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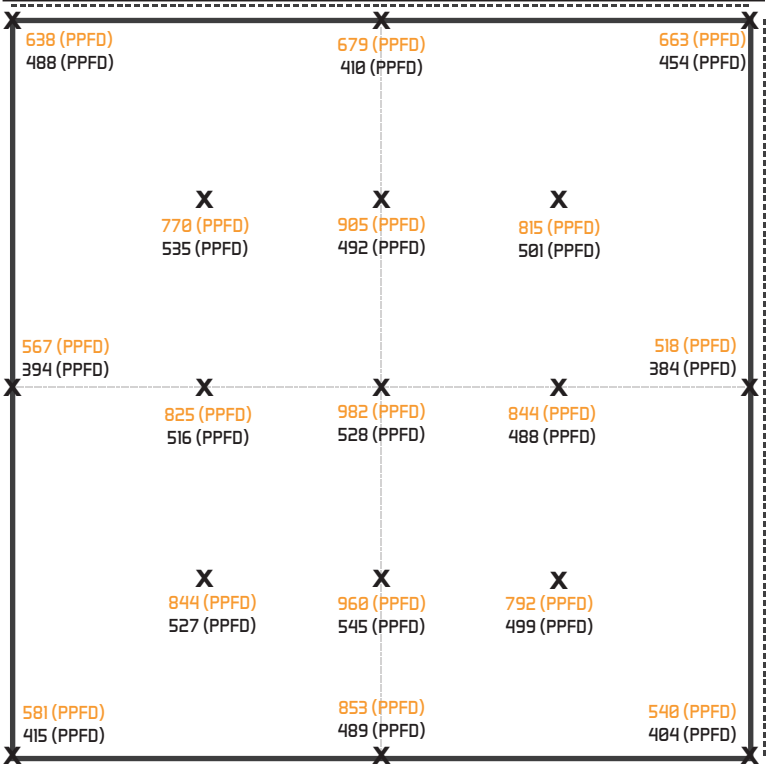
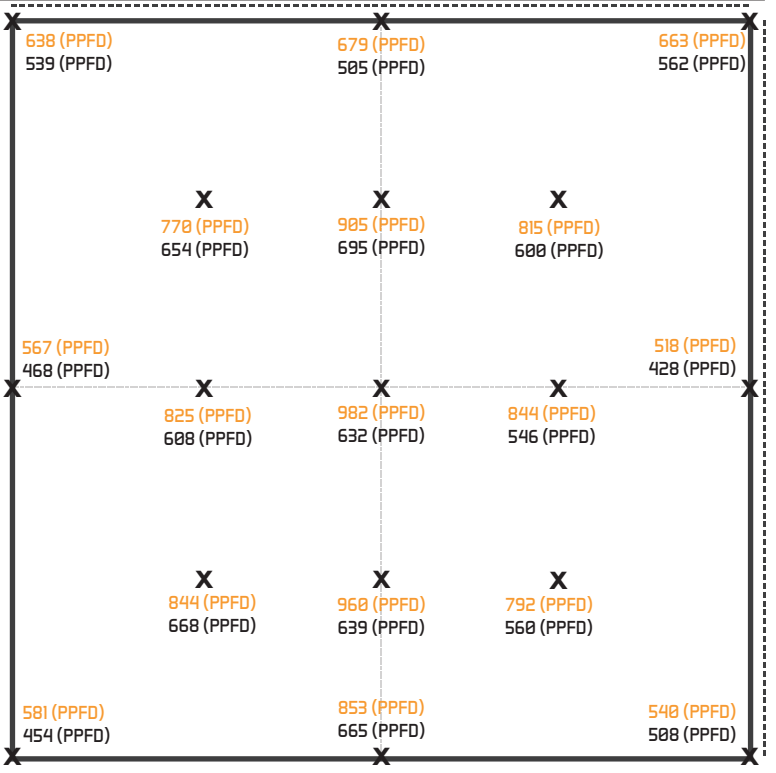
PPFD: LIGHTING FOOTPRINT AT 4FT TESTED WITH EVERFIND PLA-20 LIGHT METER

LUXX HPS PRO 1000W DE VS DLI JOULE SERIES DE 1000



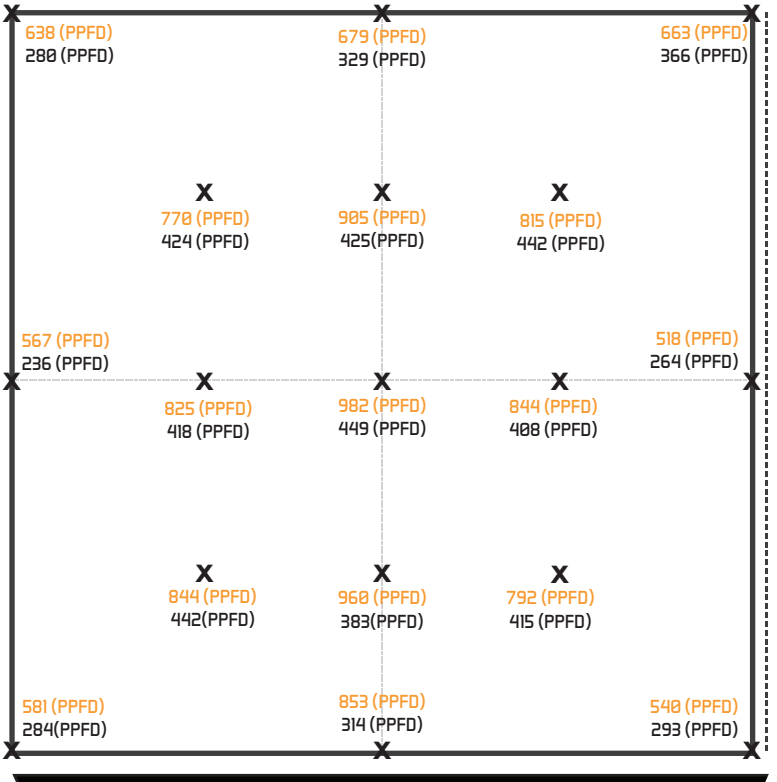
AVERAGE PPFD **751 / 475**

LUXX HPS PRO 1000W DE VS GROWERS CHOICE DE 1000



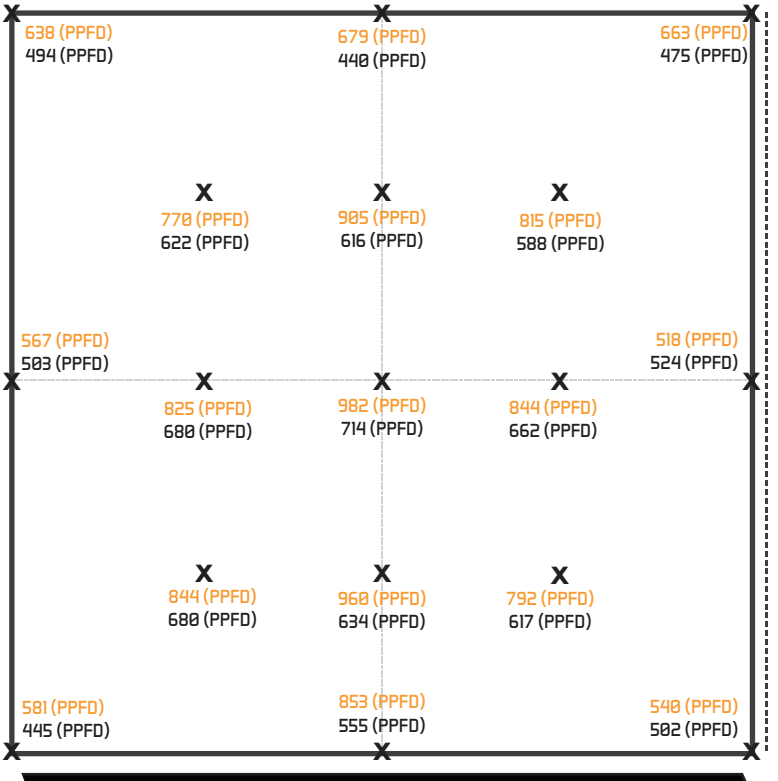
AVERAGE PPFD **751 / 572**

LUXX HPS PRO 1000W DE VS PL LIGHTING NXT DE 1000



AVERAGE PPFD **751 / 363**

LUXX HPS PRO 1000W DE VS SOLIS-TEK AI DE 1000



AVERAGE PPFD **751 / 573**

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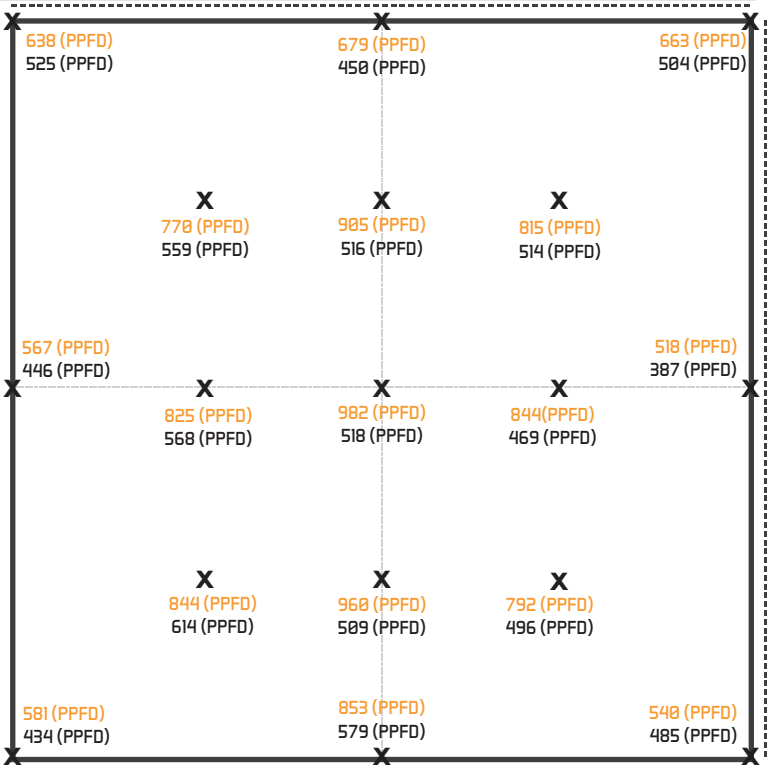
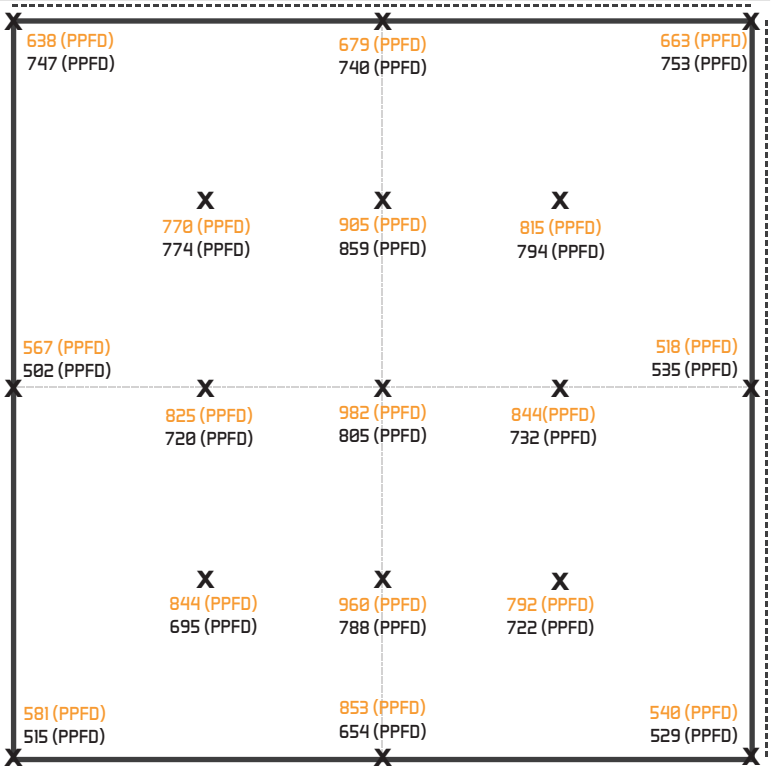
PPFD: LIGHTING FOOTPRINT AT 4FT TESTED WITH EVERFIND PLA-20 LIGHT METER

LUXX HPS PRO 1000W DE VS GAVITA PRO DE 1000



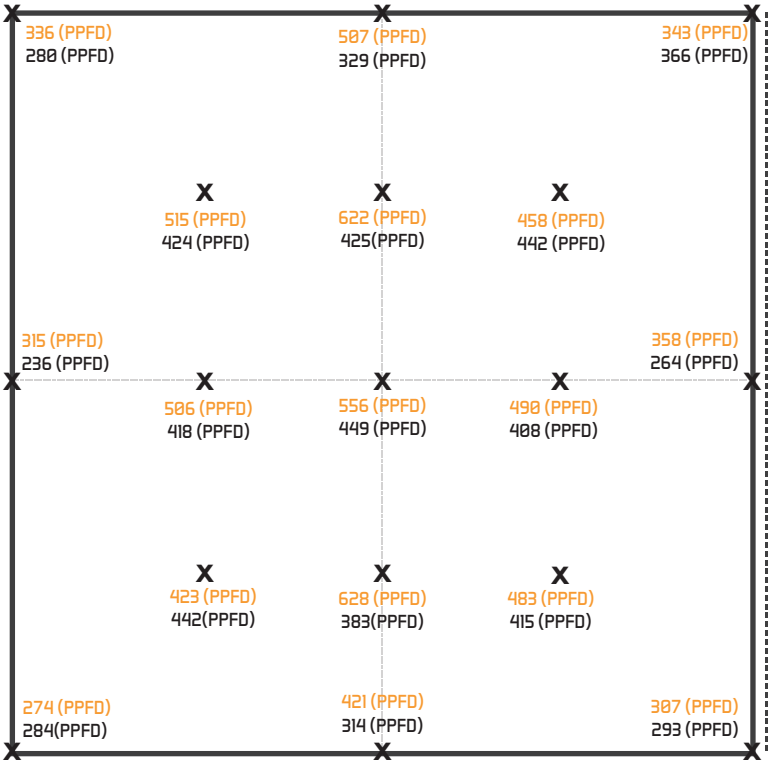
AVERAGE PPFD 751 / 504

LUXX HPS PRO 1000W DE VS PHANTOM COMMERCIAL DE



AVERAGE PPFD 751 / 697

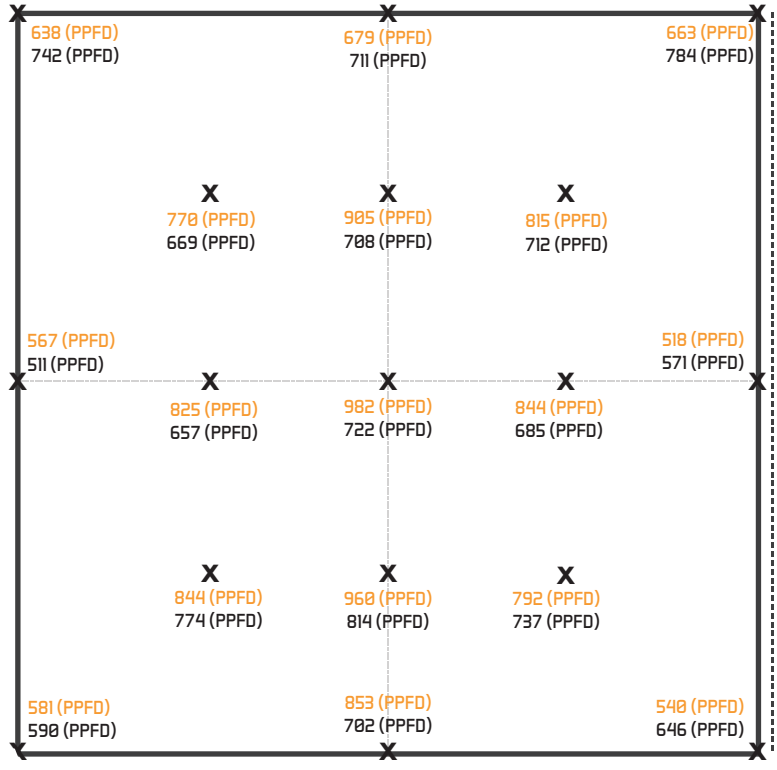
LUXX 630 CMH VS DIMLUX 630 CMH



AVERAGE PPFD BOTH FIXTURES TESTED AT 3FT AND 630W

LUXX 630W CMH: 444
DIMLUX 630W CMH: 363

LUXX HPS PRO 1000W DE VS DIMLUX 1000W DE



AVERAGE PPFD 751 / 690

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LIGHTING TERMS

PHOTOSYNTHETIC PHOTON FLUX DENSITY (PPFD)

Lighting for plants is different from lighting for humans. Light energy for humans is measured in lumens, with light falling onto a surface measured as illuminance with units of lux (lumens per square meter) or footcandles (lumens per square foot). Light energy for plants, on the other hand, is measured as photosynthetic active radiation (PAR), with light falling onto a surface measured as photosynthetic photon flux density (PPFD) with units of µmol/s-m2. The spectrum to which plants are most sensitive varies with the species, but for most plants the spectrum is very similar to the visual spectrum to which humans are sensitive, approximately 400-700 nm. This is the range that stimulates photosynthesis. Any photons within this spectrum that are absorbed by the plant will contribute to photosynthesis. However, not all wavelengths have an equal likelihood of being absorbed, as determined by the various plant pigments that might be present. As with human vision, plants are more likely to respond to (absorb) light in some wavelengths than others.

PHOTOSYNTHETICALLY ACTIVE RADIATION (PAR)

Photosynthetically active radiation, often abbreviated PAR, designates the spectral range (wave band) of solar radiation from 400 to 700 nanometers that photosynthetic organisms are able to use in the process of photosynthesis. This spectral region corresponds more or less with the range of light visible to the human eye. Photons at shorter wavelengths tend to be so energetic that they can be damaging to cells and tissues, but are mostly filtered out by the ozone layer in the stratosphere. Photons at longer wavelengths do not carry enough energy to allow photosynthesis to take place.

µMOL

Micromoles to moles conversion and definition. A micromole is a unit of measure defined as 10-6 (one-millionth) of a mole. The symbol for micromole is commonly umol or µmol.

COLOR RENDERING INDEX (CRI)

CRI is a quantitative measure of the ability of a light source to reveal the colors of various objects in comparison with an ideal or natural light source. Light sources with a high CRI are desirable in color-critical applications such as neonatal care and art restoration. It is defined by the International Commission on Illumination (CIE) as follows:

Color rendering: Effect of an illuminant on the color appearance of objects by conscious or subconscious comparison with their color appearance under a reference illuminant.

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LUXX DE 1000

PHYSICAL	METRIC / IMPERIAL
Ballast Length	180mm 7.09"
Ballast Width	250mm 9.8"
Ballast Height	105mm 4.1"
Hood Length	356mm 14"
Hood Width	356mm 14"
Total Length	685mm 29.9"
Total Weight	7.46kg 16.44lbs

PERFORMANCE

Input Voltage	208-240-277V
Input Current	5.51 / 4.6 / 3.85A
Input Power	1060/1055/1045W
Min Power Factor	0.99
THD	<10%
Crest Factor	<1.7
NEMA L7-15P to C13	10ft

PERFORMANCE REQUIREMENTS

Rated Mains Voltage	208-277V
Mains Frequency	50/60Hz
Operation Frequency	100-120Khz
Voltage Range	187-305V

- Every Luxx unit is assessed by a 4-hour accelerated ageing process to reduce probability of operational failure
- Dielectric voltage withstand test, load and peak testing
- Circuit safety and protection – internal software designed to protect the ballast and lamp from voltage or current faults
- High energy efficiency – Photosynthetic Photon Efficacy (how much PAR per watt) of 2.10 µmol / watt = 2124.22 PAR / 1008 watts (17% more efficient than comparable DE HPS)
- Noise reducing heat sink eliminates moving parts and gives you greater surface area for better heat dissipation
- Strict QC standards – each ballast is put through multiple tests to ensure the integrity of each component (Rated life > 60,000 hours)
- Units link with RJ-14 communication cable

*LUXX Voltages 208—277V; (347V; 480V) – Please note this is Special order!

LUXX PRO DE 1000W
2124.22
µmol/s/watt

LUXX PRO MH 1000W
1800
µmol/s/watt

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LUXX CMH 630

PHYSICAL

	METRIC / IMPERIAL
Ballast Length	180mm 7.09"
Ballast Width	280mm 11"
Ballast Height	105mm 4.1"
Hood Length	356mm 14"
Hood Width	356mm 14"
Total Length	685mm 29.9"
Total Weight	7.46kg 16.44lbs

PERFORMANCE

Input Voltage	120/208/240/277V
Input Current	5.56/3.2/2.8/2.4A
Input Power	686W
Min Power Factor	0.95
THD	<15%
Crest Factor	<1.7
NEMA 6-15P to C13	10ft

PERFORMANCE REQUIREMENTS

Rated Mains Voltage	120-277V
Mains Frequency	50/60Hz
Operation Frequency	140-200Hz

- Twin 315w Low Frequency squarewave ballast
- Optimized for full spectrum CMH lamps and power efficency
- Every Luxx unit is assessed by a 4-hour accelerated ageing process to reduce probability of operational failure
- Dielectric voltage withstand test, load & peak testing
- Circuit safety and protection – internal software designed to protect the ballast and lamp from voltage or current faults)
- Noise reducing heat sink eliminates moving parts, and gives you greater surface area for better heat dissipation
- Strict QC standards – each ballast is put through multiple tests to ensure the integrity of each component (Rated life < 60,000 hours)
- Units link with RJ-14 communication cable