



## Matter of Fact

3Q15 Greetings to all,

As lighting designers we interact on many levels, often graphically and in black and white. A completed project reveals its color because of light. We seek to educate more about the nuances of light in [Matter of Fact](#).

The graphic above represents a unique project solution to a common challenge of creating **lighting quality** within a university residence hall student room, more on the project below. The graphic strategies below address the new USGBC metrics for *Lighting Quality*.

I hope you enjoy and learn from what you see below and I look forward to your comments.

To the special qualities of natural light autumn elicits!

Thank you,

**Debra Gilmore IALD, MIES**  
**Gilmore Lighting Design**

## Gilmore Interprets Visually

### LEED v4 offers one point for Lighting Quality

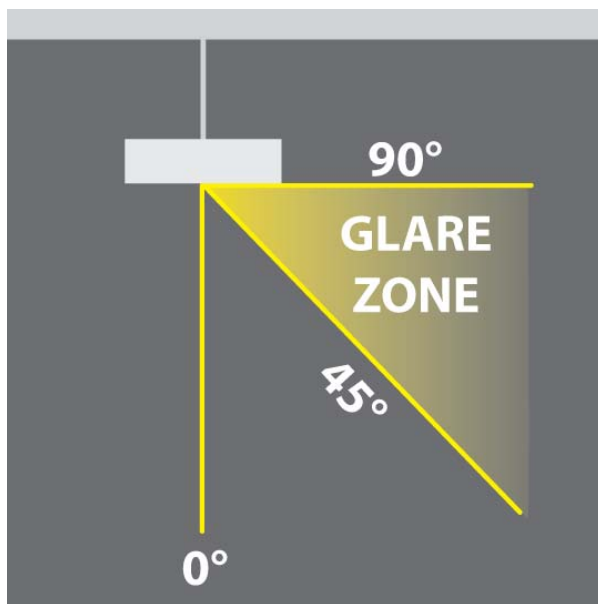
The v3 - LEED 2009 rating system had a Pilot Credit for Lighting Quality. This has now been combined with lighting control into the Interior Lighting Credit.

USGBC's intention,  
"To promote occupants' productivity, comfort, and well-being by providing high-quality lighting."

Gilmore's infographics below illustrate USGBC's 8 strategies (A-H) to achieve the Lighting Quality point. Pick four.

[USGBC Full Credit Library](#)

*While it may seem simple to distill, the reality is that these design strategies require a great deal of thinking, interpretation, and creative collaboration to accomplish results that will enable the owner to gain the Lighting Quality Point, while at the same time achieving an overall good design.*



## A. Avoid Glare

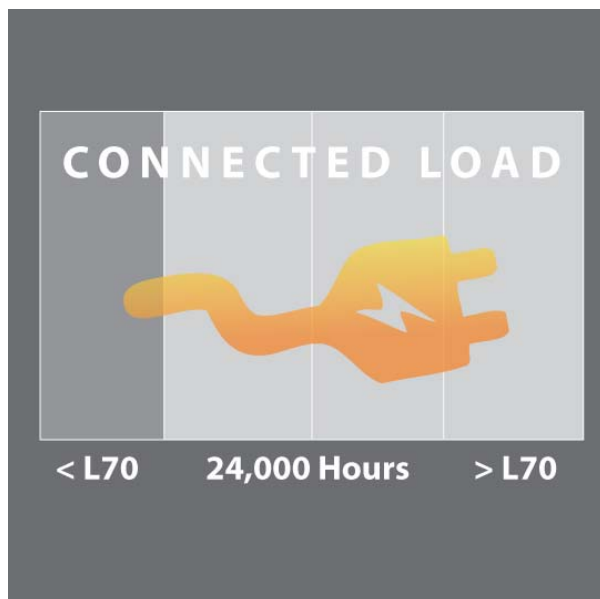
*"For all regularly occupied spaces, use light fixtures with a luminance of less than 2,500 cd/m<sup>2</sup> between 45 and 90 degrees from nadir.*

*Exceptions include wallwash fixtures properly aimed at walls, as specified by manufacturer's data, indirect uplighting fixtures, provided there is no view down into these uplights from a regularly occupied space above, and any other specific applications (i.e. adjustable fixtures)."*

## B. Pay for Good Color

*"For the entire project, use light sources with a CRI of 80 or higher. Exceptions include lamps or fixtures specifically designed to provide colored lighting for effect, site lighting, or other special use."*



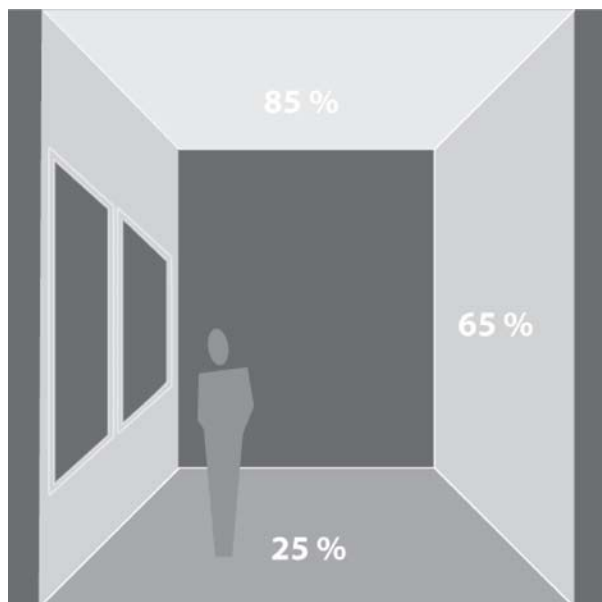
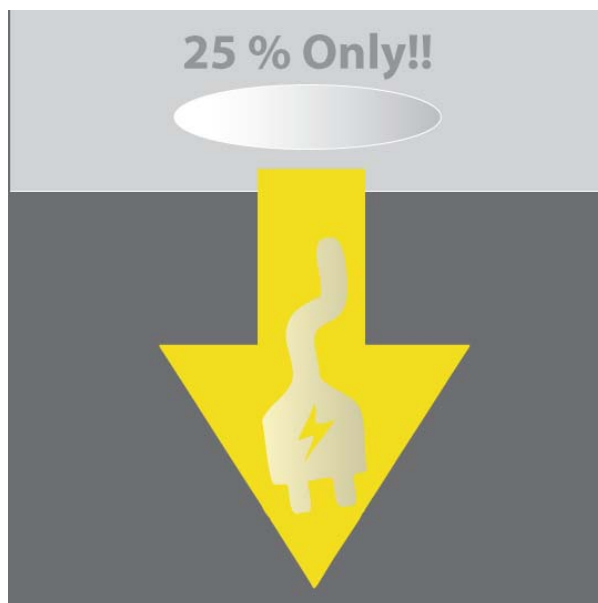


### C. Demand Long Life

*"For 75% of the total connected lighting load, use light sources that have a rated life (or L70 for LED sources) of at least 24,000 hours (at 3-hour per start, if applicable)."*

### D. Don't Just Downlight

*"Use direct-only overhead lighting for 25% or less of the total connected lighting load for all regularly occupied spaces."*

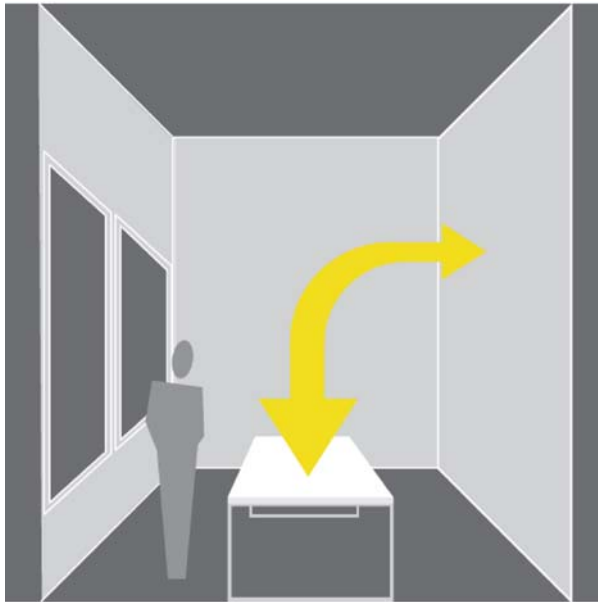
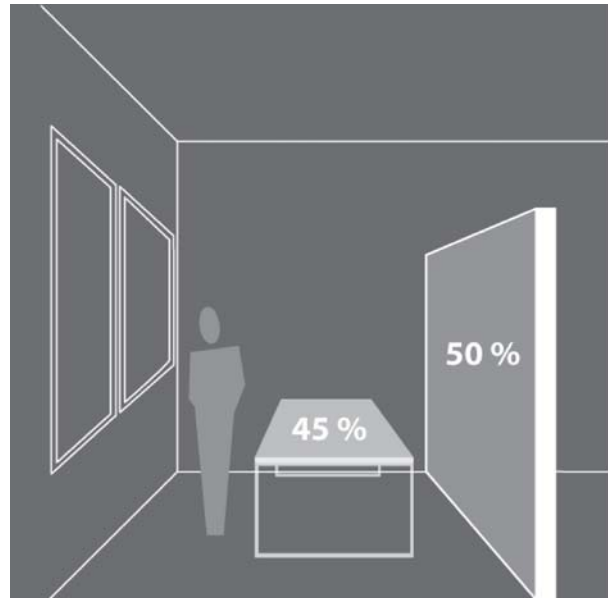


### E. Lighten the Surfaces

*"For 90% of the regularly occupied floor area, meet the following thresholds for area-weighted average surface reflectance: 85% for ceilings, 60% for walls, and 25% for floors"*

## F. Lighten the Furniture

*"If furniture is included in the scope of work, select furniture finishes to meet the following thresholds for area-weighted average surface reflectance: 45% for work surfaces, and 50% for movable partitions"*

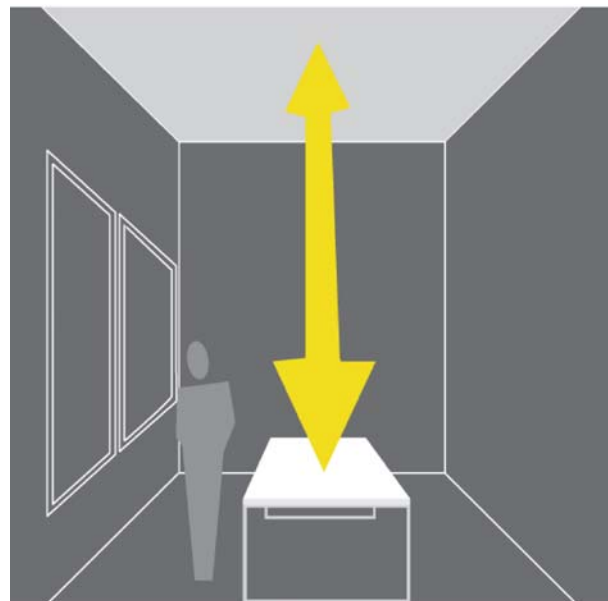


## G. Balance Task to Walls

*"For 75% of the regularly occupied floor area, meet ratio of average wall surface illuminance (excluding fenestration) to average work plane (or surface, if defined) illuminance that does not exceed 1:10. Must also meet strategy E, strategy F, or demonstrate area-weighted surface reflectance of 60% for walls."*

## H. Balance Task to Ceiling

*"For 75% of the regularly occupied floor area, meet ratio of average ceiling illuminance (excluding fenestration) to work surface illuminance that does not exceed 1:10. Must also meet strategy E, strategy F, or demonstrate area-weighted surface reflectance of 85% for ceilings."*



## In Progress - George Washington University Square 77



In 2016, GWU will open its largest residence hall built to date. Gilmore collaborated with the University and Ayers Saint Gross Architects & Planners for the 800 bed, LEED compliant project. Gilmore's design based exclusively on LED technology, was instrumental in changing GW fluorescent standards to LED.

Designed in 2014, Gilmore used lighting quality criteria to consider the dormitory room. Economies of construction dictated a centrally located fixture, and room functionality required general illumination. Gilmore designed a fixture for student appeal and to have low glare surfaces. Using greater light distribution towards the walls, makes the student function of 'lounging', visually more comfortable.



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