



LightLouver™ Unit Installation Manual

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The LightLouver Daylighting System is protected under U.S. Patent Numbers 6,239,910 B1, 6,48,336 B2 and 6,714,352.

Failure to adhere to the installation procedures described in this Manual may result in damaging the LightLouver units and voiding the Limited Warranty. See the LightLouver Limited Warranty for more details.

Do not attempt to “seal off” LightLouver units from the construction environment once they have been installed. Taping plastic or any other material over the installed LightLouver units can result in damage to the product that is not covered by the warranty. **Nor should any device, such as mini-blinds or window shades, be placed in front of the LightLouver units.**

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Introduction

This document describes the proper procedures for installing LightLouver™ units. These installation procedures, and associated installation precautions, should be carefully read and fully followed to ensure the proper installation of LightLouver units and to reduce the potential for injury to installers. Additionally, the LightLouver unit product warranty may be voided by not adhering to the installation procedures and precautions described in this manual. LightLouver units, in most instances, must always be installed by at least two people. One person attempting to install LightLouver units without assistance may damage the units or the windows, or incur bodily injury. In order to familiarize yourself with this product, please read through the installation instructions, Maintenance Manual, and the product warranty before beginning installation.

Tools Required

- Rolling platform with room for two people. The use of a rolling platform is the recommended and preferred method of accessing the “daylight” windows that will receive LightLouver units. If a rolling platform is not available, two ladders of adequate height can also be used.
- A powered drill with a #2 Phillips driver bit. A drill with a clutch is recommended.
- Cotton gloves. All LightLouver unit installers must wear cotton gloves to ensure no damage or marring of the LightLouver unit reflective slat surfaces.
- Scissors or utility knife.

Installation Timing and Conditions

LightLouver units must be installed just prior to building turnover. Final construction clean up must be complete, including all wipe-downs, floor vacuuming, and window washing, before LightLouver unit installation begins. Also, the HVAC filters should have been recently changed in preparation for occupancy, and the indoor environment should be essentially dust-free. The reflective surfaces of a LightLouver unit are highly durable under normal occupancy conditions, and will require only a light dusting twice per year. However, because construction dust contains highly abrasive substances, such as gypsum, the reflective surfaces can become damaged if the units are installed too early and are exposed to potentially damaging dust and debris. Do not attempt to “seal off” LightLouver units from the construction environment once they have been installed. **Taping plastic or any other material over the installed LightLouver units can result in damage to the product that is not covered by the warranty.** Nor should any device, such as mini-blinds or window shades, be placed in front of the LightLouver units.

Installation Procedures

The following instructions pertain to LightLouver unit installation in aluminum window assemblies, curtainwall or storefront style. For instructions pertaining to wood window assemblies, please contact LightLouver LLC at info@lightlouver.com or (303) 444 8773.

The following procedures should be followed when installing LightLouver units:

1. Determine the location in the building of each LightLouver unit type, and transport the proper shipping containers to the appropriate rooms. Leave the LightLouver units in their shipping containers whenever possible, or enclose the units in protective wrapping if a need arises to remove individual units for transport. Wear cotton gloves at all times when handling LightLouver units to reduce the risk of adding fingerprints or smudges on the reflective slats.

2. Place a rolling platform, with room for two people, directly in front of the “daylight” window into which the LightLouver unit will be installed. Alternately, place two ladders of adequate height on each side of the window.

Caution must be used in handling the LightLouver units to ensure that minimal torque is applied to the units by inadvertent twisting of the unit.



3. Open the shipping container at the top where the stickers are located, and remove the foam packing material to expose the LightLouver units.



4. Rolls of light-blocking tape are provided in the Installation Package (box), which accompanies the shipment of LightLouver units. Remove a roll of the light-blocking tape.

A strip of this tape is to be placed on the bottom portion of the glass on the window behind the LightLouver unit, as shown in the picture. When installed the tape should be flush with the sides and bottom of the window frame so that no sunlight can pass through any gaps.

Use scissors or a utility knife to cut the strips of tape so that the tape has a snug fit between the sides and bottom of the window frame. Gently press the tape so that it has a smooth, tight fit on the glass.

Do not substitute a different type of tape for the tape that is provided. The tape provided has a high temperature rating to withstand the exposure temperatures on the glass surface.



5. While still in the shipping container, remove the installation assembly (integrated support brackets and valance) from the LightLouver unit by pivoting the valance into the open position and rotating the support brackets 45 degrees toward the front of the unit. LightLouver units are packaged so that the front (side facing inside with the reflective surface) of the units are facing each other in the middle of the box. Check the installation assembly, ensuring that the support brackets are in their correct positions on the valance – small location marks on the back of the valance indicate where the sides of each support bracket should be located.



5. Hold the installation assembly against the top of the daylight window frame so that the backs of the support brackets are in contact with the glass, the installation tabs are flat against the top window frame, and the valance is centered between the side mullions. Insert an installation screw into the support bracket slot and drive the screw until it bottoms out, being careful not to strip the hole. The installation screws are self-drilling and will cut threads into the



aluminum as it passes through, creating a cleanly tapped hole. Repeat process with two screws per support bracket, taking care to ensure that all brackets are aligned correctly with the front parallel to the glass. This will ensure that the valance is straight after installation.

Note: DO NOT substitute any other type of screw for the installation screws provided with the LightLouver unit, as failure to follow these installation instructions will void the product warranty.



6. Wearing clean cotton gloves, two people should grasp the header bar of the LightLouver unit, one at either end, and carefully remove the LightLouver unit from the shipping container. Remove any packaging material that may remain attached and briefly inspect the unit for damage. Any apparent damage should be immediately reported to the General Contractor and to LightLouver LLC.



Note: DO NOT set the LightLouver unit down directly onto the floor, as this can cause damage to the “footer” components that cap the bottom end of each vertical support rod. If the LightLouver unit must be set down, place a piece of 1” X 4” packaging foam on the floor first, and then set the LightLouver unit on the foam.



Two people, one on either end of the LightLouver unit, should gently grasp the bottom slat with one hand, and support the back of the top slat with the other hand. Both hands should be located as closely as possible to where the nearest vertical support rod runs through the slats.



With the reflective surface of the slats (inside surface) facing up, and holding the LightLouver unit at a 45 degree angle with the top edge closest to the window and the bottom edge furthest, pass the horizontal aluminum header bar through the openings in the support brackets.



Continue to apply moderate pressure upwards and towards the glass, and carefully allow the bottom edge of the LightLouver unit horizontal support bar to pivot downward into the resting position in the support brackets. Once released, the LightLouver unit should hang vertically with all of the “footer” components contacting the glass.





It may be necessary to gently and slightly “twist” the unit if it is no longer perfectly square due to shipping or installation movement. Likewise, if any unit twisting is apparent, it may be necessary to gently correct the twist so that the LightLouver unit is positioned flat in the window. If excessive twisting, racking, or warping is observed and cannot be readily corrected, please contact LightLouver LLC.



7. Ensure that the LightLouver unit is centered between the window mullions. If adjustment is

necessary, exert lateral force on the horizontal header bar only to avoid racking the LightLouver unit out of square.



Pivot the valance into the “closed” position so that the header bar is no longer visible. The valance should lock into position on the support brackets with an audible click when fully closed.



8. Perform a final inspection of the installed LightLouver unit before installing the next LightLouver unit. Remove any observable dust, fingerprints, or smudges on the reflective surfaces using the dusting and glass cleaning products provided with the product. All cleaning and maintenance **MUST** be performed in accordance with the LightLouver Maintenance Manual.



Creating a Pilot-Hole Drilling Template

In instances where there are many LightLouver units of the same size to install, it usually makes sense to create a pilot-hole drilling template to locate the position of the support bracket screws. This allows for the efficient positioning and attachment of the support brackets, and installation of the LightLouver units.

Guidelines for creating an accurate and useable pilot-hole drilling template are described below.

1. Procure or create a strip of material roughly 2- 3” wide by ¼” thick. Use a material that will not scratch the window frame, such as solid wood, plywood, or MDF. Cut the material to a length that is roughly 1/8” less the width of the window opening. For very wide window openings, cut the template material at about one half the window opening width.
2. Mark a line along the length of the template that is exactly 1” from one edge of the template. Mark the edge being measured from as the “glass” edge. When creating a template for large window widths, both sides of the template can be used, which means that the 1” line should be drawn from both sides of the template. Mark the template with the name of the LightLouver unit type.
3. Remove the installation assembly (valance with brackets attached) from the LightLouver unit to be installed, following the procedures described early in this Manual.
4. Lay the installation assembly along the template so that the installation tabs of the support brackets lay flat against the face of the template and the 1” line from Step 2 is visible through the slots in the installation tabs. Ensure that the brackets are

located properly, checking against the small black marks on the back of the valance.

5. Mark the template roughly 1/8" from the inside end of each slot (closest to the middle of the support bracket) so that these marks cross the 1" line from Step 2. Repeat this process for each support bracket – 2 marks per support bracket.
6. Punch each mark with a fine point nail punch, awl or similar device to ensure accurate drilling of the pilot-holes. **Accurate hole location is critical.** Improperly located holes can twist the support brackets out of parallel during installation, leading to difficulty installing the LightLouver unit, inconsistent valance positioning, and excessive stress on the support brackets and glass.
7. Using the indentations from the punches in the template material as a guide, carefully drill through the template with a 3/32" drill bit.
8. Place the template against the underside of the window frame with the "glass" edge tight against the glass, and the end of the template positioned tight against the side of the window frame. Pass the 3/32" drill bit through the pilot-holes in the template and drill through the window frame, making sure that the template does not move between drilling each hole to lose proper positioning of the pilot-holes. If a one half window width template is being used, repositioned the template to the other side of the window and repeat the process until all pilot-holes have been drilled.