

# The Waldinger Corporation Case Study



## About The Waldinger Corporation

The Waldinger Corporation is a full-service mechanical and electrical contractor with a reputation for delivering premier service in mission-critical and high-profile projects. Founded in 1906, the Iowa-based contractor has an impressive project list that spans 42 U.S. states and includes facilities like the Houston Astrodome, the Louisiana Superdome, and the Vehicle Assembly Building at Cape Kennedy.

As a mechanical, electrical, and structured cabling contractor, Waldinger employs more than 2,000 professionals, including 1,400 tradespeople who design, fabricate, maintain, and repair HVAC, refrigeration, electrical, communications, plumbing, piping, and kitchen equipment systems for commercial, institutional, and industrial facility customers.

Waldinger is a Panduit ONE<sup>SM</sup> Gold Partner.





**Company**  
The Waldinger Corporation

**Country**  
United States

**Business Challenges**  
Update the headquarters office lighting to an efficient, modern solution, while maintaining the aesthetic of existing light fixtures, and gaining first-hand experience in the rapidly developing field of PoE lighting.

**Innovative Lighting® Solution**  
GENISYS™ PoE Lighting System, including the GENISYS Intellidrive, 2x2 lighting troffers, and GENISYS PoE Lighting Software.

**PanGen® Solution**  
GenSPEED® 6 Category 6 copper cabling; Panduit® TX6™ PLUS Category 6 Modular Plugs and Panduit TX6 PLUS UTP Patch Cords

**Business Benefits**  
The PanGen infrastructure solutions, combined with LED and PoE-powered solutions from Intelligent Lighting enabled The Waldinger Corporation to install a lighting solution that performs better, is cost-efficient, and provided a proof of concept installation for the contractor.

## PoE Lighting Gives New Life to Old Fixtures

**Power over Ethernet and LED lighting join forces to salvage a unique lighting installation for The Waldinger Corporation's headquarters.**

### Business Challenges

The central Iowa headquarters office of The Waldinger Corporation has always captured attention. The unique space has been showcased in architectural magazines, where the publications highlight features like exposed ductwork, high ceilings, and pendant lights. Although those lights may be a thing of beauty, they had become a bit of a headache. The lights were difficult to maintain, expensive to operate, and in need of replacement. The company wanted to change the lights to eliminate the headaches, while also protecting the contemporary aesthetics the lights provided.

At the same time, the design-build company had also been looking at intelligent lighting as a solution to add to their portfolio. Combining LED luminaires, sensors and software with Power over Ethernet (PoE) and an IP network, drives new levels of control, intelligence, and performance. As a low-voltage contractor, Waldinger was already installing PoE and IP networks for their customers. Adding PoE-based lighting to the networks was a logical next step. Waldinger President Tom Mass, however, is a firm believer in gaining some first-hand experience with a new solution before offering it to his customers. "I won't put anything in a customer facility that we haven't tried here," Mass explains.

"Now we can show our customers how it works.

They can see it and experience it first-hand, and we can have confidence designing it into their projects."

Tom Mass

President, Iowa Electrical Division, The Waldinger Corporation

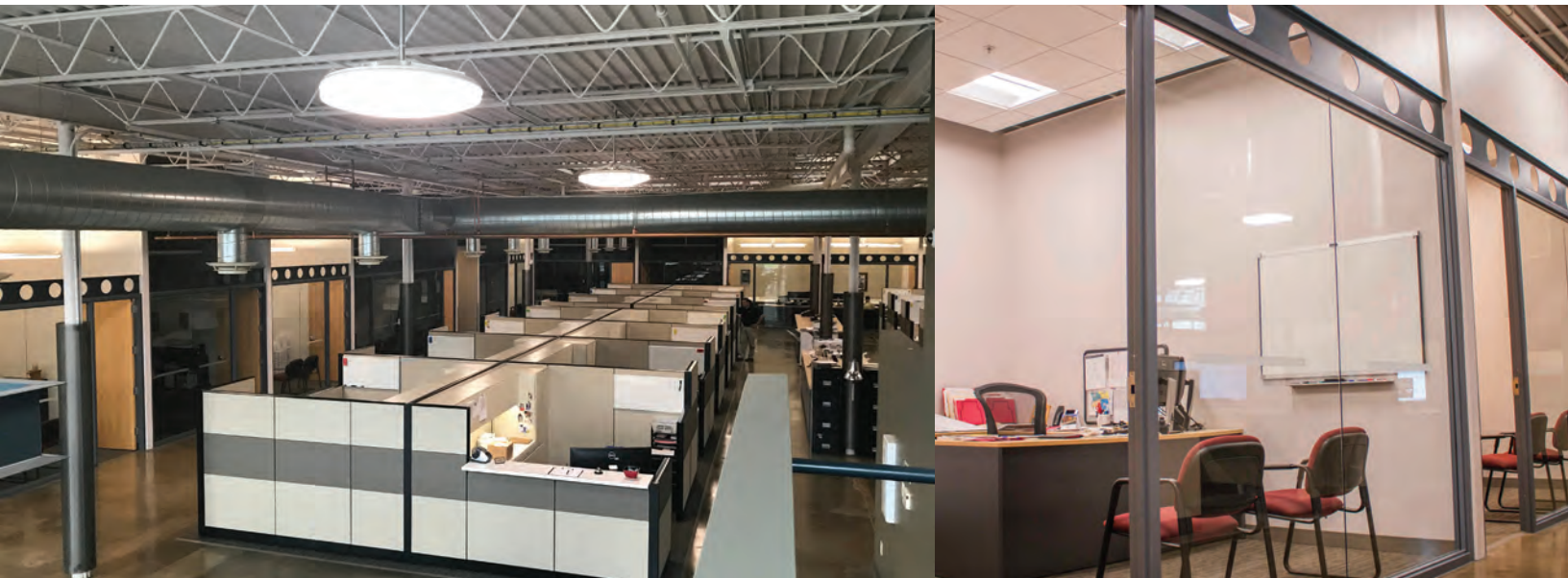
## The Solution

The solution was a retrofit of their existing lighting fixtures to an intelligent LED solution, powered by PoE, installed by their own team of low-voltage technicians.

Innovative Lighting, one of the first LED lighting manufacturers in the U.S., stepped in with their GENISYS PoE Lighting System, a solution that would meet Waldinger's goals of keeping the existing aesthetic, while reducing both energy consumption and operating expenses. Innovative Lighting supplied LED components that Waldinger installed in the existing fixtures, converting the lights to a PoE-powered LED solution.

The large pendant fixtures are the primary light source for an open office area (15,000 square feet) that houses 30 people. Private offices form the perimeter of the space. To further test PoE lighting, Waldinger converted the lighting in four of those offices to the GENISYS PoE Lighting System, with four 2x2 troffers within each space. Occupants control the color and brightness of the lights to create a space where each worker is most comfortable and consequently, most productive.

Innovative Lighting's GENISYS PoE Lighting System includes the GENISYS Intellidrive, a node that drives multiple lights, control, and sensors, all from a single unit. GENISYS software – an easy-to-use web-based interface – is also part of the solution, and enables control of fixtures either individually, or within a zone.



The PoE part of the solution is made possible by three Cisco Catalyst 3850 PoE switches and a PanGen Category 6 cabling system. General Cable GenSPEED 6 Cabling, terminated with Panduit TX6 PLUS Category 6 modular plugs, connects from the switch into each GENISYS Intellidrive. Panduit TX6 PLUS UTP patch cords then connect from each Intellidrive port to each fixture. According to Waldinger's Matt Hall, project manager, the PanGen solution was their first choice for the cabling infrastructure, knowing it would deliver quality and performance at the right price.

Waldinger's low-voltage team completed the installation and networking of the lights. "We did all the installation work ourselves," Mass explains. "Our low-voltage guys pulled the cable. They cabled it right the first time and it worked right the first time."

The PoE switches are housed in a rack in a controlled and conditioned area, which was selected based on its location relative to the length of cable runs needed for the lights. Today, that area is supporting only the PoE lights.

## Business Benefits

Since switching to the PoE lighting system, Waldinger has realized several significant benefits:

- **Financial savings:** Wattage consumption has been cut by 60% monthly; The large pendant lights were previously about 400 W each; today, they consume less than 100 W per fixture; In addition, maintenance costs are improved, as bulbs do not need to be changed routinely
- **Improved performance:** The previous lights showed lines and shadows behind the light lenses, which are now gone; the refurbished fixtures boast an even glow and light output; The lights also deliver improved control and data collection
- **Status quo:** The retrofit allowed Waldinger to maintain the aesthetics of the office and the look of the light fixtures contribute to the space
- **Lighting control:** The GENISYS PoE Lighting System gives users control over the light color and brightness in their space to achieve a level that is unique and right for each individual; Because the pendant lights are in a communal space, the company tweaked the light levels and colors until they reached a level that all occupants could agree on; Office dwellers can change light levels in their office as needed depending upon the task they are working on, time of day, and outside light levels

Perhaps just as critical, is the experience the contractor gained by installing the PoE lighting solution in their own space. “Now we can show our customers how it works,” Tom Mass says. “They can see it and experience it first-hand, and we can have confidence designing it into their projects.”

With the success of the implementation in the current building, PoE lighting is being planned for inclusion in a new headquarters building that is on the drawing boards, which will accommodate Waldinger’s growing operation.

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Innovative Lighting  
600 SW 7th, Suite F  
Des Moines, IA 50309

wstrong@innovativelight.com  
515.777.7449

[www.genisyslighting.com](http://www.genisyslighting.com)



General Cable  
a Prysmian Group Company  
4 Tesseneer Dr,  
Highland Heights, KY 41076

info@generalcable.com  
800.424.5666  
859.572.8000

[www.generalcable.com](http://www.generalcable.com)



Panduit Corp.  
World Headquarters  
Tinley Park, IL 60487

cs@panduit.com  
US and Canada: 800.777.3300  
Europe, Middle East, and Africa: 44.20.8601.7200  
Latin America: 52.33.3777.6000  
Asia Pacific: 65.6305.7575

[www.panduit.com](http://www.panduit.com)