THE VALUE PROPOSITION

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THE LIGHTING PROFESSIONAL’S EXTRA BURDEN
The knowledge and skills needed to specify equipment are not enough

Over the past 30 years, lighting has emerged as a profession unto itself, distinct from related disciplines such as architecture, engineering and interior design. With this emergence has come the development of undergraduate and graduate programs at several universities around the world, specifically designed to prepare students for the professional practice of lighting. In turn, beginning in the 1990s, certifications for lighting professionals were advanced, most notably the Lighting Certification offered by the National Council on Qualifications for the Lighting Professions. In more recent years, the International Association of Lighting Designers has begun the development of a certification for architectural lighting designers, the CLD or Certified Lighting Designer credential.

One commonality among all of these efforts is the development of a set of core competencies that each organization or educational institution believes are important to the professional practice of lighting. These core competencies typically arise from an analysis of practice or job requirements. What must a professional know or be able to do in order to practice lighting; and how can a professional demonstrate mastery of this knowledge or ability? The list of core competencies advanced by the IALD states a lighting designer must:

Demonstrate skill at designing lighting solutions that satisfy project requirements and design intent so the solutions perform as expected... [a lighting designer must also be able to] apply the principles of light to meet relevant technical criteria.

So, what are the principles of light, and how does a lighting professional demonstrate to a client their ability to apply these principles competently? Currently in lighting practice there are three principles that seem to dominate discussions of lighting:

• Has the lighting designer met recommended levels of horizontal illuminance?
• Has he or she done it within an allowable lighting power density (i.e., watts per square ft)?
• And, has he or she done this within the allowed lighting budget, payback or return on investment constraints?

We can simplify the core competencies listed above by stating that a lighting professional must be able to demonstrate that the proposed lighting solutions provide value to their client. In his book, *Value Metrics for Better Lighting*, Dr. Mark Rea defines value as the ratio of the benefits provided by a lighting installation divided by the cost. He further lays out a number of metrics that can be used to assess or measure these benefits.

Objective assessment is a critical component of a professional education or credentialing system. A lighting professional, and by extension a credentialing organization, must be able to objectively assess whether or not the professional’s work achieves the benefits desired by their client. If lighting is to advance as a profession that provides value to customers, there need to be well-established metrics or measures that quantify the many benefits that lighting can provide. These metrics need to go well beyond the lumen and the watt. And these metrics need to be included in professional education, development and credentialing systems.

ONE CLIENT’S GOAL
As an example, a client may desire that the lighting in a building promote the health and well-being of the building’s occupants. This is a broad goal or value that, at first, may seem difficult to assess. However, when presenting a lighting design for this building, a lighting professional must be able to objectively demonstrate to the client that the proposed design provides benefits that will help to achieve the owner’s goal. To do this, the
lighting professional must understand and be able to apply research into the effects of lighting on circadian entrainment—an objective, surrogate measure of health. He or she must also be able to use the results of research to assess whether or not a proposed lighting solution has achieved the desired outcome. Does a combination of the daylighting and electric lighting provide the characteristics (e.g., timing, duration, spectrum, distribution and amount) necessary to promote this aspect of health, i.e., entrainment of circadian rhythms?

Metrics are available to objectively assess this aspect of lighting design, and must be understood and properly applied by lighting professionals in their practice. The Society for Light and Lighting in the UK held a symposium in July 2014 at which researchers and designers discussed many new lighting metrics and how they might be used by lighting professionals.

Lighting professionals in the 21st century must continuously keep abreast of the latest research; must understand how to apply this research to practice; and must be able to objectively assess how well their proposed lighting solutions provide the benefits their clients demand. While aesthetics are an important component of a lighting design, a profession cannot be built solely on subjective views of “quality.” Objective means of quantification must be built into everything a professional does.

It is clear, then, that when we develop undergraduate and graduate degree programs, credentialing systems and continuing education requirements, we must structure these not only to include the knowledge and skills needed to specify equipment, but also those needed to specify the benefits that lighting can provide. In short, a true profession must be able to quantify the benefits provided by its practitioners.

THE ROLE OF EDUCATORS

As lighting educators we must be committed to providing continuing and timely education to bridge the gap between research and practice. We must be able to translate the often confusing world of peer-reviewed journals to practical infor-
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Information that professionals can apply to practice. Education, as opposed to training, must bring research and practice together. It is a critical link for promoting the value of lighting and for advancing lighting as a profession.

We must make this education easy to access. It must fit seamlessly into the everyday practice of a lighting professional. It must be provided in manageable portions when and where it is needed. And most importantly, it must lead to greater value for society. If investments are not made to ensure that educational resources are based on sound research and designed to meet the needs of the emerging lighting profession, credentialing systems will not be effective in meeting their stated objectives. Education is the foundation of any profession and ultimately the foundation of its value to the public.

BREAKING DOWN THE WALLS

All too often lighting researchers write and present to other researchers, and designers to other designers. The walls between these two “sides” of the profession must be broken down and we must begin a dialogue where practice advises research, and research informs practice.

It would be an exciting first step to create a conference series, perhaps as part of LIGHTFAIR, where researchers and designers come together with the purpose of delivering higher value to society through lighting. Such a conference series would, I believe, form the foundation for valuable education and for furthering the goals of lighting professionals. This series could also inform the development of educational tools that would allow designers to critically analyze their work and help to ensure that researchers are focused on investigations that will ultimately advance the professional practice of lighting.

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