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CRESTRON HOME®

THE IMPORTANCE OF PROPER LIGHTING DESIGN

Words: Ed Wenck

Lighting design is a complex undertaking. It's an art that's become even more technical, especially with the introduction of tunable LED luminaires.

Mark Greenawalt, who's a senior project manager and lighting design engineer for the Arizona firm Creative Designs in Lighting, understands the inherent issues: "One needs to understand what the environment needs to be, what the architect's intent is, and what the user's expectations of that space are. And then use lighting to fulfill that." He illustrates the point: "Think of the ambiance in, say, an Olive Garden versus a cafeteria. If you use those two examples, everyone knows exactly what you mean by it and how different they are, but they're both perfectly appropriate for that environment."

The job's gotten a bit easier of late: There's now a broad variety of tunable LED fixtures that can remove elements of the need to actually program those lights. But before one dives into any lighting project, understanding the various applications of illumination, the effects of color and temperature, and how to integrate tunable light with other lighting and shading solutions is key.

UNDERSTANDING THE VARIOUS APPLICATIONS OF ILLUMINATION, THE EFFECTS OF COLOR AND TEMPERATURE, AND HOW TO INTEGRATE TUNABLE LIGHT WITH OTHER LIGHTING AND SHADING SOLUTIONS IS KEY.







The Right Light for the Space

"There's basically three pillars of lighting that are important," explains Greenawalt. "Ambient lighting to illuminate, accent lighting providing the drama, and then the chandeliers and so forth — the interesting fixtures — they're the 'sparkle.' If you have those three elements working in harmony, it's a well-balanced design."

Even when those elements are represented, however, Greenawalt sees errors.

"The big mistakes I encounter are missed opportunities," he says. "For

example: A brick wall or stone wall is just beautiful when you can 'graze' it with light. And that means designing the light to be located close to the surface — you pick up that texture of the masonry."

"When I go into a space, I first ask myself, what do I want to accent?" says Greenawalt. "What's important? Maybe in the living room, it's the artwork on the wall, it's the fireplace mantle, it's the couch, it's the coffee table. Ambient light for the whole space alone won't do it."

Greenawalt recalls a moment early in his career: He was working with a more experienced designer to light a valuable painting, a ship at sea under a bright sun. After taking a stab at it himself, the elder designer began tweaking the light. "He put a small spotlight on the sun, another on the reflection on the water, and a wider-angle light to illuminate the sails," Greenawalt explains. "The effect was incredible — it actually looked like the painting was back-lit, as if the light was emanating from the painting itself."



"A brick or stone wall is just beautiful when you can graze it with light."

Greenawalt and his colleagues take that concept and apply it everywhere — finding the right blend of ambient, accent, and natural light, and applying the proper treatment to an entire space, inside and out.

The Whole Package

The other layer of all of this, of course, is the ability of tunable LED light fixtures to change over the course of the day, mirroring certain aspects one would find in natural daylight. The trick here, again, is knowing what to use where — tunable LEDs may not be necessary in each and every location. “It’s all about managing the total space, making sure that you’re enhancing the vision of the building,” says Greenawalt.

When those LEDs are installed, configured, and programmed thoughtfully, matching the natural Circadian rhythms of a human being, they can be beneficial, according to Greenawalt. “We are naturally tuned to ‘cool light’ during the day (blue skies) and ‘warm light’ during the night (such as amber firelight). There’s some real scientific research that is getting into measuring the level of how much blue light you need to perform better and it’s quantifiable,” he says. Ultimately, the right blend of lighting, coupled with proper controls (including automating some aspects of the system), will make for a home that’s as satisfying as it is stunning.

Whatever the mix, a big part of ensuring that all of this will work properly involves doing a detailed lighting design at the very outset of the project. “There is so much coordination that really needs to be done with lighting. You need to communicate with the interior designer, need to know what color the carpet is, what color the walls are, where is the artwork going? You need to be in cahoots with the architect.

Am I placing lights in a vaulted ceiling? Are there beams going across? What’s the size of the ceiling cavity I have to work with? Can I put in a big light — a fixture that’s very deep — or do I only have two inches of space to work with?”

Finding a Pro

Many smart home professionals may not be skilled in these advanced concepts, so how do you find the right professional for the job?

With decades of experience under his belt, Greenawalt shares what he believes makes for a strong lighting designer. “There’s a certain amount of wisdom you gain,” he says, “Wisdom to know what fixtures and what type of applications can achieve the results that you’re looking for.” Greenawalt initially thought the secret to good lighting was getting the right quantity of light in any given room. He quickly grasped, however, that several other factors were critically important, from color to temperature (“warm” or “cool” light) or how well a lamp renders the color of what it’s illuminating.

“Certifications are one way to find a firm dedicated to the science and art of lighting,” says Greenawalt, “and any reputable lighting designer will be happy to explain what all those initials mean.” But Greenawalt firmly believes that a body of work, a portfolio of satisfied clients, and the strength of a firm’s references are what truly determine a company’s quality.

“I think the track record, the experience of a good designer says so much more than any certificate is going to say.” ■



PHOTOGRAPHY: MARK GREENAWALT, CREATIVE DESIGNS IN LIGHTING

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