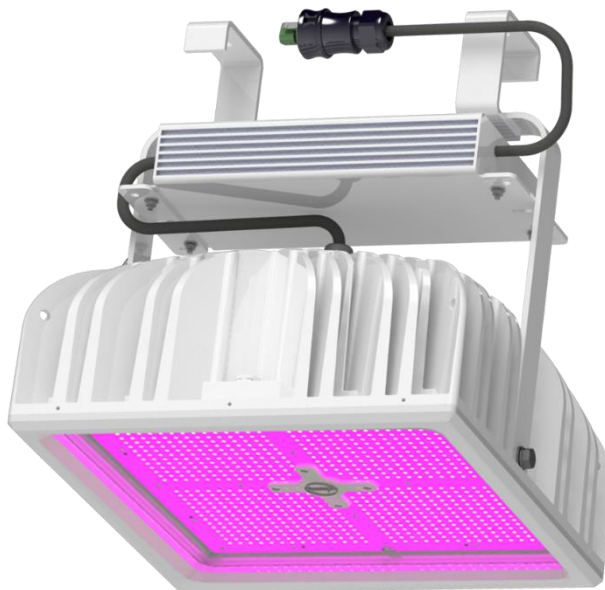




Hyperion 1000 Greenhouse LED Grow Light Product Datasheet



Key Features

- 1000 micromoles/s light output. Equivalent to 600w sodium grow lights
- 40% energy saving versus sodium
- Up to 2.8 $\mu\text{mol}/\text{joule}$ efficiency
- IP66 rated (power wash)
- A range of standard & tailor-made spectrums available
- Install on existing trellis to avoid extra c-profile cost and shading
- 130° beam angle
- 5 year/25,000hr warranty

Key Benefits

- Fewer units per install than competitor LED fixtures
- Less overall shading than competitor fixtures
- Lower installation costs
- Greater flexibility for lighting design and positioning
- Even light distribution between poles 5m apart
- Better ROI than competitors with long warranty on fixture and driver

Product Labelling

CE, UL (Pending), RoHS, IP66

Summary Description

Plessey's Hyperion LED Horticultural Grow light fixture is designed to provide plants with Photosynthetically Active Radiation (PAR). This is achieved by supplementing or replacing natural daylight with an LED generated light spectrum proven to enhance plant growth rates and yields. The Product is suitable for commercial, hydroponic and research installations.

Please contact an Application Engineer to discuss individual requirements including correct spectrum and installation options. The fixture is constructed from die cast aluminium with a corrosion proof white powder coating. The light engine is made up of state of the art LEDs arranged to maximize output and uniformity.

Summary Data

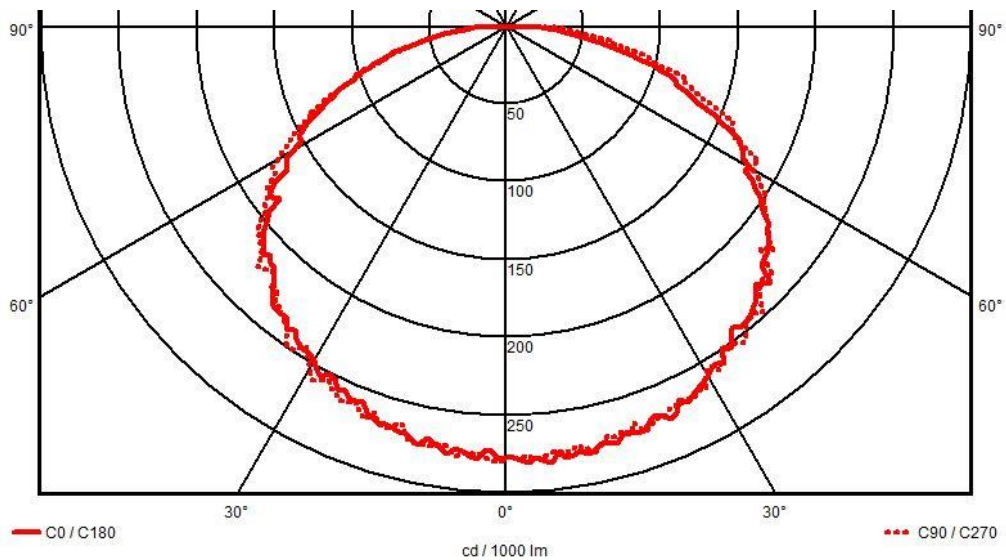
Value	Data
Input Voltage	400 - 440v AC@ 50/60 Hz
Power Consumption	375 - 420W
Power Factor*	>0.9
Inrush Current	40A @ 1100µS
Wavelength Range	450 nm to 730 nm
Working Temperature	-20° to 30°C
Tcase (Max)	75°C
PPF	1,000 µmol/s @ 25°C
Efficacy (spectrum dependent)	Up to 2.8 µmol/joule
Warranty	Up to 5 years/25000 hrs
Fixture Weight	19.7kg

Standard Spectrums

High Red Spectrum 2.4 – 2.8 µmol/joule options			High Red + White Spectrum 2.4 – 2.7 µmol/joule options			General Purpose Spectrum 2.4 µmol/joule		
Colour	Wavelength	%	Colour	Wavelength	%	Colour	Wavelength	%
Far Red	730nm	1.4	Far Red	730nm	1.4	Far Red	730nm	0.2
Red	660nm	95.3	Red	660nm	91.3	Red	660nm	77.9
Blue	460nm	3.3	White	460-730nm	4.7	White	460-730nm	9.7
			Blue	460nm	2.6	Blue	460nm	12.2

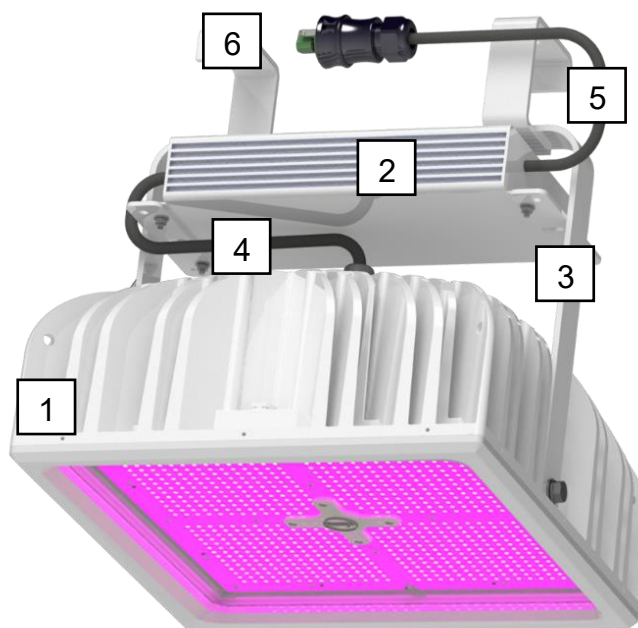
White Spectrum 1.9 µmol/joule		
Colour	Wavelength	%
Red	660nm	22.8
White	460-730nm	77.2

Radiation Plot



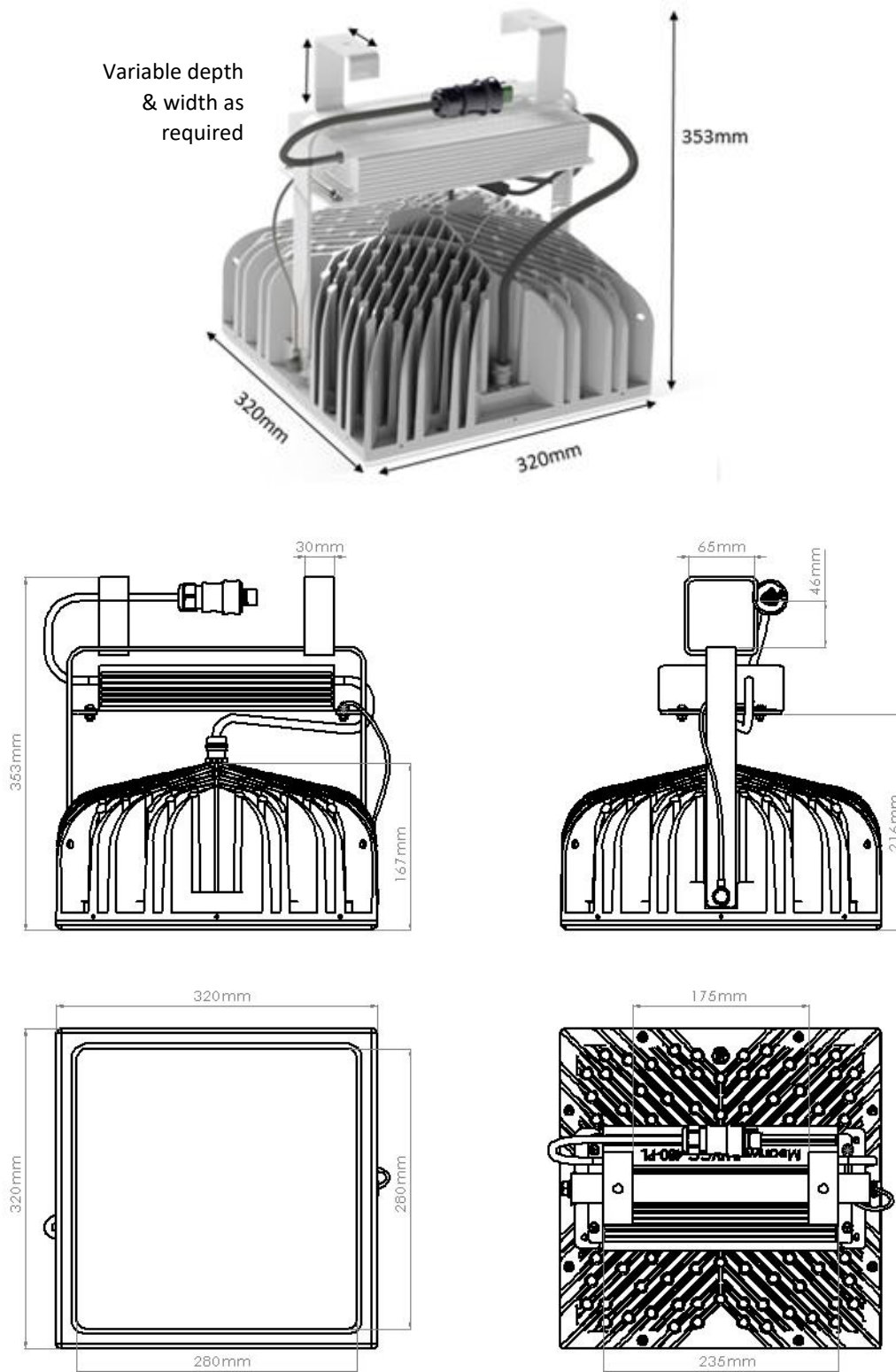
Complete Installation

1. Hyperion fixture/lamp
2. Driver mounted on mounting hook
3. Fixture bracket arm with mounting hook
4. Fixture to driver connection cable
5. Male Wieland connector for power-in cable with female Wieland plug (part number 96.032.4055.7)
6. Bracket hooks for trellis mounting



Dimensions

In this example, the hooks are shown as fitting a trellis 60mm wide by 30mm deep. Mounting hooks can be supplied to fit any trellis or c-profile dimensions.



Reflector

As an option, Hyperion can be fitted with a reflector on any of the 4 sides of the unit.

The reflector can be attached to units at the edges of an installation to reflect the light back into the main lit area, avoiding light spilling outside the glasshouse or into a different compartment/area. This helps maintain light uniformity over the whole lit area.

Fig 1. Reflector technical drawing with dimensions and position of fixing screws (x3)

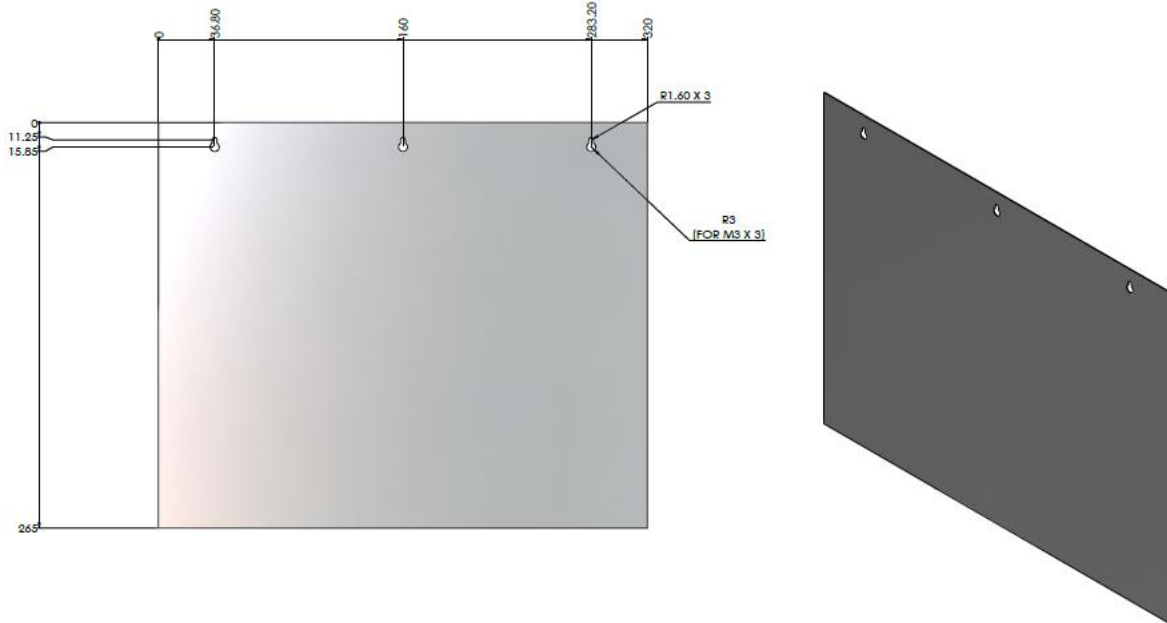
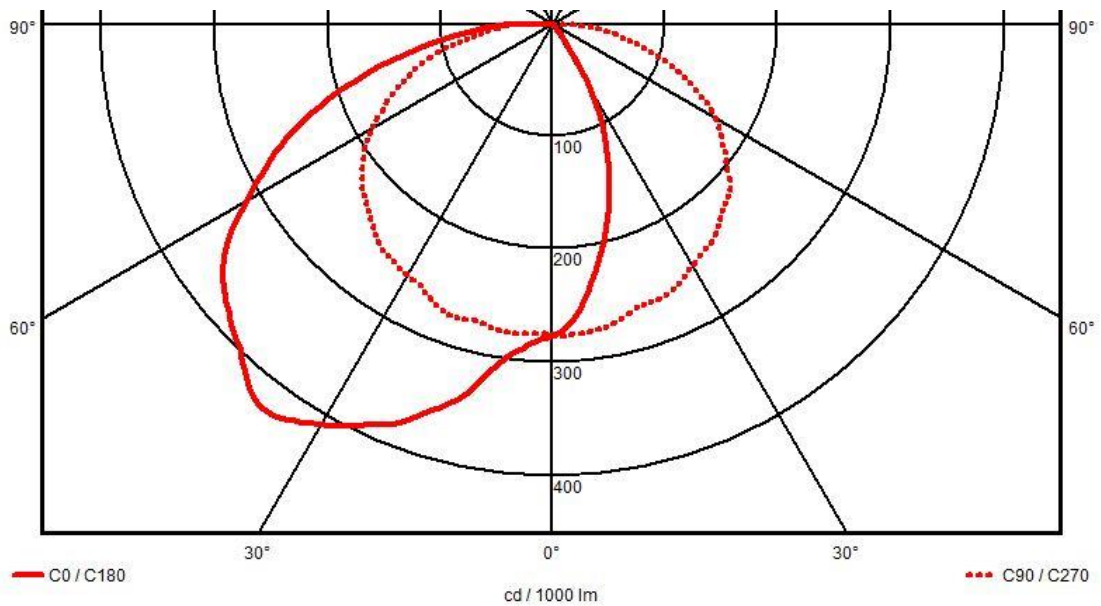


Fig 2. Light distribution curve (LDC) diagram for Hyperion with and without reflector



Order Codes

Order Item	Spectrum	Description	Order Code
Hyperion fixture	High Red	Fixture plus bracket with 415v driver	PHH24S4400A
	High Red + white	Fixture plus bracket with 415v driver	PHH64S4400A
	General	Fixture plus bracket with 415v driver	PHH34S4400A
	White	Fixture plus bracket with 415v driver	PHH54S4400A
	Bespoke	Fixture plus bracket with 415v driver	Contact Plessey
Reflector	All	For light uniformity at installation edge	HYPREFLECTOR

Mechanical Installation

The Hyperion fixture is suitable for installing on C profile, greenhouse trellis and other fixed surfaces. Check with greenhouse installers and engineers that the integrity of the structure can withstand the overall and point load brought to bear by the installation of this fixture.

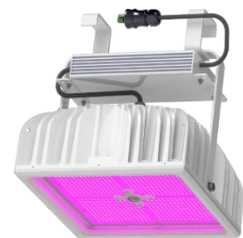
The standard bracket assembly is designed to drop and locate onto 60mm trellis cross sections. If the installation structure is different or has obstacles such as energy/ light screens then customized solutions are available.

Electrical Installation

The Hyperion grow light is supplied with an external driver which is mounted on the hanging bracket supplied with the fixture. The driver requires a two phase input from a 3 phase 415V supply.

The fixture is prewired with a Wieland male connector for attaching to the greenhouse lighting supply wiring. See image opposite.

The greenhouse lighting supply wiring should be terminated with the corresponding connector which is Wieland RST20i3 400v 3 pole female connector (green) to plug into the driver. Wieland part no. 96.031.4055.7. See image opposite.



For new build large installations it is recommended that a pluggable wiring system is pre-installed. Pre-made lengths of power cable with a female connector are available. Wieland part number 96.232.1035.7 through to 96.232.8035.7 (8x variants from 1m to 8m) See image opposite for an example of a pre-made cable.

Plessey can assist installers with cabling determinations and supply requirements.



⚠ Safety ⚠

The Hyperion fixture does not radiate harmful wavelengths of light but like many high power artificial lights users should not look directly at the fixture whilst it is on.

Care must be taken when assembling, fitting or handling to prevent personal injury or damage to the product. This light fitting must be installed by a competent person in accordance with the local Building and Electrical Regulations

Plessey cannot accept any liability for loss, damage or premature failure resulting from inappropriate use. Plessey can advise on installation requirements including how to achieve the desired amount of light and uniformity.

Maintaining Warranty

In order to maintain the product warranty, the following information must be observed.

Cleaning / Maintenance

- Depending on environment dust can collect in the metal heatsinks over a period of time. This should be removed periodically by a low pressure air / water jet, appropriate PPE should be worn.
- It is recommended that the lenses be cleaned every 3 months. Lenses can be wiped clean with a damp cloth or hosed down. The unit should not be submerged.
- This fixture has no consumable / replaceable parts other than the driver. If you experience a failure or problem with your product please contact Plessey Customer Service for Assistance

Important Information

- The Ingress Protection of any termination performed by the client must preserve the ingress protection of the fixture in order to maintain product warranty.
- It is important in large installations that the pairs of phases are swapped and evenly distributed throughout the installation to avoid overloading one phase of the supply.
- Once installed and connected to the fixed wiring system the product can be switched on with no further commissioning.

Disposal

When the light fitting comes to the end of its life please do not dispose of it within the general waste, please recycle where facilities exist. When you need to dispose of this fitting, check with your distributor or local authority for suitable options. New regulations require the recycling of Waste from Electrical and Electronic Equipment (European “WEEE Directive” effective August 2005—UK WEEE Regulations effective 2nd January 2007). Environment Agency Registered Producer: WEE/MM3672AA

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