

Horticultural Lighting Test Report

LLIA002337-012

Catalog Number: PXL-170 - LEDs and Xenon On
Pendant/highbay mounted, formed aluminum housing,
formed aluminum LED bars, no enclosure.

672 white LEDs with clear plastic enclosures over each. One pulsed xenon lamp
One Neotek NL-150W-24T LED driver and one Tomar model GSPS-120 power supply



Performance Summary

Electrical

Voltage	120.0 Vac
Frequency	60.00 Hz

Peak to Time-Averaged Ratio	30.3
-----------------------------	------

Radiometric and Quantum

Total Radiant Flux	64.05 W
Peak Radiant Flux (Inst)	1943.7 W
Total Photon Flux	289.35 $\mu\text{mol}\cdot\text{s}^{-1}$
Peak Photon Flux (Inst)	8781 $\mu\text{mol}\cdot\text{s}^{-1}$

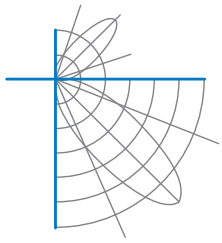
Horticultural

PPF (time averaged)	283.01 $\mu\text{mol}\cdot\text{s}^{-1}$
Peak PPF (Instantaneous)	8588.6 $\mu\text{mol}\cdot\text{s}^{-1}$
Far-Red Photon Flux	5.878 $\mu\text{mol}\cdot\text{s}^{-1}$
PPFD Conversion Factor	14.17 $\mu\text{mol}\cdot\text{s}^{-1}\cdot\text{m}^{-2}\cdot\text{klx}^{-1}$

Prepared For:
Neotek, Inc.
1030 Dividend Road
Midlothian, TX 76065, USA

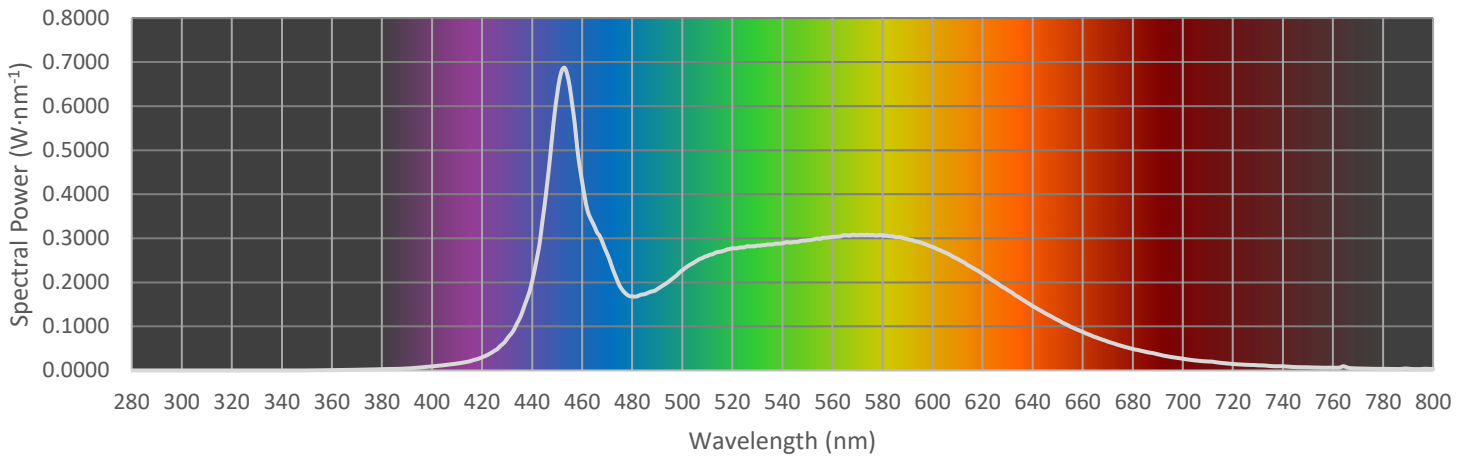
Test date: 03/12/2024
Report date: 03/22/2024

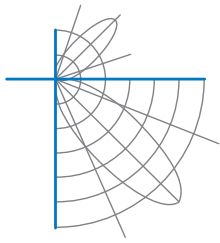
Signed: _____



Test Report Number: LLIA002337-012

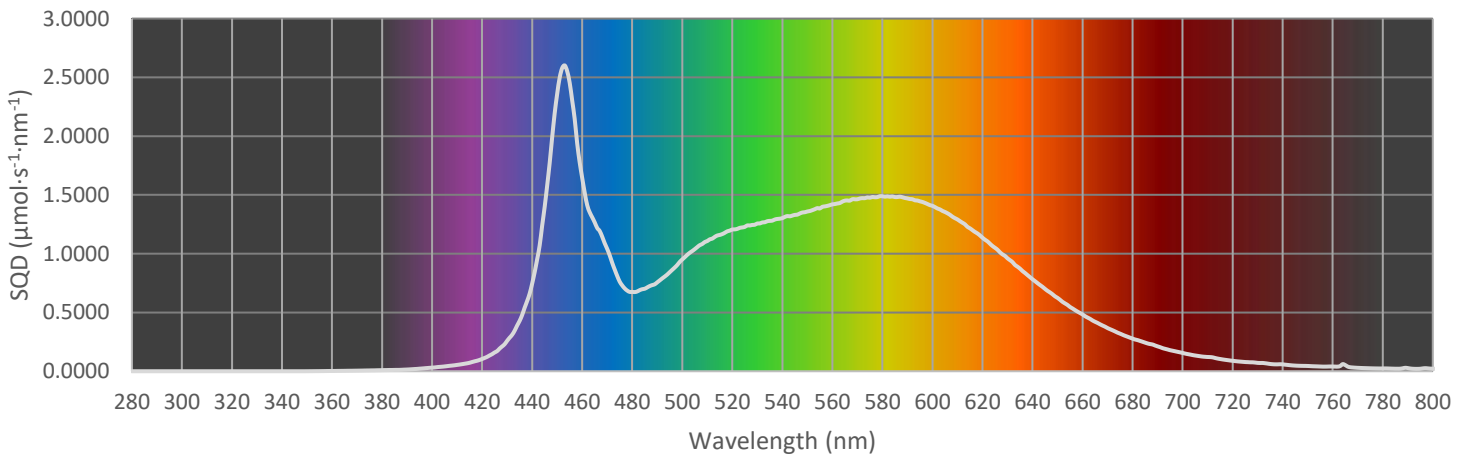
Radiant Flux Tabulation			
Waveband (nm)	Radiant Flux (W_r)	Percent of Total	Peak Radiant Flux (Inst) (W_r)
UV-B 280-315	0.00	0.0%	0.0
UV-A 315-400	0.14	0.2%	4.2
400-500	21.09	32.9%	640.0
500-600	28.79	44.9%	873.7
600-700	13.07	20.4%	396.6
Far-Red 700-800	0.96	1.5%	29.1
Total 280-800	64.05	100.0%	1943.7
PAR 400-700	62.95	98.3%	1910.4

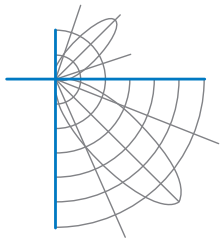




Test Report Number: LLIA002337-012

Photon Flux Tabulation			
Waveband (nm)	Photon Flux ($\mu\text{mol}\cdot\text{s}^{-1}$)	Percent of Total (%)	Peak Photon Flux (Inst) ($\mu\text{mol}\cdot\text{s}^{-1}$)
UV-B 280-315	0.00	0.0%	0.0
UV-A 315-400	0.46	0.2%	14.0
400-500	81.18	28.1%	2463.6
500-575	96.06	33.2%	2915.2
575-610	50.18	17.3%	1522.8
610-700	55.58	19.2%	1686.7
Far-Red 700-800	5.88	2.0%	178.4
Total 280-800	289.3	100.0%	8779.5
PAR 400-700	283.0	97.8%	8588.3





Test Report Number: LLIA002337-012

Photosynthetically Active Radiation (PAR) Metrics (400-700nm)

Photosynthetic Photon Flux (PPF)	283.01 $\mu\text{mol}\cdot\text{s}^{-1}$
Peak Photosynthetic Photon Flux (Inst)	8588.6 $\mu\text{mol}\cdot\text{s}^{-1}$
PPFD Conversion Factor	14.17 $\mu\text{mol}\cdot\text{s}^{-1}\cdot\text{m}^{-2}\cdot\text{klx}^{-1}$

Photobiologically Active Radiation (PBAR) Metrics (280-800nm)

PBAR Flux	289.35 $\mu\text{mol}\cdot\text{s}^{-1}$
Peak PBAR Flux (Inst)	8781 $\mu\text{mol}\cdot\text{s}^{-1}$

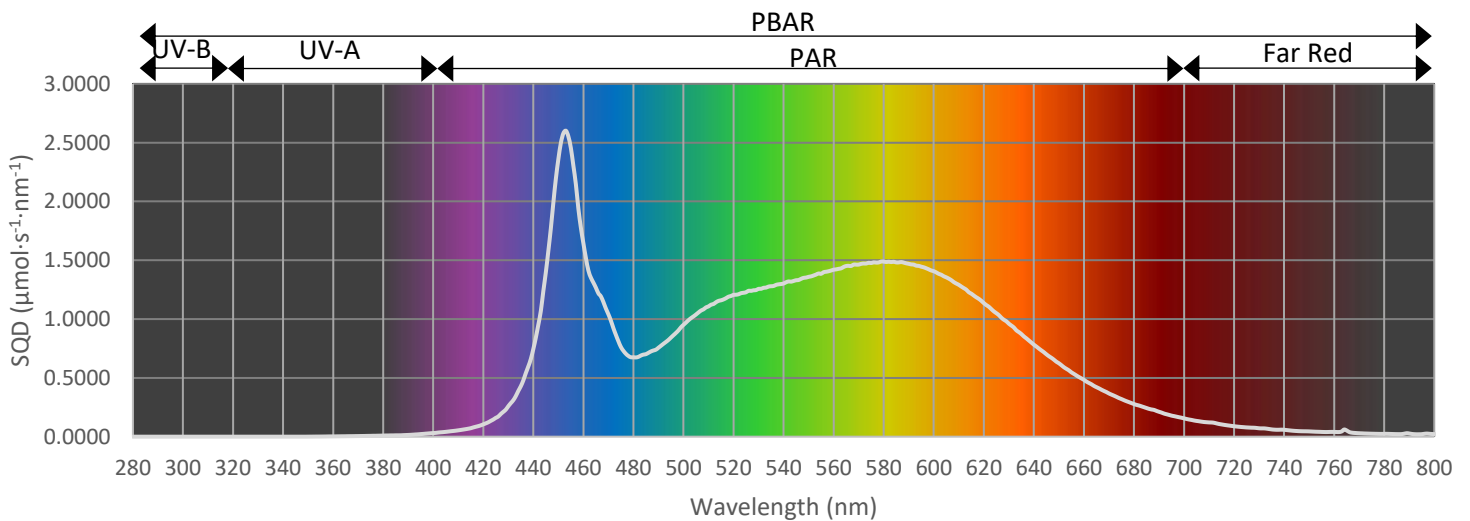
Yield Photon Flux (YPF) Metrics (Weighted 350-725nm)

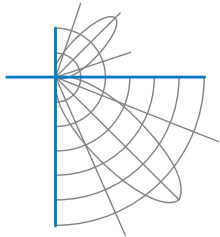
YPF	240.84 $\mu\text{mol}\cdot\text{s}^{-1}$
Yield Efficiency (YPF/PPF)	85.1 %

Red and Far-Red Flux Metrics (700-800nm)

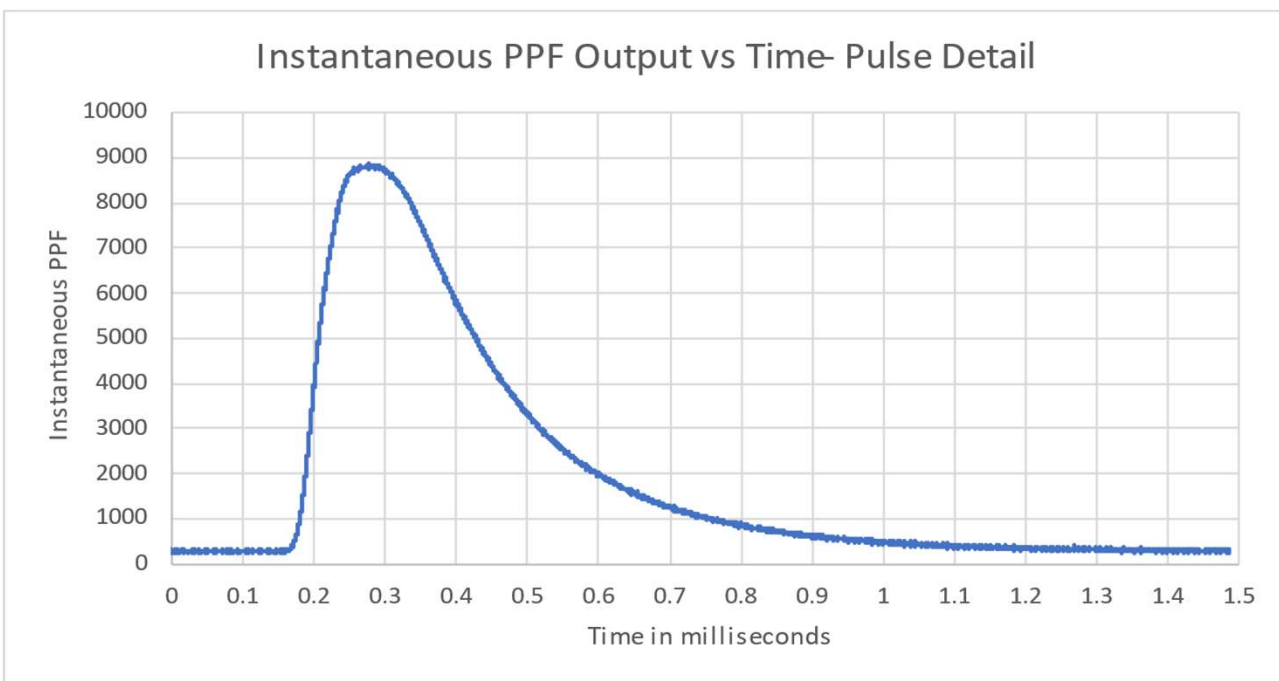
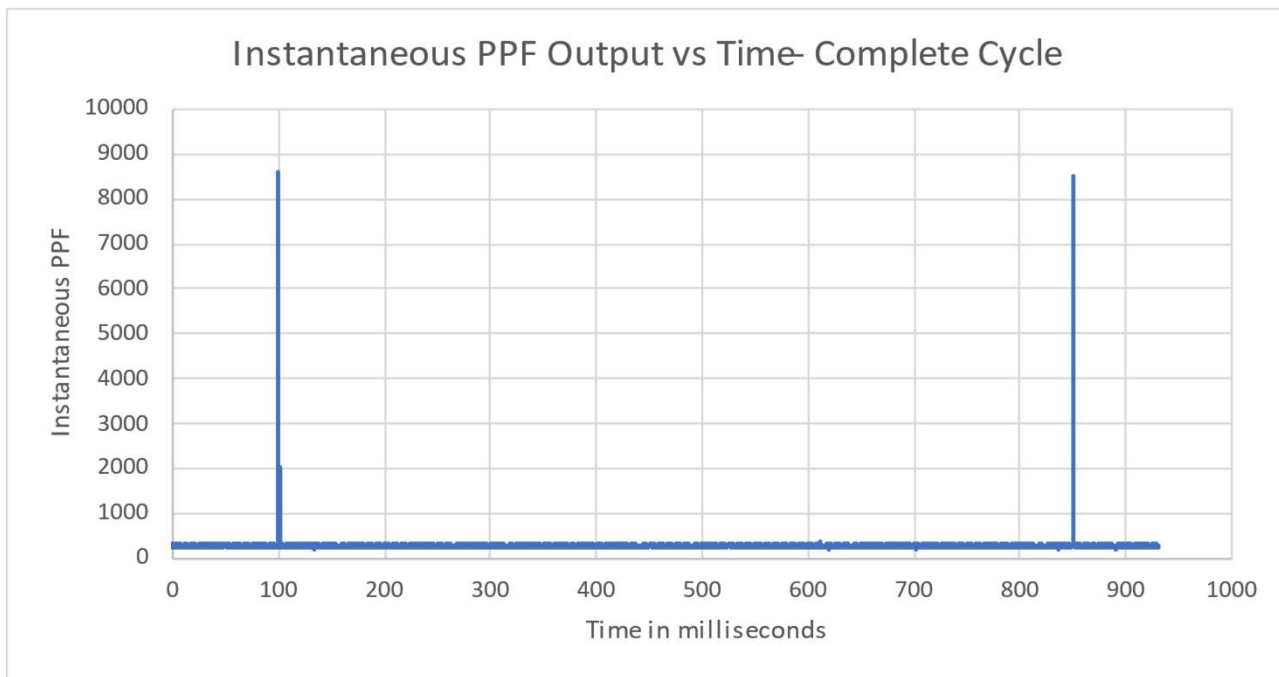
Far-Red Photon Flux	5.878 $\mu\text{mol}\cdot\text{s}^{-1}$
Red/Far-Red Ratio (R/FR Ratio)	6.694

Note: for R/FR Ratio, Red Range=640-680nm, Far-Red Range=710-750nm





Test Report Number: LLIA002337-012





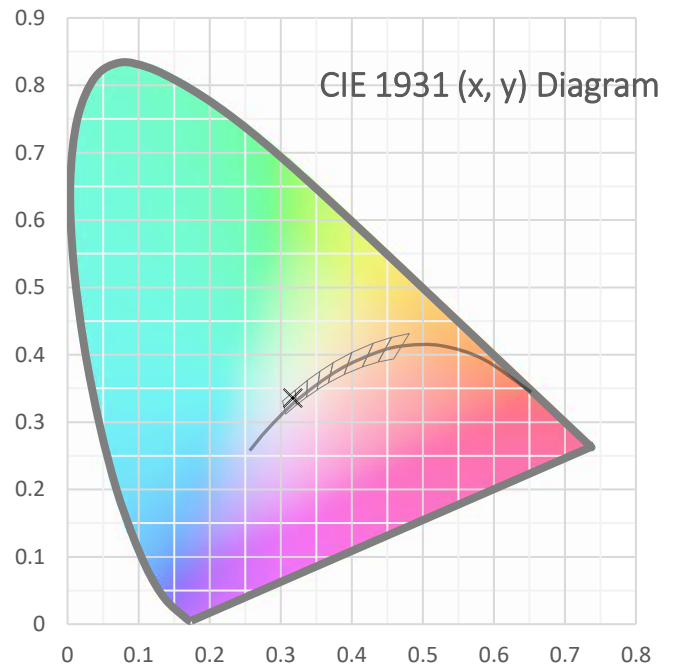
Test Report Number: LLIA002337-012

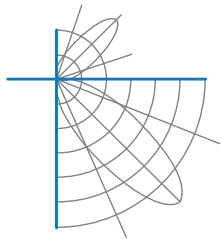
Electrical Data

Voltage	120.0 Vac
Frequency	60.00 Hz

Photometric (Human Vision) Data

Total Luminous Flux	19978.3 lm
Chromaticity (x,y)	(0.3175, 0.3358)
(u',v')	(0.1986, 0.4726)
Duv	0.0043
CCT	6214 K
CRI (Ra)	83
R9	2
TM-30: Rf	83
TM-30: Rg	93





Test Report Number: LLIA002337-012

Test Equipment Configuration: Measurements acquired using the LightLab International Allentown, LLC Labsphere 2m Integrating Sphere system with spectroradiometer.
Testing was performed using 4π geometry

Test Temperature: 25.8 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-19, LM-78-20, LM-58-20, ANSI_ANSI C78.377-2017, TM-30-20

Significance: The laboratory has not participated in the selection of samples to be tested.
All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Notes: The measurements and other derived quantities contained in this report are based on the absolute data as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections