LIGHTING LAYOUT GUIDE SERIES

RETAIL GUIDE 4

RETAIL REFRIGERATOR CASES

LED RETROFIT

BASELINE FLUORESCENT

Dimensions: 4" x 60"
Lens: Clear acrylic
Distribution: Omnidirectional
Lamp: 5' T8 (700 series)
CRI: 75
Lumens: 3150
Life: 20,000 hrs.
Watts: 40 (nominal)

LED RETROFIT PRODUCT

Dimensions: 1.82" x 1.15" x (varies)
Optics: Microprismatic Acrylic Lens
Source: LED
CCT: 5000K
CRI: 80+
Lumens per Watt: 80
Depreciation: 0.95 @ 100,000 hrs.
Rated Life: 100,000 hrs.
Watts: ~3.5 w/lf

TIP
Even more energy savings can be realized by installing dimming type occupancy sensors, which dim the fixtures to 20% after a period of non-occupancy, ramping the light levels up to 100% once occupancy is detected.

THE OPPORTUNITY

In typical grocery store with freezer and refrigerator cases, it is possible to provide high quality case lighting that adequately illuminates the product shelving, and greatly reduces the connected load, which in turn helps meet the energy code for retail spaces. This solution is the current best recommended practice for refrigerator cases.

THE SOLUTION

Install surface mounted, vertically oriented, linear LED luminaires in each refrigerator case. Although the IES does not publish illuminance recommendations for this application, this solution exceeds the target illumination of at least 40 footcandles (fc) in standard refrigerator cases. The directional optics of LEDs deliver more light with better uniformity than fluorescent sources, leading to energy savings of greater than fluorescent.

DESIGN CONSIDERATIONS

Freezer and refrigerators are typically kept at temperatures low enough that linear fluorescent lamps often do not operate optimally. LEDs prefer cold temperatures and also provide additional energy savings on average of 20% in cooling costs, making them ideal for this application.

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LED RETROFIT NOTES & DRAWINGS