



# **645w LED PRO**

LUX-645-277

USER MANUAL



## BEFORE YOU PROCEED

Make sure to register your products by visiting [www.luxlighting.com/warranty](http://www.luxlighting.com/warranty) or by scanning the QR code. Registering for warranty ensures faster service on any future unseen circumstances and keeps you connected on updates.

Thank you for being a part of the Luxx Lighting family. This manual will guide you through the installation and mounting process of the 645w LED Pro. Please read and understand this manual in its entirety before using the product. Only use this product as specified within the manual.

## PRODUCT DESCRIPTION

The Luxx Lighting 645w LED Pro has been developed by assessing SMD (Surface Mount Device) chips and drivers from leading manufacturers in controlled test applications and cultivation facilities for 3+ years. The 645w LED Pro deploys a lens angle of 120 degrees, from a 6 bar design. Luxx Lighting is the new standard for indoor cultivation.

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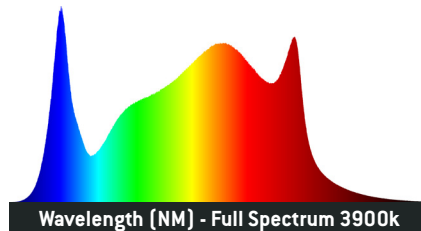
- Eyelet Bolts (2 PC)
- Lance Hanger (2PCS)
- Instruction Manual
- Bubble Level (1 PC)
- 120V Adapter
- Solid Decking Mount (4PCS)
- RJ-14 Cable (2 PC)
- Controller Splitter (1 PC)
- 240V NEMA 6-15P (10 ft) Power Cord Included.

## SPECIFICATIONS

Technical Specs	
Input Power	645W
Min Power Factor	>0.95%
Rated Mains Voltage	120-277V
Voltage Range	90-305V
Mains Frequency	50/60Hz
Operation Frequency	50/60Hz
THD	<10%
Thermal Management	Passive
Power Cord	240V NEMA 6-15P (10 ft) Power Cord + 120V Adapter Included.
Dimming	40% - 50% - 60% - 80% - 100% - EXT/OFF

Input Voltage	Input Current
120V	5.38A
208V	3.1A
240V	2.69A
277V	2.33A

Size & Weight	
Total Length	1244mm 49"
Total Width	1100mm 43.30"
Total Height	65mm 2.55"
Total Weight	14kg 31lbs



## INSTALLATION

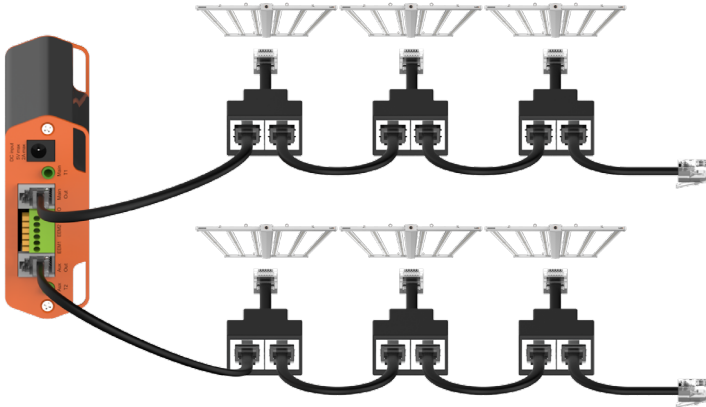
**WARNING! READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE USING OR WORKING WITH THE PRODUCT. BE SURE TO MOUNT THE FIXTURE TO SOMETHING THAT CAN HOLD THE WEIGHT OF THE FIXTURE.**

In order to mount the fixture properly, start by identifying a suitable support structure for the fixture to mount on. Common support structures include pallet racks, trusses, structural channels, Unistrut, and rolling tables. For optimal results, we recommend that two people mount this fixture together. Be sure to mount the fixture to something that can hold the weight of the fixture.

- The user is responsible for correct and safe installation.
- Separate your power and low voltage wires when daisy chaining your fixtures.
- Ensure that your low voltage communication cables are a minimum distance of 6" from any live power supply.
- Avoid coiled cords and keep main leads separated. This prevents electromagnetic interference.
- Please have an experienced, certified service personnel mount and install this device, in accordance with the applicable local laws and regulations.
- Ensure the existing electrical system can support the voltage and current requirements of the fixture.
- Do not open or disassemble the fixture. It contains no serviceable parts inside. Opening the fixture is dangerous and will void the warranty.
- Modification to the cords is dangerous and voids the warranty. Do not expose the fixture to the following conditions: condensing humidity, heavy mist, fog or direct spray, extreme temperatures outside of its operating range, direct sunlight while in use and dust.
- Always disconnect the fixture before performing maintenance.
- Give the fixture a cool-down period of about 30 minutes before touching the fixture.
- Do not use this fixture near anything flammable or reactive. The fixture can heat up to 185 ° F.
- Ensure when connecting the daisy chain that you're following the diagram below:

## CONNECTING UP TO 80 LED FIXTURES

A group of up to 40 Luxx Lighting 645w LED Pro fixtures can be connected to both the main RJ9 port and the auxiliary RJ9 port of our NX-1 controller.



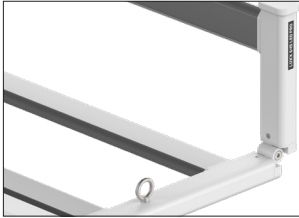
- Turn the dimming knob on all of the fixtures to "EXT" (external control).
- Plug the RJ9 end of one of the provided controller cables into the RJ9 main port of the controller.
- If a two room setup is used or if more than 40 LED fixtures have to be connected, plug a second controller cable in the RJ9 aux port.
- Plug the RJ14 end of the controller cable(s) into the input of a RJ14 splitter. Use an interconnect cable to connect one output of the RJ14 splitter to the RJ14 port of the LED fixture.
- Use an interconnect cable to connect one output of the RJ14 splitter to the input of the following RJ14 splitter.
- Repeat this process to connect up to 40 LED fixtures per group.

## UNFOLDING THE 645W LED PRO

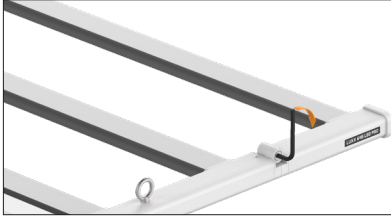
**WARNING! ALWAYS PLACE THE 645W LED PRO ON A CLEAN, SOFT SURFACE TO AVOID DAMAGING THE LED**



1. Loosen the bolts on all four of the hinges.  
Make sure not to loosen the bolts all the way.



2. Lift up the folding section and rotate it 180 degrees.



3. Hand tighten the bolts to lock the hinge in place.  
Don't over tighten the bolts.



## UNISTRUT MOUNTING PART LIST

Parts list for mounting the fixture to Unistrut:

— •10/32" or M5-0.8 hex nut

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— •10/32" or M5 fender washer

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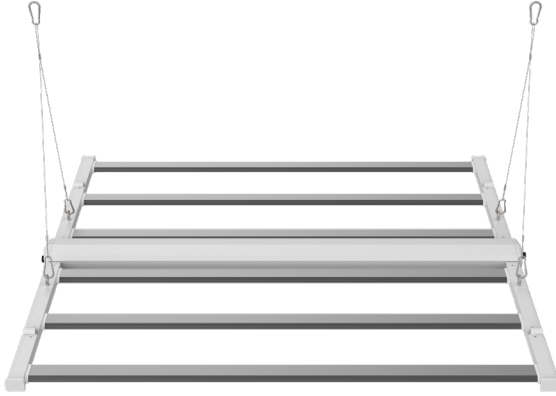
— •10/32" or M5-0.8 x 3" long all thread rod  
— •10/32" or M5-0.8 hex nut

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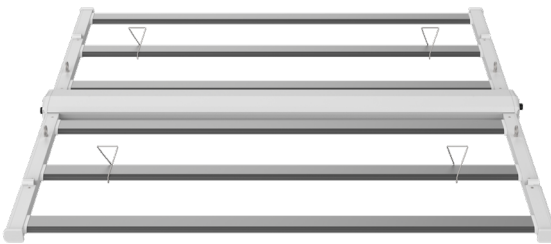
## MOUNTING WITH LANCE HANGERS

- Allow an additional 25" from the top of fixture for the length of hanger.
- Locate the 4 eye bolts on the LED fixture and slide the lance hanger clips onto two opposing eye bolts.
- Be sure to hang from the center of the lance hanger.



## SOLID DECKING MOUNTING

- Using the solid decking mounts, loop each mount across the crossbar above the LED light bar second from the end of either side of the fixture. Use two decking mounts on either end.
- Once all four decking mounts are in place, lift the LED fixture up and mount it on the decking mounts. You can do this by carefully prying apart the hooks until there is enough room to slide the fixture between. Release the decking mounts and they will hook around the fixture.
- Adjust the LED fixture so that each decking mount makes as much surface contact with the fixture as possible.
- Now that the fixture is secured to the decking mounts, you can adjust the position of the lights by sliding the decking mounts across the crossbars and settle it in the appropriate location for your growing operation.



## GROWING WITH LED'S

BY POETRY OF PLANTS (IG @poetryofplants)

When cultivating under LED lighting, a cultivator might be tempted to execute a similar methodology to HPS cultivation. This strategy can lead to frustrating results due to the environmental differences, higher usable lighting levels and subsequent higher photosynthetic rates that stimulate growth with less room for error. The focal point of heat created by a bulb also helps burn off latent load (RH) which doesn't occur with a properly built LED fixture, which diffuses heat into the ambient environment created a more evenness to environment but also can cause higher relative humidity. Also, with LEDs more input energy goes into created light than heat (which is the case with HPS).

This increase in light will stimulate higher photosynthetic rates, leading to higher transpiration rates and a higher demand of feed solution, all of which add more water into the room. When specifying dehumidifiers it's important to match the dehumidification potential with the volume of water added. With LEDs, it is safe to assume that the peak water demand per day will be 1 gallon per sq ft of canopy. Remember this is PEAK water demand, daily water demands will in reality be less and dependent on pot size, cultivar type, and plant age. For example, a 2-week-old plant will require less water than a 6 week-old plant.

## PPFD ENVIRONMENT

WEEK	1 FLOWER	2 FLOWER	3 FLOWER	4 FLOWER	5 FLOWER	6 FLOWER	7 FLOWER	8 FLOWER	9 FLOWER
PPFD	450	550	650	750	750-850	850-950	850-950	850-950	850-950
RH	60-70%	65-70%	60-65%	60-65%	60-65%	60-65%	60-65%	50-55%	50-55%
SLT	72f-75f	72f-75f	72f-75f	75f-78f	75f-78f	78f-82f	78f-82f	68f-72f	65f-68f

Because of the higher photosynthetic and growth rates, plants that receive a higher PPFD will require more food. It is recommended when first cultivating under LEDs, for the cultivator to match PPFD levels used under HPS and make gradual increases of both light and fertilizer PPM during subsequent runs. It is also recommended that the cultivator uses a quality PAR meter that measures PPFD (umol) to understand how much light they are giving the plant.

## APPROPRIATE BASELINE LIGHTING LEVELS

PHASE	MOTHERS	CLONE	PHASE 1 VEG	PHASE 2 VEG
UMOL	300-600	75-125	125-200	200-300

WEEK	1 FLOWER	2 FLOWER	3 FLOWER	4 FLOWER	5 FLOWER	6 FLOWER	7 FLOWER	8 FLOWER	9 FLOWER
UMOL	200-300	300-500	500-600	600-700	700-750	750-850	850+	850+	850+

## HOW TO ASSESS APPROPRIATE PHOTOSYNTHETIC RATES

Use a laser thermometer to measure leaf surface temperature. Under LEDs the leaf surface temperature should be at or around ambient canopy temps [2-3 degrees differential]. Transpiration generally cools the leaf surface, so if your leaf surface temp is climbing 2-3 degrees higher than ambient canopy then the light energy is not being turned into phytochemicals (which is desired) and instead is being reflected back as heat (undesired and used to cool down the plant). If the plant is heating up above the ambient temps then you need to dial down the light intensity until the stress is resolved. If this occurs for multiple days, then you should also dial down the fertilizer concentration, feeding the plant more water to help cool without leaving a buildup of salts in the media (which will choke the roots, aka osmotic root pressure). You should also perform daily pour through run off tests to make sure the media isn't becoming acidic and the EC levels are close to solution EC level].

## **ENVIRONMENT**

- This LED fixture has an IP66 rating and is designed to be used in a high-humidity environment.
- Optimal ambient air temperature for this LED fixture is between 15°C-60° F / 26°C-80° F. This LED fixture is NOT intended to be used outdoors and should not be directly exposed to water.

## **MAINTENANCE**

- Clean with warm water and cloth.
- Do not clean the LED fixture with detergents, abrasives or other aggressive substances.
- Please regularly check the LED fixture for dust or dirt buildup. Clean if necessary. Contamination may cause overheating and decreased performance.

## **STORAGE AND DISPOSAL**

- This fixture is to be stored at an ambient temperature of to 15°C-60° F / 26°C-80° F in a dry and clean environment.
- This product must not be disposed of as standard waste. It is to be collected or brought to a recycling center for proper disposal and environmental treatment.

## **5 YEAR WARRANTY**

- Luxx Lighting warrants the mechanical and electronic components of this LED product and guarantees the materials and workmanship free of defects, if used under normal operating conditions within a period of five (5) years from the purchase date.
- All returns and claims must be presented with the original proof of purchase.
- If you find that there are any defects with this product that relate to either the workmanship or the materials but are not due to improper use or user error, Luxx Lighting shall, at its discretion, either replace or repair the product using the appropriate new or reconditioned parts.
- In the case that Luxx Lighting decides to replace the entire product, the date of the limited warranty shall apply to the replacement from the date of the purchase of the initial product for five (5) years.
- We've performed a lifetime analysis test of our LED and guarantee that at 54,000 hours they will still produce 90% output.
- All RMA's must be registered at [www.luxxlighting.com/rma](http://www.luxxlighting.com/rma)