

# Lighting Retrofit Guidelines for Retail Facilities



## Facility Information Checklist

Legal Business Name \_\_\_\_\_

Facility Address \_\_\_\_\_

Hours of Operation \_\_\_\_\_

Facility Type \_\_\_\_\_

Sq. Ft./Ceiling Ht. \_\_\_\_\_

HVAC Type/Fuel \_\_\_\_\_

Utility/Acct # \_\_\_\_\_

### Walkthrough Tools Checklist

- Pen & Audit Sheets
- Ballast Discriminator
- Digital Camera
- Light Meter
- Counter
- Monocular (Binocular)

*Don't forget to include necessary safety equipment!*

## Consider the Space

Retail facilities often have long hours of operation. Annual energy savings are just one piece of showing these business owners the benefit of a lighting retrofit project. Increasing color quality and improving appearance are all vital when evaluating a retail lighting space. Retailers look at their spaces as "theaters", meaning it is critical to create a space that is inviting, where people will stay longer, shop and enjoy.

Providing retailers with energy efficient long life lighting options can be a sales strategy to help avoid frequent maintenance.

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## Consider the Space

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**Track Light Fixture:** These fixtures typically use an incandescent source and can be difficult and costly to replace. It is best to access the lamps instead of trying to guess wattage by the size of the lamp envelope. Consider using the existing track to save the customer money, but replace the heads with newer technology. Flexibility and light levels need to be considered when choosing a proper replacement, e.g., do you need narrow or wide floods to highlight merchandise? Consider LED PAR lamps, which have extended lamp life, and wall washers with high efficiency reflectors as part of the integral design. If selecting LED lamps for enclosed track heads, verify that the lamp is rated for installation in enclosed fixtures.



**Incandescent Display Lights:** These fixtures can be equipped with various types of lamps (including halogen, quartz, standard incandescent, and small ceramic metal halide). Display lights may be integral to a display case, in a recessed can light or as a track light. You need to be familiar with the term Contrast Ratio when evaluating options for merchandise lights. Retail facilities strive for a 10:1 ratio, meaning that you need 10 times more footcandles (fc) on the merchandise than you do for general illumination. The idea is to draw the eyes of the customer to the merchandise. There are high performance LED lamps that are viable replacements for virtually any incandescent lamp. Using LED sources will reduce energy use and maintenance cycles. Ensure you verify that the LED replacement lamps are rated for enclosed fixtures.



**Recessed General Illumination:** You can achieve general illumination with a variety of methods, but the most common are recessed fluorescent 2x4 or 2x2 troffers, and recessed downlights. They are uniformly spaced around the store to provide even illumination but at lower light levels (10 to 20 footcandles are not uncommon). Typical technologies that need to be replaced are T12 lamps (u-bent and linear), and halogen or 1st generation compact fluorescent lamps (CFL). An appropriate retrofit for these 2x2 or 2x4 retrofits are T8s with electronic ballasts or LED troffers. If the space is over lit, consider de-lamping or removing/re-spacing fixtures. For any downlights, consider new LED fixtures or new LED retrofit kits.

Additional energy savings can be achieved by dual switching fixtures for cleaning/restocking times when the store is not open to the public. Dimming can also be considered.

## Retail Education

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Back walls of retail spaces should typically be illuminated. This strategy draws customers' eyes in and encourages them to visit the back of the store.

Color Rendering Index (CRI) is an important concept for retail businesses to understand because of the impact it has on product appeal. Look at all retrofit or new lamp choices and make sure that they all have high CRI values. Lighting controls are often important for retail businesses.

When providing LED options, ensure that the existing or proposed control system is compatible with the selected fixtures. This can be accomplished by contacting the control manufacturer and providing a proposed bill of material.

## Final Thoughts

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Retail facilities often have excellent savings opportunities and a new lighting package can immediately impact retail sales in a positive manner.

Make sure your proposed retrofit properly illuminates the front and back of the store to communicate to potential customers, "We're open!"

Installing mock-up fixtures is the best way to sell a project. Seeing is believing.