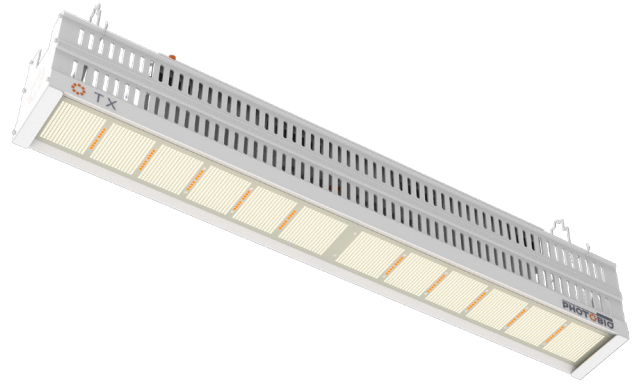


# PTB5680LS4X

PHOTOBIO•TX LED, 680W, 100–277V

## S4 SPECTRUM

PHOTOBIO•TX high efficiency LED top light is designed for greenhouse and indoor applications. The slim design minimizes sun interference while providing greater access to the plant canopy. The ultra-effective commercial design utilizes a closed loop heat pipe cooling system to rapidly wick heat from diodes, providing superior heat dissipation and longevity. The high efficiency S4 spectrum provides ideal conditions for both human and plant health to deliver better working conditions and consistent crop quality. This fixture allows horticulture professionals increased performance and yields while maximizing ROI.



## System Overview

Model	PTB5680LS4X
Fixture Type	Horticultural LED
Spectrum	S4 Spectrum
Typical Photon Flux Output	1768 $\mu\text{mol/s}$
Input Power	680W
Efficacy	2.6 $\mu\text{mol/joule}$
Input Voltage Range	100–277V
Lifetime	Q90: > 50,000hr
Optics	120° Primary Optics
Dimmable	0–10V
Driver	IP67 Driver
Operating Environment	Wet Location
Ingress Protection Rating	IP65
Warranty Period	5 Years

## Ballast Electrical Specifications

Model	Phantom 680 PSU
Fixture Power	680W
Input Voltage Range	100–277V
Max Voltage Range	90–305V
Max Input Power	690W
Power Factor	0.95
Frequency	50/60Hz
THD	<10%
$t_a$	-40
$t_c$	90

## Ballast Input Amperage Reference

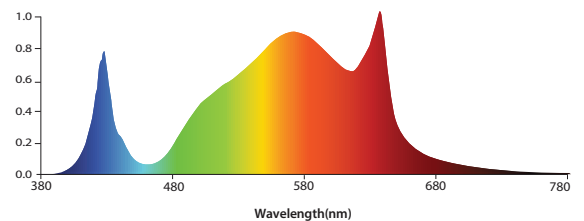
Voltage Input	120V	208V	240V	277V
Typical Amperage	5.67	3.3	2.81	2.45
Max Amperage	5.8	3.4	2.9	2.5

## Operating Conditions

Rated Operating Temperature	77°F/25°C
Minimum Operating Temperature	4°F/-20°C
Maximum Operating Temperature	104°F/40°C
Operating Environment	Wet Location
Ingress Protection Rating	IP65
Material	N/A

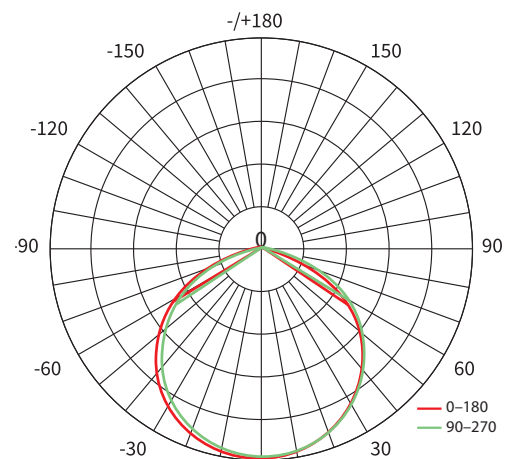
## S4 Spectrum

Normalized Photon Output



**S4 Spectrum:** Provides highly efficient full spectrum with a healthy red-to-blue ratio to drive photosynthesis. Light energy between 500–599nm, previously thought wasted, penetrates deeper into the plant canopy promoting photomorphogenic responses. High color rendering “white” light aids to rapidly identify potential threats to your crop and provides superior working conditions and safety for personnel. Ideal for both flowering and vegetative production.

## Photosynthetic Photon Intensity Distribution

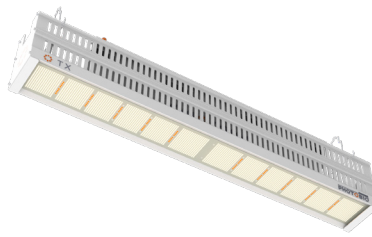


1304 Southpoint Blvd. Suite 200, Petaluma, CA, USA | 800.634.9990 | [PhantomBio.com](http://PhantomBio.com)

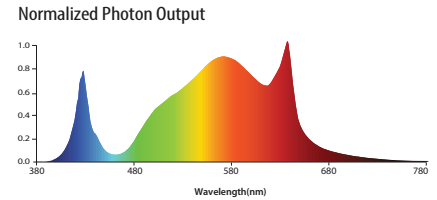
# PTB5680LS4X

PHOTOBIO-TX LED, 680W, 100-277V

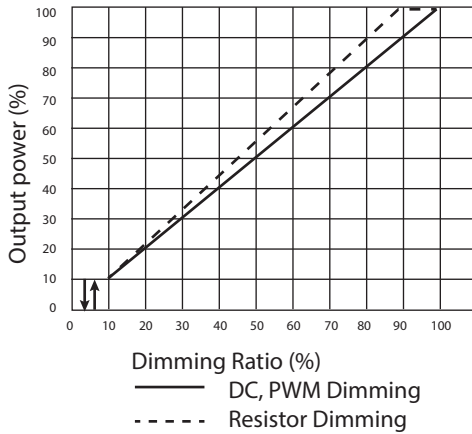
## S4 SPECTRUM



## S4 Spectrum



## Dimming Ratio



## Power Harness Options

Specific cable harnesses based on facility requirements.

- CHE1063000W** 10' F 16AWG WT w/leads, Harness
- CHE1063010W** 10' F 16AWG WT 110-120V Plug, 5-15P, Harness
- CHE1063015W** 10' F 16AWG WT 208-240V Plug, 5-15P, Harness
- CHE1083020W** 10' F 18AWG WT 277V, L7-15P, Harness

## PHOTOBIO AC Power Distribution Tree Cabling Options

Plug and play power cables that allow interconnectivity of multiple fixtures on a single circuit.

- PTBAC40APM** PHOTOBIO AC Female Panel Mount, 40A M25, Pigtail 6" 10AWG
- PTBAC40AJ10** PHOTOBIO AC Power Link Cable, 40A M25 Connector, 10'
- PTBAC40A1T4** PHOTOBIO AC Power T Cable, 40A M25 to EN100, 1-T, Ferrite, 4.5'
- PTBAC40A1T6** PHOTOBIO AC Power T Cable, 40A M25 to EN100, 1-T, Ferrite, 6.0'

## PHOTOBIO Communication Tree Cabling Options

Plug and play communications cables that allow interconnectivity from a centralized controller.

- PTBCC8850W** PHOTO LOC 0-10V Control Cable 8' Trunk + 5' Branch
- PTBCCJ16W** PHOTO LOC 0-10V Control Cable 16' Jumper
- PTBCC8300** PHOTO LOC 0-10V Control Cable, 300' 3P-2P
- PTBC4RJ112P20** PHOTO LOC 0-10V TM Adapter Cable, RJ11-2P 20'
- PTBXRC** PHOTO LOC 0-10V Signal Repeater

## Optical Specifications

Optics	120 degrees
Total Diode Quantity	3310
Diode Brand	Lumiled
Spectrum	S4
Lifetime	> 50,000hr

## Driver Specifications

Microprocessor Control	Yes
Open Circuit Protection	Yes
Short Circuit Protection	Yes
Overtemperature Protection	Yes
Over/Undervoltage Protection	Yes
Over/Undervoltage Indicator	Yes
Output Compensation	Yes
IP Rated 0-10V	Yes
Internal EMI Suppression	Yes
AC Input	Yes

## Mechanical Specification

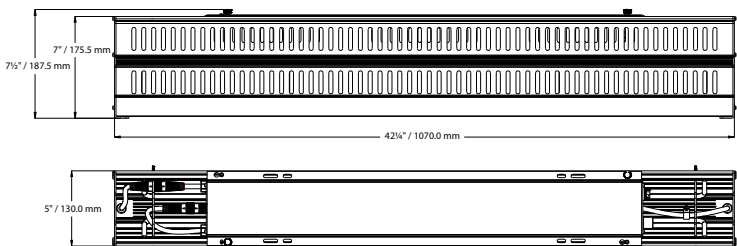
Dimensions (L x W x H)	1070 x 130 x 187.5 mm / 42.25" x 5.0" x 7.5"
Net Weight	13.1 kg / 28.9 Lb
Thermal Management	Passive + Heat pipe
Material	Aluminum, Copper

## Safety Certifications

UL	N/A
ETL	Yes
CE	Yes
FCC Commercial	Yes
FCC Residential	Yes



## Dimensional Drawing



**WARNING – POSSIBLE RISK OF INJURY TO EYES AND SKIN**

Hazardous optical UV, HEV, and IR radiation may be emitted from the light source. Always wear personal protective equipment ensuring complete shielding of skin and eyes. Avoid prolonged exposure and looking directly at light source.