FOR THE SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 100402-0.

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100454269

Original Issue Date: December 3, 2012
Revision Date: January 2, 2013

REPORT NO. 100454269CRT-003C

TEST OF ONE MODEL OF LED CANDLE

MODEL NO. LCA12C18027K1

RENDERED TO

DM TECHNOLOGY DBA ARCHIPELAGO LIGHTING
4615 STATE STREET
MONTCLAIR, CA 91763

Revision Note January 2, 2013: This report was revised to correct the lamp model number.

TEST: Distribution, Minimum Light Output, Electrical Measurements, Color, Color Spatial Uniformity, Rapid Cycle Stress Test, Transient, Lumen and Color Maintenance to 6000 hours, and In-Situ Maximum Temperature Measurements as required to the Energy Star Integral LED Lamp Criteria: Version 1.4.

LABORATORY NOTE: The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for SSL by US DOE's CALiPER program.

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500311429.

STANDARDS USED: The following standards or test guides were used in part or totally to test each specimen:

ANSI/IEEE C62.41: 1991 Recommended Practice on Surge Voltages in Low – Voltage AC Circuits
IESNA LM-79: 2008 Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products
UL 1598: 2008 Standard for Safety: Luminaires
UL 1993: 2009 Standard for Self-Ballasted Lamps and Lamp Adapters
ANSI C79.1: 2002 Nomenclature for Glass Bulbs Intended for Use with Electric Lamps
ANSI C78.20: 2003 A, G, PS and Similar Shapes with E26 Medium Screw Bases
ANSI C78.24: 2001 Two-inch Integral-Reflector Lamps with Front Covers and GU5.3 or GX5.3 Bases
Energy Star V1.4: 2011 Program Requirements for Integral LED Lamps
Energy Star Technical Clarification: 2010 Integral LED Lamp Specification Technical Clarifications
ANSI NEMA ANSLG C78.377: 2008 Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted 30 samples of model number LCA12C18027K1. The samples were received by Intertek on January 31, 2012, in undamaged condition, and 30 samples were tested as received. The sample designations are D242141-61 through D242141-90.

DATES OF TESTS: February 14, 2012 through November 29, 2012.

SUMMARY

Model Number :	LCA12C18027K1
Model Description Category :	Decorative Candle
Intended to Replace:	25W Incandescent
Rated Life on Packaging:	25,000 Hours

Criteria	Result	Status
Operating Voltage	120.0 Vac	Complies
Minimum Light Output	184.3 Lumens	Complies
Lumen Efficacy	60.97 Lm/W	Complies
Power Factor	0.926	N/A
LED Operating Frequency	120.0 Hz	Complies
Noise	19.0 dBA	Complies
Maximum Lamp Diameter	1.246 in	Complies
Maximum Overall Length (MOL)	4.075 in	N/A
Minimum Operating Temperature	- 20℃	Complies
Maximum In-Situ Source Temperature	81.2 ℃	Complies
Lumen Maintenance at 3000 Hours Life	96.23%	Complies
Color Maintenance at 3000 Hours Life	Max Δ=0.002	N/A
Lumen Maintenance at 6000 Hours Life	94.23%	Complies
Color Maintenance at 6000 Hours Life	Max Δ=0.002	Complies

Criteria	
Transient Protection	Complies
Rapid Cycle Stress Test for 25,000 Hour Rating	Complies
Rapid Cycle Stress Test for 50,000 Hour Rating	Complies

Color Information

Property	Average	Status
Color Rendering Index (Ra)	84.3	Complies
CRI - R9	22.2	Complies
Duv	0.003	Complies
Correlated Color Temperature	2716 K	Complies for 2700 K
Chromaticity Coordinate - x	0.455	Complies
Chromaticity Coordinate - y	0.403	Complies
Chromaticity Coordinate – u’	0.262	--
Chromaticity Coordinate – v’	0.524	--