the science of yield

DRAGON

SCYNCELED

USER MANUAL & INSTALLATION GUIDE

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MANUAL FOR END USER AND INSTALLER

Thank you for purchasing the Dragon fixture. This manual contains all the information needed to quickly familiarize yourself with the product. Please review this information carefully, before installing and/or operating the product.

We recommend you keep this manual on hand for future reference.

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PRODUCT DESCRIPTION

INTENDED USE/S

The Dragon family of fixtures are fixtures intended for overhead illumination of horticultural crops. For other applications in professional horticulture, please contact a representative at SCYNCE.

Any use other than the approved intended use described above is considered an unintended use.

SCYNCE cannot be held responsible for possible consequential damage caused by improper, incorrect or inadvisable use.

SYMBOLS USED

The following symbols are used in this manual to draw attention to specific topics or actions

WARNING

A warning indicates the possibility of injury to the user and/or damage to the product should the user not perform the procedures as described.

ATTENTION

A note alerts the user to potential problems which may occur if a procedure is not carried out as described.

SPECIFICATIONS
DRAGON FAMILY

Product Name	Optic	Manufacture's ID	Size	Wheight	Ingress Protection Rating	Installation Environment
Dragon SL	120°	52652	(1232 x 178 x 131)mm (48.5 x 7 x 5)in	31 lbs	IP66	Suitable for Damp Loactions
Dragon S	120°	52654	(671 x 178 x 131)mm (26.5 x 7 x 5)in	22 lbs	IP66	Suitable for Damp Loactions
Dragon S-Turbo	120°	52656	(671 x 178 x 131)mm (26.5 x 7 x 5)in	22 lbs	IP66	Suitable for Damp Loactions

	Main Voltage +/- 10%(VAC) 50/60 Hz	Power Draw	Power Factor	Color Spectrum Four Channels	Dimmable	Ambient Operating Temp
Dragon SL	120-277	600	>0.95	2700K White 4000K White 6500K White 660nm / 720nm Red	Four Channel independent dimming, 0%-100%, with Scheduling	-40~40°
Dragon S	120-277	300	>0.95			-40~40°
Dragon S-Turbo	120-277	450	>0.95			-40~40°

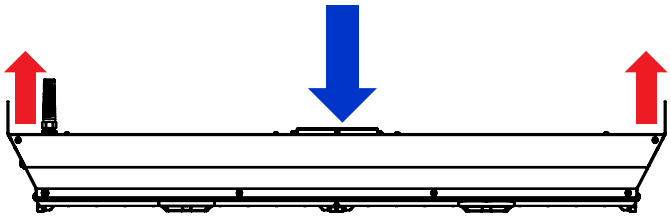
THERMAL MANAGEMENT

All Scynce fixtures have built-in dynamic thermal monitoring. In addition, the Dragon Family utilizes an active cooling system. Should the light begin to overheat, the fan will automatically increase in speed. If the light continues to overheat the onboard processor will automatically reduce output to protect the light while still maintaining a minimal level of output.

To ensure safe operation of the lighting equipment it is necessary to control the temperature of the room by mechanical ventilation or cooling system to below the maximum ambient operating temperature of 40°C (104°F).

WARNING

Never block the cooling ports on the Dragon Fixtures. Doing so will cause the performance of the product to reduce and may cause permanent damage.



Dynamic cooling air flow

LIGHT OUTPUT

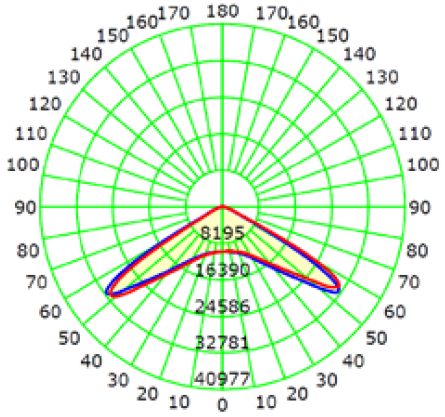
The Dragon Family has two distribution optical angle options. The 70° distribution angle has effective penetration of light into the crop and is typically used in greenhouse applications where the fixtures need to be mount 5+ feet over the canopy. The 120° distribution angle has exceptional uniformity of the light onto and into the crop and is our standard option for indoor and warehouse where 100% artificial light is required.

OPTICAL DISTRIBUTION

The luminosity distribution curve for the 70° and 120° optics are depicted below. The 120° optic offers intensity (radiated energy) that is slightly brighter on the outside of the beam. When hanging fixtures with 120° optic it is important to overlap the beams to achieve an even intensity on the plant canopy. The 70° optic offers a higher intensity that is evenly distributed across the 70° beam. By controlling the beam with optics, light energy is gathered and focused, taking full advantage of the LED directed radiation pattern. If you need assistance with fixture layout to achieve a desired PAR level at the plant contact your sales representative, we can help.

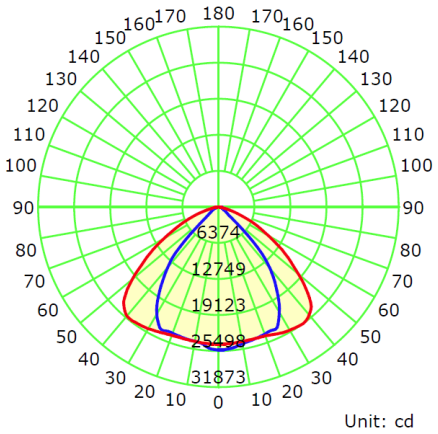
120° OPTIC

Luminous Intensity Distribution Curve



70° OPTICS

Luminous Intensity Distribution Curve



a. 120 degrees is the ideal optic for indoor and vertical applications. The fixtures can be mounted between 15" and 36" over the canopy.
b. 70 degrees - This will be ideal for greenhouses and indoor applications where the fixtures need to be mounted much higher and further away from the canopy.

PRECAUTIONARY MEASURES AND SAFETY INSTRUCTIONS

WARNING

- Always adhere to the local building and electrical codes when installing or using the fixture.
- HIGH VOLTAGE- Switch off the main voltage before commencing installation or maintenance work.
- Do not open or disassemble the fixture, it contains no serviceable parts inside. Opening the fixture can be dangerous and will void the warranty.
- Never look directly into the light source while fixture is turned on. Doing so can cause damage to the eyes.

ATTENTION

- The end user is responsible for ensuring correct installation and use of the product. Incorrect installation can cause damage to the product. The warranty shall become void if the product and/or electronic components are damaged due to incorrect installation.
- The performance of the fixture may be compromised if operated outside of the recommended ambient temperature guidelines.

Risk Group 2

CAUTION. Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eye.

Product tested against IEC62471

Groupe de Risque 2

MISE EN GARDE. Rayonnement optique potentiellement dangereux émis par ce produit. Ne regardez pas la lampe en marche. Peut être nocif pour les yeux.

Produit testé contre IEC62471

INSTALLING THE FIXTURE

ATTENTION

- THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED

INSTALLATION PREP

1. Switch off main voltage
2. Refer to your light plan. Arrange boxed light fixtures in specified mounting locations.
3. Remove the fixture from the packaging and check contents.
4. Gather any additional tools and/or hardware that may be required to mount the fixture.

MOUNTING THE LIGHT FIXTURE

The Dragon fixtures are designed to be hung using the mounting brackets at either end of the fixture's cowling. There are four mounting hole options, each of which will aim the fixture at a different angle. The optional aiming angles are; 0° 15°, 30°, and 45° (see Figure 1 for additional details).

When mounting the Dragon fixtures in an array, a minimum distance of 8 inches side to side and a minimum distance of 1 inch end to end must be maintained. When mounting next to a ceiling or wall, movable partitions, and the like, insure a minimum distance of 1.5 inches is between the fixture and the ceiling and 8 inches between the fixture and the wall and other adjacent objects.

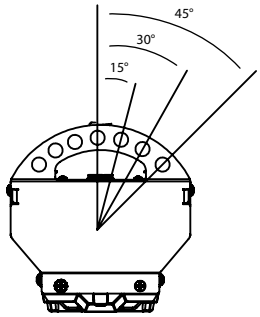


Figure 1: Fixture mounting detail

ELECTRICAL CONNECTION

Dragon fixtures are equipped with a 7ft power cord, terminated with a standard wall pug (NEMA 5-15). Simply plug the light in and you are ready to go. Always ensure that fixtures are compliant with local building codes.

When routing the fixture power cord ensure that;

- The cord is not concealed or extended through a wall, floor, ceiling, or other parts of the building structure.
- The cord is not located above a suspended ceiling or dropped ceiling.
- The cord is not permanently affixed to the building structure.
- The cord is routed so that it is not subject to strain and is protected from physical damage.
- The cord is visible over its entire length.

To ensure safe operation of the lighting equipment it is necessary to control the temperature of the room by mechanical ventilation or cooling system to below the maximum ambient operating temperature of 40°C (104°F).

SINGLE PHASE CORD TERMINATION

BLACK	Line
WHITE	Neutral
GREEN	Ground

DOUBLE PHASE CORD TERMINATION

BLACK	Line
WHITE	Line
GREEN	Ground

CONTROLING THE LIGHT

Dragon fixtures are equipped with four independent channels of LEDs (White 3000K, White 4500K, White 6500K, and Red 660nm or Red 660nm/720nm). Each channel can be independently dimmed from 0% to 100%. Channel dimming can be adjusted on-demand using the mobile app (See Mobile App Instructions for details) or by setting up an embedded schedule in the light (See Scheduling Instructions for details).

MAINTENANCE

WARNING

- High Voltage - Switch off the main voltage before commencing maintenance work.
- Caution - Fixture reaches high temps while in use.
- Do not open or disassemble the product. Opening the product can prove hazardous and will void the warranty.
- Caution - Risk of Fire
- Caution - Risk of shock

ATTENTION

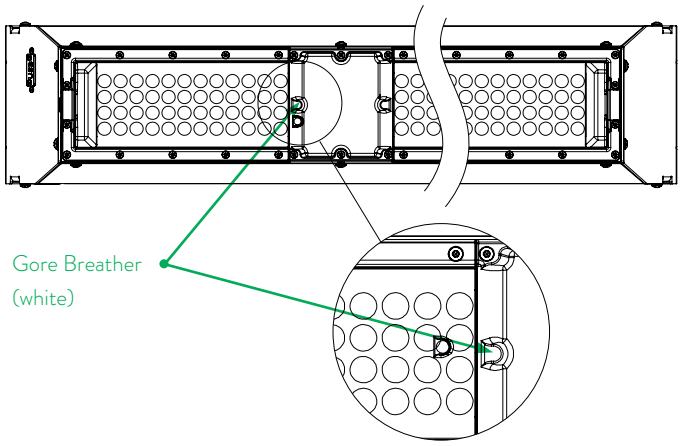
In the event that the product is defective or damaged, contact the dealer from whom you purchased the fixtures, or SCYNCE directly. Never switch on a defective or damaged fixture.

- Check the product at regular intervals for build-up of dust and dirt. Clean the product if necessary. Contamination can lead to overheating and reduced light output performance.
- Clean the fixture with water and a damp cloth or a polycarbonate safe cleaner such as Novus #1 Cleaner. Ensure that the polycarbonate lens is always clean.

CLEANING

- Always allow the fixture to cool to room temperature before cleaning it.
- Clean the fixture with water and a damp cloth or a vinegar and water solution (1:100 ratio) or with a hydrogen dioxide and water solution (<10:100 ratio) such as ZeroTol 2.0 with their recommended dilution of 1:50 or a polycarbonate safe cleaner such as Novus #1 Cleaner. Always ensure that the lens is always clean.
- Never clean the fixture with corrosive cleaning agents or other aggressive liquids. The following cleaners are known to cause damage to polycarbonate and/or PMMA.
    - o Solvents; Acetone, Alcohol...
    - o Window Cleaner; Windex, 409...
    - o Alkaline Cleaners
- Never use abrasive cleaners, abrasive pads, or gritty cloths to clean, the lenses will scratch.
- Never scrape the lenses to remove build-up.

Do Not remove or damage the Gore breathers. Removal or damage of the breather could allow condensation and contaminants to enter the fixture.



TROUBLESHOOTING

WARNING

Do not open or disassemble the product. Opening the product can prove hazardous and will void the warranty.

ATTENTION

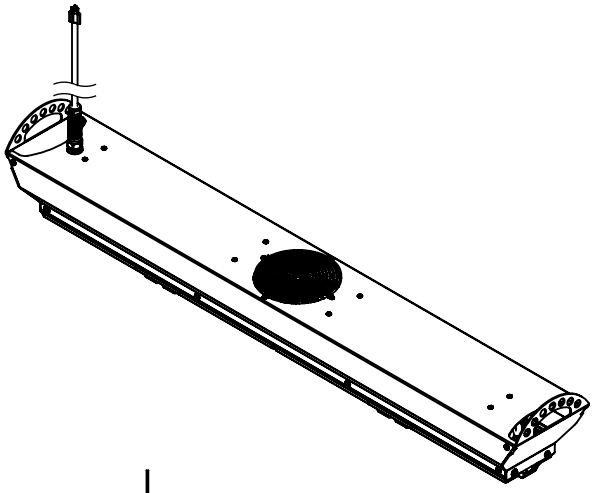
Never switch on a defective or damaged fixture. In the event the product is defective or damaged, contact the dealer where you purchased the fixture or contact SCYNCE directly.

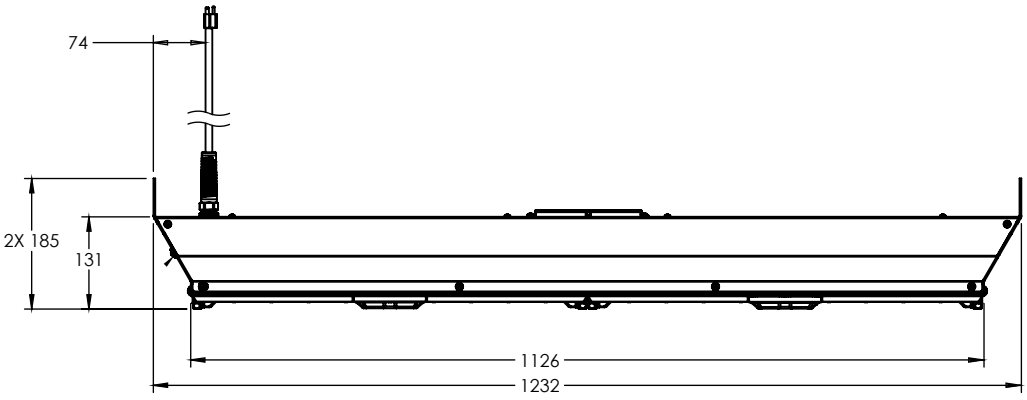
In the event a single fixture is not working correctly, disconnect power from circuit and re-apply power prior to any other trouble shooting.

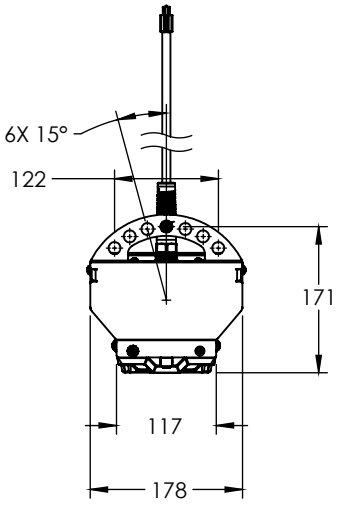
WHAT CAN YOU SEE?	WHAT SHOULD I DO?
The fixture does not emit any light.	Reset the fixture by disconnecting the main voltage for more than 5 seconds and then reconnect. In the event that the fixture switches off again, lower the ambient temperature. Check main voltage line for correct voltage range (120-277vac). Reload default settings. If the issue persists, contact supplier for assistance.
Only half of the fixture lights turn on	Reset the fixture by disconnecting the main voltage from the fixture for more than 5 seconds and then reconnecting. If the issue persists, contact supplier for assistance.
The fixture emits too little light when compared to the other fixture(s).	Reload default settings. Contact the installer and have the wiring checked. If the issue persists, contact supplier for assistance.
Fixture will not respond to Dim Control.	Reload default settings. Contact the installer and have the wiring checked. If the issue persists, contact supplier for assistance.

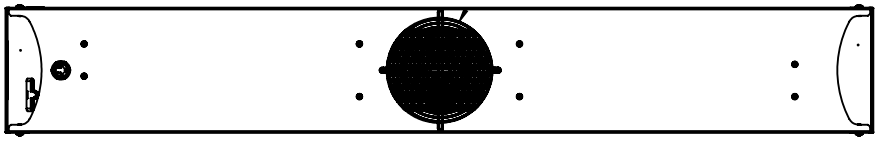
DRAGON SL

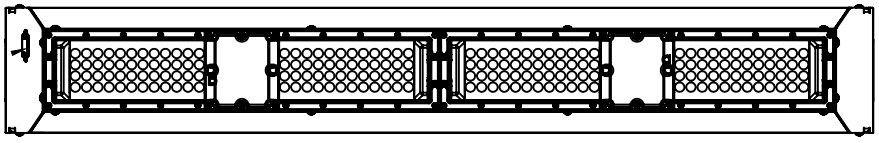
PRODUCT DIMENSIONS

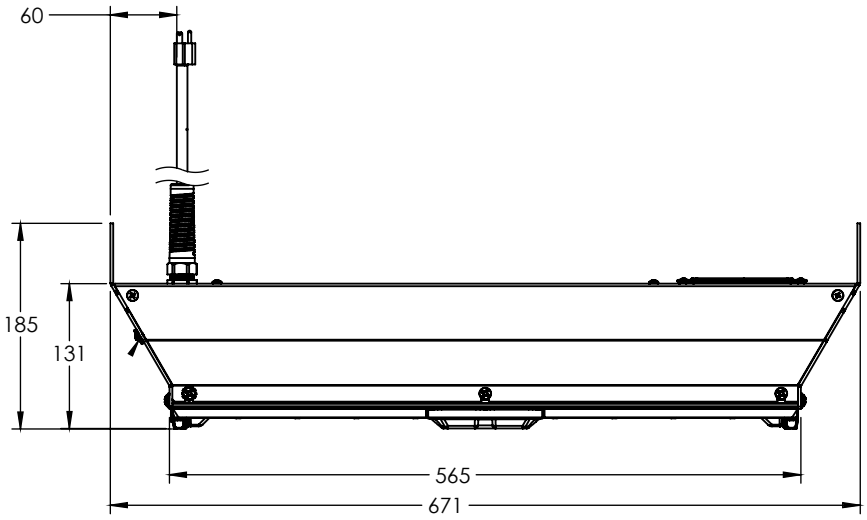
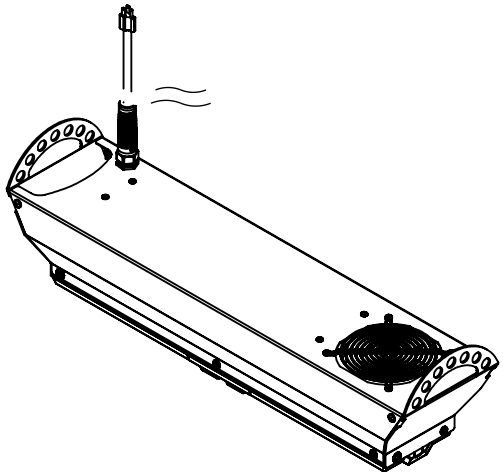
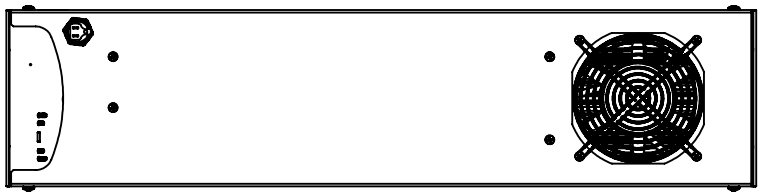
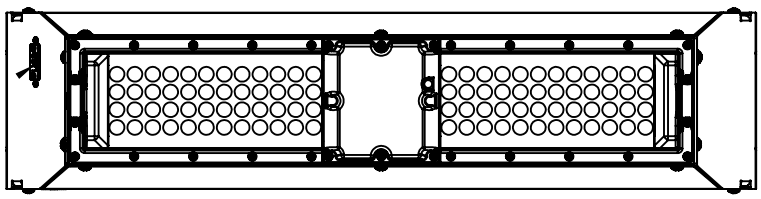
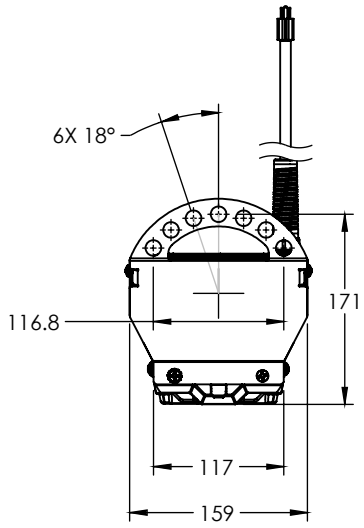










DRAGON S

PRODUCT DIMENSIONS