

CHOOSING THE RIGHT LIGHT

POCKET GUIDE PRINTING INSTRUCTIONS

1. Print this file double-sided, on landscape; select option to *flip on short edge*.
2. Cut out the *Pocket Guide* from the full sheet of paper using the solid line as your guide.
3. Fold inward along the dotted line marked **FOLD 1**.
4. Fold inward along the dotted line marked **FOLD 2**.

If your printer does not have the option to print double-sided:

- Print the first page only.
- Re-load the paper tray with the first page facing down, flipped on short edge, and print the second page.
- If the *Pocket Guide* does not print correctly, double-check your printer's options for manual duplex printing. Your printer may handle paper differently.

DIMMING

Dimming allows you to easily adjust light levels — and it saves energy! If your application calls for it, make sure the light sources you purchase are clearly labeled “dimnable.”

If you are replacing track lights, downlights or accent lights, you should be aware that some components designed for older, less efficient light sources can cause dimmable LED light sources to flicker or dim poorly. Make sure all the components you select are marked as compatible with each other! You might also look for products labeled “flicker free” or “plug and play.”

Searchable databases, such as ENERGY STAR and Lighting Facts, provide consumers with a great source of information to determine broad compatibility of products.

LIFE

LED sources last much longer than traditional light sources, but like any appliance, some are better than others. High-quality LED light sources used in the home should easily last five years or more. This is currently an industry standard, and lifetime is expected to increase in future products.

When choosing LED light sources, look for at least 10,000+ hours (or at least nine years) of rated life and a warranty of at least five years. A light source that has a five-year warranty, and is a higher-quality product may cost a bit more initially, but they are much more likely to deliver better-quality lighting and more savings over time.



Lighting Facts Per Bulb	
Brightness	800 lumens
Estimated Yearly Energy Cost \$1.18 Based on 3 hrs/day, 11¢/kWh Cost depends on rates and use	
Life	22.8 years
Based on 3 hrs/day	
Light Appearance	Warm Cool
2700 K ▲	
Energy Used	9.8 watts

The Lighting Facts Label, found on the packaging of most light sources, helps consumers compare products. Information can also be found through manufacturers' websites and in product specification sheets.



**CHOOSING THE
RIGHT LIGHT**
BUYING GUIDELINES

FRONT INSIDE LEFT

FRONT INSIDE RIGHT

BACK COVER

FRONT COVER

UC DAVIS
UNIVERSITY OF CALIFORNIA

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CALIFORNIA LIGHTING TECHNOLOGY CENTER



PLEASE RECYCLE ANY EXCESS PAPER.



CHOOSING THE RIGHT LIGHT

PURPOSE

The first step in choosing the right light is to identify the purpose it will serve.

Omnidirectional light sources distribute light uniformly in all directions and are ideal inside shaded lamps, wall sconces, post lights, and porch lights.

Common **directional light sources** include those used for accent lighting, floodlights or track lights, and downlights. With these light sources, you may need a specific angle of light. You will find this angle on the side of the product packaging, noted as the “beam spread” or “beam angle.”



OMNIDIRECTIONAL

DIRECTIONAL

INSIDE LEFT

LIGHT OUTPUT

Many people are used to estimating light output based on electricity use. Now, because more efficient light sources like LEDs can generate similar light levels using fewer watts, we should compare light sources based on **lumens**, which is the actual unit used to measure light output.

Instead of looking for something that uses 60 W or more, you will look for a light source that produces about 800 lumens. As the chart below illustrates, **the higher the number of lumens, the greater the amount of light.**

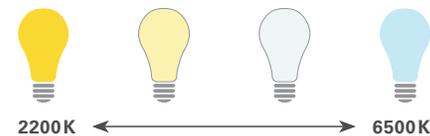
	LUMENS →	LUMENS 450	LUMENS 800	LUMENS 1100	LUMENS 1600
		LESS BRIGHT ← → MORE BRIGHT			
↑ MORE EFFICIENT	STANDARD INCANDESCENTS	40 W	60 W	75 W	100 W
	HALOGEN INCANDESCENTS	29 W	43 W	53 W	72 W
	CFLs Save up to 75%	9 W	14 W	19 W	23 W
↓ LESS EFFICIENT	LEDs Save up to 77%	8 W	13 W	17 W	N/A

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CORRELATED COLOR TEMPERATURE

When it comes to getting the color quality you want from your lighting, there are two basic concepts to consider. The first is **correlated color temperature (CCT)**, measured on the Kelvin scale (K). CCT refers to how warm or cool the light appears and influences how cool or warm a space will appear. Americans tend to prefer light sources with a warmer CCT for their homes, typically in the 2700 – 3000 K range, but it is largely a matter of personal preference.

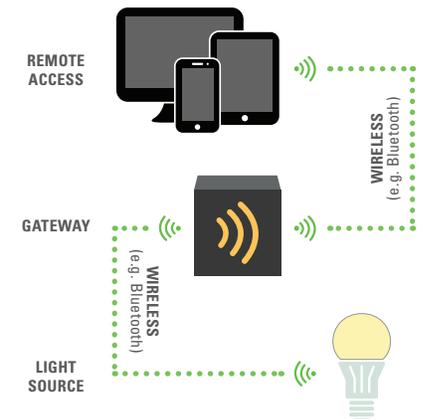
It is important to choose a color temperature that you like, then keep your light source purchases close to that color temperature to maintain consistency.



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CONNECTED DEVICES

Select lighting products allow home owners to connect their ‘smart’ light sources to a home automation system or establish a standalone lighting network. These tools allow you to control your light sources remotely and set a lighting schedule for your home.



INSIDE RIGHT

