

### LIGHTLOUVER CONCEPT

Using a patented, passive optical design, the LightLouver Daylighting System redirects daylight deep into the space onto the ceiling while eliminating glare and all direct sunlight penetration onto work surfaces. With LightLouver units integrated into the building fenestration, uniform ambient lighting is provided, so that electric lights can be turned off or dimmed and energy saved.

The LightLouver Daylighting System is equally applicable to existing commercial and institutional buildings as it is for new construction. Consider the LightLouver Daylighting System for your next renovation project.

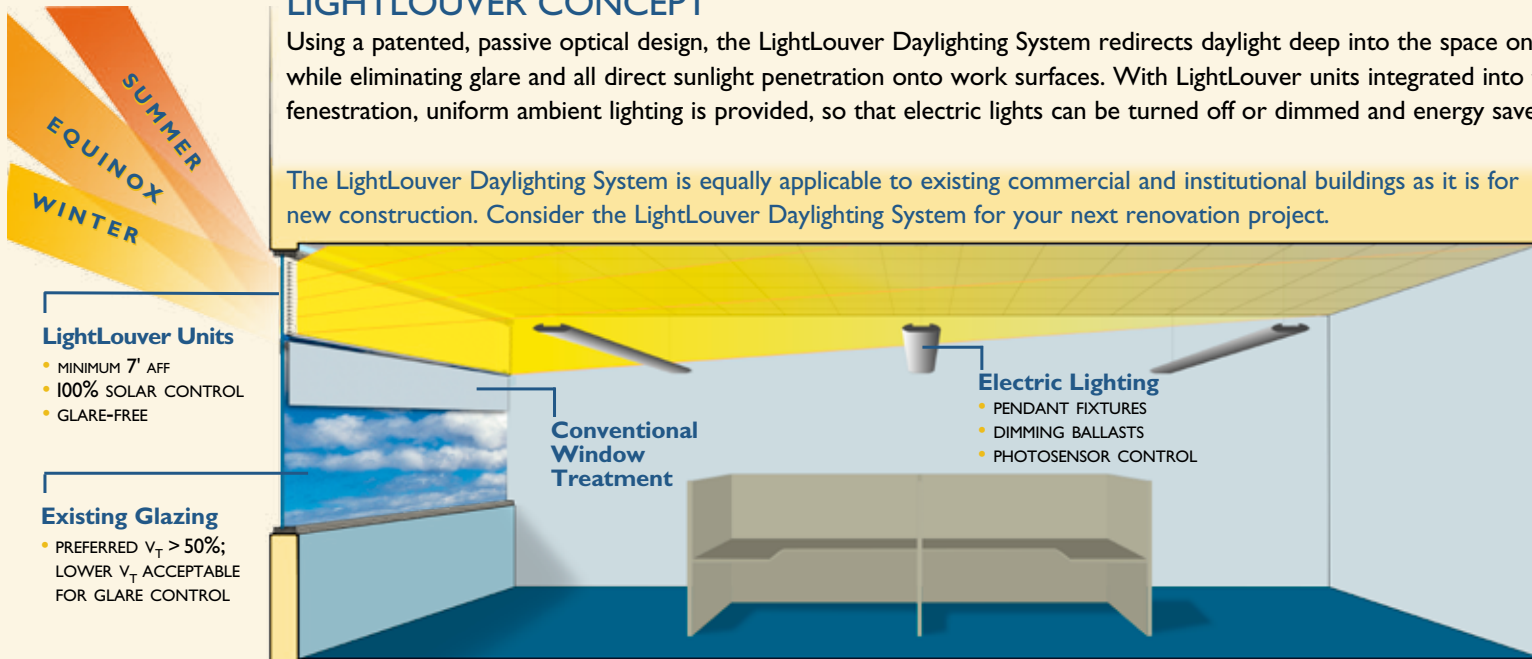
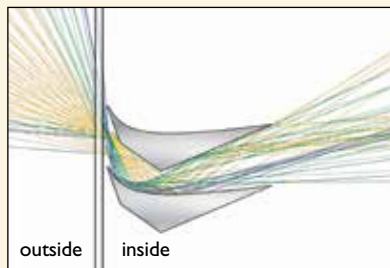


Figure 1: LightLouver Daylighting System Schematic for Existing Commercial Buildings



The patented LightLouver reflective slat design redirects daylight deep into the daylit space while providing complete solar control. For all solar altitude angles, as shown in the diagram (left), the LightLouver reflective slats redirect daylight up and back onto the ceiling to provide uniform, glare-free daylight.

## LIGHTLOUVER™ DAYLIGHTING SYSTEM

### DESIGN INTEGRATION GUIDELINES FOR EXISTING COMMERCIAL BUILDINGS

#### Assess Potential for Daylighting (refer to Figure 1)

- Existing glazing ideally should have a visible light transmission ( $v_T$ ) of 50% or higher. However, for glare control a lower  $v_T$  may be acceptable
- Existing or new windows on east, south and west facing facades should ideally have unobstructed access to sunlight throughout the day
- Sufficient area of glazing above 7' (AFF) to adequately daylight the proposed "daylit" space. (See LightLouver Unit Sizing guidelines below)
- Ability to add daylight dimming control to the existing electric lighting system in the proposed "daylit" space, or if in a renovation/retrofit situation, specify daylight dimming control in the new electric lighting system
- Sufficiently large open spaces with minimal interior walls or furnishings above 7' (AFF) in the proposed "daylit" space. Glass partition walls and transom glass are acceptable

#### LightLouver Unit Sizing (refer to Figure 2):

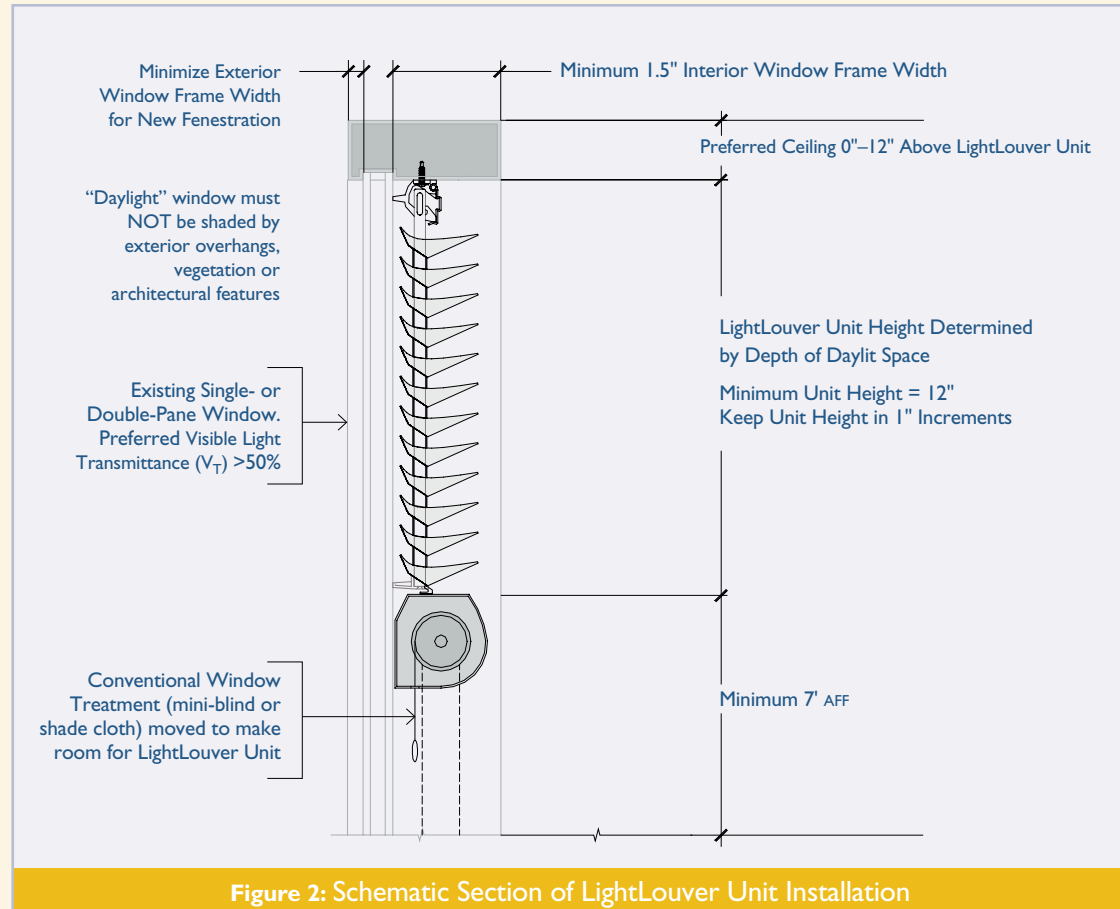
- One vertical foot of LightLouver provides uniform ambient light for a 14' daylight zone
- Minimum LightLouver unit height = 12". LightLouver unit heights should ideally be divisible by 1"
- Minimum Visible Light Transmission > 50%.
- Interior window frame width > 1.5"
- Recommended maximum LightLouver unit area = 16 sf. However, larger window areas can incorporate multiple LightLouver units

#### Electric Lighting System Integration:

- LightLouver units integrate best with indirect lighting, both of which work best with a smooth and reflective ceiling surface (ceiling reflectance > 80%). Lensed lighting fixtures are acceptable; louvered troffers do not provide a good reflective surface
- LightLouver units provide an ambient (~25fc) level of illuminance and integrate best with an ambient/task electric lighting design scheme providing the same ambient illuminance level

#### Window Treatment

- Select "view" window treatment that effectively blocks direct sunlight. Fabric shade system preferred with 3–5% openness factor



For complete daylighting system performance specifications, see Design Information section at [www.lightlouver.com](http://www.lightlouver.com).

We can help you integrate LightLouver units into your project.

For design integration assistance:

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