



Lighting 101

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turn life on

What you need to know about lighting





Why consumers
don't understand
light

Lumens

Lighting terminology is
confusing

CCCT

Why is this so
difficult?

Watts

“I just want one of these regular looking
bulbs, one that **will look nice in my
chandelier.**”

E26

What is a Kelvin?



Limited
Knowledge =

Bad
Lighting
Choices



Lighting that is **not bright enough** or **too bright**



Lighting that **diminishes the look of rooms, furniture and people**



Lighting that is a **harsh color that you dislike**




Lighting that **detracts from the look of the fixture it is in**

What do most people do when their bulb burns out?

- 1 Take old non-working bulb out of socket.
- 2 Go to utility closet or garage – wherever light bulbs are stored at home.
- 3 Try to find something that looks similar.
- 4 If you don't have one – take that light bulb with you to the store
- 5 Try to find something that looks similar



When consumers don't understand their options, they end up with the same bulb they started with!



Ambient, Task and Accent Lighting:



**What's the
Difference?**





Ambient

Provides general illumination

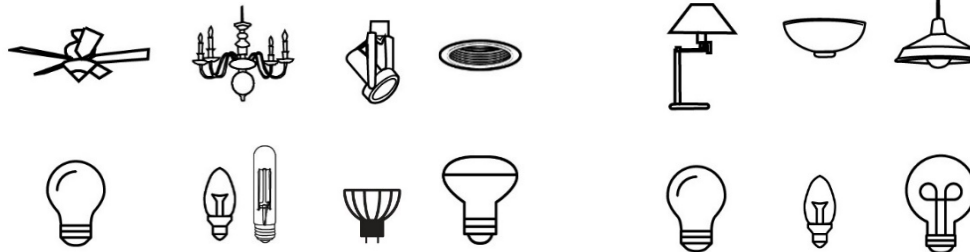
Delivers consistent, uniform lighting that envelops a space

Base Level

Can be delivered by several types of fixtures

Ceiling mounted fixtures that direct light downward

Suggested bulbs include A-Lamps, Chandelier, Globes, and Tubular bulbs along with directional bulbs



Floor & table lamps and Wall sconces that wash walls / ceilings with light. Pendants & Cove lighting that bounce light off walls and ceilings.



Task 2nd Level Lighting

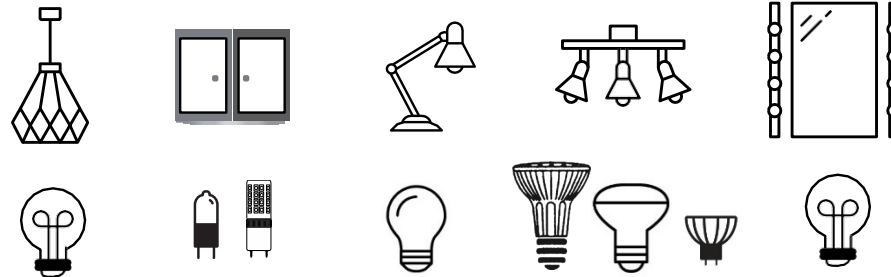
Intense, direct lighting ideal for detailed task work like reading, food prep and grooming

Focused on the specific area of the task and is brighter than the surrounding ambient lighting

Provides ample glare-free light that is bright enough to complete the task

Examples include pendants, under cabinet lighting, desk & table lamps, track & recessed lighting and vanity lights in bathrooms

Typically, PAR lamps and MR lamps.
Undercabinet lighting would be supplied by halogen bi-pin lamps or their LED equivalent.





Accent

3rd Level

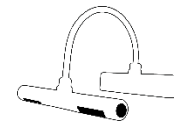
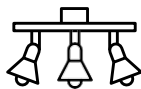
Purpose is mainly aesthetic

Highlight features of a room, such as artwork, furniture or bookcases

Create style and drama by using narrow beams of light focused on a specific area, creating a focal point

Wall Lights, Recessed Spot Lights, Track Lighting, Picture Lights and Outdoor Path Lighting

Suggested bulbs are mainly directional lamps like MR, BR and PAR lamps.





5 Key Lighting Terms:

What do they represent?

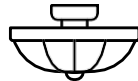
Bulb Shapes and Sizes
Finish
Lumens & Wattage
CCT
CRI

Bulb Shapes

A Shape



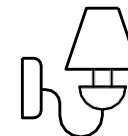
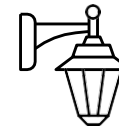
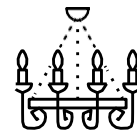
Portables
(lamps)
Chandeliers
Flush mounts



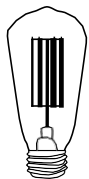
Chandelier



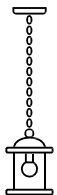
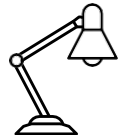
Chandeliers
Outdoor
lanterns
Sconces



ST18



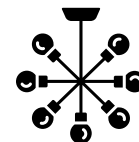
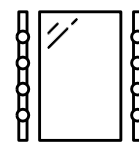
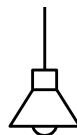
Can be substituted for A-
Shape Bulbs to accomplish a
vintage look.



Globes



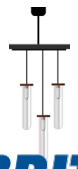
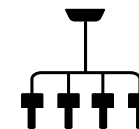
Pendants
Vanity strips
Chandeliers



Tubular

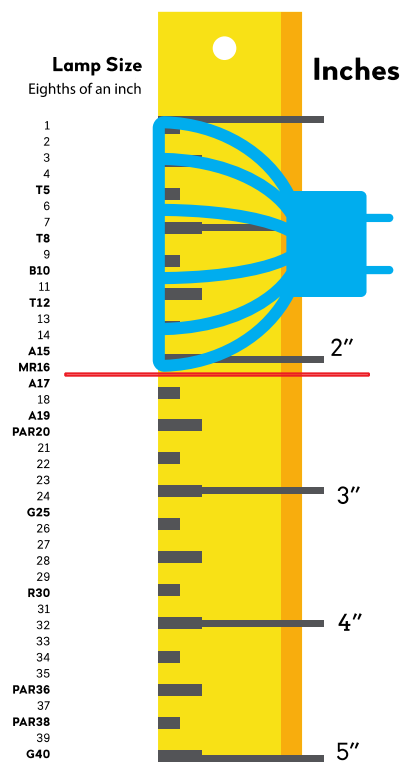


Chandeliers
Sconces
Pendants

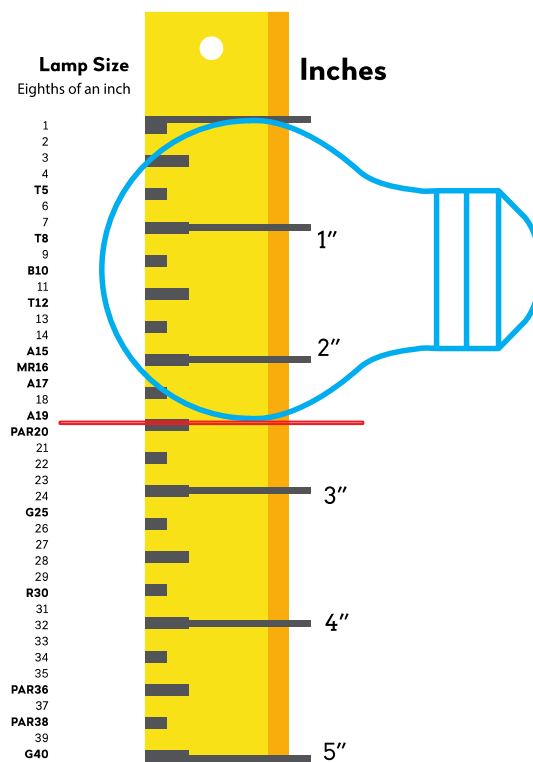


Bulb Sizes

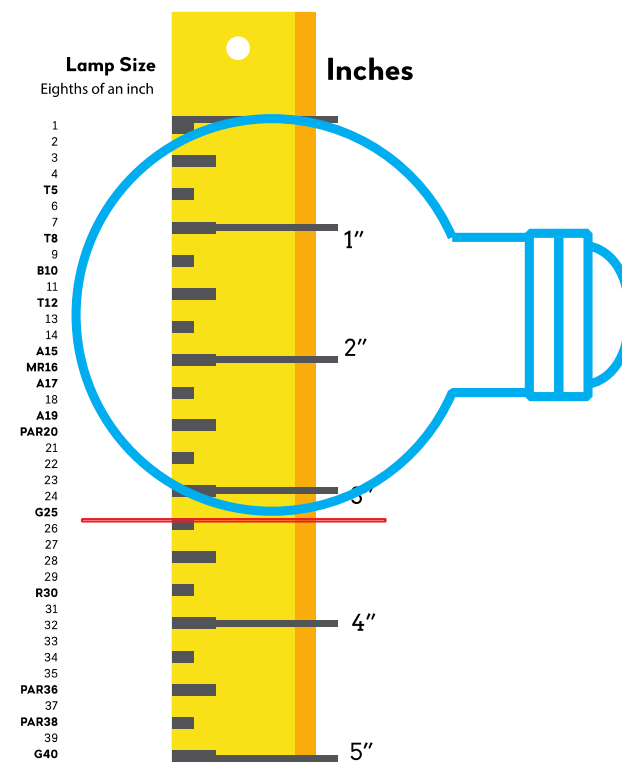
MR16



A19



G25



Finish

Clear
Frost
Milky
Brown
Amber
Nostalgic



Clear Glass Finish

The most popular LED Filament finish.

A timeless look.

Imparts no effect on the light from the bulb.

Offers the brightest light output, since there is no tint or color to the glass.



Frost or Milky Finish

LED Filaments that have a white-ish finish.

Frost is a lighter tint with some transparency

Milky is an opaque white finish that does not allow the filament to be seen.

Can reduce brightness slightly



Brown or amber translucent Finish

Known as Nostalgic or Antique finish lamps.

Often found in a trendy, dimly-lit restaurant.

Creates a warm, intimate vibe

Imparts an amber tint to the light emitted

Lumens measure how much light you are getting from a light bulb.

More Lumens = Brighter Light

Fewer Lumens = Less Light



400 Lumens



800 Lumens

Lumens & Wattage

Watts is the amount of power consumed by a bulb.

LED is much more energy efficient than older technologies.

	LED WATTAGE				
LUMENS	250 LUMENS	460 LUMENS	800 LUMENS	1100 LUMENS	1600 LUMENS
	INCANDESCENT WATTAGE				



2700K



3000K

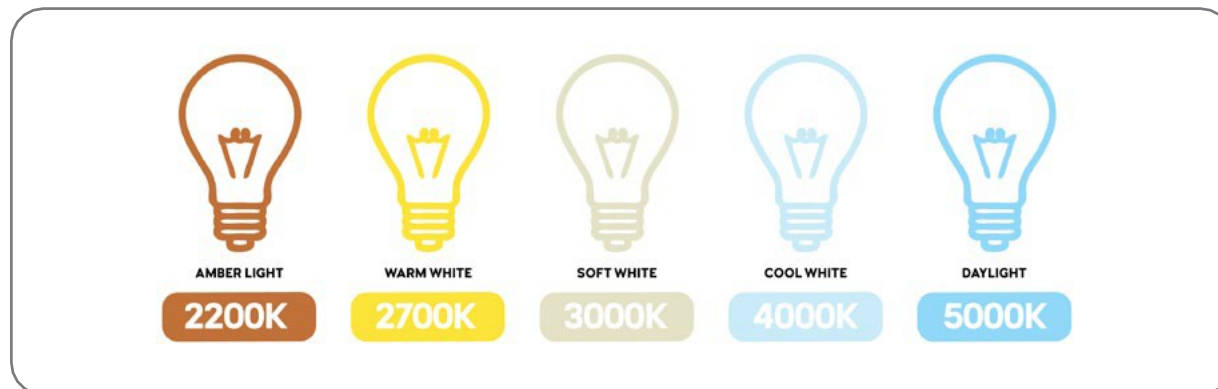


4000K

What is CCT?

CCT (Correlated Color Temperature)

is a standard that helps identify how yellow or blue the light from a bulb is. The lower you are on the scale, the warmer (or more amber) the light is. As you move higher through the scale, the color shifts to yellow, white and then even blue. Measured in Kelvins.




Color Temperature Applications



In Restaurants –

Most restaurants want lower CCT in the **1800K to 2700K** range, to create an ambiance and mood. This CCT creates a friendly intimate vibe, like a light from a fireplace.

Some more modern styled restaurants prefer lighting up to **3000K**, which provides a soft and pleasing white light.



Color Temperature Applications

At Home: Different rooms often require different CCTs

Bedrooms and living areas would typically be in the **2700K** range.

Rooms more associated with tasks, like kitchens, would be in the **3000K – 5000K** range.

Bathroom lighting is typically in the **2700K-3500K** range, with vanity lighting at the higher end of the range for grooming and applying makeup.

Studies have shown that blue light later in the day can disrupt sleep rhythms and have negative impacts on sleep quality. One way to allow for CCT customization throughout the day is to use a Smart bulb like **Bulbrite Solana**[®], which allows for independent and on-demand adjustment to the CCT of bulbs.



2700K CRI 100



2700K CRI 90



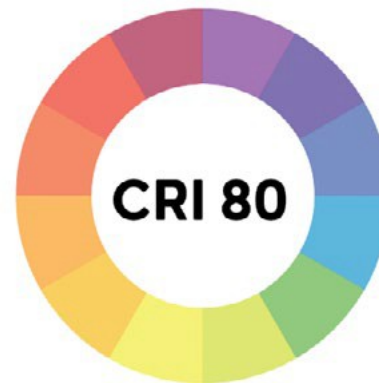
2700K CRI 80



2700K CRI 70

What is CRI?

Color Rendering Index is the measure of the ability of a light source to accurately render the colors of objects, in comparison to natural light.



The higher the CRI of a lamp, the more clean & crisp the color of an object will appear under that light.

The lower the CRI of the lamp, the more distorted and washed out the color will look under that light.

The higher the CRI, the more closely the object looks to how it would in daylight – which is the benchmark of ideal illumination.



Why is CRI important?

CRI is most important in areas where color is critical to the task or experience

- **Art exhibits**
- **Clothing retail environments** (providing visual pop)
- **Grocery stores** (making food look appealing)

High CRI can provide benefits in nearly every environment. Higher CRI lamps will help in **your home**, making colors pop, **adding a richness** to furniture, wall colors, food, even people. That's right, high CRI can even showcase a **healthy, glowing skin tone**.

80 CRI = Good
90+ CRI = Great

In Summary

3 Types of Lighting

- Ambient
- Task
- Accent

5 Key Lighting Terms

- Bulb shapes and sizes
- Finish
- Lumens and Wattage
- CCT
- CRI





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