



## Product Test Report - Integrated Photon Flux

**Test results reported for:**

Revolution Microelectronics  
Product Description: Avici 1000W

**Orb Optronix report:**

REVS003-011

**Original issue date:**

Wednesday, February 06, 2019

**Revision Issue Date:**

Thursday, February 07, 2019

**Prepared for:**

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## PRODUCT TEST REPORT - INTEGRATED PHOTON FLUX

**Manufacturer:** Revolution Microelectr

**Report Number:** REVS003-011

**Product Description:** Avici 1000W

**Release Date:** 2/6/2019

### 2.0 SAMPLE DESCRIPTION

Lab sample identification: REVS003-01 Customer Identification: Manufacturer: Revolution Microelectronics Serial number: Model Number: Avici 1000W Description: Suspended LED Fixture	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Manufacturer's Ratings</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">Max Current (A): -</td> </tr> <tr> <td style="padding: 2px;">Operating voltage (V): 240</td> </tr> <tr> <td style="padding: 2px;">Wattage (watts): 1000</td> </tr> <tr> <td style="padding: 2px;">Frequency (Hz): 60</td> </tr> <tr> <td style="padding: 2px;">Dimmable: -</td> </tr> </tbody> </table>	Manufacturer's Ratings	Max Current (A): -	Operating voltage (V): 240	Wattage (watts): 1000	Frequency (Hz): 60	Dimmable: -
Manufacturer's Ratings							
Max Current (A): -							
Operating voltage (V): 240							
Wattage (watts): 1000							
Frequency (Hz): 60							
Dimmable: -							

**Sample Device as Received**

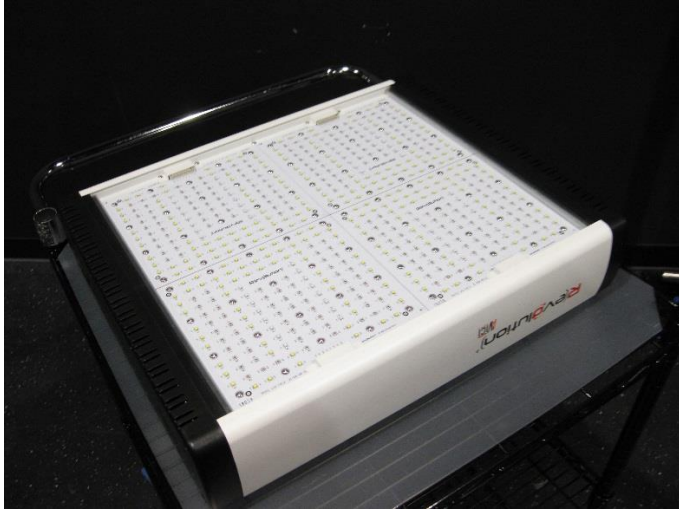


Figure 1

**Sample Device Mounted to Test Apparatus**

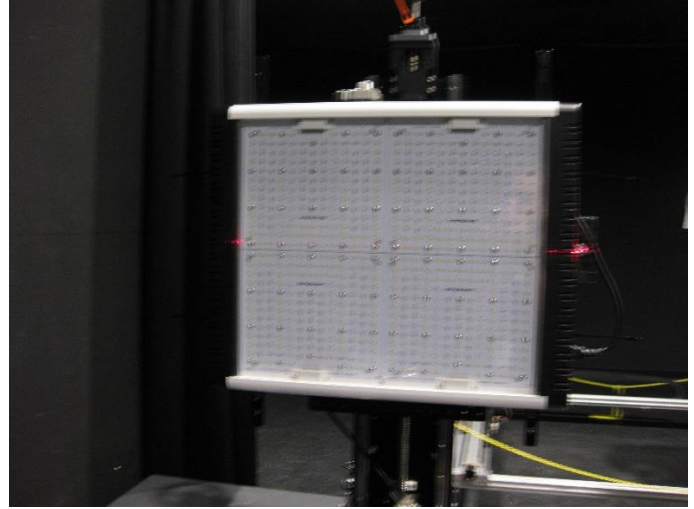
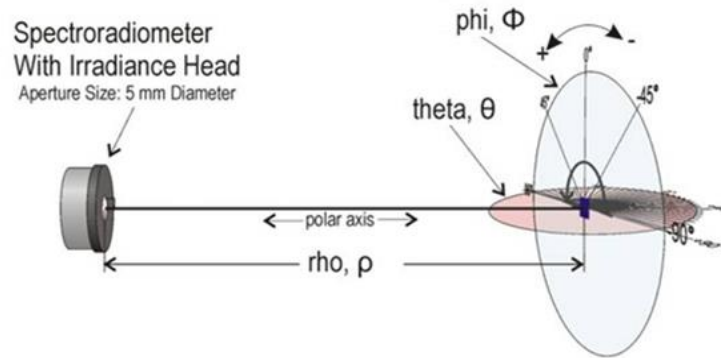


Figure 2

### 2.1 TEST DESCRIPTION

Photometric and electrical testing in accordance with IES LM 79-08 IES Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products. All measurements are made using the goniophotometer test method (See Section 6.0 for additional information).

### 2.2 Measurement Coordinates for Type-C Goniometer



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### 3.0 HORTICULTURE SUMMARY

#### Photosynthetic Active Region (PAR) Measurements

	<i>Value</i>	<i>units</i>	<i>Description</i>
↳ Photosynthetic Photon Flux:	2354.10	µmol/s	(400 - 700nm)
PPF Efficacy :	1.87	µmol/joule	(Photon Flux/Active Power)
Total Intergated YPF (µmol/s):	2409.50	µmol/s	(Yeild Photon Flux)
↳ YPF Efficacy:	1.92	µmol/joule	(Total Integrated YPF/Active Power)
Photosynthetic Photon Flux, Blue:	588.53	µmol/s	(400 - 500nm)
Photosynthetic Photon Flux, Green:	494.36	µmol/s	(500 - 600nm)
Photosynthetic Photon Flux, Red:	1247.67	µmol/s	(600 - 700nm)
Photosynthetic Photon Flux, Far-Red:	23.54	µmol/s	(700 - 800nm)

NOTE 1: Photosynthetic Photon Flux: weighted equally by wavelength and summed between 400nm and 700nm.

NOTE 2: Yield Photon Flux: PPF weighted by action spectrum (average of 20 plant species as defined by McCree) and summed between 350nm and 750nm. (See section 4.0)

#### Radiometric Measurements

	<i>Value</i>	<i>units</i>
Total Integrated Radiant Flux:	499.8	W
Peak Wavelength:	659.2	nm

#### Electrical Measurements

	<i>Value</i>	<i>units</i>
Active Power:	1258.0	W
Apparent Power:	1254.3	W
Power Factor:	0.981	
Voltage:	240.08	V
Current:	5.240	A
Frequency:	60.0	Hz

#### Thermal Measurements

	<i>Value</i>	<i>units</i>
Ambient Temperature:	25.0	°C
Humidity:	33.0	%

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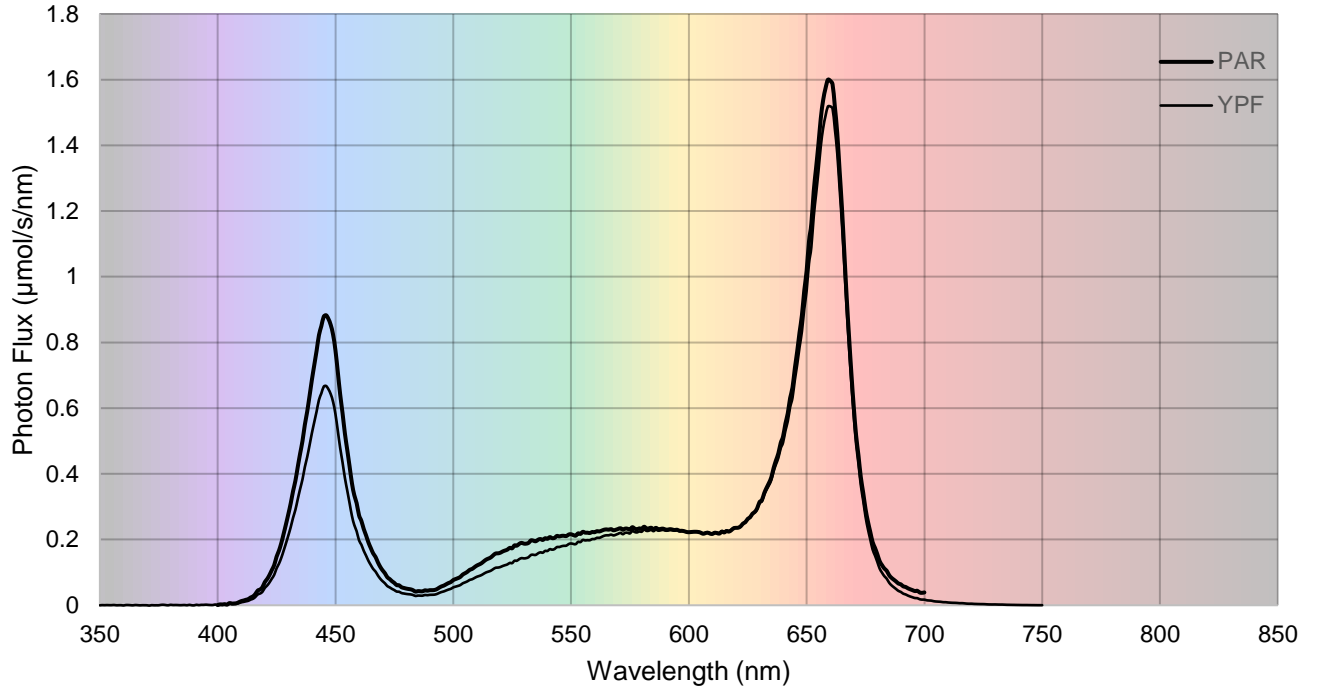
Report Number: REVS003-011

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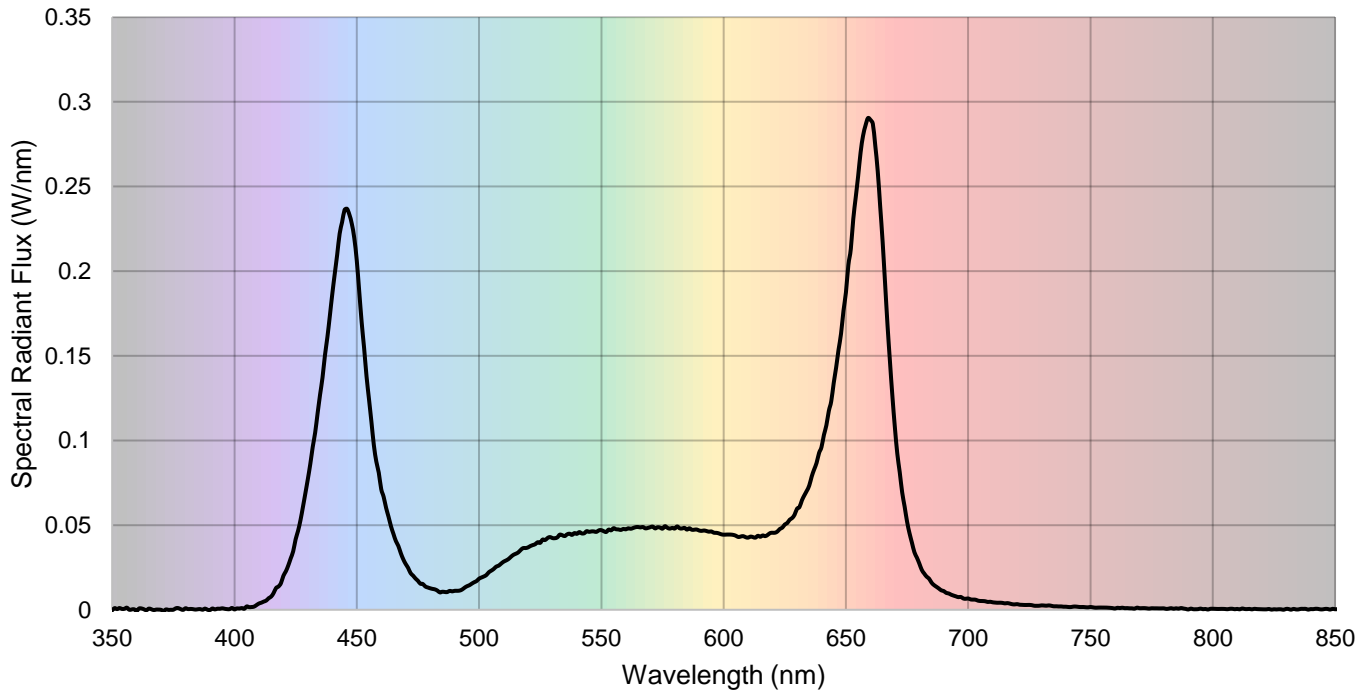
Release Date: 2/6/2019

## 4.0 SPECTRAL PHOTON FLUX

### Spectral Photon Flux



### Spectral Radiant Flux



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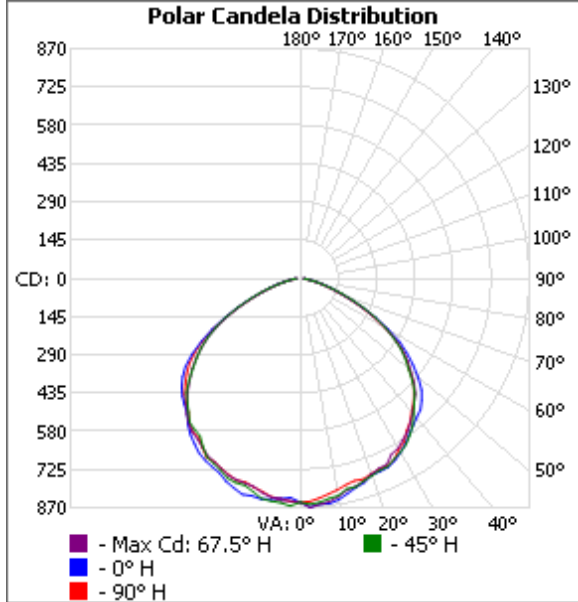
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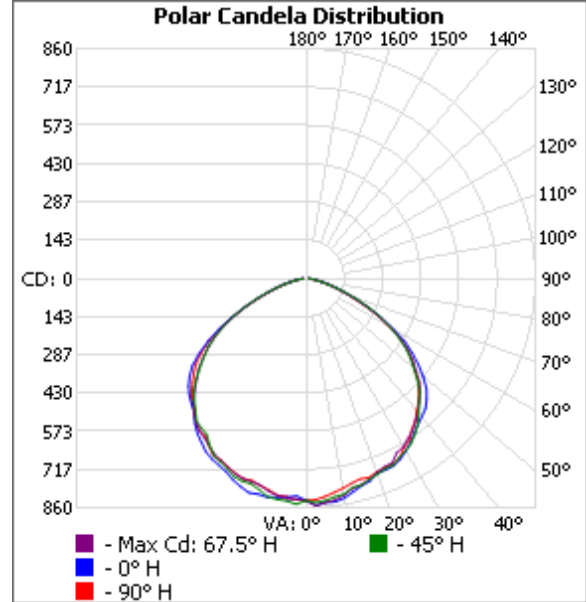
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## 4.1 POLAR PLOT - FAR FIELD



Polar PPF distribution



Polar YPF distribution

This data was measured in the far field and is only applicable at distances greater than or equal to 3m or 118.1 inches.

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### 7.0 EQUIPMENT

Item	Description/use	Manufacturer	Model	Serial #	Calibration Due
Goniometer	Type C	Orb Optronix	MS-STA-GON1	001	at use
Spectroradiometer	Optical Measurements	Orb Optronix	SP-200	2015894	at use
Source Meter	Device Power Supply	Quadtech	31015	PSAC001	-
Power Analyzer	Electrical Measurements	Yokogawa	WT210	91L122464	10-Oct-19

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**8.0 REVISION HISTORY**

REVISION	DATE	APPROVED	DESCRIPTION OF REVISION
010	2/6/2019	ACM	①ORIGINAL
011	2/7/2019	MT	Added Photosynthetic Photon Flux for 400-500nm, 500-600nm, 600-700nm and 700-800nm

END OF REPORT

