Ask Jon Eakes

A study of light bulb choices

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The manufacturers of lighting devices are constantly improving their products, constantly changing the names of things and totally confusing me if not you. So I decided to visit Sylvania's 'Light Point' display center in Toronto to try and catch up for both you and me.Durability: Some bulbs survive rough environments better than others, and it's true that durability is related to the number of supports holding up the filament. When a bulb is transparent and you can see inside, you can actually see the supports. Rough duty 'Garage bulbs' or ceiling fan bulbs have more supports than ordinary bulbs, and hence survive the vibrations better. The only bulbs that need to be placed, specifically, horizontally or vertically are the flame style chandelier lights.Halogen bulbs: Halogen gas helps to cool the very hot burners of halogen bulbs. This provides a brighter but cooler light than regular incandescent bulbs. The bulbs get extra hot so the glass is a special quartz glass to handle the heat. But quartz will absorb oils, like from your fingers. With oil contaminating the quartz, the bulb 'devitrifies', which means it will burn out quickly. So never touch a halogen bulb with your fingers, always wear gloves or use a cloth. You do not have this absortion problem with incandescent bulbs -- but you still can burn your fingers on a hot bulb.Halogen heat: Use aluminium reflectors with halogen bulbs when there is a very shallow plenum depth which might cause overheating. These aluminium reflectors will throw almost all the heat forward and keep the cavity cooler.Light vs. power: The power used to operate a light is measured in watts, and that is what you pay for in your electrical utility bill. But the light that comes off of a bulb is measured in Lumens or brightness. For many bulbs, both watts and lumens will be listed on the box. The higher the lumens, the brighter the light, the lower the watts the cheaper it is to operate. In the first photo above, both lights have about the same brightness: 1780 lumens and 1800 lumens respectively. But the first is using 122 watts and the second only 28 watts. The wasteful one is incandescent and the energy efficient one, giving off slightly more light with about 1/5th the power consumption, is a compact fluorescent bulb. In addition the compact fluorescent will last 10 times longer. It costs more to buy up front but you have to buy the incandescent bulbs 10 times over before you replace the compact fluorescent.Fluorescent Lamps: Hate the colour? Lamps have changed. Ask for a 'Designer' or full spectrum tube. They now produce an incredible bright white light that shows off colours in the room. And if you don't like the flickering, change to an electronic ballast. The flickering comes from the old magnetic ballasts trying to start a dead bulb. Now when the bulb is dead, the ballast just leaves it dead and you replace the bulb, rather than complaining about the flicker. Yes, even those horrible office lights can be converted to electronic ballasts and 'Designer' bulbs -- and you won't recognize your office, or believe how that overhead lighting no longer tires you. Even my sceptical TV producer became a convert.

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