MUNRO DISTRIBUTING

Clean Energy & Electrical Solutions

LED Lighting:

What Hoteliers Need to Know About This Emerging Technology

Misha Glazomitsky

Training Coordinator

Agenda

- Who is Munro Distributing?
- What are the Advantages of LED Lighting?
- What's New and Next in LED Lighting?
- Case Study – Success Story
- Sample Products

Who is Munro Distributing?

- Munro Distributing Company, Inc. is a family owned, customer- focused electrical distributor established in 1942 in Massachusetts
- 12 locations from Massachusetts to California
- Five Divisions:
  - Electrical Supply, Energy Conservation, Renewable Energy, Life Safety, Power Distribution and Commercial Lighting
- Munro employs over 150 people nationwide

Munro's Growth

- Munro has created win/win relationships with stakeholders, contractors, manufacturers, utility companies, ESCOs and the communities in which we operate.
- Through the years, Munro has stayed true to its roots as a family owned business, with a focus on high quality staff and exceptional customer service.
- ***Innovation*** – As a forward-thinking electrical distributor, we were one of the first to focus on energy conservation and efficiency over 30 years ago, and we were one of the first renewable energy companies in Massachusetts

Energy Conservation Division

- One of the leaders in the energy conservation industry
- Combined experience of over 100 years
- Experienced staff and inside support team focusing on servicing customers, end users, facility managers, manufacturers and utilities
- Over 20 years of experience working with utilities to develop rebate programs

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Energy Conservation Division

Customer Success Stories

- Multiple hotel chains such as Marriott, Embassy Suites, Hyatt, Hilton and more
- TD Bank North Garden
- U.S. Capitol building
- FBI headquarters and other FBI buildings
- FedEx Distribution Centers
- Pepsi Bottling Centers
- NASA
- NYC Housing Authority
- Smithsonian Museums
- National Archives
- Multiple projects for scope of armed forces

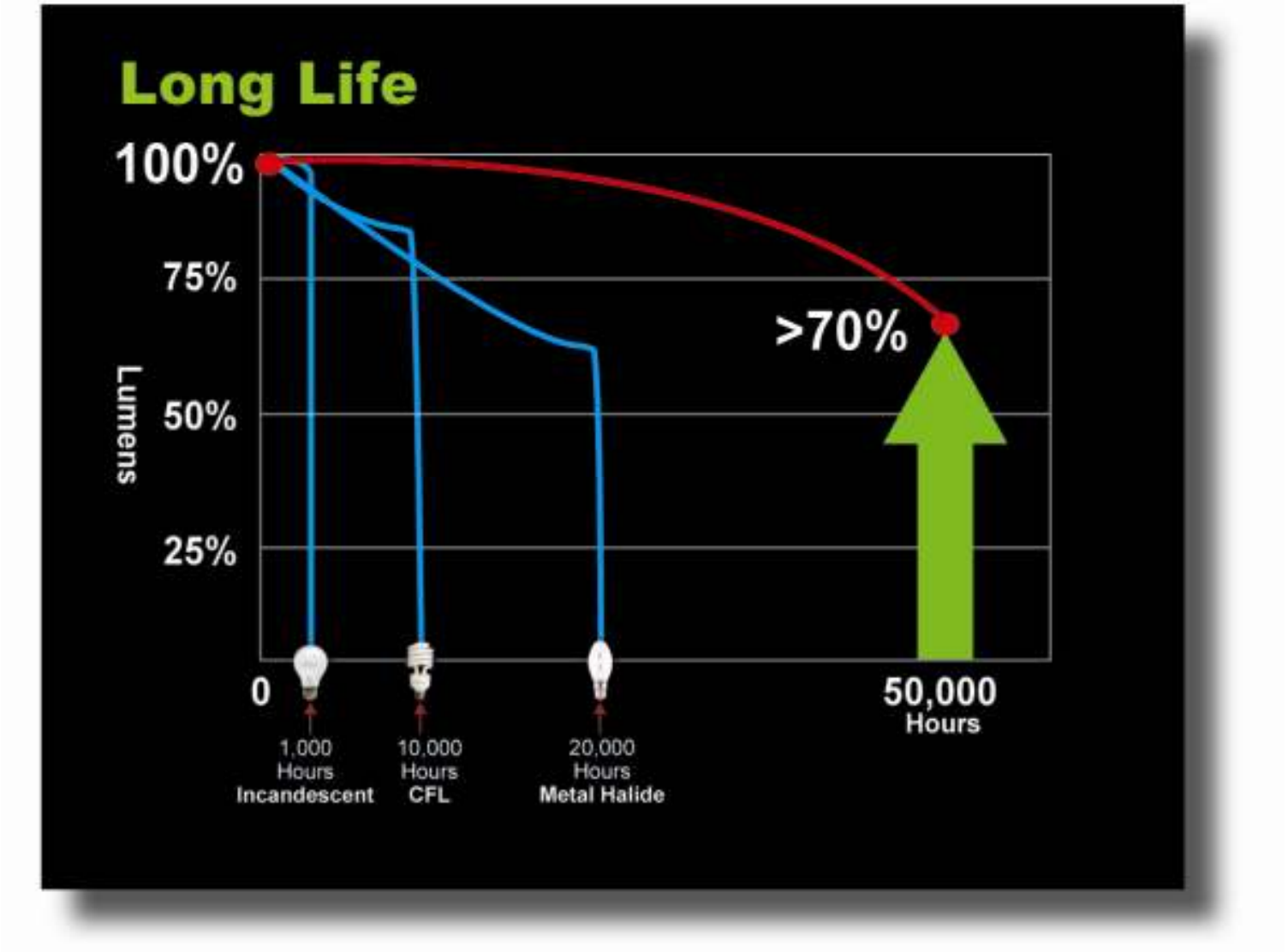
LED Lighting Advantages

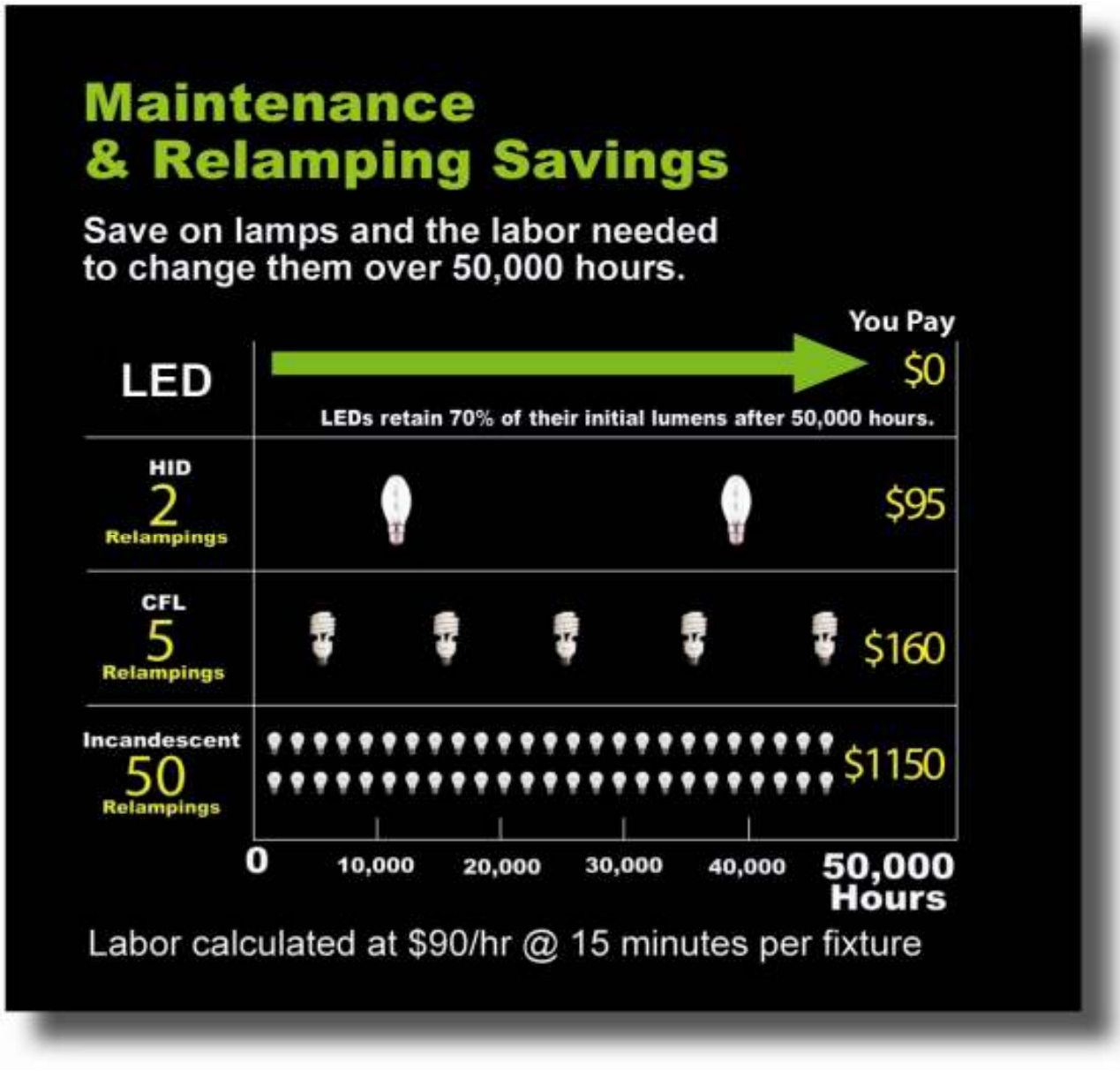
•Replacing existing lighting with LED lamps can save between 50% and 90% of lighting energy costs.

•The typical payback when replacing incandescent lighting is less than one year with the help of utility rebates.

•LED lamps generate very little heat, helping to reduce HVAC costs.

•Additional savings are realized through reduced maintenance and relamp costs due to the long life of LED lamps (50,000 hours or more).


Long Life
100%
75%
50%
25%
0
Lumens
>70%
50,000
Hours
1,000
Hours
Incandescent
10,000
Hours
CFL
20,000
Hours
Metal Halide


Maintenance
& Relamping Savings
Save on lamps and the labor needed
to change them over 50,000 hours.
You Pay
LED
$0
LEDs retain 70% of their initial lumens after 50,000 hours.
HID
2
Relampings
$95
CFL
5
Relampings
$160
Incandescent
50
Relampings
$1150
0
10,000
20,000
30,000
40,000
50,000
Hours
Labor calculated at $90/hr @ 15 minutes per fixture

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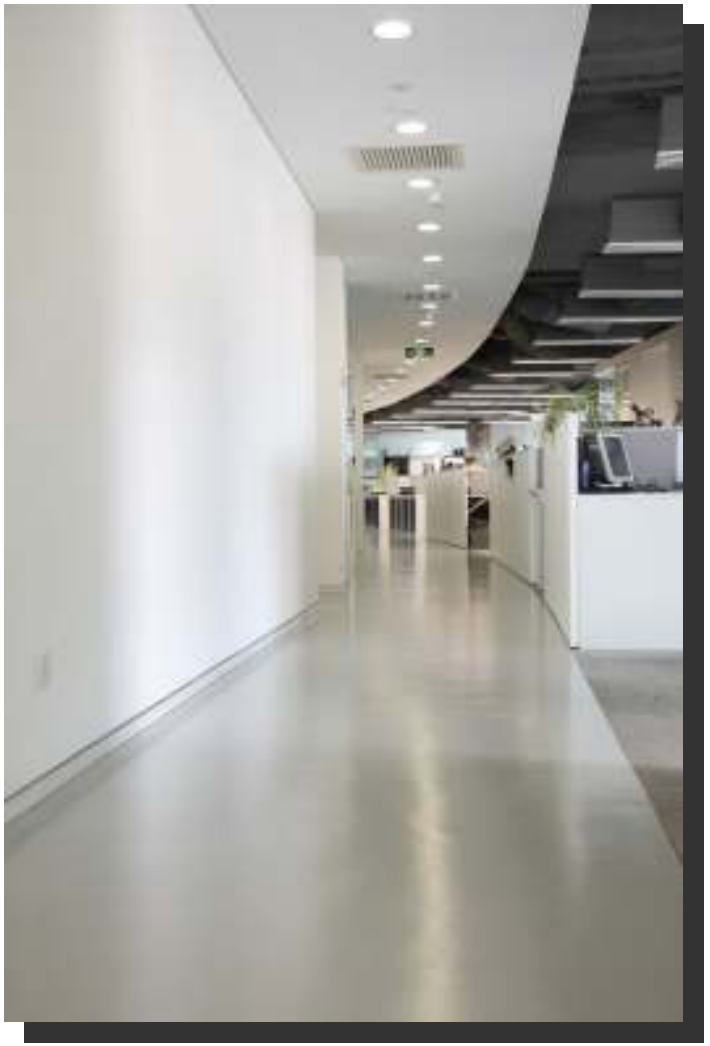
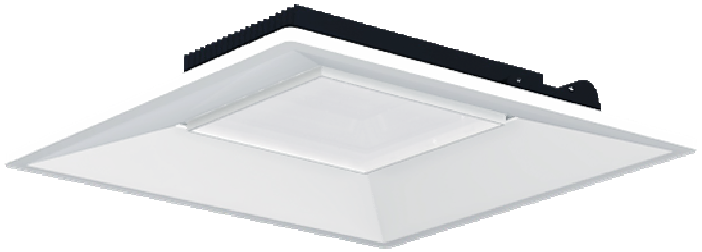
Other LED Lighting Advantages

- LEDs are 100% recyclable. They contain no toxic materials, mercury or halogen gases.
- LEDs do not emit UV rays or infrared radiation.
- There are a wide variety of color temperatures available.
- LED lamps are dimmable and instantly turn on and compatible with occupancy sensors.



What's New in LED Lighting?

- A –lamp Screw-ins
- Higher efficiencies and LPW
- 18 W LED Par 38 replacement for 75 W incandescent lamps
- 24 watt LED Par 38 replacement for 100 W incandescent lamps
- 5 year warranty by most manufacturers to replace a 3 year warranty.
- 2 X 4 and 2 X 2 LED recessed fixtures
- Garage Retrofits with LED canopy style fixtures.



What's Next in LED Lighting?

- An even longer life (75,000 to 100,000 hour life cycles)
- Even higher efficiencies and LPW outputs
- A continuing reduction in price as there is more money in the LED industry and therefore R&D investments
- Advances in driver technology

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Case Study

Boston Interiors - a family owned and operated, high-end furniture retailer.

- **Situation** – save operating cost while being more sustainable and keeping high quality lighting that would create a beautiful atmosphere that would highlight the furniture and catch customers' eyes.
- **Solution** – Switch from 60W halogens to 18W Sylvania PAR 38 LEDs.
  - **262** Lamps
  - **Cost** = $12,576
  - **Rebate** = $5,240
  - **Total Cost** = $7,336
  - **Payback** = Less than one year

Results

- Annual:
  - $8,322 Savings
  - 48,315 kWh
  - 74,163 lbs of CO_2
- Lifetime:
  - $99,067 Savings
  - 575,177 kWh
  - 882,897 lbs of CO_2

- If the replacement was for 75W Incandescents:
  - Annual:
    - $11,318 Savings
    - 65,708 kWh
    - 100,862 lbs of CO_2
  - Lifetime:
    - $134,731Savings
    - 782,241 kWh
    - 1,200,740 lbs of CO_2

Philips Candle – Flame tip

Features

- Available in 3 Watt Clear and Frost, Blunt and Bent tip
- Replaces 25 W incandescent
- Not Energy Star Approved
- Great Value with huge savings Instant-on light.
- Emits virtually no UV/IR light in the beam
- Similar ambience as traditional incandescent candles
- 2700K/3000K color temperature
- Dimmable
- 3-year Warranty period
- Rated average life based on engineering testing and probability analysis

Application

- Ideal for wall sconces and decorative lighting

Philips A19

Benefits

• Energy Star Rated, currently not relatable in CT.
Offers diffuse light source when accenting a wide area
• Will not fade colors, avoids inventory spoilage
• 3-year limited warranty
• The 800 Series EnduraLED A-shape 12 W lamp is designed to replace a standard 60W incandescent A19 lamp.

Features

• Smooth dimming to 10% of full light levels
• Designed for "Leading Edge" TRIAC dimming systems
• Instant-on light
• Emits virtually no UV/IR light in the beam.
• 25,000 hours rated average life+
• Contains no mercury.

Application

• Ideal for ambient lighting in hospitality, residential and government buildings.

Sylvania MR16

Features

•Energy star rated, $10 rebate available
6W LED lamp designed as high-quality replacement of 20W halogen MR16 lamps
• Dimmable 10%–100%
• 35,000 hours life at 70% lumen maintenance
• Suitable for indoor and outdoor damp rated environments
• Available in 2700K and 3000K with 87 CRI

Benefits

• Reduces energy consumption up to 70%
• Lasts 17 times longer than halogen lamps
• No warm-up time, instant-on with full-light output and stable color
• 12V AC/DC input voltage

Sylvania PAR20

Features

- Energy Star but not rebatable in CT
- 8W LED lamp designed as replacement of 35W halogen PAR20 lamps
- Dimmable 10%–100%
- 50,000 hours life at 70% lumen maintenance
- Suitable for indoor and outdoor use
- Available in 2700K and 3000K with 85 CRI
- Medium base for direct replacement
- Power factor 0.95

Benefits

- Reduces energy consumption up to 84%
- Lasts 20 times longer than halogen lamps
- No warm-up time, instant-on with full light output and stable color

Sylvania PAR30

Features:

•Energy Star Rated and eligible for a $20 rebate

•UV, IR and Mercury Free

• Dimmable

• Medium Base

• Available in 2700K and 3000K color temperatures.

• Assembled in the USA (10W only)

• 15W PAR30 product is ENERGY STAR qualified at 50,000 hours

• Replaces 50 W halogen.

Sylvania PAR38

Features

- **Energy Star Rated and eligible for a $20 rebate**
- UR, IR and Mercury Free
- Dimmable
- 18 W
- Medium Base
- Variety of beam angles
- Replaces 75 W halogen

SHARP PAR30 & PAR38

Features

- **Energy Star Rated and eligible for a $20 rebate**
- Energy savings of up to 79% compared to standard halogen lamps
- Long life helps reduce lamp replacement as compared to halogen lamps, thereby helping reduce maintenance and waste
- Designed to fit in standard indoor fixtures
- Dimmable on select dimmers, 10 to 100
- Starts instantly at high brightness level
- Designed to help eliminate flicker
- 3000K only
- 12 W and 16 W (replaces 50 W and 75 W halogen)

Thank you for your attention

Misha Glazomitsky
Training Coordinator
Mishag@munrodistributing.com
508-498-4838
www.munrodistributing.com