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Report No: L052311601



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Issue Date: 5/19/2023

Report Prepared For: Grow-It-LED
1730 Industrial Drive Auburn, CA 95603

Reference:N/A

Amendment:N/A

Model Number: Excalibur 680X Alpha

Test: Photosynthetically active radiation (PAR) & Electrical measurement

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2019 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2017 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77-10:2014: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Date of Tests: 5/1/23

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	1/11/24
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

General Information

Manufacturer:	Grow-It-LED
Model Number:	Excalibur 680X Alpha
Driver Model Number:	INVENTRONICS EUM-680S15AMT

Photometric, PPF & Electrical Test Results

Total PPF (μmol/s):	1830.71	* 380 - 780nm range
Total Radiant Flux(W):	380.37	* 380 - 780nm range
Total Lumens (lm):	109375.00	* 380 - 780nm range
PPF Efficacy (μmol/Joule):	2.78	
Luminous Efficacy (lm/W):	166.17	
Input Voltage (VAC/60Hz):	240.00	
Input Current (Amp):	2.7637	
Input Power (W):	658.20	
Input Power Factor:	0.9923	
Current ATHD (%):	6.9%	

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:35
Total Operating Time (Hours):	1:20

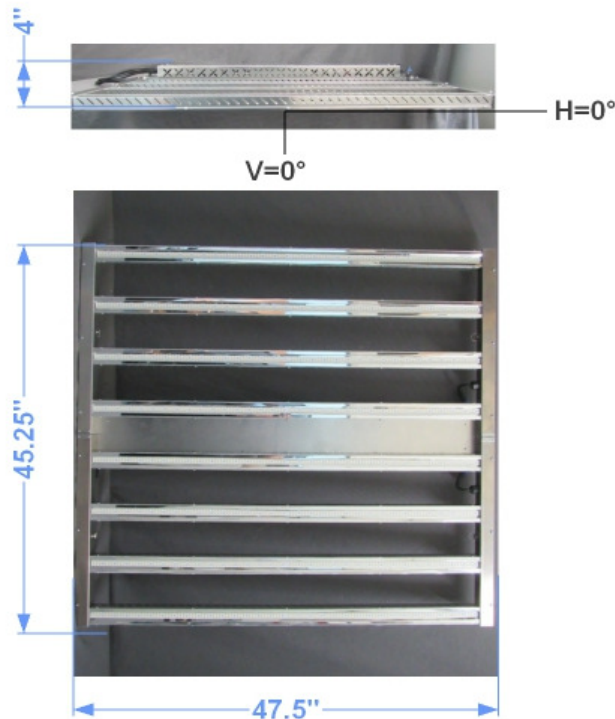
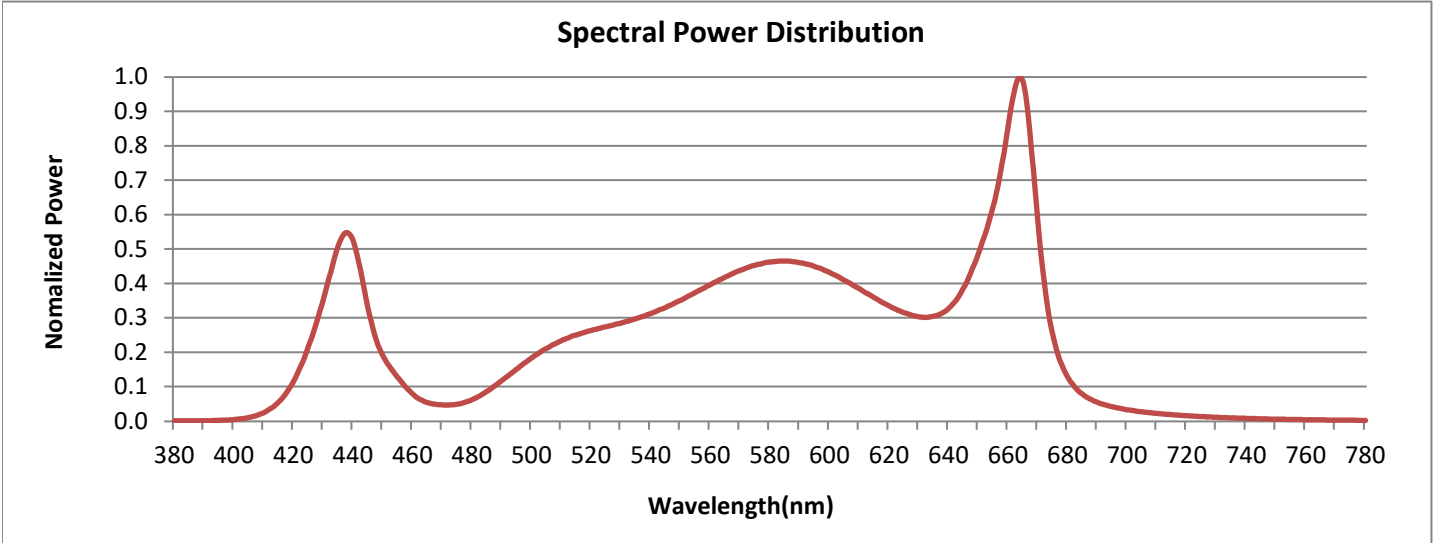


FIG. 1 LUMINAIRE

Colorimetry Test Results

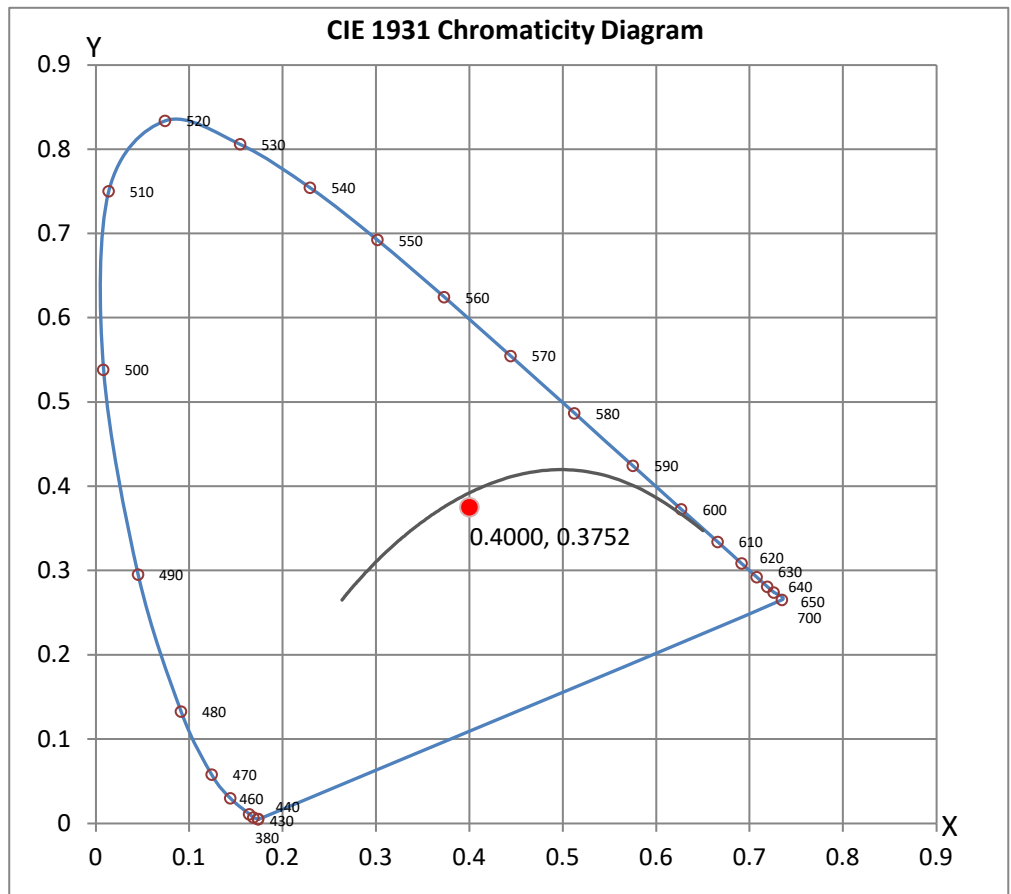


CRI & CCT

x	0.4000
y	0.3752
u'	0.2387
v'	0.5038
CRI	81.10
CCT	3487
Duv	-0.00580

R Values

R1	80.19
R2	83.77
R3	86.68
R4	80.50
R5	80.24
R6	76.05
R7	84.13
R8	77.61
R9	49.47
R10	64.77
R11	81.09
R12	63.69
R13	79.63
R14	92.38
R15	80.54



Test Methods

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

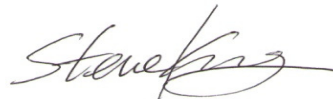
Electrical measurements are measured using the listed equipment.

Disclaimers:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by : Kunjan Modi

Test Report Reviewed by:



Steve Kang
Quality Assurance