

In Situ Temperature Measurement Test Report

For

Beyond LED Technology (Brand Name: Beyond)

1939 Parker Court, Stone Mountain, GA 30087

Direct Linear Ambient Luminaires

Model name(s): AST-LA05-40W4FTBTA1-abc30/40/50

Remark: "a" can be any two letters for Housing color;
"b" can be "R", " " "M", "P" or blank for ACPIR sensor, DC Motion Sensor provided, DCPIR
Sensor provided or not;
"c" can be "E" or blank for Emergency Driver provided or not;
"d" can be any digits for CCT.

Representative (Tested) Model:

AST-LA05-40W4FTBTA1-abc30/40/50 (Setting at 3000K)

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

Test & Report By:

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Engineer: WinnyWu

Date: 2025-05-23

Review By:

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Manager: Jason Luo

Table of Contents

1 General	3
1.1 Product Information	3
1.2 Standards or methods	4
1.3 Equipment list	4
2 Test conducted and method	4
2.1 Ambient Condition	4
2.2 Temperature Stabilization	4
2.3 Thermocouples	4
2.4 Thermocouples contact	5
3 Test Results	6
3.1 Test Data:	6
3.2 Test Photo:	6
3.3 Test Data of LED Driver:	8
3.4 Test Photo of LED Driver:	8

1 General

1.1 Product Information

Brand Name	ASmart AST-LA05-40W4FTBTA1-
Model Number	abc30/40/50 Direct Linear Ambient
Luminaire Type	Luminaires 40W
Nominal Power	--
Rated Initial Lamp Lumen	3000K,4000K, 5000K (Color tunable)
Declared CCT	Lumileds Holding B.V. L128-
LED Manufacturer	3080RA35002U1 L128-
LED Model	5080RA35002U1 SHENZHEN FOSEN TECHNOLOGY
LED Driver Manufacturer	CO.,LTD FS-TMF046B0320TCCP-12V 2025-05-13
LED Driver Model	UT U2505018E-B1
Sample Receipt Date	
Sample Number	
Photo	
	

1.2 Standards or methods

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

No.	Name
ANSI/UL 1598:2021	Luminaires

1.3 Equipment list

Equipment ID	Equipment Name	Calibration Date
BL-009B	Power Meter	2024-08-23
BL003	Hybrid Recorder	2024-08-20

2 Test conducted and method

2.1 Ambient Condition

Test was conducted in an ambient temperature of $25 \pm 5^{\circ}\text{C}$. Ambient temperature variations above or below 25°C 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°C 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

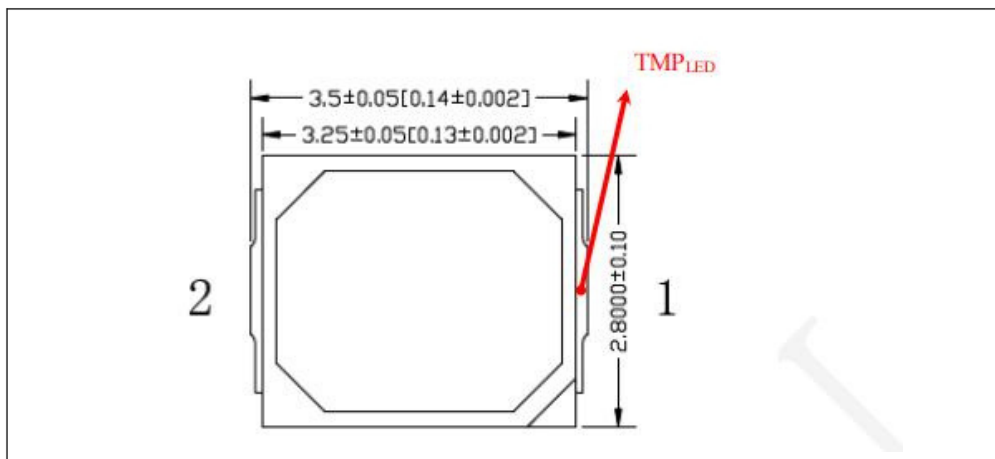
Testdate	2025-05-15	TestAmbient	25.1°C
Sample No.		LED Package Model	
UT U2505018E-B1		L128-3080RA35002U1	
LEDdriverofEachLamp	OutputvoltageV	Measured LED working current (Max.) mA	
1	117.7	78.5	

3.1 Test Data:

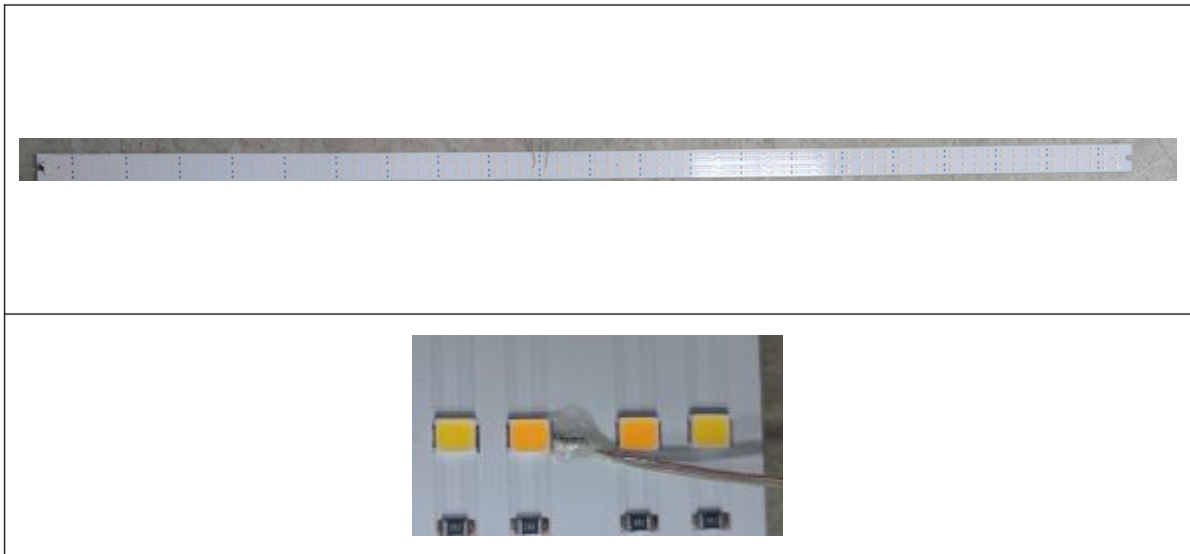
InputVol.	120.0V	InputCurrent 0.324A		InputWattage	38.79W	Temperature stabilization time:	500 min	
No.	Temperature(°C)		No.	Temperature(°C)		No.	Temperature (°C)	
	Measured	Corrected at25°C		Measured	Corrected at25°C		Measured	Corrected at 25°C
1	57.7	57.6	2	57.1	57.0	--	--	--
The highest in-situ measured temperature LED is 57.6°C								

3.2 Test Photo:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):



Results

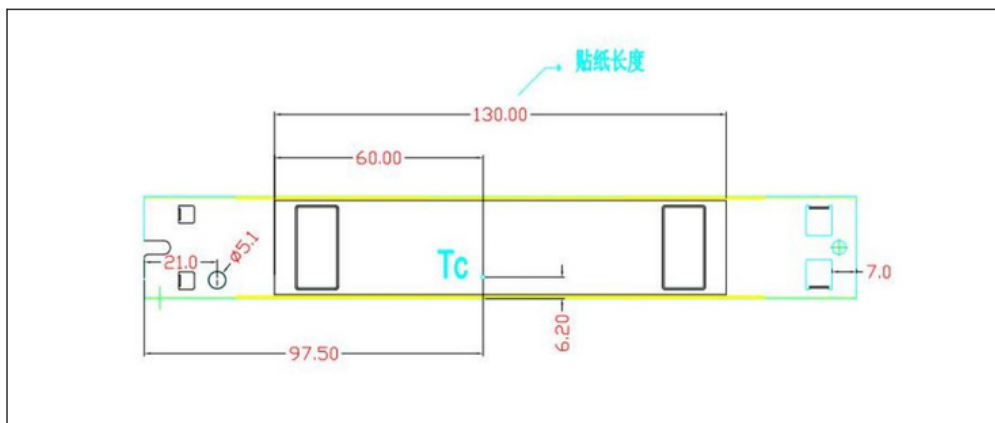
Time (t) at which to estimate lumen maintenance (hours):	36,000
Lumen maintenance at time (t) (%):	92.88%
Reported L90 (hours):	51,000

3.3 Test Data of LED Driver:

Input Vol.	120.0V	InputCurrent	0.324A	InputWattage	38.79W	Temperature stabilization time:	500min
No	MeasuredTCTemperature(°C)			TemperatureLimitedofLife≥50000hours			
	Measured		Correctedat25°C				
1	56.6		56.5	80			

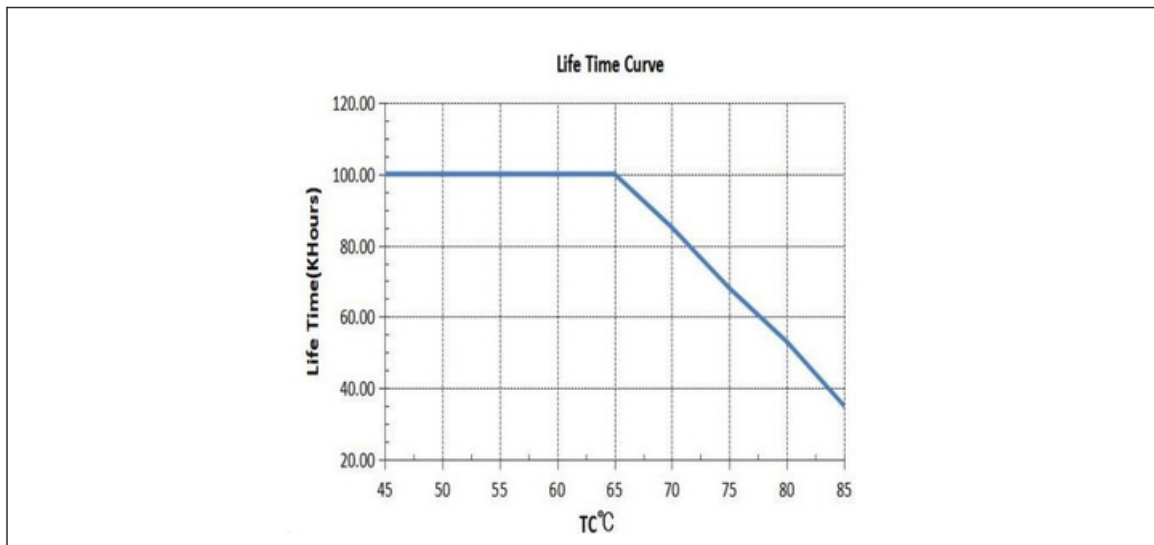
3.4 Test Photo of LED Driver:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):





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