

Goniometer Test Report

Test results reported for:

Woosty Time Trading Limited
Samples Covered in Report: 2 AH86-DEVA1000W

CSA Report: **WOOG001-010**

Original issue date: **7/20/2017**

Revision Issue Date: -

Prepared for:

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Test & Measurement Services

PRODUCT TEST REPORT - GONIOMETER TEST REPORT

Manufacturer: Woosty Time Trading Limited
 Product Description: Grow Light

Report Number: WOOG001-010
 Release Date: 7/20/2017

1.0 SAMPLE DESCRIPTION

Lab sample identification: WOOG001-01 Customer Identification: Woosty Time Trading Limited Manufacturer: Part number: Model Number: 2 AH86-DEVA1000W Description: HPS suspended fixture	Manufacturer's Ratings	
	CCT: 3500 Operating voltage: 120-240 Wattage (watts): 1000W Frequency (Hz): 60 Dimmable: -	

Sample Device as Received



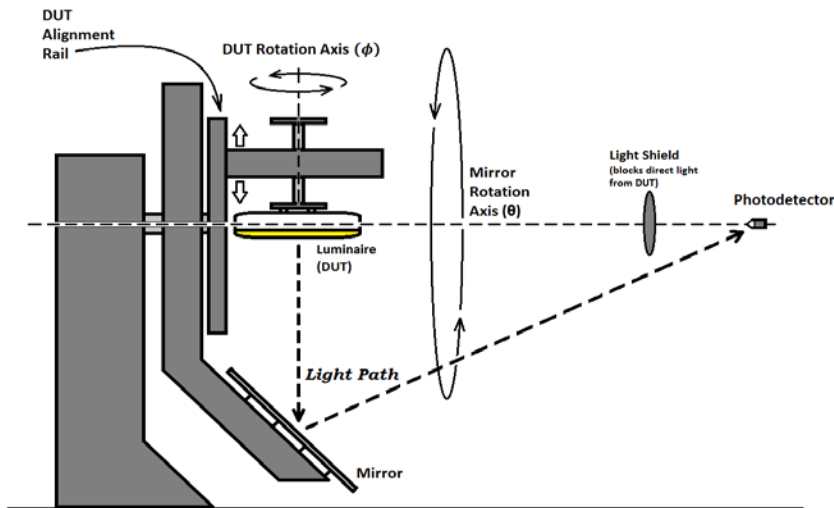
Sample Device Mounted to Test Apparatus



2.0 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).

3.0 Measurement Coordinates for Type-C Moving-Mirror Goniometer



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4.0 SUMMARY OF RESULTS - GONIOMETER MEASUREMENTS

Test Conditions

Test Date: July 18, 2017	Theta Minimum: $0 \pm 0.01^\circ$
Method: goniophotometer, spectroradiometer	Theta Maximum: $180 \pm 0.01^\circ$
x-axis Alignment: 0.0 ± 0.01 m	Theta Step Size: $2.5 \pm 0.01^\circ$
y-axis Alignment: 0.0 ± 0.01 m	Phi Minimum: $0 \pm 0.01^\circ$
z-axis Alignment: 0.0 ± 0.01 m	Phi Maximum: $180 \pm 0.01^\circ$
	Phi Step Size: $22.5 \pm 0.01^\circ$
Ambient Temperature ($^\circ\text{C}$): $25 \pm 1^\circ\text{C}$	
Ambient Humidity (%RH): 24	

Optical Measurements

Luminous Flux (lm):	130644.1
Luminous Efficacy (lm/W):	122.8
Dominant Wavelength (nm):	588.4
Peak Wavelength (nm):	819.5
Cx:	0.5330
Cy:	0.420
u':	0.3058
v':	0.542
CCT:	1989.0

Electrical Measurements

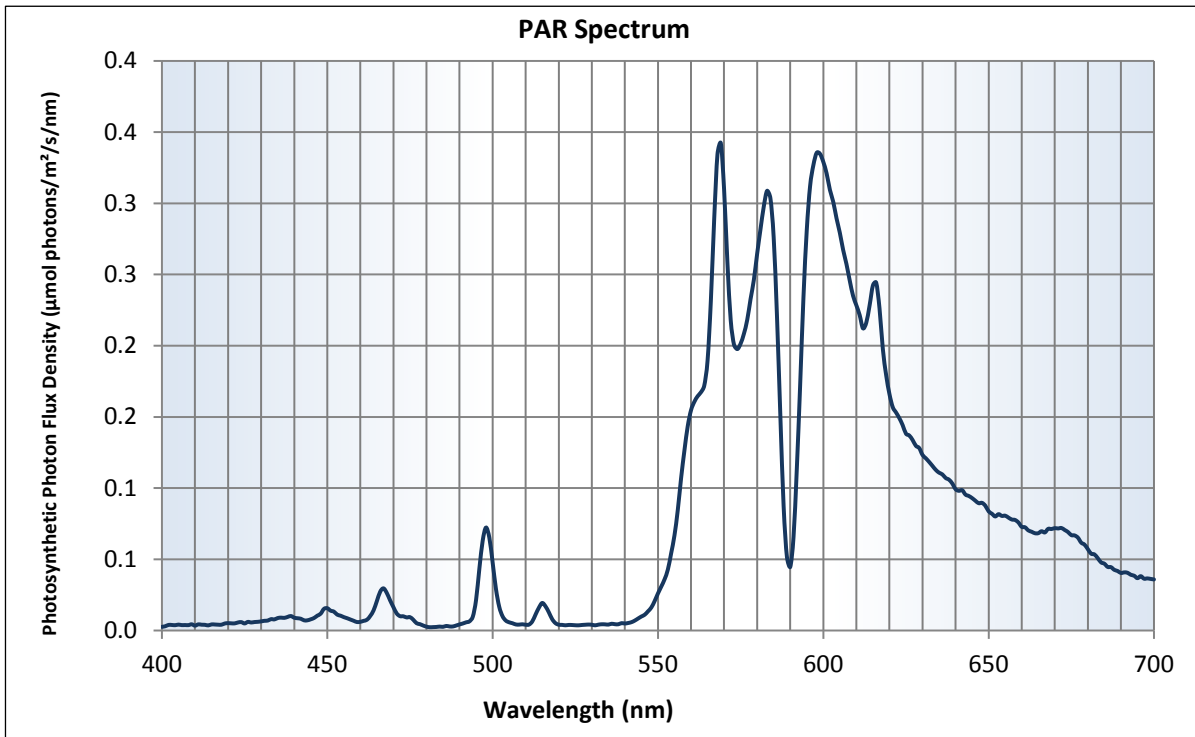
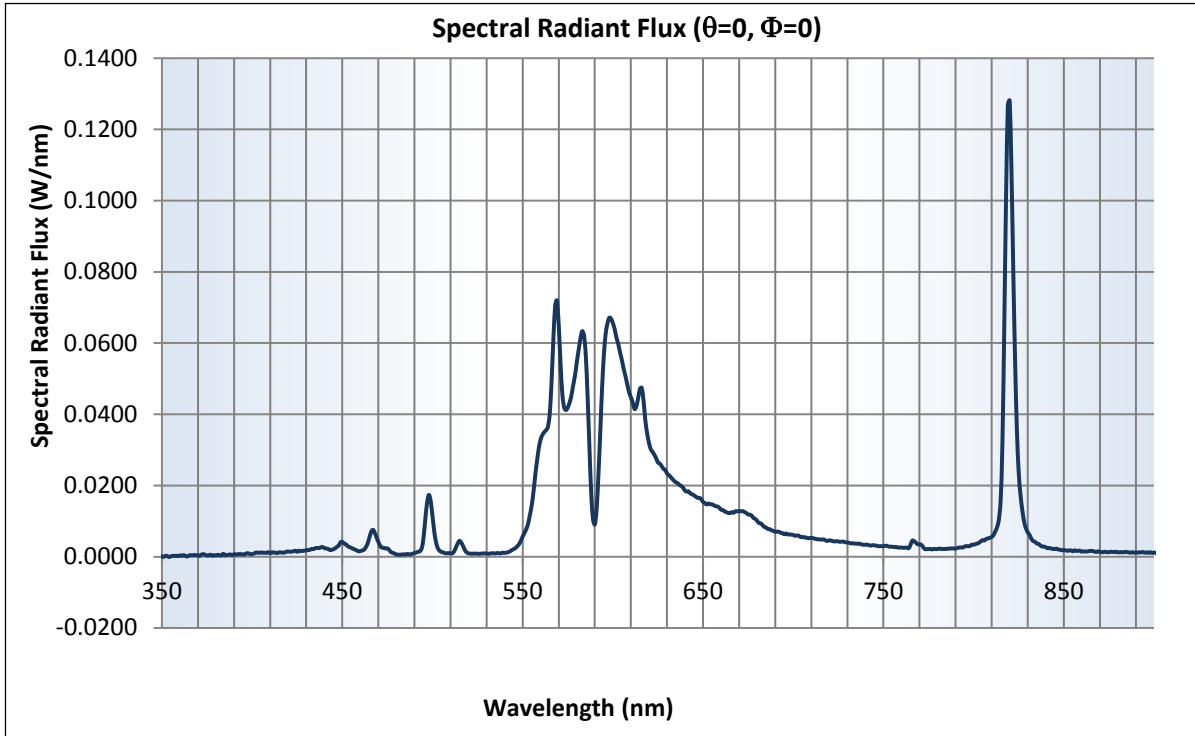
Active Power (W):	1063.6
Apparent Power (VA):	1078
Power Factor (unitless):	0.9867
Average Voltage (V):	240.19
Average Current (A):	4.488
Frequency (Hz):	60.0

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5.1 SPECTRUM CHARTS



5.2 CIE 1931 Chromaticity

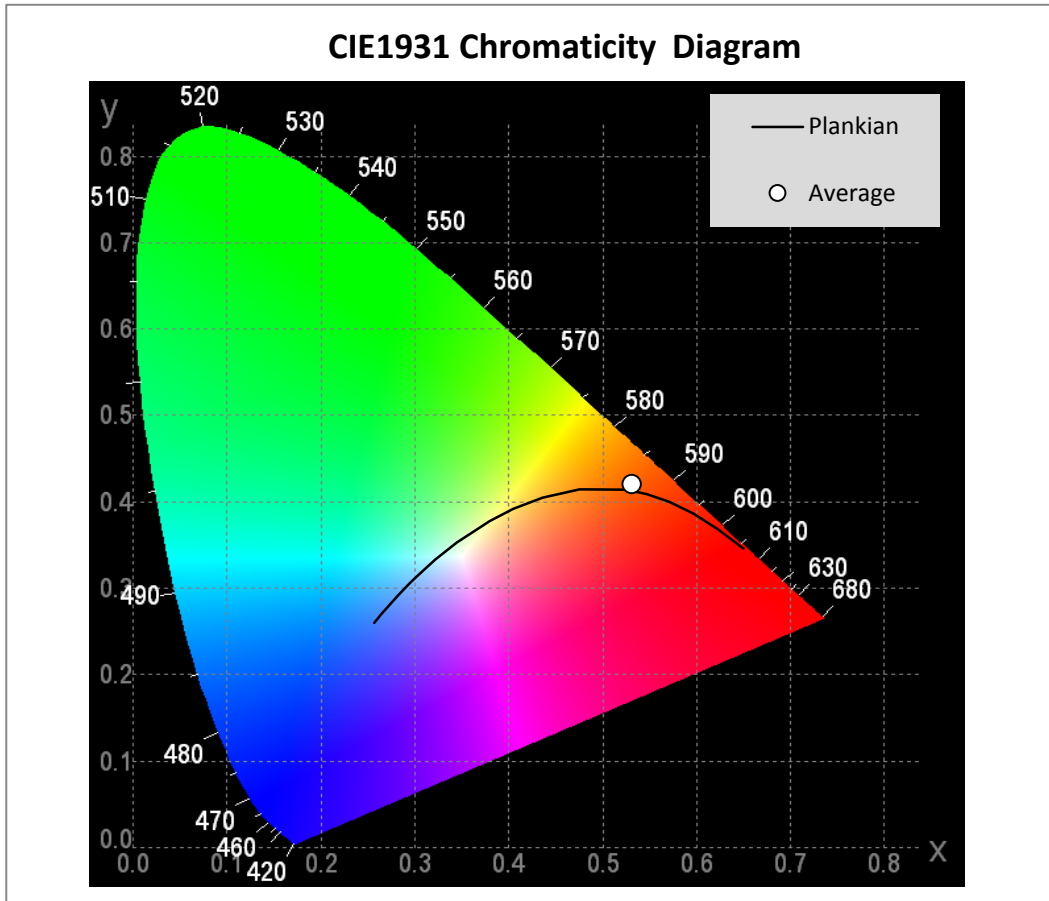


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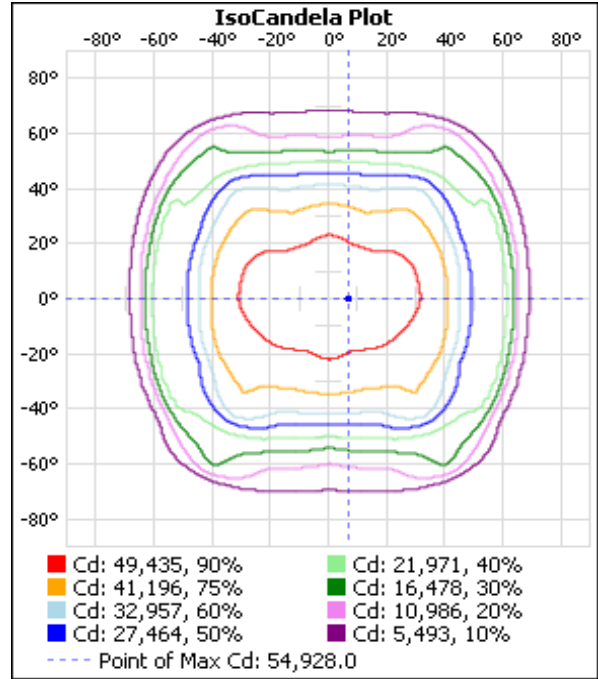
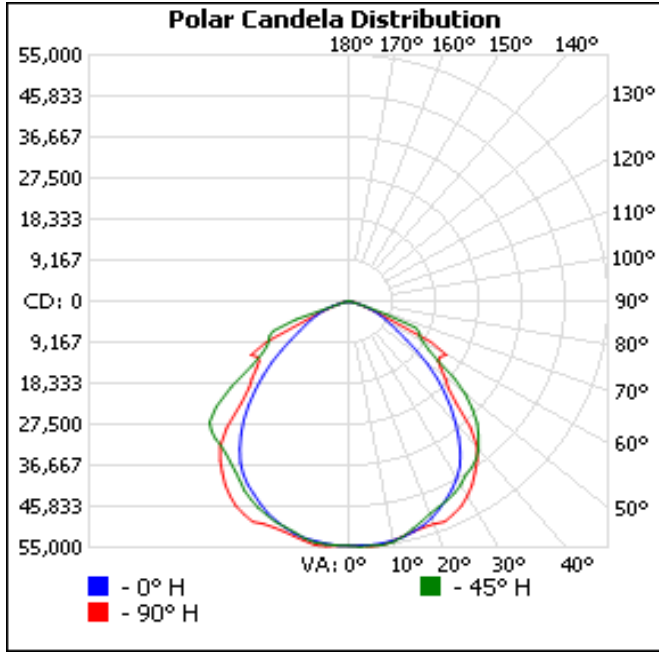


PRODUCT TEST REPORT - GONIOMETER TEST REPORT

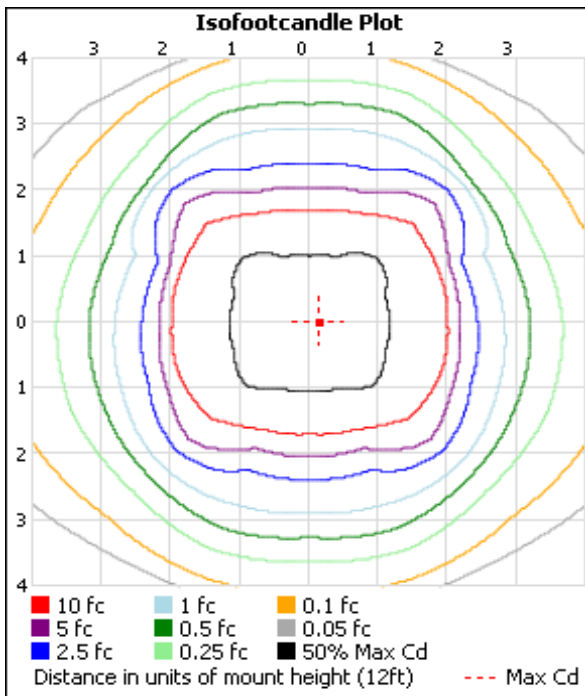
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6.1 CANDELA PLOTS



6.2 ILLUMINANCE PLOTS



	Center Beam fc	Beam Width	
2.0ft	13,649 fc	4.1 ft	4.6 ft
4.0ft	3,412 fc	8.2 ft	9.2 ft
6.0ft	1,517 fc	12.3 ft	13.8 ft
8.0ft	853 fc	16.5 ft	18.4 ft
10.0ft	546 fc	20.6 ft	23.0 ft
12.0ft	379 fc	24.7 ft	27.6 ft

■ Vert. Spread: 91.6°
■ Horiz. Spread: 98.1°

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6.3 ZONAL LUMEN SUMMARY

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	42832.3	32.8%
0-40	70129.5	53.7%
0-60	115641.2	88.5%
60-90	14713.0	11.3%
70-100	2601.7	2.0%
90-120	94.0	0.1%
0-90	130354.2	99.8%
90-180	289.9	0.2%
0-180	130644.1	100.0%

Lumens Per Zone					
Zone	Lumens	% Luminaire	Zone	Lumens	% Luminaire
0-10	5200.7	4.0%	90-100	27.8	0.0%
10-20	14887.5	11.4%	100-110	31.4	0.0%
20-30	22744.1	17.4%	110-120	34.7	0.0%
30-40	27297.2	20.9%	120-130	38.5	0.0%
40-50	26040.8	19.9%	130-140	44.0	0.0%
50-60	19470.9	14.9%	140-150	41.8	0.0%
60-70	12139.2	9.3%	150-160	36.0	0.0%
70-80	2390.3	1.8%	160-170	26.3	0.0%
80-90	0.0	0.1%	170-180	9.3	0.0%

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6.0 ADDITIONAL INFO

Given that this test was performed using a goniophotometer, radiant and quantum metrics were calculated under the assumption that the spectral power distribution is uniform over all angles of emission. Hence, scale factors were applied to convert from luminous intensity to radiant intensity or photon intensity. These scale factors were derived from an on-axis spectroradiometer measurement.

7.0 EQUIPMENT

Item	Description/use	Manufacturer	Model	Serial #
Goniometer	Type-C	Lighting Sciences	6240T	N/A
Optical Meter	Optical Measurements	Newport	2936-R	METR010
Photodetector	Optical Measurements	INPHORA	IPR-PDET	110902
Power Supply	Device Power Supply	Quadtech	31015	PSAC001
Power Analyzer	Electrical Measurements	Yokogawa	WT310	C2QD10013V

END OF REPORT