



## **ISTMT Test Report**

For

**ABBlighting, Inc.**

1501 Industrial Way N. Toms River, NJ 08755.

**Model T led light**

**Model: MT100501-III**

**Laboratory: Leading Testing Laboratories**

**NVLAP CODE: 200960-0**

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Report No.: HZ16040051c

Review by:

Handwritten signature of April Zou in blue ink.

Engineer: April Zou  
May. 09, 2016

Approved by:



Handwritten signature of Jim Zhang in blue ink.

Manager: Jim Zhang  
May. 09, 2016

## Sample Photos



Sample view

### Equipment Under Test (EUT)

<b>Name</b>	: Model T Led Light
<b>Model</b>	: MT100501-III
<b>Electrical Ratings</b>	: 100~277Vac, 50/60Hz, 100W
<b>Product Description</b>	: 5000K, Aluminum Enclosure, Black Coating, Silver reflector Manufacturer of light source: Samsung Model of light source: 351B Quantity of LED light source: 48pcs
<b>Manufacturer</b>	: ABB Lighting (shanghai) Co., Ltd.
<b>Address</b>	: Room 1012, North Minch Fortune 108 Plaza, # 1839 Qixin road, Shanghai

### Test specifications:

<b>Date of Receipt</b>	: May. 01, 2016
<b>Date of Test</b>	: May. 07, 2016
<b>Test item</b>	: In-Situ Maximum Temperature
<b>Reference Standard</b>	: ANSI/UL 8750-2011 Light Emitting Diode (LED) Equipment for Use in Lighting Products ANSI/UL 1598-2010 Standard for Safety of Luminaire

### Test Summary:

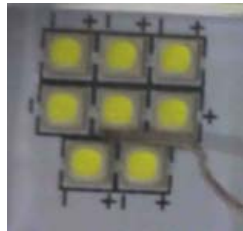
Sample Tested: MT100501-III

Test ambient temperature was 27.8 °C.

Test orientation was Light Down.

Model of light source: 351B

The stabilization time of the sample was 7.5 hours.



View of In-Situ Point- Ts



Location of In-Situ Point from overall view

To get the maximum temperature, Ts point is in middle of the LED board.



Tc Location for driver

Location of In-Situ Point from overall view

Input Voltage (V)	Input Power (W)	Tested LED source current (mA)	Measured Driver TC Maximum Temperature (Corrected to Ta=25°C)	Measured In-Situ Maximum Temperature (Corrected to Ta=25°C)
120.0	117.05	504.9	41.5	62.5
100.0	117.83	505.6	42.1	63.0
277.0	115.97	504.5	40.8	62.7

## EQUIPMENT LIST

Test Equipment	Model	Equipment No.	Calibration Date	Calibration Due date
Digital Power Meter	PF2010A	HZTE028-01	Jul. 17, 2015	Jul. 16, 2016
AC Power Supply	PCR 500L	HZTE001-08	Jul. 17, 2015	Jul. 16, 2016
Temperature Meter	TES1310	HZTE017-01	Jul. 17, 2015	Jul. 16, 2016
Temperature and humidity recorder	JR900	HZTE018-01	Jul. 21, 2015	Jul. 20, 2016
Multi-Meter	FLUKE 289	HZTE020-03	Nov. 10, 2015	Nov. 09, 2016

Table 1: Test Equipment List

## TEST METHODS

The luminaire was installed to simulate intended usage, in accordance with the manufacturer's instructions.

Temperatures were measured after they stabilized, when the test was run for a minimum of 7.5 h.

The tests were conducted in an ambient temperature of  $25 \pm 5$  °C. Ambient temperature variations above or below 25°C were respectively subtracted from or added to temperatures recorded at points on the luminaire. Temperatures recorded at points on a luminaire were measured by means of thermocouples.

The thermocouples had conductors no larger than No. 24 AWG (0.21mm<sup>2</sup>) and no smaller than No. 30 AWG (0.05mm<sup>2</sup>). Thermocouples complied with the requirements specified in ASTM MNL 12 and thermocouples as listed in the table of the limits of error specified in NIST ITS 90, or ISA MC96.1.

The luminaire was installed in the test box in the configuration that resulted in the highest operating temperatures, considering different trim and maximum lamp wattage combinations, lamp holder adjustment heights, and the like.

The test box was constructed of 12mm thick plywood as described below:

The test box was rectangular and had four sides and a bottom.

The four sides of the test box for a ceiling-mounted luminaire were a minimum distance of 8.5 in (215mm) from the nearest part of the lamp housing or heat-producing parts. The top edge of the sides of the test box were a minimum of 8.5 in (215mm) above the highest point of any permanently attached part of the lamp housing.

Thermal insulation of the loose-fill type was poured into the test box through the open top, until level with the top, without applying any compacting procedure.

The thermal insulation was conditioned to the density specified by the insulation manufacturer to obtain a required rated thermal resistance of Rsi 0.56 to 0.678 (R3.2 to R3.85).

All spaces around the luminaire and between it and the sides of the box were filled with the thermal insulation.

\*\*\* End of Report \*\*\*

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