In Situ Temperature Measurement Test Report

For

LIGHT EFFICIENT DESIGN

(Brand Name: N/A)

188 S. Northwest HighwayCary, IL60013

LED Luminaires

Model name(s): LED-8024E30-A
LED-8024-NW-E27-A

Remark: The two models are the same product with two model names

Representative (Tested) Model: LED-8024E30-A

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Garman Mo

Engineer: Garman Mo
Date: Apr.19,2017

Review By:

Tommy Liang

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Table of Contents

1 General

1.1 Product Information

Brand Name	N/A
Model Number	LED-8024E30-A;LED-8024-NW-E27-A
Luminaire Type	LED Luminaires
Nominal Power	45W
Rated Initial Lamp Lumen	--
Declared CCT	3000K
LED Manufacturer	SAMSUNG
LED Model	SPMWHT541MXXXXXXXX
Sample Receipt Date	Jan 16,2017
Sample Number	GZE161214-AD1
Photo	

1.2 Standards or methods

The following standards are partly or totally used or referenced for test:

No.	Name
ANSI/UL 1598:2008	**Luminaires**

1.3 Equipment list

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-049	Power Meter	2016-07-07	2017-07-06
ST-R-401	Temperature Tester	2017-01-29	2018-01-28

2 Test conducted and method

2.1 Ambient Condition

Test was conducted in an ambient temperature of 25±5℃. Ambient temperature variations above or below 25℃ was subtracted from or added to temperatures recorded at points on the luminaire.
The ambient temperature was measured by a thermocouple which was immersed in 15ml of mineral oil in a glass container.

2.2 Temperature Stabilization

Temperatures were measured after they have stabilized when the test has been running for a minimum of 7.5 hours, or the test has been running for a minimum of 3 hours and three successive reading taken at 15 minutes intervals are with 1℃ of another and are not rising.

2.3 Thermocouples

Type J thermocouple was used for temperature measurement. The thermocouple was 0.05mm2(30AWG), and complied with the requirements specified in ASTM MNL 12 and limits of error specified in NIST ITS 90 and ISA MC96.1.

2.4 Thermocouples contact

Thermocouples were in contact with the TMP LED location described in LM-80 test report. In order to gain the maximum temperature, if appropriate, more than one thermocouple were contact in these locations. For details information, please refer to clause 3.3 for the photo of thermocouple contact.

3 Test Results

Test date	2017-01-17	Test Ambient	25.1 °C
Sample No.		LED Package Model	
GZE161214-AD1		SPMWHT541MXXXXXXXX	
LED driver of Each Lamp	Output voltage V	Measured LED working current (Max.) mA	
1	48.6	94.9	

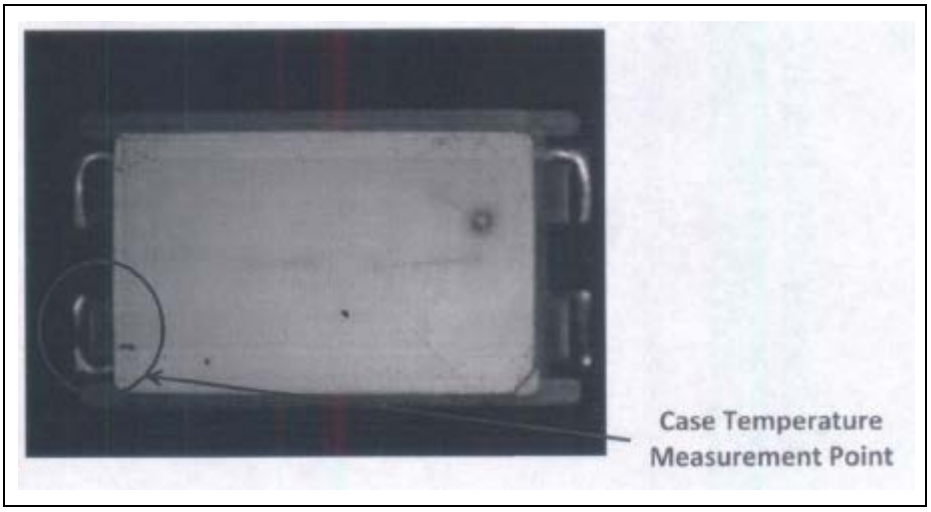
3.1 Test Data:

Input Vol.	120.0V	Input Current	0.4141A	Input Wattage	46.53W	Temperature stabilization time:	500 min

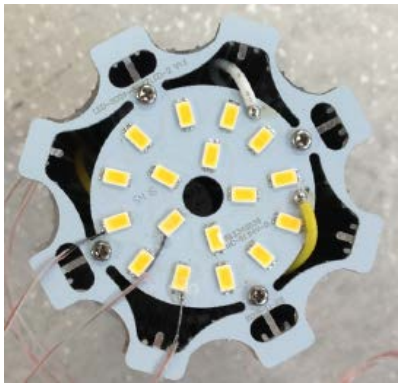
No.	Temperature (°C)		No.	Temperature (°C)		No.	Temperature (°C)	
	Measured	Corrected at 25°C		Measured	Corrected at 25°C		Measured	Corrected at 25°C
1	65.9	65.8	3	67.6	67.5	5	65.4	65.3
2	66.2	66.1	4	66.5	66.4	6	67.1	67.0
The highest in-situ measured temperature LED is 67.5°C								

3.2 Test Photo:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):



Results

Time (t) at which to estimate lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	86.66%
Reported L70 (hours):	>60000

****** END OF THE TEST REPORT******