

An Illuminating Addition to Drs. Foster & Smith's Aquaculture Coral and Marine Life Facility

Drs. Foster & Smith Educational Staff



Corals growing and thriving under LED lighting?!?

You bet! Throughout the past few months, Drs. Foster & Smith's Aquaculture Coral and Marine Life Facility has put a variety of [LED \(light-emitting diode\) lighting fixtures](#) to the test. Not only have the LED fixtures proven to be extremely cost-effective, they've also proved intense enough to allow a variety of corals to flourish.

Kevin Kohen, Director of LiveAquaria®, continues to oversee the LED implementation. He is extremely pleased with the results thus far. The results did not come as a complete surprise, however, since Kohen has already enjoyed success with LED lighting on his own reef aquariums. "The aquarium industry has benefited greatly from the LED technology becoming much more prevalent in industrial, commercial, home, and other applications," he said. "I am confident that this technology will eventually become the standard, replacing the use of T-12, T-8 and even T-5 fluorescent bulbs, as well as energy-hungry metal halide lights."

Beneficial, promising, EXCITING results

Constantly evolving, leading-edge LED technology perfectly complements the Facility's progressive nature, as well as the doctors' desire to provide aquatics hobbyists with the healthiest, most vibrant aquatic life available. LED lighting has also brought the Facility many important benefits. According to Kohen, LED lighting has proven to be:

- **Energy-efficient** - LEDs have lower energy costs: for the lights themselves, and for the Facility's climate control. Because LEDs run cooler than other types of lights, the Facility's air conditioning system runs less frequently, and fewer chillers are being used on coral systems throughout the building.
- **Cooler** - LEDs give off significantly less heat than metal halide or T5 lights. Virtually no heat transfers into aquarium water, and the ambient temperature stays lower.
- **Safe** - 24-volt LEDs use 24-volt transformers; they are actually safer than a standard 110- or 220-volt light.
- **Convenient** - Most LEDs last for 50,000 hours (approximately 10 years). This eliminates bi-annual replacement of metal halide and T-5 bulbs, saving time, effort, and expense.

Kohen also reports that LEDs have allowed lighting customization not previously possible with other lighting types. "We have the ability with some units to ramp up and then turn down the intensity during the day and even fine-tune the specific coloration and intensity of the lights over certain corals when needed," Kohen said. "This feature is very beneficial in helping us acclimate newly acquired species brought into the Facility, then slowly adjust them to full lighting intensity and finally offer them for sale in the Diver's Den® section of the LiveAquaria.com website." Further, Kohen said that intense blue LED light continues to enhance coral coloration, especially with deepwater *Acropora* spp., LPS corals, polyps and mushrooms. "The results so far are very promising," he said.



Earth-friendly technology continues to give great results

With the addition of several LED fixtures from Ecoxotic, EcoTech, Acan and other industry leaders, the Facility will become more environmentally friendly overall (by using less energy and generating fewer burned-out bulbs). And, of course, the Facility's ultimate goal remains to provide hobbyists nationwide with optimally healthy, spectacular aquatic life.

Based on his ongoing experience implementing LEDs throughout the Facility, Kohen offers practical advice for aquarists considering making the LED switch. First and foremost, he advocates taking the proper steps, just as one would when changing out bulbs in a metal halide system. Also, he reminds aquarists to be aware of existing corals' photo-acclimation requirements prior to implementing LEDs. Changing lighting intensity or spectrum without taking preventive measures can quickly result in coral damage.

LEDs are truly the "wave of the future." Each passing day brings advances in LED design and intensity, further solidifying LEDs' popularity and prominence in the overall aquarium hobby. And as industry leaders such as Drs. Foster & Smith's Aquaculture Coral and Marine Life Facility continue to provide conclusive evidence of LEDs' possibilities, aquarists may confidently incorporate LEDs into their home reef setups.

Visit our [LED Lights](#) category to compare the wide array of LED Lights available for your aquarium.