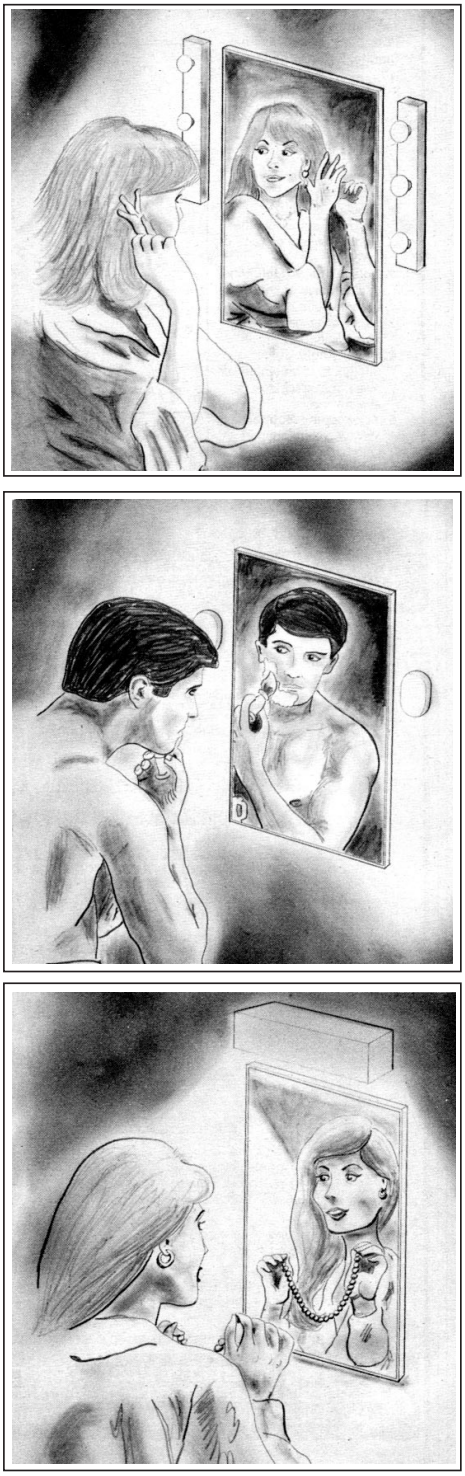
Bathroom Lighting Basics

Place lights on each side of the mirror to avoid glare and shadows

by Randall Whitehead



Vertical cross illumination (top) is the best option for lighting a vanity mirror. The light bars should be centered at eye level, so the light will shine on the face at all angles without creating shadows. The second choice (middle) for a vanity light is two translucent fixtures mounted at eye-level. The worst choice (bottom) is a single fixture above the mirror, which creates long shadows under the eyes, nose, and chin.

Good lighting is of the utmost importance in the bathroom for close tasks like shaving and applying makeup. But more often than not, it is inadequate. The most common mistake made in bathrooms is to use a single, recessed light overhead. This creates long, dark shadows under your eyes, nose, and chin. The effect is very similar to what you got as a kid when you held a flashlight under your chin to make a scary face. Another common mistake is to use one surface-mounted light above the mirror. This is only slightly better than a recessed fixture. At best, it illuminates the top half of the face. To function well, task lighting over the vanity needs balanced light that illuminates the face from all angles and doesn't create shadows.

Vertical Cross Illumination

The best cross lighting is provided by two vertical lights flanking the sink (see lead illustration). This type of lighting originated in the theater. About 20 years ago, manufacturers started to put vanity "light bars" on the market in imitation of dressing room mirrors surrounded by bare bulbs in porcelain sockets. Soon every new house was sporting the new three-bulb brass or chrome bar. More often then not, however, only one bar was used *above* the mirror rather than one on each side of the mirror. These bars don't work much better than a single fixture unless they're mounted on each side of the mirror.

Vanity light bars have slimmed down from a bulky four inches to a more attractive 2 1/2 inches. And the globe-shaped bulbs—called G-lamps—come in much smaller sizes, such as the G-14 which is only 1 3/4 inches in diameter. However, these bright little bulbs are very harsh and can create a lot of glare. Older clients with glare sensitive eyes may prefer the traditional wide bar and oversized G-bulbs. Round G-40 bulbs, five inches in diameter, diffuse the light more softly and are easier to look at. But regardless of the bulb size, always use a white frosted bulb, not a clear one. A white lamp softens the illumination; clear bulbs produce too much glare to provide good task light for anyone.

The center of the light bars should be placed at eye level. Usually this is about 62 or 64 inches off the floor. And for a single sink vanity, the lights should be spaced about 30 inches apart.

I generally spec a total of between 75 to 150 watts per side. This means that each bulb in a three bulb fixture should be between 25 and 50 watts. The range depends on the brightness of the room: the more reflectance you get off the walls, vanity top, and fixtures, the less wattage you need. Regardless, I always recommend putting vanity lights on a dimmer so the homeowners can adjust the light intensity for themselves. A client may wish to apply make-up, for example, in low light that simulates a nighttime setting.

These days a lot of architects seem inclined to spec fluorescent light soffits with either acrylic diffusers or egg-crate louvers over the vanity. But these fixtures also illuminate only the top half of a person's face. A white countertop can help reflect some light from below, bouncing some illumination onto the lower

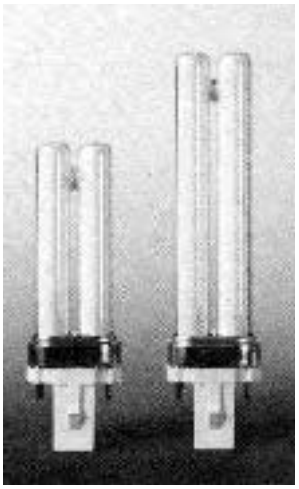


Figure 1. *Compact flourescents such as these "PL" lamps come in a variety of color temperatures suitable for lighting skin tones.*

part of the face. At best, this is cross lighting from top to bottom, and it is not the best solution. But it is a passable substitute if vertical cross-illumination isn't possible.

Another way to provide cross illumination is to wall-mount translucent fixtures at eye level on either side of the sink (see lead illustration, previous page). These can flank a small mirror or be floated on a full wall mirror. Most American and European lighting manufacturers make a number of fixtures that are perfect for this type of application. American Lighting, Lightolier, and Nova are a few of the bigger ones.

There are two high end alternatives to the simple translucent wall fixture that I like because they integrate nicely with vanity coves and don't call a lot of attention to themselves. These are made by the Phoenix Day Company (1355 Donner, San Francisco, CA 94124; 415/822-4414). Phoenix Day's RW 575 is a triangular-shaped fixture that mounts in a vertical corner, so it works well if the vanity is tucked into an alcove. For vanities without return walls, Phoenix Day makes the RW 550 which is recessed right into the wall to fit flush with the mirror. Both of these come in a variety of finishes with incandescent or fluorescent lamps.

Incandescent vs. Fluorescent

Incandescent light is always the best option for lighting faces. One incandescent light bulb that is especially flattering to skin tones is the *Beautytone* by Phillips-Westinghouse.

Fluorescents, however, are an increasingly important option to consider. Several states permit only fluorescent light sources in residential bathrooms because it is at least three times more energy efficient than the incandescent bulb. In California, Title 24 requires that at least 50% of the ambient light in all newly constructed or remodeled bathrooms (and kitchens) must come from fluorescent fixtures.

Fortunately, many of today's fluorescent lamps are flattering to skin tones. In response to criticisms of poor color rendition, most manufacturers of fluorescents have introduced bulbs that use color-correcting phosphers. In fact, there are now over 200 different color temperatures to choose from, but they are not all flattering to skin tones. "Cool white" is the most common, but unfortunately the least flattering. As a rule, you should pick bulbs with a color temperature between 3,000° and 4,000° Kelvin. Above this range, skin starts looking too green; below this, it starts looking too yellow. "Deluxe warm white" is the cheapest option with a color temperature in this range.

Even the newer compact fluorescents known as "PL" lamps have the special phosphors needed to light skin well (see Figure 1). The 13-watt version not only provides excellent color rendering, but also produces enough illumination to equal a 60-watt incandescent bulb. Because the color temperatures available in the PL Lamp are close to that of an incandescent bulb, both lights can be used in one bathroom without creating disconcerting color variations.

PL lamps have two drawbacks: the constant hum and the lack of a rapid start ballast, which causes it to flicker two or three times before stabilizing. It's a good idea to let your clients know these problems before installing PL lamps.

Unlike incandescent lamps which become more amber when dimmed, fluorescents don't change in color temperature when dimmed, which makes them desirable for vanity lights. But if you opt for dimming a fluorescent fixture, you must specify a dimming ballast when you order the fixture. Lutron makes a solid-state ballast that is silent, but it is expensive. The old, less expensive dimming ballasts make a lot of hum at low settings. In addition, you have to install a dimming switch for fluorescents which is also very expensive.

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Lighting the Tub Area

While the task area at the vanity is the most critical to light correctly, tubs and showers also need good light. Here, ceiling fixtures with white opal diffusers that project about 2 inches below the ceiling are commonly used. These are relatively effective, but they are bright and glaring. This may be a drawback for elderly clients with sensitive eyes.

A fixture that is flush or recessed into the ceiling might be a better option for such older clients. Recessed fixtures reduce glare even with high-wattage bulbs. However, with a fully recessed light, the upper third of the shower or tub area will be a little dimmer (see Figure 2).

Make sure that all fixtures used in wet locations are approved for this use by looking for the blue UL label. And when a light is placed in a tub or shower stall, it should always be on a ground-fault interrupter (GFI) circuit.

Lighting for Extra Elegance

Indirect lighting adds a soft, warm glow to the bath. Wall sconces or cove lighting directs light upward so it bounces off the ceiling and creates a well-diffused ambient light. Both of these can use miniature incandescent bulbs, PL lamps, or the standard-length fluorescent tubes, which not only comply with tight energy codes, but also provide comfortable, low-maintenance light for the entire room.

Skylights can add an elegant touch as well, and can supplement or replace electric lighting during the daytime hours. If you're not taking advantage of a view, however, don't use clear skylights. Clear glass or Plexiglas skylights project a hard beam of light, shaped like the skylight opening, onto the floor. Bronze-colored skylights cast a dimmer version of the same shape. But a white opal acrylic skylight diffuses and softens the natural light, producing a gentle light that fills the whole room. Existing clear or bronze skylights can be fitted with a white acrylic panel at or above the ceiling line to soften the light they cast.

All skylights should have ultraviolet filters to prevent the sun from rotting or bleaching natural materials. If UV filters are not available from the skylight manufacturer, you can use UF3 ultraviolet filtering acrylic sheets made by Rohm and Haas (Independence Mall, Philadelphia, PA 19104; 215/592-3000). They can often be purchased from companies that manufacture fluorescent outdoor signs.

A UV filter is usually placed just inside the sash. However, if the light well is deep enough, fluorescent strip lights can be mounted between the acrylic panel and the skylight to be used at night to keep the skylight from appearing as a black hole in the ceiling (see Figure 3). In this case we put the filter just above the ceiling line, leaving enough room for the lights between the filter and the skylight. If the filter is placed right at the ceiling line, it ends up looking too much like an institutional fluorescent fixture.

The most important goal to achieve in bath lighting is good task illumination. And while the overall light level should be appropriate for the size of the room, ambient and accent lighting are secondary to task lighting at the vanity. ■

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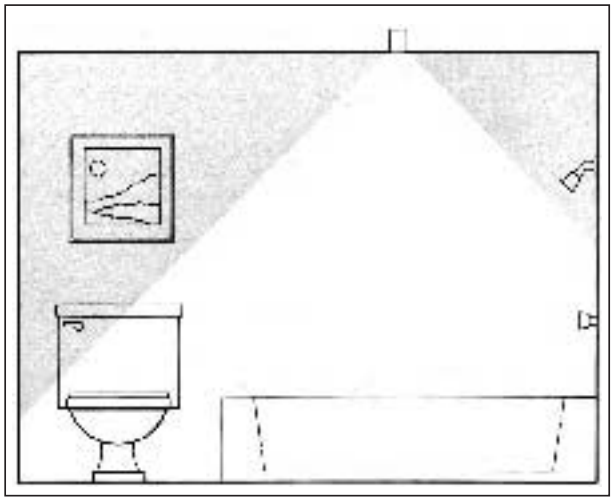

Figure 2. *A fully recessed light over the tub area will leave the upper third of the room in shadow.*

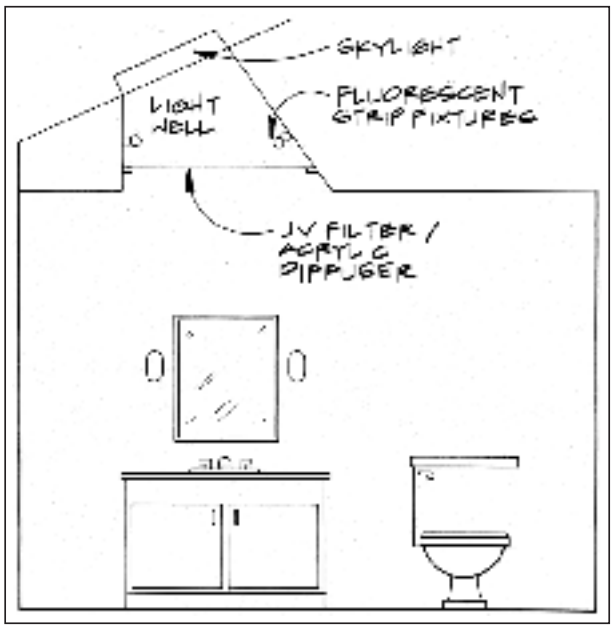

Figure 3. *Fluorescent strip lights in a skylight well will keep the skylight from appearing as a black hole at night. A UV filter or acrylic diffuser is placed just above the ceiling line to keep the light from seeming like an institutional fixture.*