

Naturally
Enhanced
Environments



THE BENEFITS OF DAYLIGHTING IN ARCHITECTURAL DESIGN

Daylighting in Retail

Enhancing Shopper Experience, Staff Well-being, and Energy Efficiency

Retail environments are all about first impressions and customer experience, and daylighting is integral to creating the right ambience. Research has shown that natural daylight levels can significantly impact shopper behavior, employee productivity, and operational costs. This blog explores why daylighting should be a priority for retail design and how it can shape the future of commercial architecture.

How daylighting impacts retail

In retail, daylighting reduces reliance on electric lighting and influences consumer psychology and buyer behavior in several ways:

The shopper experience: engagement and sales

Natural daylight profoundly impacts human behavior – in retail environments, this affects shoppers' mood, perception, and purchasing decisions. [Research](#) shows daylighting enhances the in-store experience, making customers feel more comfortable and engaged.



Specifically, the study suggested that the installation of skylights in non-skylit stores would result in a 40% improvement in sales, with a probable range of between 31% and 49%. This translates into:

- **Increased time spent in store:** **Studies** show that shoppers tend to linger longer in well-lit stores with natural light, leading to a greater likelihood of purchase. Bright, naturally daylit spaces feel more inviting and reduce the feeling of being in a closed-off unnatural environment.
- **Enhanced product appeal:** Because daylight is a full-spectrum light source, **colors appear more vibrant** when viewed in daylight, making products look their best. Accurate color representation is significant in fashion, furniture, and lifestyle stores, as it can affect purchasing decisions.
- **Psychological well-being:** **Natural daylight affects mood and reduces stress, creating a more pleasant shopping experience that fosters brand loyalty and overall satisfaction.** Relaxed, comfortable customers are more likely to return – and spend.

Employee productivity and well-being

Retail employees spend long hours indoors, often under harsh electric lighting. Daylighting can improve their work environment for higher job satisfaction and productivity, evident through:

- **Better mood and focus:** Exposure to natural daylight regulates **circadian rhythms**, improves alertness, and reduces fatigue. Employees working in naturally daylit spaces report fewer headaches, less eye strain, and overall better well-being.
- **Lower absenteeism:** Healthier, happier employees take fewer sick days. Access to daylight has been linked to **better sleep patterns** and **reduced seasonal affective disorder (SAD) symptoms**, particularly in locations with long winters.
- **Better customer service:** When employees feel energized and engaged, their interactions with customers improve, leading to better service and a more positive in-store experience. A **literature review** of research on daylighting concluded that lighting conditions are a major factor in employees' satisfaction with their working environment.

Energy efficiency and sustainability

Daylighting in retail design positively impacts energy consumption, especially for large single-story facilities, which often require significant lighting. Integrating daylighting can lead to:



When considering the many energy-efficiency measures that can be applied to today's building, the use of daylight is the one sustainable measure that occupants can actually see and appreciate.

- **Lower electric lighting costs:** Maximizing daylight reduces electric lighting demand during peak business hours and reduces energy expenses. According to studies, well-designed daylighting systems can reduce electric lighting consumption significantly, potentially by as much as **50–80%**.
- **Sustainability and green building certifications:** [New research](#) shows that 78% of consumers agree that sustainability is important. Unsurprisingly, many retailers are increasingly focusing on sustainability – according to the [2023 Deloitte CXO Sustainability Report](#), 62% of retail companies are increasing the efficiency of energy use. Incorporating daylighting helps meet LEED and WELL Building Standard requirements, reducing carbon footprints while appealing to eco-conscious consumers.

Design strategies for effective retail daylighting

For architects and designers, achieving the right balance of daylighting requires careful planning to incorporate strategies that optimize daylight in retail spaces. **Skylights and TDDs** can maximize overhead natural daylight, particularly useful for ‘big box’ single-story retail buildings. Skylights and TDDs introduce ample natural daylight without relying solely on vertical glazing. In large-format stores, **continuous skylights** are ideal for ensuring even light distribution.

In more complex designs, **modular skylights** bring flexibility, adapting to different retail layouts, and **tubular daylighting device solutions** can direct daylight into deeper spaces where daylight from windows may not reach. **Clerestory windows** allow light penetration while minimizing glare and preserving privacy, ideal in mall-based stores or retail units with limited exterior walls.

Light shelves can help bounce daylight further into the store, reducing glare and ensuring more even illumination. Combined with light-colored **reflective flooring and walls**, this technique can amplify natural daylight penetration.

Smart glazing and automated controls

To optimize daylight without excessive heat gain, consider low-E Glass and tinted windows to control solar gain, used alongside automated shades and blinds that adjust based on daylight levels and time of day. Daylight sensors can be integrated with electric lighting systems for smooth transitions between natural daylight and electric light.

Daylighting is a strategic investment in customer experience, employee well-being, and energy efficiency, bringing sustainability and aesthetics together for visually appealing and functionally superior environments. By leveraging daylight effectively, retail spaces can drive higher foot traffic, improve operational efficiency, and contribute to a healthier, more enjoyable shopping environment.

Read on to find out about retail daylighting in action.





Case Study: Daylighting transformation at Ganahl Lumber, Pasadena, California

Ganahl Lumber, one of Southern California's oldest building materials retailers, revitalized a historic General Motors dealership in Pasadena, transforming it into an inviting and energy-efficient retail space. The challenge was to balance adaptive reuse with modern retail needs while maintaining compliance with building preservation standards.

Onyx Architects implemented an innovative daylighting strategy to create a high-end shopping experience within a typically utilitarian setting. They installed 60 **Solatube** SolaMaster 330 DS-O Tubular Daylighting Devices (TDDs) to capture and distribute natural daylight throughout the store efficiently. Unlike traditional skylights, the TDDs integrate seamlessly with HVAC, lighting, and signage while reducing glare and energy consumption.

The results were dramatic – Ganahl Lumber exceeded revenue expectations, benefiting from the enhanced visual appeal and customer-friendly atmosphere created by natural daylight. Studies suggest daylighting in retail environments can boost sales by **over 40%**, a trend reflected in the store's success. The project was recognized with an AIA Pasadena & Foothill Chapter Honor Design Award for restoration and adaptive reuse, solidifying Ganahl Lumber as a standout retail destination.

This case study showcases the power of strategic daylighting in retail, illustrating how natural light can enhance both aesthetics and performance while driving business success.

[Explore the full case study here.](#)

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Case Study: Creating a statement environment at Devon Yard, Pennsylvania

More than a conventional shopping mall, Devon Yard was retail brand Anthropologie's first ever "lifestyle center," built near its original 1992 retail store. In addition to the flagship store, it also features two fine eateries, a home/garden shop and other retail spaces which are all brought together around a central courtyard. To embody both the pastoral setting and the modern rustic characteristic of the iconic lifestyle brand, **NewStudio Architecture** was challenged to create a "light and airy greenhouse feel" for occupants while meeting strict local energy codes.

The final building used a mix of Pennsylvania field stone and reclaimed barnwood to create an exposed beam structure. This was then topped off with a roofing solution that combined a traditional-looking standing seam metal barn roof divided by modern glazed areas created from 2,680 sq ft of **QuadSpan™** skylight system.

The ice-white glazed QuadSpan™ panels not only enhanced the building's aesthetics, providing a modern, airy contrast to the solidity and complexity of the barn-like architecture. But the translucent glazing helped to illuminate the spaces with soft, diffused light without risk of glare or added heat. This ensured a bright, inspiring space for shoppers, diners and workers alike.

[Explore the full case study here.](#)

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