

## Tools of the trade:

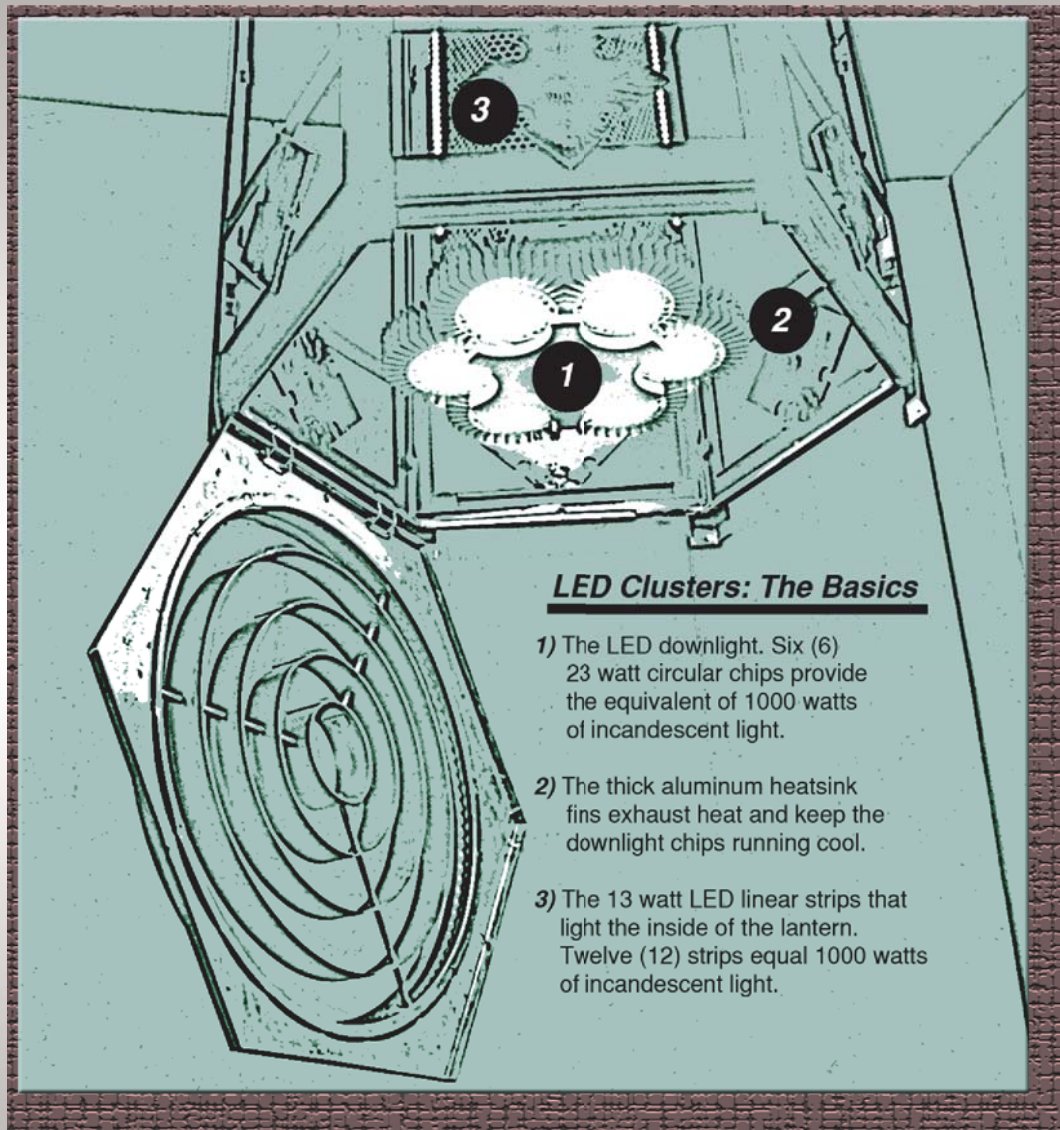
### 1-23.5wCLED

Lumens: 2790  
Watts: 23.5  
Rated Life: 50,000 hrs



### 1-13wLLED

Lumens: 1510  
Watts: 13  
Rated Life: 50,000 hrs

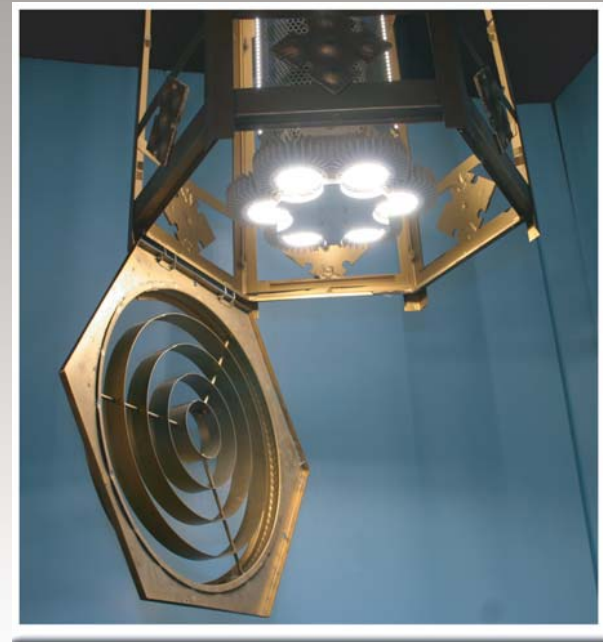


### LED Clusters: The Basics

- 1) The LED downlight. Six (6) 23 watt circular chips provide the equivalent of 1000 watts of incandescent light.
- 2) The thick aluminum heatsink fins exhaust heat and keep the downlight chips running cool.
- 3) The 13 watt LED linear strips that light the inside of the lantern. Twelve (12) strips equal 1000 watts of incandescent light.

\***T**ypical incandescent clusters have been around since Thomas Edison with very little change in construction. **M**aybe now they have outlived their usefulness. **I**t is possible with LED retrofits to keep those beautiful old lanterns, cut energy usage in half, and at the same time increase light output by 500% or more. **New century...new choices!**

## LED Retrofits for Church Lighting



**So**, what if someone told you there was a way to take those beautiful old lanterns in your church and:

- 1) Make them super energy efficient...using just half or less of the energy they did before!
- 2) While at the same time producing 4-5 times as much light as they did before!
- 3) And at the same time reducing maintenance costs down to "zilch" for the next 20 years!

To good to be true?

**Read ON!**

**Church Interiors Inc.**

~ Enhancing Worship by Design ~

800 Eastchester Drive ~ High Point, NC 27267  
Ph: 800-289-7397 ~ Web: info@churchinteriors.com



Young  
Hands!  
~~~~~  
Old  
Technology!

## Some "LED" Facts.

### ~ LED Uplights ~

Each 23 watt CLED disc is brighter than a 150w incandescent flood light. Swivel adjustment for complete focus. Small size...Enormous power!

- 1) LED is short for "Light Emitting Diode"...a semiconductor. They are called solid-state lights because they have no filaments to break and are much more durable than other light sources.
- 2) LED's are not new, they have been around for decades used in indicator lamps, video screens, and traffic signals to name a few common devices.
- 3) Late in 2010, after constant development, LED's became the most energy efficient light source available, producing an unheard of 102 lumens per watt and are still improving. In perspective: The best incandescent light may be 20 lumens per watt. The best fluorescent may be 100.
- 4) The LED chips we are using right now are rated at 117 lumens per watt...extremely efficient and very powerful.
- 5) They are easily dimmed. Our LED drivers are all dimmable unless otherwise specified.

### ~ LED Linear Chips ~

Linear LLED chips provide light through the diffuser panels of the fixture. Each 13 watt LLED chip is equal to a 100 watt incandescent.

### ~ LED Cluster Cage ~

The "cage" houses the LED drivers that power the LED chips. We ventilate it for cool running and long life for the drivers

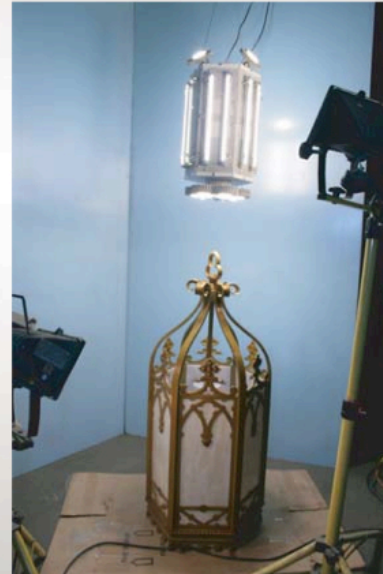
### ~ LED Heat Sinks ~

We custom machine each heat sink to ensure ultimate cooling. Cool temperatures (below 70°C) are the life of the chips.

### ~ LED Downlights ~

We build these to order in groupings of 2,3,4,6, and 8 CLED discs. This 6-disc downlight is the equivalent of a 1000 watt incandescent flood. It uses 141 watts of electricity and lasts 50,000 hours or more.

\*LED chips exhaust heat backwards. Even with this very powerful array of chips, move your hand 6" away from it and you'll feel nothing but cool air.



### Note:

We build LED clusters to fit individual fixtures. The retrofit you see on the far left was specifically built for the 1935 Curtis Lighting Company cast iron lantern you see above...a valuable and classically gothic historic light.

## About our front cover photo:

You are seeing the bottom of a typical 1950's church lantern. A very beautiful fixture. Not so typical is the LED retrofit we have installed into it.

The original lantern was 6-60 watt A-lamps interior and 1-300 watt PS lamp down:  
Total wattage: 660 watts  
Total Lumens: 9200 lumens

The LED retrofitted lantern is now 12-13wLLED interior and 6-23wCLED down:  
Total wattage: 297 watts  
Total lumens: 34860 lumens

If you are counting... the fixture is now:  
**379% brighter.....!**  
**Uses 55% less electricity.....!!**  
**And its good for the next 50,000 hours.....!!!**



### \*\*Here's the physical comparison for you!\*\*

The original incandescent cluster on left: A real energy hog. Always changing lamps... about every 6 months or so.

And our LED replacement on right: Lean and mean. You don't have to worry about changing lamps. Your kids can worry about it in 20 years or so when they finally need maintenance.

 Church Interiors Inc.

~ Enhancing Worship by Design ~

800 Eastchester Drive ~ High Point, NC 27267  
Ph: 800-289-7397 ~ Web: info@churchinteriors.com