Les Industries Spectralux Inc.
Spectralux Industries Inc.

2750 Sabourin, Saint-Laurent (Quebec) H4S 1M2 Canada
Tel.: (514) 332-0082 Fax: (514) 332-3590 www.spectralux.ca

NVLAP LAB CODE: 200899-0

Sphere Test Calibration Report

Standard(s) CIE 84-1989, IESNA LM-16-93, IESNA LM-58-94, ANSI C78.43-2004

Customer ABC Technologies, 1st Avenue, City, Province, Country, 1A1-1A1

General Information		Lamp Details: CM14		Ballast Details: 400W-M59	
Test Report	L1001262-C1	**Description**	Clear 400MH ED37	**Type**	Reference
Tested	26 January 2010	**Manufacturer**	AAA	**Description**	Reactor
Created	2 February 2010	**Catalog No.**	MH 400W	**Current**	3.25 A
Sphere Temperature	26.8 °C	**Designation**	M59/E	**Impedance**	45.00 Ω
Humidity	23.7 %	**Position**	Vertical Base Up	**Voltage**	146.25 V
Lamp Type	HID	**Quantity**	1	**Power Factor**	0.0750

Stabilization Time: 60 Minutes

Tested By:

Approved Signatory:

Signature:

Notes

1) Field performance may differ from laboratory measurements. Results are valid for tested material only.

2) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectra Lux Industries Inc.

SAMPLE ONLY

Lamp Calibration Method

The calibration was performed in a 1.93 meter diameter Ulbricht sphere with a spectrophotometer covering the full visible spectrum range from 380 to 780 nanometers. During the test, a reference ballast was used and adjusted to nominal electrical characteristics specified by ANSI (American National Standards Institute).

Good electrical contacts have been used to ensure the control of electrical parameters and an adequate stabilization period prior to collecting data. The self-absorbance was measured and a geometrical correction factor was applied to the luminous flux value to take into account the sphere configuration.

Equipment, reference standards and methods are traceable to NIST (National Institute of Standards and Technology).

SAMPLE ONLY

Equipment List

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Auxiliary Power Supply	American Reliance	SPS150-7	B10155	2009/12/29	2010/12/29
Test Power Supply	iRDC	CIF-3000A	974997	2009/04/22	2010/04/22
Input Power Meter	Yokogawa	WT210	27E116584	2009/12/30	2010/12/30
Output Power Meter	Yokogawa	WT210	27E224420	2009/12/30	2010/12/30
Shunt Resistor	Fluke	Y5020	5675014	2010/01/05	2011/01/05
Current Multimeter	HP	HP3458A	25B746	2010/01/06	2012/01/06
Voltage Multimeter	HP	HP3458A	25B747	2010/01/06	2012/01/06
Spectrometer	Ocean Optics	USB2000N	USB2E3864	2009/08/24	2010/08/24
Temperature Humidity Sensor	Omega	HH311	060703153	2009/06/08	2010/06/08

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Electrical Measurements

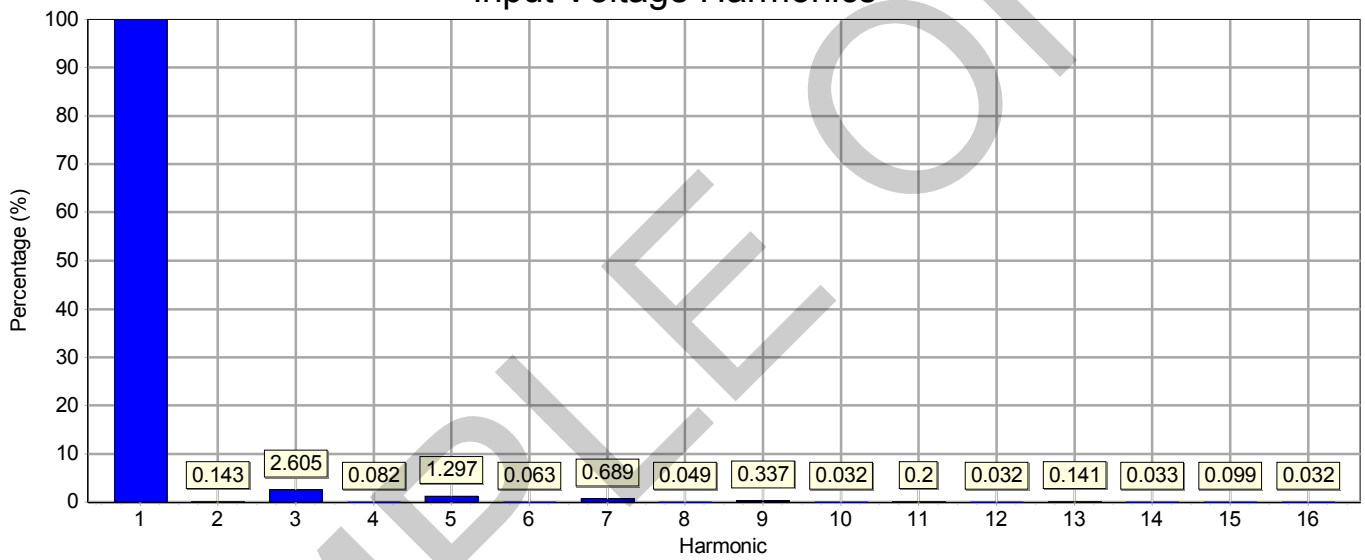
Input

Frequency	60 Hz	Active Power	439.96 W	THDV [CSA]	3.04 %
Voltage	220.2 V(rms)	Apparent Power	745.70 VA	THDA [CSA]	7.91 %
Current	3.3864 A(rms)	Power Factor	0.590	Max. Harmonic At	3rd order

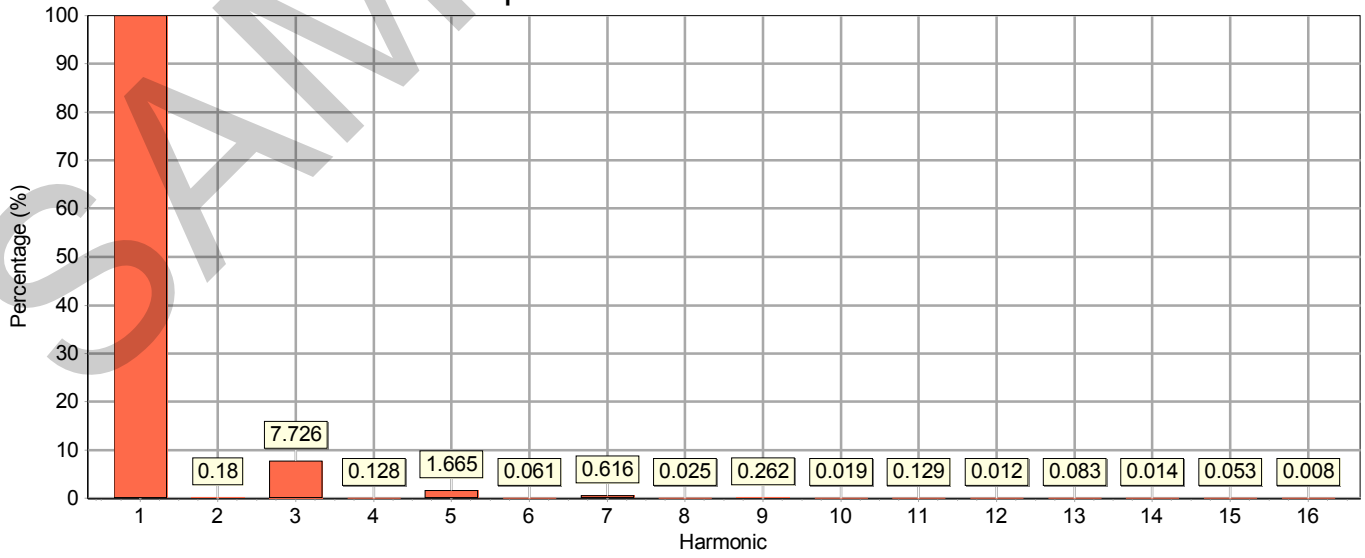
Output

Lamp Voltage	125.6 V(rms)	Lamp Current	3.3868 A(rms)	Lamp Power	399.82 W

Input Voltage Harmonics



Input Current Harmonics



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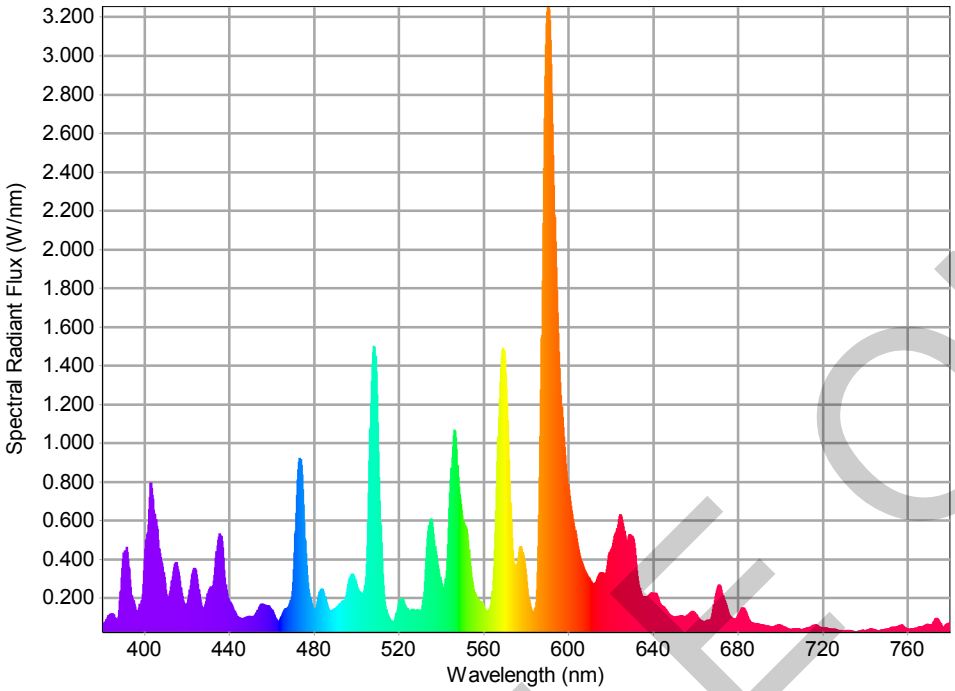
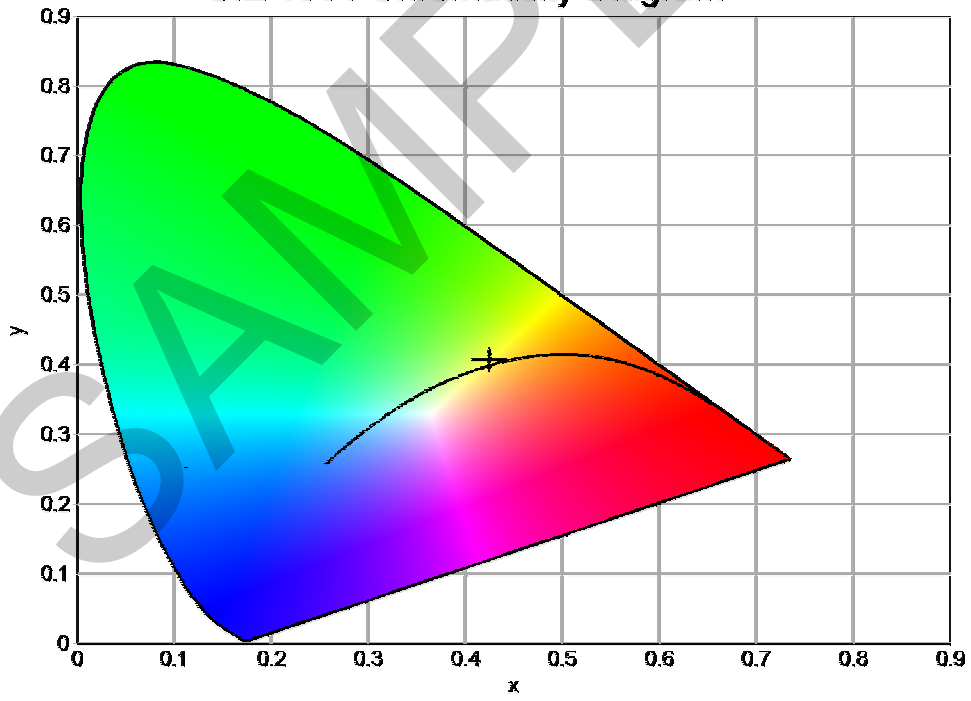
Spectral Power Distribution



Peak Wavelength	590 nm
Luminous Flux	41144 lm
Input Power	439.96 W
Lumens/Watt	93.5

CIE 1931 Chromaticity Diagram



x	0.4238
y	0.4074
CCT	3260 °K
CRI	57
R1	51.8
R2	85.3
R3	77.0
R4	51.1
R5	58.7
R6	86.5
R7	53.6
R8	-4.3

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