significant impact on the environment as well as their bottom line.
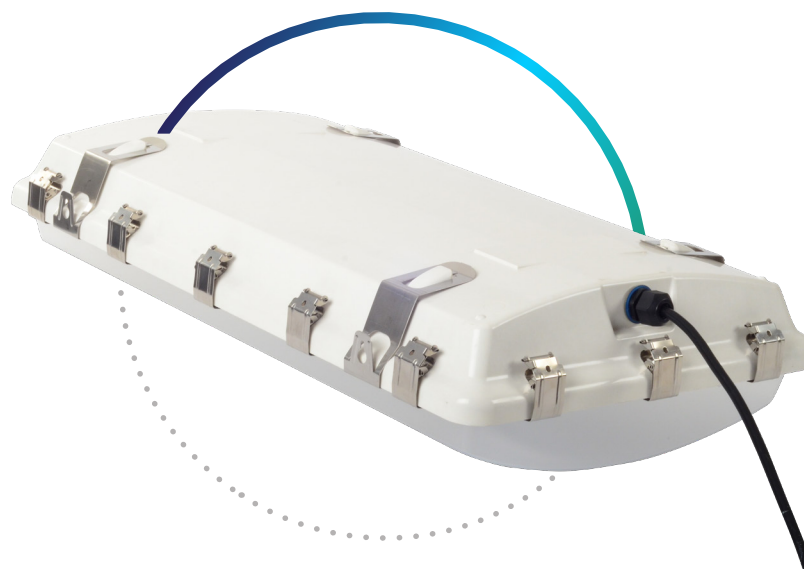
Benefits of Cold Storage LED Retrofits

+ Install lighting designed to withstand harsh facility conditions
+ Reduce operating and maintenance costs with fixtures using less power
+ Continual optimal lighting performance 24/7
+ Dramatically reduce energy consumption costs with modern and efficient lights
+ Reduce maintenance and lamp replacement time
+ Maximize light levels in aisles, docks, and storage racks
+ Increase safety and reduce OSHA-related incidents
+ New configurations ensuring appropriate light levels in all areas
+ Increase picking accuracy, productivity, and morale

Lighting Considerations

Return on Investment

Upgrading from fluorescent to LED reduces energy costs by as much as 50% and provides payback in as little as one to three years.

Environmental Impact

Orion manufactures and assembles most lighting fixtures in the USA, which means lead times of three weeks or less and a smaller environmental impact from shorter shipping distances. That's a smaller carbon footprint for a cold storage facility even before installation. Once installed, efficient fixtures will put facilities on the right path toward reaching their own sustainability goals.

Cold Storage Facility Product Specifications

Orion's cold storage lighting specs summarized:

- Rated down to -40°F
- Freezer and cooler storage LED LM 70 maintenance rated for 250,000+ hours of use
- Highest lumens per watt means highest ongoing utility savings
- In-house environmental testing chamber ensures optimal performance and product design for harsh conditions

Rebate Eligibility

Installing energy-efficient lighting fixtures and controls to better optimize your facility may qualify you for certain energy management rebates.

What's more, Orion's DLC-listed products allow facilities to maximize budget and cost savings, and not all companies offer DLC-listed products.

Rebates are offered on light fixtures as well as control systems.
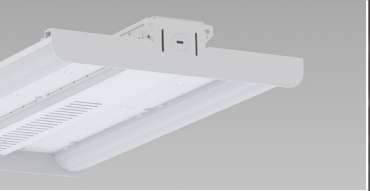
Warranty Information

Limited or standard warranties on Orion's products offer peace of mind. Facility managers can count on superior service to ensure every fixture meets and exceeds expectations and lives up to its promise. Warranty coverage ranges between 1 to 10 years depending on the product.

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Lighting Essentials

The fixtures below are designed specifically with cold storage conditions in mind and include features such as rust resistance and aluminum that dissipate heat six times faster than steel. OurI ISON™ and HARRIS brands lead the way in lighting products specially rated for cold storage environments.

ISON™ AND HARRIS PRODUCT SPECIFICATIONS

MODEL	ISON™ LED VAPORTIGHT NARROW BODY (GEN 2)	ISON™ LED VAPORTIGHT WIDE BODY (GEN 2)	HARRIS STAR LINE FREEZER HIGH BAY (GEN 1)
PRODUCT SERIES	VTON2	VTOD2	HSLF1
CERTIFICATIONS/ RATINGS/LISTING	• NSF/ANSI STD 2 CERTIFIED, GEN 2 SPLASH ZONE • UL/cUL LISTED FOR WET LOCATIONS • IP66, IP67 • DLC LISTED	• NSF/ANSI STD 2 CERTIFIED, GEN 2 SPLASH ZONE • UL/cUL LISTED FOR WET LOCATIONS • IP66, IP67 • DLC LISTED	• UL/cUL LISTED FOR DAMP LOCATIONS • DLC LISTED
CORRELATED COLOR TEMPERATURE	4000K, 5000K	4000K, 5000K	4000K, 5000K
VOLTAGE OPTIONS	120V – 277V, 347V, 480V	120V – 277V, 347V, 480V	120V – 277V, 347V, 480V
LUMEN RANGE	3,000 – 20,000 lumens up to 167 LPW	13,000 – 38,000 up to 167 LPW	15,000 – 29,000 up to 172 LPW
FEATURES	• High-pressure washdown up to 1500 PSI • Dustproof, watertight, and rugged fixture body • 4-foot and 8-foot lengths	• High-pressure washdown up to 1500 PSI • Dustproof, watertight, and rugged fixture body • 2-foot and 4-foot lengths	• Four light distribution options • Tier 1 electrical components made for freezers down to -40°C • Up to 77% energy savings vs. traditional HID lighting • Rigid and suspended mounting • 2-foot and 4-foot lengths

Orion provides ongoing planned maintenance and is available on-call for support during unforeseen events.

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STANDARD ENVIRONMENTS

Orion offers additional innovative product lines for standard environments where cold isn't a factor.

HARRIS PRODUCT SPECIFICATIONS - FIXTURES FOR NON-RUGGED ENVIRONMENTS

MODEL	HARRIS LED HIGH BAY STAR LINE HIGH EFFICACY (GEN 2)	HARRIS LED HIGH BAY UFO (GEN 4)	HARRIS LED STRIP LUMINAIRE (GEN 2)	HARRIS LED STRIP RETROFIT (GEN 2)
PRODUCT SERIES	HHSL2/HHSL2 HE	HHUF4	SFHC2	SFHR2
CERTIFICATIONS/ RATINGS/LISTING	• UL/cUL LISTED FOR DAMP LOCATIONS • DLC LISTED	• NSF/ANSI STANDARD 2 • UL/cUL LISTED • UL WET LOCATION LISTED • IP65 RATED • IK10 IMPACT RATING (FIXTURE ONLY) • DLC LISTED	• UL/cUL LISTED FOR DAMP LOCATIONS • DLC LISTED	• UL/cUL LISTED FOR DAMP LOCATIONS • DLC LISTED
CORRELATED COLOR TEMPERATURE	HHSL2 - 3500K, 4000K, 5000K HHSL2 HE -4000K, 5000K	4000K, 5000K	3500K, 4000K, 5000K	3500K, 4000K, 5000K
VOLTAGE OPTIONS	120V – 277V, 347V, 480V	120V-277V, 277V-480V	120V – 277V	120V – 277V
LUMEN RANGE	HHSL2 HE Range (9,000 to 45,000 lumens up to 198 LPW) HHSL2 Range: (9,000 to 72,000 lumens up to 185 LPW)	15,000-36,000 lumens up to 150 LPW	2,000 – 10,000 up to 177 LPW	2,000 – 10,000 up to 177 LPW
FEATURES	• General, Narrow, and Reduced Glare light distributions available • Available battery backup • 55C rated with lens • High ambient operating temperature up to 65°C for select fixture options (HHSL2 HE) • 2-foot and 4-foot lengths • Five light distribution options • Rigid and suspended mounting options • Up to 77% energy savings vs. traditional HID lighting	• Tandem mounting option for higher lumen output • Additional 20kV/10kA surge protection available • Three different light distribution options • Integrated sensors available • Two fixture colors available • Round, compact high bay	• Easy surface or suspended mount installation • Installation tethers to hold cover that allows for a one-person installation • Integrated sensors and end-mounted sensors available • 4-foot and 8-foot lengths • Integrated sensors available	• Designed to fit over existing linear fluorescent strip fixture channels • Installation tethers that allow for a one-person installation • Integrated sensors and end-mounted sensors available • 4-foot and 8-foot lengths • Integrated sensors available

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Fit into the Big Picture

Measure, manage, and optimize lighting while meeting the unique demands of your facility.

THE BENEFITS OF LED LIGHTING CONTROLS

Increased Safety

Use controls to automatically increase the lighting in common intersections and eliminate as many physical hazards as you can through proper illumination.

Enhanced Energy Reduction

Tack an additional 24-38% of operating savings onto what you already save with LED fixtures thanks to programmable options such as timers and occupancy sensors.

Rebate Eligibility

Qualify for energy management rebates when installing lighting and building controls.

Optimized & Adjustable Lighting

Keep employees satisfied by adjusting the light to a comfortable level wherever possible, contributing to a positive work environment.

Flexible & Future-Proof Facilities

Invest in sophisticated wireless lighting controls and networks now to keep your facility cutting edge and flexible for future building and technological advances.

On-site Fixture and Data Management

Create live dashboards and capture data to gain insights into how lighting is applied and where further optimization is needed.

Remote or App Management

No need to be physically present in areas of concern to adjust the lighting. Conveniently access connected networks from almost anywhere.

Facility Optimization

Find where light is most frequently used or underused and maximize lighting where necessary while reducing light where it isn't needed, saving on operating costs.

	CONTROL TIERS				
	MANUAL SETTINGS (TIER I)	REMOTE SETTINGS (TIER II)	REMOTE SETTINGS WITH ZONES (TIER III)	ON-SITE NETWORK CONTROLS (TIER IV)	CLOUD BASED IoT CONTROLS (TIER V)
INCREASED SAFETY	BETTER	BEST	BEST	BEST	BEST
ENHANCED ENERGY REDUCTION	GOOD	GOOD	BETTER	BEST	BEST
REBATE ELIGIBILITY	GOOD	GOOD	BETTER	BEST	BEST
OPTIMIZED & ADJUSTABLE LIGHTING	GOOD	GOOD	BETTER	BEST	BEST
FLEXIBLE & FUTURE-PROOF FACILITIES	GOOD	BETTER	BETTER	BEST	BEST
ON-SITE FIXTURE AND DATA MANAGEMENT				BEST	BEST
REMOTE OR APP MANAGEMENT					BEST
FACILITY OPTIMIZATION					BEST

Lighting Control Solutions

Use controls and motion sensors to optimize lighting in different locations within the facility and save on energy costs. Additional control options are available depending on the project or requirement.

SPECIFICATIONS				
BRAND	WATTSTOPPER	WATTSTOPPER	VEALITE	VEALITE/KEILTON
PRODUCT NOMENCLATURE	WBxx	WSxx/WSxxB	VLxx	VBMxx
ORION TIER	TIER II	TIER II	TIER II	TIER III
OPERATING TEMPERATURE	–40°C to Max Fixture Limit	0°C to Max Fixture Limit	0°C to Max Fixture Limit	0°C to Max Fixture Limit
REMOTE SETUP AND ADJUSTMENT	iOS® or Android® Sensor Configuration App	Handheld Wireless Configuration Tool	Handheld Wireless Configuration Tool	iOS® or Android® Sensor Configuration App
DIMMABLE	Yes	Yes	Yes	Yes
PHOTOCELL	Yes	Yes	Yes	Yes
DAYLIGHT HARVESTING	Yes	No	No	Yes
WIRELESS ZONES/ GROUPS	No	No	No	Yes
FIXTURE COMPATIBILITY	HSLF1, HHSL2, HHSL2 HE, VTON2, VTOD2, SFHC2, SFHR2	HHSL2, HHSL2 HE, VTON2, VTOD2, SFHC2, SFHR2	HHSL2, HHSL2 HE, SFHC2, SFHR2	HHSL2, HHSL2 HE, HHUF4
OEM DATA SHEET	Click here for more information on this sensor	Click here for more information on this sensor	Click here for more information on this sensor	Click here for more information on this sensor

Industry-leading energy efficient lighting controls are rated for wet and cold locations.

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Featured Cold-Storage Projects

annual energy savings approaching

$80,000

US Foods

Industry giant US Foods partnered with Orion to update the company's fluorescent lighting to LED fixtures, which stand up better in cold temperatures. Initially, work was done in about two dozen facilities, but it soon expanded to US Foods' 60 facilities across the country.

Orion's LED lights allowed a US Foods facility in Little Rock to see annual energy savings approaching $80,000, while another project garnered $130,000 in annual savings.

$65,918

in annual cost savings

an annual kilowatt hour reduction of 502,396

Showa Marine & Cold Storage

Orion stepped in to replace Showa Marine & Cold Storage's legacy HID fixtures with LED high bay fixtures, which created an effect similar to going from standard-definition TV to high-definition TV with how much more the facility lit up.

This project enabled $65,918 in annual cost savings, an annual kilowatt hour reduction of 502,396, a load reduction of 180 kW, and an annual carbon dioxide reduction of 310 tons.

$77,866

in annual cost savings

an annual carbon dioxide reduction of 496 tons

Institutional Wholesale Company, Inc.

Based in Cookeville, Tennessee, Institutional Wholesale Company replaced their legacy metal halide fixtures with Orion's LED high bay and LED cold storage fixtures with remarkable results in the facility's illumination and savings.

The project generated $77,866 in annual cost savings, an annual kilowatt hour reduction of 815,418, a load reduction of 95.5 kW, and an annual carbon dioxide reduction of 496 tons.

annual cost savings of

$141,754

Gordon Food Service

Gordon Food Service had a legacy lighting system consisting of 400w HID fixtures. Orion stepped in to replace them with our Full Range Dimming T8 and LED fixtures.

Gordon Food Services saw annual cost savings of $141,754, an annual kilowatt hour reduction of 1,865,179, a load reduction of 32 kW, and an annual carbon dioxide reduction of 1,134 tons.

a load reduction of **40.4 kW**

an annual cost savings of

$24,269

FoodPro

Maryland-based FoodPro was looking to replace their legacy high-pressure sodium fixtures with Orion's T8 LED high bay fixtures and basic motion controls.

This project resulted in annual cost savings of $24,269, an annual kilowatt hour reduction of 362,228, a load reduction of 40.4 kW, and an annual carbon dioxide reduction of 220 tons.

annual cost savings of

$23,968

an annual carbon dioxide reduction of **156 tons**

H.T. Hackney Co

Based in Tennessee, H.T. Hackney Co had their legacy metal halide lighting fixtures replaced with Orion's LED interior fixtures and standard motion controls.

The company saw an annual cost savings of $23,968, an annual kilowatt hour reduction of 256,622, a load reduction of 38 kW, and an annual carbon dioxide reduction of 156 tons.

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Why Orion?

Our Mission

Through environmentally responsible practices and innovation, Orion provides energy-efficient LED lighting systems and turnkey projects to help Fortune 500 companies nationwide save on operating expenses while improving their lighting.

Services Provided

- Comprehensive site assessment including lighting requirements and energy usage
- Engineering design for a custom system fit for each client's specific needs
- Site verification or technology demonstration measurement verification
- Project management including overseeing all phases of implementation with electrical contractor
- Review and management of electric bills and power quality
- Remote monitoring and control of our installed systems
- Utility incentive and government subsidy management
- Recycling in connection with retrofit installations

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Core Strengths

We set ourselves apart with:

Superior lighting products

Project support from beginning to end and beyond

Quick quote turnaround time

Fast shipping of components made locally or regionally

Socially and environmentally responsible practices

Flexibility across projects

Reduced Carbon Footprints and Returns on Investment

Orion believes in a sustainable future and works to reduce our own carbon footprint while helping customers reduce theirs. Not only does this help the environment, it also achieves cost savings in short order, with efficient LED lights paying for themselves in just a few years.

Contact Us

Ready to start saving on energy costs with an LED retrofit? **Let's connect** and discuss how we can help your cold storage facility shine.

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