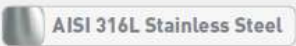
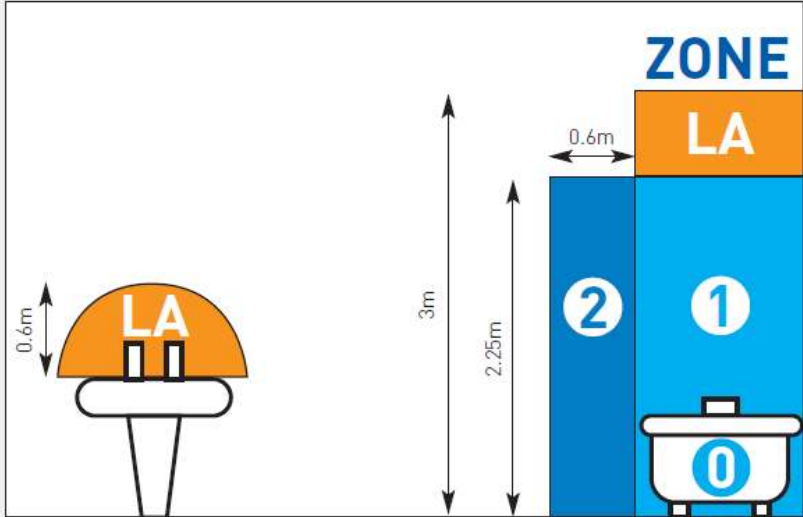





# Technical A-Z

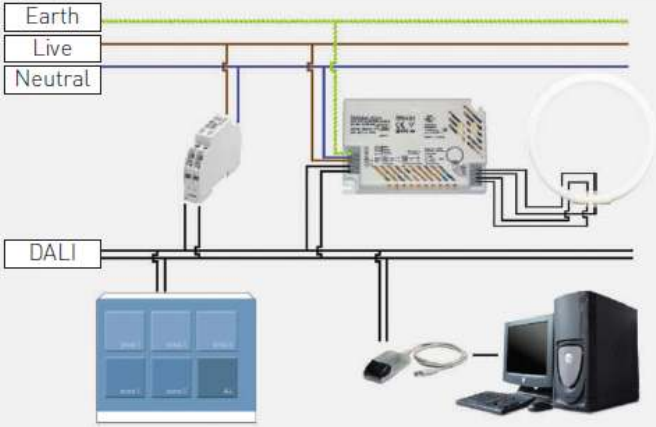
AC	Alternating Current. The movement or flow of electric charge that periodically changes direction. AC current is the format that electricity is supplied in.
Accent Lighting	A synonym for display or highlighting.
Air-Handling	A type of recessed modular that can be used to either supply air (heating or air conditioning) to a room, remove air from a room, or do both. The air-handling capability is expressed in litres per second.
 AISI 316L Stainless Steel	Grade (from American Iron and Steel Institute) of Stainless Steel used in Collezione Italiana products. 316L is a low carbon content grade of Stainless Steel, giving excellent corrosion resistance properties. Due to its corrosion resistance AISI316L is also known as Marine Grade. All Stainless Steel requires a degree of maintenance to ensure its appearance does not tarnish over time. (see ASSCK – Stainless Steel Cleaning Kit below)
Aluminium Reflector Lamp	Designed and manufactured to filter the majority of generated heat forwards, in the direction of the emitted light.
Ambient Lighting	The level of background light, usually low and supplemented by Task or Accent lighting
Ambient Temperature	Surrounding - the ambient temperature is the temperature of the air that surrounds the fixture in the room. A critical criterion for fixture selection especially in extreme temperature environments. Ansell interior luminaires are rated for use in ambient temperatures up to 25c unless otherwise stated.
ASSCK	Stainless Steel Cleaning Kit To ensure Inox/AISI316L Stainless Steel products from the Collezione Italiana range maintain their high quality finish and appearance, we recommend regular (every 3-4 months) cleaning by using the ASSCK kit.
Asymmetric Distribution	Non-symmetric distribution of light. In many cases, the luminous intensity (light output) may be more pronounced in one direction. Commonly found on floodlights to allow them to be aimed downwards, keeping unwanted upward light spillage to a minimum.
Average Rated Life	A value given to the light source, typically lamp manufacturers' quote a figure in hours at which 50% of lamps are surviving.
Azimuth	The orientation angle in the horizontal plane, commonly referred to in floodlighting schemes.
Bathroom Zones	<p>To comply with BS7671 [2008] also known as the IEE 17th Edition Wiring Regulations, there are rules regarding electrical equipment installed in areas containing a bath or shower. The Zones of space in and around the bath or shower are defined and appropriate Ansell luminaires have the zone for which they can be installed in clearly indicated. In addition to the zones from BS7671, the Lighting Association recommends that luminaires with a minimum IP44 rating, are installed in LA indicated areas.</p> <div data-bbox="655 1536 1461 2051">  <p>The diagram illustrates the zones for electrical equipment in a bathroom. It shows a bathtub (Zone 0) at the bottom right. Above it is Zone 1, a vertical area 2.25m high. Above Zone 1 is Zone 2, a vertical area 3m high. To the right of Zone 1 and 2 is a vertical area labeled 'ZONE LA' with a width of 0.6m. To the left of Zone 2 is another vertical area labeled 'LA' with a width of 0.6m. A luminaire is shown to the left of Zone 2, with its own 'LA' zone indicated by a 0.6m wide area around it.</p> </div> <p>* Note: The area under the bath is classed as an outside zone, if it is behind a panel that can only be accessed with the aid of a tool.</p>

## Technical A-Z

<b>Ballast</b>	A device used to operate fluorescent and HID lamps. The ballast, while limiting and regulating the lamp current during operation, provides the necessary voltage to the lamp.
<b>Ballast Losses</b>	Power, which is supplied to ballast but is not converted into lamp energy. Ballast loss is dissipated as heat. There are strict guidelines to ensure only efficient ballasts are used, to avoid unnecessary energy consumption.
<b>Ballast Lumen Factor</b>	The ballast lumen factor (BLF) is the ratio of the light output of the lamp when operated under emergency lighting conditions compared to normal mains supply. Typically this figure will be below 0.1 (10%) and per lamp operated on emergency control gear.
<b>BC</b>	Bayonet Cap lampholder/lamp cap.
<b>Beam Angle</b>	Somewhat misleading angle of light spread, to which the intensity has fallen of to 50% of the peak value.
<b>Brightness</b>	What the eye actually sees. Not to be confused with luminance, which is what a lightmeter, reads.
<b>BSI</b>	British Standards Institute. The UK National Standards Body - <a href="http://www.bsigroup.com">www.bsigroup.com</a>  <b>Key Standards applicable include</b> BS 476 part 21 Fire test for building Materials (i-Cage Range) BS 5225 Photometric Data for Luminaires BS 5266 Code of practice for Emergency Lighting BS7671 Requirements for Electrical Installations (Wiring Regulations) BS EN 60570 Track systems for Luminaires BS EN 60598-1 Luminaires - General requirements and tests BS EN 60598-2-2 Luminaires – Specific requirements, Recessed Luminaires BS EN 60598-2-5 Luminaires – Specific requirements, Floodlights BS EN 60598-2-6 Luminaires – Specific requirements, In-built Transformers BS EN 60598-2-22 Luminaires - Specific requirements, Emergency Lighting BS EN 61047 Electronic Transformers
<b>Building Regulations</b>	Legal requirements for the installer to adhere to regarding equipment installed in to a building. Standards exist for Domestic and Non-Domestic premises and there are variations in the different countries of the UK.
<b>Burning Position</b>	All HID lamps have a rated burning position, meaning they will only operate correctly in that orientation. All Ansell luminaires supplied with HID lamps, have a correctly rated lamp for the typical function of the luminaire. For installations where a luminaire may be used unconventionally, lamp suitability should be checked.
<b>Candela (CD)</b>	The SI unit of luminous intensity. The intensity of a light source in a Specific direction.
<b>Capsule Lamp</b>	A small extra low voltage lamp that normally fits into a luminaire with its own reflector.
<b>Capacitor</b>	Component that stores electrical energy. Often used for power factor correction and lamp regulation.
<b>CE</b>	European Community conformity mark. This denotes that the item conforms with the requirements of relevant EU Directives
<b>CELMA</b>	Federation of National Manufactures for Luminaires and Electrotechnical Components for Luminaires. A powerful European body committed to improving standards, particularly 'Green issues' within the lighting industry. <a href="http://www.celma.org">www.celma.org</a>

# Technical A-Z

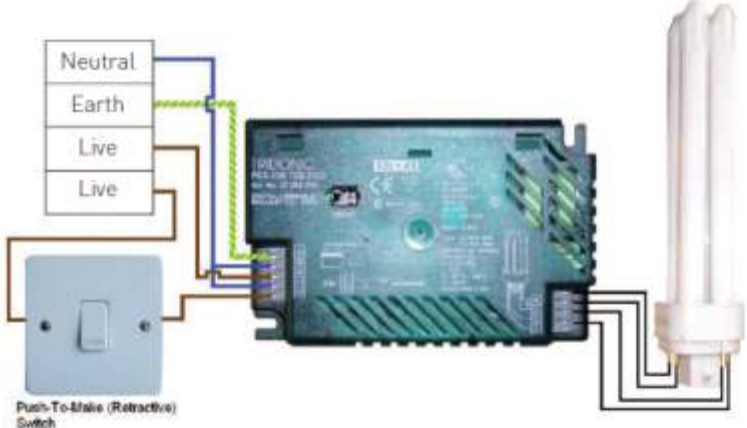
<b>CFL</b>	Compact Fluorescent Lamp.
<b>CIBSE</b>	The Chartered Institute of Building Service Engineers. The Society of Light and Lighting, a division of CIBSE, publishes many Lighting Guides, widely used as references for the choice of luminaire and recommended Illuminance level most suitable for a specific area. <a href="http://www.cibse.org">www.cibse.org</a>
<b>Class I</b> 	Luminaires in this class are electrically insulated and provided with connection with earth.
<b>Class II</b> 	These types of luminaire are designed and constructed so that protection against electric shock does not rely on basic insulation only. This can be achieved by means of reinforced or double insulation. No provision for Earthing is provided.
<b>Class III</b> 	Protection against electric shock relies on the supply of Safety Extra Low Voltage (SELV) and in which voltages higher than those of SELV are not generated (Max.50V ac or below).
<b>CS</b>	Cold Store version. A luminaire, normally the Ansell ADP range can be supplied as an option equipped with control gear to allow operation in Cold Store Areas down to -30c. Emergency versions are not available due to the effect of temperature on the battery cells, hindering the ability to hold a charge.
<b>Colour Appearance</b>	General expression for the impression when looking at a light source eg. Warm or Cool.
<b>Colour Rendering</b>	The appearance of surface colours when illuminated by light from a given source. Good colour rendering implies similarity of appearance to that under an acceptable light source, such as natural daylight.
<b>Colour Rendering Index</b>	Measurement of the degree to which the colours of surfaces illuminated by a given light source conform to the same surfaces under a reference source. CRI (also sometimes shown as Ra) is expressed as a number where 100 indicates that there is no colour shift as under natural light. Typically High Pressure Sodium lamps would be approx Ra=25, Metal Halide Lamps Ra=65, Triphosphor Fluorescent lamps Ra=80+
<b>Colour Temperature (Light sources)</b>	Measured in degrees Kelvin. The Lower the Kelvin figure, the Warmer the lamp Colour Temperature e.g. 2700°K is very warm and 6500°K is very cool/Daylight. Warm White generally refers to >3000 °K, White/Intermediate =3500 °K and Cool White <4000 °K
<b>Compact Fluorescent</b>	Small fluorescent lamps from 5W to 57W that are sufficiently compact to emulate an incandescent lamp. The term also applies to TC-L lamps up to 55W.
<b>Cool Beam Lamp</b>	A lamp designed to filter heat backwards, such as dichroic reflector lamps.
<b>Corona</b>	A band/ring of light around an object also commonly referred to as a Halo effect.
<b>Cos φ</b>	Cos φ is the expression of the power factor. Most high power factor luminaire have a figure >0.85, with Electronic High Frequency >0.90-0.95. A low power factor luminaire can have significantly more current draw in the circuit, resulting in larger capacity cables and switching required.

<p><b>DALI</b></p>	<p>Digital Addressable Lighting Interface. A Dimming system that employs DALI protocol-based technology (i.e.digital control signals) to control electronic ballasts, controllers and sensors belonging to the system. Each system component has its own device-specific address, and this makes it possible to implement individual device control.</p> <p>The DALI system offers 64 individual addresses, 16 group addresses and the ability to program each ballast with up to 16 scenes.</p> 
<p><b>Data Sheets</b></p>	<p>Are available for Ansell products to enable Operation and Maintenance manuals to be completed. These can be obtained via <a href="http://www.anselluk.com">www.anselluk.com</a>, Ansell Sales Offices and Sales Personnel.</p>
<p><b>Dimmers &amp; Dimming</b></p>	<p>The process by which lamps are dimmed from 100% to a minimum level that is not always zero. It is not possible to dim switch start or other standard fluorescent luminaires, which have conventional control gear. Luminaires that are required to be dimmed will need special control gear for this operation and typically additional circuit wiring.</p>
<p><b>Direct Lighting</b></p>	<p>Lighting in which the greater part of the luminous flux from the luminaires reaches the surface (usually the working plane) directly, i.e. without reflection from surrounding surfaces.</p>
<p><b>Directional Lighting</b></p>	<p>Lighting a display object predominately from one direction. Directional lighting can be used to great effect in retail, display windows or even exterior floodlighting, producing strong modelling/shadows to accentuate the object.</p>
<p><b>Disability Glare</b></p>	<p>Glare from, for example, facing a spotlight or bright sunlit window that impairs the ability to see.</p>
<p><b>Discharge Lamps</b></p>	<p>Fluorescent lamps are medium pressure discharge lamps but high-pressure lamps include Metal Halide, Ceramic Metal Halide, and High-pressure Sodium lamps.</p>
<p><b>Discomfort Glare</b></p>	<p>Glare that does not impair the ability to see, but that will cause over time a certain subconscious discomfort.</p>
<p><b>DLOR</b></p>	<p>Downward Light Output Ratio. The ratio of the total light output of a luminaire below the horizontal.</p>
<p><b>Double Insulation</b></p>	<p>Insulation comprising both basic insulation and supplementary insulation. Also referred to as Class II</p>
<p><b>Efficiency</b></p>	<p>Ratio of power supplied to wattage dissipated.</p>
<p><b>Efficacy</b></p>	<p>A metric term used to compare light output to energy consumption. Efficacy is measured in lumens per watt. Efficacy is similar to efficiency, but is expressed in dissimilar units. For example, if a 100-watt source produces 9000 lumens, then the efficacy is 90 lumens per watt.</p>

# Technical A-Z

<b>Electromagnetic Ballast (Magnetic Ballast)</b>	Ballast that uses a copper wire winding around a solid core assembly to transform electrical current to start and operate fluorescent and high intensity discharge (HID) lamps.
<b>Electronic Ballasts (High Frequency)</b>	The efficiency of fluorescent lamps can be improved by increasing the frequency of the mains voltage supplied to them. Electronic ballasts and controls can be used to increase the normal mains frequency of 50/60Hz to 25/30KHz improving lamp efficiency by approximately 10%. Electronic ballasts also consume less power than conventional ballasts and when combined with other efficiency benefits, electronic ballasts can achieve savings of around 20% compared to conventional 50/60Hz systems with the same light output levels.
<b>EMC</b>	Electromagnetic Compatibility. Many Electrical items produce unintentional interference, EMC ensures these levels are within guidelines and should therefore not cause unwanted interference with other equipment.
<b>Emergency Lighting</b>	Lighting provided for use when the main lighting installation fails enabling safe exit from a building.
<b>Emergency Lighting Testing</b>	Testing An Emergency Lighting Installation should undergo regular periodic testing to ensure the luminaires are correctly functioning, also to maintain the condition of the batteries. The testing should be recorded in a log book and follow the schedule of <ul style="list-style-type: none"> <li>• Daily – Visual Check that the charge indicator LED is illuminated</li> <li>• Monthly – A Functional test, that the luminaire operates when mains supply is disconnected</li> <li>• Annually – As Monthly test but for the full rated duration of the luminaire (3hrs)</li> </ul>
<b>Escape Route Lighting</b>	Emergency lighting provided on a defined route to ensure that the means of escape from a point in a building to the final exit.
<b>ELV</b>	Extra low voltage: voltage range from (1V – 50V).
<b>E27 (ES)</b>	Edison Screw (lampholder or lamp cap).
<b>E40 (GES)</b>	Giant Edison Screw (lampholder or lamp cap) common on larger wattage HID lamps.
<b>Filament</b>	The tungsten coil that glows to incandescence when an electric current passes through it.
<b>Fire-Rated</b>	A luminaire, usually a downlight, which has been designed to function also as a fire barrier when installed into a building.
<b>Flicker</b>	A visible oscillation in the luminous flux/light output.
<b>Flood Beam</b>	Reflector lamps and luminaires with in built reflectors having a beam spread of more than 60°
<b>Fluorescent lamps</b>	A lamp, which produces light by a gas discharge that in turn, causes a phosphor coating inside the glass envelope or tube to produce light by fluorescence. Fluorescent lamps produce much more dispersed light than ‘point’ sources such as incandescent, halogen or discharge lamps. This quality, along with their outstanding energy efficiency, make them ideally suited for illuminating many large open areas such as offices and industrial buildings. Standard traditional fluorescent lamps use halophosphate lamp coatings. These lamps are used where low initial cost is the most important factor. However, higher performance lamps using triphosphor coatings, are now increasingly being used as they provide better colour rendering and significant energy savings. All compact fluorescent and T5 lamps are Triphosphor as standard.
<b>Fluorescent Tubes T12, T8, T5 etc</b>	Refers to their diameter of the lamp glass in eighths of an inch, i.e. 12/8 (38mm) 8/8 (26mm) 5/8(16mm) and respectively. Lamps may be linear or compact fluorescent type.
<b>Fluorescent Lamps - Effects of temperature change</b>	Fluorescent lamps are designed to produce their optimum light output at an ambient temperature of 25°C. However, when installed in a luminaire; the temperature of the air surrounding a lamp can change and affect the light output of the lamp. In cold rooms for example the light output may only be 50% of the rated figure.

## Technical A-Z

Flux	(Lumens) falling on to a surface.
Frequency	Rate of alternation in an AC current. Expressed in cycles per second or hertz (Hz).
General Lighting	Lighting designed to illuminate the whole of an area uniformly without provision for special local requirements.
Hazardous Area	An environment in which a risk of fire or explosion exists. Commonly referred to as Zone 1, Zone 2 etc, but not to be confused with the Zones of space in bathroom areas. Ansell do not offer any equipment suitable for Hazardous areas.
Hertz (Hz)	Cycles (frequency) per second.
HFDD	<p>High Frequency Digital Dimming or SWITCH DIM – SwitchDIM operation for ON / OFF and dimming is by means of a push-to-make (retractive) switch, and is the simplest form of dimming fluorescent control gear.</p> <p>A brief operation of the switch (&lt;math&gt;&lt;0.6\text{sec}&lt;/math&gt;), will switch ON or OFF. When the push to make switch is held, the lamps are dimmed. On a further push, the lamp is dimmed in the opposite direction. For full operation, the circuit should be as shown below, using a 4 core installation (switched live, permanent live supply, neutral and earth).</p>
	 <p>The diagram illustrates the wiring for HFDD dimming. It shows a 4-core installation with terminals for Neutral, Earth, Live, and Live. A Push-To-Make (Retractive) Switch is connected to the first Live terminal. The second Live terminal is connected to the dimming control input of the electronic ballast. The ballast is also connected to the Neutral and Earth terminals. The ballast output is connected to a fluorescent lamp.</p>
	<p><i>An additional Unswitched live is required if the luminaire incorporates emergency control gear.</i></p> <p>Ansell luminaire ranges that have this dimmable option are marked HFDD.</p>
High Power Factor	A circuit/control gear with a .9 or higher rating power factor, which is achieved by using a capacitor or Electronic Ballast.
High Risk Task Area	A requirement within Emergency Escape Lighting provided to ensure the safety of people involved in a potentially dangerous process or situation and to enable proper shut down procedures for the safety of the operator and other occupants of the premises.
Hot Restart/Strike	The phenomenon of re-striking the arc in a HID light source after a momentary power loss. Hot restart occurs when the arc tube has cooled a sufficient amount. Some lamps also employ 2 arc tubes to allow hot re-strike.
(hm)	Usually the vertical distances between a luminaire and the working plan, but sometimes the distance between the luminaire and the floor.



<b>i-Cage</b>	Ansell Lighting's innovative range of fire rated downlights.																																											
<b>Ignitor</b>	A device, which provides a control high voltage (3.0- 4.5kV) pulse to ignite a gas discharge lamp. Two basic types are available, impulse Ignitor and superimposed Ignitor.																																											
<b>Illuminance</b>	A photometric term that quantifies the light on a surface or plane. It is expressed in lumens per m (lux). This can be calculated or measure with a lightmeter.																																											
<b>Illumination</b>	The density of luminous flux on a surface this parameter shows how "bright" the surface point appears to the human eye.																																											
<b>Intensity of Light</b>	This is the power of visible radiation in a particular direction measured in Candelas.																																											
<b>Incandescent Lamp</b>	A lamp which produces light by electrically heating a filament.																																											
<b>Indirect Glare</b>	Glare produced from a reflective surface.																																											
<b>Indirect Lighting</b>	A system by which light is reflected from a primary surface, usually ceiling or walls, before reaching the working/task plane. Some luminaires by their design offer indirect lighting.																																											
<b>IP Ratings</b>	The designation to indicate the degree of protection consists of the characteristic letter IP followed by two numerals. The first numeral indicates the degree protection against the ingress of solid of objects, whereas the second numeral refers to the degree of protection against the ingress of water. The following symbols are appropriate:																																											
<b>Classification of Ingress Protection</b>	<table border="1"> <thead> <tr> <th></th> <th>Protection Against Solid Objects</th> <th>Protection Against ingress of Water</th> </tr> </thead> <tbody> <tr> <td>IP20</td> <td>Greater than 12mm</td> <td>Non-protected</td> </tr> <tr> <td>IP21</td> <td>Greater than 12mm</td> <td>Dripping water</td> </tr> <tr> <td>IP22</td> <td>Greater than 12mm</td> <td>Dripping water (up to 15° angle)</td> </tr> <tr> <td>IP23</td> <td>Greater than 12mm</td> <td>Spraying water (up to 60° angle)</td> </tr> <tr> <td>IP40</td> <td>Greater than 1mm</td> <td>Non-protected</td> </tr> <tr> <td>IP43</td> <td>Greater than 1mm</td> <td>Spraying water (up to 60° angle)</td> </tr> <tr> <td>IP44</td> <td>Greater than 1mm</td> <td>Splashing water</td> </tr> <tr> <td>IP54</td> <td>Dust-protected</td> <td>Splashing water</td> </tr> <tr> <td>IP55</td> <td>Dust-protected</td> <td>Water jets</td> </tr> <tr> <td>IP64</td> <td>Dust-tight</td> <td>Splashing water</td> </tr> <tr> <td>IP65</td> <td>Dust-tight</td> <td>Water jets</td> </tr> <tr> <td>IP67</td> <td>Dust-tight</td> <td>Water immersion</td> </tr> <tr> <td>IP68</td> <td>Dust-tight</td> <td>Submersion to declared depth</td> </tr> </tbody> </table>		Protection Against Solid Objects	Protection Against ingress of Water	IP20	Greater than 12mm	Non-protected	IP21	Greater than 12mm	Dripping water	IP22	Greater than 12mm	Dripping water (up to 15° angle)	IP23	Greater than 12mm	Spraying water (up to 60° angle)	IP40	Greater than 1mm	Non-protected	IP43	Greater than 1mm	Spraying water (up to 60° angle)	IP44	Greater than 1mm	Splashing water	IP54	Dust-protected	Splashing water	IP55	Dust-protected	Water jets	IP64	Dust-tight	Splashing water	IP65	Dust-tight	Water jets	IP67	Dust-tight	Water immersion	IP68	Dust-tight	Submersion to declared depth	
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<b>Initial Lumens</b>	Lumen output of a lamp after it has been operating 100 hours.																																											
<b>Input Voltage</b>	Voltage provided to a ballast/luminaire by the power supply.																																											
<b>Inrush Current</b>	A transient condition, generally lasting 5-10 milliseconds that occurs during ballast start-up. Largely dependent upon ballast circuit design. Wire wound transformers can have in rush currents up to 40 times their running current making the correct selection of circuit protection devices vital.																																											

## Technical A-Z

<b>Illuminance</b>	The amount of light.
<b>Illumination Level</b>	Refers to light levels of a space at other than initial or rated conditions. This term considers light loss factors such as lamp lumen depreciation, luminaire dirt depreciation, and room surface dirt depreciation.
<b>Iridescence</b>	Occurs when a reflector, especially those made of anodized aluminium, separates the wavelengths in the light produced by the CFL's rare-earth phosphors. This can result in a 'rainbow' effect seen on the Aluminium surface.
<b>Isolux Diagram</b>	A diagram showing contours of equal illuminance. Can be used to determine the direct illuminance on a plane.
<b>Kelvin</b>	A measurement of temperature. $1^{\circ} F = 256^{\circ} \text{ Kelvin}$ , $1^{\circ} C = 274^{\circ} \text{ Kelvin}$ . Used to measure colour temperature. The SI unit of temperature used to express colour temperature. The temperature in Kelvin (K) is approximately equal to the temperature in Celsius ( $^{\circ}C$ ) plus 273.
<b>Lamp</b>	A device which converts electrical energy into light. Can be Tungsten filament, Fluorescent or HID.
<b>Lamp Darkening</b>	Through life, some darkening of the arc tube, most apparent near the ends of the lamp, will occur due to the deposits of electrode material on the inside wall surface. This is quite normal with lamp ageing and cannot be avoided. It is typically seen on T5 lamps that due to their smaller diameter are not possible to have cathode shields fitted, also lamps that have been excessively operated on Emergency lighting circuits. Other causes are radiated heat reflected back onto the arc tube or poor luminaire design allowing excessive heating of lamp heating.
<b>LED</b>	Light-emitting Diode. Ultra-bright light-emitting diodes based on material combinations such as Aluminium Gallium Indium Phosphide (AlGaInP) and Gallium Arsenide (GaAs) which cover half the visible spectrum, ranging from yellowish-green to red. Since developments in the early 1990's, this technology has been undergoing continuous improvements to increase the efficiency of the LED.
<b>LED Life</b>	Figures published refer to the L50, L70 or L75 classification system where the number relates to the percentage of light output. So a 30,000hr L70 LED would be expected to have 70% of its rated output at 30,000hrs. LED's are subject to very small operating temperature parameters and figures quoted are typically at 25c. Building a LED into a luminaire can result in the operating temperature being outside the design parameters and the life being adversely affected.
<b>LED White</b>	Previously, the only way to produce white LED light was by the additive colour mixing of the three basic colours using so-called MULTILED, i.e., three semiconductor chips (red, green and blue LED) had to be combined. Today, manufacturers can produce white LED light with only a single chip. In luminescence conversion, only a blue LED is used, whose light stimulates a luminescent substance that emits yellow light, the system produces the colour white. Depending on the composition of the luminescent substance, various white tones can be achieved such as warm white, cool white etc
<b>Lighting Association</b>	<p>Ansell Lighting is a fully accredited member of this leading UK trade organization. Ansell have elected to participate in the Lighting Association's Code of Practice Scheme that is designed to substantiate Members' claim of conformity and the BSEN standard.</p> <p>By taking part in this scheme all of our manufacturing facilities are audited on an annual basis to ensure compliance and quality.</p> <p><a href="http://www.lightingassociation.com">www.lightingassociation.com</a></p>
<b>Lighting Design</b>	Ansell offer a lighting design service provided by a team of vastly experienced and industry qualified staff. A simple to complete form is available to ensure designs are prepared with all of the correct criteria taken into consideration.
<b>Light Meter</b>	or exposure meter. A device use for the measurement of light intensity. This should have a cosine corrected sensor, usually a convex shape, to measure light falling on to it from all directions and a digital readout for accuracy.







## Technical A-Z

<b>Light Spillage/Trespass</b>	Unwanted or nuisance light which is spilled beyond the boundry of the illuminated property or area.
<b>LOR</b>	Light Output Ratio. The ratio of the total light output of a luminaire under stated conditions to that of the lamp or lamps under reference conditions. The higher the figure, the more efficient the luminaire is. LOR may consist of any ratio of DLOR and/or ULOR.
<b>LDL</b>	Lighting Design Lumens. Lamps vary in flux output, both between themselves and through their operating lives. This is a nominal value which representative of the average light output of each type or size of lamp throughout life.
<b>Lumen</b>	Standard unit of luminous flux. Describes the quantity of light emitted by a light source or received by a surface.
<b>Luminance</b>	The physical measure of brightness measured by the luminous intensity of the light emitted or reflected in a given direction from a surface element dived by the area of the element in the same direction. The SI unit of luminance is the candela per square metre (Cd/m <sup>2</sup> ) It is very difficult to determine other than with a luminance meter.
<b>Luminous Efficiency</b>	The ratio of the luminous flux emitted by a lamp to the power consumed by the lamp. When the power consumed by the control gear is taken into account this term is sometimes known as lamp circuit luminous efficacy and is expressed in lumens/circuit watts.
<b>Lux</b>	The metric unit of measure for illuminance of a surface. One lux is equal to one lumen per metre-squared.
<b>Maintained Luminaire</b>	A luminaire containing one or more lamps all of which operate from the normal supply or from the emergency supply when required.
<b>Metal Halide Lamp</b>	A high intensity discharge (HID) lamp, which uses a mercury discharge modulated by other additives to give, enhance colour and efficiency.
<b>Mercury Lamp</b>	A type of high intensity discharge (HID) lamp in which most of the light is produced by radiation from mercury vapour. Available in clear and phosphor-coated lamps.
<b>Microwave Sensor (MWS)</b>	Microwave Sensor (MWS) Sophisticated presence detector that uses low power Microwave signals which are then reflected by moving persons and measured using the "Doppler effect" method. As lamps will have life expectancy affected by frequent switching, sensors integral to Ansell luminaires have been configured to maximise lamp life.
<b>M3</b>	Maintained 3hour, Mode and duration (minimum with fully charged batteries) of an Emergency luminaire. To ensure the full duration is achieved, Emergency luminaires must be correctly maintained to condition the batteries.
<b>Night Light</b>	A light source used only to provide low levels of illumination at night, for security or safe movement of persons. This may either be a standalone luminaire or an option incorporated within a luminaire used for general lighting. Low wattage compact fluorescent lamps are ideal for this application.
<b>Noise</b>	Conventional copper wound ballast's at normal supply frequencies can generate a low level 'hum'. HF electronic ballasts emit no perciveable noise.
<b>Non-Maintained Luminaire</b>	The lamp is off when the mains power is available to charge the batteries. Upon supply failure the lamp is energised from the battery pack.
<b>Obtrusive light</b>	Light from any luminaire which causes discomfort or impedes the view of the night sky.
<b>Occupancy Sensor</b>	Control device that turns lights off after the space becomes unoccupied. May be Microwave, ultrasonic, infrared or other type. Care should be taken that switching cycles do not impaed the life of the lamp. It is recommended that a minimum of 20mins ON is used



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Open (anti-panic) Area Lighting	A part of Emergency Escape Lighting provided to avoid panic and provides illumination-allowing people to reach a place where an escape route can be identified.
Operating Efficacy	A term used which qualifies the efficacy of a lighting installation in use. Specifically operating efficacy is the quotient of the installed efficacy of the installation and the load factor. It is expressed in Lumens per watt (Lm/W)
PIR	Passive InfraRed (Detectors) are a type of occupancy sensor. Ansell do not recommend that fluorescent luminaires that HF control gear are used on PIR's and they should be on a minimum 15-20min switching cycle. TC-DD (2D) lamps must NOT be used.
Phosphor	The powder coating in an electric discharge lamp is the phosphor. The most common chemical used to make white light is calcium halophosphate. Other colours can be produced by a variety of other chemicals.
Photocell	A light-sensing device used to control luminaires and dimmers in response to detected light levels.
Pre-heat	A type of ballast/lamp circuit that is designed to heat up a fluorescent lamp before high voltage is applied to start the lamp. This prolongs life of the lamp as is less harmful during starting. Also called Warm-Start
Rated Duration	Manufactures declared duration for a battery operated Emergency Lighting unit, specifying the minimum time for which it will operate after mains failure. This is normally one or three hours (when fully charged) From initial install, 24hours is required to reach full charge and 12-14hrs from subsequent discharges.
REACH	Registration, Evaluation, Authorisation & restriction of Chemicals. An EU Directive covering the use of hazardous chemicals used in the manufacturing process and supply of products.
Relux 	Ansell is a member of Relux, with photometric data for selected luminaires available in electronic file format, allowing for use in computer generated lighting schemes. Relux software can be downloaded free directly from <a href="http://www.relux.biz">www.relux.biz</a>
RoHS 	Restriction of Hazardous Substances (2002/95/EC) is an article 95 directive, meaning it is consistent across all European Union member states. Since July 1st 2006 the use of hazardous substances is restricted in products, to prevent damage to the environment. The prohibited substances are Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls and Polybrominated Diphenyl Ethers.
RM3	Remote Maintained 3hour, Luminaire where the Emergency control gear is separate from the main luminaire housing, typically due to lack of space for the additional emergency components. The emergency control gear must be enclosed and within 1.0m of the main luminaire. Otherwise it is classed as a central battery system and then must be wired in flame resistant cable.
Safety Glass	A necessity on most HID luminaires for UV protection and protection against lamp implosion. Usually made from toughened/tempered or borosilicate glass.
SBC	Small Bayonet Cap (lampholder or lamp cap).
Self-Contained Emergency Luminaire	The most common type of Emergency lighting luminaire, where all of the components are within one luminaire. This can include gear boxes connected directly to individual luminaires but outside the main luminaire housing.
SELV	Separated Extra Low Voltage: An extra-low voltage system which is electrically separated from Earth and from other systems in such away that a single fault cannot give rise to the risk of an electric shock.

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<b>SES</b>	Small Edison Screw (lampholder or lamp cap).
<b>Service Illuminance</b>	is illuminance recommended for the assumed standard conditions of the application, as specified within the CIBSE guide.
<b>Starter</b>	A device used with a ballast to start a fluorescent lamp. Starters should always be replaced at the same time as lamps to ensure efficient operation.
<b>Stroboscopic Effect</b>	The optical elusion of motion in which moving objects appear stationary when illuminated with periodically changing light. This is due to the movement of the item occurring at the same frequency as the supply to the lamp, normally 50Hz or 50 times per second. This can be particularly dangerous in industrial applications but can be cured by using high frequency control gear.
<b>Task lighting</b>	Localised lighting intended for a specific task, examples include bedhead reading lights, desk lamps and inspection bench lighting.
<b>Timed ignitors</b>	Optional safety feature to protect the ignitor from overheating. Timed ignitors will 'shut'down' if they are not successful in striking a lamp after a number of attempts, thus protecting the circuit and luminare from potential damage that constant ignition voltages can cause.
<b>t°C</b>	Rated value of the casing's maximum operating temperature. Typically marked on control gear components.
<b>Thermal Cut-out</b>	A protection from overheating due to abnormal lamp conditions (rectifier effect, short circuit or overload), with automatic restart after cooling. If a lamp is in a cycle of, runs for a duration, turns off, then restarts and runs for the duration again, it is likely that a thermal cut-out is operating.
<b>Transformer</b>	A device by which the voltage of alternating current is changed. Traditional transformers are constructed by copper wire wound around an iron core, Electronic transformers are also commonly found. Typically used for supplying low voltage lamps, most transformers can be dimmed. The success of dimming depends on many factors including the type of dimmer and transformer used. Ansell can not recommend particular dimmers and suggest that the dimmer supplier is consulted for compatibility.
<b>Transient Voltage</b>	A sudden surge of high voltage on a power distribution circuit, usually caused by lightning or the switching on/off of heavy loads, especially motors.
<b>Triphosphor Lamp</b>	The fluorescent coating made up of 3 different phosphors on the inside of lamps that gives enhanced colour rendering. Compact fluorescent and T5 lamps are Tri-Phosphor as standard. T8 lamps will become Tri-phosphor only as less efficient Halophosphate lamps are phased out.
<b>Tungsten Filament</b>	A tungsten filament is coiled then coiled again to make it more efficient and robust. Whilst a wire heated to over 525°C will act as a light source, the melting point of tungsten is 3419°C.
<b>Tw</b>	Maximum permitted winding temperature of the ballast under normal operating conditions.
<b>ULOR</b>	Upward Light Output Ratio The ratio of the total light output of a luminaire above the horizontal.
<b>Utilisation Factor</b>	The proportion of the luminous flux emitted by a light source, which reaches the working plane.
<b>UV Ultra Violet</b>	Invisible radiation that is shorter in wavelength and higher in frequency than visible violet light (literally beyond the violet light). Lamps that emit varying degrees of long wave ultraviolet light, which does cause harm or degradation overtime, may require filters to absorb the UV. A 'failed' lamp that does not emit any visible light is still capable of emitting high levels of UV light but is not noticed as the lack of visible light gives the impression that the lamp is not operating. The high levels of UV can then cause damage to materials, particularly plastics, with dis-colouration and crumbling of the material. Therefore failed lamps should always be replaced immediately. Ultraviolet light source can be used to create special lighting effects with fluorescent materials. UV sources can be incandescent, fluorescent, or preferably HID lamps.

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<p>UV filter</p>	<p>Attachment for absorbing UV radiation from the beam. Glass makes a very effective filter.</p>
<p>Visual Field</p>	<p>The human visual field is much wider than most suppose with Altitude +60° - 60° and Azimuth 120° window.</p>
<p>Voltage</p>	<p>The electric potential which exists between two components in an electrical circuit. Lamps are rated in terms of wattage at a specific voltage. Operating a lamp at another voltage from that which it is rated may cause the lamp to burn at less than full intensity or to burn out very quickly.</p>
<p>Watt (W)</p>	<p>The unit for measuring electrical power. It defines the rate of energy consumption by an electrical device when it is in operation. The energy cost of operating an electrical device is calculated as its wattage times the hours of use. In singlephase circuits, it is related to volts and amps by the formula: Volts x Amps x Power Factor = Watts. (Note: For AC circuits, Power Factor must be included.)</p>
<p>WEEE</p> 	<p>Compliance with the Waste Electrical and Electronic Equipment Directive. This covers the collection, treatment and recycling of equipment at end of life. WEEE producer numbers are          Ansell Electrical Products (Warrington) - WEE/FH0429XT          Ansell Sales and Distribution (Belfast) - WEE/GJ0292UQ</p>
<p>White Light</p>	<p>Although scientists call the light that comes from light bulbs and the Sun as "white" light, it is not really white. White light is a combination of all the colours in a rainbow. This mixture of colours is called the light spectrum.</p>
	<p>products within the Collezione Italiana range have a finish that gives the appearance of wood, whilst having the advantages of a durable, weather resistant material.</p> <p>The process starts with a corrosion resistant aluminium extrusion, then a film transfer and cellulose resin is then applied by a process called Sublimation. This process does not have any harmful or polluting waste, making it very safe to both humans and our environment.</p> <p>The final result is a seamless finish that is perfectly applied to the profile of the Collezione Italiana product. Extensive laboratory testing including in saline mist for over 1500 continuous hours in order to simulate coastal conditions, has been successfully completed. Giving confidence in this highly realistic finish.</p>
<p>Working Plane</p>	<p>The horizontal, vertical, or inclined plane in which the visual task lies. If no information is available, the working plane may be considered to be the horizontal and 0.75m above the floor for offices (desk height), horizontal and 0.85m-1.0m above the floor for industrial (bench) applications.</p>
<p>Zenith</p>	<p>The direction directly above the luminaire (180° angle). Term used in floodlighting designs.</p>