

Revolutionizing the effectiveness of retail food lighting.

Lighting Vocabulary.

Accent Lighting

Directional lighting used to accentuate a particular product or draw attention to a display item. It is typically overhead and located in the ceiling or in an extended boom structure of a case. Typical examples are spot, track, pendant, and recess fixtures.

Brightness

Can refer to any of several technical terms used in lighting and is, therefore, ambiguous. Technically, it is a measure of "surface brightness." It can be measured in candelas per square meter (or per square foot) and often is referred to as Luminance.

Candela (cd)

The measure of luminous intensity of a light source in a given direction. A standard candle emits light with a luminous intensity of roughly one candela.

CE Marking

The CE marking is a mandatory conformity mark for products placed on the market in the European Economic Area. With the CE marking on a product, the manufacturer ensures that the product conforms to the essential requirements of the applicable CE directives.

Color Rendering Index (CRI)

An international system used to rate a fixture's ability to render object colors. The higher the CRI (based upon a 0-100 scale) the richer colors appear. CRI ratings of various fixtures may be compared, but a numerical comparison is only valid if the fixtures are close in color temperature. CRI differences are usually visible to the eye when difference is more than 3-5 points.

Color Temperature (CCT)

A number indicating the degree of "yellowness" or "blueness" of a white light source. Measured in kelvins, CCT represents the temperature or warmth of the light. Yellowish-white ("warm") sources, like

incandescent lamps, have lower color temperatures in the 2700K-3000K range; white and bluish-white ("cool") sources, such as cool white (4100K-5000K) and natural daylight (6000K), have higher color temperatures. The higher the color temperature, the whiter or bluer the light will be.

Cool White

A term used to denote a color temperature of around 5000K. Cool white normally has a slightly bluish tint.

Driver (Power Supply)

An auxiliary piece of equipment required to start and to properly control the flow of current to the fixture. It is often referred to as a Power Supply Unit (PSU).

Efficacy

A measurement of how effective the light source is in converting electrical energy to LUMENS of visible light. Expressed in LUMENS-PER-WATT (LPW), this measure gives more weight to the yellow region of the spectrum and less weight to the blue and red region where the eye is not as sensitive.

Efficiency

Efficiency of a light source is simply the fraction of electrical energy converted to light, i.e., watts of visible light produced for each watt of electrical power with no concern for the wavelength of the energy being radiated. For example, a 100 watt incandescent lamp converts 7% of its electrical energy into light. The efficiency of a fixture is the percentage of the lamp lumens that actually comes out of the fixture. (See Luminous Efficiency)

Energy Policy Act (EPACT)

Comprehensive energy legislation passed by the U. S. Congress in 1992. The lighting section includes lamp labeling and minimum energy efficacy requirements for many commonly used incandescent and fluorescent lamps.

Footcandle (fc)

A unit of illuminance or light falling onto a surface. It stands for the light level on a surface one foot from a standard candle. One footcandle is equal to one lumen per square foot. (See Lux)

Illuminance

The “density” of light (lumens/area) projected on a surface; i.e., the light level on a surface. Illuminance is measured in footcandles or lux.

Kelvin

A unit of measurement for temperature. It is one of the seven base units in the International System of Units (SI) and is assigned the unit symbol K. The kelvin is often used in the measure of the color temperature of light sources.

Kilowatt (kW)

A measure of electrical power equal to 1000 watts.

Kilowatt Hour (kWh)

This is the standard measure of electrical energy and the typical billing unit used by electrical utilities for electricity use. A 100-watt lamp operated for 10 hours consumes one kilowatt-hour of electrical energy.

Lumens

A measure of the luminous flux or quantity of light emitted by a source. For example, a dinner candle provides about 12 lumens. A 60-watt Soft White incandescent lamp provides about 840 lumens.

Lumen Maintenance

A measure of how well a lamp maintains its light output over time. It may be expressed numerically or as a graph of light output versus time.

Luminaire Efficiency

The ratio of total lumens emitted by a fixture in relation to those emitted by the light sources used in that fixture.

Luminaire (Often referred to as a fixture)

A complete lighting unit consisting of a light source and ballast (or ballasts) if needed. The luminaire also includes the parts used to position and distribute the light, protect the light source, and connect the light source to the power supply.

Lux (lx)

A unit of illuminance or light falling onto a surface. One lux is equal to one lumen per square meter. Ten lux approximately equals one footcandle. (See Footcandle)

Neutral White

Refers to a mid-range light color around 4,000K. Since neutral white is neither cool nor warm, it can be used to highlight many different colors in the spectrum.

R9 Value

Represents the 9th of 14 color samples used to determine the CRI of a light source. Enables more accurate rendering of red colors in products and packaging, including meat, fish, vegetables, and fruit.

Visual Merchandising

The activity and profession of developing floor plans and three-dimensional displays in order to maximize sales. Both goods or services are displayed to highlight their features and benefits. The purpose of such visual merchandising is to attract, engage, and motivate the customer towards making a purchase. The purpose of visual merchandising is to:

- Make it easier for the customer to locate the desired category and merchandise.
- Make it easier for the customer to self-select.
- Make it possible for the shopper to identify complementary purchases to round out menus or events.
- Recommend, highlight, and demonstrate particular products at strategic locations.

Warm White

Refers to a color temperature around 3000K, providing a yellowish-white light.

Warm Neutral

Refers to a color temperature approximately 3500K, still warm but with slightly less yellow than warm white.

Watt

A unit of electrical power. Fixtures are rated in watts to show the rate at which they consume energy.

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