

Shedding Light on the Design Process

Key questions and considerations for planning your lighting scheme.



Many exhibit managers and designers take an elementary approach to lighting. Their philosophy: a light is a light. Just find a bulb, maybe a pretty fixture and plug it in.

Yes, this approach is simple, but not particularly effective. If you really want to take full advantage of exhibit lighting – to power up your exhibit design, lend image, draw attention – the process takes a bit more effort. The key: start your planning early. Lighting needs to be on your list of exhibit design considerations – before you finalize your floor plan. This timely attention has several benefits. You can:

- Avoid “pimples on the architecture.” Instead of adding fixtures as an afterthought, lighting systems can be hidden or worked into the exhibit structure. The result: more “magical” lighting effects and a more attractive design.

- Save time and money. Any redesign adds cost. By planning early, you will avoid retrofitting lighting systems into existing architecture.

- Plan efficiencies. By identifying lighting needs at the start of the project, you can find prudent solutions – energy-efficient lamps that reduce power costs; easy-to-install lighting systems that lower labor costs; readily available lamps to avoid rush charges when bulbs break at a show.

- Capitalize on design aspects. As discussed in a previous article (“Lighting: The New Basics,” *Exhibitor*, December 1993), each light source has unique attributes that can enhance your exhibit design. For example, lighting can “warm up” product displays while “cooling down” architecture, play up the vibrancy of corporate colors or products, or create movement or a “rhythm” of light to

attract attention.

From both a design and cost standpoint, these benefits for early planning can be substantial. But where do you begin? The process starts with identifying your lighting design goals.

Setting lighting goals

The aesthetics of illumination is very subjective. Just like the term “rock music” means different things to different people – heavy metal, easy listening, Top 40 – lighting preferences run a broad spectrum.

True lighting design is a combination of art and science. From an art perspective, a designer uses patterns or layers of illumination as a painter uses a brush. The light works to emphasize colors, enhance exhibit architecture, draw attention to product areas, control traffic flow . . . the list goes on. Scientifically, a lighting designer delves into technical aspects – from engineering the right amount of light to creating a pre-wired system that helps control costs. Both elements are critical to your results.

To begin the design process, make a preliminary list identifying your expectations for exhibit lighting. What do you want lighting to achieve? Your goals may include:

1. *Attract attention.* If this is a goal, be sure to specify your intentions. What areas do you want show goers to notice? What areas don't you want them to notice? Is there a hierarchy? Do you want certain signage or products to draw the eye first? Are you hoping to draw attention from a distance?

2. *Generate excitement – or not.* What type of atmosphere do you want to create with your exhibit? Just as a sunny or cloudy day can affect moods, lighting can be designed to produce psychological effects. Lighting can make your exhibit dramatic and exciting, or soft, diffuse and calming.

3. *Improve visual performance.* Think of

what visual tasks will be performed in the exhibit that have special requirements – writing leads, viewing small items, reading literature, seeing computer screens. Also identify any possible problems like glare on computer screens, monitors or graphics.

4. *Direct focus/traffic flow.* Perhaps your exhibit requires visitors to pass through in a certain order. Just as the lights coming up at the end of a movie encourage people to leave the theater, controlled exhibit lighting can help direct traffic by varying levels of brightness.

5. *Allow for flexibility.* How will your lighting needs change from show to show, season to season? Perhaps you need to light various sizes of products, depending upon the show. This may require a lighting system that easily switches from floodlights to spotlights. Also, keep in mind what type of control system you need – now or in the future. Will you want dimming capabilities, spotlights for presenters, roving or flashing lights?

6. *Provide safety or security.* Are you planning to have an enclosed theater, steps or raised flooring? If so, you'll want to have special lighting to ensure visitors note any hazards.

7. *Avoid any detrimental effects of lighting.* These goals may include protecting historical documents from ultraviolet rays or not wilting your plants with heat output from lamps.

Defining lighting objectives

Besides establishing your goals for lighting, there are certain considerations that you need to address. All lighting designers need to keep these four lighting objectives in mind:

1. *Form a pleasing composition.* Think of light in “layers.” For your exhibit, the first layer would be any existing light in the exhibit hall – daylight or general hall lighting. Then with each switch that's turned on in your exhibit, you've added another layer: overall exhibit lighting, recessed lighting, product accent lighting, front- or backlit graphics, decorative lighting, edgelighting, monitors or computer screens.

How you combine and control all these layers will create the dynamics of lighting design. Which areas should be emphasized? Which are less important? How will the layers of light interact and affect each other?

2. *Create a specific mood/image/atmosphere.* This objective will follow with the goals that you have set – whether you want your lighting to generate excitement, attract attention or provide a calm escape on the show floor. Along with your exhibit design, lighting will affect visitors' perceptions of your company.

You need to identify your corporate design parameters – how you want your company to

continued on page 46

continued from page 48

be perceived. But also keep your ultimate clients in mind: the show attendees. Outrageous, rock-concert lighting may go over well with creative audiences, but conservative doctors, engineers or technical people may feel such designs are too contrived. Think of what your customers' comfort levels will be and how they will react to your space.

3. Provide visual comfort. Glare is the biggest enemy to good exhibit lighting; it is distracting, annoying, visual "noise." Since the eye is naturally drawn to the brightest light source in your field of view, you want to make sure your lighting designer takes steps to avoid these distractions and ensure visual comfort in your exhibit. There are several types of glare to combat:

- Direct glare – light shining directly in your eyes from exposed lamps.
- Reflected glare – light bouncing off a surface, screen or shiny product.
- "Veiling" reflections – glare that covers something you should be seeing, like the "hot spot" on a laminated graphics or on a magazine page.
- Disability glare – light that produces a hazard, such as a spotlight shining in your eyes as you go down a staircase.

4. Meet code requirements. Electrical requirements will vary from hall to hall. Your lighting system will have to meet standards at each facility. Make sure to check into the regulations before you begin purchasing equipment and building lighting systems. The best advice for compliance: Only use components that are U.L.-listed, and send drawings to show halls in advance.

Final considerations

Identifying your goals and objectives will help you begin the design process. But there are three more factors that you need to think through before any designs are suggested.

1. Who will design your exhibit lighting? There are many options for lighting design consultation: your exhibit designer, exhibit house's electrician or an outside lighting specialist may all be well-versed to tackle your project. You can even request design ideas from manufacturers' sales representatives.

But the person you select as your lighting specifier will greatly affect the outcome. An electrician may be more inclined to look solely at mechanical aspects of light – how many watts, what type of wiring, etc. And while sales representatives can tell you all about their products, remember, they are there to sell, and the "free consulting" may have a hidden

cost, monetary or otherwise.

Who you choose for your lighting specifier will depend upon the amount and type of lighting design you desire. After you've outlined your goals, you now have to find someone who can best implement them. For each prospective lighting specifier, consider the person's:

- Philosophy in regard to lighting design. Each person has a different twist. Some are more conservative, methodical, by the book; some are theatrical, flamboyant, off the wall. You have to find someone who fits with your goals.
- Education and experience level. How much do they know about available products? Lamp manufacturers release products monthly – all with unique improvements from optical control to energy efficiency. A lighting specifier who knows what's on the market and how to apply it to your needs will be your best bet.
- Fee. Naturally, design fees will range with experience, training and services provided. Your best bet: Contact and interview a number of sources to be able to compare fees for simi-

specifically for lighting.

A good rule of thumb for basic exhibitry: Create a lighting budget equal to 10 percent or 20 percent of your exhibit construction budget. For example, if your new exhibit will cost \$100,000, plan to spend \$10,000 to \$20,000 for lighting. Such a lighting budget should cover three types of costs:

- Equipment costs – lamps, fixtures, control systems, wiring, crating, etc. As with any merchandise, lighting supplies have a trade off between cost and quality. Cheaper lamps may not last as long or be as energy efficient. For example, metal halide lamps are more expensive than quartz lamps, but quartz lamps draw more energy, increasing your power costs. You and your lighting consultant will need to weigh these factors.
- Operating costs – installation and dismantle labor, electrical wiring and power, replacement costs. The upfront purchase price of equipment is very tangible; less concrete is how much these items will cost you over time. Work with your lighting specifier to identify operating costs and to find solutions to keep these charges in control, such as creating a built-in electrical system that will simplify labor and save money show to show.

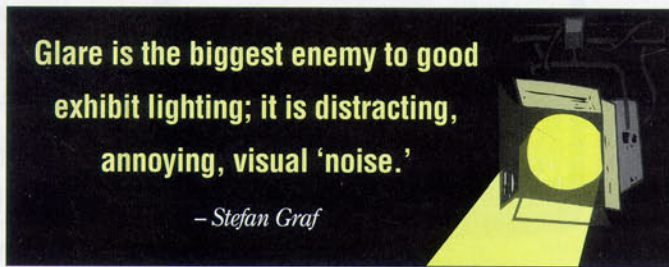
• Consulting fees – if you hire a lighting specialist. As you examine all of the costs going into your lighting budget, keep your goals and objectives in mind. Remember, only you can decide what the value of good lighting is to your exhibit's appearance, attraction level and sales effort.

3. What is your time frame? With new exhibit construction schedules being squeezed tighter and tighter, sometimes there may not be time to accomplish all you want to with lighting before the first show. Your lighting specifier may be able to come up with a system that can easily expand, as time and budgets allow.

The experience level of your lighting designer will also affect the time element. Someone who knows the industry, what products are available and where to find them, what suppliers are reliable and have items in stock, etc., may be able to save you time and money.

Planning an effective, efficient lighting design for your new exhibit project is not as simple as just making a trip to a lighting supply store. But the extra planning efforts can pay off in a lighting scheme that can enhance your exhibit's design, save money and grow with your exhibit program.

– *By Stefan Graf, design director, Illuminart and Fantasee Lighting, a lighting firm located in Ypsilanti, MI. Graf conducts lighting seminars at the annual Exhibitor Show.*



lar services and experience. (Be sure to ask specifically about exhibit lighting experience.)

Where can you find lighting specifiers to interview? There are several starting points. The most accessible: Look in the yellow pages under lighting consultants. Another option is to contact lighting associations for membership lists. There are two major industry groups, both located in New York: the International Association of Lighting Designers (membership is limited to lighting designers and is by invitation only) and the Illuminating Engineering Society (membership is open to anyone with a lighting interest, including manufacturers, designers and engineers).

A final resource area for finding a lighting specifier: trade publications. These include *Lighting Dimensions*, *Lighting Design and Application*, *Architectural Lighting*, *Architectural Record Lighting Supplement* and *International Lighting Review*.

2. What are your budget requirements? Most companies haven't a clue how much to budget for exhibit lighting. Take an example from another industry – retail stores. Many retailers have noted a correlation between lighting and sales; sales rose when they improved their lighting. As a result, they establish a budget