

6.4 Bathrooms, Garages, Laundry Rooms and Utility Rooms

§150(k)3

Lighting in bathrooms, garages, laundry rooms and/or utility rooms must be high efficacy, or must be controlled by a manual-on occupant sensor.

A bathroom is a room containing a shower, tub, toilet, or a sink that is used for personal hygiene.

If a sink used for personal hygiene is in a room other than a bathroom, such as bedroom, where no doors, walls, or other partitions separate the sink area from the rest of the room, and the lighting for the sink area is switched separately from room area lighting, only the luminaire(s) that are lighting the sink area must meet the bathroom lighting requirements. In this case, lighting of the sink area includes lighting of associated counters, cabinets, and mirrors.

More than one circuit of luminaires may be attached to the same manual-on occupant sensor. At least one high-efficacy luminaire should be installed so that it can be left off the occupant sensor circuit to ensure that all of the luminaires don't switch off while someone is in the bath. Even dual technology sensors may not detect a motionless and silent occupant.

Garages, laundry rooms and utility rooms can be lit entirely by high efficacy lighting. Linear fluorescent luminaires are typically between 1.5 and 4 times as efficient as CFLs, and should be used unless there is insufficient space. Luminaires should be mounted close to washer/dryer hookups and over work surfaces to ensure shadow-free illumination.

Garages present an opportunity to reduce energy use by providing task lighting. The end of the garage furthest from the door to the house is often used as a work area, and can be provided with high efficacy luminaires switched separately from the rest of the space.

Although not required, occupant sensors can be used in conjunction with high efficacy lighting to achieve the lowest possible energy use. If there are any concerns about safely using occupant sensors in conjunction with low-efficacy luminaires in a space, consider the following two options:

- In addition to the low efficacy luminaires controlled by a manual-on occupant sensor, leave one high efficacy luminaire on a separate manual switch.
- Install all high efficacy luminaires in the space; high efficacy luminaires do not require an occupant sensor to meet the requirements of the Standards.

Example 6-8

Question

What types of occupant sensors qualify for controlling low efficacy lights in bathrooms, garages and utility rooms?

Answer

Eligible occupant sensors are those that do not allow the luminaire to be turned on automatically and do not have an override that allows it to remain on.

Sensors including microwave, ultrasonic and passive infra-red (PIR) must comply with section 119 (d)

Example 6-9

Question

Is it good lighting practice to have all the lighting in a room controlled by a single occupant sensor?

Answer

Occupant sensors may fail to detect people who aren't making large movements, and their sensitivity is reduced in hot environments. Occupant sensors may cause the lights to switch off while someone is using a hazardous device. Where safety is an issue, high efficacy luminaires should be installed. High efficacy luminaires do not require an occupant sensor to meet the Standards.

Example 6-10

Question

Is the factory installed lighting system in a bathroom mounted medicine cabinet required to be either high-efficacy or controlled by a manual-on occupant sensor?

Answer

If the factory installed lighting in a medicine cabinet is designed to only illuminate the inside of the medicine cabinet, and the lighting is controlled only by a door activated switch where the lights turn off automatically when the cabinet door is closed, then the factory installed lighting is not regulated by the Standards. However, if the factory installed lighting is connected to a manually operated switch that can be turned on regardless of the position of the cabinet door, and/or the lighting is designed to illuminate and/or display the contents of the cabinet when the door is closed, then it is considered permanently installed lighting that must comply with the Standards. Also, any factory installed "bath bar" or other general lighting system is considered permanently installed lighting that must comply with the Standards.

Example 6-11

Question

Is the factory installed lighting in a built-in ironing board device required to be either high-efficacy or controlled by a manual-on occupant sensor when it is installed in a laundry room?

Answer

Yes, if the lighting is permanently wired it must be either high-efficacy or controlled by a manual-on occupant sensor. However, if the lighting plugs directly into an electrical receptacle, it is not regulated by the Standards.

6.5 Other Rooms

§150(k)4

Permanently installed lighting in other rooms must be high efficacy, or a manual-on occupant sensor or a dimmer must control it.

“Other rooms” includes hallways, dining rooms, family rooms and bedrooms – the rooms in which people are most aware of interior design both in terms of fashion and the usability of their living space.

Exception 3 to §150 (k) 4 specifies that permanently installed luminaires that are not high efficacy luminaires can be allowed in closets less than 70 square feet. These luminaires may be controlled by a simple toggle switch, manual-on occupant sensor, or an automatic-on occupant sensor.

Many people commonly add their own portable lighting. Unfortunately, portable lighting often means highly inefficient incandescent floor-standing luminaires that can consume 190 watts or more for older lamps.

Permanently installed lighting should reduce the need for such high wattage portable sources by creating variations of light throughout the room, and by reducing areas of shadow. To achieve this, use several luminaires rather than a single luminaire; wall-mounted uplights are a good choice because they are design-neutral and can be repainted. For high-end properties, linear fluorescent cove lighting and other forms of concealed lighting may increase marketability.

People like to control the appearance of their rooms; providing separate switches for each luminaire will make the space more attractive to tenants and will allow them to reduce their energy use.

Although occupant sensors can be used in living spaces, there are limitations in those living spaces where people are expected to sit still for long periods of time and not move around enough to keep the sensor activated, resulting in lights going off prematurely.

Example 6-12

Question

Can a ceiling fan with integrated lighting be a high efficacy luminaire?

Answer

Yes. Ceiling fans with integral CFL ballasts are available. Occupants are likely to prefer obscured lamps to visible lamps. A less efficient alternative, when the ceiling fan is installed in a room other than a kitchen, bathroom, garage, laundry room and/or utility room, is to use incandescent lamps on a dimming circuit separate to the fan circuit.

Example 6-13

Question

Are high-efficacy spotlights available, to replace halogen MR16s?

Answer

Some CFLs resemble spotlights, and manufacturers may describe them as spotlights, but they produce the same diffuse light as regular CFLs. Metal halide spotlights with 35W T-6 high efficacy lamps are available, and LEDs can be used as spotlights.