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# LET THERE BELIGHT

#### MODERNIZING ONE OF THE MOST UNDERAPPRECIATED ESSENTIALS FOR THE ROAD

by Gary Wescott photos by Gary & Monika Wescott

f all the amenities afforded by traveling in an RV, one particular luxury we often take for granted is the ability to simply flip on the lights. As we continue on the project of Restoring an Old Friend, our 1981 Terry travel trailer was entering the dark ages. Its lights were showing their long use, with burned out ballasts and dead tubes.

Years ago we had replaced the lights in our back-roads campers with the stylish Optronics Pulsar 12- and 18-inch dual-fluorescents. We liked the smooth rounded corners and compact design.

Now it's not that the Optronics fluorescents don't produce plenty of light, but technology is changing and the industry is moving in the direction of using only light-emitting diodes in RVs. One company that has blazed the trail in diode technology for the RV market is Star Lights, making those old incandescent and fluorescent lamp fixtures easily replaceable with LED fixtures.

LEDs use much less energy than this old-school lighting, allowing trailer batteries to last longer when not plugged in. As a bonus, they produce considerably less heat. Measuring a comparable normal dual-tube compact fluorescent left on for several hours and the same fixture with replacement Star Lights Revolution T5-12 LED tubes, we found

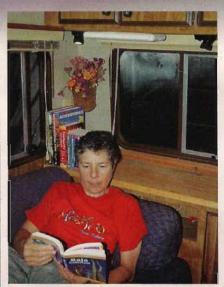
as much as a 20° F difference. Plus, Star Lights LEDs are often direct-replacements for OEM fixtures.

Installing the Star Lights LED tubes isn't difficult, and if necessary, there's help from the company's tech line. The swap can be done without removing the existing lights from the ceiling if you don't mind working upside-down. All necessary wire nuts and quick-disconnects are supplied with each lamp. In the case of our Optronics fixtures, small pop-rivets needed to be drilled out to remove the ballast cover.

After isolating the ballast, which is no longer needed, wires from the harnesses supplied by Star Lights were spliced into power (positive) and ground (negative) and the switch. We shortened wires to reduce bulk under the ballast cover, and we reused the small quick-connects from the Optronics fixtures. Star Lights supplies quick-connects, but they are larger.

We also used Quick Cable butt connectors that have built-in heat shrink, though the supplied wire nuts would also work. The ballast cover was replaced and pop-riveted. With the new LED tubes in place, we connected the small plugs to the harness.

If you are using incandescent bulbs, Star Lights offers a large selection of replacement LED bulbs. According to



Optronics Europa-Ultra Bright reading lights over the bed, sitting area and the dinette add a modern functional touch.

Star Lights, incandescent bulbs can degrade and lose as much as 60 percent of their "designed luminous output" after just a few hours. They also require up to 90 percent more amperage to run than do LEDs. Replacements include common usages like turn, stop and running lights on trailers and tow vehicles. For example, we found a Revolution Wedge 250 Natural Light LED bulb the perfect fit for the dim incandescent light in the stove hood. Now we can really see what's cooking! And LED bulbs rarely

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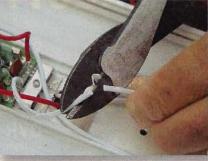
burn out. We've had LEDs on our truck going on 11 years and 130,000 miles.

For an additional touch of modern lighting, we installed flush-mount Optronics Europa-Ultra Bright reading lights over the bed, sitting area and the dinette. To mount these compact adjustable lights, it was simply a matter of drilling a 1/2-inch hole where we wanted the new light to be mounted, and then using a "snake" (a stiff piece of wire), feeding negative and positive wires to the hole. (Of course, be sure to turn off all power when doing this.) We used butt connecters to steal power from the existing OEM 12-volt DC wiring. To further reduce heat and amp draw, we replaced all the bulbs in the Optronics Europa-Ultra Bright reading lights with Star Lights Revolution 1156 single contact bayonet-style bulbs.

Finally, we installed the unique Star Lights Brilliant Light fixture. By adding plug-in accessories, the LED Brilliant Light can be controlled by a dimmer, a day/night sensor or a motion sensor. It



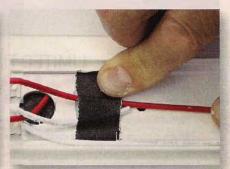
1) The ballasts covers on our Optronics were attached with small pop-rivets that needed to be drilled out.



2) We cut the ground wire from the ballast to the switch.

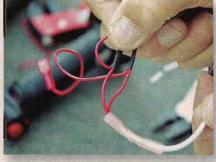


3) We reused the small quick-connect from the Optronics wiring. Star Lights supplies quick-connects, but they are larger.



4) We taped down any unneeded wires from the ballast to help keep them out of the way.

5) We used QuickCable butt connectors with built-in heat shrink for maximum reliability.



6) The Star Lights harness wires were spliced into the Optronics negative and positive switch wires.



8) Star Lights were a direct replacement for the original compact fluorescent

also has a night-light feature - All this is in one unit, (single or double), with three replaceable LED strength options.

LEDs are bright and robust, ideal for areas where we wanted plenty of light, like over the sink and countertops. For the dinette, we still preferred the softer Optronics compact fluorescents. The motion sensor Smart Light 1000 and 2000 series for indoor/outdoor use are perfect for the porch and entry steps.

Now that we have plenty of light, we could see that many other details in the trailer were really starting to show their age. Latches, window blinds, cabinet knobs and hinges and new carpet will give a fresh and much brighter look in the next installment of Restoring an Old Friend.

Optronics Inc., (800) 826-5483, www.optronicsinc.com. Circle 202 on Reader Service Card.

Star Lights, (800) 883-5444, www.starlightsinc.com. Circle 203 on Reader Service Card.



7) We used a PowerFast pop-rivet gun to reattach the ballast cover, making sure it is secured.

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9) The Optronics Pulsar 12- and 18-inch dual fluorescents were direct replacements for the old Thin-Lites in the Terry.



10) A "snake" was used to feed wires to the new Optronics reading lights.



11) Star Lights Brilliant Light fixture can be used with plug-in accessories including a motion sensor and a night-light.



**12)** The Star Lights Brilliant Light fixture accepts three different power level LED cards.



13) The Optronics stylish Pulsar compact fluorescent light fixtures add a modern look to any RV.



14) The Star Light replacement LED bulb, left, is clearly much brighter than the incandescent.

