LifeTimeLED®

CASE STUDY



Installer/ Partner:	**Tom Ries** *Linmore Partner* Innovative Facilities Solutions
Client:	**EnerSys**
Industry:	**Manufacturing** *(Battery Production)*
Location:	**Warrensburg, MO**

Embracing New Lighting Technology to Reduce Total Cost of Ownership

About the Installation

EnerSys, the world's largest battery manufacturer, is upgrading the lighting at its peak-capacity production facility in Warrensburg, Missouri.

This large-scale project includes the installation of nearly **1,000 new Linmore LifeTime LED 2x4 troffer door kits**.

> **"LifeTime LED troffers with the ReLuma® Module are easy to install and service."**
>
> **Tom Ries**
> *President/Owner* | Innovative Facilities Solutions



LifeTime LED Door Kit (LT10D)
Engineered to last the life of your building, not just a single lighting cycle.



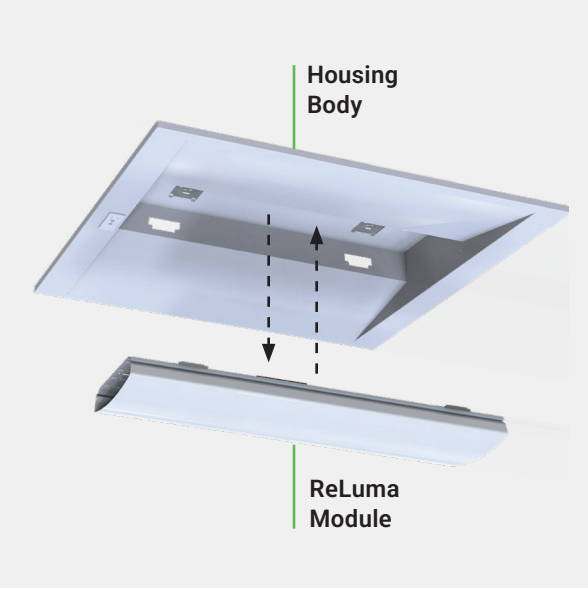
The difference is clear: The left-side photo shows the original lighting before updates. It is uneven with a harsh glare. The right-side photo shows the newly installed Linmore LifeTime LED door kit troffers — they are whiter and more uniform.

Challenge

LED 2.0 is about thinking beyond the next decade and seeing light fixtures as infrastructure that can last the life of a building.

Like most industrial facilities, EnerSys had grown used to the standard LED replacement cycle: every 5–7 years, the entire fixture may need to be replaced as drivers and boards reach end of life. For a 24/7 battery manufacturing facility, that cycle carries costs well beyond the fixture itself:

- **Labor:** Full troffer replacement requires a licensed electrician at an average hourly rate of $125–150.
- **Installation time:** Removing and reinstalling a fixture takes roughly 30 minutes per unit – multiplied across hundreds of fixtures.
- **Production environment:** Airborne residue from battery production settles above the ceiling grid, so opening up troffers for a full replacement means added cleanup time and cost.
- **Disposal:** Old fixtures have to be removed, palletized and hauled out for waste or recycling – adding more labor to every replacement cycle.
- **Recurring capital expense:** When fixtures fail or replacement parts are no longer available, the facility is faced with another full lighting project.



For a facility operating around the clock, the cumulative cost of repeatedly replacing an entire lighting asset can become significant over the life of the building.

Solution

The contractor installed Linmore LifeTime LED Door Kits without pulling down the existing troffer housing or opening up the ceiling grid.

The LifeTime LED is designed to make the fixture housing part of the building's permanent infrastructure. Rather than replacing the entire fixture when the light source reaches end of life, the ReLuma Module can be replaced independently – future maintenance involves changing only the light engine, rather than removing and replacing the entire troffer.

Traditional LED Troffers

- The entire fixture must be discarded and replaced every 5–7 years.
- Installation requires a licensed electrician.
- It takes about 30 minutes per fixture to remove, dispose of and install a new troffer.
- Replacement can disturb the ceiling grid, requiring cleanup.
- Full fixture replacement creates recurring costs.

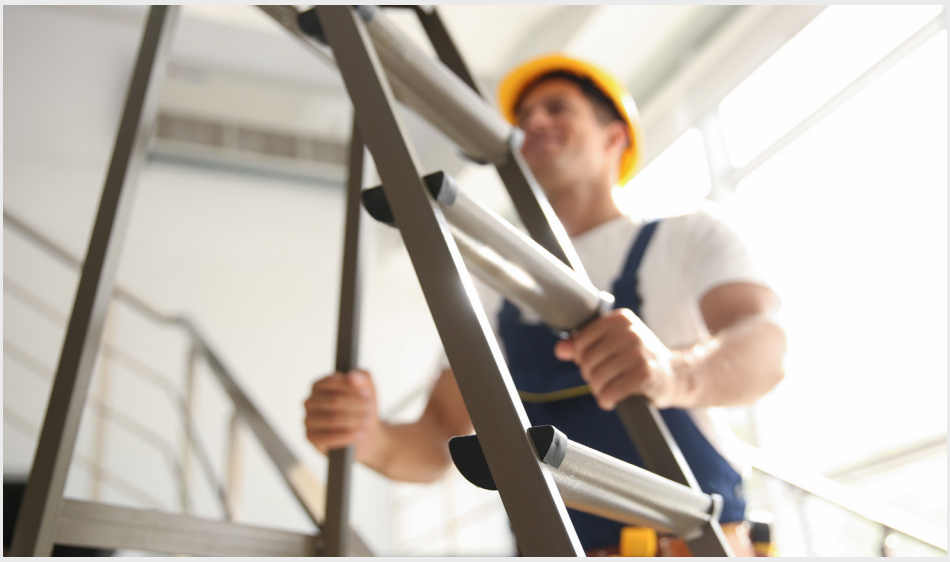
Linmore LifeTime LED

- The existing troffer housing remains in place.
- The plug-and-play ReLuma Module can be replaced with minimal downtime.
- The housing becomes part of the building infrastructure.
- No need to remove the fixture or open the ceiling grid.
- LifeTime LEDs have five color-temperature settings, adjustable with a dip switch.

The ReLuma Advantage

- Installing a ReLuma Module takes about 30 seconds.
- Installation can be done by facility maintenance staff or a lower-cost laborer.
- No removal and disposal of the fixture housing, greatly reducing landfill waste.
- Removed ReLuma Modules can be sent back to Linmore to be recharged.

> **"The building's facility staff can undo the lens, unplug the back of the module and put the new one in, and you're done in 30 seconds – that's a big deal."**



Results

The LifeTime LED delivers savings from the initial installation and continues to reduce costs throughout the life of the lighting system.

Economy	Simplicity	Productivity	Reusability
Up to 50% material cost savings compared with replacing traditional LED troffers.	Replacing the ReLuma Module does not require a licensed electrician.	The ReLuma Module can be replaced in about 30 seconds, reducing downtime up to 90%.	The existing fixture housing remains undisturbed, which reduces landfill waste.

These efficiencies can help reduce the initial project investment and support a faster return on investment. However, the real value of the LifeTime LED extends well beyond the initial payback period.

> **“It’s the cost of ownership of the lighting asset, not just the sticker price.”**

The real story lies in total cost of ownership. Over a 30-year period, the LifeTime LED can deliver up to 70% lower total cost of ownership compared with conventional lighting solutions. Facilities can reduce recurring material, labor, maintenance, disposal and cleanup costs.

For a 24/7 manufacturing environment like EnerSys, that long-term difference can be significant. Instead of funding full-fixture replacement projects, facility teams can maintain the existing lighting infrastructure with a faster, simpler and less disruptive module replacement process.

Lower Total Cost of Ownership Over the Life of the Building

Rather than measuring the project solely by the initial cost of the installation, the LifeTime LED allows EnerSys to consider **the total cost of owning and maintaining the lighting asset.**

The cost comparison takes four key factors into account:

1. **Energy savings**
   The LifeTime LED uses lower-wattage LED technology, creating ongoing energy savings.
2. **Replacement labor**
   ReLuma Module swaps take about 30 seconds and can be performed by facility personnel.
3. **Full-fixture replacement cycles**
   EnerSys reduces the need to replace entire lighting fixtures over the life of the facility.
4. **Facility disruption**
   ReLuma Modules can be replaced quickly with minimal disruption.

WE INSTALLED 991 LIFETIME LED 2x4 DOOR KITS. OPERATING 24/7, THEY ARE PROJECTED TO SAVE AN ESTIMATED 436,864 KWH PER YEAR – ROUGHLY $43,686 ANNUALLY AT A BLENDED RATE OF $0.10 PER KWH.*

** This is a conservative estimate, calculated at medium wattage settings. Since many fixtures are being run at lower wattage, actual savings should be greater.*

Why Linmore

- **Long-term relationship and trust** | Tom Ries has worked with Linmore's founder for years, going back to the original concept behind the LifeTime LED.
- **A genuinely unique and patented design** | The ReLuma Module lets a facility replace only the light engine, not the entire fixture, treating lighting as permanent building infrastructure rather than a disposable, recurring-capex commodity.
- **Flexibility built in** | Five color-temperature settings via dip switch give facilities flexibility in the field.
- **Serviceability** | The modular design allows facility maintenance teams to handle future light-engine replacements without the labor and disruption associated with full-fixture replacement.
- **A partner who stands behind the product.**

> "What's best for the customer, not what's best for Linmore or me – that's what I always hang my hat on."



Looking Ahead

The EnerSys installation project continues with additional work on the horizon. The LifeTime LED is also positioned to support future lighting projects by allowing facilities to treat lighting infrastructure as a long-term asset rather than a recurring full-fixture replacement.

To learn more: scan the QR Code, contact your Linmore representative or visit: linmoreled.com/lifetimeseries/

WINNER FACILITIESNET 2026 VISION AWARDS

Linmore
2360 S Orange Ave | Fresno, CA 93725
559 485 6010 | info@linmoreled.com | linmore.com

Linmore

All specifications are subject to change without notice. Please visit linmore.com for latest information. All values are typical or design values and series averages. Actual performance may differ as a result of end-user environments and applications. Consult Linmore with specific inquiries. Copyright © 2026, Linmore LED Labs, Inc. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Linmore.

Updated: 2026/11/18