Visual 2012 Help – Glossary

Absolute coordinates

Location information referenced to the global origin of (0,0,0).

Active Plane

The current Cardinal Plane which is the basis for coordinate information and actions. This is the plane of movement of the mouse pointer crosshairs. Working planes are restricted to the three cardinal orientation planes (X-Y, Y-Z, X-Z) in Visual. The working plane sequentially toggles through the three possibilities whenever the Tab key is pressed. The working plane may be moved incrementally in a perpendicular fashion using the up and down arrow keys and the Home key may be used to return the working plane to X-Y at Z=0 (grade level) at any time.

Avg/Min

The ratio of the average value divided by the minimum value of illuminance found within a statistical or calculation zone. Typically used as an indicator of lighting uniformity in area lighting projects.

Ballast factor

The flux of a fluorescent lamp operated on a ballast as a fraction of the flux when operated on the standard (reference) ballast specified for rating lamp lumens. Usually applied to Light Loss Factors.

Base Point

Coordinate location (X,Y,Z) used to define a starting location or direction (the base or basis) from where an object will then be placed afterward. Typically a Base Point is selected as part of an object such as the corner of a Wall or the center of a Luminaire.

Boilerplate

A standardized set of text that can be used repeatedly without being changed. For example, a specifier may use the same Luminaire Schedule or specification from project-to-project.

Bulge vector

A line that is drawn from a point to establish the tangency of an Arc segment passing through that point.

CAD

An acronym for Computer Aided Design, this term generally refers to graphical software used for drafting and solid modeling. Most commonly used in Visual to refer to imported or exported DWG and DXF files.

Candela

The unit of luminous intensity.

Candlepower

The luminous intensity of a Luminaire expressed in candelas.

Cardinal

Any of the fundamental directions defined by the Cartesian coordinate system (X,Y, or Z). The cardinal directions are orthogonal, or perpendicular in nature.

Cartesian

Referring to positive or negative numerical values used to define position in three-dimensional space based on the three orthogonal axes (X, Y, and Z) and an origin (0,0,0). Synonymous in Visual with "cardinal".

CFL

Compact fluorescent lamp: A low-pressure mercury electric-discharge lamp in which a fluorescing coating transforms some of the UV energy generated by the discharge into light. Usually shaped with two, four, or six bent tubes.

Coefficient of variance

A statistic that reports the ratio of the standard deviation divided by the mean value for a Calculation or Statistical Zone.

Combo box

An interface tool that couples a text box with a menu of choices.

Context-sensitive

Meaning that the referenced object may change based on different situations.

Coordinate

Location information usually provided in terms of (X,Y) or (X,Y,Z) components along Cartesian axes.

Coordinates

Location information usually provided in terms of (X,Y) or (X,Y,Z) components along Cartesian axes.

Crosshairs

Two thin, intersecting, orthogonal lines affiliated with the mouse pointer in the Design Environment. The crosshairs are used to pinpoint locations in the Design Environment and provide a
visual cue to the plane in which the mouse pointer is moving via color.

Destination point

Coordinate location (X,Y,Z) used to define a relative location or direction where an object is to be placed.

Dialog

A window initiated on top of the main program.

Diffuse

Having hte properties of diffuse reflection or diffuse refraction.

Direct component

The portion of light from a Luminaire that arrives at a Calculation Zone without being reflected by any room surfaces.

Downlight

A small direct lighting Luminaire that is normally recessed into a ceiling.

Drawing

A graphical representation of a view of the Design Environment placed on a Page in the Print Editor.

Drop-down menu

A menu option revealed by left-clicking the mouse on an arrow shown on certain toolbar buttons. In Visual, the arrow is usually at the bottom of the button.

DWG

A file format commonly used in CAD software to store drawing information. Files of this type have .DWG as their file name extension and may be imported into Visual.

DXF

A file format used primarily in CAD software to transfer information from one program to another. Files of this type have .DXF as their file name extension and may be imported into Visual.

Efficiency

The ratio of lumens emitted by a Luminaire to that emitted by the lamp(s) used therein.

Exitance

The area density of the luminous flux leaving a surface.

Fence

A selection technique whereby objects are added to the selection set based upon their inclusion within a drawn rectangular (fence) region. Objects lying at least partially within the fence are added to the selection set.

Floodlighting

A system designed for lighting a large area in most cases.

Footcandle

A unit of illuminance. Equal to one lumen per square foot, or 10.76 lux.

Grips

Yellow boxes at the edges and corners of object in Print Editor that can be "grabbed" by left-click-dragging the mouse.

Hotkey

A keyboard link to a common command.

Icon

Any graphical symbol used as a means of communication in the computer interface.

Illuminance

The area density of the luminous flux incident on a surface.

Interreflected

The portion of the luminous flux from a luminaire arriving at the workplane after being reflected one or more times from room surfaces.

Interreflection

The multiple reflection of light by the various room surfaces before it reaches the workplane or other specified surfaces of a room.

Iso-candela line

A curve plotted on any appropriate set of coordinates to show the distances in various directions in space, about a source of light at which the intensity is the same.

Iterative

Repetitious or cyclical.

Label

An alphanumeric designation used to establish a unique correspondence between Luminaire Symbols and their associated Luminaire Type entries in the Luminaire Schedule

Lamp

A generic term for an artificial source of light. Often incorrectly called a "light bulb".

Lamp Lumen Depreciation factor

The fractional loss of lamp lumens at rated operation conditions that progressively occurs during lamp operation. A critical non-recoverable performance component of the Light Loss Factor.

Light Loss factor

A performance multiplier that is usually less than 1.0 accounting for recoverable and non-recoverable losses due to system degradation and other components. Typically composed of Lamp Lumen Depreciation, Ballast Factor, Luminaire Ambient Temperature Factor, and Luminaire Dirt Depreciation, but may also include numerous other factors.

Linear

Being along a line or straight path.

List box

An entry field with a down-arrow to the right indicating a finite list of options. Left Click on the down-arrow button to reveal and select from among the list of options.

Lumen

The unit of luminous flux.

Lumen Method

A lighting design procedure used for predetermining the relation between the number and types of lamps or Luminaires, the room characteristics, and the average illuminance on the workplane. It takes into account both direct and interreflected flux.

Luminaire

Any light emitting object, or configuration of light emitting objects, referenced within the Luminaire Schedule in Visual. Consists of photometric, graphical, and descriptive information.

Luminaire Ambient Temperature Factor

The performance multiplier accounting for temperature effects on the Luminaire. This is a non-recoverable factor and is critical for some Luminaires and some applications, for example, large freezers.

Luminaire Dirt Depreciation Factor

The fractional loss of task illuminance due to luminaire dirt accumulation over time.

Luminaire Type

See Luminaire.

Luminaires

Any light emitting object, or configuration of light emitting objects, referenced within the Luminaire Schedule in Visual. Consists of photometric, graphical, and descriptive information.

Luminance

The area density of the luminous flux leaving a surface through a given solid angle.

Lux

The metric standard unit of illuminance. One lux is equal to one lumen per square meter.

Masking

The process of removing calculation points from an existing Calculation Zone by selecting a polygonal exclusion region.

Max/Min

The ratio of the maximum value to the minimum value of illuminance found within a statistical or calculation zone. Typically used as an indicator of lighting uniformity in area lighting projects.

Model

The entire lighting system composed of Luminaires, Solid Objects (perhaps), and Calculation Zones.

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Mounting Height

The distance from the floor (or workplane if specified as such) to the light center of the luminaire. This may be the ceiling height in recessed cases.

Page

The electronic information representing what will be printed to make what is normally called a drawing.

Panel

Subdivision of the Ribbonbar menu system that group related commands using vertical dividers.

Panels

Subdivisions of the Ribbonbar menu system that group related commands using vertical dividers.

Pendant

A Luminaire suspended from the ceiling or other structure.

Photometric

Referring to a data file containing information related to the photometric distribution of lighting equipment. Valid files of this type typically have a .IES extension and adhere to the format outlined in IES LM-63.

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Photometrics

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Pick-box

A small square located at the center of the mouse pointer crosshairs when in selection mode. The size of the pick-box establishes the precision with which objects must be selected, it can be adjusted within the Options Form.

Planar

Two-dimensional in nature. All components lie within a single plane.

Plane

A two-dimensional and flat object.

Planes

Two-dimensional and flat objects.

Pole

A standard support generally used for area and site lighting projects.

Polygon

A closed planar figure composed of line segments with multiple angles and sides.

Polygonal

See Polygon.

Polyline

A graphical entity composed of one or more line segments continuously connected at the endpoints.

Radius

Related to arcs, circles, and spheres. The radius may be used to define the curvature by virtue of fact that all points on the object are equidistant from a center point. Any straight line from the center to a point on an arc, circle, or sphere.

Reflectance

The ratio of the flux actually reflected by a sample surface to that which would be reflected into the same reflected-beam geometry by an ideal, perfectly diffuse standard surface irradiated in exactly the same way as the sample.

Reflection

When light bounces off of a surface.

Register

A list of information kept in Visual.

Relative coordinates

Location information referenced to a Base Point. Usually used in commands to specify displacement.

Specular

A characteristic of a surface that reflects light in a directional fashion that is often image-preserving. Gloss finishes exhibit specular reflective characteristics as do mirrors and chrome.

Symbol

The graphic symbol associated with a Luminaire Type. Used to specify the location, orientation, and type of lighting equipment in drawings.

Tab

A user interface object found in the Ribbonbar or Sidebar comprised of graphic and text buttons grouped based on function.

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A user interface object found in the Ribbonbar or Sidebar comprised of graphic and text buttons grouped based on function.

Tangent

Related to a point on a curve, the tangent is given by the direction of a line passing through the point with an orientation perpendicular to the radius at that point. The tangent intersects the curve at only that location.

Template

A graphical representation of the illuminance produced by a single luminaire object. Lines are used to represent all points of a given illuminance level similar to elevation contours on a topographical map. Iso-illuminance templates are useful in determining the spacing and orientation of lighting equipment prior to system analysis.

Text box

An entry field that anticipates text entry via the keyboard. Text boxes are activated with a left-click of the mouse and present an "I-beam" cursor for text editing.

Toggle button

A button that turns a feature on when highlighted in yellow and off when not highlighted. Successive left-clicks of the mouse cycle the on/off state.

Transmittance

Transmission is when light passes through a material.

Troffer

A recessed lighting unit, usually long and installed with the opening flush with the ceiling. "2x4"

Uniformity gradient

A statistic that measures the rate of change of illuminance over a Calculation or Statistical Zone expressed as a ratio between the illuminance level of adjacent calculation points.

Vector

A linear entity having both length and directional properties.

Vertex

The intersection of two lines or the corner of a Solid Object.

Vertices

The plural of vertex.

Window

A selection technique whereby objects are added to the selection set based upon their inclusion within a drawn rectangular (window) region. Objects lying entirely within the window are added to the selection set.

Workplane

The plane at which work is usually done, and on which the illuminance is specified and measured.