

# Test Report

**Client** : GEMA DEVELOPMENT LTD  
**Address** : Room No.2006, MingHui Building, No.666 JinYu Road, Yinzhou, Ningbo, China

**Description of the submitted sample(s):**

Sample Name : Work light 360  
Model/Type : 2597  
Trademark : N/A  
Ratings : 2\* 3V (2\*AA Battery)  
Test Item : LM-79-19  
State of Sample(s) : Normal  
Sample Quantity : 1 PCS  
Manufacturer : GEMA DEVELOPMENT LTD  
Address : Room No.2006, MingHui Building, No.666 JinYu Road, Yinzhou,  
Ningbo, China  
Sample Received Date : 2025-08-15  
Sample tested Date : 2025-08-15  
Test Standard : LM-79-19  
Test Laboratory : Shenzhen AOCE Electronic Technology Service Co., Ltd  
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu  
Testing location : Industrial Park, Fuhai Street, Baoan District, Shenzhen,  
Guangdong, China  
Remark : The tested sample(s) and the sample information are provided by  
the client.

Tested by:

*Bruce Lin*

Approved by:

*Robin Lin*

Robin Liu  
Lab Supervisor  
2025-08-20

Date :

**Summary of Result**

Test Item	Test Result	
	Luminous Flux (lm)	Correlated Color Temperature (K)
Integrating Sphere Test	625.151	4981

## **1 Test Condition**

### **1.1 Air Temperature**

The ambient temperature in which measurements are being taken shall be maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , measured at a point not more than 1 m from the SSL product and at the same height as the SSL product. The temperature sensor shall be shielded from direct optical radiation from the SSL product and optical radiation from any other source. If measurements are performed at other than this recommended temperature, this is a non-standard condition and shall be noted in the test report.

### **1.2 Thermal Conditions for Mounting SSL Products**

The method of mounting can be the primary path for heat flow away from the device and can affect measurement results significantly. The SSL product under test shall be mounted to the measuring instrument so that heat conduction through supporting objects causes negligible cooling effects. If the SSL product under test is provided with a support structure that is designated to be used as a component of the luminaire thermal management system, the product shall be tested with the support structure attached. Any such support structure included in the measurement shall be reported.

### **1.3 Air Movement**

The incidence of air movements on the surface of a SSL product under test may substantially affect electrical and photometric values. Air flow around the SSL product being tested should be such that normal convective air flow induced by device under test is not affected.

### **1.4 Waveshape of AC Power Supply**

The AC power supply, while operating the SSL product, shall have a sinusoidal voltage waveshape at the prescribed frequency typically 50/60 Hz or 50 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

### **1.5 Voltage Regulation**

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

### **1.6 Seasoning**

For the purpose of rating new SSL products, SSL products shall be tested with no seasoning.

### **1.7 Stabilization**

Before measurements are taken, the SSL product under test shall be operated long enough to reach stabilization and temperature equilibrium. The time required for stabilization depends on the type of SSL products under test. The stabilization time typically ranges from 30 min to 2 or more hours for large SSL products.

### **1.8 Operating Orientation**

The SSL product under test shall be evaluated in the operating orientation recommended by the manufacturer for an intended use of the SSL product. Stabilization and photometric measurements of SSL products shall be done in such operating orientation.

## **2 Test Method**

### **2.1 Integrating Sphere Measurement**

The integrating sphere system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The system is calibrated by standard lamp before measurement weekly. The standard lamp has been calibrated regularly and traced to the National Primary Standard.

The  $4\pi$  geometry was used to measure total luminous, luminous efficacy, chromaticity coordinates, correlated color temperature, and color rendering index, the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm. The product was operated in its intended orientation and was recorded in the report.

### **2.2 Goniophotometer Measurement**

The goniophotometer system is calibrated by standard lamp before measurement weekly. The standard lamp has been calibrated regularly and traced to National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous efficacy, luminous intensity distribution, and color angular uniformity, which were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. The product was operated in its intended orientation and was recorded in the report.

### **2.3 Electrical Measurement**

According to ANSI C82.77-2002, the measurement was made using a digital power meter and power supply, the SSL product under test was operated at rated voltage and stabilized enough before measurement. The total harmonic distortion of current and power factor can be calculated from the digital power meter. The digital power meter was calibrated regularly and traced to National Primary Standards

## **3. Test Equipment**

Equipment Name	Manufacturer	Model No.	Equipment No.	Calibration Due Date
2m Integrating Sphere	SENSING	SL-300	AOC-S-126	2026-04-13
Horizontal Distribution Photometer	SENSING	GMS1800D	AOC-S-124	2026-04-13
Standard Lamp	SENSING	220V/150W	AOC-S-156	2026-06-05
Digital power meter	HENGHE	WT310E	AOC-S-012	2026-04-13
Digital power meter	SENSING	UI2008	AOC-S-123	2026-04-13
Digital power meter	SENSING	UI2021	AOC-S-123	2026-04-13
DC source	OYHS	OYHS-Z120V-50A	AOC-S-062	2026-04-13
Variable frequency power supply	WOSEN	BP6005	AOC-S-129	2026-04-13
Variable frequency power supply	AIPUSI	KDF-500	AOC-S-130	2026-04-13
Oscilloscope	TEKTRONIX	MDO3012	AOC-S-028	2026-04-13

## Photo Document



Fig.1



Fig.2



Fig.3



Fig.4



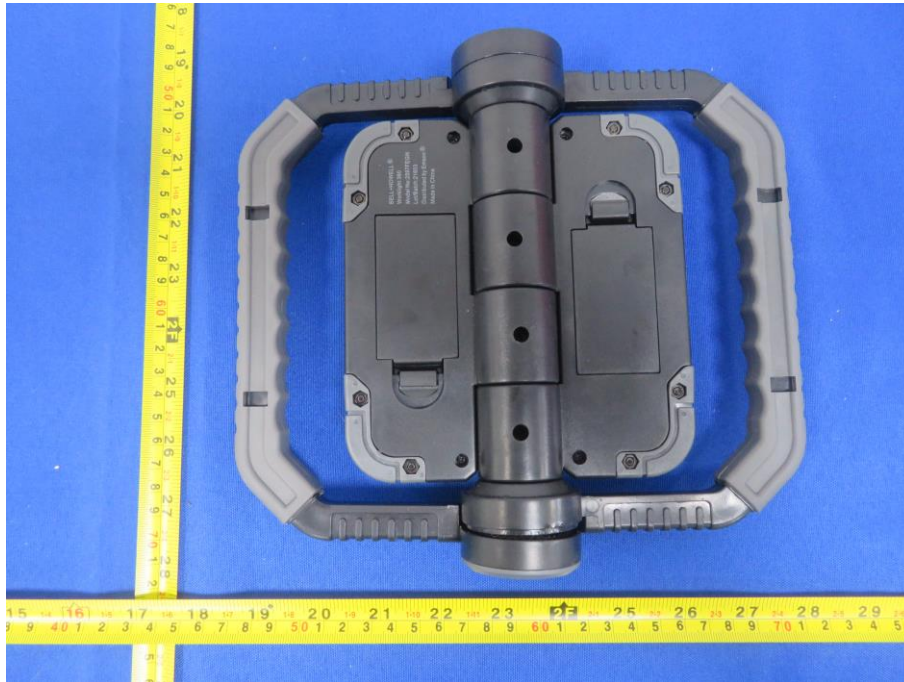


Fig.5

-- End of Report --

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