

LED LIGHTING – IN AND OUT OF THE STUDIO

Presenters:

David Simpson

Principal

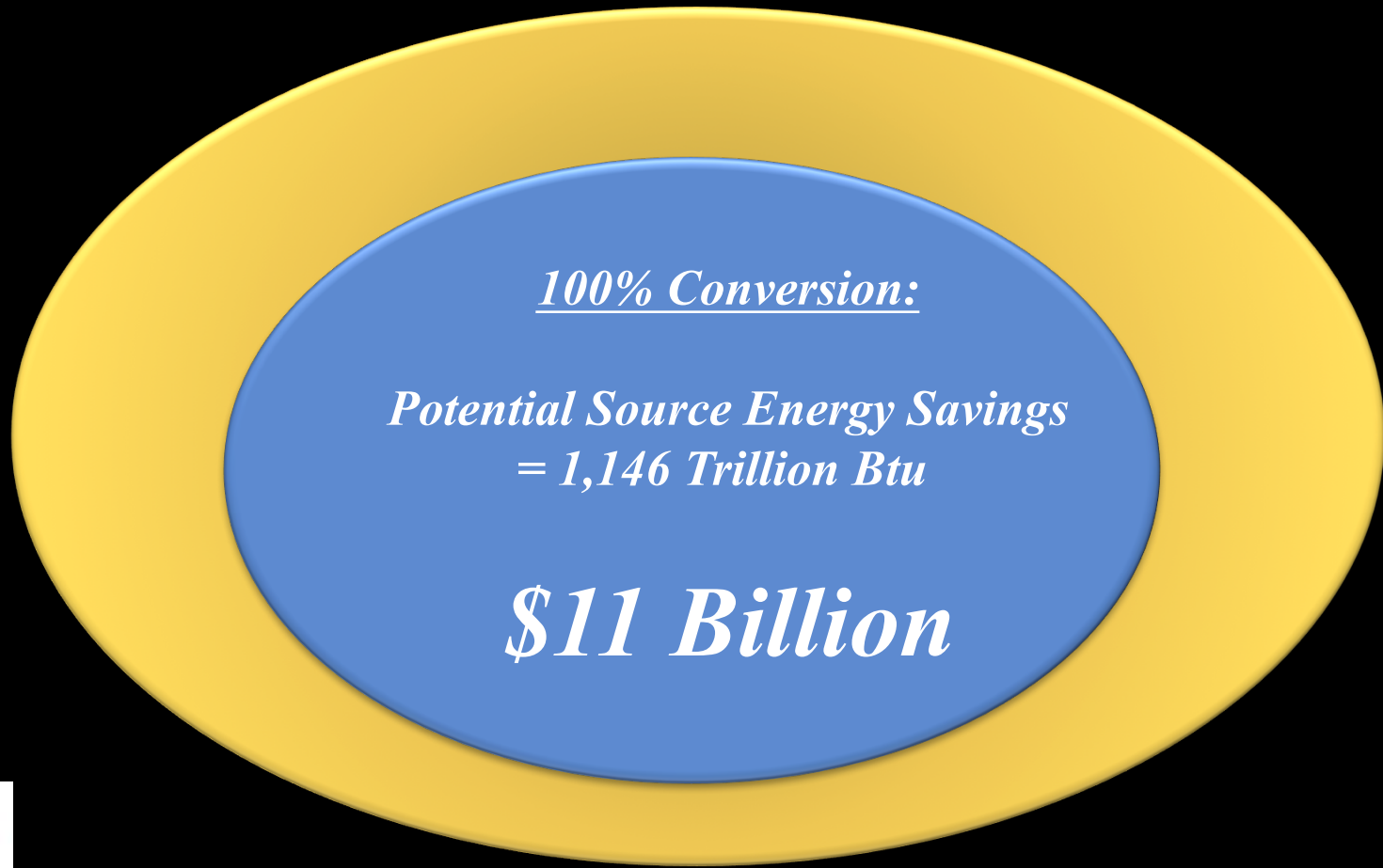
CM Buck & Associates, Inc.

Mike Brubaker

Head of Design

Associated Controls + Design

If the US converted ALL Linear Fluorescent Fixtures to LED



http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/led-adoption-report_2013.pdf

Approximately 2 Billion Fluorescent Sockets to be Filled!

30%

Lensed
Troffer



20%

Parabolic
Troffer



15%

Wrap



15%

Strip



10%

Volumetric/
Basket



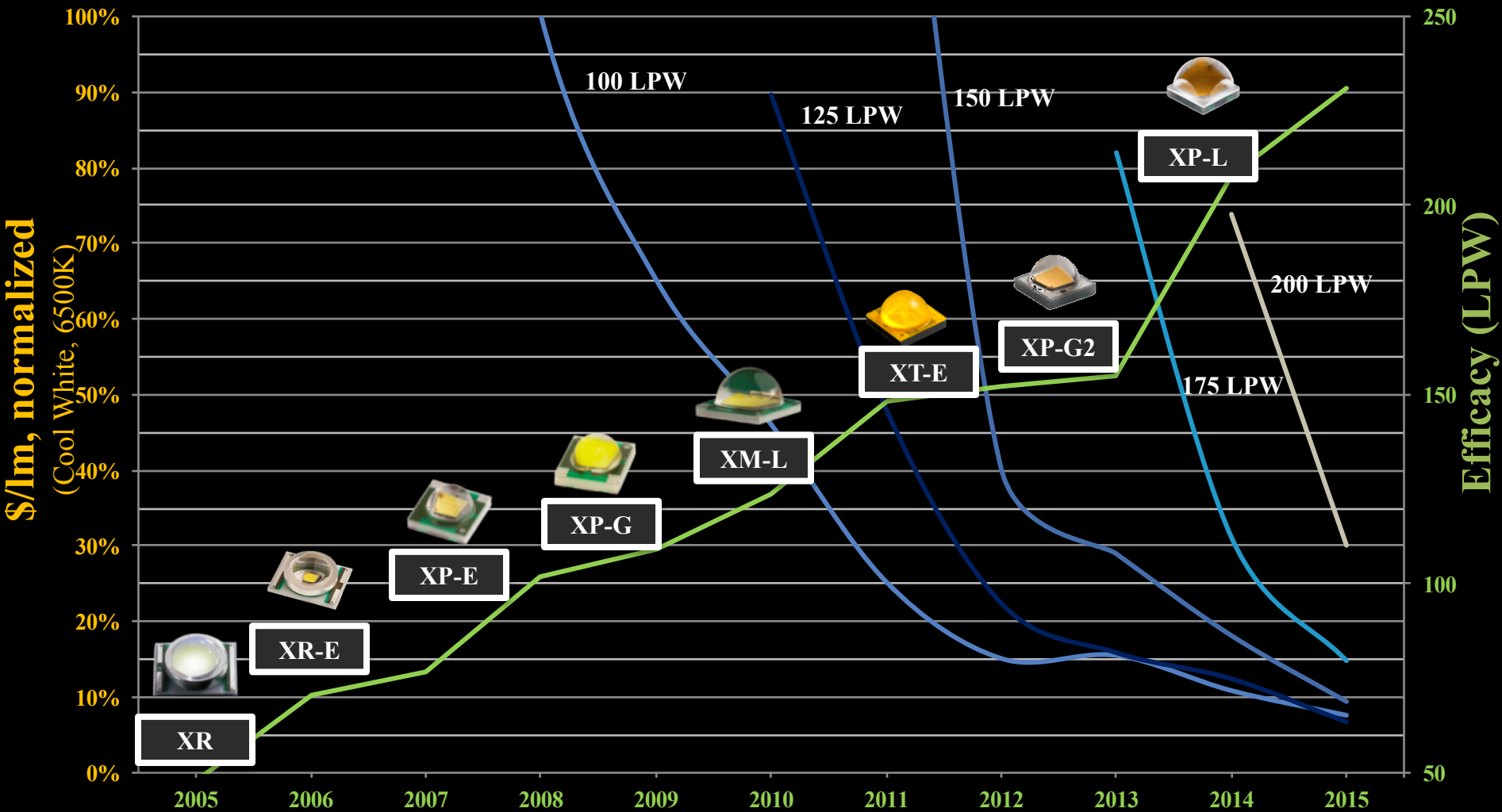
10%

Industrial/
Low Bay

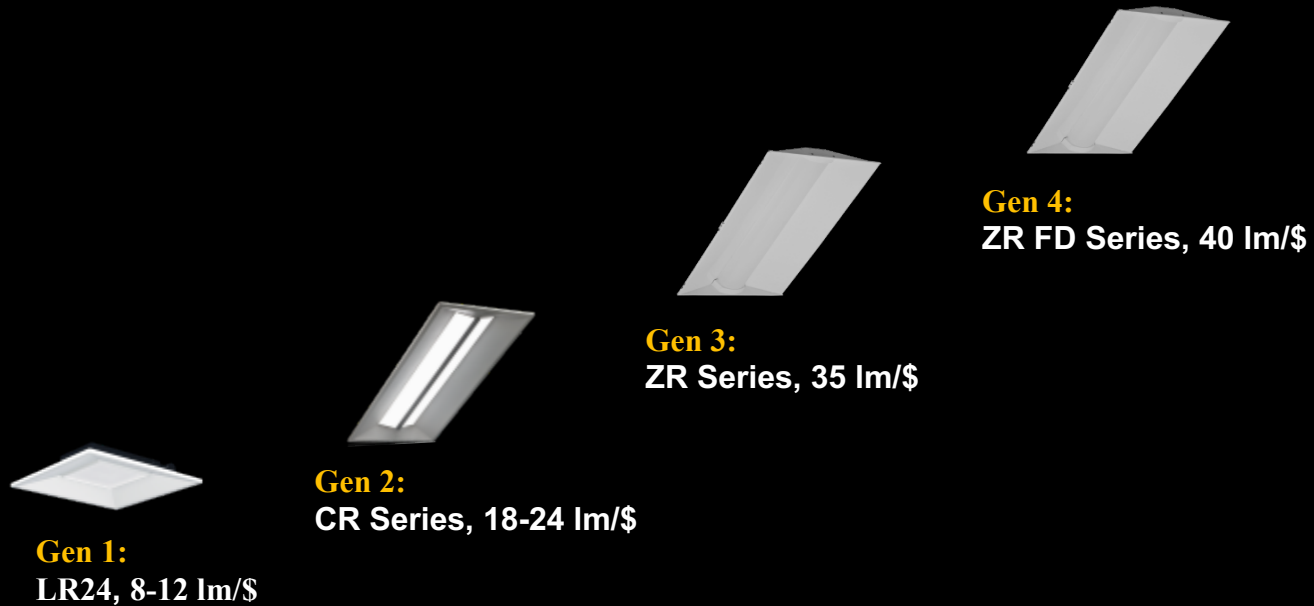


DataPoint Research Lighting 2012

Driving Lumen Affordability with Technology



TROFFERS



2008

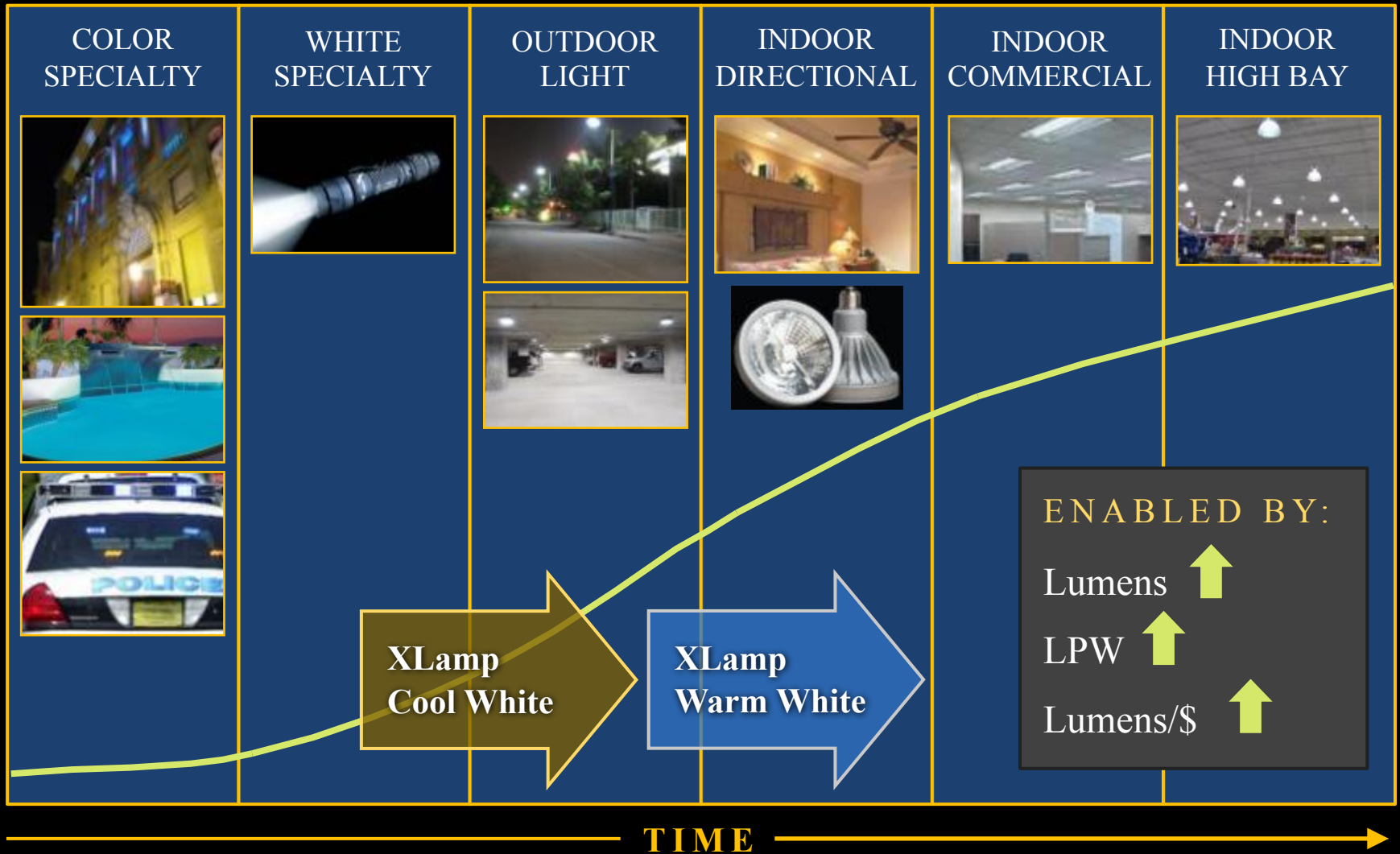
Innovative design and cost reductions improve lm/\$

Payback shortens from 4+ Yrs to less than 1 year

2017

Rapidly Opening New Markets

Market for LED General Illumination

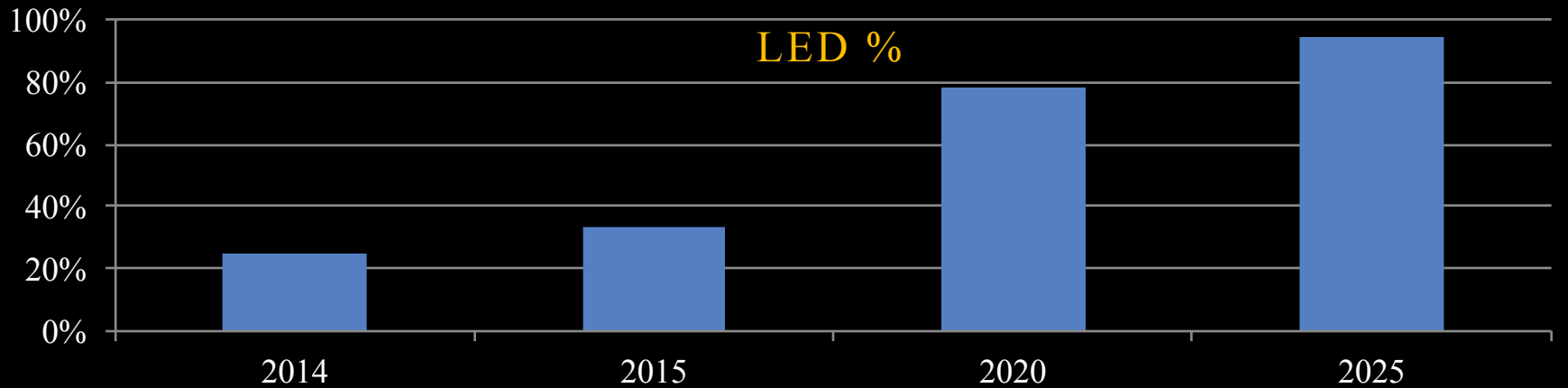
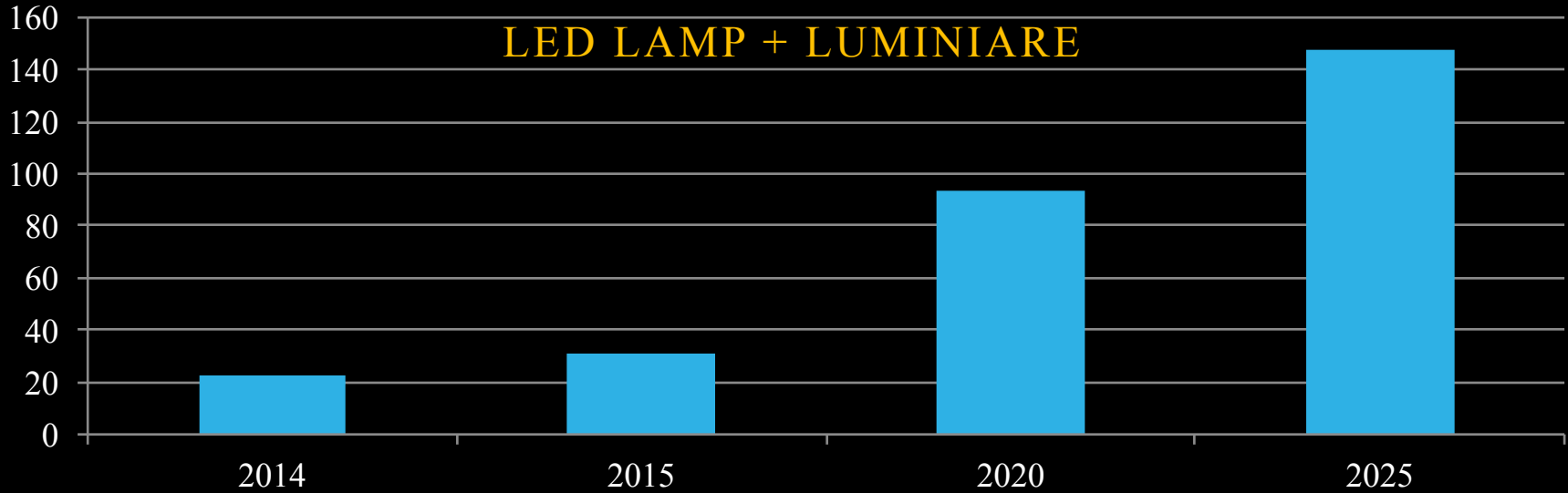


...And It's Driving LED Adoption Faster Than Ever!

BILLIONS

CREE GLOBAL MARKET ESTIMATES

LED LAMP + LUMINIARE



ZR Series Troffers



AFTER

BEFORE





Watson Clinic Lakeland, FL

“Our doctors love this new lighting system, and our patients love it too – most particularly, our older patients, whose eyesight isn’t generally quite so good. They notice something different, without knowing what it is, and comment on how much better the lobby areas looks. ”

- Gary Picklesimer
Asst. Director of Facilities

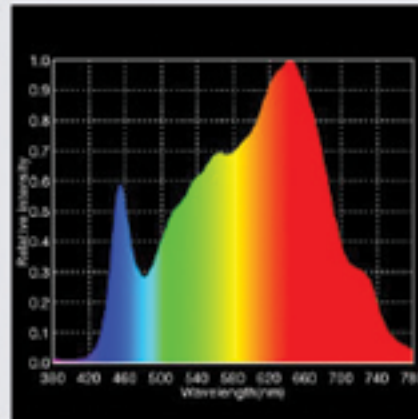
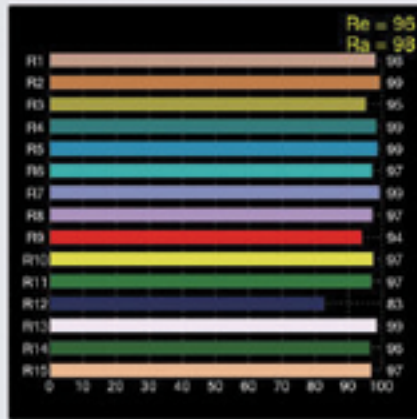
CR Series Troffers with Field-Adjustable Color Temperature

- Available in CR24-40L, CR14-40L, CR22-32L
- Enables simplified specification and ordering
- Adjustable from 3000K – 5000K (in 500K increments)
- Factory set at 4000K (can be changed using configuration tool)
- No adder

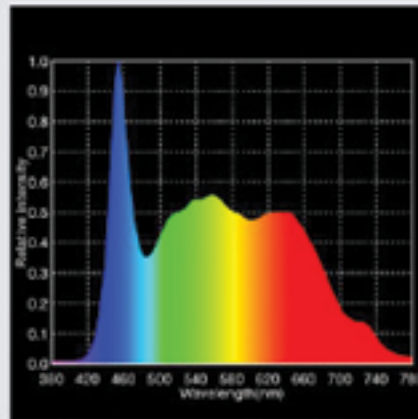
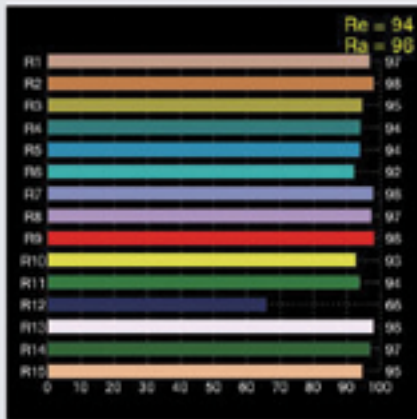


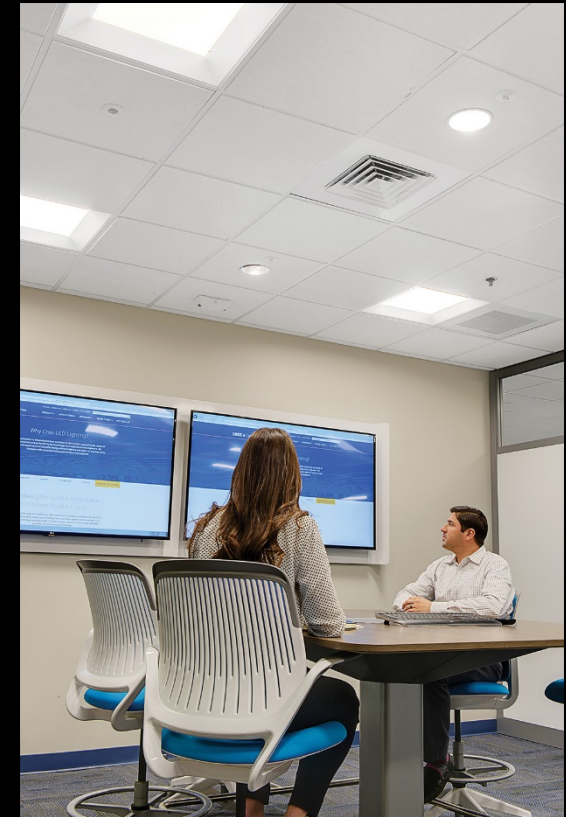
Color Rendering (CRI, TLSI, R9)

3200 K



5600 K





- **Architectural recessed flat panel blends into any ceiling**
- **Offers soft, smooth, fully-luminous light, creating a quiet ceiling that keeps spaces bright and vibrant**
- **Ultra thin (<4”) design easily accommodates narrow plenums**

- **Paybacks less than one year possible when replacing 70W & 100W HPS**
- **Price parity with incumbent HPS luminaires**
- **Application-specific optics to accommodate a variety of pole heights and spacing**
- **Hassle-free installation**



XSP Street Luminaire



Series Performance at a Glance

- Wattage Range:
 - 101W XSP1 C, 99W XSP1-HO, 139W XSP2 C, 160W XSP2-HO
- Initial Delivered Lumens:
 - ~8,820 XSP1 C, ~10,946 XSP1-HO, ~14,408 XSP2 C, ~18,523 XSP2-HO
- CRI: 70min, 80 (3000K) (see specification sheet for specific product offering)
- CCT: 5700K, 4000K, 3000K
- Typical Optics: 2ME, 2LG, 3ME, 4ME
- Mounting: Horizontal Tenon for 2.375" or 1.66" horizontal tenon (min 8" long)
- DLC Qualified (refer to www.designlights.org/QPL for most current info)
- Limited Warranty: 10 year on luminaire & Colorfast DeltaGuard® finish

Notes

- Designed from the ground up as a totally optimized LED street lighting system
- Die cast aluminum housing
- Tool-less entry



One-for-One Product Change-Out Guide



HID Replacement Equivalent		
150W-250W HID	250W-400W HID	400W-1000W HID
175 – 288 Input Watts	288 – 460 Input Watts	460 – 1080 Input Watts
OSQ Input Wattage		
86 Watts “B”	130 Watts “K”	166 Watts “T” 215 Watts “U”

130W OSQ

455W MH

International Place Tower Memphis, TN

- 71% Energy Savings
- Better Uniformity
- Better Color Quality

Studio Fixtures – Power, Heat, Life



750 Watts
2560 BTU/Hr
500 hours

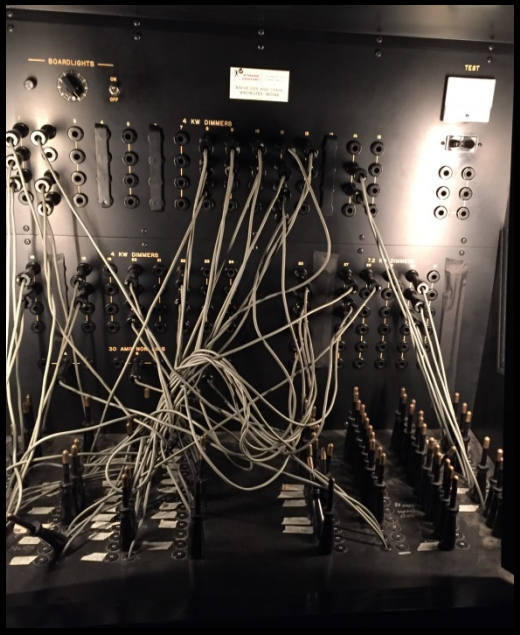


150 Watts
425 BTU/Hr
>50,000 hours

Color – or Not



Control - before



Control - after



 *Buck & associates, inc.*

cmbuck.com



ASSOCIATED CONTROLS + DESIGN

Intelligent lighting + dimming + rigging

acdtheatrical.com