PHILIPS

Projection lamps

How to quickly detect the **Philips quality?**

Many compatible lamp suppliers are offering inferior quality products for your projector. Still they claim quality and light output on par with the original Philips lamp. How to figure it out? Testing for at least a year and buying an expensive light meter, would give you the answer. However, here we explain you how to easily detect who is really living up to their claims and in the end is the best buy. All you need is that smartphone in your hand.

Your smartphone shows to be as accurate as a light meter.

The callibrated light meter showed **78% more light** generated by the Philips lamp versus the compatible product. A value recognized from earlier extensive benchmarkings. The three smartphones used in this test, showed to be **99% accurate** in detecting this difference. So convince yourself that Philips is the best buy on the longer run. Read on the get more details on how to perform the test.

How to perform the test

What you need:
- A new Philips lamp (check our website for genuine dealers)
- A compatible lamp (available on popular e-commerce platforms)
- A smartphone with one of the indicated light meter apps
- A projector

How to measure:
1. It's important that every measurement is taken on exactly the same way, therefore mark a spot in the middle of your projection screen or area and place your smartphone always perpendicular to the lightbeam for optimal results.
2. Install the compatible lamp in your projector according to the instructions provided with the lamp.
3. Turn on the projector and measure the light intensity. Note this number down as **measurement 1.**
4. Turn off the projector, let the lamp cool down and install the Philips branded lamp according to the instructions.
5. Turn on the projector and measure the light intensity. Note this number down as **measurement 2.**
6. Turn off the projector and measure the ambient light (on exactly the same spot). This is **measurement 3.**

Fast facts

Hardware:
- Minolta CL-200 lux meter
- Huawei P9 Lite & P20
- Apple iPhoneX
- EPSON EB-575W
- PHILIPS lamp UHP 215W E21.3
- Compatible lamp bought on market

Apps:
- Playstore Lux Meter (Light Meter)
- Appstore: Light Meter LM-3000

Measurement 1: Compatible (lamp + ambient)

Measurement 2: Philips (lamp + ambient)

Measurement 3: Ambient light to correct

How to draw the conclusion:
Light follows simple mathematics. If 1 light source is generating 100 lux, adding exactly the same ligth source will give you 200 lux. This means we can define the light level from the projection lamp without the need to perform the measurement in the dark. In our test we therefore need to distract the ambient light measurement (3) from both 2 lamp measurements. This is giving us the light level of the 2 projector lamps

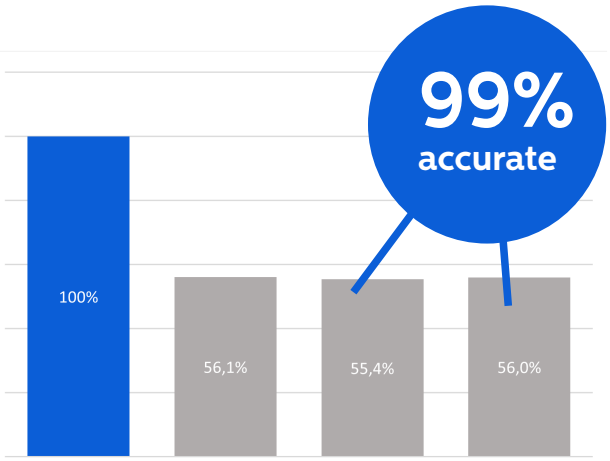
Here we take the light meter measurements, to find out Philips lamp gives **78% more light:**

Compatible lamp: 796 - 414 = **396 lux**
Philips lamp: 1095 - 414 = **683 lux**

Smartphone measurements

The two smartphones with Android app, showed very accurate absolute values, as you can see in the pictures. However this is not to be generalized.

Best results are obtained by calculating the ratio between the two lamps. The callibrated light meter shows the light level of compatible lamp is 56,1%, all used smartphones are extremely close to this level. Hence **capable of detecting the Philips quality.**



Tips and tricks for Iphone owners

With the used Iphone X, it was not easy to find a reliable app for the measurements. The indicated light meter app is giving very accurate results and we suggest to use only that app. The app will request you to create a “diffuser” and add it on the selfie camera.
Cut a piece of paper and attach it with some tape to your phone like in this picture. Good luck!

Frequently Asked Questions:

Why is the amount of light (the brightness) so important?
The amount of light is defining for a very large extend the quality of your projector image. With a brighter lamp you can enjoy your projector in lighter rooms, have higher contract,... However not so many users are aware that the light coming out of a projector is degrading. On top less experienced users tend to keep using their projector until the light source has failed (3000-5000h). Typically at this moment only 30-40% of the initial light was still coming out of your projector. Any new lamp you install will show a brighter picture compared to the previous situation, but with a new Philips lamp you can bring your projector closest to new. Easily said**: the brighter the lamp, the longer you can enjoy a good quality image**. A PHILIPS lamp most probably last twice as long as compatible lamps, while you can enjoy much better image quality.

Can you detect the brightness difference with your eyes?
The human eye is not easily capable of defining light levels, however it is strong in comparing light levels in case you place them next to each other. That's why in the projection industry mostly two beamers are placed next to each other to evaluate. So **only in case you can compare the light levels next to each other**, you will be able to see the difference yourself. Therefore we suggest you to use the smartphone.

What is lux? And what can I do with it?
Lux is the unit for illuminance, easily said: the amount of light projected on a given surface. This measurement value as such is not important in this case. It's best to compare the values to each other **to define what's the brightest lamp**.

Why is it important to measure always on the exactly the same spot?
Lux is the amount of light on a surface. With your smartphone the surface is fixed (the surface of your camera). During testing you will notice that turning your smartphone away from the light beam has large effect on the measured value. Also the distance between the projector and smartphone needs to be fixed, since a projector is a diverting light beam. This means the further away from it the lower the lux value. Therefore we recommend to measure **always in the middle of the screen**.

More questions? Contact us on UHP.AfterMarket@signify.com

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