

FB TECHNOLOGY

World Leader in Airfield Photometry

PAC π

PAPI Calibration & Measurement



**Have a project, need some advice ?
Contact our team.**

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What is PAPI bar ?

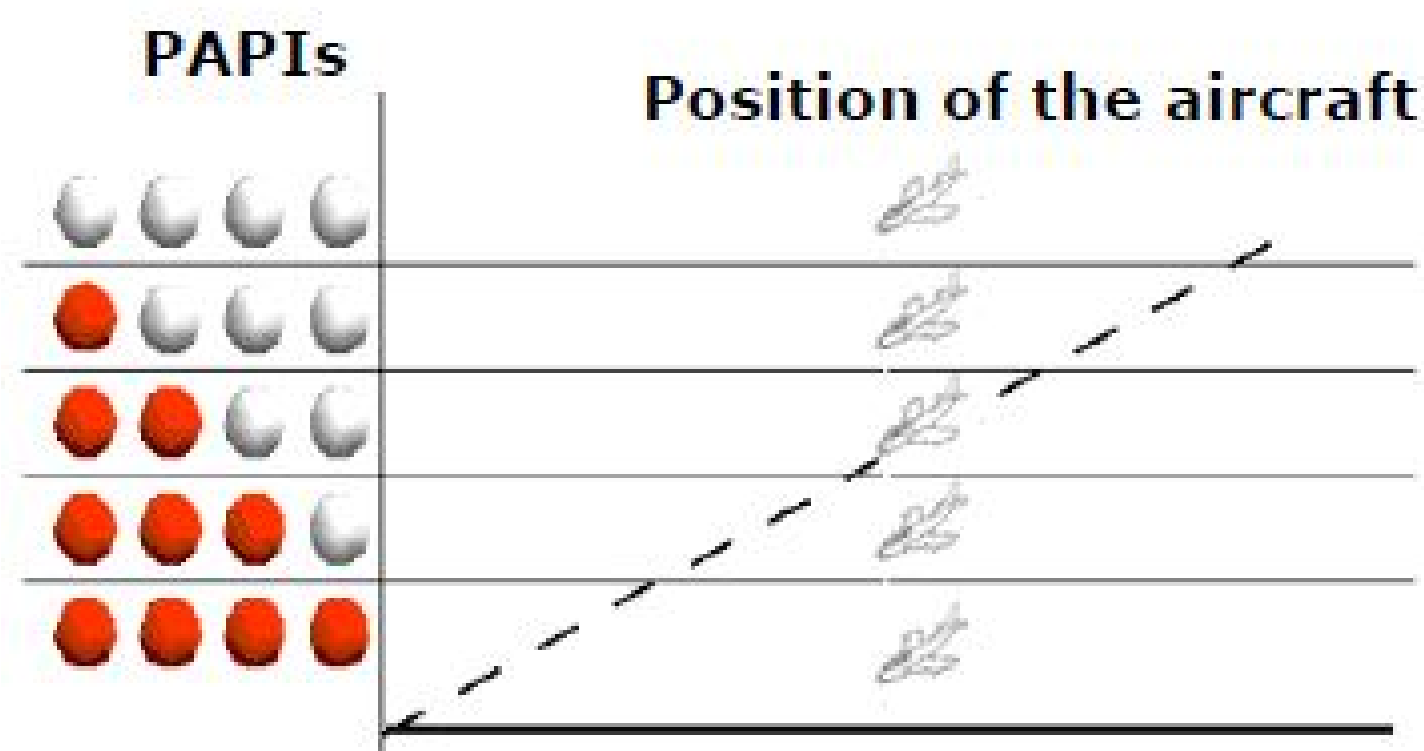


The Precision Approach Path Indicator (PAPI) is a crucial equipment of the Airfield Ground Lighting for a safe approach to the runway even if the airports are equipped with ILS.

It provides visual guidance information to help the pilot acquire and maintain the correct approach to the runway.

Strict international regulations

The international recommendations issued by ICAO or the FAA define very precise rules about how to locate, install, align and maintain PAPI lights. Under bad visibility, poor PAPI conditions could have serious consequences on aircraft safety.



New solution are emerging

The testing of PAPI bars was used to be performed by costly and time consuming flight inspections, requiring closure of the runways. Furthermore, the flight checks were only providing a subjective idea of the proper alignment of the PAPI. No information was provided on the red/white transition width, nor on the photometry & chromaticity of the PAPI light beams.

Nowadays, and thanks to FB Technology expertise, a portable and state-of-the-art equipment can easily measure all the angular and photometric characteristics of the PAPI.

This new solution is simpler, quicker, more reliable and cost effective.







System Overview

The PAC π is a portable vision sensor mounted on a tripod supporting one PTZ camera and one motorized axis.

The system provides high accuracy and precision in measuring angles using a gyroscope.

Running a software using image processing algorithms.

Data exchange and connection assured by WIFI connection.

Watch the video of PAC π
operating next page





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The Italian Civil Aviation Technical Services (ENAC) specifies the following recommendations:

For periodic checks, after first installation, the flight check can be substituted by a ground check using PAC π as a unique test, limiting the flight check only to verify the alignment in between the aiming of the PAPI and the aiming of ILS/MLS units.

In all the other cases, i.e. for non-precision landing on instrumented and not-instrumented runways, the PAC π can be used alone, given that its precision is equal or even better than the one assured by a flight check without an ILS/MLS unit.

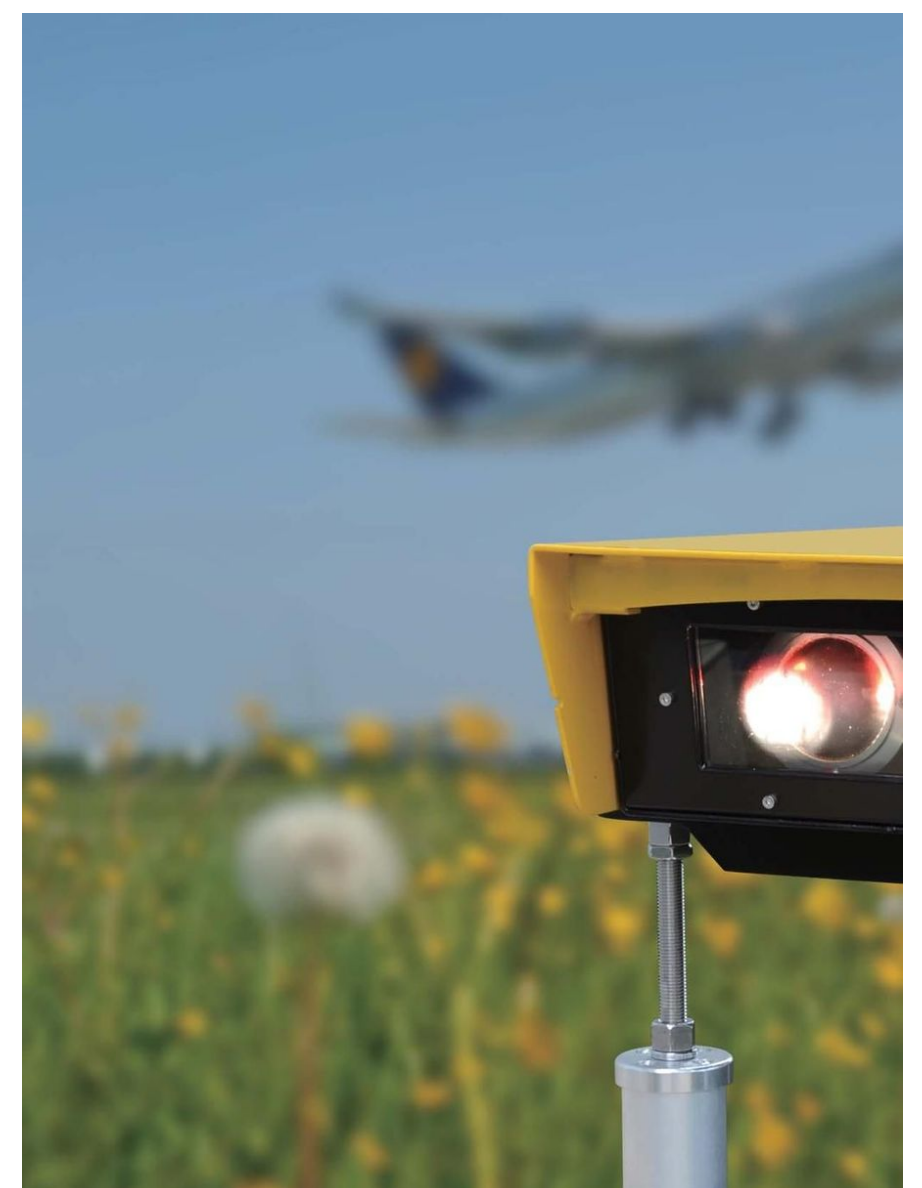
Video of operating PAC π



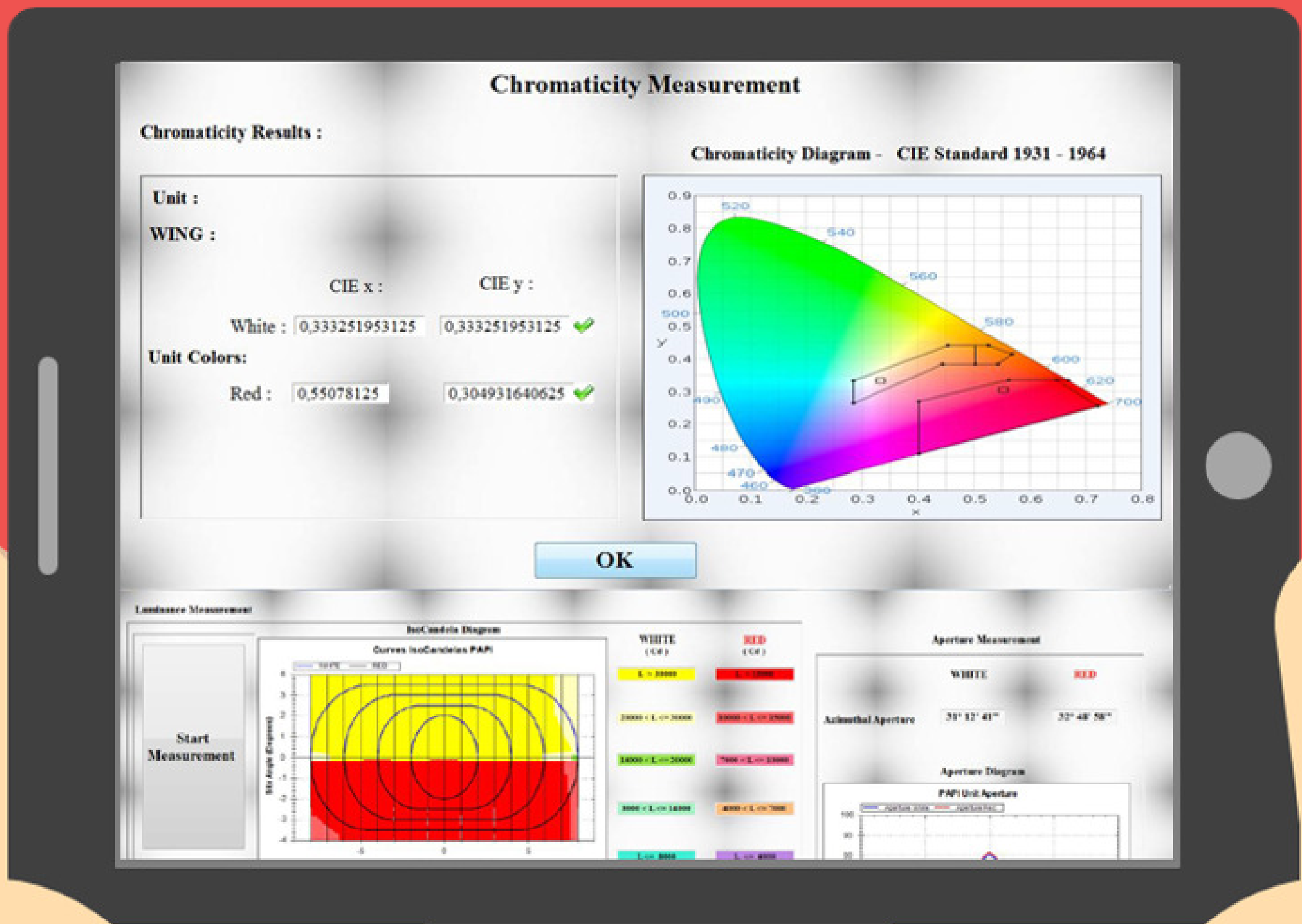
The PAC π measures the PAPI lights & provides the measurement results according to the requirements of **ICAO** or **FAA**.

Using a high-resolution camera, a spectrophotometer and lux sensors, the system provides all necessary information related to the aiming angles, the transition, the chromaticity and the isocandela diagram of the light beam.

Total measurement time for one complete PAPI bar (for PAPI unit) takes **less than 1 hour**.



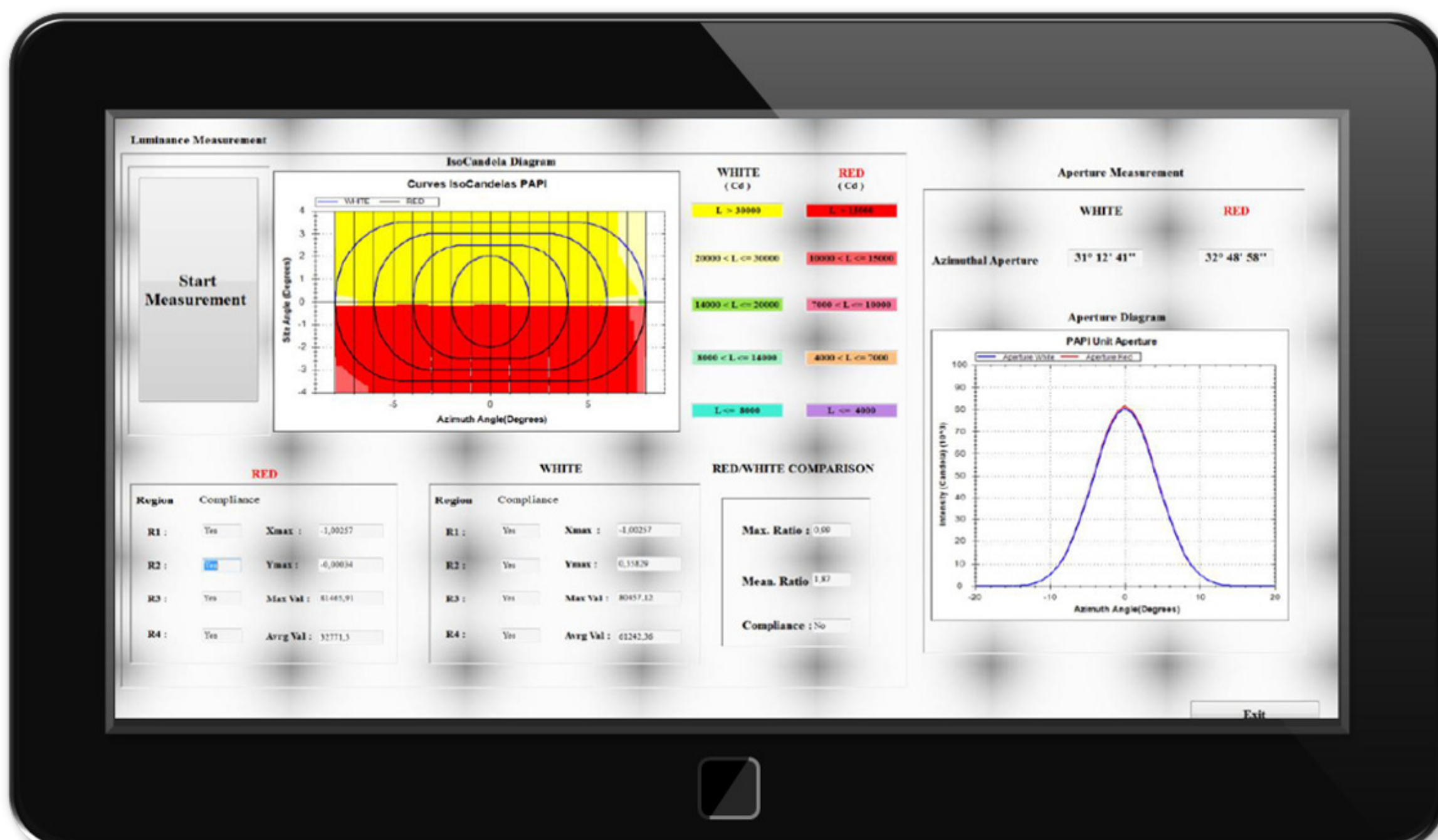
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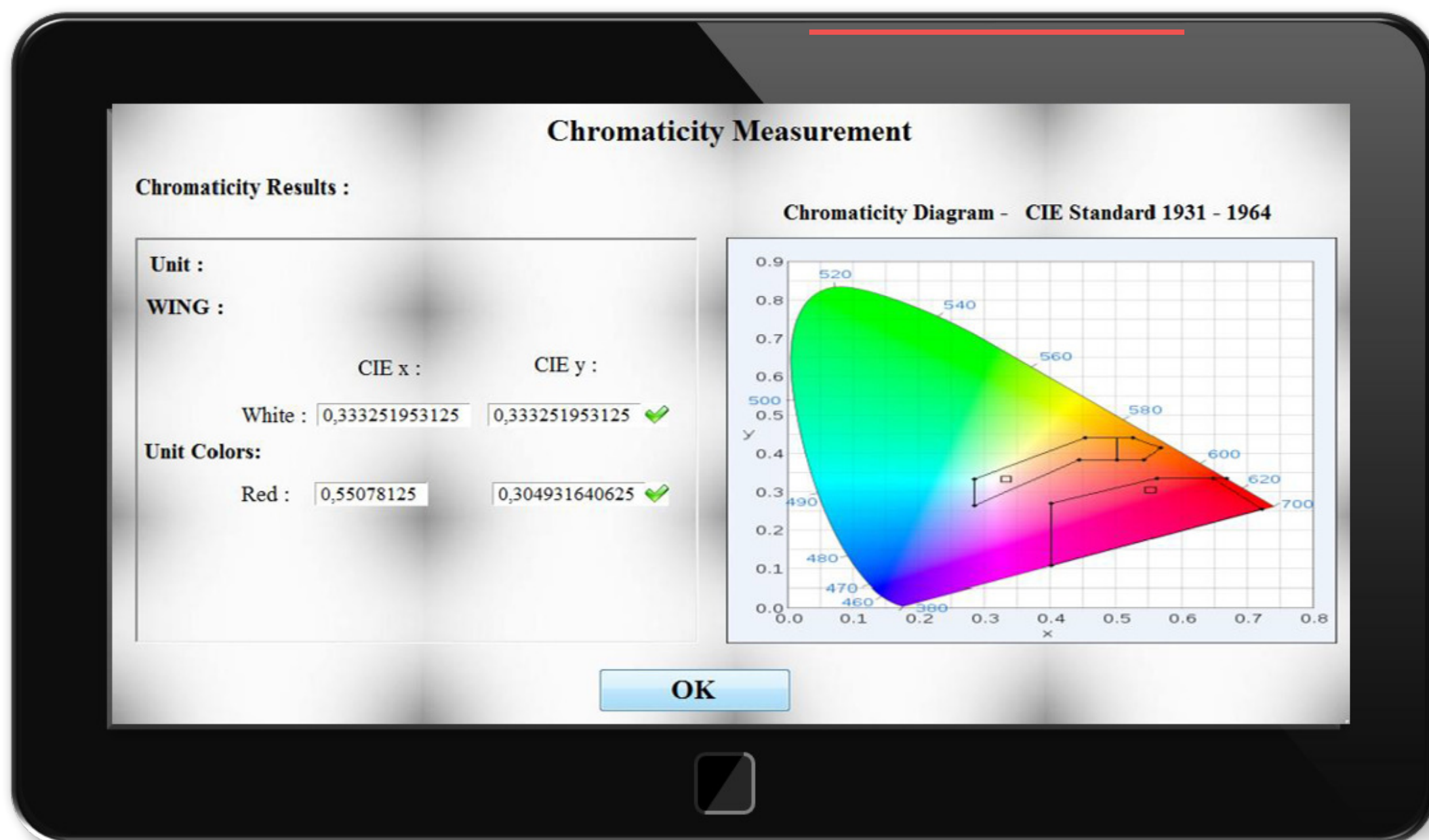
Software: Parameters Measurement & Results



1. Elevation angle of each beam in the PAPI unit.
2. Average elevation angle of the unit.
3. Average elevation angle (glide path) of the PAPI bar.
4. Horizontality of the colour transition of the PAPI unit.
5. Horizontality of the colour transition of the PAPI bar.
6. Colour transition width of the unit
7. Azimuth aperture of the PAPI unit & bar.
8. Photometric (Intensity) diagram of the PAPI unit.



9. Chromaticity Diagram of the unit.



With PAC π , PAPI maintenance becomes easier, reliable, traceable & cost effective !

THE ADVANTAGES



High accuracy
& precision



Easy to use
& to handle



Time effective



Hand portable



Automatic mode
and procedure



Instant dialog to provide
the operator with the
correction for a precise
alignment



Database system to
manage & record data
used & collected



Night & day
operations



Full measurement (angle data,
isocandela & azimuth opening)
of the entire PAPI bar

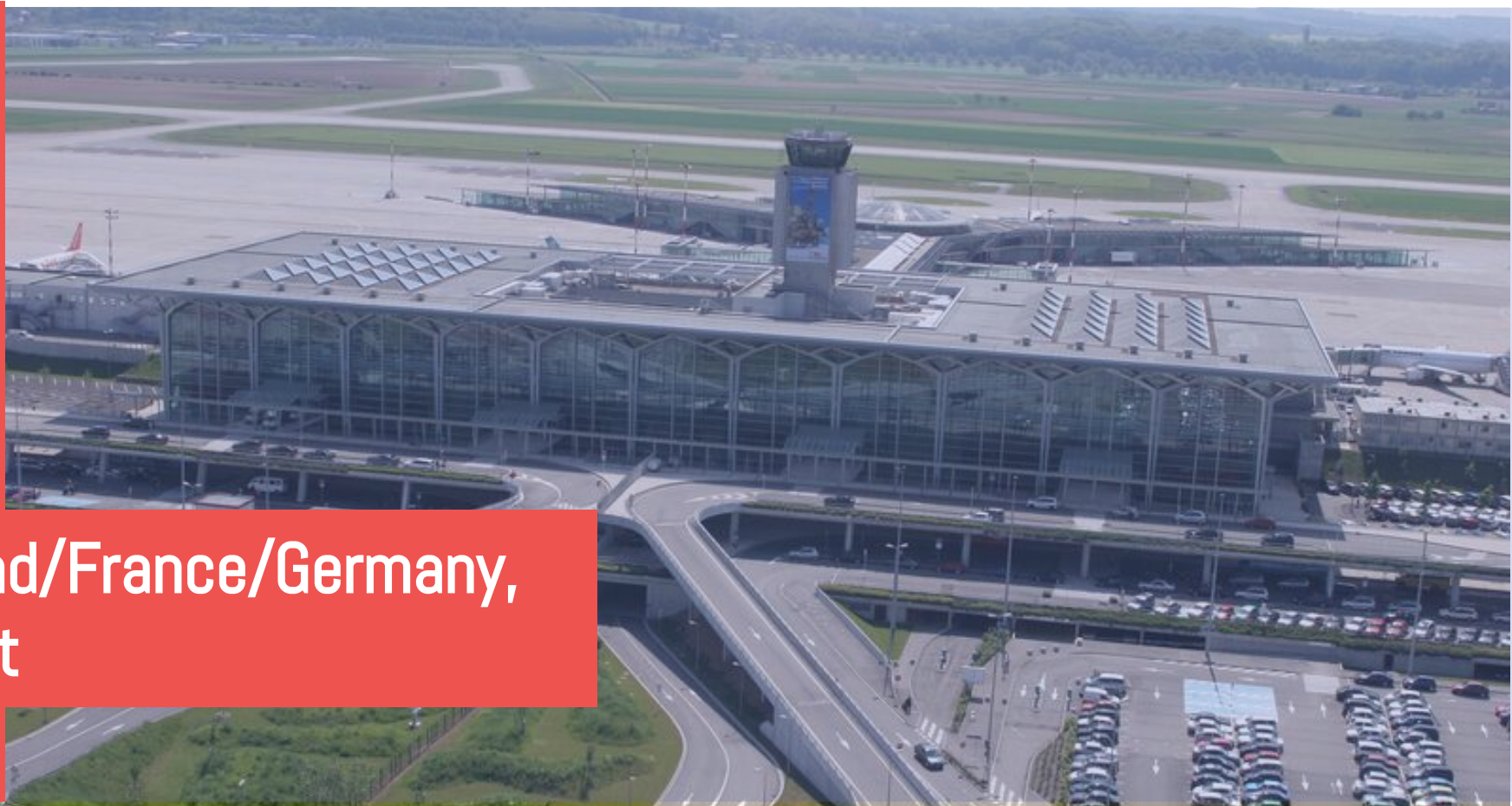


THEY USE OUR PAC II

Switzerland, Geneva



Switzerland/France/Germany,
Euroairport



Moroccan Airport Contractor



Italian Airport Contractor



Other Products



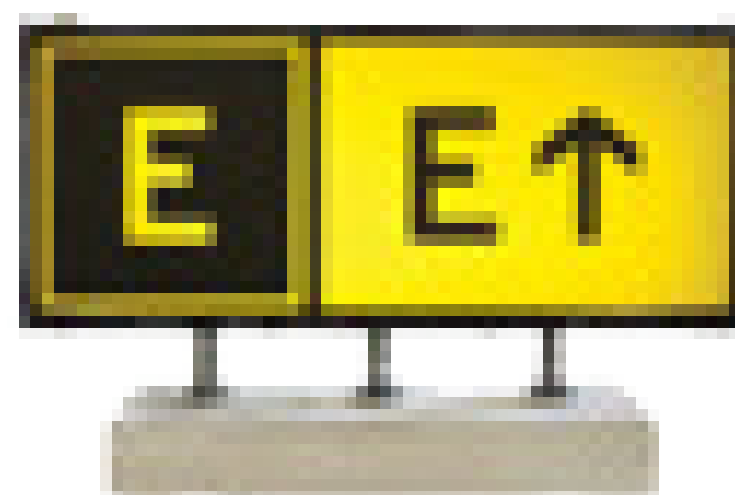
MARC ONE

Autonomous robot for
photometry & maintenance



PAC² V5

Bi-directional measurement
of Airfield lights



PAXIGN

Chromatic & luminance
signs measurement



SoDICE

Cleaning light equipment



PAC APRON

Measure the lux values of
the apron floodlighting



FB Technology

PAC π - Brochure



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