

## **Q&A for Lighting University - The Power of Light: Going Beyond Illumination. June 22, 2017.**

**Q: How do I go ahead with learning lighting design and how do I build a portfolio that shows my inclination towards lighting design?**

**A>>**

Attend a great school for lighting design, and while you're there - design as much as you can. But - as someone that hires a lot of young designers – what I'm really looking for is someone who truly understands how light works. And the way you get that knowledge is by spending as many hours as possible looking at, and more importantly, playing with light.

You NEED to see with your own eyes how light works and how subtle changes (like angle of light, viewing angle, color temperature, etc) can alter how you perceive a material or a finish (this is the "playing" part). The hours spent (at least 5 hours a week) will help you build a visual library in your brain of how light really works. I can teach a young designer almost anything – but only time will give someone this incredibly important knowledge.

**Q: Is there any books on lighting design or can we have update on emails from you on light design?**

**A>>**

There are a number of very good books about lighting design – many including information on today's advances in technology. However, I prefer some of the older books (pre-LED's) because they focus more on design, and less on technology.

Lee Watson's *Lighting Design Handbook* was at my side all through graduate school – it's a great all-around resource for all types of lighting design. William Lam's *Perception & Lighting as Form gives for Architecture* is also excellent. Again, an older book, but a great resource to learn about using light to enhance the perception of space. A more modern favourite is from our friends at Speirs and Major – *The Art of Lighting and Architecture*.

**Q: Do Lighting Designers routinely work with Industrial Designers to guarantee success - essentially making sure that the right products are designed and manufactured.?**

**A>>**

We often work with lighting fixture manufacturers (who employ industrial designers) to make sure the fixtures they make are solving the problems we lighting designers need to solve. Again, because Lighting Designers have a unique understanding on how light influences everything we perceive – lighting fixture manufacturers should take advantage of our input to make their products better and better.

**Q: How do you distinguish not just the monetary benefits of a retrofit, but the quality improvements that the LED lighting retrofit can provide?**

**A>>**

LED's can offer huge improvements in lighting quality over other sources like fluorescent or metal halide. However, the quality of lighting produced by some LED's can also be detrimental to a design.

I've found the only way to be sure LED's will work for an application is to test them myself – ensuring the color temperature, dimming quality, and flickers are all within an acceptable range.

**Q: If doing a light design program for a city, what would you focus on?**

**A>>**

I'd re-examine all the currently held assumptions regarding how much light people really need to live and function in an urban outdoor environment. In my experience, cities that have converted their street poles to LED's – are over lit. The high color-rendering of today's LED's allow us to see things more easily – which means we don't need nearly as much light as we did with previous sources.

**Q: You mentioned some resources for inspiration and/or lighting reference. Can you share some that you prefer or reference?**

**A>>**

Sure...mother nature. Just go outside and look around...everyday there are beautiful examples of lighting – some quite complex like a multi-colored sunset, and some very simple like light reflecting off the surface of a pond. A lot of what we bring to our lighting design work comes to us through inspiration from nature.

**Q: How can I sell the idea to my client, we need a light designer?**

**A>>**

You can certainly *talk* to them about the importance of good lighting design, but the best way to convince them is by *showing* them (remember – seeing is believing!). Let's say you're designing a restaurant – find one with great lighting, and one with bad lighting – and go have a drink with your client at both. Point out the differences (what's clear to you, may not be to them) – the care in the layout and aiming, the use of layered lighting, the smart decisions that saved money without sacrificing lighting quality. If you point these things out to them – then they should start to understand the value hiring a lighting designer can have.

**Q: What are your recommendations for choosing a supplier correctly?**

**A>>**

Getting a good lighting supplier can often make or break your lighting design. What you want is someone (a person, not just a company) that really understands not just the fixtures they're selling, but also what you're trying to achieve with your design, and who is willing and able to work with you to solve any lighting problems in an affordable way for the Owner. If you get a submittal you're not happy with – ask for a meeting with the supplier that prepared it, along with the Owner, and ask them to explain why the substitutions they suggested are smart. If they're not, get another supplier.

**Q: How much important is render or 3d view in the project? it is important to the client?**

**A>>**

Renderings are an important tool for conveying the intended look of a space to a client. But those renderings become even more powerful when backed up with a lighting mock-up. Not only will a mock-up help inform what's shown in the rendering, the Owner will believe it more after they've seen the mock-up.

**Q: Do you use any metering equipment during aim/adjust or is it primarily an intuitive process?**

**A>>**

I do use light meters occasionally – but for most of the projects I design, I trust my eyes to help guide light levels, contrast, and composition. After all, that’s how everyone else will experience your work – with their eyes!

**Q: How much importance you place on energy efficiency?**

**A>>**

A lot! Thankfully, LED lighting has matured to the point where I can design a space with multiple layers of lighting, and still meet very stringent energy codes. That wasn’t the case even 5 years ago. Now we can have great lighting AND be energy efficient!

**Q: How is the market for smart/connected lighting & related solutions going to be in near future? say 5 years from now?**

**A>>**

While I don’t have a crystal ball, what is clear is that smart lighting will play a bigger and bigger role in our lives. I think we’ll see a much greater market share for residential consumer grade smart lighting – especially as products like Amazon’s Echo or Google Home allow us to control all aspects of our home infrastructure.

I also think change is coming to commercial lighting – where lighting fixtures won’t just provide light, but will be a platform for sensors and other technology that provide additional data on use, occupancy, temperature, and many other aspects of a space. This will likely change (and not necessarily for the better) how we all specify and coordinate lighting fixtures. It’s likely to get a lot more complicated – which means we’ll have to work even harder to ensure the lighting within a space is great.

**Q: Is it better to play using theater lighting for varying quality or use standard luminaires for architectural lighting?**

**A>>**

Nearly any light fixture will do. Even a flashlight that you carry in your bag is helpful. What’s important about “playing with light” is that you experience the subtle differences in perception that can only be seen first-hand.

**Q: What is the best approach to integrate the human centric lighting into the lighting design?**

**A>>**

I guess I think all lighting is “human centric” – that’s what makes lighting design both fun, yet incredibly challenging. Remember, every decision we make as lighting designers has to do with enabling, manipulating, or enhancing how humans visually experience the space we’re designing.

**Q: How do you coordinate your design ideal with life safety and code requirements?**

**A>>**

All of our lighting designs must meet the minimum requirements of life safety (such as adequate light at stairs, or paths of egress) as well as energy codes. But these requirements don't dictate the design direction – we start with the project's goals, analysis, and central concept – and then develop a design that meets those goals while also achieving these life-safety and code requirements.

**Q: How can we enable this dialogue between Lighting Designers, Suppliers and Industrial Designers/Mechanical Engineers? R&D teams would like to learn very early in a development process what the Lighting Designer's requirements are based on Architect's goals**

**A>>**

This is tough, because at least for many of the projects that I design, there's not enough time for a lengthy R&D discussion with a manufacturer/industrial designer. With rare exception, I only have enough time to specify what's available at that moment. Any discussions I have with a manufacturer's R&D team usually focus on my wish list for fixtures or technology that I want to use on future projects.

**Q: When participating in a tender for a lighting project, what are the most important areas to focus on for a lighting company to differentiate itself from the competition. ( the majority of the LED lighting industry feature homogeneous products)**

**A>>**

If by lighting company, you mean lighting fixture manufacturer – then the key is for the manufacturer to understand what the lighting designer really needs. Too often in my experience, manufacturers don't invest enough time getting feedback directly from lighting designers. The ones that do, and who then incorporate those suggestions into their products usually receive my specification.

**Q: Are there any lighting sources/ tech that has been phased out by new tools/ tech?**

**A>>**

The efficiency and flexibility of LED lighting has certainly reduced the rationale for using many of the light sources we've been specifying for decades – including fluorescent, high-pressure sodium, and metal halide sources. The one source that LED's still haven't beaten out (in terms of lighting quality) is incandescent lighting – but with emerging "warm dim" technology, it will only be a matter of time.

**Q: Kindly advise what is the basic requirement for a light designer and are there tools for a perfect design?**

**A>>**

Unfortunately, I don't think there is ever a "perfect" design – you can always do better. If you can learn to accept this, and you constantly force yourself to see and analyse the lighting around you every day – producing a visual library of light in your mind- you'll possess one of the most important tools any lighting designer can have.

**Q: Is there any chance to still use incandescent lights? Maybe in lights for decoration? or there is no chance to use?**

**A>>**

Yes! I still specify incandescent lighting on many projects – mostly restaurants, hotels, and residential projects – where warmth and great dimming quality is really important to making the

space feel and look great. Due to very strict energy codes – the use of incandescent needs to be limited and strategic. As you suggest – decorative fixtures, which provide excellent ambient light – are the perfect application for incandescent lighting. I do hope though that technology will soon advance to the point where even this limited use of incandescent lighting can be replaced with warm and beautiful LED's.