



# MALMS™ Photometric Bench Tester and Workshop Tester

## Advantages

The MALMS™ Photometric Bench and Workshop Testers are specifically designed to quickly and accurately measure the photometric performance of light fittings. The MALMS™ range of products will enable every light fitting to be tested before it is installed on the airfield. This will ensure compliance with maintenance and serviceability levels specified in national and international regulations before they are installed on the runway or taxiway contributing to:

1. An efficient airfield lighting maintenance process and;
2. Traceability – MALMS™ testers provide a comprehensive audit trail for the airfield lighting maintenance process and can be configured to show a full history for the lights being maintained;
3. Accurate and efficient management information all captured and recorded electronically (no manual input) and;
4. Safety – MALMS™ testers provide the means to demonstrate that an airport is operating safely.
5. Significant verifiable Cost Savings: Efficient AGL management process + accurate information + regulatory compliance + traceability + electronic data capture + safety all contribute directly to reduced costs and provide a rapid return on investment.



## The MALMS™ product range comprises of two systems:

**MALMS™ Workshop Tester:** Compact and self-contained system designed for airports with limited space comprising a 3.0 meter tunnel and an eight-sensor array.

**MALMS™ Photometric Bench Tester:** An enhanced version of the Workshop Tester which measures photometric performance by the method specified by ICAO Annex14 and FAA Advisory Circular Spec 150/5340-46A; and provides the facility to store and review results. Measurements are taken at 1-degree intervals in both the vertical (elevation) axis and horizontal (azimuth) axis with a twelve-sensor array at a distance of 4.5 meters through a specially built test tunnel.

**Both systems** can measure tungsten halogen and LED light fittings with near-laboratory accuracy but requiring only a small floor area and no special dark room.

Included with these systems is the user-friendly MALMS Luminaire software package. This provides easy to use data analysis facilities and the functions required to manage AGL maintenance both on the runway and in the refurbishment workshop.

**Over 50 systems** are now used by major international airports around the world including London Heathrow Airport.



## Easy to Use

The automatic test sequence is as follows and takes approximately 30 seconds per light:

- Connect power lead and place light on turntable
- Test started automatically by the closure of the turntable access door
- Tester powers up fixture to confirm lamp(s) are functional
- Rotate fixture until side A points to sensors and measures
- Rotate fixture until side B points to sensors (if bi-directional fixture) and measures
- Display test results as Pass or Fail
- Remove tested light
- On the computer screen the results for both Side A and Side B are shown including:
  - Pass or Fail for both sides
  - Average Main Beam Intensity (Cd)
  - Vertical Beam Alignment error (Elevation °)
  - Horizontal Beam Alignment error (Azimuth °)

## Tester Specifications

Each system (MALMS™ Photometric Bench Tester and MALMS Workshop Tester) comprises:

### MALMS Test Cabinet

- Floor mounted enclosed unit with integral safety door
- Provide a constant current supply of 6.6 Amps and power supply of up to 350 Watts
- Display screen showing voltage, power and current readings
- Pass / Fail Display
- Can mount either 8 or 12 Inch inset fixtures or elevated fixtures, using specially designed adaptor plates
- Dimensions 600mm wide x 600mm depth x 1125mm high
- A laser calibration plate is supplied as standard for mechanical calibration of the system

### Light sensor array

The Light Sensor Array comprises array of calibrated photometers that are available in two formats:

- **MALMS™ Photometric Bench Tester**  
An array of photometers designed for mounting 4.5m from the turntable, comprising: 5 each Dual Light Sensors with 6 gain ranges 0.01 to 6000 Lux and 1 Dual Light and Color Sensor.



- **MALMS™ Workshop Tester**

An array of photometers designed for mounting 3.0m from the turntable, comprising: 3 each Dual Light Sensors with 6 gain ranges 0.01 to 6000 Lux and 1 Dual Light and Color Sensor.

### Test Tunnel

The test tunnel frame is made from steel tubing with plastic connectors. The tunnel sides are made from wood and painted with non-reflective black paint.

### Computer system

The MALMS™ Photometric Bench and Workshop Tester Systems are supplied with an easy to use personal computer system pre-configured with Windows. No user set-up required.

### MALMS™ Luminaire Software

A user friendly software package that runs under Windows and includes the following functions:

- Identification of Results by time and AGL manufacturer, model and serial number
- Input of information relating to the test for example: Test Reference Number (user defined), Operator Comments (free text), Work Done (prior to test)
- Information Relating to Fixtures. Each fixture can be specified by Manufacturer and Model Number
- Review of Results Database. Saved results and reports can be viewed and printed or output to an Excel spreadsheet.
- ISOCANDELA image can be reviewed for both sides of the fixture (MALMS Photometric Bench Tester only)

This software is supplied as standard with MALMS™ Photometric Bench Tester and is optional with MALMS™ Workshop Tester.



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