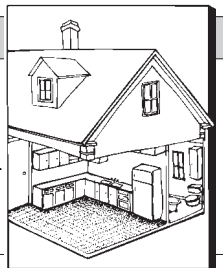
# Lighting a Kitchen



*by Patrick J. Galvin*

The Dark Ages signifies one period in time for archaeologists, another for sociologists. In 1987, the "dark ages" too often are the hours spent by home owners in today's kitchens with yesterday's light fixtures.

Lighting a kitchen properly is not difficult if it is done at the design stage. All you need to know are what kinds of light are needed, how much to put in, and what wiring is necessary.

But there are several variables that affect light in the kitchen. Dark surfaces on cabinets, walls, and floors, for example, can double the amount of light needed.

The age of the home buyer is also a factor. A person of 40 needs twice as much light as a person of 20 to see well. At 60, a person needs three times as much. Since light fixtures are rated for wattage, this can't be adjusted simply by changing light bulbs.

### General and Task

There are two functional types of lighting a builder should plan in the kitchen: general illumination and task lighting.

You can take care of general illumination with a central ceiling fixture or with lighted ceiling panels. The ultimate would be a complete luminous ceiling controlled by a dimmer switch, since general lighting does not need much intensity.

Task lighting, on the other hand, should be bright but localized. It is best accomplished with under-cabinet lighting strips that shine on countertop work areas. Many cabinet manufacturers provide these, but they must be ordered. Even if they aren't ordered with the cabinets, they can be added by the builder. The lamps should be mounted at the fronts of the cabinets, not back against the wall, and they must be hidden from direct eye view.

In U.S.-style cabinets with face frames, the lower rail often will hide a fluorescent tube from direct view. Euro-style cabinets have no such rail, so one will have to be added. It might be impossible to match the rail to the cabinets, so one alternative is to have the rail made by the countertop manufacturer to match the counter.

For areas without wall cabinets, you can install down lights in the ceiling for task lighting. They must be bright and their fields must overlap to prevent shadows.

### How Much Light?

Lighting needs vary with the size of the kitchen, and there are big differences in the output of fluorescent and incandescent lamps. ("Lamp," by the way, is lighting lingo for any light-emitting bulb or tube.)

Small kitchens—75 square feet or less—need at least 60 watts of fluorescent lighting for general illumination. For incandescence, there should be at least 150 watts in one to three sockets. But if the fixtures are recessed in the ceiling and have enclosed bottoms, the bottom panels should be at least 12 inches wide. With recessed fixtures, the small kitchen would need 80W fluorescence or 300W incandescence.

An average kitchen of 75 to 150 square feet will need 60 to 80W fluorescent or 150 to 200W incandescent. For recessed fixtures, the minimum would be 80W fluorescent or four 100W incandescent bulbs.

For large kitchens with more than 120 square feet, calculate it this way: Figure 3/4W per square foot fluorescent, or 2W per square foot incandescent. If the fixtures are recessed, you'll need 80 to 120W per 60 square feet fluorescent or 150W per 40 square feet incandescent.

For lighting over the counter, use recessed or surface-mounted down lights about 20 inches apart, centered over the countertop with 75W reflector floods.

Wall brackets can be an alternative to down lights. Mount them 24 to 27 inches above the work surface with 36-inch, 30W or 48-inch, 40W tubes or with 75W reflector floods.

### Lighting for Drama

In more and more cases, buyers of custom homes opt for dramatic lighting in the kitchen, especially when the kitchen is open to the living room or family room.

This often takes the form of wall washers that accentuate the texture of a brick or stone wall. Whether recessed or surface-mounted, down lights show texture best when placed as close to the wall as possible. The "points" of light from incandescent bulbs work better for this than fluorescents.

**Wall washers will show the seams and imperfections in your wallboard.**

If the wall happens to be wallboard, this technique won't work because close mounting will show the seams and imperfections. So to wash a wallboard wall with light, mount the lights at least 12 inches away from the wall.

Small shelves—for art objects or knickknacks—can be highlighted with tiny, low-voltage, high-intensity lights that throw a very small beam. These "Precise" lamps, made by General Electric, are only two inches in diameter. They have precise beam control and generate very low heat. But you'll need a transformer to reduce house current to 12 volts for them.

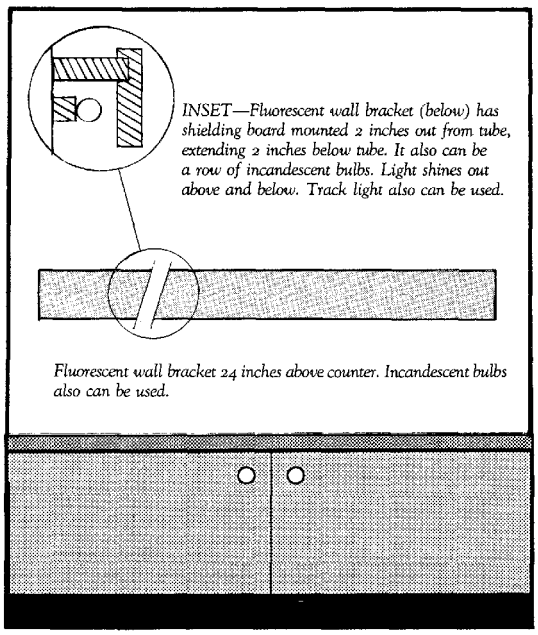
### Lighting as Afterthought

For houses under construction, in which proper lighting has not been planned, there are simple solutions.

Light bars are available at lighting stores. They have from three to eight 40W, globe-type bulbs, and can be surface-mounted on the wall or ceiling and easily tied into the wiring.

For task lighting, surface-mounted down lights or wall brackets are perhaps the easiest answer. Track lighting also is an answer, but some customers find the structure objectionable.

Under-cabinet lighting, as we noted, is easiest to add under framed cabinets. One firm, Task Lighting (Box 1094, Kearney, NE 68847), has various low-voltage systems developed for this purpose in kitchen and bathroom. These have tiny incandescent bulbs that are three inches apart in strips. The light output is adequate, and they are easy to hide from view under the cabinets. ■




*Patrick J. Galvin is the author of* Kitchen Planning Guide for Builders, Designers and Architects *and the former editor and publisher of* Kitchen & Bath Business.