## POLYTECHNIC OF TORINO FACULTY OF ARCHITECTURE 2 Degree in Architecture Honors theses

## **Urban illumination plan of Statuto Square in Turin**

by Maria Grazia Citati

Tutors: Chiara Aghemo, Agata Spaziante, Mario Broglino

Aware light has always had an essential role in the working process of an architectonic structure. In every architectonic space the light gets a primary function in definy the phisical sides of the same space. It has the capacity to mould the surfaces, volumes and to articulate and to define the spaces. It's an effective and incisive component. The use of artificial light must be planned and aware, in the project one has to join the technical knowledge to the poetry of life, it is necessary to understand the phenomenology of light, to settle rules and lines to show in evidence the architectonic space.

The Statuto Square lighting plan have been studied to get those results. A lighting installation must became integrated with the place, it cannot be out of the context. For this reason it is necessary to throw very well the place where to install the light, especially when in this occasion is an historical square where the lighting has to drow attention to the original historic and artistic aspects. Therefore an historical research has been made of the square to trow the reason why it was made and when possible to realise the different means of lihts during the ages. Then a detailed analysis of the current condition follows: its position within Turin urbanistic structure as well as the analysis of the characterising aspects is presented. Since the lighting project has to consider the Square future appearance and use, existing development plans have been analysed to understand the major modifications.

In the second part of this job the necessary tools to the realization of a lighting project has been examined: the viable devices for lighting such an historical place as Statuto Square as well as their main characteristics. Specific attention was paid in studying the norms and regulations which define modifications of this type.

In the third part, the requirements, the criteria, and the solutions for Statuto Square lighting project are exposed. Alternative solutions have been simulated via a software, and the optimal one was defined on the base of aesthetic and budget reasons. The solution proposed returns Statuto Square to its original "stage scene" character. Since the Project is inserted in a setting which is rich of scenographic elements a low impact intervention was preferred. Luminance contrast and the use of different colour temperatures sourcesenhance the Squares – and its garden - key elements and chromatisms . Devices and poles used in the project are proper of Turin's tradition and of Statuto Square specifically.

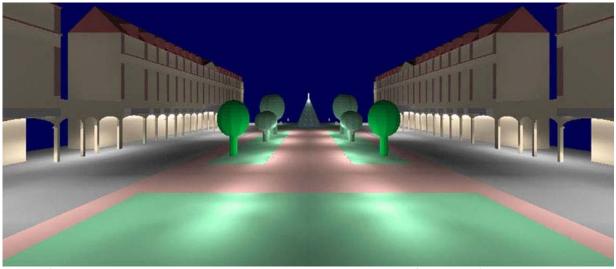


Fig. 1 Graphic simulation of the definitive solution, seen from Garibaldi Street.

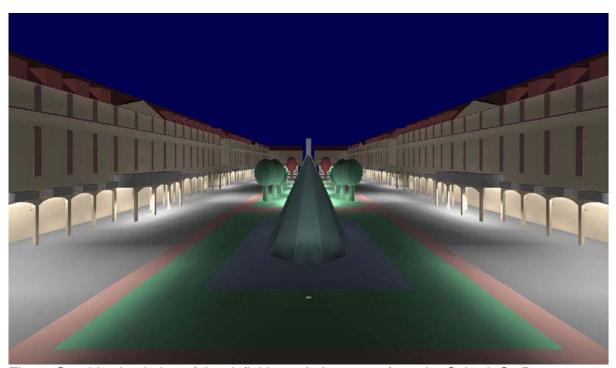


Fig. 2. Graphic simulation of the definitive solution, seen from the Suburb St. Donato.

Ambito da illuminare	Quantità e tipo di apparecchio	h installazione (m)	Sorgente luminosa	Temperatura di colore (K)	Durata media (ore)	Potenza (W)	Flusso luminoso (lm)
PORTICI	n. 104 projettori "Y"psilon SBP ottica asimmetrica	4,9	Philips White SON SDW-T 100 W, 4.800 lm	2.550	8000	10.400	499.200
PIAZZA	n. 20 apparecchi Santa Teresa con globo America ottica asimmetrica	8.0	Philips MHW-TD 150 W, 13.000 lm	3.000	12.000	3.000	260.000
	n.28 apparecchi Santa Teresa con globo America ottica simmetrica	4.6	Philips MHW-TD 70 W, 6.000 lm	3.000	12.000	1.960	168.000
GIARDINÓ	n. 8 lanterne serie 801 Neri	4.0	Philips CDM-T 150/830 150 W, 14.000 lm	3.000	9.000	1.200	112.000
	n. I apparecchio da incasso Icare Targetti Sankey	0	Philips Serie Masterline Plus UV-Block	3.200	4.000	150	3.000
	n. 12 apparecchi da incasso Phénix Targetti Sankey	0	Philips Serie Masterline Plus UV-Block	3.200	4.000	405	6.740
MONUMENTO	n. 3 projettori Platea iGuzzini ottica asimmetrica	0	Osram HQI-TS 150 D 150 W, 11.000 lm	6.000	6.000	450	33.000
	n. 2 proiettori Venus 382 Fivep ottica spot 10°	11	Osram HQI-T 150/NDL 150 W, 12.500 lm	4.200	6.000	300	25.000
Totale potenza impiegata						17.865	
Totale flusso luminoso emesso							1.106.940

Tabella riassuntiva degli apparecchi e delle lampade impiegate.

3. Scheme of devices and lamps used

For further information contact: citati.mari@katamail.com