

HOW LED LIGHT BULB TEMPERATURES AFFECT PAINT COLORS



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How LED Light Bulb Temperatures Affect **Paint Colors**

Color is Light!

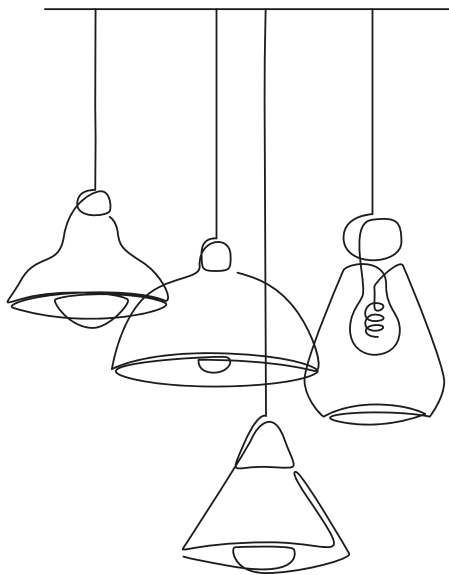
And light is an absolute necessity in our daily lives!

Sunlight, daylight, warm light, cool light!

The color of the light bulbs you install in your house, matters.

Different colors have different functions, and you should be paying attention to where you install those colors.

The basic principles of lighting choices begin with understanding the characteristics of the lighting source each bulb or lighting factor has.

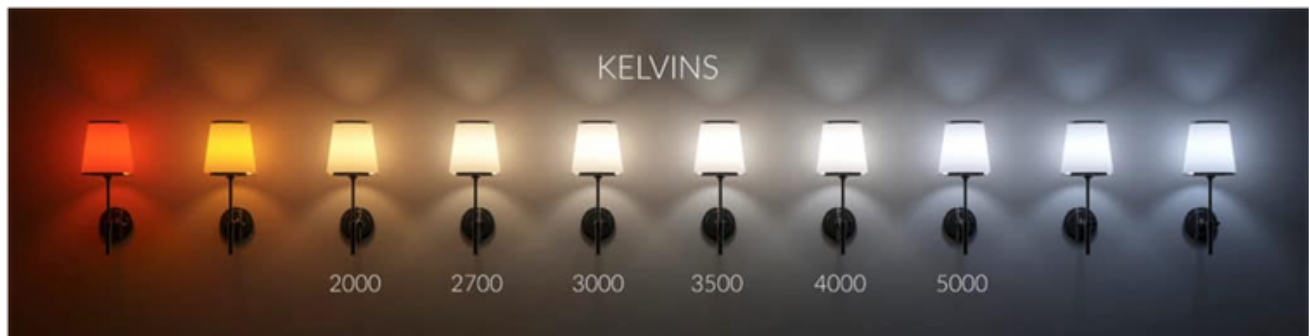


How LED Light Bulb Temperatures Affect Paint Colors



Light has 3 characteristics

- The purpose of the light
- The color temperature - Warm or Cool which is translated to Soft White, Natural or Clear light, and Daylight. The spectrum of color temperature is measured in Kelvins
- And the brightness of the bulb which is measured in Lumens.



As a Professional Color Consultant, when doing a paint color consultation, before I even consider possible paint colors, I always start with the light bulbs, because the color of the bulb will influence your paint color either way.

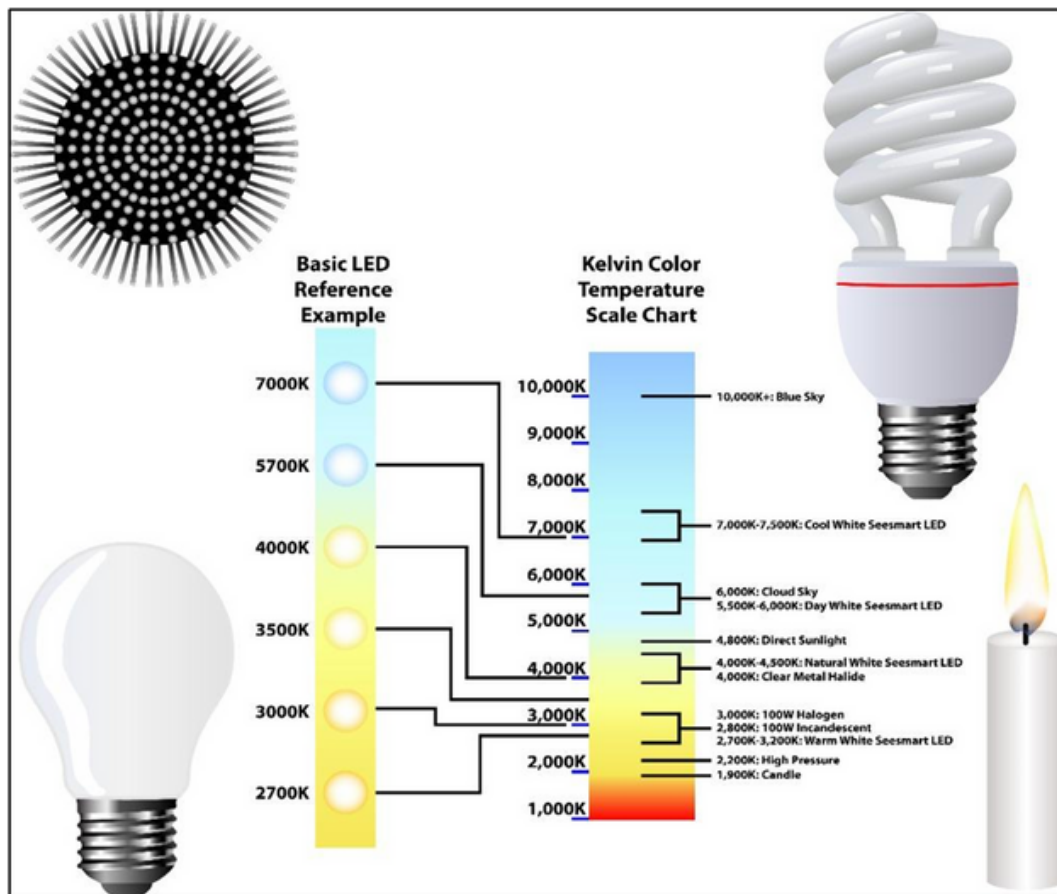
I have learned over all these years, working in so many homes, that the color of the lightbulb is the one thing that will make your house look old and tired or updated and fresh!

Have you noticed that your ring light, and ceiling fans probably have different Kelvin settings?

KELVINS

Kelvins refer to the **COLOR** of the lightbulb.

Look at the image below and see which color correlates to that specific number.



Study the numbers above to make yourself familiar with color temperatures. Notice that 3500K is NOT Cold. It has just a cleaner, more natural look.

The lower the Kelvin number, the warmer and yellower the lightbulb will be.



2700K - 3200K Light Bulbs

Temperature: Warm-Yellow

- The temperature of the light in this range is warm-yellow.
- Some Edison Bulbs will be even lower, around 2200K, and most homes have bulbs installed that are 2700K, which is average.

This light gives a warm and cozy feeling and is often best for living rooms, dens, and bedrooms although I do find that people lean more towards the 3500 Kelvin range when updating their homes.

Warm paint colors for 2500 - 3200k bulbs

- Warm paint colors will be enhanced by these warm bulbs as they lean toward each other.
- Gray colors could end up looking more taupe.
- The lower the kelvin number is, the warmer your paint color will look.
- Warm paint colors often look their best between 2700k and 3200K.

Cool paint colors for 2500 - 3200k bulbs

- Cool paint colors will be toned down and muted by this warm light.
- Cool colors that look crisp and fresh in white or cool light, will lose this edge in warm light.
- Blue paint colors could be distorted and end up looking slightly green or even muddy.



3300 - 4000K Light Bulbs

Temperature: Brighter Warmth to Neutral White

- Light bulbs around 3300K will still have a subtle warmth to them, but their light will be less warm/yellow than the lower Kelvins. These Kelvins can come across as a bit brighter and whiter looking, but not cold.

These bulbs are best suited for kitchens, home offices, and bathrooms.

Warm Paint Colors for 3300 - 4000K Bulbs

- Warm paint colors will look soft and warm, as they should, but they will have a cleaner look. The room will end up looking brighter and less yellowish, compared to the 2700K range.
- 3300-3500K won't influence the warm colors as much as the lower Kelvin range can.
- As you get closer to 4000K, you will gradually lose warmth. This warmth is replaced by a whiter, cleaner-looking light. I usually recommend testing both 3500K and 4000K and see which one you feel more comfortable with

Cool Paint Colors for 3300K - 4000K bulbs

- Cool paint colors will look brighter and cleaner in this light range.
- Cool Paint colors, with bulbs around the 3500K+, will look crisper and cleaner vs muddy



4300 - 5000K Light Bulbs

Temperature: Relatively Neutral White to Blue

- If you choose bulbs in this range, you're looking at a cold blue-white light that is similar to a clear, bright, north-facing day. The closer you are to 4000K the more neutral/less blue the light will be, the closer you are to 5000K, the cooler or bluer the light will be.

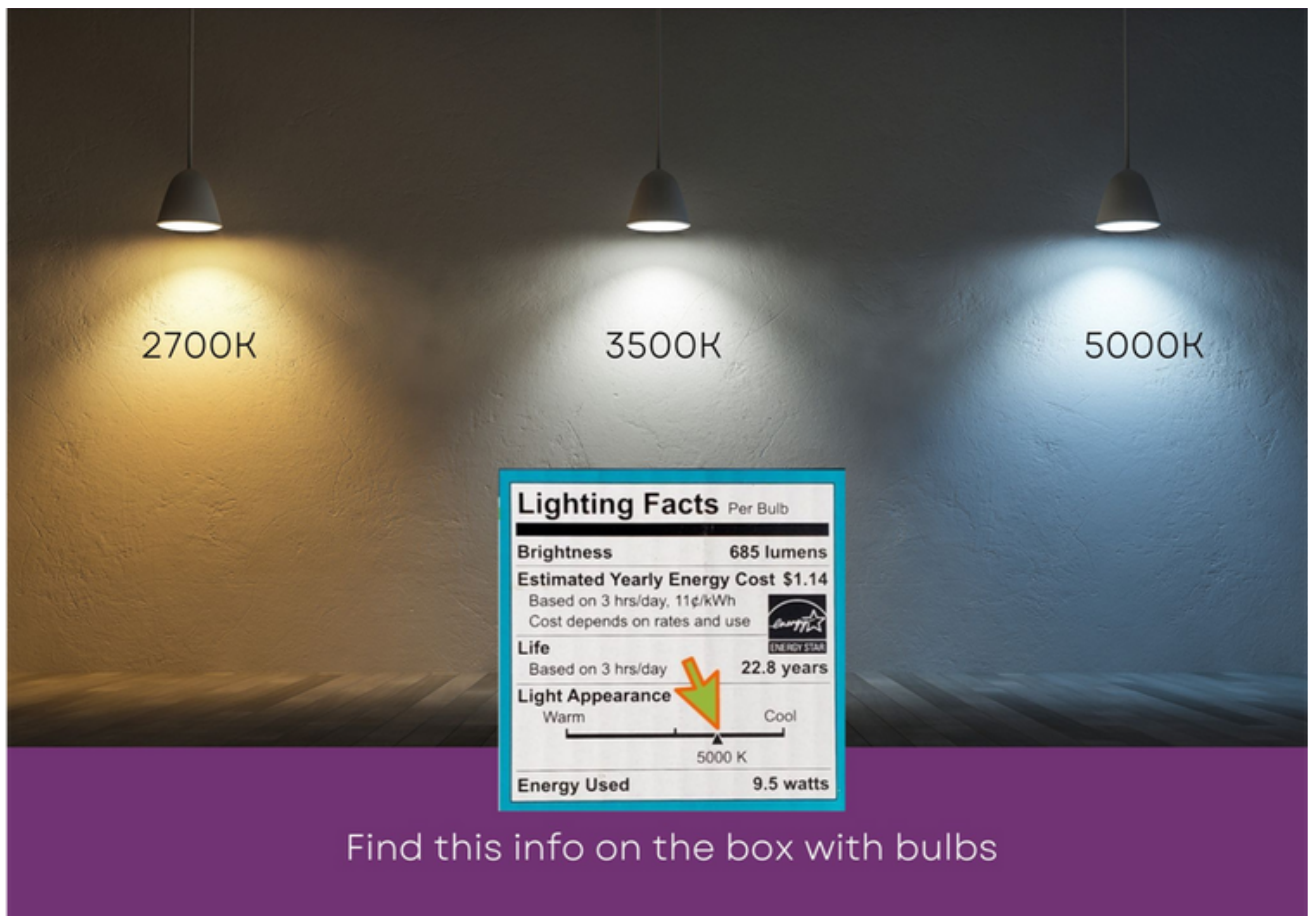
This light color will maximize contrast for colors, making it ideal for working, reading, or applying makeup.

Warm Paint Colors for 4300 - 5000K Bulbs

- Whereas some cool paint colors can look pretty in warm light, warm paint colors will look flat and distorted in this cool white-blue light.
- You may find that using higher Kelvins in the bathroom can cast a green glow onto your skin. For those people who need to see better, a brighter cooler bulb can be helpful.

Cool Paint Colors for 4300 - 5000K

- Cool paint colors will respond well to cool white light, just as warm colors respond well to the 2700K range. If you are a lover of everything crisp, cold, and clean, this could be the Kelvin for you. But be aware, it is bright and cold.



5000K and above Light Bulbs

Not recommended for the home

Temperature: Blue

- These lights are more popular for offices, commercial applications, medical institutions, warehouses, and garages.

Warm Paint Colors for 5000K + Bulbs

- Warm paint colors will look distorted under it as it doesn't have yellow/orange/red in it to play with warm colors. Blue light will absorb red and could end up looking purple.

Cool Paint Colors for 5000K + Bulbs.

- Cool paint colors will end up looking cold and crisp and if it's a light paint color, it might even be undetectable in this light. (Washed out)



Lumens

Lumens simply describes the BRIGHTNESS of the bulb. In simple terms, lumens are a measure of the total amount of visible light to the human eye from a lamp or light source. The higher the lumen rating, the brighter the bulb will be.

Incandescent lights were described as Watts (which referred to the amount of energy used, not the brightness) When it comes to LED bulbs, we refer to Lumens.

The number of lumens can tell you the degree of brightness, regardless of whether it is emitted from an incandescent, halogen, or energy-efficient LED bulb. How bright a room should be is subjective and the effectiveness of a bulb is dictated by the size of the room, wall colors, light placement, and other factors. So, knowing where to start with brightness can be convoluted.

Let's recap:

The higher the lumens, the brighter the bulb. And, yes, there is such a thing as too much light. My suggestion: If you have a cluster of LED bulbs in the kitchen, consider having no more than 650-850 Lumens per bulb and have them connected to a dimmer switch.

Example: For darker areas with fewer light bulbs, such as a hallway, I usually specify a bulb that has 3500K and around 1000 lumens, depending on what you can find during your search. I have learned that local big box stores do not carry great LED bulbs. I usually buy them from Amazon.



BR30 or BR 40?

The last thing that you must keep in mind when you are looking for LED recessed lights is the BR number.

The terms BR30 and BR40 refer to the size and shape of the LED bulb's reflector. "BR" stands for "bulged reflector," and the number after it represents the diameter of the bulb in eighths of an inch.

Therefore, a BR30 bulb has a diameter of 30/8 inches, or approximately 3.75 inches, while a BR40 bulb has a diameter of 40/8 inches, or approximately 5 inches.

BR30 bulbs are commonly used in recessed lighting fixtures, while BR40 bulbs are often used in larger fixtures, such as flood lights or track lighting. It is important to choose the right size and shape of the bulb to fit your fixture properly and ensure optimal lighting performance.

Don't fret about the technical jargon. Bottomline is, take out one of your old bulbs and see if you can read what it says on the bulbs itself. But install the correct size of bulb for your recessed lighting.

Find this info on the LED box with bulbs

Shape and size

Lumens

Kelvins

BR30

Lighting Facts		Per Bulb
Brightness	850 lumens	
Estimated Yearly Energy Cost	\$1.32	
Based on 3hrs/day, 11¢/kWh. Cost depends on rates and use.		
Life	22.8 years**	
Based on 3hrs/day.		
Light Appearance		
Warm	4000K	Cool
Energy Used	11W	

RECOMMENDED DIMMERS:
LUTRON DVWCL-153PH
LUTRON DVCL-153P
LUTRON AYCL-153P
LUTRON CASETA SMART
TP LINK KASA SMART

For more dimmer information, please visit: www.suncolighting.com

* At \$0.11 per kWh, this 11 Watt LED bulb uses \$30 of electricity over its 25,000 hour life. This is a \$149 savings when compared to the \$179 required to run a 65 Watt halogen lamp over the same period. Actual savings will vary depending on cost per kWh.

** 25,000hr / 22.8 year rated life is based on engineering testing and probability analysis where the lamp is used 3 hours per day, 7 days a week.

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SKU: BR30-11W-4K-6PK
Made in China / Fabriqué en Chine

The following is a guideline with specific keywords you could use when you are planning to order your bulbs online:

BR30 LED Light Bulbs, 3500K Natural White, Dimmable, 1100 Lumens,
LED Floodlight Bulb

Now you know:

- ➡ What to look for when you are buying new LED bulbs.
- ➡ What a Kelvin is and how it will influence your colors.
- ➡ What a Lumen is and why you need to pay attention to it.
- ➡ What the BR number on the box mean
- ➡ How to search for an LED bulb online.



Printable cheatsheet below

LED LIGHTBULB COLORS IN

WARMER



3500k - 4000K
Clear

Modern
Clean
Fresh

Best for:
Kitchens
Bedrooms,
Living Rooms,
Dining, Hallways

3000k
Clear

Comfortable
Clean, warm
Fresh

Best for:
Bedrooms, Living
Rooms,
Dining, Hallways

2700k
Soft White

Traditional
Relaxing
Warm

Best for:
Bedrooms,
Dining rooms,
Lamps

COOLER

4000k
Cool White

Clear
Crisp
Cold

Best for:
Laundry Rooms,
Security Lights,
Display Areas,

5000k
Daylight

Energizing
Cold
Bright

Best for: Garages
Commercial Offices,
Hospital main areas,
Commercial Kitchens

6500k
Deluxe Day

Stark
Cold
Bright

Best for:
Warehouses,
Industrial Settings