Eagle670 A670NMFLASH2

Eagle670 v1.0-3.0 670 nm Deep Red LED Light Flashlight Instruction Manual

1. Introduction

Thank you for choosing the Eagle670 v1.0-3.0 670 nm Deep Red LED Light Flashlight. This manual provides essential information for the safe and effective use of your device. Please read it thoroughly before operation and retain it for future reference.

The Eagle670 flashlight is designed to emit a precise 670 nanometer deep red light, verified by USA laboratory testing. It features two power settings and includes a foam spacing tube for consistent application.

2. Safety Information

Important Disclaimer: This device has not been evaluated by the FDA and is not intended to diagnose, treat, cure, or prevent any disease or health condition. Consult with a healthcare professional for any medical concerns.

- Do not look directly into the LED light for extended periods.
- Keep out of reach of children.
- Do not expose the device to water or extreme temperatures. This device is not water resistant.
- Use only the specified battery type (3 AAA batteries).
- If the device malfunctions or shows signs of damage, discontinue use immediately.

3. Package Contents

- Eagle670 v1.0-3.0 670 nm Deep Red LED Light Flashlight
- Foam Spacing Tube

Note: 3 AAA batteries are required and are not included in the package.

4. Setup

4.1 Battery Installation

1. Unscrew the tail cap of the flashlight.
2. Insert 3 AAA batteries into the battery compartment, ensuring correct polarity (+/-).
3. Screw the tail cap back on securely.

4.2 Attaching the Foam Spacing Tube

The included foam spacing tube helps maintain a consistent 3-inch distance from the light source for specific applications.

1. Gently slide the foam spacing tube onto the front end of the flashlight.
2. Ensure it is seated firmly but not overly tight.

Image: Eagle670 flashlight shown with the included foam spacing tube.

Image: Illustration of sliding the foam spacing tube onto the flashlight for proper spacing.

5. Operation

5.1 Power Settings

The Eagle670 flashlight features two distinct power settings:

- **Low Setting:** Provides 8mW/cm² of light intensity when used with the 3-inch spacing tube.
- **High Setting:** Provides 40mW/cm² of light intensity when used with the 3-inch spacing tube.

To switch between settings, press the power button located on the tail cap. Each press cycles through Low, High, and Off.

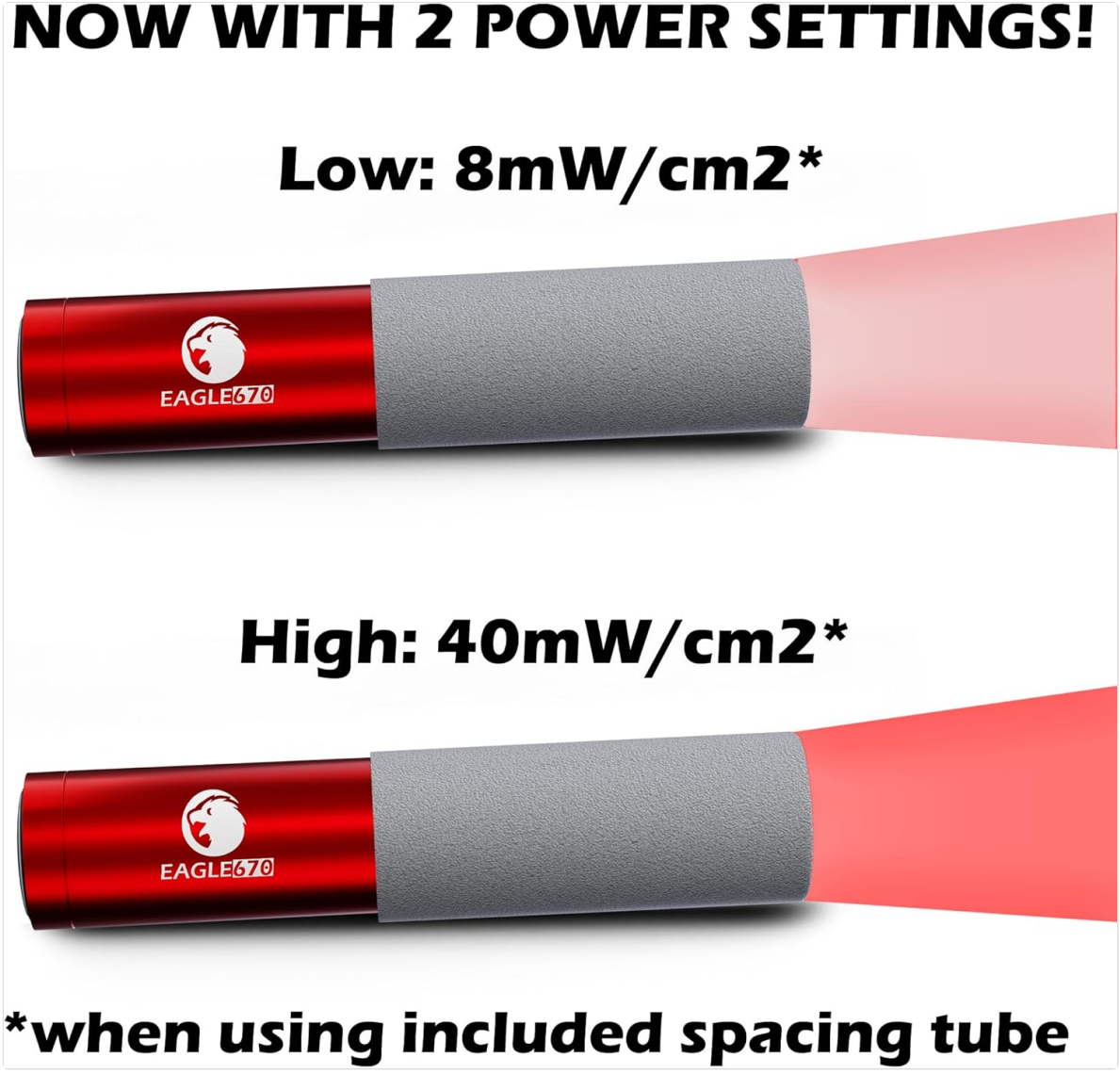


Image: Visual representation of the Eagle670 flashlight operating at Low (8mW/cm²) and High (40mW/cm²) power settings with the spacing tube.

5.2 General Usage

- Hold the flashlight steady during use.
- For applications requiring specific distances, utilize the foam spacing tube to maintain approximately 3 inches from the target area.
- The 670nm deep red light contains no blue light spectrum.
- This flashlight can be used for various applications needing 670 nm light, including preserving night vision or reducing blue light exposure from other sources.

6. Maintenance

- **Cleaning:** Wipe the flashlight body with a soft, dry cloth. Do not use abrasive cleaners or immerse in liquids.
- **Battery Replacement:** Replace batteries when the light output diminishes or the flashlight fails to turn on. Ensure to use fresh AAA batteries.
- **Storage:** Store the flashlight in a cool, dry place away from direct sunlight and extreme temperatures. Remove batteries if storing for extended periods to prevent leakage.

7. Troubleshooting

Problem	Possible Cause	Solution
Flashlight does not turn on.	Dead or incorrectly inserted batteries.	Replace batteries with fresh AAA batteries, ensuring correct polarity.
Light output is dim.	Low battery power.	Replace batteries.
Cannot switch between Low and High settings.	Faulty switch or low battery power.	Ensure batteries are fresh. If the issue persists, contact customer support.
Foam spacing tube does not fit or is loose.	Incorrect placement or damaged tube.	Ensure the tube is slid onto the front end of the flashlight correctly. If damaged, contact customer support.

8. Specifications

Feature	Detail
Model Number	A670NMFLASH2
Wavelength	670 nm (Deep Red)
Light Source Type	LED
Power Settings (with 3" spacing tube)	Low: 8mW/cm², High: 40mW/cm²
Power Source	3 AAA Batteries (not included)
Voltage	4.5 Volts (DC)
Material	Aluminum
Color	Red
Item Weight	1.44 ounces (without batteries)
Product Dimensions	3.7"D x 1"W x 1"H
Water Resistance Level	Not Water Resistant
UPC	195893150861

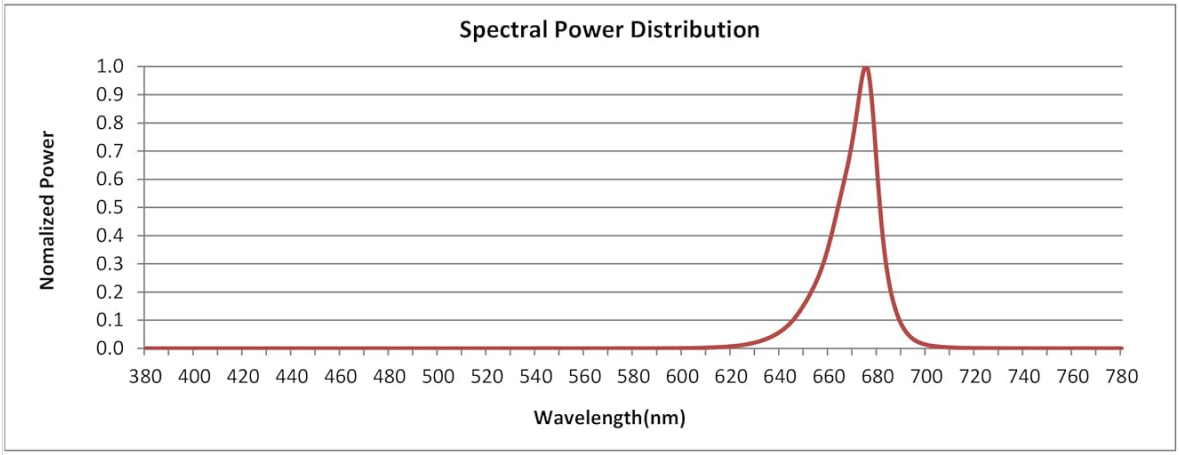
Image: Eagle670 flashlight highlighting its compact size (3.35" long) and light weight (1.48 oz without batteries).

8.1 Laboratory Verification

The Eagle670 flashlight's 670nm wavelength accuracy has been verified by an accredited laboratory in California, confirming a peak wavelength within 5nm of 670nm.

Image: Eagle670 flashlight emitting a red light beam, illustrating its laboratory-tested spectrum.

Colorimetry Test Results



CRI & CCT

x	0.7236
y	0.2751
u'	0.5963
v'	0.5101
CRI	18.90
CCT	1000
Duv	0.26668

R Values

R1	12.10
R2	77.26
R3	33.70
R4	-10.93
R5	12.64
R6	80.36
R7	13.56
R8	-67.17
R9	-226.58
R10	76.70
R11	-3.88
R12	93.19
R13	34.83
R14	58.22
R15	-24.92

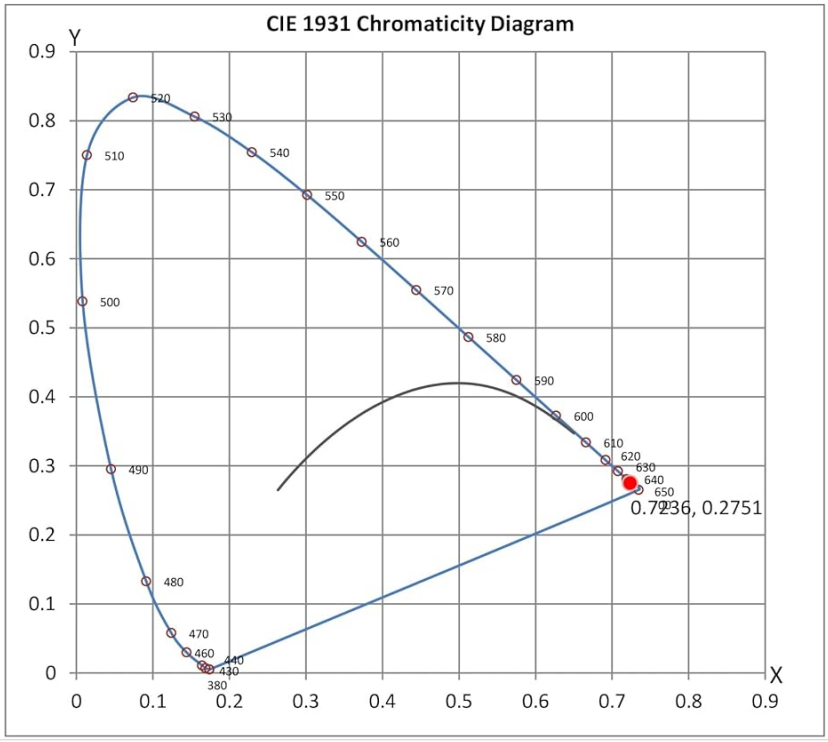


Image: Graph displaying the Spectral Power Distribution and CIE 1931 Chromaticity Diagram from the colorimetry test results.

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Report No: L062212202
NVLAP TESTING
NVLAP LAB CODE 200927-0

General Information	
Manufacturer:	Eagle670
Model Number:	A670NMFLASH-B
Driver Model Number:	BATTERY

Test Summary	
Color Redering Index:	18.9
Correlated Color Temperature:	1000
Peak Wavelength	675
Input Voltage (VAC/60Hz):	N/A
Input Current (Amp):	N/A
Input Power (W):	N/A
Input Power Factor:	N/A
Current ATHD (%):	N/A

Test Condition	
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	0:35

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

Image: Table summarizing the laboratory test conditions and equipment used for the Eagle670 flashlight.

9. Warranty and Support

9.1 Limited Warranty

The Eagle670 flashlight comes with a one-year limited warranty covering manufacturer's defects from the date of purchase.

9.2 Customer Support

For any questions, concerns, or warranty claims, please contact Eagle670 customer support through the retailer where the product was purchased.