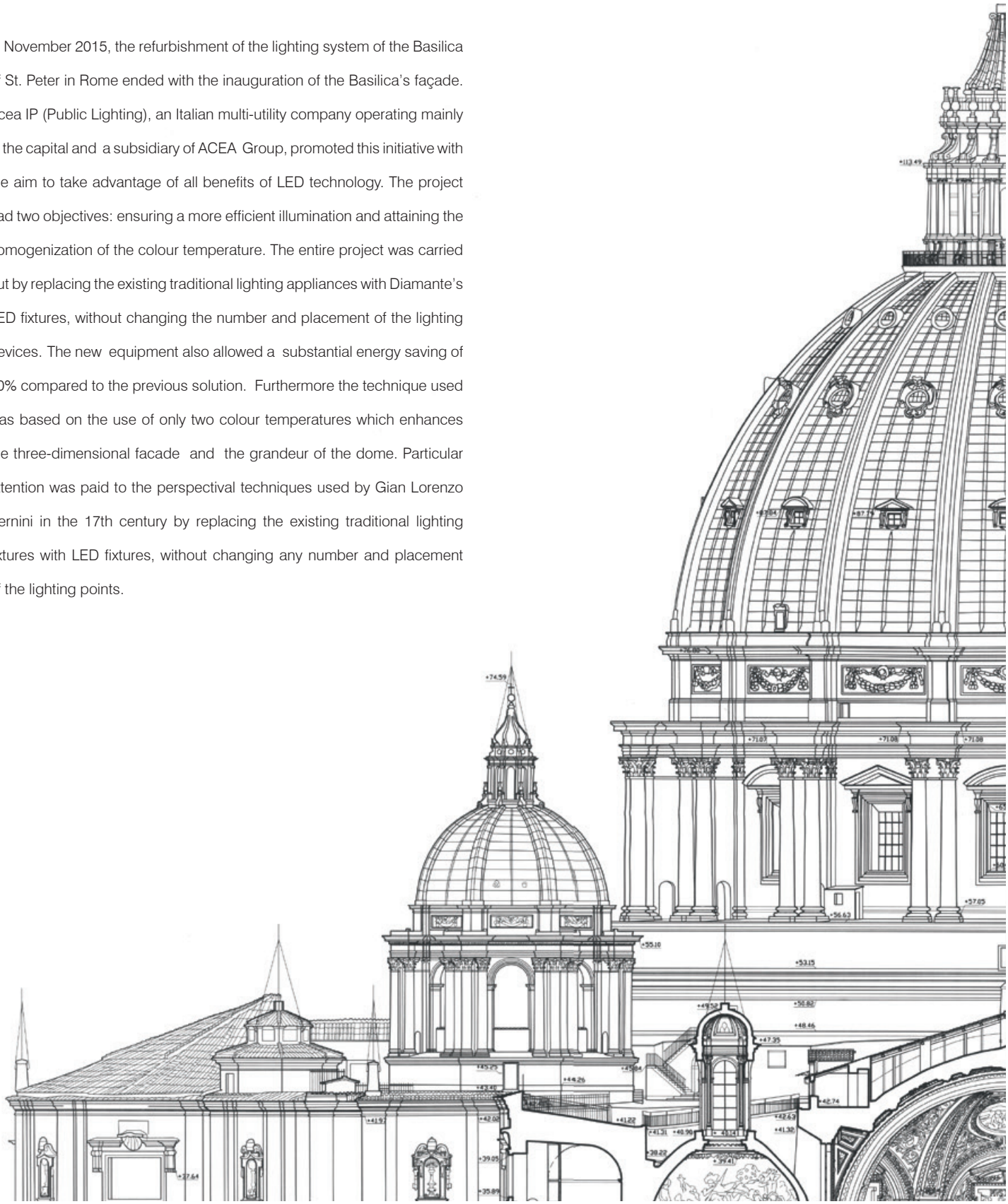
LED lighting for St. Peter’s Basilica
Italy 2015

Custom
solutions

In November 2015, the refurbishment of the lighting system of the Basilica of St. Peter in Rome ended with the inauguration of the Basilica’s façade. Acea IP (Public Lighting), an Italian multi-utility company operating mainly in the capital and a subsidiary of ACEA Group, promoted this initiative with the aim to take advantage of all benefits of LED technology. The project had two objectives: ensuring a more efficient illumination and attaining the homogenization of the colour temperature. The entire project was carried out by replacing the existing traditional lighting appliances with Diamante’s LED fixtures, without changing the number and placement of the lighting devices. The new equipment also allowed a substantial energy saving of 70% compared to the previous solution. Furthermore the technique used was based on the use of only two colour temperatures which enhances the three-dimensional facade and the grandeur of the dome. Particular attention was paid to the perspectival techniques used by Gian Lorenzo Bernini in the 17th century by replacing the existing traditional lighting fixtures with LED fixtures, without changing any number and placement of the lighting points.



All this was made possible through Diamante Lighting's know how, which designed and provided custom lenses and reflectors on Acea IP's request. 340 LED appliances were used for the illumination of the facade, the dome, the cupolas and the statues of the Main Altar and Bernini's Baldachin. The project lasted approximately two months including the production and the complete installation of the equipment; a record time considering the complexity of the project. To ensure effective work and meet deadlines, "rope operators" were involved whose technique enabled us to carry out the installation in otherwise inaccessible places.

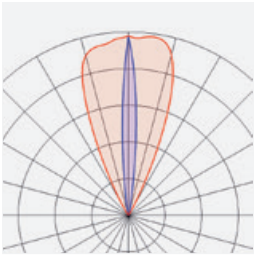
St. Peter dome

St. Peter
main entrance

Special versions of the following fixtures have been used:

Boxed 900

45°x8°

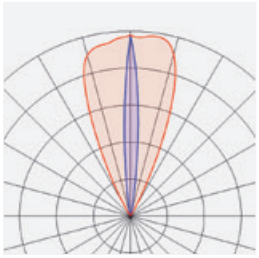


4000 K
19.24 Kcd
2780 lm
36 W

2 m	4800 lux
3 m	2130 lux
5 m	770 lux
10 m	192 lux
20 m	48.1 lux

Compass 900

45°x8°

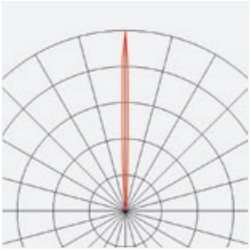


4000 K
25.97 Kcd
3760 lm
52 W

2 m	6490 lux
3 m	2880 lux
5 m	1030 lux
10 m	260 lux
20 m	64.9 lux

D4.07

4°

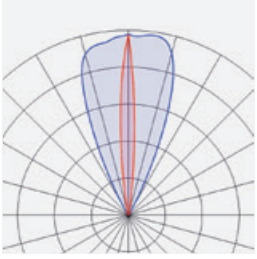


4000 K
129.1 Kcd
1270 lm
19 W

3 m	14.35 Klux
5 m	5160 lux
10 m	1290 lux
20 m	323 lux
50 m	51.7 lux

Elle 60

8°X45°

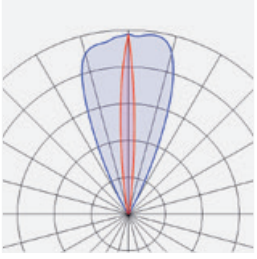


4000 K
63.80 Kcd
9230 lm
114 W

3 m	7080 lux
5 m	2550 lux
10 m	638 lux
20 m	160 lux
50 m	25.5 lux

Elle 80

8°X45°



4000 K
85.07 Kcd
12.32 Klm
152 W

3 m	9450 lux
5 m	3400 lux
10 m	851 lux
20 m	213 lux
50 m	34.0 lux