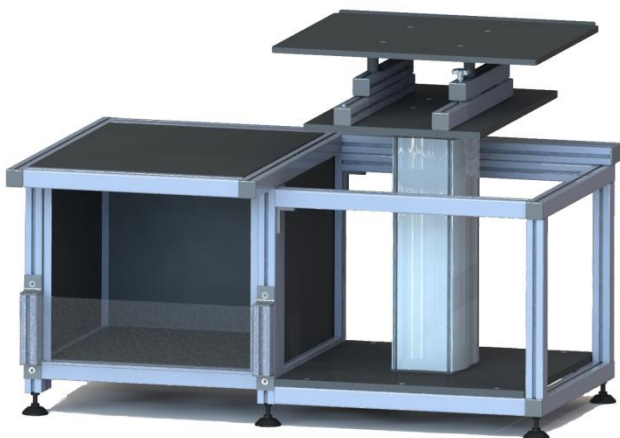


## Cutoff Measurement System





## Company synopsis

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Pleiades Instruments is an optoelectronic system maker, designing and manufacturing for you specific systems such as photometric measurement and customized systems. Designing high performance devices, our team assists you in standard and specific need.



Our devices are used by automotive and general lighting industry for the development, the testing, the calibration and the production of different types of products such as rear or head lamps.

Goniophotometers and Multicells systems, by analyzing the spatial distribution and the photometric properties of different kinds of sources, will help you for the certification of your devices, according to many different standards (SAE, ECE, Japan, ERAI, GB) on 10 or 25 meters distance.

## Regulations and Standards

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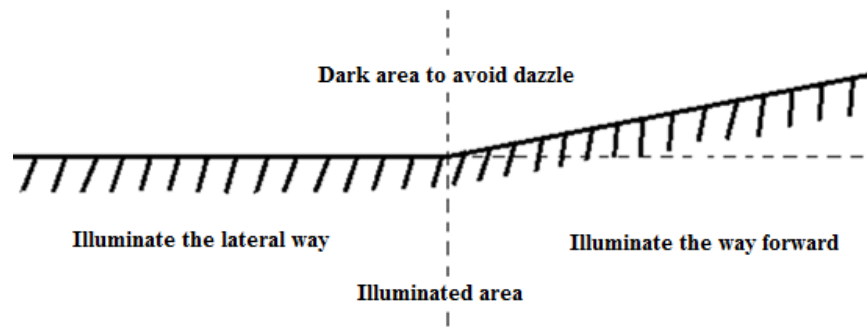
Regulations and standards impose conditions on the spatial repartition but also on the spectral components of lamps. For instance, ECE regulation imposes new headlamps to emit a white light.

Manufacturers of automotive lighting systems need testing and qualifying tools throughout the development and manufacture of their products. To do so, they need measurements using one or several photometric sensors and mobile elements to do specific evaluations.

Our goniophotometers have been developed to make the characterization of many kinds of products, precise and easy at the same time.

# Cutoff Measurement System

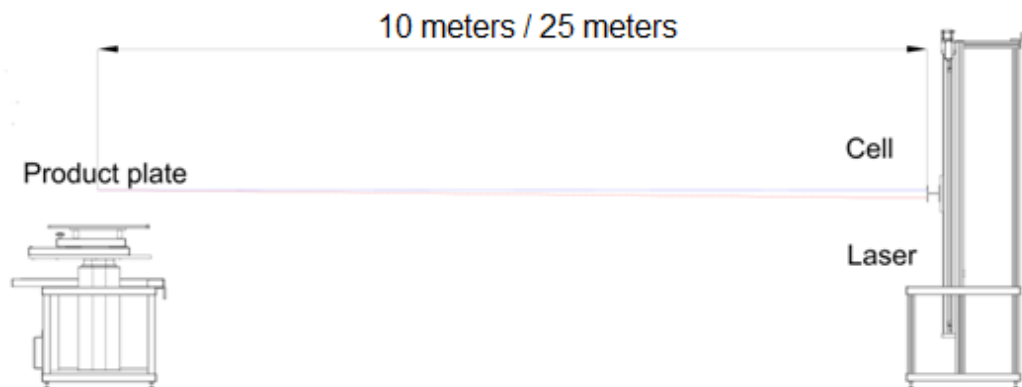
## Cutoff profile



Headlamps provide a light distribution to give adequate forward and lateral illumination without dazzling other road users with excessive glare; they are specified for use whenever other vehicles are present ahead.

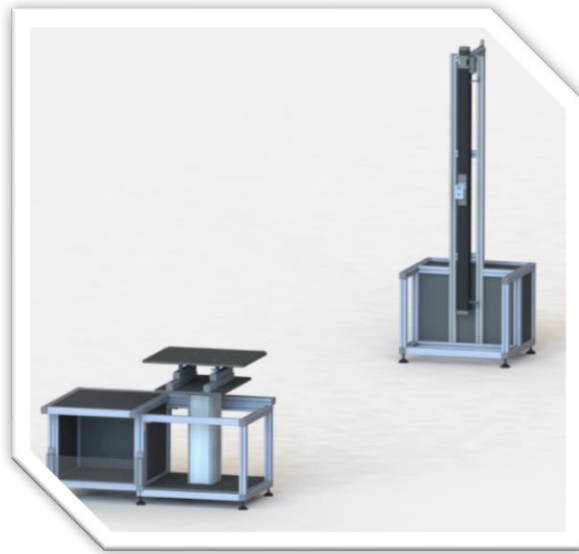
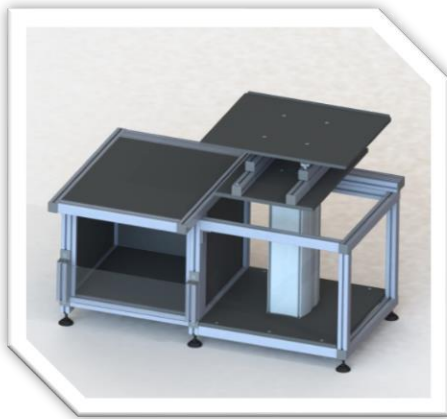
## System structure

Cutoff Measurement System has been conceived and designed to measure and analyze temporal changes of cutoff position for headlamps. A cell detector, placed at 10 m (or 25m) in front of the product and moving along the vertical axis, provides information about the luminous flux emitted in a particular direction. A laser placed below the cell enables adjustment of the position of the product.



## Cutoff Measurement System

Cutoff Measurement Systems with a mobile cell allow measurement and qualification of related products according to different standards (SAE, ECE and Japan) on 10m (or 25m). Thanks to this device, useful for Research and Development as well as production in the automotive lighting industry, our customers can test and certify many different products.



Our Cutoff Measurement System has many assets:

- ❖ Stand alone system.
- ❖ Large measurement range: 0 to 2750 lux
- ❖ High photometric resolution.
- ❖ High quality and repeatability of the measurements.
- ❖ Instant measurement.
- ❖ A dark photometric room required.
- ❖ Easy to use software, allowing different kinds of measures, with a large range of standards and products.
- ❖ Our devices allow tests and qualifications according to many different standards: ECE, SAE, Japan... etc.
- ❖ High quality maintenance with our reliable, timely, cost effective services for soft/hardware and our reactive after sales service.

### Cutoff Measurement System characteristics:

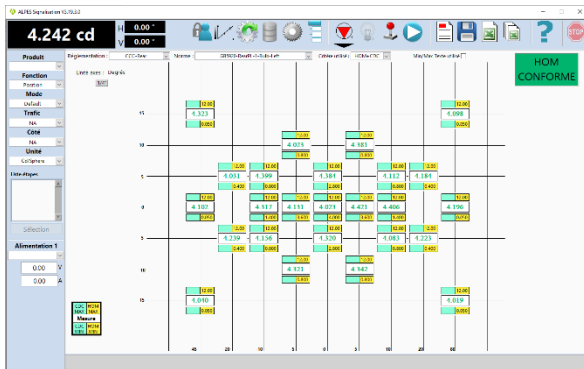
| Properties             | Cutoff Measurement System  |
|------------------------|--|
| Measurement cell       | 1 cell Photolux v4   |
| Photometric range      | 2750 lux   |
| Photometric resolution | 3 digits   |
| Display frequency      | 1 Hz   |
| Measurement Mode       | Continuous   |
| Power Supply           | 1 power supply:<br>18V/20A   |
|                        | Setting accuracy   |
|                        | 1 $\mu$ V $\pm$ (0,05% FS) / 0,01mA $\pm$ (0,2% FS)<br>10 $\mu$ V $\pm$ (0,1% FS) / 0,01mA $\pm$ (0,2% FS) |
| Movement range         | 1200 mm  |
| Measurement angle      | $\pm$ 3.4°   |
| System weight          | 75kg   |
| System Size            | Height: 1.85m  |
|                        | Width: 1.2m  |
|                        | Length: 11.2m  |
| Power requirements     | 230V/50Hz/16A  |
| PC requirements        | Processor:<br>DualCore 2.7 GHz   |
|                        | RAM: 2Go   |
|                        | Software: ALPES, Pack Office   |



# Software: ALPES

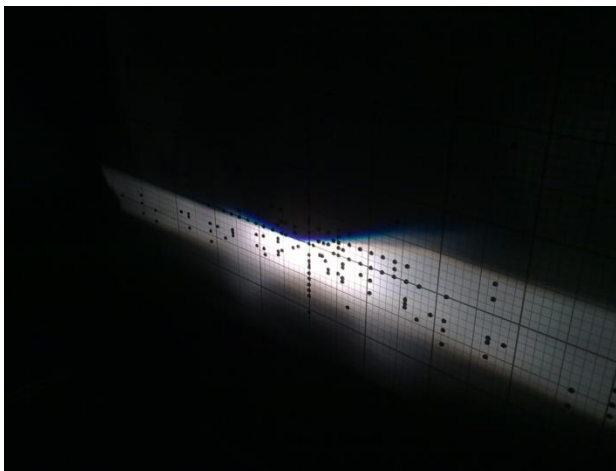
Our system is delivered with our fully applicative software called ALPES (Automotive Lighting Photometric Equipment Software). ALPES is an application used for controlling and running the photometric systems manufactured by Pleiades Instruments. It offers a user friendly and simplified user interface for operators in production mode, or a fully customizable software for administrators and Research & Development users.

ALPES is used for all the systems sold by Pleiades Instruments: goniophotometer, multi-cells, and cutoff systems and for different products: signaling and lighting.

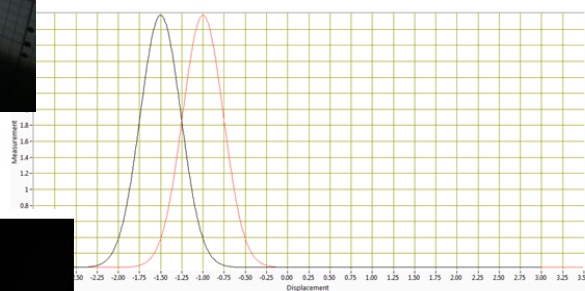


This software allows a large spectrum of measurements for complex analysis, production... A database of standards that can be tested is provided with the system. ALPES provides a report indicating if a measurement is conform to the standards. The results could be displayed by graphs which illustrates obviously the measurement.

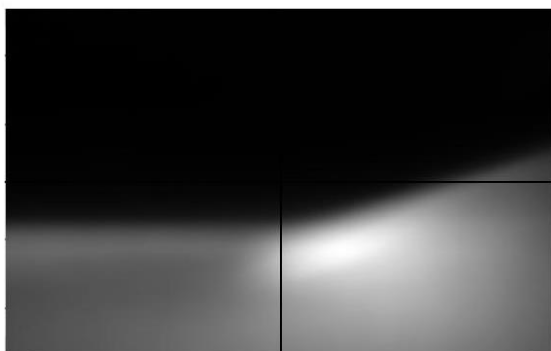
The administrator mode allows the user to prepare the measurements and to calibrate the cells if necessary; then, the operator has just to start the measurement and to analyze results.



ALPES is a very flexible software which means that it is possible for users to configure all measurements. Updates are also regularly available online.



**Cutoff Sharpness Measurement**





# Certificat

Certificate

N° 2017/74946.2

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AFNOR Certification certifie que le système de management mis en place par :  
 AFNOR Certification certifies that the management system implemented by:

## PLEIADES INSTRUMENTS

pour les activités suivantes :  
 for the following activities:

ETUDES R&D, FABRICATION ET MAINTENANCE  
 DE MATERIEL DE MESURE OPTO-ELECTRONIQUE.

RESEARCH AND DEVELOPMENT ENGINEERING, MANUFACTURING  
 AND MAINTENANCE OF OPTO-ELECTRONIC MEASUREMENT SYSTEMS.

a été évalué et jugé conforme aux exigences requises par :  
 has been assessed and found to meet the requirements of:

### ISO 9001 : 2015

et est déployé sur les sites suivants :  
 and is developed on the following locations:

4, rue de la Sure FR - 38600 FONTAINE

Ce certificat est valable à compter du (année/mois/jour)  
 This certificate is valid from (year/month/day)

2020-07-16

Jusqu'au  
 Until

2023-04-06

Ce document est signé électroniquement. Il constitue le original électronique à valeur probatoire.  
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**Julien NIZRI**  
 Directeur Général d'AFNOR Certification  
 Managing Director of AFNOR Certification



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