

**CASE STUDY** | **Manufacturing**

**C&R**  
**LED Conversion an 'Obvious Right Decision'**

**APPLICATION** – Shop Floor, Offices      **PRODUCT** – High Bays, Flat Panels, Flood Lights      **LOCATION** – Groveport, Ohio

**OPPORTUNITY**

C&R Inc., a stainless steel welding fabrication business, discovered that half of its energy usage wasn't from the arsenal of electric welders, shears, press brakes and other metal fabrication power equipment, but lighting.

This revelation surfaced when the company looked to replace the 20-year-old plant's original lighting system. Tired of the cost and maintenance of replacing burnt-out and failing bulbs and ballasts, C&R sought answers and a bid from a local electrical supplier. The vendor recommended replacing all 91 units of 400-watt Pulse Start Metal Halide (PSMH) fixtures with fluorescents.

"On review, we did not believe the exposed bulb fluorescent fixtures they proposed were appropriate for our shop environment," said Don Saunders, C&R project manager. "Not only would the project require extensive wiring changes due to different fixture positioning, but we'd still have the issue of replacing degrading bulbs and ballasts."

"We were astounded to discover that lighting comprised half our electricity usage," Saunders said.

Equipped with this new-found knowledge, C&R sought a lighting solution that tapped multiple avenues of savings in addition to improving illumination for its employees at the 55,000-square-foot plant.

Saunders and team were delighted to learn that LEDs had advanced considerably – and gone down in price – in the 20 years since buying their first bulbs from Torrance, Calif.-based LEDtronics.

"Since we had a prior relationship with LEDtronics as a supplier of small indicator lamps, we reviewed their offerings," Saunders said. "We quickly saw that LEDs had matured to be the most desirable solution."



*Ohio company is "now all LED with zero regrets, zero compromises, zero complaints"*

**SOLUTION**

C&R was presented with multiple options and a luminaire schedule, which enabled them to compare shop floor lumen levels of different fixture scenarios.

"We ultimately chose a solution to replace our existing fixtures one for one since this would require minimal electrical modifications, allowing us to complete the install in-house," Saunders said.

The solution more than doubled C&R's shop floor lumens and increased fixture dispersion,

greatly reducing shadows.

In Saunders' words, "We are now all LED with zero regrets, zero compromises, zero complaints."

"Our complete conversion to LED started with replacing shop lights and exterior lighting, and culminated with replacing all office fluorescents with ultra-thin, edge-lit LED panels," he said.

"These changes have made a huge difference in our shop, providing not only more light, but a better-quality light – more comparable to daylight. This is especially welcome in the winter months when all the shop doors are closed, eliminating any natural light enhancement."

C&R's bottom line also has seen a positive difference. Beside the elimination of maintenance costs, energy savings is more than half over the 400W PSMH and ballast, according to the company. Reduced energy usage, alone, calculates to a three-year payback, sweetened by AEP Ohio's energy efficiency program award.

Additional savings are achieved with C&R's lighting system now being maintenance-free.

**SPECIFICS**

- **Customer:** C&R, Inc.
- **Location:** Groveport, Ohio
- **Customer Website:** <https://www.crproducts.com/>
- **Sales Representative:** Regional Sales Solutions
- **Story URL:** <https://www.ledtronics.com/Media/PressReleases.aspx?pressID=392>
- **Product Part Numbers:** HBL004-200W-XPW-101WD  
CLL2X4DB-72W-XPW-101D  
FDL003-3X50W-XPW-101W  
FDL002-50W-XPW-101W
- **Photo Courtesy:** C&R, Inc.
- **Story by:** David Dickstein



*LEDtronics high-lumen, low-profile high bay luminaires replaced burnt-out and failing bulbs and ballasts*