

*Bright Ideas, Bold Innovations*



**ANSI  
Type-**



**VENTURE<sup>®</sup>**  
**LIGHTING**

The Real Story Behind  
Open Fixture Rated Lamps

## Open Rated Lamps

Open fixtures offer significant advantages over enclosed fixtures.

Cover lenses reduce light output, accumulate dirt and make it harder to replace lamps. For safety, open fixtures need open rated (ANSI Type-O) metal halide lamps.

To reduce the risk of liability, lighting specifiers need to be aware of the criteria for a true open rating and what the Type-S or Type-O designations indicate about lamp construction.



## ANSI Lamp Designations

The American National Standards Institute (ANSI) currently classifies metal halide lamps with three possible ratings: Type-O, Type-S, and Type-E.

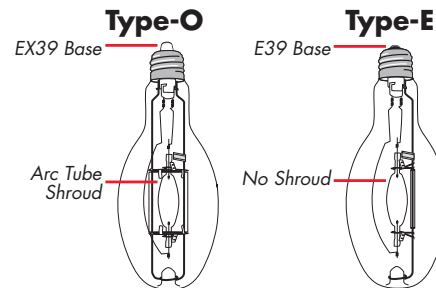
**Type-O** open fixture rated lamps:

1. Shroud around the arc tube, which helps prevent damage to the outer bulb in the event of an arc tube rupture,
2. Open fixture rated base, such as EX39 mogul base or narrow neck bulb with a medium base,
3. Pass the ANSI C78.389 test, where ruptured arc tubes are contained within the outerjacket of the lamp.

All MP, MPSE and MPI lamps produced by Venture Lighting meet the requirements to be rated Type-O, and can be used with confidence.

**Type-S** lamps do not include internal protection against failure. These lamps are not permitted in open fixtures according to the 2005 NEC. Previously they had been permitted when operated and installed in strict adherence to manufacturers and NEMA guidelines<sup>3</sup>.

**Type-E** lamps are rated only for use in enclosed fixtures.



## The Insurance Industry

An insurance industry report published in March 1998, warned against the use of lamps with an "S" designation because they pose a risk of fire and injury<sup>1</sup>. Lamps with the "S" designation do not have containment shrouds.

The insurance industry now recommends that all metal halide lamps manufactured for open fixtures incorporate shrouded arc tubes with the Type-O rating. One major insurer also recommends using Type-O lamps in enclosed fixtures with plastic lenses<sup>2</sup>.



Ruptured Type-S Lamp that melted through a plastic lens



## It's the Law... Almost: NEC Compliance

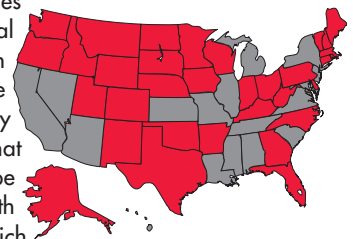
In 2005, the National Fire Protection Agency (NFPA), publisher of the National Electrical Code (NEC), indicated specific guidelines for the manufacture and installation of metal halide fixtures.

NEC section 410.73(F)(5) states that "Luminaires (fixtures) that use a metal halide lamp other than a thick-glass parabolic reflector lamp (PAR) shall be provided with

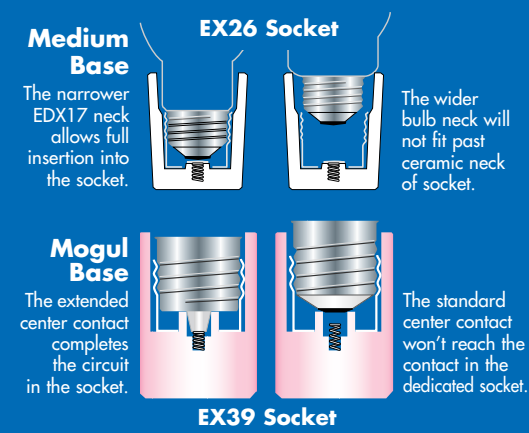
a containment barrier that encloses the lamp, or shall be provided with a physical means that only allows the use of a lamp that is Type-O."

Open fixtures need sockets that only accept Type-O lamps (pink mogul sockets) in order to prevent accidental use of Type-S or Type-E lamps.

Over 34 states have adopted the NEC guidelines concerning metal halide open fixtures<sup>4</sup>. Venture lighting strongly recommends that Type-S lamps be replaced only with Type-O lamps which fit in all existing lampholders.



## Open Fixture Enclosed Fixture



Ruptured arc tube contained in the intact outer jacket of a Venture MP lamp

# Open-Rated Lamps

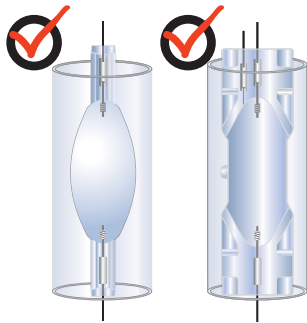
## We Build Lighting Systems With Safety in Mind!

For 20 years, Venture has been leading the way by producing metal halide lamps that contain protective shrouds. In the event of an arc tube rupture, the shroud helps contain hot particles within the lamp. Venture Lighting provides the industry's widest selection of lamps that meet ANSI C78.389-2004 testing requirements for a rating of Type-O. Venture is building lighting systems with safety in mind, your customers' safety and yours.

Un-shrouded arc tube of an ANSI Type-E lamp



Shrouded arc tubes of MP and MPI lamps



## Venture's Open Rated Lamp Benefits

Venture's MP, MPI and MPSE lamps:

- Meet requirements of the 2005 NEC
- Meet ANSI criteria for use in open luminaires
- **No luminaire lens required**, delivering more light - Lumen loss with a lens is up to 16%
- Can be operated continuously, **no shut-off required**
- Contain shrouds which feature Venture's UV Shield® technology
- Operate in open or enclosed luminaires
- **More cost effective** than installing a fixture lens

### Footnotes:

1. IRInformation, IM.5.11.2, Industrial Risk Insurers, March 2, 1998.
2. FMGlobal Property Loss Prevention Data Sheets, 5-21, Rev. May 2001.
3. NEMA white paper: LSD 25-2004
4. NEMA's website: [www.nema.org](http://www.nema.org)

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