

## Technical Questions

**Is the light output of the Susan Lamp equivalent to the Metal Halide lamps it replaces?**

The Susan Lamp replaces 400W, 320W, 250W and 175W metal halides (MH) and delivers the same mean light levels that the MH fixtures were originally designed to deliver. An added benefit of the Susan Lamp is that it maintains a much more consistent light output level over its lifetime than that of a MH, which suffers from rapid lumen degradation.

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**Are the lumen ratings measured at chip level or out of the lens?**

The lumens are measured as the usable light emitted from the lamp. We often find our customers use foot candle measurements to determine proper/adequate light levels in a specific space.

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**How does the Susan Lamp remove the generated heat?**

Heat is removed from the Susan Lamp through a combination of an engineered heat sink and Lunera's proprietary Thermal IQ™ technology. Thermal IQ enables the Susan Lamp to operate reliably up to 150°F ambient by dimming the lamp based upon the thermal characteristics of the environment and the specific design of the fixture in which it has been installed. Thermal IQ dimming profiles are subject to fixture type and environmental conditions. Contact Lunera for more information.

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**How does the Susan Lamp handle the normal strike, required by a metal halide lamp?**

Pulse-start ballasts have an igniter that fires when the ballast sees an open circuit. This igniter then shuts off as soon as the lamp starts conducting voltage. The Susan Lamp conducts voltage immediately upon power being applied so the igniter never strikes the Susan Lamp.

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# Application Questions

Is the Susan Lamp suitable for installation with electronic as well as magnetic ballasts?

The Susan Lamp is only suitable for use with pulse- or probe-start magnetic ballasts, fitting an E39/EX39 mogul base or E26 medium base socket.

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Can I connect the Susan Lamp directly to a line voltage, phase and neutral, socket?

No. The Susan Lamp cannot be directly connected to line voltage - it receives its power through the installed magnetic ballast. Connecting to line voltage can severely damage the Susan Lamp.

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Is the Susan Lamp damp rated?

Yes.

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Can I use the Susan Lamp in a freezer?

Yes.

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Can the Susan Lamp be installed in lensed fixtures?

Yes.

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Are there applications where the Susan Lamp should not be installed?

Although Lunera may expand the application range of the Susan Lamp in the future, it is currently not suitable for installation in the following applications:

- Sockets driven by magnetic MH ballasts outside of the wattage ranges specified for the Susan Lamp
  - Sockets driven by electronic MH ballasts
  - Sockets driven by High-Pressure Sodium ballasts
  - Sockets driven by line voltage
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# Manufacturing and Quality Questions

## Susan Lamp Certifications and Testing?

The Susan Lamp is recognized to the UL test specification by UL. Lunera also maintains appropriate LM80, LM79, ISTMT, and TM21 laboratory testing results.

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## Will the Susan Lamp extend the life of my installed ballast... what happens if the ballast fails?

Because the Susan Lamp requires much less work from the installed ballast than the metal halide it re- placed, the ballast operates at a much cooler temperature. Initial examination indicates that installation of the Susan Lamp may actually 2-3X the life of the installed ballast. If in an unlikely event the installed ballast fails, it would need to be replaced to continue to operate the Susan Lamp.

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## Who manufactures the LEDs in the Susan Lamp?

Nichia makes the LEDs used within the Susan Lamp design.

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## Is The Susan Lamp Energy Star listed and will it qualify for any rebates?

Our product is so unique and new, there currently is not a category for the product at Energy Star or DLC. Lunera is working directly with a number of utilities and has attained custom incentives for the Susan Lamp. Please contact your Lunera Rep directly for further details on incentives available in your marketplace.

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## How long has Lunera been in business?

Lunera Lighting was established in 2008. Lunera's award-winning products have been installed in millions of square feet of commercial real estate. The company designs its' lighting solutions in Silicon Valley.

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