

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 design, uniform ambient lighting is provided, so that electric lights can be turned off or dimmed and energy saved.

The LightLouver Daylighting System is the perfect choice for integrating daylighting into your new construction projects, supporting compliance with today's more stringent energy codes.

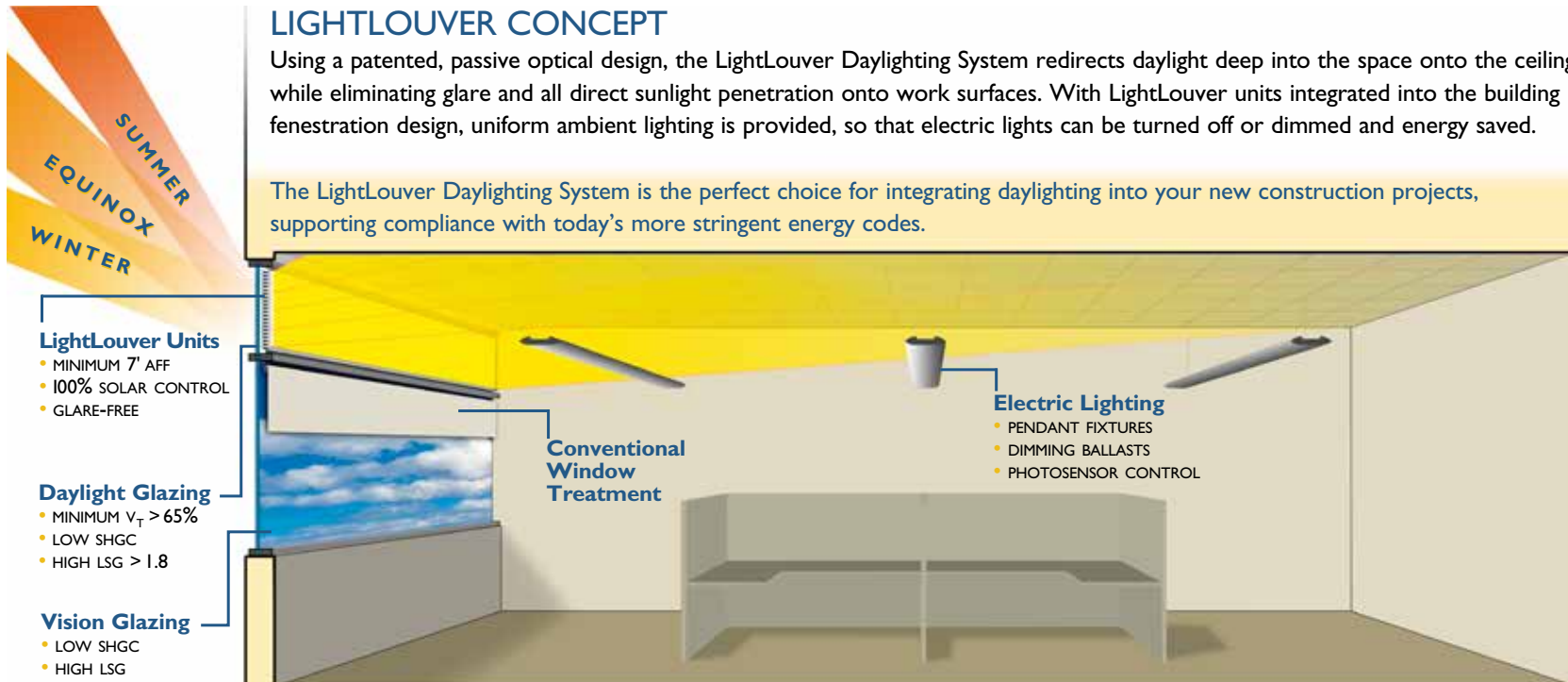
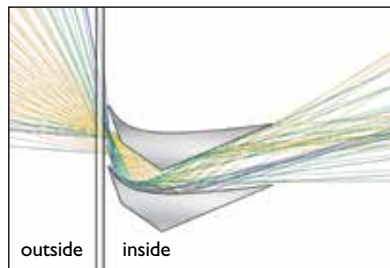


Figure 1: LightLouver Daylighting System Schematic for New Commercial Buildings



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 Unit Location (refer to Figure 1):

- Locate in “daylight” windows on east, west and south facing facades with unobstructed access to sunlight
- Bottom of the unit should not be lower than 7' (AFF)
- Preferred use in long and continuous daylight windows

Daylit Space Type:

- Optimal performance in large open spaces with minimal interior obstructions above 7' (AFF)
- Good eastern, southern or western exposure to sun with minimal shading from neighboring objects (trees, buildings, etc.) or architectural features

LightLouver Unit Sizing (refer to Figure 2):

- One vertical foot of LightLouver reflective slats provides uniform ambient light for a 14' daylit zone
- Minimum “daylight” window opening height = 12"
- Window opening heights should ideally be divisible by 1"
- Recommended Visible Light Transmission (v_t) > 65% and Light to Solar Gain (LSG) ratio > 1.8
- 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 troffer lighting fixtures do not provide a good reflective surface
- Open- or closed-loop lighting controls and dimming ballasts to “harvest” daylight and energy savings
- 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 blocks direct sunlight, but allows filtered daylight and views. Fabric shade system preferred with 3–5% openness factor

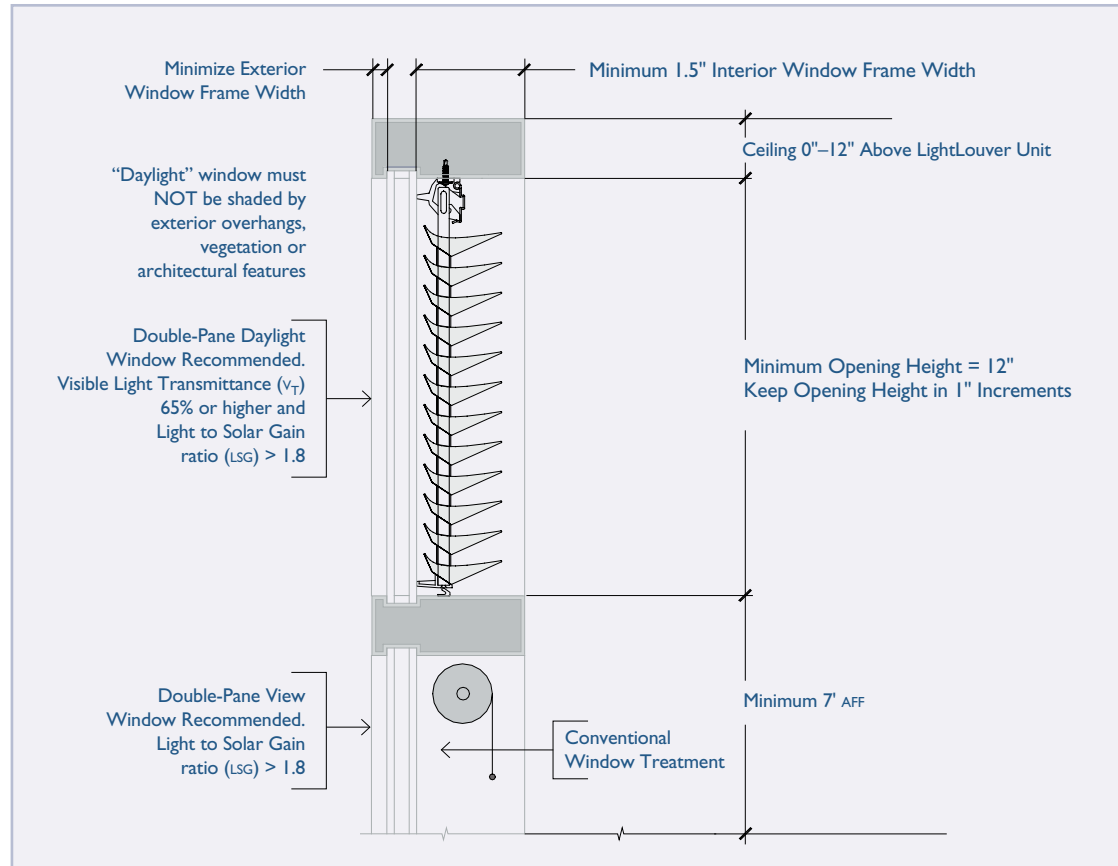


Figure 2: Schematic Section of LightLouver Unit Installation

For complete daylighting system performance specifications, see Design Information section at www.lightlouver.com.

We can help you integrate LightLouver units into your project.

For design integration assistance:

303.444.8773 • info@lightlouver.com • www.lightlouver.com

