Certificate#4810.01

In Situ Temperature Measurement Test Report

For

ASMART LIGHT CO., LTD

(Brand Name: ASMART)

506 N GARFIELD AVE SUITE#210 ALHAMBRA CA 91801

High-Bay Luminaires for Commercial and Industrial Buildings

Model name(s):
AST-PHB10-400WBML1A1-abeWD
Remark: "a" can be any two letters for housing colors; "b" can be "DMS", "DPS" or blank for Sensor provided or not; "e" can be any digits for CCT; "W" for wattage adjustable; "D" for CCT Tunable.
Representative (Tested) Model:
AST-PHB10-400WBML1A1-ab40WD

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

Test & Report By:

Arvin Qin

Engineer: Arvin Qin

Date: 2023-09-07

Review By:

Jason Luo

Manager: Jason Luo

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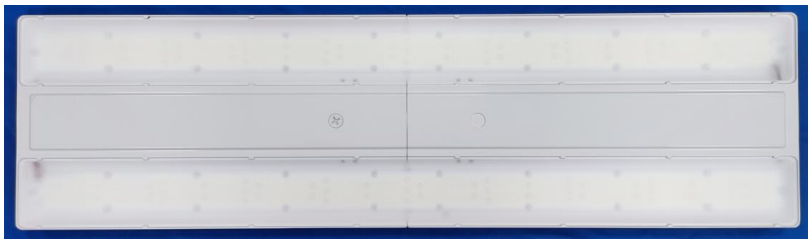
1 General

1.1 Product Information

Brand Name	ASMART
Model Number	AST-PHB10-400WBML1A1-abeWD
Luminaire Type	High-Bay Luminaires for Commercial and Industrial Buildings
Nominal Power	400W(Power adjustable)
Rated Initial Lamp Lumen	--
Declared CCT	4000K,5000K(Color tunable)
LED Manufacturer	Lumileds Holding B.V
LED Model	L128-3080RC35000E1 L128-5080RC35003P1
LED Driver Manufacturer	SHENZHEN Lifud ELECTRONICS CO.,LTD
LED Driver Model	LF-FAA200
Sample Receipt Date	2023-08-27
Sample Number	UTC2308050E-A1
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	Calibration Date
BL-009B	Power Meter	2022-09-28
BL003	Hybrid Recorder	2022-10-08

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	2023-08-31	Test Ambient	25.1 °C
Sample No.		LED Package Model	
UTC2308050E-A1		L128-3080RC35000E1 L128-5080RC35003P1	
LED driver of Each Lamp	Output voltage V	Measured LED working current (Max.) mA	
2	225	62.1 per die	

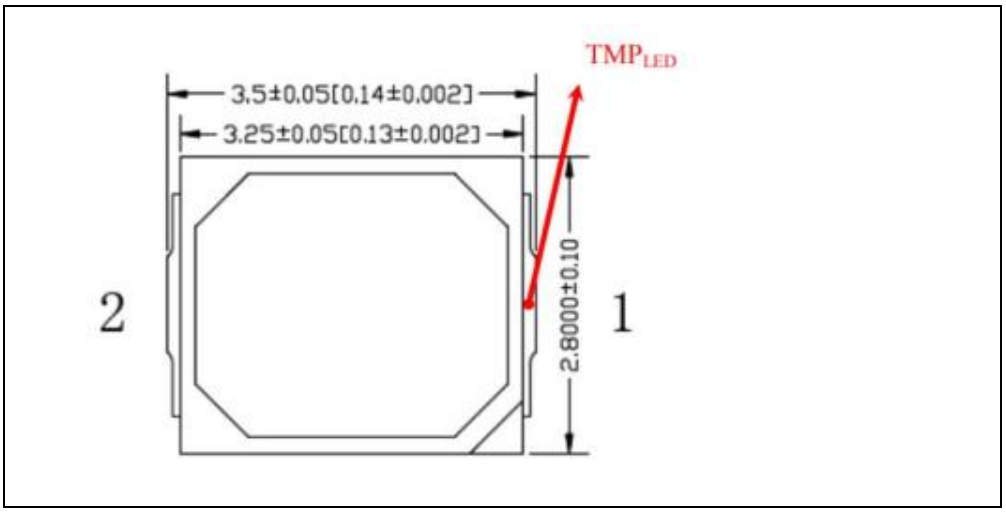
3.1 Test Data:

Input Vol.	120.0V	Input Current	3.327A	Input Wattage	398.87W	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	66.0	65.9	2	66.3	66.2	--	--	--
The highest in-situ measured temperature LED is 66.2 °C								

3.2 Test Photo:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):





Results

Time (t) at which to estimate lumen maintenance (hours):	36,000
Lumen maintenance at time (t) (%):	92.88%
Reported L90 (hours):	51,000

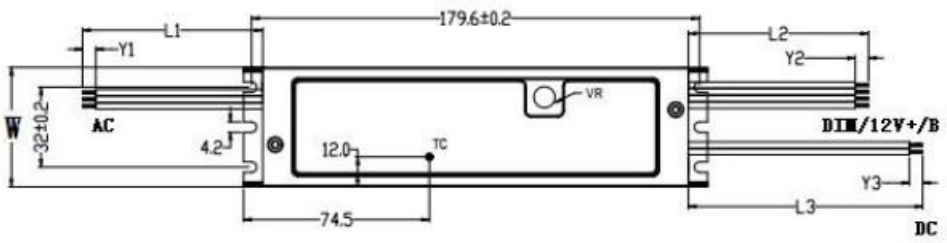
3.3 Test Data of LED Driver:

Input Vol.	120.0V	Input Current	3.327A	Input Wattage	398.87W	Temperature stabilization time:	500 min

No	Measured TC Temperature (°C)		Temperature Limited of Life ⩾ 50000 hours
	Measured	Corrected at 25°C	
1	58.4	58.3	82

3.4 Test Photo of LED Driver:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):



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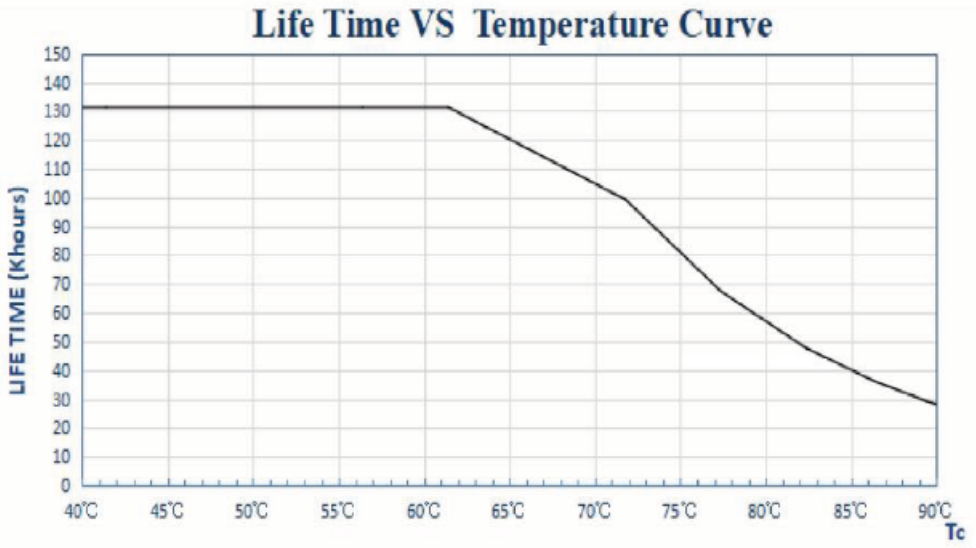

****** END OF THE TEST REPORT******