

WORKSHOP SAFETY

The Importance Of Proper Workshop Lighting

Snap on the lights in most American kitchens and chances are, you'll get a wash of bright yet soft illumination that reaches into all corners. *That's* the kind of lighting that makes a good workshop environment, as well.

A dimly lit shop isn't only dangerous, it's also no fun to work in! It doesn't beckon you to get to work on that special Christmas furniture, toy or gift project. Dim lights also cause eyestrain, fatigue and impatience.

And although bright lights help you relax and enjoy your woodworking, it's important to note that *bright lights* doesn't mean *glaring lights* – that can distract your eyes and throw deep shadows throughout the shop. As a general rule, lighting should be even throughout most of the shop...an effect that can be made much simpler by splashing some inexpensive latex paint on the workshop walls, ceilings and shelves to spread the light around the shop. It also doesn't hurt to keep all windows clean at all times to let the sunshine in!

Direct versus indirect lighting

Preferably, fixtures in the shop should throw light from directly overhead the main work area. If you're using incandescent lighting (ordinary light bulbs), be sure all fixtures have reflectors behind them to diffuse the light. This is also important with fluorescent bulbs as using reflectors with them will give you more light than incandescents...for the same amount of electricity.

Again, a *wash* of even, overhead, shadow-free lighting throughout the shop is generally preferred. However, there are times when directional *task lighting* is the best answer. For example, if you're doing close-up, close-tolerance work on a Scroll Saw, Bandsaw or similar tool, additional light may be required. In these cases, auxiliary lighting that can be aimed directly at the cutting line may be preferred.

Shopsmith's Utility Light features a specially engineered slip-on / slip-off support bracket that lets you move it from machine-to-machine...and a long, flexible gooseneck that allows you to aim the light exactly where you need it for specialized operations. There's even a special T-Track Light Support Bracket that lets you mount the Utility Light to the top of your Model 510 or 520 Rip Fence (or newer Bandsaw Rip Fence) for close-up Sanding, Drilling, Shaping, Routing, Bandsawing or similar operations.

Another great lighting device for extremely close-up work is the fluorescent Magnifier Lamp. Just mount it to your machine (it's especially useful for close-up Scroll Sawing) or workbench, move it to where you want it, lock the long adjustable arms into position and go to work. Its built-in fluorescent (circular) bulb and optically correct lens will give you a view of your work that's magnified by 175%.

So...what about shadows? Are there times when some shadows are preferable? Absolutely. For example, carving, veneering work and similar operations often benefit from a low-angle, *raking* light cast across the workpiece surface to help bring out details that may otherwise be very difficult to see. In these cases, ordinary adjustable student or "art-style" lamps are a great choice. As a rule, they include a clamp that allows you to attach them to a work surface...and a "mounting post" that can be dropped into a hole that's been drilled into a benchtop or other convenient mounting surface.

Fluorescent versus incandescent lighting

Fluorescent bulbs offer two distinct advantages over incandescent bulbs. First, they cast a softer, more shadow-free light than incandescent bulbs. Secondly, they're more *efficient* than incandescent bulbs, giving you more light with four to six times the operating efficiency of incandescent bulbs...and that means less electrical consumption.

So, which is best...*Warm White* or *Cool White*? Well...in this respect, fluorescent light bulbs are a lot like wine. It's often been said that "the best wine is the wine you like the best". The same is true of fluorescent bulbs. *Warm white* bulbs are usually described as "softer", casting a more red/orange/yellow glow while *Cool white* bulbs cast a brighter, more blue/violet/green glow.

Today, there's yet another choice...*Full Spectrum* or *daylight* fluorescents. Although they are more expensive than their *cool* or *warm white* counterparts, they can be much easier on the eyes when you're exposed to them over long periods of time. They're also preferred in situations where it's important to be able to discern the true colors of finishes, since the light they cast is *neutral* like sunlight, and not weighted towards red/orange/yellow or blue/violet/green.

What about the new *compact* fluorescents? Resembling incandescent bulbs with a screw-in base instead of the conventional double-ended, tubular style, these new bulbs offer 9,000 to 10,000 hours of life. However, it will take several of them (with reflectors) to match the more even lighting effect created by longer tube-style bulbs.

It's also important to note that fluorescent bulbs cast light in pulsating waves. When used in temperatures below 50-degrees F., this can cause an annoying "flickering" effect, especially in garage shops that are located in cold climates. In some instances, it's also possible for these fluorescent light pulses to *harmonize* with the movement of power tool saw blades and distort their appearance. As a result, your eye receives an optical illusion that the blade is moving slower than it actually is...or that it's even *stopped*. This effect is entirely possible...though unusual...and can be minimized by lighting areas with a minimum of TWO fluorescent tubes.