

PROFESSIONAL

LIGHTING

DESIGN



Magazine for
professional lighting design

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LED – the answer to everything?

PROFESSION

Lighting designers –
how important are they?



⇒ **A lesson learnt**

Brooklyn Navy Yard, New York/USA.

The entry courtyard to the new visitor and exhibit center at the Brooklyn Navy Yard welcomes guests with an intimate quality of light and human-scale fixtures. With many of the windows in the historic commandant's house blocked off by exhibits, custom light boxes transform the building into a warm presence along the heavily-trafficked street. The atrium bridging the old and new buildings is a glowing lantern. Architecturally integrated and concealed fixtures illuminate massive photographs and sculptural elements spanning the entire height of the three-story atrium. The building and its lighting are designed to achieve LEED Platinum certification.

Quoted from Linnaea Tillett's blog: "The LEDs Got Brighter"

An exhibition space holding light-sensitive archival objects needs a controlled environment. In the case of a historic Brooklyn Navy Yard building, that meant blacking out all the windows. But what about the outside? Our challenge was to reanimate what would otherwise look abandoned, and keep the look of the building. Our solution was a very tiny bulb above the top frame of each of the many windows; the building would never look uninhabited.

At the time we were brought on the project, the available LED technology was still very actively forming itself (as it constantly does.) Starting with an 11 watt bulb, we did a number of tests in the studio and on site. It was stunning that such a small wattage was WAY too bright. So we took it to a 6 watt LED and we put that up, and we still felt it was a little too bright. Down to a 3 watt – everyone was happy and we ordered all the LEDs and they were delivered to the site and we put them in...and it was waaaaay too bright.

Everyone stood there and looked at us and said WHAT DID YOU DO? And what we realized – and confirmed with the manufacturer – was that our 3 watt LEDs had indeed gotten brighter with advances in efficiency. The LED company said "Hey it's great! We increased the efficiency! The same wattage is giving out much more light!"

But of course more light is *not* what we wanted. And they didn't want to take them back. From the industry's point of view, we don't make things which are inefficient. We make them more efficient! In fact, there was no factory anymore with the dimmer bulbs in production. Is there a one watt bulb? No! In the end, we went with a dimming system.

What this illustrates is a relatively new concept the general public is now facing: wattage does not tell you anything about brightness and efficiency. Even though manufacturers were telling us that a 15 watt fluorescent was equivalent to a 60 watt incandescent, your experience when you screwed in that new bulb told you otherwise. I think people were just starting to get a grip on that when LEDs blew it all out again. The efficiency of an LED and the way it makes light is so unrelated to its wattage that you actually have to think of it entirely differently. You have to really re-imagine what light is.

I've been arguing for a while that it's a very difficult concept to understand abstractly – and that's because our association with wattage is so deeply ingrained. What really makes sense is to go out and buy one of each kind of light bulb and try it out at home so you can see it and remember it and start to make new associations. While you're there rethinking everything you've learned over a lifetime of seeing under incandescent A lamps, you can also start to absorb how a tube or globe, or any of the other many shapes of bulbs, changes the way that lighting reads.

Project team:

Client: Brooklyn Navy Yard Development Corporation

Architects: Beyer Blinder Belle

Landscape architects: D.I.R.T. Studio

