

# White Paper

Part 4/4

## Lighting & Control Terminology



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Absence Detection	An occupancy sensor using a manual-ON/automatic-OFF sequence of operation. Also known as Vacancy Sensor
Accent Lighting	Directional lighting to emphasise a particular object or draw attention to a display item.
Adaptation	The process by which the human eye adjusts to a change in light level.
Adaptive Compensation	Lowering illuminance at night in spaces, based on research indicating that people both need and prefer less light at night than during the day. For example, in applications with long hours of operation during the night, such as airports and 24-hour retailers, this can produce significant energy savings. Also known as night setback.
Amp	A measure of electrical current.
Analog Control	A control loop in which data is expressed or measured by means of one or more physical properties that can express any value along a continuous scale.
Arc	A general term for a high intensity electrical discharge occurring between two electrodes in a gaseous medium, usually accompanied by the generation of heat and the emission of light
Arc Lamp	A light source containing an arc (see above). Also called a discharge lamp, or an arc discharge lamp
Area Control Unit	A control unit controlling a significant area of a building or more local control units may be connected
Astronomical Time Switch	A device that provides a signal to turn a load on or off or adjust power in steps based on the time of day or based on astronomical events such as sunset or sunrise, accounting for geographic location and day of the year. Also known as an astronomical time clock.
Automatic	Self-acting, operating by its own mechanism when actuated by some non-manual influence. Also known as Occupancy or Presence Detection.
Automatic Daylight Control	A device or system of devices that are used for automatically regulating electric lighting power in response to the amount of daylight that is present in a space. Such a control may adjust lighting in multiple steps, or continuously. Also known as automatic daylighting control or Daylight Harvesting.
Automatic Shutoff Control	A device capable of automatically turning loads off without manual intervention.
Average Rated Life	An average rating, in hours, indicating when 50% of a large group of lamps have failed, when operated at nominal lamp voltage and current.
Ballast	A device which provides the necessary starting voltage and appropriate current to a fluorescent or high intensity discharge (HID) luminaire
Ballast Factor	A ratio used to calculate the expected real-world performance of a lamp. Calculated as the difference between the expected performance of a lamp with a commercial ballast versus the measured performance of that lamp with a reference ballast. Rated Lamp Lumens x Ballast Factor = Net Lumens.
BCT	Ballast Case Temperature. The measured operating temperature of a fixture's ballast. Operating outside of a ballast's specified operating temperature will shorten its functional lifespan.
Bi-Level Control	A lighting control strategy that provides two light levels—one at full-ON or at a high light level and one at a lower level. This may include turning off some portion of the lighting so that uniform light level and distribution is maintained. In addition to the two ON settings, bi-level control may provide for full-OFF. Also known as bi-level switching. This can also be achieved by dimming.
Bi-Level Occupancy Switching	An occupancy sensor that provides the capability for two light levels—one at full-ON or at a high light level, and one at a lower level. The device may also provide automatic-OFF. This can also be achieved by dimming.
Building Log Book	A document detailing the state of the building services systems within a building as defined by Building Regulations Approved Document L2
Building Management System (BMS)	A BMS has at least one permanent operator workstation (BMS Supervisor) connected via a communications network to a number of controllers which are often called 'outstations'.
Candela	The measure of luminous intensity of a source in a given direction. The term has been retained from the early days of lighting when a standard candle of a fixed size and composition was defined as producing one candela in every direction. A plot of intensity versus direction is called a candela distribution curve and is often provided for reflectorized lamps and for luminaires with a lamp operating in them.
Category A Fit-Out	There is no standard definition for category A fit-out – it can vary between the different developers but generally it is the minimum required for a building to be ready for the occupier to fit out to specification
Category B Fit-Out	Category B completes the fit-out to the occupier's specific requirements. This will include the construction of cellular offices etc.
Captive Key Switch	A type of switch in which a key is required to activate or deactivate the load; the key cannot be removed when the load is in the ON position.
Chromaticity	Measure to identify the colour of a light source, typically expressed as (x,y) coordinates on a chromaticity chart

Color Rendering Index	An international system used to rate a lamp's ability to render object colours. The higher the CRI (based upon a 0-100 scale) the richer colours generally appear. CRI ratings of various lamps may be compared, but a numerical comparison is only valid if the lamps are close in colour temperature. CRI differences among lamps are not usually significant (visible to the eye) unless the difference is more than 3-5 points.
Commissionable System	A system designed, installed and prepared to specific requirements in such a manner to enable commissioning to be carried out.
Commissioning	Lighting commissioning is the process of ensuring that a lighting scheme performs according to the design intent, which should embrace the needs of the owner occupiers.
Commissioning Certificate	A document signed off by the relevant parties as defined by the contract to confirm that commissioning has been completed to their satisfaction.
Commissioning Method Statement	A document specifying the process required to achieve commissioning and those responsible for the completing those processes.
Commissioning Specification	The document that prescribes the requirements with which the various commissioning services have to comply. Note: the specification should refer to drawings, schedules and relevant standards
Communications or Signal Bus	A communication network used to connect field control devices such as outstanding and unitary controllers.
Compact Fluorescent	The general term applied to fluorescent lamps that are single-ended and that have smaller diameter tubes that are bent to form a compact shape.
Configuration	The process of linking basic pre-defined control functions to provide a control strategy.
Continuous Dimming	A lighting control strategy that varies the light output of a lighting system over a continuous range from full light output to a minimum light output without flickering in imperceptible steps.
Controlled Illuminance	The process of managing the output of luminaries by using an internal light sensor to set target illuminance.
Control Strategy	A list of required control functions for areas of a building.
Correlated Colour Temperature (CCT)	The temperature of a full black radiator (black body) that emits radiation having a chromaticity nearest to that of the light source being considered, expressed in kelvins.
Corridor Link	Facility that relates to circulation lighting so that exit routes are kept lit while any office lighting is on.
Clerestory	A portion of an interior rising above adjacent rooftops and having vertical windows admitting daylight to the interior.
Control Device	A device used to regulate the operation of equipment.
CRI	Colour Rendering Index, sometimes CIE. The ability of a light source to accurately render an object's colour in comparison with a natural light source. Measured on a scale of 1 -100 with 100 being the ideal.
Daylight Controls	A device or system of devices that are used for regulating electric lighting power in response to the amount of daylight that is present in a space. See also daylight responsive control.
Daylight Harvesting	A lighting control strategy used to manage a building's energy consumption by automatically regulating the use of electric lighting in response to the amount of daylight available. Also known as Daylight Dimming.
Daylight Hours	The time period from 30 minutes after sunrise to 30 minutes before sunset.
Daylight Management	Manual or automatic means of controlling daylight penetration ideally enabling daylight to enter the building without creating glaring visual conditions or damaging interior contents that are sensitive to solar radiation. Daylight management can be achieved by using window treatments, glazing, light shelves, louvers, etc. It may also be called shade control or daylight control, not to be confused with daylight harvesting.
Daylight Sensor	A device which senses the amount of daylight in a room and controls the luminaire accordingly.
Daylighted Area	The area substantially illuminated by daylight where the illumination provided by electric lighting may be reduced or eliminated.
Daylighting	The practice of applying architectural design principles to use windows, light shelves, or other openings and reflective surfaces in the design of the building so that during the day natural light provides effective internal illumination.
Disability Discrimination Act	DDA includes lighting levels and control definitions.
Demand Response	Load shedding initiated by the energy provider.
Demand Responsive Lighting System	A lighting system that has the ability to control power consumption in response to a demand response signal. This system may be triggered automatically or manually.
Design Intent	A written specification of the whole lighting and control system prepared by the lighting designer giving the design criteria, control strategy and other system requirements and other systems requirements, as appropriate.
Dichroic Reflector (or Filter)	A reflector (or filter) that reflects one region of the spectrum while allowing the other region(s) to pass through. A reflector lamp with a dichroic reflector will have a "cool beam" i.e. most of the heat has been removed from the beam by allowing it to pass through the reflector while the light has been reflected.

Dimmer	A control device that is capable of varying the light output of light sources. It may be capable of continuous or stepped dimming.
Dimming Stepped	A lighting control method that varies the light output of lamps in one or more predetermined, steps of greater than one percent of full output. The changes between levels are generally perceptible.
Direct	A direct source of light which is cast downwards from a fixture to provide lighting with uniform levels of illumination. Open, louvered, and lensed fixtures can all be "direct". Also see Indirect and Direct/Indirect.
DID (Direct Indirect)	A source of light in which light is cast both upwards and downwards from a fixture to provide a combination of direct and indirect illumination.
Downlighting	Light which is cast downward from a fixture. The most common and direct form of lighting
ECE R37 Code	European Common Market Regulation 37 standard lamp number.
ECM	Energy Conservation Measures. A term commonly used by ESCOs in lighting audits/designs.
Efficacy	A measure expressed in lumens per watt representing the efficiency of a lamp/ballast system or luminaire.
Energy	The capacity of a system to do work. In electrical terms, energy (E) is the amount power used over a time period, typically reported in watt-hours (Wh), kilowatt-hours (kWh) or British Thermal Units (BTU).
Energy Management Control System	A control system used for managing the energy use of building systems such as heating, ventilation and air conditioning (HVAC), lighting, refrigeration, plug loads, and water heating systems. The system may also be capable of monitoring environmental and system loads, and performing adjustments to optimise energy usage and respond to demand-response signals. Also known as Building Management System (BMS)
Energy Use Intensity	An expression of building energy use in terms of net energy divided by gross floor area; commonly abbreviated as EUI. Also known as energy utilisation index.
External Light Sensor	Light sensing device mounted externally to measure ambient lighting conditions.
Foot-Candle (FC)	Foot-Candle. A unit of measure for the density of light as it reaches a surface. One foot-candle is equal to 1 lumen per square foot.
Field Control Device	A control device such as an outstation or unitary controller.
Fenestration	All areas in the building envelope that let in light including windows, plastic panels, clerestories, skylights, glass doors that are more than one-half glass and glass block walls.
Fit-Out	The process of altering the internal configuration of a building to suit the user's needs.
Flexibility	The ability of a lighting installation to adapt to changing needs and/or layouts.
Fresnel Lens	This is the cover placed over a PIR Sensor. This cover contains a great many lenses that collectively become a 'Fresnel Lens'.
Functional Extra Low Voltage	The term functional extra-low voltage (FELV) describes any other extra-low-voltage circuit that does not fulfil the requirements for a SELV or PELV circuit. Although the FELV part of a circuit uses an extra-low voltage, it is not adequately protected from accidental contact with higher voltages in other parts of the circuit. Therefore the protection requirements for the higher voltage have to be applied to the entire circuit.
Gateway	A device to link one or more control systems that have different protocols.
General Lighting	Lighting designed to provide a uniform level of illuminance throughout an area, exclusive of any provision for additional task-specific lighting requirements. Also known as Ambient Lighting.
Group Dependence	Similar to Corridor Link but used where the linked lighting is required for comfort or environmental reasons
Halogen Lamp	A halogen lamp is an incandescent lamp with a filament that is surrounded by halogen gases, such as iodine or bromine. Halogen gases allow the filaments to be operated at higher temperatures and higher efficacies. The halogen participates in a tungsten transport cycle, returning tungsten to the filament and prolonging lamp life
Handover	The process of handing the building over from the contractor to the client following practical completion.
Hard and Soft Points	Points in a system where the hardware (hard) or software (soft) can be checked during the commissioning process.
Hard Fired	Term used to described certain solid-state dimmer circuits.
Heat Sink	A component or integral part of luminaire that conduct or convects heat away from LED components.
Hi-Bay	Lighting used in industrial applications where the ceiling height is greater than 20 feet. Common in big box retail, industrial, warehouse and manufacturing spaces.
High Intensity Discharge (HID)	A general term for mercury, metal halide and high-pressure sodium lamps. HID lamps contain compact arc tubes which enclose various gases and metal salts operating at relatively high pressures and temperatures.
High End Trim	A lighting control strategy that sets the required maximum light level for each space.
High Frequency Control Gear	For fluorescent or high-intensity discharge lighting, electronic control gear that operates at a frequency significantly above the normal mains frequency and usually well above the audible range.
High Pressure Sodium	HPS lamps are high intensity discharge light sources that product light by an electrical discharge though sodium vapour operating at relatively high pressures and temperatures

Hysteresis	Hysteresis is the time-based dependence of a system's output on current and past inputs. The dependence arises because the history affects the value of an internal state. To predict its future outputs, either its internal state or its history must be known.
Hot Restart Time	Time it takes for a High Intensity Discharge lamp to reach 90% of light output after going from on to off to on.
Illuminance	Light arriving at a surface, expressed in lumens per unit area; 1 lumen per square foot equals 1 foot candle, while 1 lumen per square meter equals 1lux.
Incandescent Lamp	A light source that generates light utilising a thin filament wire (usually of tungsten) heated to white heat by an electric current passing through it.
Induction Lighting	Gases can be excited directly by radio-frequency or microwaves from a coil that creates induced electromagnetic fields. This is called induction lighting and it differs from a conventional discharge, which uses electrodes to carry current into the arc. Induction lamps have no electrodes inside the chamber and generally, therefore, have longer life than standard lamps
Indirect	An indirect source of light which is cast upwards from a fixture and bounced down to provide lighting with minimal glare and more uniform levels of illumination.
Initial Lumens	The lumens produced by a lamp after an initial burn in period (usually 100 hours).
Intelligent Luminaries	Luminaries with in-built sensors and control circuitry.
Input Watts	The total wattage required by both the ballast and the lamp in a luminaire.
Instant Start	Ballast starting type. Applies high voltage across the lamp with no preheating of the cathode.
Internal Light Sensor	A photosensitive device that reads internal lighting levels, usually as observed from the ceiling looking down.
Inverse Square Law	Formula stating that if you double the distance from the light source, the light level goes down by a factor of 4, if you triple the distance, it goes down by a factor of 9, and so on.
IR	Abbreviation for Infra-Red that is commonly used as a means of transmitting coded commands for the purpose of remote control.
Isocandela Plot	A plot with lines connecting points of equal luminous intensity around a source.
Isolux Plot (or Isofootcandle Plot)	A line plotted to show points of equal illuminance (lux or footcandles) on a surface illuminated by a source or sources.
Junction	The p-n junction in a diode, for instance LED, where positively charged and negatively charged materials exchange electrons, emitting photons and generating heat.
Junction Temperature	The temperature in the vicinity of an LED's p-n junction. Controlling junction temperature is critical for achieving the optimal balance between lumen output and lumen maintenance.
Kelvin Temperature	A numerical scale used to describe the colour of light. Light with a lower Kelvin rating will have a more yellow tint, while light with a higher kelvin rating will have a more blue tint.
Kilowatt	1000 Watts
Kilowatt Hour	1000 Watts used continuously for one hour
Lamp	A generic term for a man-made light source created to produce optical radiation. The term is also used to denote sources that radiate energy in other regions of the spectrum such as IR and UV. A lamp is sometimes called a bulb or tube.
Leading Edge Dimmer	Type of dimmer that 'chops' the leading (or rising) edge of the mains sine wave to reduce power delivered to luminaries.
LED	Light Emitting Diode –commonly known as LED is a semiconductor devise that emits visible light of a certain colour.
Lens	A glass or plastic element used in luminaries to seal a fixture or control the exiting light.
Lighting Control	Electrical devices and techniques used to regulate the output of luminaries or light sources to provide the necessary amount of light.
Lighting Control System	A lighting control where two or more components are required to be installed in the field to provide all of the functionality required to make up a fully functional and compliant lighting control.
Lighting Control Unit (LCU)	Also known as Lighting Control Module (LCM). A control unit for lighting circuit(s)
Lighting Control Zone	An illuminated area or group of areas for which the lighting conditions are sufficiently similar as to allow the lighting equipment to be controlled in unison.
Lighting Control Self-Contained	A unitary lighting control device where no additional components are required for a fully functional lighting control.
Lighting Industry Federation (LIF) Code	For Showbiz/Specialty lamps, these are assigned by the Lighting Federation of London U.K. They ensure electrical and mechanical interchangeability of similarly coded lamps. LIF codes are divided into groups according to the primary application of the lamps.
Lighting Power Density (LPD)	The lighting power per unit area typically expressed as watts per square foot or meter.

Lighting System	A collection of luminaires and related lighting equipment installed in an application to provide the right amount of light where and when needed, with consideration of human comfort, visibility, safety and security, the physical environment, and daylight integration. Such a system is comprised of multiple components such as luminaires, lighting controls, and windows or skylights designed to minimise energy use while maintaining lighting quality.
LLD	Lamp Lumen Depreciation Factor. The multiplier to be used in illumination calculations to relate the initial rated output of light sources to the anticipated minimum rated output based on the re-lamping program to be used. (See also Lumen Depreciation and Mean Lumens).
LLF	Light Loss Factor. A factor used in calculating illuminance after a given period of time and under given conditions. It takes into account temperature and voltage variations, dirt accumulation.
Load Shedding	A control strategy for selectively reducing the load of a system on a temporary basis to reduce energy usage. A building manager or system may utilise load shedding to avoid peak pricing or to avoid a condition where electricity demand exceeds supply.
Lo-Bay	Lighting used in industrial applications where the ceiling height is 20 feet or less. Common in big box retail and industrial settings.
Low Voltage	Voltage level upto 1000 Volts
LPW	Lumens Per Watt. The number of lumens produced by a light source for each watt of electrical power supplied to the light source. See Efficacy.
Lumen Depreciation	The decrease in lumen output of a light source over time; every lamp type has a unique lumen depreciation curve (sometimes called a lumen maintenance curve) depicting the pattern of decreasing light output.
Lumen Maintenance Control	A lighting control strategy that adjusts lamp power over time to maintain constant light output as lamps age, dirt accumulates in luminaires or both. This strategy allows for energy savings early in the life of a system then increases power as the system ages. Also known as lumen depreciation compensation.
Lumens	A unit of luminous flux; overall light output; quantity of light, expressed in lumens.
Luminaire	A device to produce, control, and distribute light. It is a complete lighting unit consisting of one or more lamps and some or all of the following components: optical control devices designed to distribute the light; sockets or mountings to position and protect the lamps and to connect the lamps to a supply of electric power; the mechanical components required to support or attach the luminaire, and various electrical and electronic components to start, operate, dim, or otherwise control and maintain the operation of the lamps.
Luminaire Efficiency	The ratio of lumens emitted by a luminaire to the total lumens emitted from the light source within the luminaire.
Lux	A unit of illuminance equal to 1 lumen per square meter.
Mains-Borne Signalling	Transmission of command or data signals super imposed on the mains frequency power supply. Also known as Power-Line Carrier (PLC) signalling
Maintenance Factor	The ratio of the illuminance provided by an installation at some stated time with respect to the initial illuminance e.g after 100 hours of operation. The maintenance factor is the product of the lamp lumen maintenance factor, the lamp survival factor (where group replacement without spot replacement is carried out).
Manual Control	A lighting control strategy that requires human intervention to control electric lighting. For example, wall switches or remote controls.
Marshalling Box	Plug-In connection unit for luminaires that is similar to a plug-in lighting control module. It may or may not have intelligence/addressability.
Master Lighting Shut-Off Control	A manual control used to turn off permanently installed lighting from one location or from a remote location. This strategy is typically used to turn off most or all permanently installed lighting in a building.
Mean Lumens	The average lumen output of a lamp over its rated life. Mean lumen values for fluorescent and HID lamps are typically measured at 40% of their rated lives.
Mercury Lamp	A high-intensity discharge light source operating at a relatively high pressure (about 1 atmosphere) and temperature in which most of the light is produced by radiation from excited mercury vapour. Phosphor coatings on some lamp types add additional light and improve colour rendering.
Mesopic	Typically referring to nighttime outdoor lighting conditions, the region between PHOTOPIC and SCOTOPIC vision
Metal Halide Lamp	A high intensity discharge light source in which the light is produced by the radiation from mercury, plus halides of metals such as sodium, scandium, indium and dysprosium. Some lamp types may also utilise phosphor coatings.
MH	Metal Halide HID lighting.
Micro Matte	A highly effective reflecting material manufactured by Alanod which appears white but reflects nearly as much light at traditional specular surfaces.

Microwave Detector	These detect motion through the principle of Doppler radar, and are similar to a radar speed gun. A continuous wave of microwave radiation is emitted, and phase shifts in the reflected microwaves due to motion of an object toward (or away from) the receiver. Unlike PIR Detection Microwave does not require heat
Miniature Circuit Breaker (MCB)	A compact mechanical device for making and breaking a circuit both in normal conditions and in abnormal conditions such as over current, short circuit or earth fault. In abnormal conditions the the circuit should be broken automatically.
Modular Wiring	Pre-fabricated wiring harness designed to provide rapid installation of lighting circuits and small power.
Motion Sensor	An occupancy sensor used for exterior areas.
MR-11	A line of low voltage compact reflector lamps used for accent and spot lighting. The 11 refer to 11 eighths of an inch diameter
MR-16	A line of low voltage compact reflector lamps used for accent and spot lighting. The 16 refers to 16 eighths of an inch diameter
Multi Level Lighting Control	A lighting control strategy that provides at least three light levels—one at full-ON or at a high light level and two or more at lower levels. This may include turning off some portion of the lighting so that uniform light level and distribution is maintained. In addition to the three ON settings, multi-level control may provide for full-OFF. Continuous dimming systems meet this requirement. Also known as multi-level switching or stepped switching.
Multi-Level Switching	
Networked Lighting Control System	A lighting control system with multiple components that is connected by a network and offers multiple strategies such as energy reporting and may be integrated with various building systems.
Night Setback	See adaptive compensation.
Occupancy Sensing	A lighting control strategy that regulates the operation of lighting or other equipment based upon detecting the presence or absence of people within a space.
Occupancy Sensor	A control device that detects the presence or absence of people within a space or area and causes lighting, equipment, or appliances to be regulated according to the required sequence of operation.
On/Off Switching	A lighting control strategy that turns a luminaire or group of luminaires on or off using manual or automatic methods.
Operations and Maintenance Manual (O&M manual)	A series of documents detailing the design intent, mode of operation and maintenance requirements of building services.
Operator Workstation	A device used to provide a central monitoring facility for a BMS. Also referred to as a 'central station, head end', 'host', or 'BMS supervisor'
Outstation	A device capable of control and monitoring functions to which sensors, actuators and other controls are connected. Outstations are linked by means of a communications bus.
Override	A manual control that is used for operating lighting or other equipment that is under the control of an automatic system. For example, an override may be used to turn lights ON after scheduled automatic shut-off.
PAR Lamp	PAR is an acronym for parabolic aluminised reflector. A PAR lamp, which may utilise either an incandescent filament, a halogen filament tube or a HID arc tube, is a precision pressed-glass reflector lamp. PAR lamps rely on both the internal reflector and prisms in the lens for control of the light beam.
Performance Testing	The testing of a system, or grouping of systems, to determine whether the certain performance criteria are met.
Personal Control	A lighting control strategy that enables users to adjust the illuminated environment to their personal preference within their space.
Phosphors	Substances which emit light after being bombarded by electrons. Phosphors are used to coat the inside of fluorescent lamps.
Photocell	A solid-state device that converts light into electrical energy by producing a voltage as in a photovoltaic cell, or, uses light to regulate the flow of current as in a photoconductive cell.
Photocontrol	
Photometry	The measurement of light and related quantities.
Photopic Lumens	A type of light measured in lumens that is generally detected by common light meters and accounts for part of the human eye's perception of brightness.
PIR	Passive infrared sensors are sensitive to a person's skin temperature through emitted black body radiation at mid-infrared wavelengths, in contrast to background objects at room temperature. No energy is emitted from the sensor, thus the name "passive infrared" (PIR).
Pint Data	Data collected at pre-determined points in the system during the commissioning process.
Power Factor	A measure of the effectiveness with which an electrical device converts volt-amperes to watts; devices with power factors (< 0.90) are "high power factor" devices.

Practical Completion	A legally defined point in the construction process where a designated person, often the architect agrees that all major construction tasks have been satisfactorily completed. There are still likely to be small defects (snags) that must be rectified later.
Pre-Commissioning	Specified systematic checking of a completed installation to confirm its state of readiness for commissioning.
Predictive Occupancy Control	The use of time scheduling designed to control lighting use in line with the hours of occupation.
Protected Extra Low Voltage (PELV)	A PELV circuit only requires protective-separation from all circuits other than SELV and PELV (i.e., all circuits that might carry higher voltages), but it may have connections to other PELV systems and earth (ground).
PS (Programmed Rapid Start)	A method of starting fluorescent lamps, associated with electronic ballasts, where low voltage is applied to the cathode prior to lamp ignition. Recommended for use with occupancy sensors.
PSMH	Pulse Start Metal Halide HID Lighting.
Ramp Speed	The setting of fading or dimming of a light. Used in Scene Setting to add interest to the establishment of different lighting effects.
Rapid Start	A method of starting typically associated with magnetic ballasts; where a low filament voltage is applied to preheat the cathodes.
Regulation	Varying the output of fluorescent luminaires by managing the control gear.
RF	Abbreviation for Radio Frequency that is used in a similar manner to infra-red transmission, This can be used to provide wireless communication between devices.
Re-Strike	Refers to the restarting of a previously operating lamp shortly after turnoff. Metal halide lamps typically require a minimum of 4-15 minutes to restart after turn-off.
RLO	Relative Light Output. The ratio of light output between a fixture's potential light output at optimum ambient temperatures and actual light output at actual ambient temperatures. For example, if a fixture at its optimal temperature of 75°F produces 10,000 Lumens and 8,000 Lumens 50°F, that fixture's RLO at 50°F is $8,000 \text{ Lumens} \div 10,000 \text{ Lumens}$ , or 80%.
Rooftop Monitor	Vertical fenestration integral to the roof, may also be referred to as a roof monitor.
Safety (Separated) Extra Low Voltage (SELV)	A SELV circuit must have: <ul style="list-style-type: none"> <li>protective-separation (i.e., double insulation, reinforced insulation or protective screening) from all circuits other than SELV and PELV (i.e., all circuits that might carry higher voltages)</li> <li>simple separation from other SELV systems, from PELV systems and from earth (ground).</li> </ul> The safety of a SELV circuit is provided by <ul style="list-style-type: none"> <li>the extra-low voltage</li> <li>the low risk of accidental contact with a higher voltage;</li> <li>the lack of a return path through earth (ground) that electric current could take in case of contact with a human body.</li> </ul>
Scene Setting	A lighting control device or system that allows for two or more pre-defined lighting settings, an "all off" setting, and allows for the recall of these settings for a luminaire; a group or multiple groups of luminaires to suit multiple activities in the space.
Scheduling	A control strategy that controls lighting, equipment, or systems based on the time of day or astronomical event. For example, scheduling building lighting to automatically turn OFF at 6 p.m. or sunset.
Scotopic Lumens	A type of light that is not generally detected by common light meters but which accounts for part of the human eye's perception of brightness.
Semi Specular	A reflective but somewhat diffuse surface.
Sequence Of Operation	A description of how lighting and/or other systems shall operate to fully meet the control design intent.
Sequence of Operation: Automatic partial On/ Automatic Off	Automatic activation of a lighting load to a reduced power level between full-ON and full-OFF and automatic deactivation of the lighting load from either an occupancy or time-based system.
Sequence of Operation: Automatic On Partial Off	Automatic activation of a lighting load to full power and automatic reduction of lighting power to a level between full-ON and full-OFF from either an occupancy or time-based system.
Sequence of Operation: Manual On/ Automatic Off	Manual activation/automatic deactivation of an electrical load. See vacancy sensor.
Shade Control	A method of daylight management using manual or automatically controlled window or skylight treatments to manage daylight and glare.
Shell and Core	Shell-and-core works will generally comprise the structure, cladding, base plant, completed common areas and external works. It will include fitted-out main reception, lobbies, staircases, toilets, lift shafts, basements, loading bays, car parking and so on.



Sidelighting	Daylighting provided by vertical fenestration mounted below the ceiling plane.
Solid-State Lighting	A description of the devices that do not contain moving parts or parts that can break, rupture, shatter, leak or contaminate the environment.
S/P Ratio	The ratio of scotopic to photopic lumens produced by a light source. An appropriate S/P ratio will provide for a more comfortable atmosphere and better perceived brightness.
Skylight	Fenestration installed on a roof less than 60 degrees from the horizontal.
System Integration	The linking of two or more control systems from different manufactures.
Specular	A highly polished or mirrored surface.
Specification	The documents that prescribes the system design and requirements for commissioning of by reference to drawings, information schedules and relevant codes, manuals, guides and standards.
T5	5/8" diameter fluorescent lamps. "T" stands for tubular, while the number "5" stands for the 5 in 5/8". Therefore a T8 lamp would be a Tubular 8/8", or 1" diameter lamp.
T8	1" diameter fluorescent lamps.
T12	1 1/2" diameter fluorescent lamps.
Task Lighting	Supplemental lighting provided to assist in performing a localised task, e.g. a table lamp for reading or an inspection lamp for fabric inspection.
Thermal Characteristics	The manner in which a luminaire manages heat, either dissipating heat or retaining it.
THD	Total Harmonic Distortion. A measure of the distortion of an electrical wave form. Excessive THD (defined by ANSI as greater than 32%) may cause adverse effects to the electrical system.
Time Switch	A device that controls lighting, equipment, or systems based on the time of day—typically used for time scheduling strategies. Also known as time clock. See also astronomical time switch.
Timer Switch	A control device that turns lights or other loads on when manually activated and automatically turns lights or other loads off when a user-selected time period elapses. Sometimes referred to as count-down timer switch or count-down timer.
Toplighting	Daylighting provided by fenestration mounted above the ceiling plane including skylights, tubular daylighting devices, and vertical fenestration in rooftop monitors, and fenestration mounted above a lower adjacent ceiling plane in the spaces in clerestories.
Trailing Edge Dimmer	Type of dimmer that 'chops' the trailing (or falling) edge of the mains sine wave to reduce power delivered to luminaires.
Troffer	A recessed luminaire shaped like an inverted trough used to enclose and reflect fluorescent lamps.
Total Harmonic Distortion	A measure of the distortion caused by ballasts and other inductive loads of the input current on alternating current (AC) power systems caused by higher order harmonics of the fundamental frequency. THD is expressed in percent and may refer to individual electrical loads (such as ballast) or a total electrical circuit or system in a building. Excessive THDs on electrical systems can cause efficiency losses as well as overheating and deterioration of system components.
Tuning	A lighting control strategy in which the light output of an individual or group of luminaires is set to provide the desired amount of light for a space, task or area. While tuning is sometimes accomplished using high-end trim, the light levels are generally lower utilising tuning than the high-end trim levels. Also known as task tuning.
Unitary Control Device	A control device that controls one single unit.
Uplighting	A source of light which is cast upwards to illuminate a ceiling cavity for aesthetic reasons. When combined with reflective ceiling materials, uplighting can function as a source of indirect lighting
Vacancy Sensor	An occupancy sensor using a manual-ON/automatic-OFF sequence of operation.
Valance Lighting	Lighting from light sources on a wall typically above eye level, shielded by horizontal panels. The light may be upward or downward directed.
Warm White	Refers to a colour temperature around 3000K, providing a yellowish-white light.
Work Plane	Unless otherwise indicated, it is assumed to be a horizontal plane 75 centimetres above the floor (table-top height) having the same area as the floor.

Hager Ltd.  
Hortonwood 50  
Telford  
Shropshire  
TF1 7FT

Sales Service Centre: 01952 675612  
Sales Service Centre Faxline: 01952 675645

Technical Service Centre: 01952 675689  
Technical Service Centre Faxline: 01952 675557  
[www.hager.co.uk](http://www.hager.co.uk)

Hager Ltd.  
Unit M2  
Furry Park Industrial Estate  
Swords Road  
Santry  
Dublin 9  
Ireland

Northern Ireland Tel: 028 9077 3310  
Northern Ireland Fax: 028 9073 3572

Republic of Ireland Tel: 1890 551 502  
Republic of Ireland Fax: 1890 551 503  
[www.hager.ie](http://www.hager.ie)

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