



LED LIGHT BULB



COMPACT FLUORESCENT



INCANDESCENT LIGHT BULB

| LIGHT OUTPUT | LED's | CFL's | INCANDESCENT's |
|--------------|-------|-------|----------------|
| LUMENS | WATTS | WATTS | WATTS |
| 450 | 4-5 | 8-12 | 40 |
| 300-900 | 6-8 | 13-18 | 60 |
| 1100-1300 | 9-13 | 18-22 | 75-100 |
| 1600-1800 | 16-20 | 23-30 | 100 |
| 2600-2800 | 25-28 | 30-55 | 150 |

Lumens=Brightness
This is now what you look for

| Incandescent | Lumens=Brightness This is now what you look for | CFL | LED |
|--------------|--|--------|----------|
| 150w | 2600lm | 32-35w | 25-28w |
| 100w | 1600lm | 23-26w | 16-20w |
| 75w | 1100lm | 18-22w | 12.5-15w |
| 60w | 800lm | 13-15w | 8-12.5w |
| 40w | 450lm | 9-11w | 6-8w |

Watts=Energy
This is what you did look for

Most of us still use the incandescent light bulbs we grew up with as a mental benchmark when we are trying to decide how much light we need. The problem is that those bulbs were all labeled by wattage, 60-75-100 watts, etc. Watts measures energy, Lumens measures light output. So in a world with ever increasing energy efficient options, it can be hard to determine which bulb best meets your needs. This grid is a good place to start. By remembering what an incandescent bulb would have looked like in your situation, you can see the approximate lumens output and then see what CFL or LED bulb would meet the same need.

A couple of points about LED bulbs: LEDs are much more directional than other light sources. A lot of the development around LED light bulbs is about how to make the light omnidirectional. If you don't need omnidirectional light - a ceiling fixture or wall sconce for example - a dedicated LED array will be even more energy efficient and won't need to output the same number of lumens to provide the same usable light. Think about it - if you have a ceiling fixture with two 60 watt incandescent bulbs in it, they are throwing off approximately 1600 lumens of light. However, this light is flowing out 360 degrees in every direction. Half of it is shining into the ceiling where you don't need it! An 800-1000 lumen LED that only aims downward will very likely provide the same amount of usable light for 9% of the energy used. That is an enormous cost savings. Secondly, LED bulbs are all designed to last longer. Individual bulbs are usually rated for 20,000-30,000 hours and dedicated LED modules are rated for 50,000 hours and higher. Depending on your usage, this could easily exceed the lifetime of the fixture itself.

ARKANSAS LIGHTING

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