

## Installing Recessed Lighting

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Looking for an inexpensive way to update the appearance of your home? Try replacing your existing lights with recessed lighting. Use recessed lighting to highlight specific areas in a room or to accentuate decorative elements. Since the lights are hidden, the ceiling lines are not broken and your rooms feel more open and spacious. This project requires knowledge of electrical wiring. If you are not comfortable performing electrical work, hire a licensed electrician. Lowe's is happy to provide this information as a service to you.



Recessed lighting is an inexpensive way to update your home's décor.

### Tools & Materials

#### Tools

- Electrical tester
- Screwdriver
- Drill/driver and bits
- Fish tape
- Drywall saw
- Stud finder
- Wire pliers

#### Materials

- Recessed lighting fixtures
- Light bulbs
- Electrical cable
- Wire nuts

### Planning



These instructions are for pulling power from an existing light fixture and wiring the recessed lights parallel. The existing switch controls the new lights. If no fixture exists, you may pull power from another circuit or add a new circuit to the main electrical panel. Consult a licensed electrician before adding lights to a new circuit to ensure that the added power requirement does not overload the circuit.

As with any project, planning is essential to obtaining professional results. Think about the effect you want to achieve and how best to obtain it. Then ask yourself a few questions.

#### What effect do you want from the lighting?

What objects or areas should be highlighted? Is there a space that needs bright light for reading, or is there an area that needs soft light for relaxing? The two basic styles for recessed lights can fill these needs:

- Down lights project a cone of light straight down. The cone for a 100-watt light in an 8' ceiling is usually 8' in diameter at the floor. The cones of light should overlap for maximum effect. Space the down lights so the distance between lights is no more than 75 to 95 percent of the ceiling height. In an 8' ceiling install the lights no more than 6' to 7'6" apart.
- Eyeball lights are mounted on a swivel and can be positioned to highlight different areas. Eyeball lights are very good for task lighting or focusing attention on particular items in the room.



Down light



Eyeball light

#### What's above the ceiling?

If an attic is above the ceiling, the project is pretty straightforward. You can probably use recessed light cans (like the one shown at right) with standard housings and running the electrical cable is very simple. If there's another floor above, the project is more involved. Special, remodeling cans are needed and the wire has to be fished through the ceiling.



A standard light can

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### What kind of wiring do you have?

Is the existing wiring aluminum or copper? Use wiring that is the same material and gauge (thickness) as the existing wire. If the existing wiring is fabric-insulated or has no ground wire, have a licensed electrician inspect it to determine if the wiring should be replaced.



**Good idea:** Insulated ceiling cans cost a little more initially, but easy installation and added fire safety make them a good investment, that pays for itself in the long run.

### How many lights are you adding?

You can add lights that draw as many watts as the existing fixture without overloading the circuit. If you plan to add lights that use more watts than the existing fixture, have an electrician determine what the circuit can carry.

Example: If the existing fixture uses four 100-watt bulbs.

$4 \times 100 = 400$  watts total capacity

You can safely install up to 400 watts of lighting on the circuit. To use more than 400 watts consult an electrician.

### How do you replace the existing light fixture?

There are several things you can do in the location of the old light fixture. Here are a few options:

- If the circuit supports the extra load, keep the existing fixture and add the new wiring for the recessed lights to the junction box. The switch for the existing fixture will control the recessed lights.
- Replace the existing fixture with a recessed light.
- Install a ceiling fan in place of the old fixture.
- You can install a decorative coverplate over the old fixture.
- If the area above the fixture is an unfinished attic, turn the junction box face up, put a coverplate over the open face and patch the ceiling. The junction box must remain easily accessible.
- If the area above the fixture is another floor or finished space, you must pull new wire from an accessible junction box or the panel box. All junction boxes must be easily accessible.



**When working with electricity always:**

1. Turn off the power.
2. Test the wires to ensure the power is off.
3. Lock out the panel box, so no one can accidentally turn the power back on while you are working.
4. Check with local authorities to see if a permit is required.
5. Have your work checked by an inspector.
6. Wear eye goggles and a dust mask.
7. To avoid overloading the circuit, consult a licensed electrician.

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1. Shut off the power to the circuit before you begin any work. Lock out the circuit or the panel so no one can turn the circuit on while you are working.
2. Identify the location for each light. Use the manufacturer's template to transfer the opening for each fixture to the ceiling. Drill a 1/4" hole in the ceiling at the center of the proposed opening. If the attic is above the ceiling, visually check the attic for obstructions. If a finished area is above the ceiling, use a fish tape or coat hanger to probe for obstructions.
3. Use an appropriate saw to make the openings for the light cans.
4. Disconnect the existing fixture from the power source.
5. Pull cable from the power source to the first recessed light. Leave about 18" of the wire hanging from the ceiling. Continue to pull wire to each light fixture leaving 18" of wire hanging from the ceiling. The excess wire allows enough slack to wire the new fixtures. If the attic is above the ceiling, run the wire from the attic. If the area above the ceiling is a finished floor, use a long flexible drill bit to drill through the joists and fish the wire through the framing.
6. Wire the first light to the power source and the cable leading to the next can. There should be three black wires together, three white wires, and three ground wires. Cap the connections with wire nuts. Continue connecting the fixtures until you reach the last one.
7. Mount the cans and trim pieces according to the manufacturer's instructions.
8. Screw in the light bulbs.