

## Technical Questions

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

The Susan Lamp offers a Pro and Junior line to replace 400W, 250W, and 175W metal halides. The Pro line delivers the same mean light levels that the metal halide fixtures were originally designed to deliver. The Junior line offers less light levels and resultant greater energy savings for spaces, where lower light levels are preferred. If quality of light is important to you, or you regularly manage metal halide lamp replacement in your space, then choose the Susan Lamp Pro options. If light levels are not critical you your space or tend to replace existing metal halide lamps, only when they fail, then the Junior line may work for you.

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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 fixture.

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

Heat is removed with a heat sink, designed by Lunera. The LEDs have been measured In-Situ at an ambient temperature, and steady state conditions at 93°C. The Nichia thermal spec rates the LEDs at 105°C, which is a conservative spec, so the Susan Lamp has plenty of guard band on the thermals.

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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, supporting a E39 or EX39 mogul base.

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

You cannot connect the Susan Lamp directly to line voltage. The Susan Lamp receives its power through the installed magnetic ballast.

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## **Can I use the Susan Lamp in horizontal installations.**

The Susan Lamp is for vertical, lens down, application only. Lunera designs the heat sink to remove heat away from the LEDs efficiently. Changing the orientation of the lamp to either lens-up or horizontal may result in overheating of the Susan Lamp.

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## **Can I use the Susan Lamp to replace a metal halide with a medium to mogul base adapter?**

Technically, the solution will power safely. However, the Susan Lamp + adapter will hang much lower in the fixture. The resulting beam angle on the fixture will thus be much broader, and potentially the Susan Lamp will hang below the bottom of the fixture

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## **Is the Susan Lamp damp rated?**

The Susan Lamp is not rated for damp applications and thus is only appropriate for ambient interior conditions at temperatures not lower than 32F and with non-condensing relative humidities from 15%-85%.

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## **Can I use the Susan Lamp in a freezer?**

The Susan Lamp is not damp rated and therefore should not be installed in a refrigerated or freezing environment. Such applications require products specifically designed to perform in these high humidity applications.

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# Application Questions

## Continued

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### Can the Susan Lamp be installed in lensed fixtures?

Most lensed metal halide fixtures, contain venting either at the top of the fixture or along the lens seat. In this situation, you can safely install the Susan Lamp. However, if the lens is fully sealed and there is no venting at the top of the fixture, thus fully enclosed, you cannot install the Susan Lamp.

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

The Susan Lamp is optimized for vertical installation in existing and new downlight type fixtures, using 400W, 250W, or 175W metal halides. Although Lunera may expand the application opportunities in the future, we currently recommend that you **DO NOT INSTALL** the Susan Lamp in the following applications:

- Metal halide applications where the lamp is in a horizontal orientation.
  - Metal halide applications with wattages other than 400W, 250W, or 175W. It is essential that the Susan Lamp series match the replaced lamp wattage (i.e. Susan Lamp 400 replaces metal halide 400W... you cannot use a Susan Lamp 250 to replace a 400W Metal Halide).
  - Completely enclosed fixtures that do not contain any venting.
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# Manufacturing and Quality Questions

## Susan Lamp Certifications and Testing?

The Susan lamp is certified to the UL test specification by UL. Lunera also maintains appropriate LM80, LM79, and ISTMT 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 replaced, the ballast operates at a much cooler temperature. Initial examination indicates that installation of the Susan Lamp may actually 10X 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 over 10 million square feet of commercial real estate and they have over 500 customers. The company does all of its' own lighting design work in Silicon Valley.