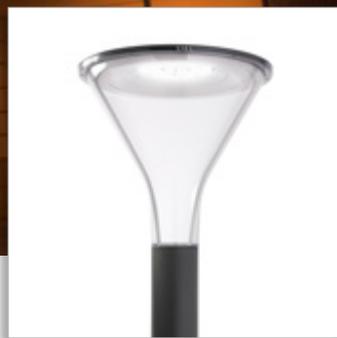
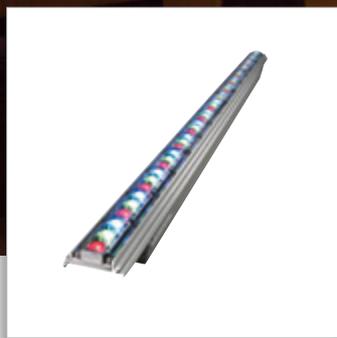




Casas Mudéjares



# Case Study

## Bastions of light

Location  
Philips Lighting

Badajoz, Spain  
ColorGraze, ColorReach RGB, Metronomis LED



**PHILIPS**



Watch the video of  
Bastions of light.



Arab Alcazaba castle

## Background

The Spanish city of Badajoz has been guarding the frontier with Portugal for many years. Its many “bastions” reflect the days when Spain was not on such good terms with Portugal as it is today. Badajoz contains many unknown heritage sites and antiquities. It could easily be included in the group of hidden cities.

An ambitious project, the artistic Bastions of light, has just been completed to boost tourism and to enhance nightlife for its residents. The project showcases six of the city’s most iconic spaces with dynamic lighting. As well as producing stunning moving displays, the project required the lighting to be energy-effective as well as low maintenance, and for this reason LEDs are widely used in the installation.

## The project

The goal of the Bastions of light is to promote and increase knowledge of the valuable heritage that Badajoz possesses. It transforms Badajoz from a frontier town, prepared for war, into a town that welcomes people to places where they can meet friends and family and have a good time. It also contributes to the economical development of the city. The Bastions of light become support instruments for the transformation of an old town on its ascent towards modernity, without forgetting any of its attachment to its past. The old city of Badajoz now

stands out for its versatility, its quality of life and its dynamic neighborhood lifestyle and extraordinary urban beauty.

The lighting design of Bastions of light done by César Rodríguez-Arbaizagoitia Calero Philips implemented the scheme. The collaboration on the Bastion of light project, in Badajoz, was an extremely significant challenge because for the first time in Spain, Philips worked on a sound and light project, contributing a new experience to the city’s cultural development and beautification. It served as a creative stimulus and opened up a new doorway to the substantial experience Philips possess in the lighting of monuments. This new concept gives visitors an increased attention span to monuments by combining lighting with sound. The spectrum of shows can be extremely broad and varied, ranging from classical music to folklore, story narration, and so on, in a blend of light and sound that fills the Plaza Alta. No efforts have been spared in the implementation of the LEDs, controllers and audio equipment. There can be no doubt that the city will profit from this project, which will constitute a huge display window to show to other cities.

Architectural LED installations were designed for six areas, supplemented with Metronomis LED urban lighting:

- 1) Puente Real symbolizes the city’s lift-off towards the future. Located in the most recently constructed part of the city, it forms part of a cutting-edge architectural complex formed by the new State Library and the headquarters of financial institutions.

# Spanish fortress city offers 'Bastions of light' stunning tourist attractions.

**79%**

Energy savings

**6%**

Increase on  
hotel occupancy

**€360,000**

Increase on  
local spendings

- 2) Teatro López de Ayala, the true nerve center of the city's culture and performing arts, shows off its new face, intriguing spectators who approach it with spectacular dynamic façade illumination provided by Graze RGB LED floodlights. And just beyond it, a little jewel of medieval architecture has also been included in the plan.
- 3) Puente de Palmas is an example of lighting on one of the city's most recognizable bridges. It displays its perfectly-rounded arches which, thanks to the changing colors of Reach RGB LED floodlighting, reflected in the River Guadiana and in conjunction with its round spillways, create

the effect of circles superimposed on one another. The city's main bridge for centuries, the zealous guardian of passage into the interior of Badajoz, is now the main gateway to a modern, welcoming city.

- 4) The walled enclosure of the Arab Alcazaba castle displays the past glories of one of the most glorious and extensive Muslim kingdoms built on the Iberian Peninsula. The restoration of its wall and the architectural illumination of the monument make it one of the greatest examples of defensive Muslim architecture in Spain.
- 5) The Plaza Alta is now fully restored for the recreation of citizens. The project includes a huge multimedia show in which all of the arches in the square become a theater for a brilliant dynamic light display programmed into Graze RGB LED floodlights, and sequenced with the voice of Porrina de Badajoz, one of the greatest of flamenco singers.
- 6) The old Casas Mudéjares, or Mudejar Houses, with their magnificent colonnades, are now a reception center for visitors.



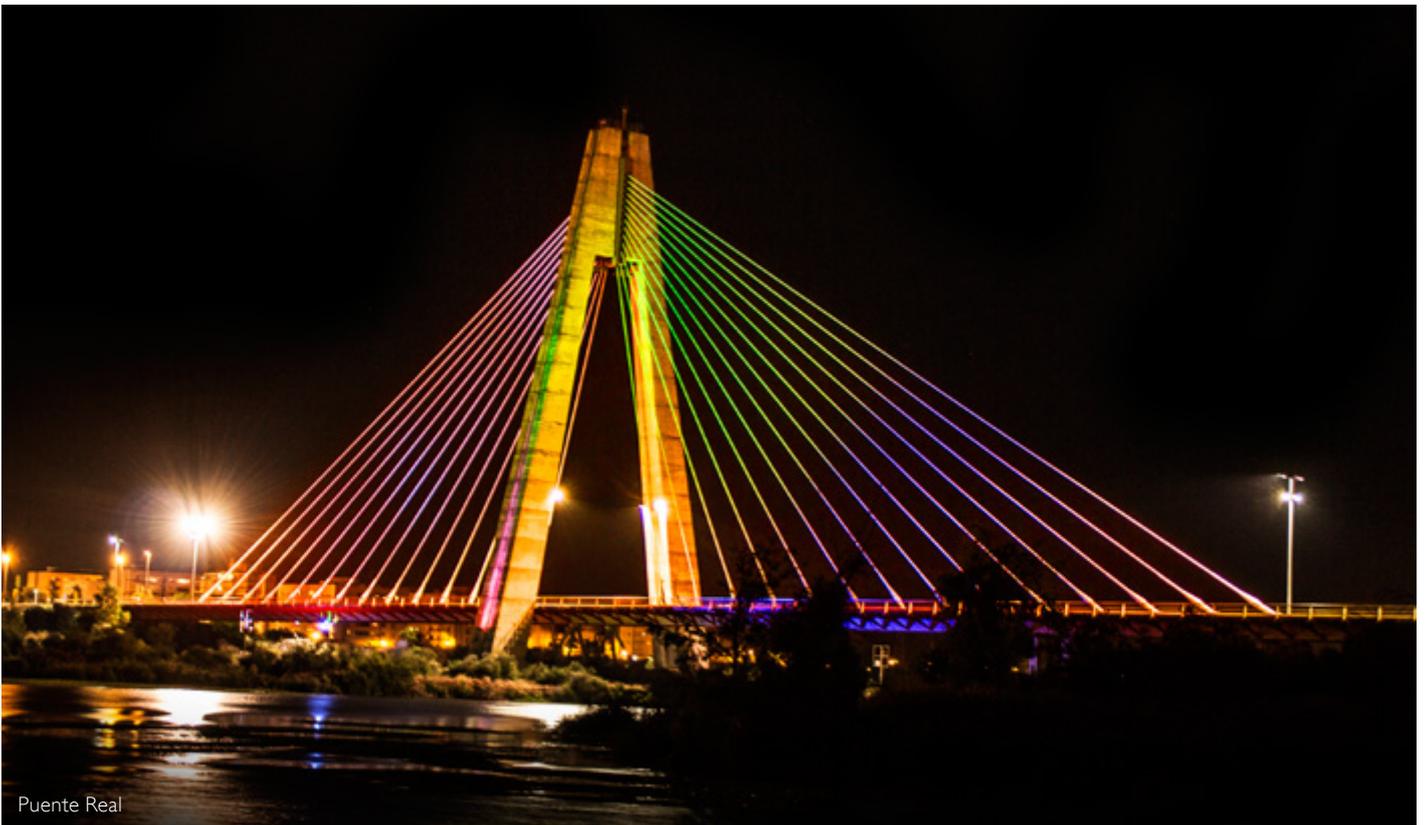




## Benefits

Bastions of light benefits everybody - tourists, residents and the city of Badajoz. Badajoz is an ancient fortress, now with stunning, state-of-the-art dynamic lighting features at its center to bring tourists into the city and bring residents out at night. The annual hotel occupancy has already been improved by 6% and the annual money spent in the city increased by 360,000 Euro / year in 2012, compared with 2008 - a good result, considering the economical crisis and the fact that Badajoz visitors are mostly from Spain.

Considering the investment of around 1,000,000 for the total lighting project and taking into account the additional income from tourism and the 79% energy savings and maintenance savings by using LED's, the payback time for this ambitious project is less than 2 years. The city is grateful as the Bastions of light project has given Badajoz a new visage. It has signified the renovation of their image as a city of heritage, with the clear intent to remain committed to a development model that unites excellence in services for citizens, an open, friendly culture for those who visit, and a spirit of sustainability and efficiency in everything they do.





Puente de Palmas



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Date of release: March 2014