

Adventures in Church Lighting - by Steve Jones, Naperville IL

Church lighting. A Pandora's Box of challenges but also opportunities. It is typically something many churches don't think about until a bulb burns out. But more congregations are paying attention to this for a number of reasons – electric cost, brightness, or “greening” the church.

There is another reason to pay attention to your lighting – new regulations. Illinois is the latest of 8 US states which have banned the sale of mercury-containing bulbs. The Illinois ban starts in 2026 with the sale of screw-based bulbs, and in 2027 includes all fluorescent tubes. Existing bulbs can continue to be used, but any replacement bulbs must be LED.

Energy Savings

You may be thinking, “Do we actually save much by changing lights? They're only on a few hours per week.” Although lighting in a home or business typically comprises 10-20% of the overall electric usage, in churches it can be up to 60% of your usage. In the churches I have relamped, electric cost savings have ranged between 20-60%, even for buildings not used much other than Sundays. One church I relamped was thrown off the “budget plan” by the utility since they now fell below the minimum usage required for that plan.

Fluorescent Lights

It may surprise you, but fluorescent tube fixtures are currently your largest opportunity for wattage savings. By changing to LED tubes you reduce the wattage by at least 50% while increasing light levels. But be sure to check what type of ballasts you have and buy the correct LED tubes. Type A tubes work with electronic and sometimes magnetic ballasts.

Light Quality

I have helped a few churches whose primary concern was light level and quality. “I can't read the Bulletin!” is a common complaint. As we get older, we lose vision. So improving light levels helps our congregants navigate halls and stairs safely as well as presenting a bright welcoming space where everyone can participate more easily.

Even if you increase wattage in the Sanctuary a bit, it is offset by savings in the rest of the buildings, especially if you upgrade your fluorescent fixtures.

One technique I use to improve brightness and quality is to use “High CRI” LED bulbs, meaning higher color rendition. Higher CRI means colors are more accurate, but they also appear brighter and make the space feel brighter compared to older LED bulbs. High CRI brands include FEIT Enhance and Sylvania Tru-Wave bulbs.

I also select warmer Color Temperature LED bulbs. Color Temperature is measured in degrees Kelvin. So “warm white” ranges from 2700 – 3500 K. I use 3000K bulbs in my work, a brighter warm white sometimes called “halogen white”.

To dispel a misconception, “daylight” or bluish-white LED bulbs are not “brighter” per se. They stimulate the cones on your retinas more, but do not give off much more light (lumens) than other color bulbs of the same wattage.

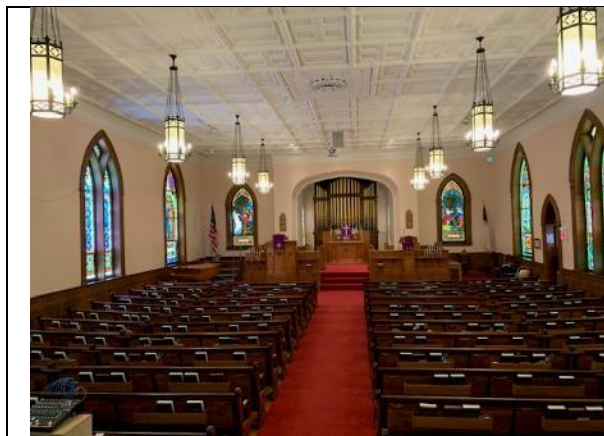
Pay attention to any dimmers also. Older rheostat dimmers do not work with LED bulbs, except sometimes the LED filament bulbs. So you may need to update to electronic dimmers. If LED bulbs start “strobing” immediately after you change them, it is likely the dimmer not the new bulbs.

Below are some examples of LED retrofits I have done.

For more detailed information, I have a video on YouTube that explains all of this in simple detail. It is divided into chapters so you can forward to the desired topic.

<https://www.youtube.com/watch?v=TuA5UNO2JTM>

If you have any questions or want more information, feel free to reach out to me directly – SteveJonesLED@gmail.com



Sanctuary before – 55 watt CFLs and 60 watt candelabra bulbs



Sanctuary after – 33 watt LEDs and 17 watt FEIT Enhance candelabra bulbs at 3000K



Choir Room – mid-changeover. 40 watt T12s tubes on left



Choir Room – after. 17 watt LED tubes



Sanctuary Chandelier – reduced wattage from 1520 watts down to 125 watts



Bathroom lights – changed to 17 watt FEIT Enhance bulbs at 3000K

BIO (if needed)

Steve Jones is a lifelong Congregationalist who has made it his personal ministry to help churches reduce electric costs and improve light quality through changing and upgrading lighting.

His education and background is in electrical and industrial engineering, occupational safety & ergonomics. He currently lives and works in Naperville IL where he is Global Ergonomist for a large local company.

Starting with his home church in Naugatuck Connecticut, he has relamped every church he has attended over the last 25 years, and now a few more by invitation. He has just completed his 16th church upgrade and is willing to help any church that needs his advice or labor.