Substitution of a self-ballasted Compact Floresent Lamp (CFL) or Light Emitting Diode (LED) for an incandescent bulb can be done if some critical guidelines are followed. Even by following the guidelines below, the bulb may still have shorter than expected life or reduced light performance as not all bulbs are created equal.

- Bulb to be listed by a certification body (examples UL, CSA, ETL)
- Bulb to be marked suitable for enclosed fixtures

**Traditional Ventilation Fan/Lights**

- Bulb should be the same shape as an A19 (2.38” diameter x 4 3/8” maximum total length) **AND**
- Maximum bulb wattage
  - CFL 32 watts max
  - LED 19 watts max

**Recessed fan lights**

- If installed in a tub/shower area, bulb must be suitable for wet locations (PAR prefix models below)
- Bulb should be of one of the following shapes: R30, BR30, PAR30L, PAR30LN
  - CFL 20 watts max
  - LED 17 watts max

**Lumens vs. Watts**

As light bulb technology evolves from incandescent to CFL and LED, the measurement of light output is converting from being based on watts to lumens. When selecting a CFL or LED bulb, look for lumen output that matches the traditional wattage that was preferred in incandescent bulbs per the following table.

<table>
<thead>
<tr>
<th>Old Incandescent Bulb</th>
<th>Bulb Output/Brightness</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>450</td>
</tr>
<tr>
<td>60</td>
<td>800</td>
</tr>
<tr>
<td>75</td>
<td>1,100</td>
</tr>
<tr>
<td>100</td>
<td>1,600</td>
</tr>
</tbody>
</table>

**Dimmability**

Dimmability is a function of the bulb and wall control being used, not the ventilation fan. Check bulb manufacturer’s labels as not all are dimmable and if they are, may need to be used with certain controls.

**Range hoods**

Due to the higher heat generated by cooking and the type of controls used, only hood products sold with CFL or LED lighting should be used with these technologies. Substituting for an incandescent bulb with a CFL or LED bulb may produce less then satisfying results, as heat has a major impact on the operating life of these bulbs and improper controls can cause flickering in low light settings.