ECLIPSE N

FEATURES & SPECIFICATIONS

General Description

The Eclipse N is ideal for vertical farm applications, but is also suitable for a wide range of other horticulture applications including: greenhouses, growth chambers and tissue culture laboratories. The Eclipse N single bar is designed to deliver high levels of photosynthetic photon flux (PPF) values with unsurpassed light uniformity, all within a slim and water-proof design. For easy installation, the Eclipse N fixtures can be daisy-chained together in runs of up to 15 fixtures (22 for low wattage option). Fixtures are supplied with spring clips for surface mount or unistrut installations.

Mechanical Construction

Single, 46-inch anodized aluminum extrusions provide thermal management and housing for drivers and wiring.
High temperature, molded-silicone gaskets and injection-molded polymer end caps provide IP66-rated ingress protection from dust and moisture. 5-conductor cables and water-tight, locking connectors provide power and dimming from bar to bar.
Each bar includes pigtail and male connector on one end and a female connector on opposite end. Maximum bar to bar spacing is 18 inches on centers.

Electrical Specifications

Each Eclipse N fixtures includes an internal dimmable driver. Input voltage is 120-277VAc and 50-60Hz. 0-10V dimming is standard.

LEDs

The 50° beam angle utilizes Illumitex's patented Digital Distribution technology ensuring that the maximum light intensity is delivered directly to the crop canopy at higher mounting heights (12 to 36 inches).

Weight

5.4 lbs

Finish

Clear anodized extrusions with black molded gaskets and end caps.

Power Consumption

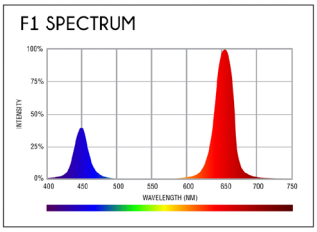
65 watts for 12 LED's in F3 spectrum (consult factory for wattage of other spectrums, 75 Watts max)

Testing & Compliance

IP66 ingress protection rating
RoHS compliant
ETL/cETL listing for wet location
5-year warranty
50,000 hour life

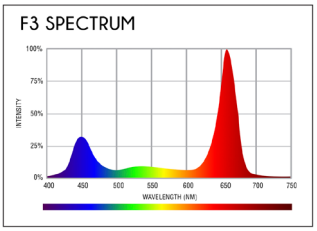
IP66 RoHS Intertek

SPECTRA



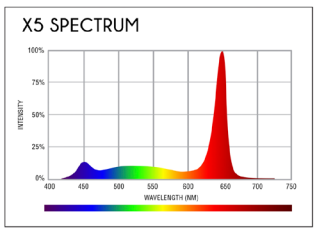
F1 WAVELENGTH MIX	
Blue (400 - 499nm)	22.8%
Green (500 - 599nm)	0.3%
Red (600 - 699nm)	76.8%
Far Red (700 - 780nm)	0.1%

GENERAL PURPOSE, HIGH EFFICIENCY
F1 spectrum is suitable throughout the plant growth cycle and offers the highest photon yield efficacy of the available spectra. F1 is recommended for applications with a tight energy budget where visual plant assessment is not a priority.



F3 WAVELENGTH MIX	
Blue (400 - 499nm)	22.4 ± 1.3%
Green (500 - 599nm)	13.4 ± 0.6%
Red (600 - 699nm)	63.9 ± 0.8%
Far Red (700 - 780nm)	0.4 ± 0.1%

BEST FOR GERMINATION THROUGH FLOWERING
The F3 specturm is the workhorse and most popular spectrum from Illumitex. It produces the fastest germination and drives the best vegetative and flowering results among all of the spectra options.
In addition to the blue and red wavelengths, the F3 spectrum contains a small amount of green which is beneficial for the quality assessment of plants. The F3 spectrum is recommended for use in growth chambers as well as controlled environment agriculture operations of any size.

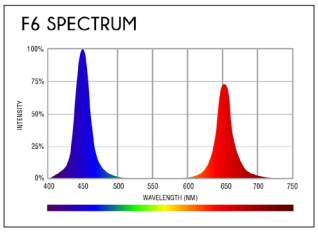


X5 WAVELENGTH MIX	
Blue (400 - 499nm)	18.0%
Green (500 - 599nm)	17.0%
Red (600 - 699nm)	64.0%
Far Red (700 - 780nm)	0.0%

BEST FOR HUMAN VISUALIZATION
Inspired by the work of NASA scientists, X5 spectrum delivers the highest level of light within the green band of the PAR spectral range, thus providing the best spectrum option for plant quality assessment.

illumitex

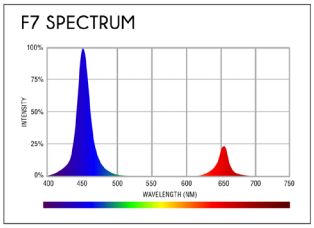
ECLIPSE N



F6 WAVELENGTH MIX	
Blue (400 - 499nm)	49.5%
Green (500 - 599nm)	0.5%
Red (600 - 699nm)	49.9%
Far Red (700 - 780nm)	0.1%

BEST FOR VEGETATIVE GROWTH

F6 spectrum provides an enhancement in the 400 to 499nm region ensuring the fastest vegetative growth results. The increased blue content reduces overall plant height and improves plant appearance and space utilization.

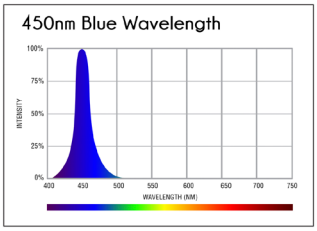


F7 WAVELENGTH MIX	
Blue (400 - 499nm)	74.5%
Green (500 - 599nm)	0.6%
Red (600 - 699nm)	24.8%
Far Red (700 - 780nm)	0.1%

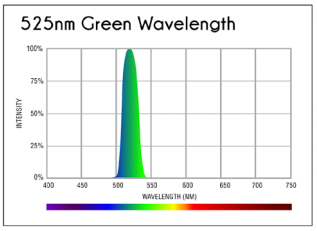
BEST FOR SEEDLINGS

F7 spectrum delivers the highest blue content of all available spectra. This spectra produces stocky plants with the shortest internodal distances which is highly desirable at the seedling stage of growth.

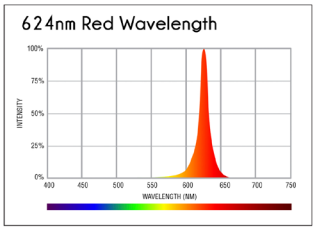
SUPPLEMENTAL LIGHTING



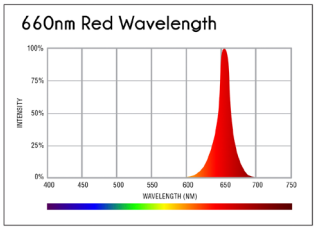
The 450nm wavelength is recommended as supplemental light for seedlings and young plants during the vegetative stage of their growth cycle, especially when “stretching” must be reduced or eliminated.



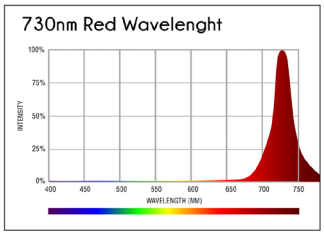
The 525nm wavelength LED can be used as a tool for eliciting specific plant responses such as stomatal control, phototropism, photomorphogenic growth and environmental signaling.



This 624nm region has the highest photosynthetic relative quantum yield for a range of plants. Its action on red-absorbing phytochrome is considerably weaker compared to that of 660nm red light.



The 660nm wavelength exhibits the highest action on red-absorbing phytochrome regulated germination, flowering and other processes. Most effective for light cycle extension or night interruption to induce flowering of long-day plants or prevent flowering of short-day plants.



Although the 730nm wavelength is outside the photosynthetically active range, but it has the strongest action on the far-red absorbing form of phytochrome and can be used at the end of each light cycle to promote flowering in short-day plants.

FIXTURE PPF VALUES

SPECTRUM	F1	F3	X5	F6	F7
TYPICAL PPF	108	110	102	103	87

* 50° beam; 12 LEDs

PART NUMBER ORDERING GUIDE

ESN	1	48			U	D
SERIES	# OF BARS	BAR LENGTH	# OF LEDs	LED SPECTRA	INPUT	DIMMING
ESN = 50° beam	1 = Single Bar	48 = 48” Over all length	12 = 12 per Bar 08 = 8 per Bar for low-wattage	Growth: F1 = F1 F3 = F3 X5 = X5 F6 = F6 F7 = F7 Supplemental: 45 = 450nm 52 = 525nm 62 = 624nm 66 = 660nm 73 = 730nm	U = 120-277Vac	D = 0-10V Dimmable (standard)

CE5-10CH1 & 2 are listed under accessories.

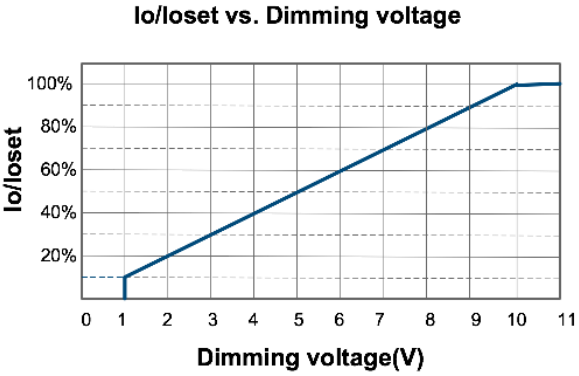
INPUT SPECIFICATION

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	120 Vac		277 Vac	
Input Frequency	50 Hz		60 Hz	
Input AC Current *See NOTE 1		0.57		Measure with F3 spectrum at 120 Vac
Power Factor		0.99		120 Vac, Full load
Power		65W		Measured with F3 spectrum at 120 Vac

Notes: 1. Input power varies per spectrum

ECLIPSE N

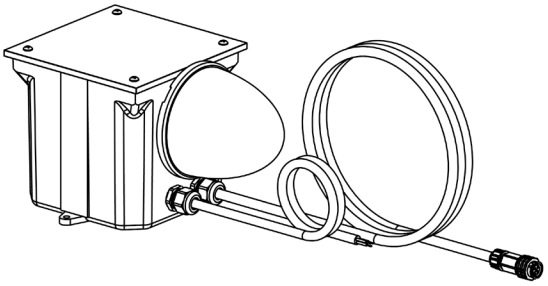
DIMMING FUNCTION



Notes:
1. The maximum current draw of the dimming input (DIM+) is 0.15mA. This will determine the total number of dimming wires that can be tied together to one controller.

CONTROLS (order separately)

WS-JBOX-ESG2: Wireless node j-box (includes node)
WS-225C: Wireless Gateway



ACCESSORIES (order separately)

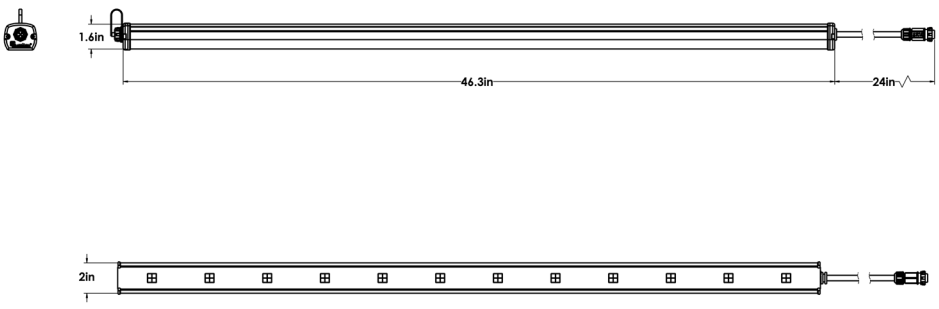
CE5-10CH1 (Cable extension, 5-conductor, 10-foot, female connector + flying leads) = power input @ first bar
(see wiring diagram)

Wiring Diagram for CE5-10CH1 Input Cable

Black Wire	Line
White Wire	Neutral
Green Wire	Ground
Red Wire	Dimming +
Orange Wire	Dimming -

CE5-10CH2 (Cable extension, 5-conductor, 10-foot, female connector + male connector) = bar to bar extension

DIMENSION LINE DRAWINGS



Fixture is designed to fit in 48” modules including all connectors and fittings.

Subject to change. Please visit www.illumitex.com for the latest updates.