

# Proper Shop Lighting

David Heil

For many years I struggled getting my painted colors to match what the real color should look like, especially when I was painting indoors. A few years ago I had an epiphany and realized the problem was the lighting in my workshop! Years of working in photographic laboratories and placing color photographs into the light box to balance the color reminded me of the reasons we did this. Fluorescent lighting (and incandescent as well) has a “color” it gives as a part of the function of providing light. Ever notice how some of your family pictures seems to have an orange/yellowish hue once printed? This was because the indoor lighting used emitted light in a range of the color spectrum other than what you wanted. To solve this dilemma in our workshops, it is a simple task of replacing the light bulbs with those rated at 6500k (k stands for Kelvin). These bulbs provide natural lighting like you were outside in the daylight thus making your color matching much easier. Here is a chart that may help:

## Halophosphate tubes

<b>Numeric color code</b>	<b>Color</b>	<b>Approximate CRI</b>	<b>Color temperature (K)</b>
27	Warm white	50–79	2700
33	Cool white	50–79	4100
83	Medium warm white	80	3000
84	Cool white (high CRI)	80	4100
29 (discontinued)	Medium warm white	50-70	2900
32 (discontinued)	Medium cool white	50-70	3200
34 (discontinued)	Cool white (pinkish)	50-70	4000

## Tri-phosphor tubes

<b>Numeric color code</b>	<b>Color</b>	<b>Approximate CRI</b>	<b>Color temperature (K)</b>
827	Warm white	~85	2700
835	White	~85	3500
841	Cool white	~85	4100
850	Sunlight	~85	5000
865	Cool daylight	~85	6500
880	Skywhite	~85	8000

## Multi-phosphor tubes

<b>Numeric color code</b>	<b>Color</b>	<b>Approximate CRI</b>	<b>Color temperature (K)</b>
927	Warm white	~95	2700
941	Cool white	~95	4100
950	Sunlight	~98	5000
965	Cool daylight	~95	6500

By using 6500k bulbs in your shop, you provide natural daylight illumination for your project. I use two different types of bulbs in my workshop. I have several banks of 4 foot T-8 fluorescent lamps that each has two bulbs. I picked these bulbs up at my local Lowes:



### **GE 2-Pack 32-Watt T8 48" Fluorescent Light Bulb**

Item #: 154515 | Model #:29566

**\$7.67**

I also have a ceiling fan with a light fixture that uses standard bulbs. I found 650 CFL bulbs at Lowes and put them in the fan light as well.

If all of your lighting in your workshop emits natural daylight (6500k) you will be better able to match and duplicate the model colors you need for your next project.