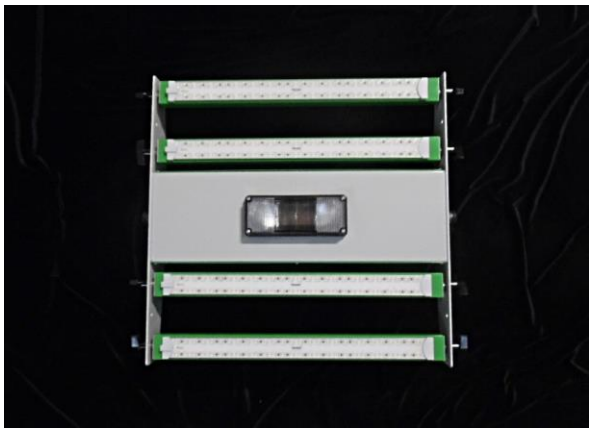
LightLab INTERNATIONAL ALLENTOWN LLC

Horticultural Lighting Test Report

LLIA002337-004

Catalog Number: PXL-75-S - LEDs and Xenon On
Pendant/highbay mounted, formed aluminum housing,
formed aluminum LED bars, no enclosure.
224 white LEDs with clear plastic enclosures over each. One pulsed xenon lamp
One Neotek NL-60W-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	88.7	
Radiometric and Quantum		
Total Radiant Flux	23.65	W
Peak Radiant Flux (Inst)	2098.2	W
Total Photon Flux	107.15	$\mu mol \cdot s^{-1}$
Peak Photon Flux (Inst)	9506.16	$\mu mol \cdot s^{-1}$
Horticultural		
PPF (time averaged)	103.89	$\mu mol \cdot s^{-1}$
Peak PPF (Instantaneous)	9216.94	$\mu mol \cdot s^{-1}$
Far-Red Photon Flux	3.052	$\mu mol \cdot s^{-1}$
PPFD Conversion Factor	14.21	$\mu mol \cdot s^{-1} \cdot m^{-2} \cdot klx^{-1}$

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

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

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2024.03.22 15:46:51 -04'00'

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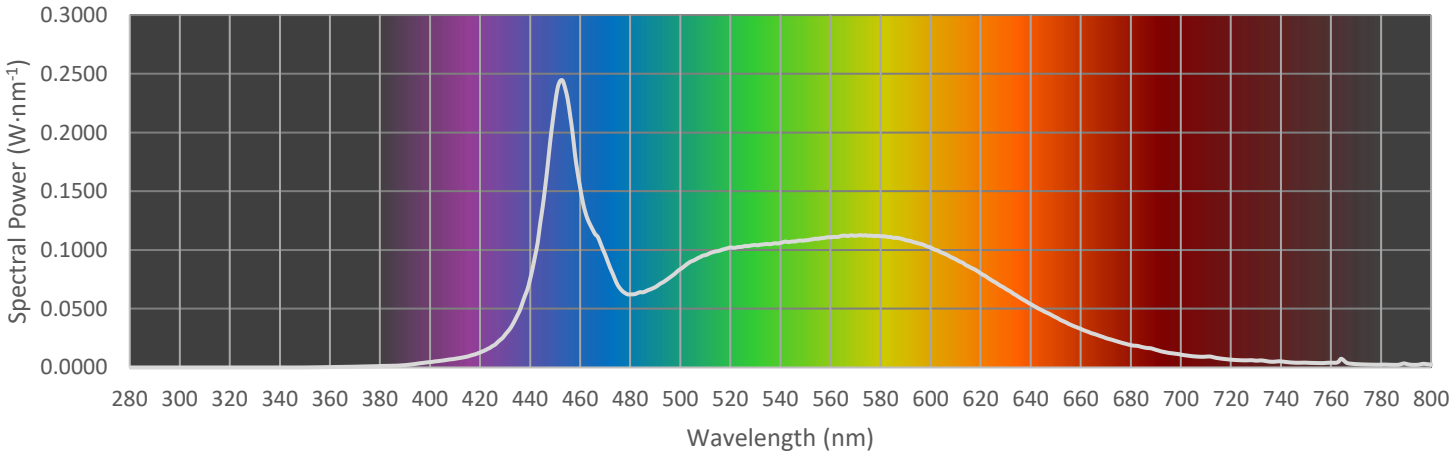
Radiant Flux Tabulation			
Waveband (nm)	Radiant Flux (W_r)	Percent of Total	Peak Radiant Flux (Inst) (W_r)
UV-B 280-315	0.00	0.0%	0.0
UV-A 315-400	0.06	0.3%	5.3
400-500	7.71	32.6%	684.0
500-600	10.55	44.6%	936.0
600-700	4.84	20.5%	429.4
Far-Red 700-800	0.50	2.1%	44.4
Total 280-800	23.65	100.0%	2098.2
PAR 400-700	23.09	97.6%	2048.5



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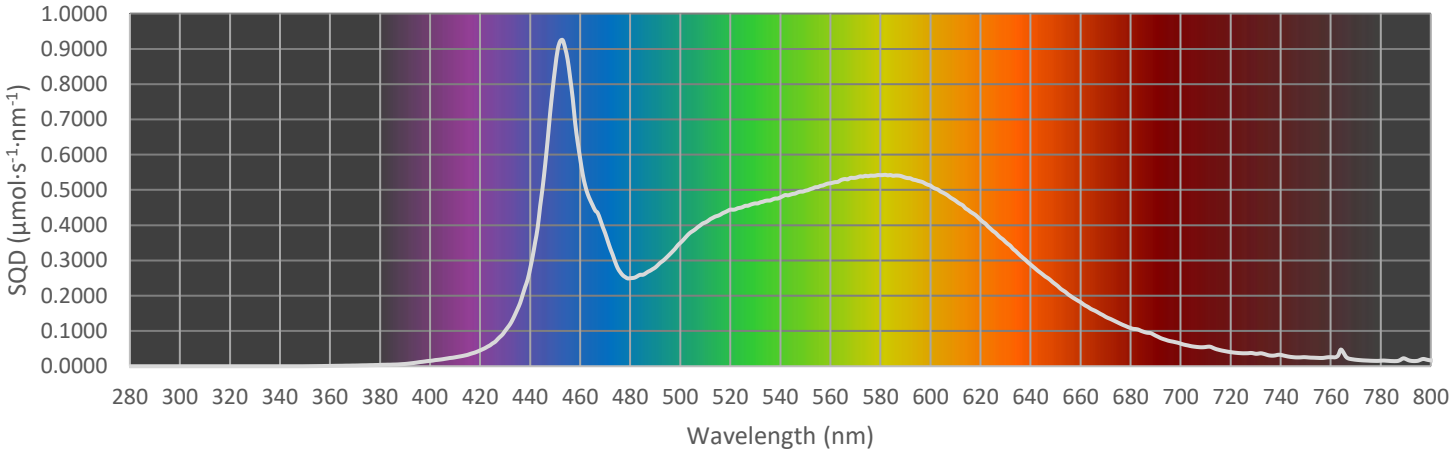
Photon Flux Tabulation			
Waveband (nm)	Photon Flux ($\mu mol \cdot s^{-1}$)	Percent of Total (%)	Peak Photon Flux (Inst) ($\mu mol \cdot s^{-1}$)
UV-B 280-315	0.00	0.0%	0.0
UV-A 315-400	0.21	0.2%	18.6
400-500	29.66	27.7%	2631.4
500-575	35.25	32.9%	3127.3
575-610	18.28	17.1%	1621.8
610-700	20.71	19.3%	1837.4
Far-Red 700-800	3.05	2.8%	270.6
Total 280-800	107.1	100.0%	9501.7
PAR 400-700	103.9	97.0%	9217.8



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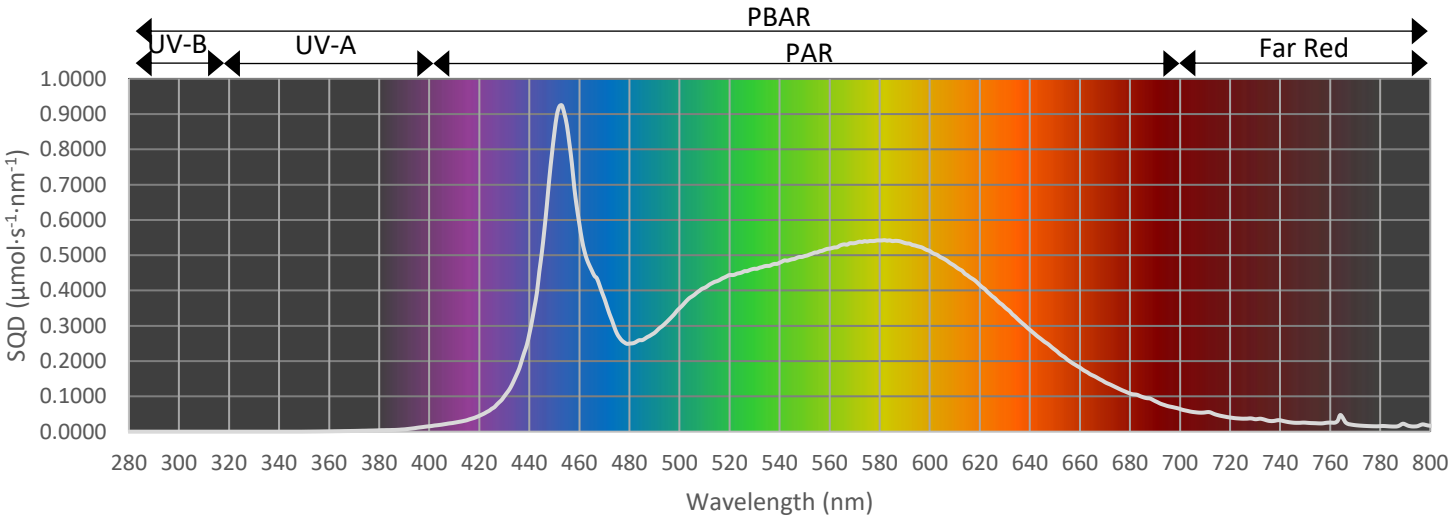
Photosynthetically Active Radiation (PAR) Metrics (400-700nm)		
Photosynthetic Photon Flux (PPF)	103.89	µmol·s^{-1}
Peak Photosynthetic Photon Flux (Inst)	9216.94	µmol·s^{-1}
PPFD Conversion Factor	14.21	µmol·s^{-1}·m^{-2}·klx^{-1}
Photobiologically Active Radiation (PBAR) Metrics (280-800nm)		
PBAR Flux	107.15	µmol·s^{-1}
Peak PBAR Flux (Inst)	9506.16	µmol·s^{-1}
Yield Photon Flux (YPF) Metrics (Weighted 350-725nm)		
YPF	88.48	µmol·s^{-1}
Yield Efficiency (YPF/PPF)	85.2	%
Red and Far-Red Flux Metrics (700-800nm)		
Far-Red Photon Flux	3.052	µmol·s^{-1}
Red/Far-Red Ratio (R/FR Ratio)	5.154	

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



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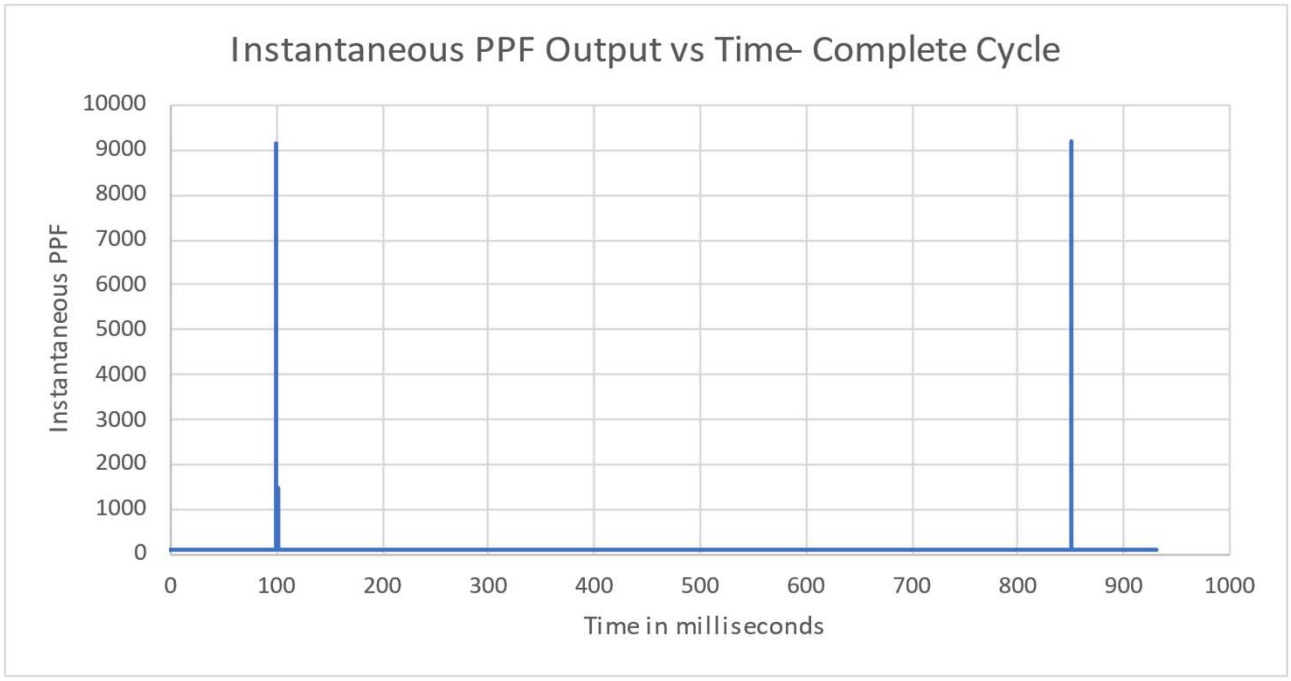

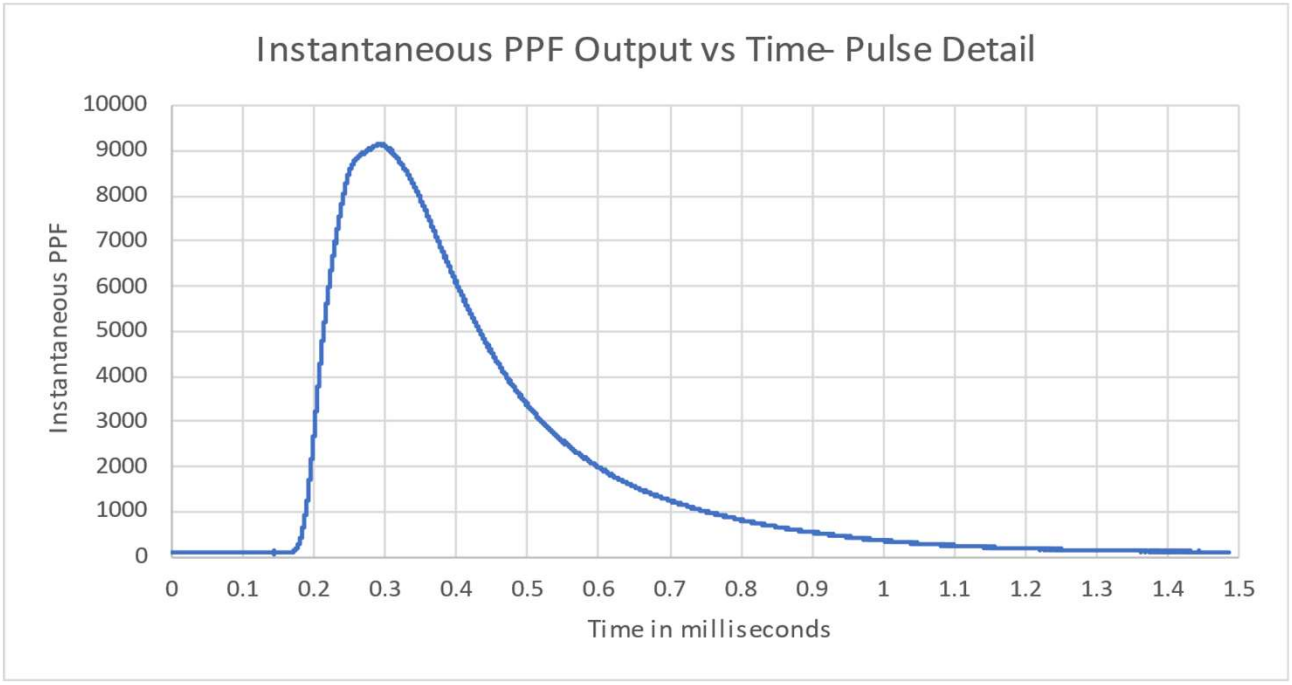

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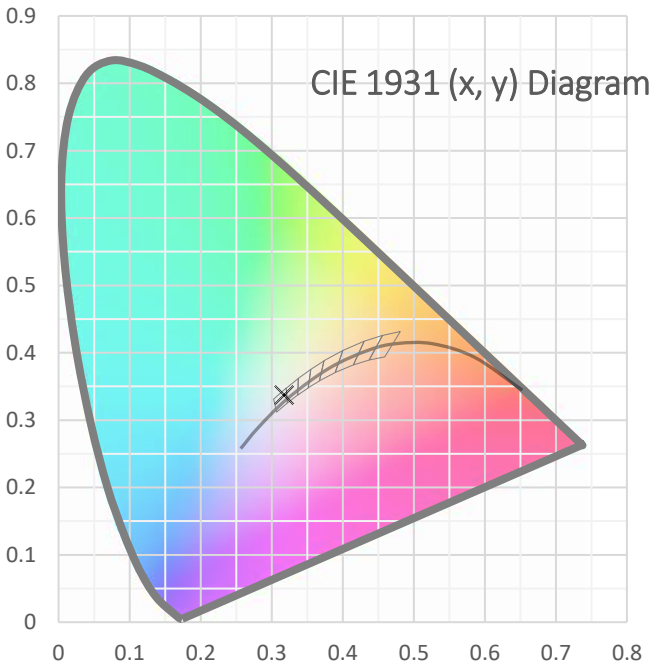
Electrical Data

Voltage	120.0	Vac
Frequency	60.00	Hz

Photometric (Human Vision) Data

Total Luminous Flux		7313.0	lm
Chromaticity	(x,y)	(0.3177, 0.3372)	
	(u',v')	(0.1983, 0.4734)	
Duv		0.0049	
CCT		6194	K
CRI (Ra)		83	
R9		3	
TM-30: Rf		84	
TM-30: Rg		93	



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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:	25.6 °C
Test Procedure:	Tested in accordance with the applicable sections of: LM-79-19, LM-78-20, LM-58-20, ANSI_ANSLG 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

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