

Architectural luminaires are mounted horizontally on the wall, ceiling, or on top of cabinets. They include coves, soffits, and valances. Coves distribute light upwards; soffits distribute light downwards; valances distribute light up and down. These luminaires usually contain linear fluorescent lamps, lamp sockets or holders, and ballasts. Architectural luminaires can also contain incandescent and compact fluorescent lamps. Some architectural luminaires contain reflectors to increase the efficiency of the luminaire. A shield positioned vertically or at a slight angle hides the lamps from view. Shields can be constructed of metal, wood, plywood, or gypsum board. Optional baffles, louvers, or diffusers can be incorporated to direct light and to reduce glare.

Architectural luminaires provide soft, diffuse ambient light that may need to be supplemented by luminaires in other parts of the room. They can unobtrusively emphasize the architectural design of the space, and can be attractively incorporated into the interior design of a room if they are painted or decorated with moldings, trims, or fabrics.

Purchase architectural luminaires from lighting stores or electrical distributors or build them on-site using materials that are available at building supply and hardware stores.

Energy and Lamps

Manufacturers offer cove, valance, and soffit lights that produce higher luminaire efficiencies and better light distribution patterns than do most site-built luminaires; nevertheless, a well-designed room with site-built luminaires can be far more efficient than many typical designs that use incandescent lamps.

Installation

For greatest efficiency, lowest cost, and an even distribution of light on walls, use linear fluorescent lamps. Use T8 fluorescent lamps with electronic ballasts to achieve lowest operating costs. In rooms where color appearance of the furnishings is important, such as living rooms and bedrooms, choose lamps that have good color qualities. See Fluorescent Lamps in the Lamps chapter and see the People, Energy, and Light chapter for more information on color rendering and correlated color temperature.

Use architectural luminaires in rooms with white or light-colored walls and ceilings. Use coves and valances in rooms with ceiling heights of at least 8 feet. Shield lamps that can be seen from normal viewing positions with baffles, louvers, or diffusers to limit discomfort glare. Paint the inside surface of the shielding boards of site-built luminaires white for highest reflectance. Arrange the lamps inside site-built architectural luminaires so that the light is distributed evenly. If using linear or compact fluorescent lamps, consider mounting them so that their ends overlap slightly, thus avoiding gaps in the light distribution, or “socket-shadows.” If two rows of linear fluorescent lamps are used, stagger the ends of the lamps.

Simple architectural luminaires can be economical, especially in remodeling or new construction, and particularly for multi-family housing, if many luminaires are purchased or built at once. For lowest cost when building architectural luminaires, use inexpensive strip luminaires that contain linear fluorescent lamps. Note that 4-foot T12 linear fluorescent lamps are readily available, relatively inexpensive, last a long time, and are not difficult to replace; these are factors that benefit residents, especially those with low and fixed incomes.

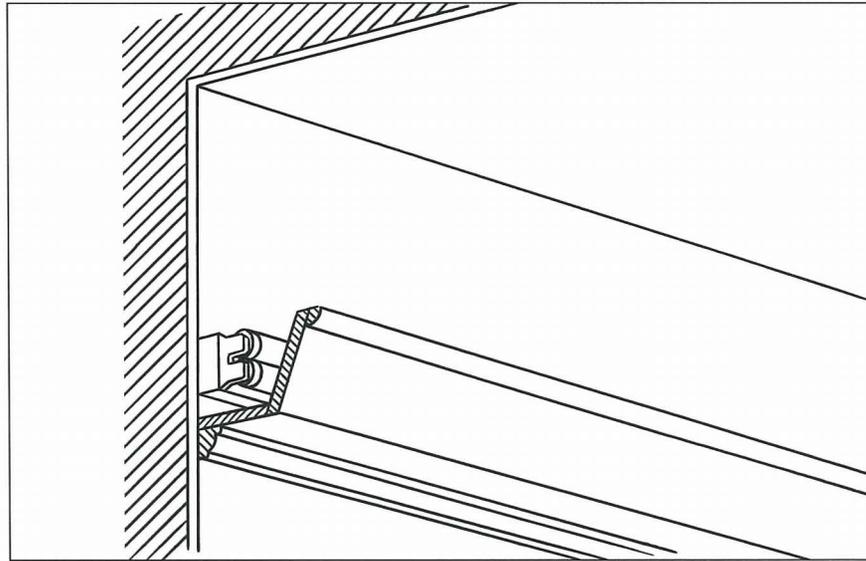
Controls

Switch the luminaires on each wall separately for the resident’s convenience and for energy savings. If each luminaire contains two rows of lamps, wire them for separate row switching to achieve two levels of light output. Use dimmers for luminaires containing incandescent lamps. Also consider dimmers for linear fluorescent lamps: special ballasts must be used.

Cautions

Use only where wall and ceiling surface textures are finely finished or interesting, because the grazing light from these luminaires will accentuate imperfections and any other textures.

Architectural: Coves



Coves are architectural luminaires that direct light upward to the ceiling and use the ceiling as a reflector to distribute light indirectly throughout the room.

Energy and Lamps

Consider using T5 linear fluorescent lamps rather than larger diameter lamps for above-cabinet cove lighting because lower light output may be sufficient for this area of the room. Alternatively, use T8 or T12 lamps operating on reduced-light-output (50 percent) ballasts.

Installation

Consider coves for rooms with high ceilings, including vaulted or cathedral ceilings, and rooms where the ceiling height abruptly changes. Use coves to emphasize decorative ceilings. To prevent hot spots or excessive brightness on the ceiling, place the top of the cove at least 18 inches from the ceiling; position the base of the cove at least 6 feet, 8 inches above the floor. For kitchens without soffit enclosures above the upper wall cabinets, simple fluorescent lamp holders can be mounted on top of the cabinets and concealed from direct view with a trim board. This provides ambient lighting for the kitchen and it can be supplemented with under-cabinet luminaires or other task lighting. To reduce glare, the cove shielding board should hide the lamp from the eye of the resident while allowing the lamps to light the ceiling directly.

Controls

If a cove has two rows of lamps, switch them individually to achieve two light levels. Use dimming controls and dimming ballasts for further variations in light output.

Cautions

If a landing or balcony overlooks a room with coves, shield the cove lamps from view from above.

For more information refer to

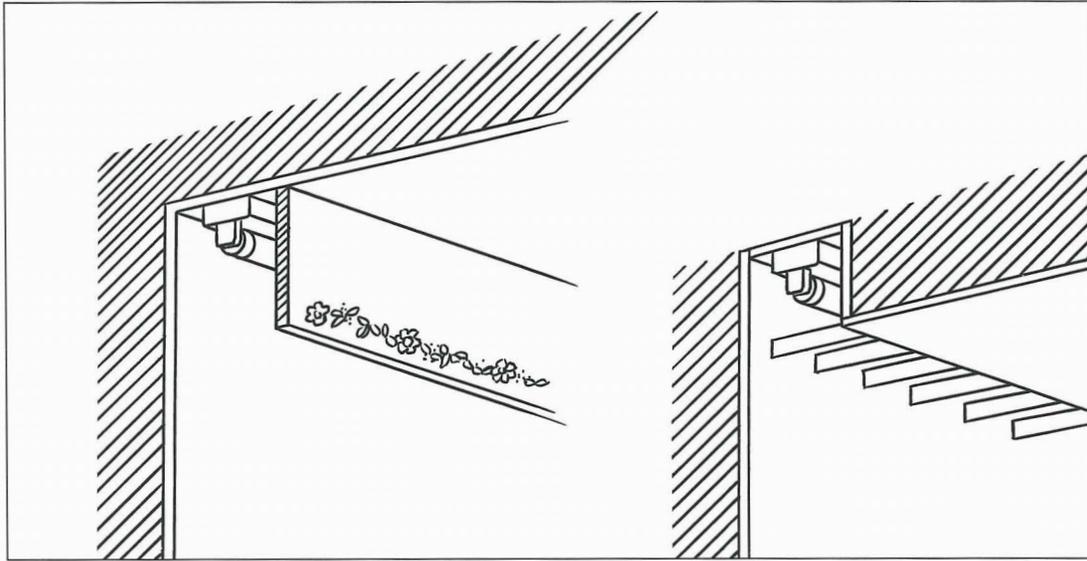
Techniques: Ambient, Indirect, Special Purpose

Lamps: Fluorescent

Designs: Medium Kitchen 2

Other luminaires: Suspended Uplights, Valances, Wall-Mounted Track or Adjustable Heads (see Ceiling-Mounted Track of Adjustable Heads), Floor Lamps

Architectural: Soffits



Soffits, sometimes referred to as cornices, are architectural luminaires that provide downlighting only. They can produce dramatic lighting effects on walls, draperies, and murals. Soffit lighting produces a grazing effect that enhances textured surfaces such as wood, brick, and stucco.

Energy and Lamps

Use linear fluorescent lamps in soffits.

Installation

Soffits can be used in rooms with low ceilings, and can be integrated into cabinetry, particularly in kitchens and bathrooms where light is needed on countertops. Where joists run parallel to the wall, recessed soffits can be inserted; these are also called “wall slots.”

Controls

If a soffit has two rows of lamps, switch them individually to achieve two light levels. Use dimming controls and dimming ballasts for further variations in light output.

For more information refer to

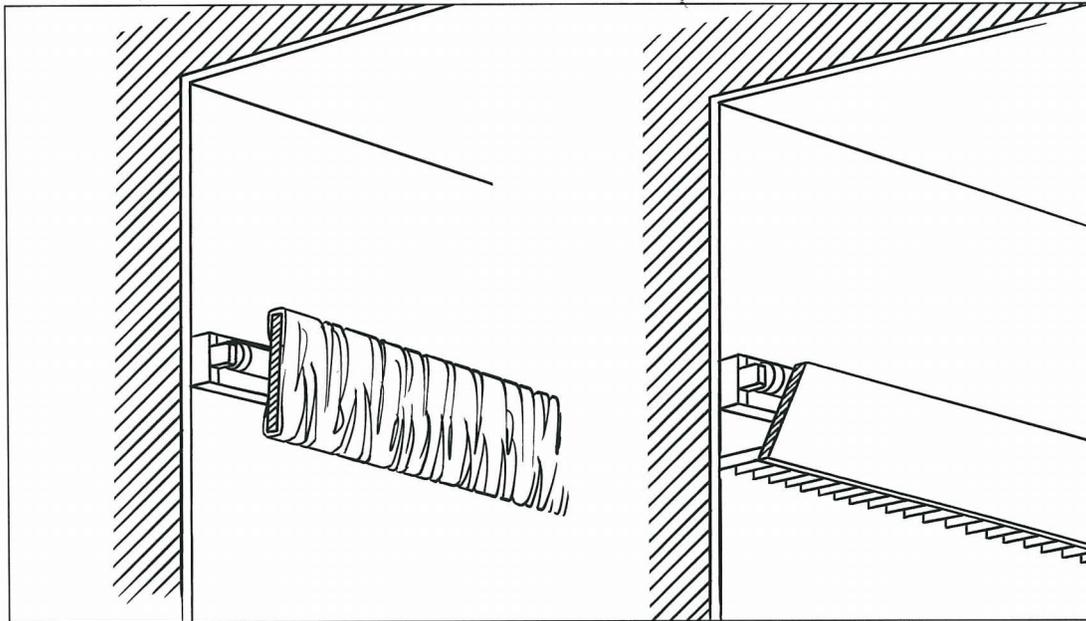
Techniques: Ambient, Wall Washing, Task, Special Purpose

Lamps: Fluorescent

Designs: Small Dinette, Large Living Room 1, Small Bath, Medium Bath 1, Large Bath, Large Bedroom, Home Office

Other luminaires: Suspended Downlights, Recessed, Valances, Wall-Mounted Track or Adjustable Heads (see Ceiling-Mounted Track of Adjustable Heads), Floor Lamps

Architectural: Valances



Valances are architectural luminaires that direct light both upwards and downwards. The upper portion acts as a cove and the lower portion acts as a soffit.

Energy and Lamps

Use linear fluorescent lamps in valances.

Installation

Valance lighting can be used with ceiling heights of at least 8 feet. Consider valance lighting for rooms with high ceilings, including vaulted or cathedral ceilings. Valance lighting is a good choice for living rooms, bedrooms, and kitchens, where general lighting and lighting for special purposes is required. Consider a lower valance mounting height for lighting specific tasks such as reading in bed. The downlight component of a valance light is used to wall wash and can be used effectively above draperies.

Mounting height will vary according to window and door height. Consider aligning the valance height with the top of the doors and windows, typically at 6 feet, 8 inches. Valances can run continuously along a wall. A combination of 4-foot and 3-foot fluorescent lamps may be used to span the full length of the valance. Try to use the same length lamp throughout a room. Lamps of different lengths may appear slightly different in color, even though they have the same correlated color temperature.

Cautions

If a valance has two rows of lamps, switch them individually to achieve two light levels. Use dimming controls and dimming ballasts for further variations in light output.

For more information refer to

Techniques: Ambient, Indirect, Wall Washing, Task, Special Purpose

Lamps: Fluorescent

Designs: Medium Kitchen 2, Medium Dinette, Medium Living Rooms, Large Living Rooms 1 and 3, Small Bedroom, Home Office, Foyer with Open Stair, Multi-Family Fire Stair 1

Other luminaires: Suspended Uplight/Downlights, Coves, Soffits, Wall-Mounted Track or Adjustable Heads (see Ceiling-Mounted Track of Adjustable Heads), Floor Lamps