

Glossary

A-lamp: Common incandescent “light bulb” used throughout most homes in North America. An A-lamp can have a clear glass bulb or a white coating or an etched frost on the inside of the glass bulb.

accent lighting: A technique that emphasizes a particular object or draws attention to a particular area. Accent lighting usually utilizes the tight beam control of PAR-lamps and MR-lamps. Also called highlighting.

accent luminaire: A type of luminaire that includes ceiling-mounted track and directional luminaires and recessed accent luminaires. Accent luminaires provide directional lighting to accent an object or an area within a space.

adjustable head: An adjustable luminaire that is surface-mounted, or that inserts into a linear track and provides directional lighting.

ambient lighting: Lighting that is designed to provide a substantially uniform light level throughout an area, exclusive of any provision for special local requirements.

annual energy savings: A term used in the Economics chapter to refer to the difference per year in kWh between the energy used for lighting Design 1 and Design 2.

annual energy use: A term used in the Economics chapter to refer to the energy used per year in kWh by a lighting system.

annual lamp replacement costs: A term used in the Economics chapter to refer to the cost per year of replacement lamps, excluding labor.

annual operating cost savings: A term used in the Economics chapter to refer to the difference between the annual operating cost of Design 1 and that of Design 2.

annual operating cost: A term used in the Economics chapter to refer to the cost per year of electricity and replacement lamps.

aperture: An opening, usually in a recessed luminaire, through which light enters a space.

architectural luminaire: A luminaire that is integrated into the structure of the room. Architectural luminaires are mounted horizontally on a wall or ceiling with a shield to hide the lamp(s) from view. See also cove, soffit, and valance luminaires.

average rated lamp life: The average rated life of a lamp is the number of hours when 50 percent of a large group of lamps have failed. For fluorescent lamps, the operating conditions include operation at nominal line voltage at 3 hours per start. For high-intensity discharge lamps, the lamps are operated at 10 hours per start. The average rated life of an electric lamp is a median value of life expectancy. Any individual lamp, or group of lamps, may vary from the published average rated life.

baffle: A single opaque or translucent element that shields a light source from direct view at certain angles or that absorbs unwanted light.

ballast: A device that is used with a fluorescent or high-intensity discharge lamp to provide the necessary circuit conditions (voltage, current, and wave form) for starting and operating the lamp.

beam spread: The width of a light beam, expressed in degrees. The beam of light from a reflector-type lamp (PAR, R, ER, or MR) can be thought of as a cone. The beam spread is the angular width of the cone. The edge of the beam is defined as “50 percent of center beam intensity (candlepower)” or “10 percent of center beam intensity,” depending upon the lamp type.

bi-pin base: A base with two pins that is used for some tungsten-halogen reflector lamps, low-voltage tungsten-halogen lamps, and fluorescent lamps.

bollard: A low, pole-mounted luminaire, usually for outdoor use. Bollards commonly are used to light pathways.

brightness: Subjective impression of light reaching the eye. Subjective brightness does not correlate exactly with luminance, which is measured with an instrument.

bulb: The outer envelope of a light source, usually quartz glass or other varieties of glass.

candle lamp: A decorative incandescent lamp with a bulb shaped like a flame. The lamp designation is usually “F” or “C.”

candlepower: See luminous intensity.

cans: Square or round recessed downlight luminaires. These are also called “high-hats.” Also, a surface-mounted luminaire, usually a downlight, that has a cylindrical shape.

capsule compact fluorescent lamp: A screwbase compact fluorescent lamp product whose lamp(s) is covered by a diffusing glass or acrylic lens. Capsule compact fluorescent lamps commonly are available in three shapes: globe, bullet, or jar.

ceiling-mounted luminaire: See surface-mounted luminaire.

center beam candlepower (CBCP): The luminous intensity (in candelas) of a reflector lamp measured at the center of its beam.

central controls: Lighting controls systems that control many luminaires from one or two locations.

chandelier: A decorative, often branched, luminaire suspended from the ceiling.

circline lamp: A fluorescent lamp bent in a circle so that the ends meet at the socket.

color: The color appearance of a lamp, and how the lamp makes other colors appear. See correlated color temperature and color rendering index.

color rendering index (CRI): A technique for describing the effect of a light source on the color appearance of objects being illuminated, with a CRI of 100 representing the reference condition (and thus the maximum CRI possible). In general, a lower CRI indicates that some

colors may appear unnatural when illuminated by the lamp. CRIs of two or more lamps should only be compared if the lamps have the same correlated color temperature. See also correlated color temperature.

color temperature: See correlated color temperature.

commodity-grade luminaire: A commonly available luminaire that is constructed of less-expensive materials, with lower-quality construction standards. It is usually lower in price than a specification-grade luminaire. Commodity-grade luminaires commonly are used in homes and are available at discount stores and some electrical suppliers.

common incandescent lamp: See A-lamp.

compact fluorescent lamp: A small fluorescent lamp, usually with one or more bends in the tube.

contrast: The relative brightness (luminance) of an object against its immediate background.

control: A mechanism to turn lamps on and off, or dim lamps. Controls include switches, dimmers, timing devices, motion detectors, photosensors, and central control systems.

cornice luminaire: See soffit luminaire.

correlated color temperature (CCT): Describes the color appearance of the light that is produced, in terms of its warmth or coolness. The CCT relates the color appearance of the lamp to the color appearance of a reference source when the reference source is heated to a particular temperature, measured on the Kelvin (K) temperature scale. A low color temperature (3000 K and lower) describes a warm source, such as a typical incandescent lamp and a warm fluorescent lamp. A high color temperature (4000 K and higher) describes a cool source, such as a cool white fluorescent lamp.

cove luminaire: An architectural luminaire that directs light from sources that are mounted in a cove to the ceiling or upper wall. A cove is a ledge or shelf on the wall, or a recess in the wall.

current: A flow of electric charge, measured in amperes or amps.

daylight: Light produced by solar radiation. Daylight includes direct sunlight, sunlight scattered by the atmosphere, and sunlight reflected from clouds or other surfaces.

Design 1: A term used in the Economics chapter to refer to an existing lighting system, a common-practice lighting system, or any other lighting design that serves as a point of reference for comparison to another lighting design, Design 2.

Design 2: A term used in the Economics chapter to refer to a new lighting system that is being compared to Design 1.

diffuse lighting: Lighting provided on the work plane or on an object that does not come from any particular direction. Diffuse lighting produces less-distinct shadows than directional lighting.

diffuser: A device to redirect or scatter the light from a source, primarily by the process of diffuse transmission.

dimmer: A device used to control the intensity of light emitted by a luminaire by controlling the voltage or current available to it.

dimming power reduction factor: See power reduction factor.

direct glare: Glare resulting from very bright sources of light in the field of view. It usually is associated with bright light from luminaires and windows. A direct glare source may also affect performance by reducing the apparent contrast of objects in the field of view, especially those near the source of light.

directional lighting: The lighting produced by luminaires that distribute all, or nearly all, of the light in one direction.

directional luminaire: A luminaire that provides directional lighting, including downlights, accent luminaires, and the like.

distribution: See light distribution.

downlight: A directional luminaire that directs light downward.

efficacy (of a light source): The total light output of a light source divided by the total power input. Efficacy is expressed in lumens per watt.

efficiency (of a luminaire): The ratio of luminous flux (lumens) emitted by a luminaire to that emitted by the lamp or lamps used therein. Luminous efficiency is a dimensionless measure, expressing the percentage of initial lamp lumens that ultimately are emitted by the luminaire.

electromagnetic interference (EMI): The impairment of a wanted electromagnetic signal by an electromagnetic disturbance.

electronic ballast: A ballast that uses electronic circuitry to provide the voltage and current that are needed to start the lamp(s) and to maintain its operation. Electronic ballasts weigh less than magnetic ballasts and operate more quietly. Electronic ballasts operate lamps at a higher frequency than magnetic ballasts (20,000 to 60,000 hertz compared to 60 hertz), which eliminates flicker and increases efficacy. See also ballast.

ellipsoidal reflector lamp (ER-lamp): An incandescent lamp with an internal reflector that has a focal point a few inches in front of the lamp face. ER-lamps are used in grooved-baffle recessed downlights or track heads to reduce the amount of light absorbed by the baffle trim.

energy: The product of power (watts) and time (hours). Energy used for lighting can be saved either by reducing the amount of power required or by reducing the amount of time lighting is used.

ER-lamp: An ellipsoidal reflector lamp.

exterior lighting: Lighting for the outside of a building, including decorative and functional lighting.

“eyeball” luminaire: A recessed luminaire with a partially recessed sphere that can be rotated to provide adjustable, directional lighting.

facade lighting: Floodlighting the exterior of a structure for security or for illuminating architectural features.

filament: A fine wire heated electrically to incandescence in an electric lamp.

fitting: See luminaire.

fixture: See luminaire.

flood lamp: A lamp that produces a relatively wide beam of light.

fluorescence: The ability of some materials, such as phosphors, to convert ultraviolet energy into visible light.

fluorescent lamp: A lamp containing mercury under low pressure, relative to high-intensity discharge lamps. The mercury is ionized by an electric arc, producing ultraviolet energy which, in turn, excites phosphors coating the inside of the lamp to fluoresce.

footcandle: Imperial unit of illuminance equal to one lumen per square foot. One footcandle equals 10.76 lux.

footlambert: Imperial unit of luminance equal to $1/\pi$ candelas per square foot. One footlambert equals 3.426 candelas/m² (nits).

four-way switch: One of three switches that controls the same luminaire or group of luminaires. The luminaire(s) may be turned on or off from any of the three switches. It is called a four-way switch because it contains four contact points: the luminaire and the three switches.

G-lamp: A globe-shaped incandescent lamp, usually having a spherical bulb.

general lighting: See ambient lighting.

glare: The loss of visibility and/or the sensation of discomfort associated with bright light within the field of view. See also direct glare and reflected glare.

globe: A spherical transparent or diffusing enclosure that is intended to protect a lamp, to diffuse its light, or to change the color of the light.

globe lamp: An incandescent lamp with a globe-shaped bulb or a compact fluorescent lamp with a globe-shaped diffusing cover. See also capsule compact fluorescent lamp.

globe luminaire: A luminaire with a spherical diffuser, typically used for ambient lighting.

grazing light: Directional, usually downward, light that emphasizes the texture of surfaces by creating contrast between highlights on raised portions and shadows beyond them. Heavily textured surfaces, such as stucco, are complemented by grazing light.

halogen incandescent lamp: An incandescent lamp whose filament is encapsulated; the capsule contains a halogen gas that reacts with

tungsten evaporated from the filament to redeposit it on the filament. Halogen incandescent lamps have higher efficacies than common incandescent lamps. They are sometimes referred to as quartz lamps because the capsule is made from quartz glass.

halophosphates: The class of phosphors that commonly are used in fluorescent lamps. Halophosphates are limited in their ability to provide a high color rendering index without sacrificing light output. See also rare-earth phosphors.

HID lamps: High-intensity discharge lamps.

“high-hat” luminaire: A square or round recessed downlight luminaire. Also called a “can.”

high-intensity discharge (HID) lamps: A group of electric discharge lamps operating at relatively high pressures (compared to fluorescent lamps). This group includes the lamp types known as mercury vapor, metal halide, and high-pressure sodium.

highlighting: See accent lighting.

high-pressure sodium lamp: HID light source in which radiation from sodium vapor under high pressure produces visible light. High-pressure sodium lamps are orangish in color appearance, take a few minutes to achieve full light output on lamp startup, and require several minutes to restart if power to the lamp is interrupted, even briefly.

“Hollywood” lights: A luminaire that uses a strip of multiple globe lamps mounted on one or more sides of a mirror. They are common in bathrooms.

“hot spot”: An area of higher illumination than that on the immediate surrounding area, often resulting from a lamp being placed close to a surface. Hot spots also can occur due to improper optical design of a luminaire.

human factors: The study of the interaction of people and lighting.

illuminance: The density of luminous flux incident on a surface. Illuminance is the luminous flux divided by the area of the surface when the surface is uniformly illuminated. Illuminance is calculated as the amount of lumens per unit area. Two common units used to measure illuminance are footcandles (lumens/square feet) and lux (lumens/square meter). For conversion purposes, 1 footcandle is equal to 10.76 lux. The IESNA recommends illuminance levels for a variety of lighting applications in which visual performance (for example, speed and accuracy) is important. These recommendations are a function of the visual task being performed, the adaptation level of the observer, and the age of the observer.

incandescent lamp: A lamp producing visible radiant energy by electrical resistance heating of a filament.

incentive: A reimbursement of a portion of the cost of a product. Incentives commonly are offered by electric utilities and manufacturers on some energy-saving lighting products. Also known as rebates.

incremental cost: The difference between the cost of two items that perform similar functions.

indirect lighting: Light arriving at a point or surface after reflection from one or more surfaces (usually walls and/or ceilings) that are not part of the luminaire.

infrared-reflecting lamp (IR-lamp): A halogen lamp with an infrared-reflecting coating on the capsule that surrounds the filament. The coating redirects infrared energy onto the filament, which increases the temperature of the filament without additional input power, thereby increasing efficacy.

initial cost: The original cost of equipment, lamps, and installation, exclusive of operating costs such as energy, maintenance, and lamp replacement.

input power: The active power that is used by a lamp or lamp/ballast combination, measured in watts.

intensity: See luminous intensity.

interval timer: A lighting control that automatically switches the luminaire off after a selected time interval. An interval timer can be either electronic or mechanical.

IR-lamp: See infrared-reflecting lamp.

IR PAR-lamp: An infrared-reflecting PAR-lamp. See infrared-reflecting lamp.

kelvin (K): The standard unit of temperature that is used in the *Système Internationale d'Unités (SI)* system of measurements. The Kelvin temperature scale is used to describe the correlated color temperature of a light source.

kilowatt (kW): One thousand watts. See also watt and watt-hour.

kilowatt-hour (kWh): Measure of electrical energy consumed; 1 kilowatt-hour is equal to 1000 watts used for 1 hour. See also watt and watt-hour.

lamp: A manufactured light source. For electric lamps, it includes the bulb, the base, and the internal structure that produces light, either a filament or an arc tube. Lamps are often referred to as light bulbs. The term lamp also is commonly used to refer to plug-in luminaires (see desk, floor, and table lamps).

lamp life multiplier: A factor used in the economic analyses in this book to adjust the average rated lamp life to reflect the effects of hours per start and dimming of lamps.

lamp life: See average rated lamp life and service life of a lamp.

LED: See light-emitting diode.

lens: A glass or plastic element used in luminaires to refract, that is, to control, the distribution of light. Lenses can be flat and fitted into the aperture, or cup-shaped or spherical to fit over a lamp.

light: Radiant energy that is capable of producing a visual sensation. The visible portion of the electromagnetic spectrum extends from about 380 to 770 nanometers.

light distribution: The pattern of light that is produced by a lamp or a luminaire, or the patterns of light created in a room.

light-emitting diode (LED): A semiconductor diode that radiates in the visible region of the spectrum. LEDs are used as indicator lamps on some lighting controls, and are used in some emergency exit signs.

light output: Luminous flux, measured in lumens. The light output rating of a lamp is a measure of its total integrated light output. See also lumen.

light source: The object that produces the light. For electric lighting, a lamp; for daylighting, the sun.

lighting design: The planned application of lighting systems to an indoor or outdoor space.

lighting system: The set of equipment that is used to produce light, including a luminaire and control.

lighting technique: A way to light a space to achieve a desired effect.

linear fluorescent lamp: Any of the family of straight tubular fluorescent lamps. Lamps are available in 6-inch to 8-foot lengths, with the most-common length being 4 feet.

louver: A series of baffles or reflectors that is used to shield a light source from view at certain angles, absorb unwanted light, or reflect light.

low-voltage lamp: A lamp that nominally operates at 6, 12, or 24 volts. A transformer must be used to convert the 120-volt line voltage to the lower voltage.

lumen: The unit of luminous flux. The lumen is the time rate of flow of light.

lumens per watt (LPW): See efficacy.

luminaire: A complete lighting unit consisting of a lamp or lamps, together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply. Also referred to as a light fixture, fitting, or unit.

luminance: (footlamberts, candelas/m², or nits) The luminous intensity of a surface of a given projected area. Luminance is closely related to the brightness of an object. One candela/m² = 1 nit = 0.2919 footlamberts.

luminance ratio: See brightness ratio.

luminous ceiling: A dropped ceiling containing lamps above translucent panels. Luminous ceilings provide bright, diffuse lighting.

luminous flux: The time rate of flow of light, measured in lumens.

luminous intensity: Total luminous flux within a given solid angle, in units of candelas, or lumens/steradian.

luminous intensity distribution data: Curve, generally plotted on polar or rectilinear coordinates, which represents variation in luminous intensity (in candelas) from a bare lamp or from a luminaire. Distribution data can also be presented in tabular format.

lux: Standard international unit of illuminance equal to 1 lumen per square meter. One lux equals 0.0929 footcandles.

magnetic ballast: A ballast that uses a magnetic core and coil to provide the voltage and current that are needed to start the lamp(s) and to maintain its operation. Magnetic ballasts are heavier than electronic ballasts. See also ballast.

matte surface: A surface from which the reflection is predominantly diffuse.

mercury vapor lamp: HID light source in which radiation from mercury vapor produces visible light.

metal halide lamp: HID light source in which radiation from a mixture of metallic vapor and additives of halides (e.g., sodium, thallium, indium) produces visible light.

modular compact fluorescent lamp: In this book, the replaceable lamp in a two-piece compact fluorescent lamp product. It is a single-ended fluorescent lamp with a two- or four-pin base. When used with a modular compact fluorescent lamp ballast, the combination can replace an incandescent lamp.

modular compact fluorescent lamp ballast: In this book, the ballast in a two-piece compact fluorescent lamp product. It has a medium screwbase with a socket for the modular compact fluorescent lamp. The ballast and lamp connect together using a socket-and-base design that ensures compatibility of lamps and ballasts.

motion detector: Also called an occupancy sensor, a device that detects the movement of people, animals, and objects using a passive infrared and/or ultrasonic sensor. Motion detectors are used to control other devices, such as alarm systems and luminaires, so that these devices are activated when motion is detected. Some motion detectors offer manual on and/or manual off override capabilities. See also passive infrared and ultrasonic.

motion detector factor: A factor that is used in the economic analyses of this book to adjust the hours of lighting use to account for a motion detector that turns off lamps when no motion is detected.

mounting height: The distance from the floor to the lamp center of the luminaire or to the plane of the ceiling for recessed equipment. Motion detectors also have a recommended mounting height.

MR-lamp: A multi-faceted reflector lamp.

multi-faceted reflector lamp (MR-lamp): A low-voltage halogen reflector lamp that is used in lighting applications where precise beam control is required, such as accent lighting. Some MR-lamps, such as projection lamps, are designed for line-voltage operation.

multiple-level switching: A switching technique wherein the individual lamps, or groups of lamps, in a luminaire are switched independently to achieve multiple light outputs. For example, an architectural luminaire that

contains two rows of lamps may have each row controlled by a separate switch, so that the two rows of lamps may be turned on and off independently.

occupancy sensor: See motion detector.

operating cost: See annual operating cost.

PAR-lamp: A parabolic aluminized reflector lamp.

parabolic aluminized reflector lamp (PAR-lamp): An incandescent or tungsten-halogen incandescent lamp with a hard glass bulb and an interior reflecting surface, a precisely placed filament, and a lens to control beam spread. The lens is hermetically sealed to the reflector. Metal halide PAR-lamps are also now available.

parabolic reflector: A reflector with a parabolic shape that usually is used to concentrate the light in the direction parallel to the axis of the reflector. The location of the light source relative to the reflector is crucial to the design of the reflector.

passive infrared (type of motion detector): Passive infrared motion detectors sense the motion of infrared energy (heat) within a space. A detector is located behind an infrared-transmitting lens, which is usually vertically segmented with multiple smaller lenses etched within each segment. This lens design results in horizontal and vertical "fan" pattern detection zones. When a passive infrared sensor detects motion from one zone to another, it activates whatever device it controls (usually an alarm system or one or more luminaires). See also motion detector.

pendant luminaire: See suspended luminaire.

phosphors: Chemical compounds that are used to coat the inside of fluorescent and some HID lamps. See also fluorescence.

photosensor: A device that converts light to electrical current. Based on the amount of incident light, a photosensor can switch a lamp on or off or regulate a lamp's light output to maintain a preset light level.

plenum: The space between the ceiling and the floor or roof above.

point source: A source of radiation, the dimensions of which are small enough, compared with the distance between the source and the lighted surface, for them to be neglected in calculations and measurements.

power reduction factor: A factor used in the Economics chapter that accounts for the reduction in power that is drawn by lamps when they are dimmed to a specified level (expressed as a fraction of full power), or when they are operated by multiple-level switching. The power reduction factor also accounts for the use of multiple-level lamps (e.g., 50-100-150 watts) at various levels.

pull-cord: A string or chain that is attached to a switch that is mounted in a luminaire. Pull cords typically are used to control individual ceiling-mounted luminaires, as in an attic or basement.

quartz-halogen lamp: See halogen incandescent lamp.

R-lamp: A common reflector lamp.

radio frequency interference (RFI): Direct radiation from lamps or wiring, or conducted interference through wiring, that can affect the operation of other electrical devices.

rare-earth phosphors: A group of phosphors containing rare-earth elements. Rare-earth phosphors are used in fluorescent lamps to achieve higher efficacy and better color rendering than can be achieved with halophosphates. Rare-earth phosphors each produce light in a very narrow wavelength band. Although collectively they are more efficacious than halophosphates, they are more expensive. Thus, to reduce manufacturing costs, lamps often are coated first with halophosphates and then with a thin layer of rare-earth phosphors. RE designates a lamp containing rare-earth phosphors.

rated life: See average rated life.

receptacle: An electrical outlet.

recessed luminaire: A luminaire that is mounted above the ceiling (or behind a wall or other surface) with the opening of the luminaire flush with the surface.

reduced-wattage lamp: A lamp that is of slightly lower wattage than the lamp it is intended to replace. A reduced-wattage lamp also provides less light.

reflectance: A measure of how effectively a surface will reflect light, that is, the ratio of lumens reflected off a surface to lumens falling on it. Pale surfaces have a higher reflectance than dark ones.

reflected glare: Glare resulting from bright reflections from polished or glossy surfaces in the field of view. Reflected glare usually is associated with reflections from within a visual task or areas in close proximity to the region being viewed.

reflector: A surface of mirrored glass, painted metal, polished metal, or metalized plastic that is shaped to project the beam from a light source in a particular direction. Reflectors may be an integral part of a lamp or they may be part of the luminaire.

reflector lamp (R-lamp): An incandescent filament or electric discharge lamp in which the sides of the outer blown-glass bulb are coated with a reflecting material so as to direct the light. The light-transmitting region may be clear, frosted, or patterned.

reflector lamps: A class of lamps that have reflecting material integrated into the lamp to direct the light. Types include common reflector (R), parabolic aluminized reflector (PAR), ellipsoidal reflector (ER), and multi-faceted reflector (MR) lamps.

sconce: A decorative and/or functional wall-mounted luminaire.

screwbase compact fluorescent lamp: A compact fluorescent lamp with a ballast that has a medium screwbase that fits into the standard incandescent lamp socket. A screwbase compact

fluorescent lamp may either be modular, in which the lamp and ballast are separate pieces, or self-ballasted, in which the lamp and ballast are inseparable. Both types are designed to replace incandescent lamps. See also modular compact fluorescent lamp and modular compact fluorescent ballast.

self-ballasted compact fluorescent lamp: A one-piece screwbase compact fluorescent lamp.

service life (of a lamp): The total time that passes, including time that the lamp is on and time that it is off, before the lamp must be replaced.

shade: A device on a luminaire that is used to prevent glare (by hiding the light source from direct view), control light distribution, and sometimes diffuse (and perhaps color) the light emitted.

simple payback: A term used in the Economics chapter to define the time required to save enough in operating costs by using Design 2, compared to Design 1, to pay back the incremental cost of Design 2.

single-pole switch: Single-location on-off switch that controls one luminaire, or group of luminaires.

skylight: A clear or translucent panel set into a roof to admit daylight into a building.

socket: The fitting on a luminaire that electrically connects the luminaire to the lamp.

soffit luminaire: An architectural luminaire that directs light downward from the cornice or soffit between the wall and ceiling to light the wall surface below.

specification-grade luminaire: A luminaire that is produced with high-quality construction and materials. See also commodity-grade luminaire.

specular surface: A surface from which the reflection is predominantly directional. Specular surfaces are mirror-like or shiny, as opposed to diffuse.

spot lamp: A lamp that provides a relatively narrow beam of light.

surface-mounted luminaire: A luminaire mounted directly on the ceiling or other surface.

suspended luminaire: A luminaire hung from a ceiling by supports. Also called a pendant luminaire.

switch: A device that turns a lamp or lamps on or off by completing or interrupting the power supplied to the lamp(s). See also single-pole switch, three-way switch, and four-way switch.

task lighting: Lighting that is directed to a specific surface or area. Task lighting provides illumination for visual tasks.

three-level lamp: Incandescent lamp having two filaments. Each can be operated separately or in combination with the other, which provides three different light outputs. A special socket is required to use the three levels of this lamp.

three-way switch: One of two switches that control the same luminaire or group of luminaires. The luminaire(s) may be turned on or off from either of the two switches.

timer: See interval timer.

torchiere: An indirect floor lamp sending all or nearly all of its light upward.

track head: An adjustable luminaire that connects to the track in a track lighting system.

track lighting: A lighting system with an electrically fed linear track that accepts one or more track heads. The track heads can be easily relocated along the track.

trim: Baffles, cones, rims, and other treatments for apertures of downlights. Trim is usually the part of the luminaire that is visible from below the ceiling.

trim ring: A plastic or metal ring used to cover and seal the edges of holes that are cut into ceilings to install recessed luminaires.

tripphosphor: See rare-earth phosphors.

troffer: A recessed luminaire that is installed in the plenum with the opening flush with the ceiling. Typically rectangular or square in shape, as in a 2-foot by 4-foot luminaire.

tungsten-halogen lamp: See halogen incandescent lamp.

twin-tube lamp: A single-ended fluorescent lamp with the tube bent into a very tight "U" or "H" shape.

U-shaped lamp: A fluorescent lamp with the tube bent in the middle so that the ends fit into the same side of a luminaire.

UL: Underwriters Laboratories; conducts safety and materials tests. UL-listed products have passed UL's tests.

ultrasonic (type of motion detector): Ultrasonic motion detectors emit high-frequency sound waves (too high for the human ear to hear), which are reflected by objects and room surfaces to a receiver located in the detector. The reflected waves

set up a static wave pattern; any disturbance in this pattern alters the frequency of the reflected wave, which is detected by the receiver. The receiver then activates whatever device the detector controls (usually an alarm system or one or more luminaires). See also motion detector.

ultraviolet (UV) radiation: Any radiant energy within the wavelength range of 10 to 380 nanometers.

under-cabinet lighting: Luminaires mounted on the underside of cabinets to provide task lighting, typically in a kitchen.

uplight: A luminaire that directs the light upward onto the ceiling and upper walls of a room.

valance luminaire: An architectural luminaire with a longitudinal shielding member mounted across the top of a window or along a wall and usually parallel to the wall, to conceal light sources giving both upward and downward distributions. See also architectural luminaires.

vanity light: A wall-mounted luminaire located next to a mirror. See also "Hollywood" lights.

voltage (V): The electric potential difference that drives the current through a circuit.

wall washing: A technique that lights a wall fairly evenly from top to bottom without spilling or wasting light away from the wall into the room.

watt (W): Unit of active electric power; the rate at which electric energy is used.

watt-hour: Unit of electric energy. One watt-hour is the amount of energy consumed at the rate of 1 watt during a 1-hour period.

wattage: The active electrical power consumed by a device.

wavelength: The distance between two similar points of a given wave. Wavelengths of light are measured in nanometers (1 nm = 1 billionth of a meter, or 1×10^{-9} meters)