

DEFINITION OF TERMS USED

Definition of the principle terms used in the study are mostly taken from ISI Booklet and lighting manual from Philips and are stated here for facilitating understanding of a reader.

Accommodation :- the process by which the eye changes focus for objects at various distances involving change in the shape and position of the crystalline lens.

Adaption :- the process by which the eye adapts itself to light, involving primarily a change in photo - receptors.

Brightness :- the luminous flux per unit of projected area per unit solid angle or the attribute of the visual appearance in accordance with an area seem to emit more or less light. This attribute is sometimes referred to as luminosity or apparent brightness and can not be expressed in ordinary photometric terms.

Brightness ratio:- (luminance ratio) the ratio between the photometric brightness of any two relatively large areas in the visual field.

Diffuse transmission :- the process by which a portion of the incident flux is re-emitted from a surface or medium on the non-incident side in a non-image forming state.

Fluorescent lamp :- an electric discharge lamp in which a fluorescing coating (Phosphor) transforms some of the ultraviolet energy generated by the discharge in to light.

Glare :- a condition of vision in which there is discomfort or reduction in the ability to see significant object or both due to an unsuitable distribution or range of luminance or to extreme contrast in space and time.

Direct glare :- glare resulting from high brightness or insufficiently shielded light source in the field of view or reflecting area of high brightness and large area.

Reflected glare :- the variety of ill effects on visual efficiency and comfort produced by unwanted reflections in and around task area or glare resulting from specular reflections of high surfaces in the field of view.

General lighting :- lighting designed to provide a uniform level of illumination throughout the area involved.

Incandescent filament lamp :- a lamp in which light is produced by filament heated to incandescence by the flow of an electric current through it.

Lamp :- An artificial source of light.

Luminous flux :- the light given by a source or received by surface or transmitted by medium irrespective of the way in which it is distributed specially as regards direction. The unit of luminous flux is lumen (lm).

Lumen (lm) :- the luminous flux emitted within solid angle (one Steradian) by a point source having uniform intensity of one candle.

Luminous Intensity (Formally Candlepower) :- Luminous intensity of light source in a given direction is the luminous flux within an infinitesimally narrow cone containing that direction divided by solid angle of the cone.

Illumination :- Illumination is the density of luminous flux incident upon a surface. The unit of illumination is lumen per square meter (lm/m^2) which is known as **lux (lx)**.

Luminaire :- A complete lighting unit consisting of lamp or lamps together with the parts designed to position and protect the lamp and to connect the lamp to power supply.

Reflectance : - the ratio of flux reflected by a surface or a medium to the incident flux. The quantity reported may be total reflectance, regular reflectance, diffuse reflectance or specular reflectance depending on component measured.

Reflection : - a general term for process by which a part of incident flux leaves a surface or medium from incident side.

Regular or Specular reflection : - the process by which a portion of the incident flux is remitted at a specular angle without scattering.

Task lighting : - lighting used to provide at the task area a specific amount or quantity of illumination which cannot be readily obtained by the general lighting system and which supplements the general lighting system.

Visual acuity : - The ability to distinguish fine detail, quantitatively the reciprocal of the angular size in minutes of critical detail which is just large enough to be seen.

Visual field : - the focus of objects which at a given moment can be seen by one or other of the two eyes.

Visual Task : - Those details and objects which must be seen for the performance of a given activity including the immediate background of details or objects.

Working plane : - The plane (imaginary or real) at which work is usually done and at which therefore the illumination is specified and measured. Unless otherwise indicated this plane is assumed to be horizontal and 0.85 m above the floor.