



Lighting Glossary

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BALLAST

A device which is used to supply sufficient voltage to start and operate Fluorescent lamps.

BEAM ANGLE

The degree of width that light emanates from a light source.

BULB

Another term for a lamp.

COLOR RENDERING INDEX

Color Rendering Index also known as CRI, is a measure of the ability of a light source to reproduce the colors of various objects faithfully in comparison with a natural light source. The CRI simply rates the color rendering out of 100, the higher the index the better the color rendering.

COLOR TEMPERATURE

- Color temperature is a measure of how warm or cool the light given off by a lamp appears.
- 'Warm' colors appear tinged with yellow and generally feel soft and cozy. Cool colors are tinged with blue and appear whiter; making them a more 'honest' and unforgiving light more suitable for working environments than relaxing. The way to measure light is through the Kelvin Temperature scale.

DIFFUSER

A translucent piece of glass or plastic sheet which shields the light source in a fixture. The light transmitted throughout the diffuser will be redirected and scattered.

DIMMER

A device in an electrical circuit used for varying the brightness of lamp in a lighting installation.

FROSTED LAMP

A lamp that is chemically etched or sandblasted to diffuse the emitted light.

GLARE

- Direct glare is caused by light coming directly to the eye from a light source.
- Indirect glare is light reflected from a surface in the direction of the eye.
- Both can harm vision and cause visual discomfort, annoyance or loss of visual performance.

INGRESS PROTECTION RATINGS

- Ingress Protection ratings, also known as **IP ratings**, are used to specify protection from the environment.
- First IP Number - Protection against solid objects
 - 0 - No special protection.
 - 1 - Protected against solid objects up to 50mm, eg. Accidental touch by person hands.
 - 2 - Protected against objects up to 12mm, eg. Persons fingers.
 - 3 - Protected against solid objects over 2.5mm (tools and wires).
 - 4 - Protected against solid object over 1mm (tools, wires and small wires).
 - 5 - Protected against dust limited ingress (no harmful deposit).
 - 6 - Totally protected against dust.
- Second IP Number – Protection against Liquid
 - 0 - No protection.
 - 1 - Protected against vertically falling drops of water.
 - 2 - Protection against direct sprays of water up to 15° from the vertical.
 - 3 - Protected against direct sprays of water up to 60° from the vertical.
 - 4 - Protected against water sprayed from all directions – limited ingress permitted.
 - 5 - Protected against low pressure jets of water from all directions - limited ingress permitted.
 - 6 - Protected against temporary flooding of water, eg. For use on ship decks – limited ingress permitted.
 - 7 - Protected against the effect of immersion between 15cm and 100cm.
 - 8 - Protected against long periods of immersion under pressure.



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KELVIN TEMPERATURE SCALE

The way we measure light is through the Kelvin Temperature scale. This standardized color scale is created by heating a theoretical black body, starting out at zero degrees Kelvin (Absolute zero) as the body heats up, it glows, like any other object would. As the heat increases the color changes, appearing first dark red then yellow, moving through the visible colors of the spectrum until it reaches blue and violet.

LIGHT EMITTING DIODE

Light Emitting Diode, also known as LED, a small electronic device that lights up when electricity is passed through it. LED's have a very long life and come in a variety of colors.

LUMEN

A unit of light flow. The lumen rating of a lamp is a measure of the total light output, or brightness, of the lamp

LUMENS TO WATTS

By bulb type:

Lumens	Standard	Halogen	CFL	LED
450	40 W	29 W	9 W	8 W
800	60 W	43W	14 W	13 W
1100	75 W	53 W	19 W	17 W
1600	100 W	72 W	23 W	20 W

Rated Life: **1 year** **1-3 years** **6-10 years** **15-25 years**

Savings: **up to 30%** **up to 75%** **up to 80%**

Please note that these lumen values are approximate, they may vary due to different manufacturers.

PENDANT LIGHTING

Pendant Lights can provide both task and general lighting, equipped with shades or globes to avoid glare. They are suspended from the ceiling over dinette tables, kitchen counters or other work areas.

TRANSFORMER

An electrical device that transforms the line voltage of a facility into the voltage that a low voltage lighting system requires.

VOLTAGE

- The standard metric unit of measurement for electrical potential. It defines the force or pressure of electricity.
- Voltage is typically noted as either 120V, 240V, or 277V

WATT

- Watt is the unit for measuring electrical power. It defines the rate of energy consumption by an electrical device when it's in operation. It is defined by the current voltage. The energy cost of operating an electrical device is calculated as its wattage times the hours of use.
- LED wattage is not an indicator of the brightness of the lamp

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