



State of The SSL Industry

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Disclosure: Forward-Looking Statements

This presentation includes forward-looking statements about Cree's business outlook, future financial results, product markets, plans and objectives for future operations, and product development programs and goals. These statements are subject to risks and uncertainties, both known and unknown, that may cause actual results to differ materially, as discussed in our most recent annual report for fiscal 2009 filed with the SEC.

Important factors that could cause actual results to differ materially include current uncertainty in global market conditions that could negatively affect product demand, collectability of receivables and other related matters; our ability to successfully develop new products; our ability to lower costs; increasing price competition; the complexity of our manufacturing processes and the risk of production delays and higher than expected costs; risks associated with the ramp-up of production for new and existing products; the rapid pace of technology development that could affect demand; and the difficulty of estimating future market demand for our products.

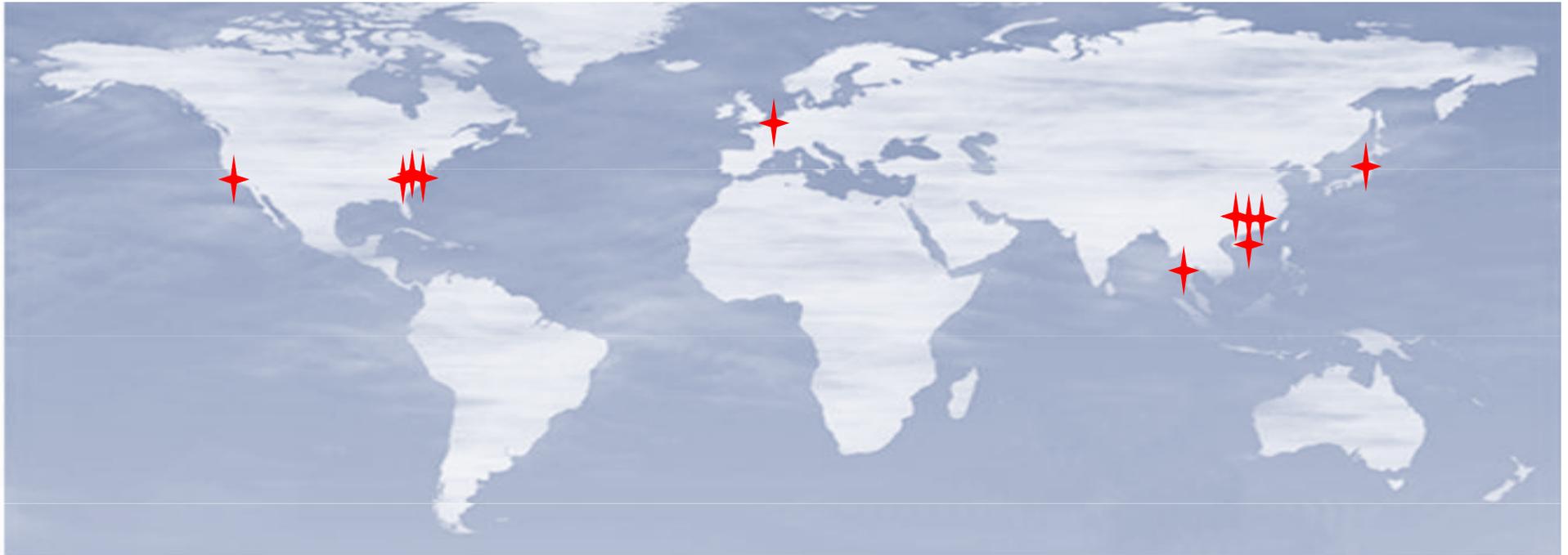
The forward-looking statements in this presentation were based on management's analysis of information available at the time the presentation was prepared and on assumptions deemed reasonable by management. Our industry and business are constantly evolving, and Cree assumes no duty to update such forward-looking statements to reflect subsequent developments.

Agenda

- **Cree Overview**
- **Background for The LED Lighting Revolution**
 - Why now?
- **Evidence of the Revolution – Rapid Deployment**

CREE, INC.

A Global Company



Founded in 1987

- Public since 1993 (Nasdaq: CREE)
- Headquartered in Durham, NC
- Strong patent portfolio
 - 601 U.S. patents and 1094 foreign patents

Global Reach

- 11 Major Locations
- 4,500 Employees
- Fiscal 2010 Revenues \$867M

Company Mission

**Lead the LED Lighting Revolution
and obsolete energy-inefficient
light bulbs**

Cree LED Lighting Strategy

Market Opportunity



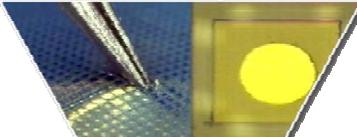
LED Lighting



LED Components



LED Chips



Materials



LED Lighting

- Lead the market & accelerate adoption
- Create demand/pull for LED lighting

LED Components

- Drive Revenue
- Enable the market with "lighting-class" LEDs

LED Chips

- Technology to enable components

WHY LED LIGHTING, NOW?

Almost No One Survives Solid State Transitions



Vacuum Tubes

1940s – 1960s

Transistors



VHS

1980s – 1990s

DVD



CRT TV

1990s – 2000s

Flat Panel TV and Displays



Film

1990s – 2000s

Flash Memory



“Brick” phones

1990s – 2000s

Smart phones



Light Bulbs/
Fluorescent Tubes

2000s – ...

Solid State Lighting



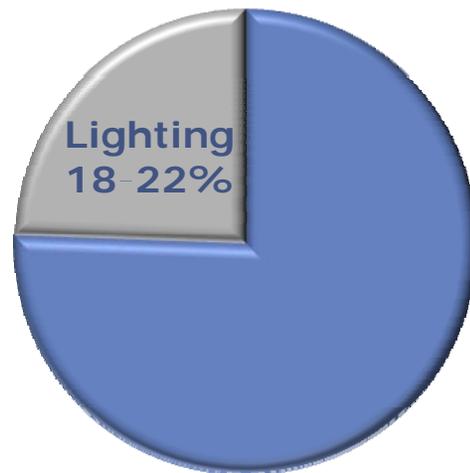
Why Now?

10 Reasons:

1. 2 World trends
2. US EPA and DOE "Get It"
3. Traditional bulbs have big problems
4. The market is attractive
5. Superior performance
6. Superior reliability
7. Standards are in place
8. Technology continues to improve
9. Cost has dropped dramatically
10. Competitors see the LED light

1. Two Global Macro Trends

1. Limited energy availability and high cost



Electricity Consumption
Worldwide

2. "Green" movement

- 2012: Cree's production alone could save equivalent of 14 coal-fired generators

Source: EIA and Cree Analysis

2. Both EPA and DOE “Get It”

- DOE estimating 2030 consumption
 - Lighting energy use will be well below 2010 level
 - *Largely to LED lighting*
 - The LED scenario represents a reduction of 25% of total electrical energy consumption
 - *Savings is equivalent to 25, large nuclear generators*

Source: DOE, Energy Savings Potential of Solid-State Lighting in General Illumination Applications 2010 to 2030

2. EPA



The screenshot shows the ENERGY STAR website interface. At the top left is the ENERGY STAR logo. To its right is a banner image of an elderly man and a young girl. The main heading reads "BUY PRODUCTS THAT MAKE A DIFFERENCE" with the subtext "U.S. Environmental Protection Agency • U.S. Department of Energy". Below this is a navigation menu with buttons for "Products", "Home Improvement", "New Homes", "Buildings & Plants", and "Partner Resources". A search bar is located on the right side of the menu. The main content area features a breadcrumb trail: "Home > Products > Light Fixtures > Commercial LED Lighting > Why Choose ENERGY STAR?". The primary heading is "Why Choose ENERGY STAR Qualified LED Lighting?". The text below explains that LED lighting is a rapidly evolving technology that produces light in a whole new way, surpassing the quality and efficiency of existing technologies like fluorescent and incandescent, though not all LED lighting is created equal. To the right of this text is a small image of a modern light fixture. On the left side of the page, there is a sidebar with links: "Products", "Find ENERGY STAR Products", and "How a Product Earns the Label". On the right side, there are links for "Find a Store", "Special Deals", and "LED Lighting Resources for".

ENERGY STAR

BUY PRODUCTS THAT MAKE A DIFFERENCE
U.S. Environmental Protection Agency • U.S. Department of Energy

About ENERGY STAR • News Room • FAQs • **KIDS**

Search **Go**

ENERGY STAR

Products Home Improvement New Homes Buildings & Plants Partner Resources

Products

Home > Products > Light Fixtures > Commercial LED Lighting > Why Choose ENERGY STAR?

Why Choose ENERGY STAR Qualified LED Lighting?

LED lighting is a rapidly evolving technology that [produces light in a whole new way](#). It is already beginning to surpass the quality and efficiency of existing lighting technologies, such as fluorescent and incandescent — but not all LED lighting is created equal.

[Find a Store](#)
[Special Deals](#)
[LED Lighting Resources for](#)

Find ENERGY STAR Products

How a Product Earns the Label

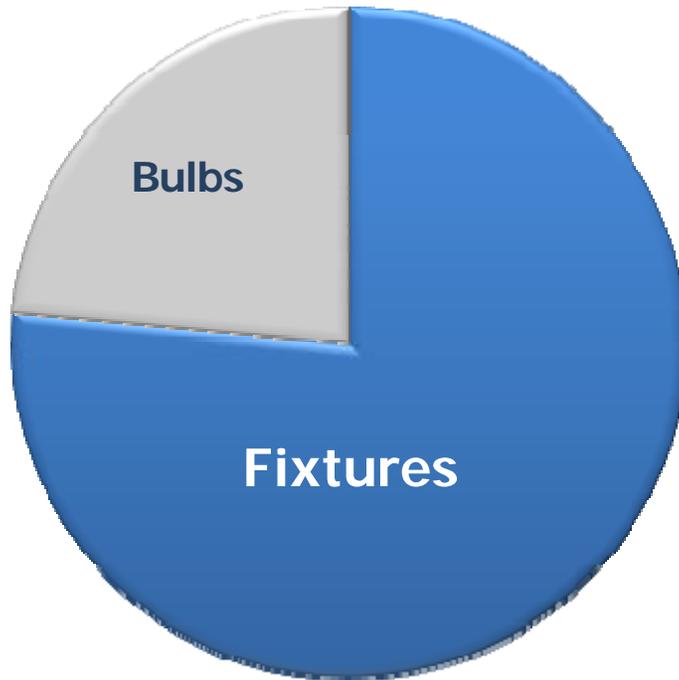
3. Traditional Technologies Have Big Problems

- Incandescents not efficient enough
 - “Space heater that gives off a little light”
 - Banned worldwide over next 10 years
- Fluorescents have mercury that end up in landfills
 - Bio-accumulating neurotoxin
 - **2.2 BILLION** bulbs could be produced this year (Datapoint 2008 report)
 - See EPA website for issues with breakage
 - Recycling behavior is very, very low for residential
 - Now, with LEDs, they are not even necessary

Source: EPA

4. The Market is Attractive

\$119 Billion*

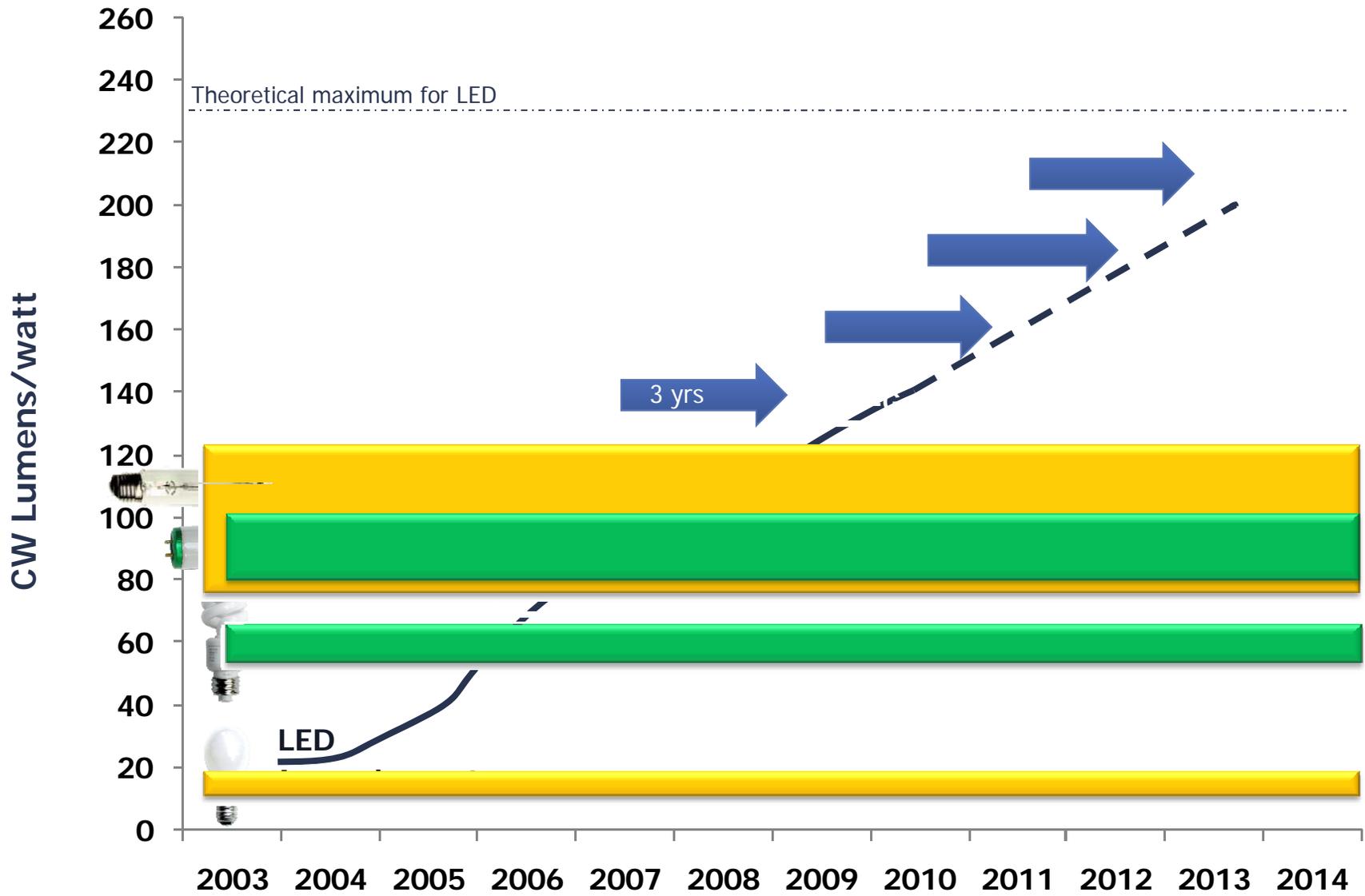


Applications

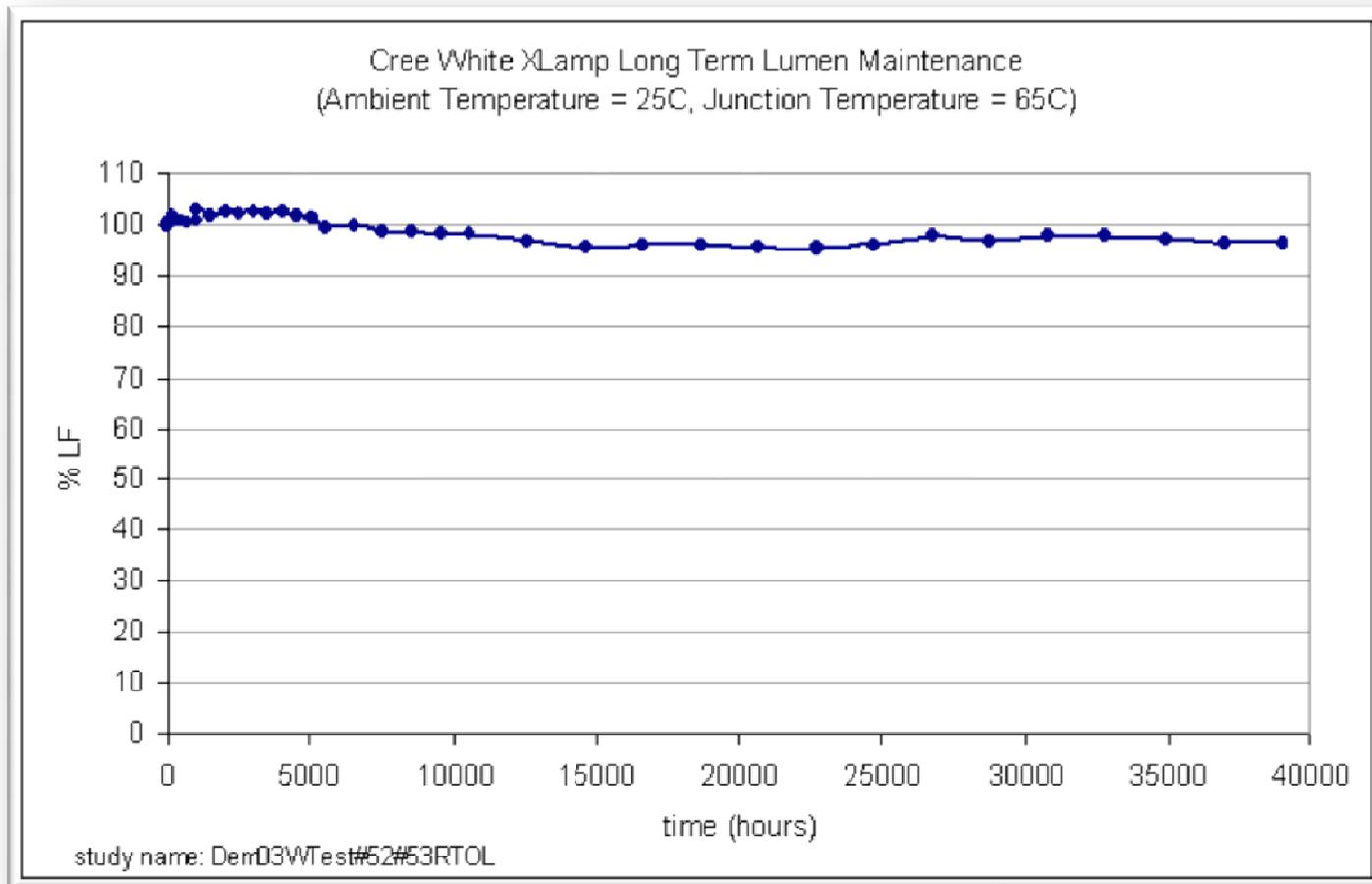


*Source: Freedonia Group estimate for 2007

5. Superior Performance



6. Superior Reliability



7. Standards are in Place

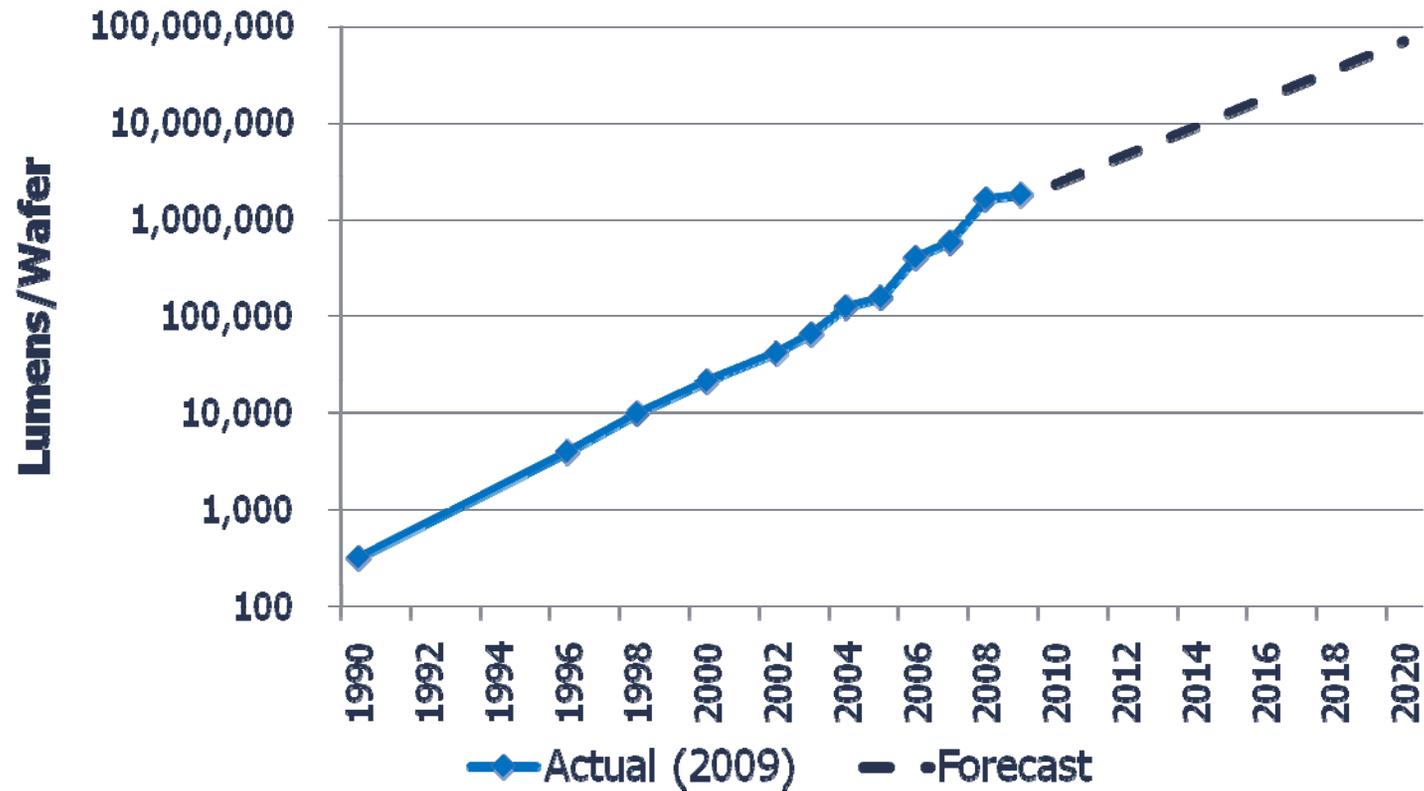
Standard	Draft	Comment	Comment Resolution	Publication Status
IES RP-16 <i>Definitions</i>	X	X	X	Complete
ANSI BSR C78.377A, <i>Chromaticity</i>	X	X	X	Complete
IES LM 79, <i>Luminous Flux</i>	X	X	X	Complete
IES LM 80, <i>Lumen Depreciation</i>				
				
IES TM-21 <i>LED Lifetime</i>	X			
NEMA LSD-44, 45, 49 <i>Best Practices for SSL Interconnect, Sub-Assemblies, Integral Lamp Dimming</i>	X	X	X	Complete
NEMA SSL-3, <i>LED Binning</i>	X	X	X	
CIE CQS <i>Color Quality System</i>	X	X		
NEMA-ALA Joint White Paper <i>Definition of Functional & Decorative Lighting</i>	X	X	X	Complete
UL 8750 <i>LED Safety</i>	X	X	X	Complete
IEC 62471-2, IES RP-27 <i>Photobiological Safety</i>	X	X	X	Complete

Status of NEMA, ANSI, IES, IEC, and CIE Solid State Lighting Standards (Partial List)

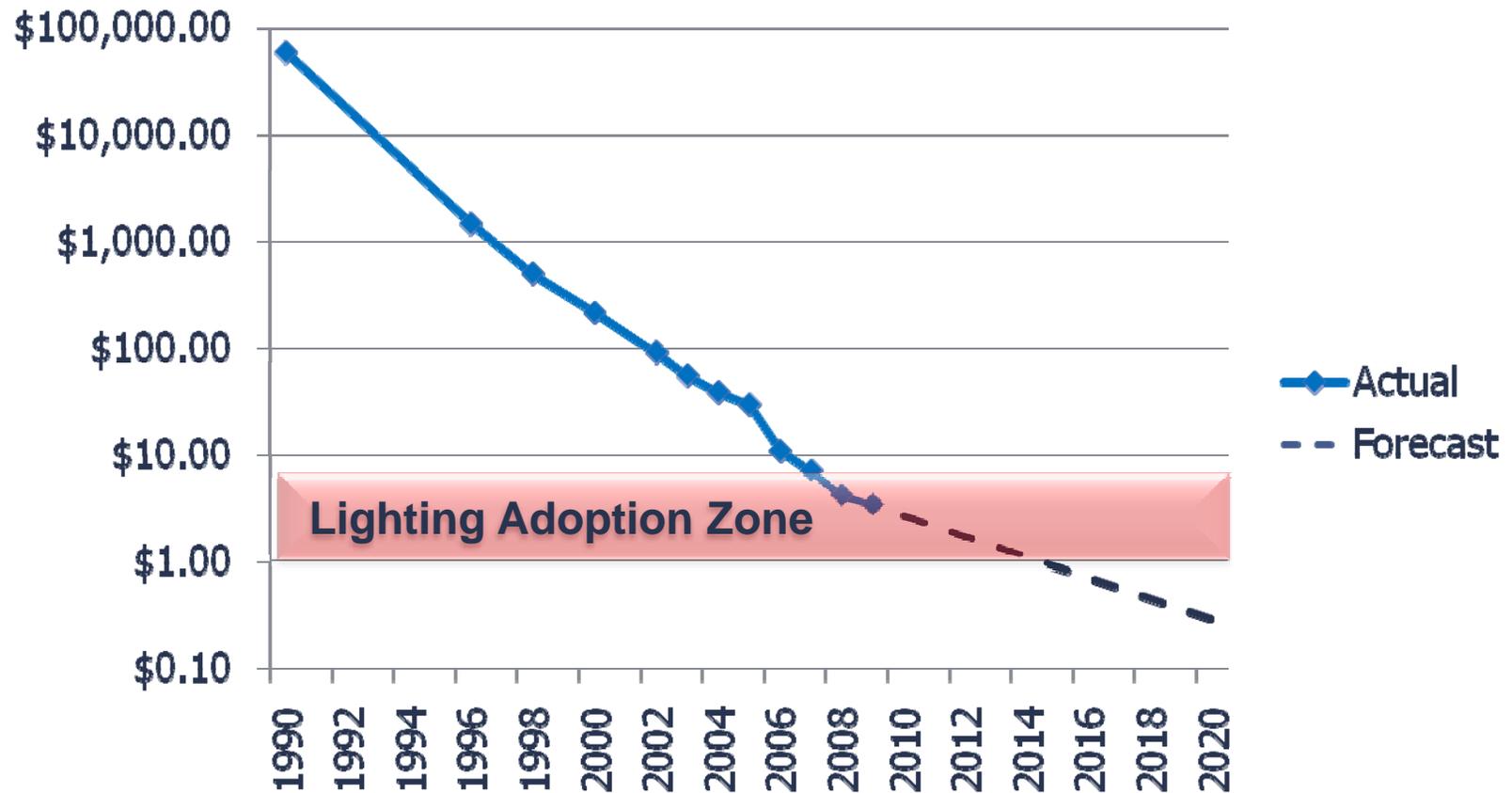
Standards Under Development

- **TM-21**
 - An IESNA Technical Memorandum currently under development
 - Recommendations for projecting long-term lumen maintenance per IES M-80-08
 - Representatives from major LED manufacturers and other SSL organizations have been involved
 - PNNL (Pacific Northwest National Labs) has been providing technical support in developing the document
 - Completion of the document is currently targeted for February 2011

8. Technology Continues to Improve

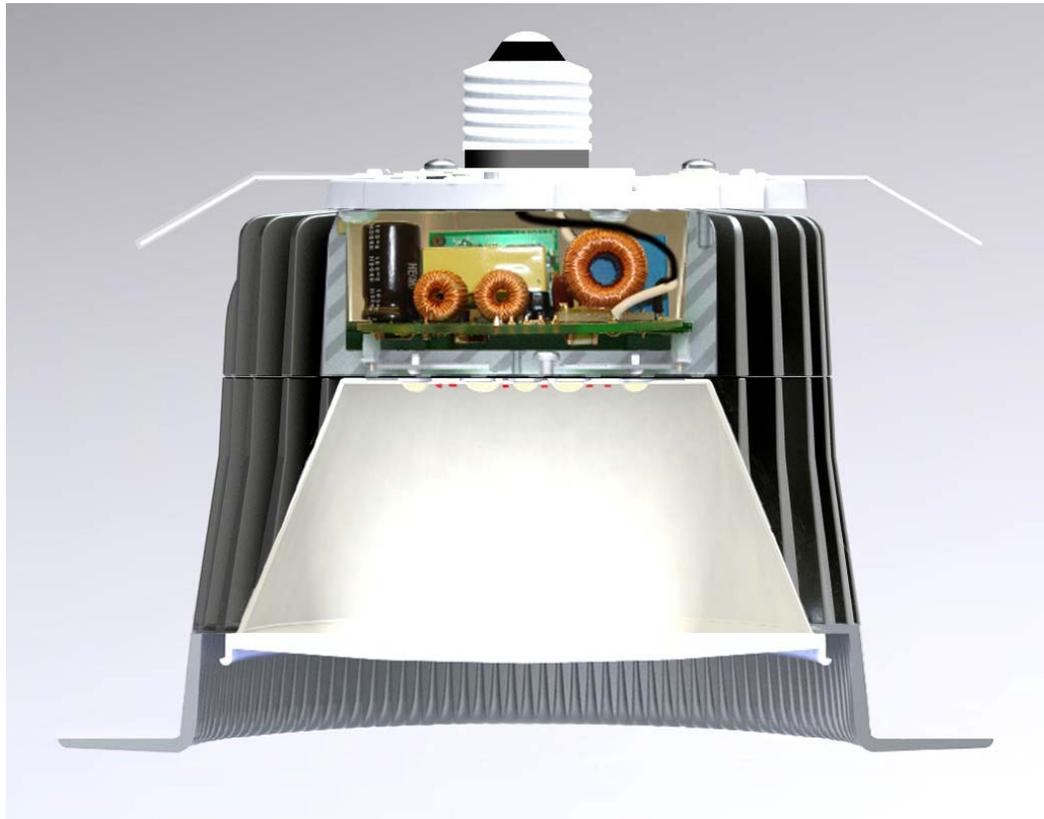


9. Cost has Dropped Dramatically



Different lighting applications turn on
at different LED cost/lumen points

LED's Are *No Longer* the Cost Issue

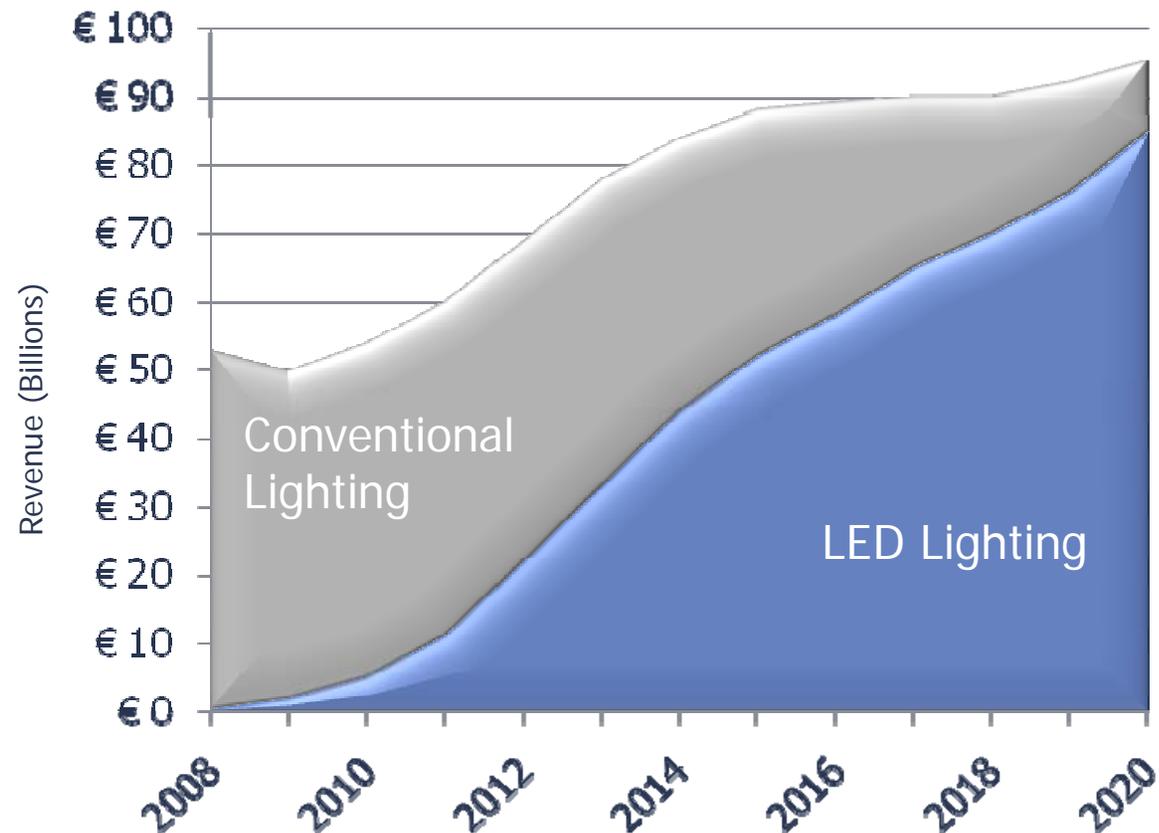


LED Fixture Costs

LEDs	35%
Power Supply	} 65%
Mechanicals	
Drive Circuit	
Optics	
Labor & OHD	

10. Competitors Can See the LED Light

General Illumination Market**



* Strategies Unlimited 2009 / **Philips Lighting 2009

EVIDENCE– RAPID DEPLOYMENT

CREE Lights Up the Olympics

盤古廣場LED顯示屏
CREE LED LAMP

鳥巢體育場地屏CREE
LED LAMP



水立方
CREE XLamp LED

鳥巢外牆燈光
CREE XLamp LED

奧運廣場和水立方之間
柱形信息柱
CREE SMD LED

Spokane, Washington



- 100% off grid
- Portable
- Dimmable
- Dark-sky compliant



High Bay lighting is an emerging application

- 50%+ energy savings
- Lifetime 2-3x traditional lighting
- ROI < 1 year

Photo credit: Dialight

Walmart Stores



Courtesy of John Sutton (2009)

650 stores to install the LRP-38 during the first year

- 82% energy savings vs. ceramic metal halide
- 5+ year life in a 24/7 operating environment

Anchorage, AK



Courtesy of BetaLED

Los Angeles, CA



Edgewood, USA



Courtesy of BetaLED



Parma, Italy



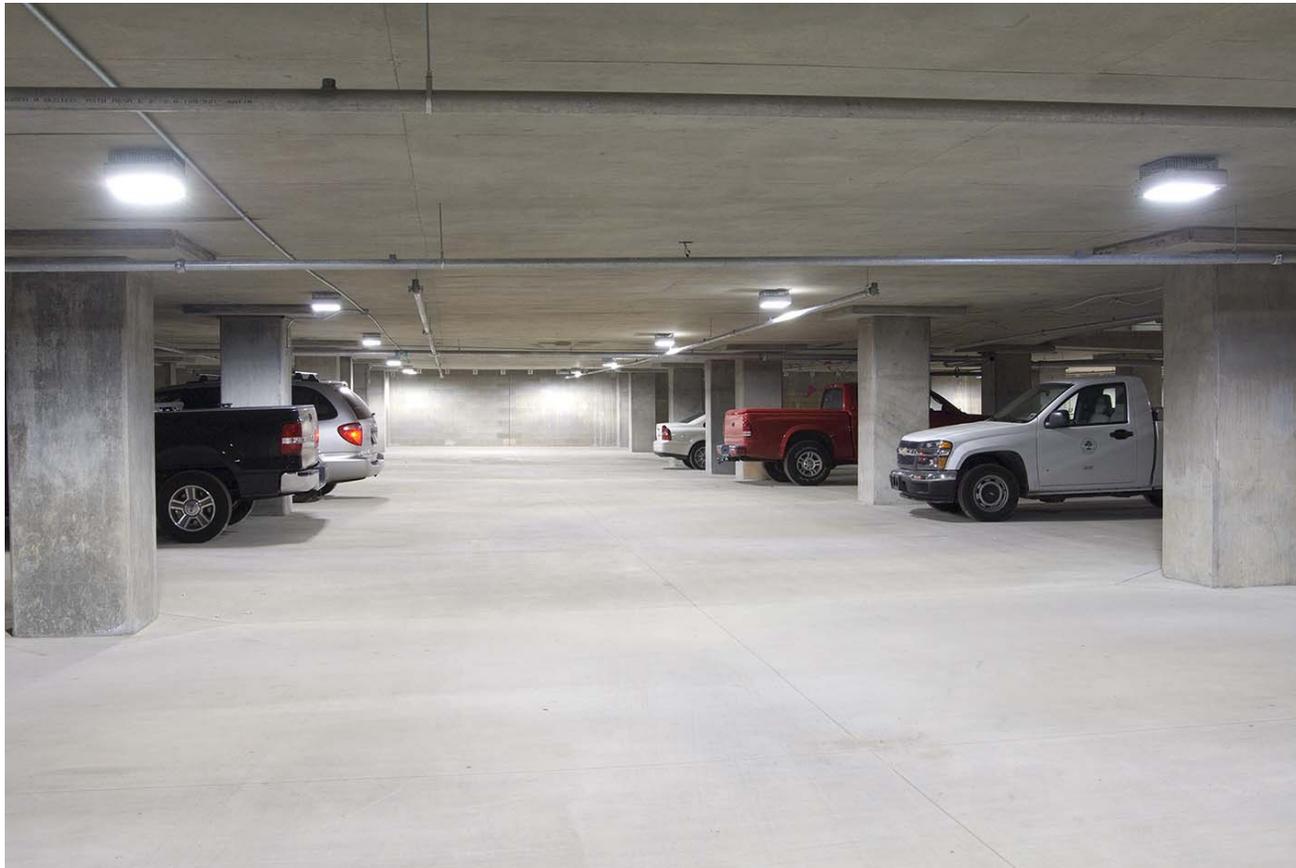
Courtesy of BetaLED



Raleigh, USA



New Raleigh Convention Center



Hotels



Hyatt Regency Grand Cypress Resort



LRP-38™ and LR6™
lighting installed in the
lobby and hallways

- > 80% energy savings vs. halogen
- ROI ~9 months



Cheng Du



Chicago, USA



Photo Derry Berrigan, DBLD



Restaurants



- 80% Energy Savings
- Excellent Color Rendering (CRI >92)



Cree LR6



McDonald's



Courtesy of Derry Berrigan, DBLD

North Carolina's first eco-friendly McDonald's is lit with Cree LEDs

- 78% energy reduction from baseline store
- 97% of lighting is high-performance LEDs



Yum Brands



- 81% energy reduction from baseline store
- 95% of lighting is high-performance LEDs



Courtesy of Derry Berrigan, DBLD



Cree LR6



Courtesy of BetaLED

Results: Recognition



...Back in Durham.....





PORTABLE

RESIDENTIAL

OFFICE

RETAIL

ARCHITECTURAL

OUTDOOR



LED lighting: Energy efficient & planet friendly.

Cree. Leading the LED lighting revolution.

Join Cree's LED lighting revolution. We invite you to see how our high-performance, high-efficiency LEDs are lighting up the world.

