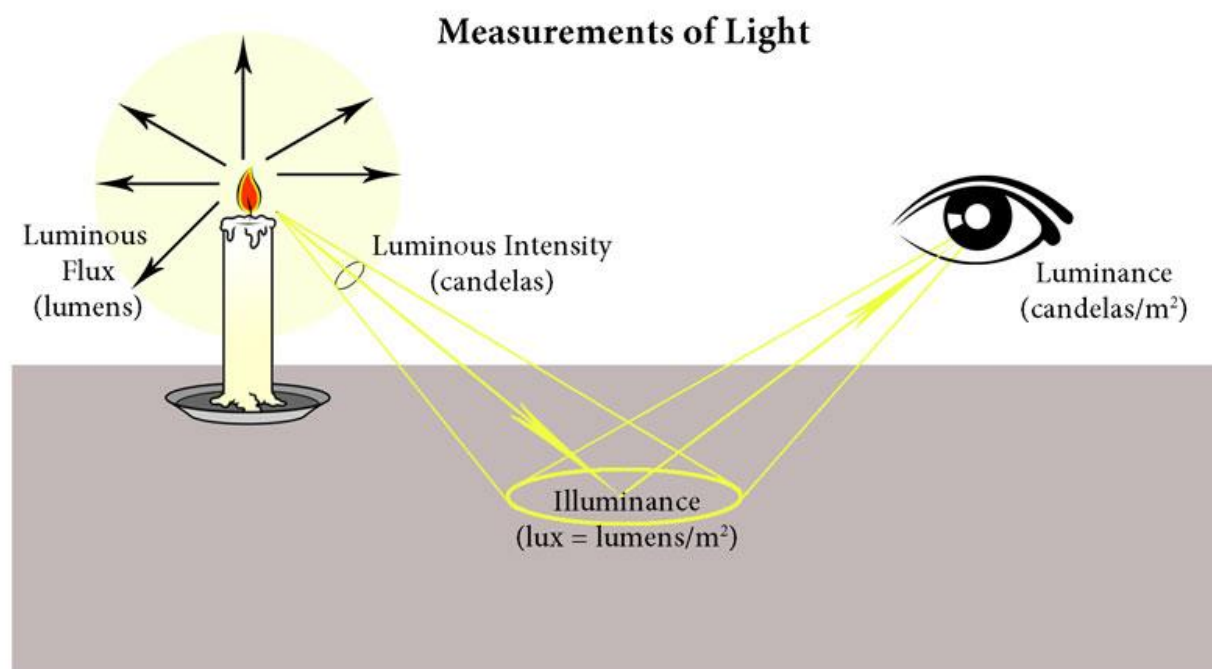


# PHOTOMETRIC FUNDAMENTAL

## Some photometric terms

Some commonly used photometric terms are introduced here. The following figure will help you to understand every photometric term in an overall picture.



### Candelas

Candela is the base unit of luminous intensity; unit symbol is cd.

Definition: luminous power per unit solid angle emitted by a point light source in a particular direction.

Usually, a common wax candle emits light with a luminous intensity of roughly one candela.

### Luminous flux

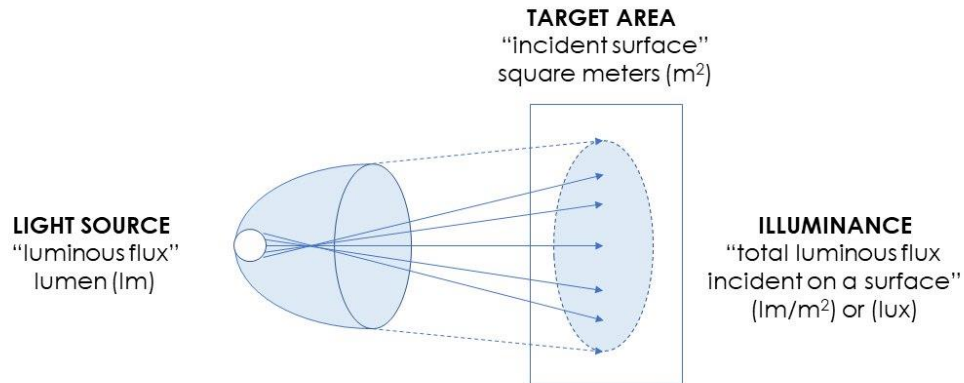
Luminous flux is the measure of the perceived power of light; unit symbol is lumen (lm).

Usually, 1 W high-output white LED has around 25 – 120 lumen.

### Illuminance

Illuminance depicts the total luminous flux incident on a surface, per unit area; unit symbol is lux (lx).

## Illuminance



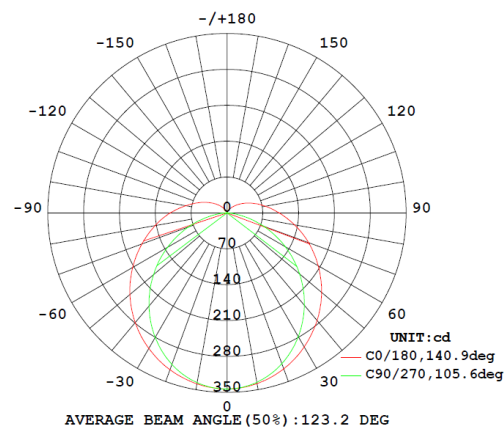
### luminance

luminance is a photometric measure of the luminous intensity per unit area of light travelling in a given direction; unit symbol is cd/m<sup>2</sup> or nit.

It describes the amount of light that falls within a given solid angle. Luminance is the intensity of a light emitting from an object or surface and not from the source. Brightness is the term for the subjective impression of the objective luminance measurement standard.

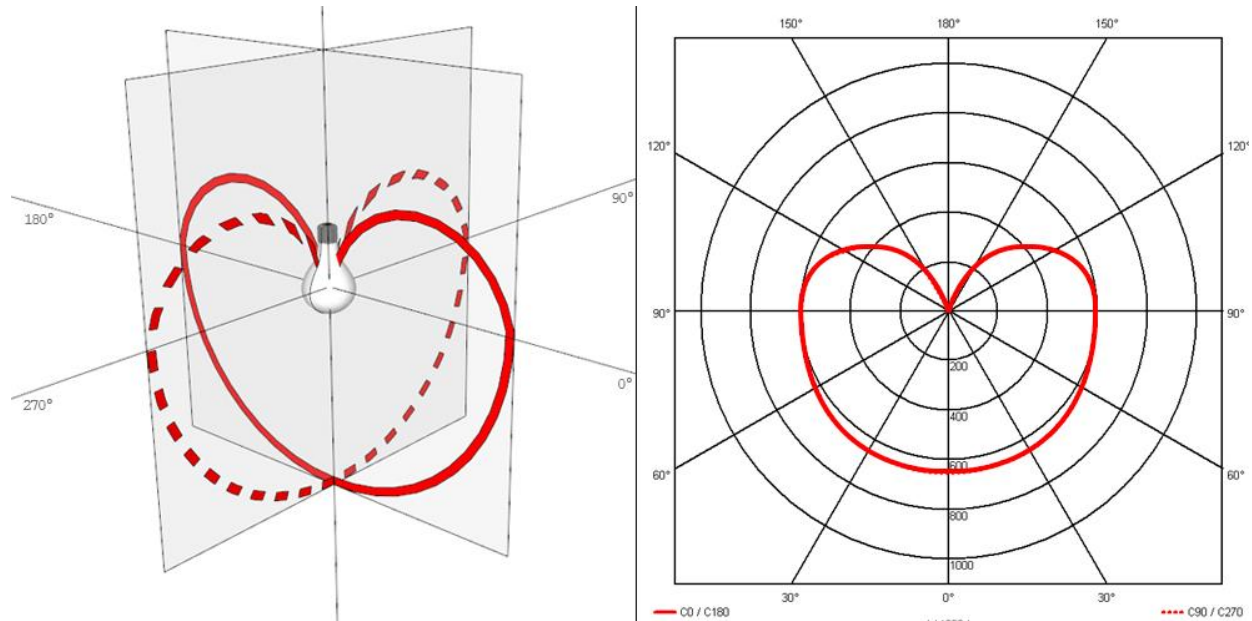
### Polar Candela Plot

Polar Candela Plot is commonly included in the light photometric report. This is a graphical representation of the candela distribution.



The angles marked on the edges are vertical angles with 0 pointed straight down. The curve shown provides a visual guide to the type of distribution expected from the luminaire.

The lamp is located at the center; the lines radiating out from the center depict the angles and the concentric lines depict the luminous intensity.



## Illuminance Cone Diagram

Illuminance Cone Diagram indicates the illuminated area and the average illumination when the luminaire is at different distance.

