

GENERAL INFORMATION



SPECIALTY LIGHTING INC.

LAMP BULB RATINGS & CHARACTERISTICS

DEFINITIONS

CANDLEPOWER:

Luminous intensity, expressed in candelas, of 1/60th of one square centimeter of projected area from a point source operating at the temperature of solidification of platinum. 1 candlepower = 12.57 lumens.

LUMEN:

Unit of luminous flux (intensity) per unit solid angle in a given direction.

FOOT CANDLE:

Unit of illumination on surface one square foot in area or one lumen per square foot.

Reflector (sealed beam) lamps are rated in beam candlepower at a projected beam spread in degrees. Average maximum candlepower (candelas) is the luminous intensity in the brightest portion of the beam (usually center 10 cone). Beam spread ratings are stated in degrees for the total angle, vertical and horizontal, from a point at 10% of maximum intensity on either side of the beam center.

Illumination on a surface at any distance can be measured with a footcandle meter (lightmeter). This illumination is inversely proportional to the square of the distance, thus it diminishes rapidly as distance from light source is increased.

Assuming we have identical candlepower source, increasing distance two feet from surface to be illuminated, footcandles are reduced to only 25% (1/4) and for 10 feet, footcandles are reduced 100% (1/100).

Specialty Lighting uses PAR (parabolic reflector) lamps in many models. Sizes vary and they are identified by the numerals in their part numbers to indicate diameters in 1/8th inch increments. Diameters can be easily calculated by dividing the numeral in the part number by eight.

EXAMPLE: $PAR\ 36 = 36/8 = 4\ 1/2"$ diameter
 $PAR\ 46 = 46/8 = 5\ 3/4"$ diameter
 $PAR\ 56 = 56/8 = 7"$ diameter

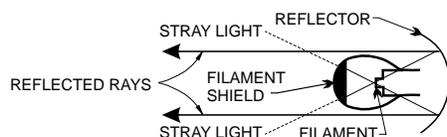
Non-reflector lamps have similar designations:

EXAMPLE: $F15T8 = T8$ means tubular lamp 1" diameter (8/8)
 $Q500T3 = T3$ means tubular lamp 3/8" diameter (3/8).

FILAMENT SHIELDS IN LAMPS

Reflective surfaces in PAR lamps project light from the filament but unwanted and distracted hot spots, images and scatter light are also projected outward. Shields over the filament obstructs filament glare and stray light from distorting the uniformity of the projected beam. These filament shields eliminated the halo around the central beam pattern which cause flashback or reflections through glass, smoke or fog.

Color coating on lens does not prevent glare or stray light from filament, only a filament shield can do this. In fact, adding color coating to the lens actually reduces the effective light output. For maximum candlepower, the lens should be clear and free of any filtering material.



HAZARDOUS LOCATIONS

Hazardous locations as defined by the National Electric Code (NFPA 70-1970) article 500 through 503.

CLASSIFIED LOCATIONS:

CLASS 1:

Flammable gases or vapors are or may be present in the air in sufficient

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quantities to produce explosive or ignitable mixtures.

CLASS 2:

Combustible dust is present to cause the area to become hazardous.

CLASS 3:

Ignitable fibers of filings present but not suspended in air in sufficient quantities to be ignitable mixtures.

CLASSIFIED DIVISIONS:

DIVISION 1

Locations where hazardous material exist continuously, intermittently or periodically under normal conditions, such as repair or maintenance operations where leakage may occur or breakdown or faulty operation of equipment or processes might release flammable material.

EXAMPLES:

Paint spray booths, drying rooms containing flammable solvents, open tanks or vats, gas generating or manufacturing areas, cleaning & dyeing plants, etc. Some areas of textile mills, gins, woodworking plants, etc.

DIVISION 2

Locations where hazardous material are handled, processed or used but are normally confined within closed containers or closed systems and would escape only accidentally and in areas adjacent to Division 1 locations from which occasional transmission of hazardous materials is possible.

EXAMPLE:

Locations which become hazardous only in case of accident or some other unusual operating condition. These locations are usually designated as such by the authority having jurisdiction.

CLASSIFIED ATMOSPHERES BY GROUPS:

GROUP A

Acetylene.

GROUP B

Acrolein, butadiene, ethylene oxide, hydrogen, propylene oxide, gases containing more than 30% hydrogen (by volume).

GROUP C

Acetaldehyde, allyl alcohol, n-butylaldehyde, carbon monoxide, cyclopropane, diethylether, ethylene, hydrogen sulfide, 2-nitro-propane, 1-dimethyl hydrazine, and others (refer to NEC for complete list).

GROUP D

Acetic acid* (glacial), acetone, benzene, butane, 1-butanol, 2-butanol, N-butyl acetate, ethane, ethyl alcohol, gasoline, heptanes, propane, propylene, styrene, toluens, vinyl acetate, vinyl chloride, xylenes, and others (refer to NEC for complete list).

GROUP E Metal dust.

GROUP F Carbon black, charcoal, coke & coal dust with more than 8% total volatile material.

GROUP G Flour, starch or grain dust.

NOTE: Model 2127-803 is approved for the following hazardous locations Class 1, Division 2, Group D/Class 2, Division 1, Group F.

WEIGHTS AND MEASURES

LENGTH AND AREA

1 Inch = .254 Meters

1 Foot = .3048 Meters

1 Meter = 1.093 Yards

1 Meter = 3.281 Feet

1 Meter = 39.37 Inches

1 Cubic Foot = .1728 Cubic Meters

1 Cubic foot = .0283 Cubic Meters

1 Cubic Meter = 35.3144 Cubic Feet

WEIGHT

1 Ounce = 28.35 Grams

1 Gram = .0352 Ounces

1 Pound = .4536 Kilograms

1 Kilogram = 2.2046 Pounds

1 Ton = 907.18 Kilograms

1 Gallon = 3.78531 Liters

NOTE: All dimensions and weights in this catalog are in inches and pounds.