Luminous flux in lumens [lm]

In photometry, luminous flux is the measure of the perceived power of light. Luminous flux is measure of the total power of light emitted. One lumen is defined as the luminous flux of light produced by a light source that emits one candela of luminous intensity over a solid angle of one steradian. Steradian is a unit solid angle. Luminous flux can be measured only in special spherical chamber with lamp placed inside, so it captures the entire luminous flux of the lamps.



Manufacturers of LED lights provide light flux as the sum of the fluxes of all the LEDs. This value is given by characteristics of the LEDs at given current, multiplied by the number of LEDs, which are built in a lamp.

Real flux lamp is lower than this value, it is necessary to take into account losses in the optics used by the lamp and the losses of the glass that covers and protects LED diodes. Realistic lighting flux can be determined only by the flux measured by the prescribed method. The real luminous flux and luminous flux of LEDs are the same only when the lamp does not use optics and LEDs aren't covered with protective glass or any other protection. Be sure that luminous flux of the lamp isn't given as a flux of LEDs.