

# 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 high hours of operation, but are smaller facilities. Annual energy savings are just one piece of showing these business customers the benefit of a lighting retrofit project. Increasing color quality, flexibility and improving sales are all vital when evaluating a retail lighting space. Customers look at their spaces as “retail theaters,” meaning that it is critical to create a space that is inviting where people will stay, shop and enjoy. Providing retail customers with energy efficient *long-life lamp* options should be a sales strategy as these customers also do not want their employees changing lamps.

## Consider the Space

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**Track Light Fixture:** These fixtures are characteristically 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. For example, do you need narrow or wide floods to highlight merchandise? Consider LED and ceramic metal halide (extended lamp life) and include high efficiency reflectors as part of the integral design.



**Incandescent Display Lights:** This type of product can be used in a variety of fixture housings with various types of lamps (including halogen, quartz and standard incandescent). 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 foot-candles on the merchandise than you do for general illumination. The idea is to draw the eyes of the customer to the merchandise.



**Recessed General Illumination:** You can achieve general illumination with a variety of methods but the two most common are recessed fluorescent fixtures and recessed downlights. They are adequately spaced around the store to provide even illumination, but at lower light levels (10 to 20 foot-candles is not an uncommon level). Typical technologies that need to be replaced are T12 lamps (u-bent and linear) and halogen or 1st generation compact fluorescent lamps. An appropriate retrofit for these 2x2 or 2x4 retrofits are T8's with electronic ballasts. If the space is over lit, consider delamping or removing/re-spacing fixtures. For any downlights, consider new LED or ceramicmetal halide.



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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- Retail spaces typically require back walls to be illuminated in the store. The idea is to draw the customers eyes through the store and encourage them to visit the back areas. This effect can also be important in showing the customer that the store is open.
- CRI - Color Rendering Index: CRI is an important concept for retail businesses to understand because of the impact it has on illuminating product. This is especially true if the facility is using low CRI illumination or has incandescent with higher CRI. Look at all retrofit or new lamp choices and make certain that they all have high CRI values.
- Lighting controls are often important for retail customers. When providing LED options to a customer, ensure that the existing or proposed control system is compatible. 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 also immediately impact retail sales in a positive manner.
- Installing mock-up fixtures is the best way to sell a project - seeing is believing.
- Make sure your proposed retrofit properly illuminates the front and back of the store to signal to potential customers "I am open!"