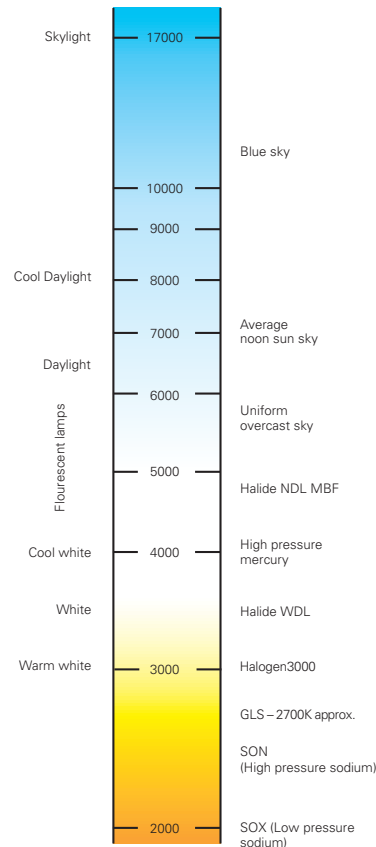
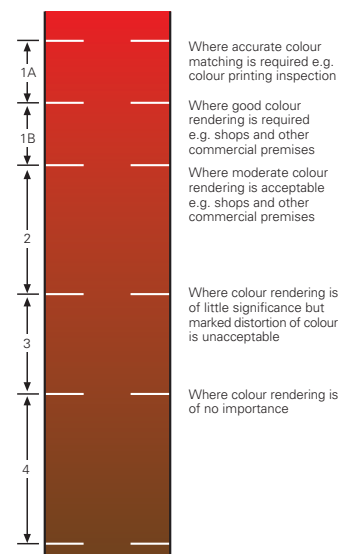


LIGHTING TERMS

COLOUR TEMPERATURE



COLOUR RENDERING



A BRIEF GLOSSARY

BUILDING REGULATIONS - PART L2 A & B

This document released in April 2006, ensures efficient usage of optics, control gear and lamps throughout new and existing buildings. It stipulates 45 luminaire lumens per circuit watt within office, industrial and storage areas. To achieve this in offices high frequency fittings with triphosphor lamps must be used.

COLOUR RENDERING

The ability of a light source to render colours naturally, without distorting the hues seen under a full radiator (similar to daylight), in which all the wavelengths of the visible spectrum are present. Measured on the Ra(8) scale of eight standard test colours. Values of 100-90 are good, 90-80 less good and lamps with RAs below 80 should not be used where colour rendition is a key factor. See colour rendering table.

COLOUR TEMPERATURE

The colour appearance of a lamp is measured in degrees Kelvin. The colour appearance can be indicated by the colour temperature, which will range from warm to cool eg. 3000K is equivalent to warm, 4000K to cool. Colour temperature is not a guide to colour rendering.

ILLUMINANCE

Unit of luminous flux used to describe a quantity of light emitted by a source or received by a surface.

INITIAL LUMENS

The lumen output of a lamp, measured after a pre-determined period under standard test conditions.

LIGHT OUTPUT RATIO (LOR)

The ratio of light emitted by a luminaire to the light output of the lamp or lamps. This is the efficacy of the luminaire.

LIGHTING DESIGN LUMENS

A nominal lumen output for a lamp, measured under standard test conditions, and used in lighting design calculations.

LUMINANCE

The measure of brilliance with which the eye perceives an illuminated surface from a certain direction. Luminance is measured in candelas per square metre (cd/m²).

LUMINOUS EFFICACY (LM/W)

Indicates how efficiently a lamp converts electrical energy to light. Measured in lumens per watt.

LUMINOUS FLUX

The total light emitted by a source or falling on a surface. The unit of light is a lumen.

LUMINOUS INTENSITY

The power of a light source or illuminated surface to emit light in a certain direction, measured in Candelas.

LUX (LUX)

The standard unit of illuminance of a surface being lit. One lux is one lumen per square metre.

MAINTAINED ILLUMINANCE

The specified illuminance (Lux) of an installation that must be maintained irrespective of lamp and luminaire age and condition.

ROOM INDEX

A means of representing the dimensions of a room enabling manufacturers' utilisation factor tables to be used in interior design calculations. The formula is;

$$RI = \frac{LW}{Hm(L+W)}$$

Where L and W are room length and width, and Hm the luminaire height above the working plane.

SPACING/HEIGHT RATIO

Published figures for a given luminaire for the permissible maximum centre-to-centre spacing of luminaires in relation to their mounting height to maintain acceptable uniformity of illuminance on the working plane.

UNIFORMITY RATIO

The ratio of the illuminance to the average illuminance over an area.

UTILISATION FACTOR

Published figures for the ratio of the total flux reaching the working plane divided by the total lamp flux. It is dependant upon the room index, and on the reflectance of the ceiling, walls and floor.