

Daylighting Facts and Figures

Retail Sales

- According to Minnesota-based consultancy Design Services Group, a typical retailer now spends about \$300,000 on lighting – about 10% of total store construction costs, up from 8% a few years ago. Armed with data that shows the right lighting can increase sales, retailers such as Albertson's, Kroger, Safeway, Wal-Mart and Whole Foods Market are using illumination tricks to make merchandise more attractive. Wal-Mart builds all of its supercenters to exploit natural lighting. While energy savings are an important draw, the company reports that the improved lighting increases sales.

(Business 2.0, September 2005)

- A 1999 Pacific Gas & Electric Company (PG&E) daylighting study analyzed a retail chain of 108 stores where two-thirds of the stores were lit with skylights and one-third were not. All other things being equal, the study found that the daylighted stores had 40% higher sales than those without.

(Heschong Mahone Group HMG "Skylighting and Retail Sales" Report at www.h-m-g.com, 1999)

- In 2003, a new retail study was conducted to replicate the HMG study with a new (anonymous) retailer. The report stated: However, the more detailed "daylight hours per year" model found that there was a significant dose/response relationship between the number of daylight hours per year and the magnitude of the increase in sales (once other factors, such as the size of the parking lot, were considered).
 - ✓ Daylight was found to be as reliable a predictor of sales as other more traditional measures of retail potential, such as parking area, number of local competitors and neighborhood demographics.
 - ✓ During the California power crisis of 2001, when the chain operated its stores at half-lighting power, the daylit stores had an average 5.5% increase in sales relative to the non-daylit stores.
 - ✓ Along with an increase in average monthly sales, the daylit stores were also found to have a 1% to 2% increase in the number of transactions per month.
 - ✓ Stores with the most favorable daylighting conditions had a 40% increase in sales compared to non-daylit stores, consistent with the findings of the HMG study.
 - ✓ No seasonal variation was detected. Researchers concluded this suggested a long-term customer loyalty effect and not a short-term impetus on sales.
 - ✓ Over a dozen large national retail chains are known to be currently (at time of this report, 2003) building skylit stores or developing prototypes to investigate how skylighting could best be applied for their format.

In addition, in 2003 the head of store planning for a national department store corporate and seven other major retailers have consulted HMG for advice on including skylighting in their stores.

("Integrated Energy Systems: Productivity and Building Science" report prepared for the California Energy Commission Public Interest Energy Research Program by the New Building Institute Inc., October 2003)

- Local retailers who adopt daylighting for their store design are likely to find a competitive advantage reflected in higher sales, greater customer loyalty and perhaps also employee loyalty.
("Integrated Energy Systems: Productivity and Building Science" Report prepared for the California Energy Commission Public Interest Energy Research Program by the New Building Institute Inc., October 2003)
- In relation to the original PG&E study, the link between high consumer activity and skylighting occurs despite the fact that many of the customers interviewed state that they were unaware of the presence of skylights. Rather, the customers responded that they frequent the skylit stores because of non-specific positive environmental feelings, such as that the stores feel cleaner, more spacious, more open or brighter. The authors of the study offer several hypotheses concerning why the skylights encourage these sentiments, including:
 - ✓ Customer Loyalty – Although they are unaware of the skylights, customers may routinely travel a little farther to shop at a skylit store because it seems cleaner or brighter.
 - ✓ More Relaxed Customers – The skylights may impact customers in a manner similar to piped-in music, which has been found so effective at relaxing customers and encouraging them to spend more time shopping in the store.

- ✓ Better Visibility – It may be easier for customers to find products and/or discriminate between alternatives with daylight illumination.
- ✓ More Attractive Products – It is possible that visual quality provided by daylighting, with high color rendition and three-dimensional modeling, may make products more appealing.
- ✓ Employee Morale – It could be that employees working under natural light have higher morale and provide better service as a result

(Houston Business Journal, September 22, 2000)

- According to Southern California Edison, “Our data show that over a six-month period, stores in the same districts with daylighting, selling the same products, showed a 25% increase in sales.”
(Energy User News, February 1997)
- Researchers with North Carolina State University’s Department of Textiles report that inconsistencies in store lighting affect how colors in items such as clothing appear to shoppers, causing colors to look different in the store than when the customer gets home. This leads to unhappy customers and, consequently, a negative impact on sales. The best way to inspect the true color of an item is to view it under natural light.
(Raleigh News & Observer, December 24, 2001)
- After payroll, electricity is a retailer’s largest expense. As profit margins shrink, retailers are focusing on improving the bottom line through savings rather than sales volume. Anything retailers can do to save on utility overcharges or to save a kilowatt hour comes back as increased profits. Many retailers and shopping center operators are finding that lighting improvements offer the biggest bang for the buck. Wal-Mart, for example, has been utilizing a daylighting system of skylights and lighting controls in many of its stores since 1995, with an average reduction of 2,800 hours in electric lighting turned off per year according to the company.
- A 1995 Wall Street Journal article reported Wal-Mart’s experience with daylighting its store in Lawrence, Kansas. Sales were significantly higher in the side of the store that utilized skylights than the same product displayed at other Wal-Mart stores. To test the correlation, products were swapped from the artificially lit to the daylit sections and those located under the skylights again had significantly higher sales while those shifted to the artificial lights returned to their national sales average.
(Portland Business Journal, July 19, 1999)