

# Light Meter (Foot Candles)

**840021**

# **Light Meter (Foot Candles) - 840021**

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## INTRODUCTION

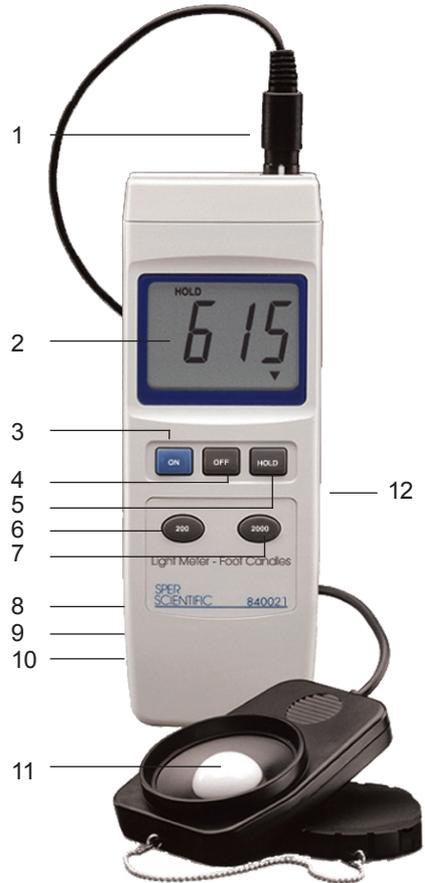
Compact and portable, your new meter can be used to monitor light levels or check the FC level of a particular light source. The sensor's exclusive photo diode and color correction filter meets the C.I.E. photopic spectrum.

Sper Scientific light meters are cosine corrected for a quick and accurate response. Large easily legible 4 digit LCD. The meter has an external zero adjustment, data hold, low-battery indicator, and a moisture resistant front panel.

Comes with soft carrying case, detachable light sensor, photo-sensor cover, instructions and a 9-Volt battery.

## PANEL DESCRIPTION

1. Sensor Input & Sensor Plug
2. Display
3. On Button
4. Off Button
5. Hold Button
6. 200 Range Button
7. 2000 Range Button
8. Tripod Screw (on back)
9. Stand (on back)
10. Battery Cover (on back)
11. Photo Sensor
12. Zero Setting Terminal



## MEASUREMENT PROCEDURES

1. Insert the **SENSOR** plug into the **SENSOR INPUT** socket.
2. Turn the meter on using the **ON** button.
3. Remove the lens cap from the **PHOTO SENSOR**.
4. Press the **200 RANGE** button for measurements of 0 ~ 199.9 FC, or select the **2000 RANGE** button for measurements of 200 ~ 1999.9 FC. If you are uncertain about which range to use, select the highest range.
5. Range Overload is indicated when “1” appears on the left side of the display. If this occurs, switch to the highest range or discontinue use.
6. Point the **PHOTO SENSOR** toward the source and read the results on the display. Divide the meter reading by the factor of .0929 to convert FC results to LUX.
7. Push the **HOLD** button to freeze the reading in the display. The word “HOLD” appears on the LCD. Press the **HOLD** button again to exit this function.
8. Press the **OFF** button to turn the unit off.

### Notes

- Keep the lens cap on the **PHOTO SENSOR** at all times except when actually taking a reading.
- Fluctuations in the reading are generally due to shadows or fluctuations in the line voltage. Ambient temperature, drafts and ventilation also affect the luminous flux output.
- Avoid range overload and do not store in areas of high temperature and / or humidity. Remove the battery for long-term storage.

## ZERO ADJUSTMENT & CALIBRATION

**IMPORTANT:** During adjustment, be sure to use only the terminal marked “ZERO.” The unmarked terminals are for professional laboratory calibration only. Tampering with the unmarked terminals will result in inaccurate readings and require professional calibration of the meter.

1. With the sensor cover securely in place and the meter turned on, the LCD display should indicate “000” or “00.0” depending on the selected range.
2. A slight variation will not affect readings; however, if a precise reading is required you may use the **ZERO SETTING** terminal to reset the unit.
3. To make an adjustment, press the **200 RANGE** button and cover the **PHOTO SENSOR**.
4. Using a small screwdriver, turn the **ZERO SETTING** terminal until “00.0” appears on the LCD.
5. To maintain accuracy, annual laboratory calibration is recommended. For calibration service, contact SPER SCIENTIFIC.

## BATTERY REPLACEMENT

1. Replace the battery when the low battery icon is displayed.
2. In-spec measurements may be made for several hours after the low battery indicator appears.
3. Remove the **BATTERY COVER** screw and slide the cover off.
4. Replace the battery with a fresh 9V battery (alkaline or heavy duty).

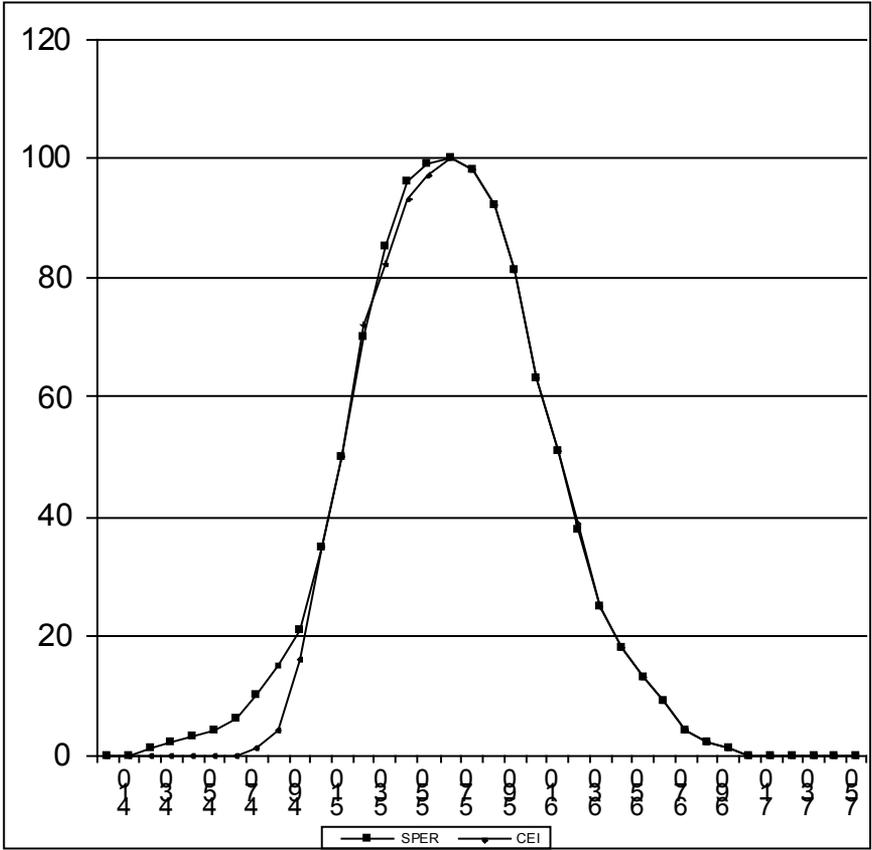
# SPECIFICATIONS

Unit of Measure	Range	Resolution	Accuracy
Foot Candle	200 Range = 0 ~ 199.9	0.1	±5% + 4 digits
	2000 Range = 200 ~ 1999	1	

Electronic Specifications (23 ± 5°C): Tested under the environment RF Field Strength less than 3 V/M, and frequency less than the 30 MHz only.

Display	Maximum reading 1999
Overload Indicator	"1" is displayed on the left of the LCD
Power Supply	One 9V battery, current approx. DC 3mA
Operating Environment	32 ~ 122°F (0 ~ 50°C), less than 80% RH
Dimensions	7¾" × 2¾" × 1¼" (197 × 70 × 32 mm)
Weight	10 oz (283 g)

# LIGHT SPECTRUM CHART



## **WARRANTY**

Sper Scientific warrants this product against defects in materials and workmanship for a period of **five (5) years** from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will break the waterproof seal and void the warranty.

To obtain warranty service, ship the unit postage prepaid to:

**SPER SCIENTIFIC LTD.**  
8281 East Evans Road, Suite #103  
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at [www.sperwarranty.com](http://www.sperwarranty.com) within 10 days of purchase.