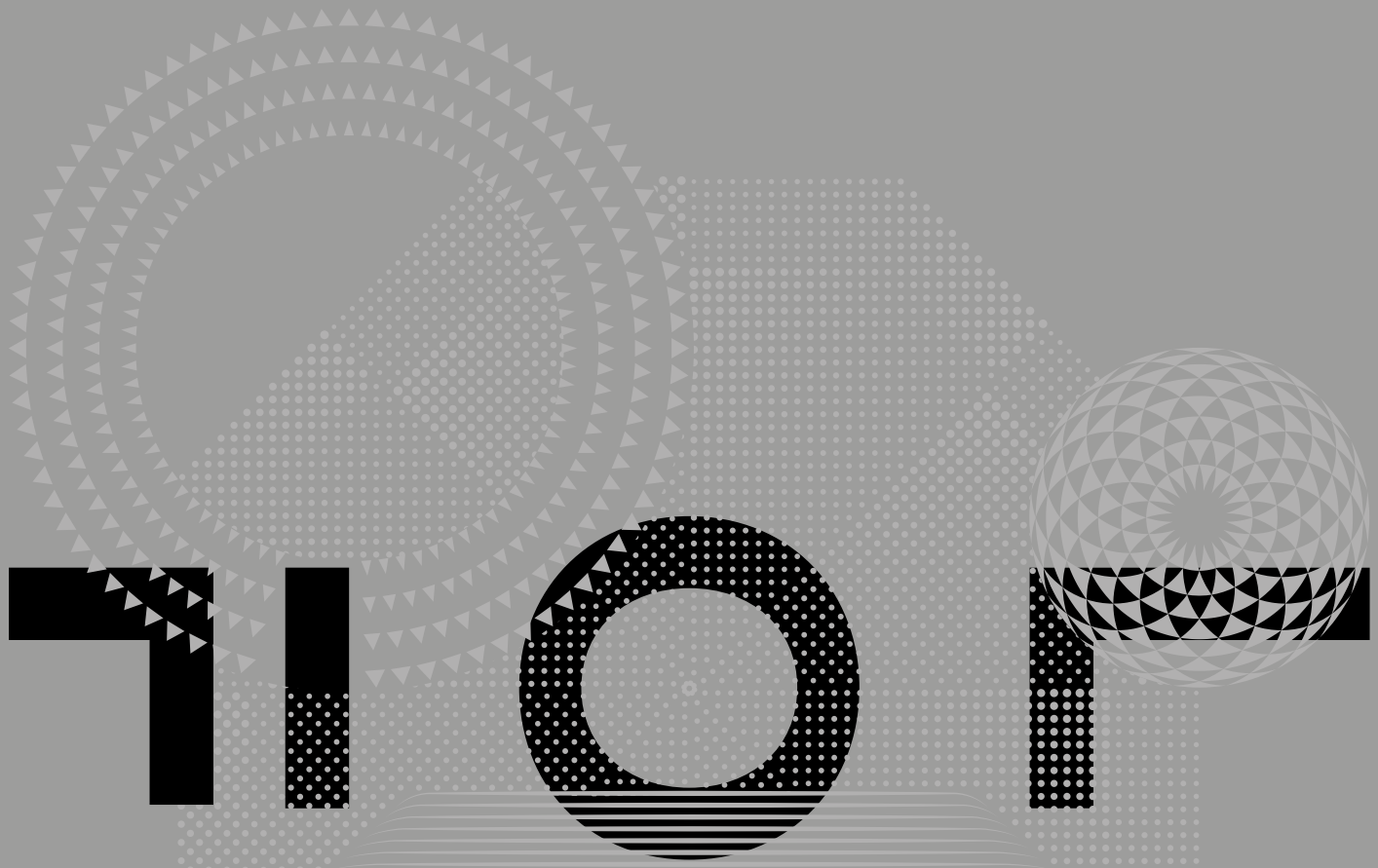

LIGHT
OF
FLORENCE

TARGETTI

LIGHT
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Index

Chapter			Page
01	**Light of Florence**	**Florence and its light**	4
02	**Dialogues on art**		10
		Dialogue with Antonio Natali *Curator and art historian*	12
		Dialogue with Felice Limosani *Multidisciplinary artist*	16
		Dialogue with Massimo Iarussi *Lighting designer*	20
03	**Art in the spotlight** Lighting museums		24
		The relationship between Art and Light	27
		Exhibition spaces today	30
		Harmony of uniformity	38
		The atmosphere of contrast	41
		Optical Systems	42
		CASE HISTORIES	
		Galleria delle Statue e delle Pitture, Florence	50
		MEF Museo Ettore Fico, Turin	62
04	**Evocative light** Lighting places of worship		70
		Light as the first creative act	73
		The church as a building	74
		The church as a place of prayer	76
		Flexible light: control systems	78
		CASE HISTORIES	
		The Cathedral of Santa Maria Assunta, Volterra	84
		The Cathedral of Valledupar, Colombia	100
05	**Lighting our cultural heritage** Light for the historical and artistic heritage		110
		Enhancing historical and artistic heritage using light	113
		Illuminated architecture in the city	115
		The right surface finish for maximum integration with the architecture	124
		Lighting history from inside	127
		CASE HISTORIES	
		The Salone dei Cinquecento, Florence	128
		The Campanile dell'Assunta, Pisa	138
06	**Targetti light for art**		150
		A solution to every request	154
		Standard product	156

01

Light of Florence

Living and working in Florence deeply influences our approach to the world of Art and the way to illuminate it; it is part of our DNA, our nature.

Light in Florence is a product of its own ground and the way it interacts with natural light both on rainy and sunny days, when sunsets set fire to the facades of its palaces.

Light in Florence has its origins in the colours of its streets and squares, the colours of the materials that shape its buildings and monuments in a stratification that has maintened its architectural and colour balance over time making this city unique.

The golden brown "pietra forte" sandstone similar to tobacco, strongly characterises the colour scheme of the city. This sandstone extracted from Boboli hill in the centre of the city was used in the 1300 and 1400 to build bridges and the most important palaces in Florence (Palazzo Vecchio, Palazzo del Bargello, Palazzo Pitti, Palazzo Medici Riccardi and Palazzo Strozzi).

The romantic and gothic period gave way to white, green and red marble inlays typical of some of the facades of Florentine churches, while during the Renaissance period white plaster became a fundamental element to enhance space in contrast with the grey and bluish sandstone that made up the supporting elements of the architecture of Brunelleschi and Michelangelo. In the Baroque period palaces were decorated with multicoloured frescoes and then there was the work that was carried out during Firenze Capitale era, when the city was once more adorned with monochrome yellow-ochre of pietra forte sandstone. The 1900 s was a time of experimentation, great contributions from painters and sculptors, the use of travertine limestone and new artificial building materials which filled the city with ochre and brown tones.

The use of natural stone therefore has given the city a predominant hue over the centuries making yellow-ochre the most typical and characteristic colour around; earth from the city transformed into stone and then architecture.

The relation between light in Florence and art is so deeply rooted in medieval and renaissance times, their mutual relationship and fascination are so intertwined it would seem unnecessary to pursue the question further. However the natural artistic leaning of the city makes it open to modern and contemporary art, it is a creative workshop in continuous ferment where streets and squares become charming open-air exhibition spaces with light as the common thread to bear witness to the continuous dialogue between the past, the present and the future.

SPIRITUAL GUARDS - JAN FABRE
TEMPORARY EXPOSITION 2016 - FLORENCE, ITALY
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02

Dialogues with

Antonio Natali
Felice Limosani
Massimo Iarussi

The enhancement of the artistic and cultural heritage by means of light is a complex subject that requires a multidisciplinary approach and the involvement of very different competences working with a common goal: to create the ideal experience for the enjoyment of art.

We have collected the testimonies of professionals with international reputation who live in Florence and work daily in this field. Together with their “illuminated sight”, experience and sensitivity they have shared with us their intimate relationship with the light-art pairing.

Antonio Natali

Curator and art historian

Art historian, Director of the Uffizi Gallery in Florence from 2006 to 2015, he was the first Director of the Centre for Renaissance, Mannerism and Contemporary Art Studies at the same Museum. From 2000 to 2010 he taught Museology at the University of Perugia. Author of books on painting and sculpture from the XV and XVI century and monographs on Michelozzo and Andrea del Sarto. He has curated many important art exhibitions such as "Il Cinquecento a Firenze" in Palazzo Strozzi between 2017 and 2018, where he brought together works of art by artists such as Michelangelo, Andrea del Sarto, Rosso Fiorentino, Pontormo, Bronzino, Giorgio Vasari, Santi di Tito and Giambologna..

Q. Where does the light in Florence come from, the one you can see walking around the streets or along the river?

AN. It comes from the love each person has for this city that they carry around within them. In the Betrothed Manzoni wrote: "The sky in Lombardy is so beautiful when it's beautiful". Paraphrasing I say: "the sky in Tuscany is so beautiful even when it's not". I was born by the sea in Piombino and I carry the sea sky within me, it has its own light, a clear light that allows you to see beyond.

Q. How much has the light and colour one "breathes" in Florence influenced your approach to enhancing works of art?

AN. The light in Florence, which in some way you could assimilate to the clear light of the sea is that of a popular view, or the one you see at San Miniato al Monte looking to the west where nothing interrupts the view to the sea, or the light in the narrow streets in the city when there's no-one around, when the sun manages to pass through the eaves and filters through the cornices cutting the streets in half. This is the light I love the most. Light is a fundamental element to appreciate the poetry in a work of art, light that is not subjective but as clear as possible like the one devoid of shadows and reflections that helps you to read a good book.

I am traditional; when enhancing works of art I have always looked for simple, clear light. I incorporated the light from the sea and that's the one I carry with me. I don't know how much this has influenced my approach to lighting works of art as much as appreciation of the poetry of the same.

It is fundamental first of all to understand the distinction between poetry and iconicism. The works of art are the same, it is the perception that changes. In this way art historians don't help because instead of talking about thought and poetry they make art history a history of language (figurative of course). They talk about expression, style, tangency and lineage and never about the content represented in the works of art themselves and their meaning.

The mountain by the sea in «Annunciation» by Leonardo is not a landscape, it is a symbol with a very precise meaning: it is God in the world. The bird of prey that flees when the dove arrives in «The Baptism of Christ» by Verrocchio and Leonardo is another symbol: heresy that flees when the Holy Spirit arrives. I am not just saying these things based on my own personal logic, I am saying them on the basis of well-known texts that were around at the time Leonardo

painted the two works. In my opinion a figurative work of art is poetry expressed in a figurative way instead of in words and poetry is appreciated not only for the language but also (I would say to above all) for its content; it is the content that pulls at the heartstrings.

Q. How has the way of exhibiting works of art changed over the years?

AN. I think the relationship between people and works of art has changed. I often use the example of the room with the Mona Lisa in the Louvre. I show a picture of a day when the museum is closed, I show a normal day when it is open with the room teeming with people and I ask: "Would you read your favourite poetry in such chaos?". Unfortunately the Mona Lisa is not seen as poetry. It is now almost just an icon.

You only find poetry when you go looking for it. Many people visit the most important museums because they exhibit works that have become icons; for example if you visit the Louvre for Mona Lisa's enigmatic smile you are not looking for the poetry in that work you are looking for the enigma; Mona Lisa's smile moreover is not even an enigma because as Vasari said, portraits always have a touch of melancholy, so when the portrait of Lisa Gherardini was painted Vasari explained they called musicians and jesters to make her smile.

Today it is the museums themselves that support a "iconic" approach from visitors by only focusing attention on the same well-known works.

If I show the portrait of Mona Lisa alone on a specially built monumental wall and on the adjacent walls I place around forty Italian works from the Sixteenth Century not particularly cultured visitors are allowed to think that the Mona Lisa is the only important work on display and all the others are just window dressing.

I am convinced that even in my time at the Uffizi there were too many visitors and it was a continuous fight to make it clear that some neglected rooms were just as important as the more famous ones. Personally any work by Botticelli does not provoke the same emotion as the «Deposition from the Cross» by Rosso Fiorentino in Volterra or the so-called «Deposition from the Cross» by Pontormo in Santa Felicita. This does not mean that I do not perceive the lyric heights of Botticelli; I have my preferences. I am passionate and while the « Deposition from the Cross » in Volterra moves me to tears, the extenuated grace of Botticelli does not move me . I admire it; but it doesn't move me. If we really want to enhance art it is Rosso Fiorentino the artist we should raise awareness of; Botticelli has no need to be enhanced.

Q. | Given the relationship today between art and society what are the role of Museums?

AN. Museums are places of education and this definition could make us think (in this incoherent time) of a dusty place. Obviously in the digital era we cannot do without teaching in line with the times but works of art must be exhibited in the best way and in a place that allows for suitable appreciation and "enjoyment".
Giuseppe Pelli Bencivenni, Director of the Uffizi in the 18th century used to say something like this: "Young people should come to the Uffizi to learn and understand beauty because then they will know how to recognise it in every moment of life". Recognising beauty is not innate or instinctive, you need to study it, to listen to good music and read good books. I found myself with a friend with a scientific background in front of a painting by Pollock and I said to him convinced: "That's really beautiful!". He said to me: "Antonio they're brush drips!". He asked me to explain what I found so beautiful. I didn't even try; I just wrote him a list of books to read.

Q. | How do conservation and enhancement work in an ethical museum?

AN. Once museums were just places of education, a place to form a historical awareness; today they are above all a company that focuses on profits. Today conservation is considered a cost and enhancement a way to make money. In reality conservation and enhancement are almost synonyms. What does enhancement mean? It means returning cultural value to an asset that has lost it or giving cultural value to one that has never had it. In order for works of art to be enjoyed they must be preserved and if necessary restored. It is therefore necessary to invest in conservation if you want to enhance it. Conservation works that, if done intelligently and sensibly, can also make a profit; but profits should not be the starting point.

Q. | How should works of art be displayed so that they communicate their message in the best way?

AN. I believe that the set-up should not be too intrusive; frills and additions are not necessary, rather too much interference destroys the message. When additions are necessary as in the case of lighting you have to use a discrete, functional system, one where the source remains as hidden as possible. It is very important to work on perception taking into account functionality because people go to the museum to see, know and possibly understand. A functional element does not cause a distraction because the brain takes it for granted. If however you emphasise a contour you see the contour and it distracts you more than a light fixture.

As part of an arrangement of works inside a room you have to consider observation points. Many works have a privileged point of view and must be exhibited so that they can be observed from the point of view they were conceived for. «Annunciation» by Leonardo has often been judged to be a work that has been badly set prospectively: the Madonna's arm is too long, the lectern is too far away, the ashlar blocks on the short splay wall and the door trim are too long compared to the wall. These are not "problems" for Leonardo; they are rather "problems" for critics, sometimes incapable of taking into account the privileged point of view that paintings often have and for which in the same paintings anamorphic expedients are adopted (it almost always happens for example when the painting like in the case of the da Vinci Annunciation are rectangular shaped with the base longer than the height). These are works that should not be looked at head-on as is usually done; it is necessary to change your observation point. At the Uffizi I displayed «Annunciation» so that visitors entering the room could see it on the right which is the correct point of view.

Q. | You were involved in restoring great works like the Baptism of Christ by Verrocchio and Leonardo, what did you do exactly?

AN. I worked alongside the restorer because it is not possible to restore an ancient work of art without studying it: the art historian is responsible for studying and the restorer for carrying out the work. For the «Baptism of Christ» by Verrocchio and Leonardo it was for example essential to know how the colours had changed; the water of the Jordan and the marsh behind Christ were originally transparent copper green and the pink colour was originally a red lacquer. The art historian must monitor to indicate how far cleaning can go.

In general restoration work should be carried out in a light that is as similar as possible to daylight; which is the same the painters used while creating the paintings you are working on.

Q. **You were the first person to introduce colour into exhibitions at the Uffizi, why did you do it? How does the background colour interact with the works on display and light?**

AN. As I have already said museums are educational institutions and my choice to use colour was functional to this purpose. When I arrived in 1981 all rooms were white, around forty of them. I believe that white is the colour of intellectual abstraction but having extended the Uffizi to 100 rooms white had become too intrusive; the Uffizi risked appearing like a hospital more than a museum. I then thought about introducing colour by giving it the task of characterising a period in history or a geographical location. Blue marked for example rooms for foreign paintings, red for paintings from the sixteenth century, green of Paolo Uccello indicated rooms for the fifteenth century and yellow was used for rooms to house paintings from the seventeenth century (yellow to evoke the brocades in Palazzo Pitti).

A single painting on a coloured background can also provoke a strong reaction, but if there are four or five paintings on the same background the mind understands there is an underlying reason. Light does all the rest by allowing people to see paintings in an easy, clear and unadulterated way.

Q. **You were the director of one of the most important museums in the world, now you organise temporary exhibitions, the last one the Sixteenth Century in Florence was one of the most visited exhibitions in 2018. How different are permanent and temporary exhibitions in terms of set-up and communication?**

AN. Temporary exhibitions allow the curator to give their own interpretation on the communicative message of the works, while permanent exhibitions must be more neutral to allow everyone to interpret the works without any interference. In the exhibitions I curated I sometimes sought emphasis of light especially with sculptures. When we wanted people to perceive the dramatic significance of a statue or to show the predilection of an artist for languorous aspects – faces thrown back, upturned eyes, inclined head.

I tried to emphasise this pathos using light. In temporary exhibitions I have an assumption that I want to show through the set design. If I want to highlight the Hellenistic inspiration behind the sculptures by sixteenth century artists I accentuate the pathos with more dramatic lighting regardless of the point of observation. When the same works are displayed in a museum light should be as neutral as possible.

Q. **How will the concept of the museum of the future evolve to welcome and communicate beauty in a constantly evolving panorama?**

AN. I believe that museums as places to enjoy works of art won't change very much, the didactic language will change. In the last exhibition I curated "Leonardo e Pontormo, la natura e l'antico", to get closer to a younger audience I used a video installation in which by juxtaposing the work of the two artists I explained that Leonardo was Pontormo's first master, in accordance with the memoirs written by Vasari.

I substituted to traditional static visuals with (extremely effective) films that were not there to surprise but to educate; and everything was told by a voice-over. I just wanted to get my message across without impressing because exasperation is in my opinion the enemy of enjoying a work of art. Everything in an exhibition of works of art that is artificial and enhances iconisicm, is hostile to poetry.

Felice Limosani

Multidisciplinary artist

Self-taught. He started his professional career as a DJ. Today he lives and works in Florence with the idea of merging technology and humanities to remove the boundaries between art, design, culture, communication experience and entertainment. All languages that are intrinsically connected, that influence and interact with each other. He is internationally recognised with works ranging from artistic installations to the creation of immersive environments (both physical and virtual) right up to curating experiential exhibitions. His commissions have been displayed at Miami Art Basel, the Louvre in Paris, The White Chapel Gallery in London, Palazzo Strozzi, Palazzo Vecchio and the Galleria dell'Accademia in Florence, the Triennale in Milan and the Mies Van der Rohe Pavilion in Barcelona.

Q. Do you see yourself as an artist?

FL. Indeed! Today artists are deemed to those that exhibit at the Biennale or if they are represented by gallery owners and curators. They are those that enter a referential system which is an economic and financial one. I personally adhere to the meaning of art in the Greek and Roman sense of the word meaning doing things well. To me making art is doing something well that means something, stimulates thought, creates aesthetic beauty, emotion, reflection and innovation. If then based on today's logic this is not considered art because it isn't at the Biennale, culturally and economically brokered by third parties I "free myself from this straitjacket" and I keep away from this type of art.

Q. What's the difference between being creative and being an artist?

FL. They are two very different things. Here lies the key to understanding multi-disciplinarity. In the classical age artists were those who did things well while creative people were philosophers or writers, those who developed ideas and thoughts. Today "Design Thinking" expresses a similar concept. It has its origins in design, i.e. feasibility, functionality, utility and sustainability yet it also has an intangible, elusive and aesthetic component: colour, shape and materials.

This concept translated into ideas and thoughts implies that they must be useful, concrete, evolutionary, humanising and at the same time exciting and beautiful, they must create amazement, surprise but they must also serve something or someone in an ethical sense. This is design thinking, fantasy and concreteness. Multi-disciplinarity is living and coexisting in different areas with extensive expressive freedom and looking to the future. The multidisciplinary approach needs constant study and hard work that must be converted into knowledge, know-how and informing. Making art in the most accessible and universal way: doing something that has a meaning and a message, that excites and makes us think, that is WOW for "informing the world" which is now an essential part of a work of art.

Q. Light is one of your favourite tools to create artistic installations, what's the reason?

FL. Light has always been a key element for the

perception of a work of art. Natural or artificial, direct or reflected, light does not invade but caresses and gives life and poetry to things. It cannot be touched but it exists, it is insubstantial but provides substance.

Think of Michelangelo's sculpture, think of works by Caravaggio and the extraordinary light that animates them. I had the privilege of providing a new dynamic light for David by Michelangelo, every shape in its sculptural posture changed in dimension and perception. Its beauty manifested itself in an unexpected and dynamic way that had never been seen before.

If Renaissance artists could have used light to express their ideas with the light of technology and not technique they would have done so. This is a good summary of what I say in the installation "Magnificient" narrated by Andrea Bocelli in Palazzo Vecchio. Stories from the past that are brought to life using light and a new narration. In my opinion light is the most sensitive, modern and elegant tool for arousing emotions.

Q. Have the companies you received commissions from understood the link between art and communication?

FL. The culturally enlightened companies understand that real communication is not the same as advertising. Communicating means transferring something, communicating is part of the art of involvement, not in the belief in advertising as the old arm of marketing. What I do is not even so new. In the 50's the historical restaurant of the Four Seasons in NY commissioned works by Rothko and Pollock. Let's also think of Campari and Depero and those ephemeral devices made by Leonardo for the Sforza family. What is more ephemeral today than what we do in the majority of contemporary art?. I am known all over the world for having inverted the "economic" paradigm towards sponsor companies with a "cultural" one transforming them into new patrons eager to give others a unique experience rich in content and expressive meaning. It goes without saying that this approach is even reflected in a positive way in business terms. To the Medici family art was a passion but it was also a means of consent.

I believe that it no longer makes sense to talk singularly about art, communication, design, entertainment or technology; my mantra is that all these languages talk to each other and together they will be able to transcend and go beyond. We need to know how to remember the past and imagine the future.

Q. One of your most famous installations expressing the link between art and communication was "Fabric is Art", at the Galleria dell'Accademia in Florence for a well-known woollen mill from Tuscany where you "dressed" David by Michelangelo with fabrics of light.
What is your approach when your creativity is so closely connected to historical and artistic heritage?

FL. It is not easy to establish a connection between modern forms of expression with cultural heritage above all when it involves a symbolic sculpture like David by Michelangelo. It takes humility, sobriety and always talking a step back in creative terms. The work of art is already there. My task was to give it a new updated interpretation for the times and the new users that have grown up with "other" languages and means of expression.

At that time at the Galleria dell'Accademia there was an exhibition on fabrics, real works of art from the Fourteenth to the Sixteenth Century, that's why I decided to make a connection with this exhibition; ten iconic fabric textures including houndstooth and many others. I worked with continuously moving light, with projections that changed the perception of the space and the sculpture itself. Obviously the soundtrack, the architecture and the pixel colours created a synesthetic perception that had never been seen before. We were also honoured with a nice page in the NY Times. I'm sure that Michelangelo would have been happy with this contamination, this experience to see David in a multimedia, multidisciplinary and multisensorial way.

Q. You have had the privilege of creating installation in several exceptional spaces that are synonymous with history and culture. What was your approach?

FL. The opportunity of working in exceptional spaces depends on my idea of "Gesamtkunstwerk", a total work of art. It wasn't a pipe-dream that Wagner theorised about. In his vision music, poetry, prose, dance etc could and should meet and merge into a meta experience. Much more modestly my work today updates the codes of "gesamt" (total), "kunst" (art) and "werk" (work). At the Mies Van der Rohe Pavilion for example I did "Final Touch", a video installation created with suspended sinuous digital shapes that fluctuated slowly. I synchronised everything with sounds obtained from insect noises manipulated using software on which the London Sinfonietta performed a classic analogue acoustic score; the video projection established a connection between the body of water and the marble architecture by Van der Rohe. How would you define it?

At Palazzo Strozzi I represented a change of perspective by creating the project "the sun on the roofs". Metaphorically I reflected that when it is down it looks completely lost, when it climbs on a terrace you can see views and visions"; a story of hope more than creativity. I created a publication with a circulation of more than 180,000 copies (Gruppo24Ore) and a large video mapping installation that created a union between the imposing architecture of Palazzo Strozzi and the evanescence of light. Establishing a connection with these two elements was not banal. To complete the experience there were a series of lasers connecting the highest points in the city of Florence, the Palazzo Vecchio tower, Giotto's Bell Tower, the bell tower of Santa Croce right up to Forte Belvedere with a message.
Today we can no longer divide ourselves between the "here" and "beyond" the river Arno; everyone was invited to feel children of the same shore. An extremely topical issue these days more than ever.

Q. | How has the concept of ART changed in recent years? What does it mean today?

FL. I don't think that the concept of art has changed, I believe that a big part was folded by a speculative system and the rest is undergoing huge changes, emancipated from the system and strongly hybridised. Once artists and artisans were the same thing, today however artists like Jeff Koons or Ai Weiwei or Maurizio Cattellan do not create works with their own hands but elaborate a concept that is turned into something by others. This should make us think. Art made by those who have worked with their own hands and talent will remain set in stone for eternity, the "other" art, the one amplified by the system could disappear with time.

Q. | How do you see the relationship between society, culture and technology in the near future?

FL. Optimistically I think of something constructive. I have a lot of faith in the new generations; it's as if we were children of the stone age and they of the bronze age. Certainly technology will be very pervasive, I myself am working on projects that require extensive use of virtual and augmented reality. I believe however that young people have more anti-bodies, ethical sense and openness to others than we think. It's up to people like me that deal with digital art to ensure that content is culturally relevant. The problem is not technology, we just need to take a look at its governance. I am convinced that a new humanism will emerge and technology will be the channel and means of its creation. The world that awaits us is very different from the one we know today and it will be established on paradigms that we can't even describe in words today because suitable words do not exist yet. I've seen it already. For more than ten years I have heard: "Mr. Limosani I don't understand exactly what you do but you do it very well".

Massimo Iarussi

Lighting designer

Massimo Iarussi the architect, has worked as a lighting designer since 1984. In his work he tries to combine creativity and technology. The city of Florence, where he lives and works has influenced his professional career:
his main specialisation and most important work has been in the field of illuminating museums and historical and artistic buildings.
In his approach he aims to empathise and connect with the works to be illuminating: light is never imposed or intrusive but limits itself to making the objects to be lit talk. His recent main projects have been illuminated the Museo del Duomo in Florence, numerous halls in the Uffizi Gallery and the Cathedral in Volterra.
Some of his most prestigious projects currently underway include the New National Museum of Oslo (NO) and the one for the Richelieu site of the French National Library in Paris.

Q. **You are one of the most famous Italian lighting designers, can you tell us something about this professional figure?**

MI. The best description of this profession can be found simply in its title. On the headed notepaper in my office I define the activity with the italian definition “progettazione della luce”, that is more coherent with my idea of working with light. I use the Italian not because of linguistic parochialism but because it summarise the concept I have of the work I do. The direct reference to “planning”, highlights the centrality making it immediately clear. I think the English term “designer” could be misleading: although the literal translation is “designer”, in Italian it is used with a slightly different connotation, in many different ways all emphasising creative aspects: interior designer, industrial designer, graphic designer, fashion designer and so on. Of course I don’t want to deny the important creative component that is part of our work; I do however think it is important to highlight that it plays an integral part of the architectural design process.

Even the choice of the words “lighting designer”, instead of the more widely used “lighting technician”, is not by chance. The latter places the emphasis on technical aspects, almost to imply that a lighting project has a purely functional character. Not even the term “lighting planner” would work as well; even this refers to physical objects used to create light, more than the light itself, the immaterial entity that is the real object of the design. Mastery of technology in our work is an indispensable prerequisite but not it’s not enough on its own: designing light must not limit itself to merely checking quantitative parameters but it must integrate into the architectural project.

There are many people who provide design services: manufacturers, promoters, retailers and installers.
However, only an independent professional can ensure the relationship of trust between designer and client: it is best if manufactures manufacture, sellers sell, installers install and designers design.

Q. **How important is the role of the lighting designer in enhancing art ?**

MI. Light plays a particularly important role in the appreciation of a work of art is stating the obvious: modulation of light in all its aspects, shapes the perception of a work of art and its relationship with the architecture and

the surrounding context. A designer that lights a work of art always adds their own interpretation and assumes the responsibility. A project is never "neutral": it can be more or less intrusive, minimalist or aggressive, yet it is always the result of an interpretation. Therefore the role of a lighting designer is certainly fundamental.

However, let us go back to the centrality of the "project": no matter how important the activity of lighting design is it can only take place within a more general project which includes the point of view of the curator, the exhibition designer and the architecture. The role of the lighting designer is to create a coherent synthesis between all these points of view and integrate it into the way the work is presented in form of light.

Q. **How much awareness is there in the art world about the importance of light as a means of enhancing historical and artistic heritage?**

MI. The art world is made of trained and competent professionals who are perfectly aware of the role lighting plays in their field of work. Unfortunately this is not always enough. The most problematic aspect is often linked to the next level, i.e. the way this awareness is translated into concrete action.

It can happen that the person in charge of the work is distracted by a linear solution: the chaotic and aggressive market puts them under strong pressure, often offering them solutions that can lead to confusion between design and commercial aspects. Budget constraints and bureaucratic difficulties further complicate the situation. In such confusion those that have to make the decisions can venture down ambiguous roads or let themselves be tempted by self-managed solutions confusing their own unquestionable competence with other figures in the field. The best way is once again to respect different roles and the division of professional skills within a working group.

Q. How much did living and working in Florence influence your way of lighting artistic heritage?

MI. In Florence beauty is everywhere: you are immersed in it, almost so much you almost take it for granted and don't notice it anymore. The entire city is a work of art on its own. It is impossible to think about working on such beauty without feeling crushed by the enormous responsibility that this entails. At the beginning of my professional career I couldn't help being extremely cautious, fearing that any gesture outside those lines could undermine this splendid and delicate balance. The key word is "humility": I acquired a sense of respect towards a heritage that belongs to the whole world; I developed the awareness that we must stay on the side-lines, work with a careful hand and avoid the limelight. It's not an unwillingness to intervene, quite the contrary. It means the opposite, exploiting the expertise you have and all the means technology provides to assist you in your project.

Q. What do you think is the right approach to a lighting project in a place of historical-artistic value?

MI. I like to repeat with a play on words that the best lighting project is the one that remains in the shadows, in the background. Virtually you should not even notice the light; it should be perfectly integrated with the environment and the objects it is directed at to ensure that visitors appreciate and perceive them in a unified way. Any smearing or affectation would draw attention away from the lit objects.

In publications relating to the illuminated sector you can often hear repeated like a mantra how much light can and therefore must create "emotions". Working on so much beauty has led me to introduce a subtle yet substantial difference: I do not want my light to create emotions; rather I want the emotions to be created by the works it is lighting by lending a helping hand to do this. Centre stage should belong to the objects that are illuminated and certainly not to my work as the designer.

Q. How important is team work in the process of enhancing works of art?

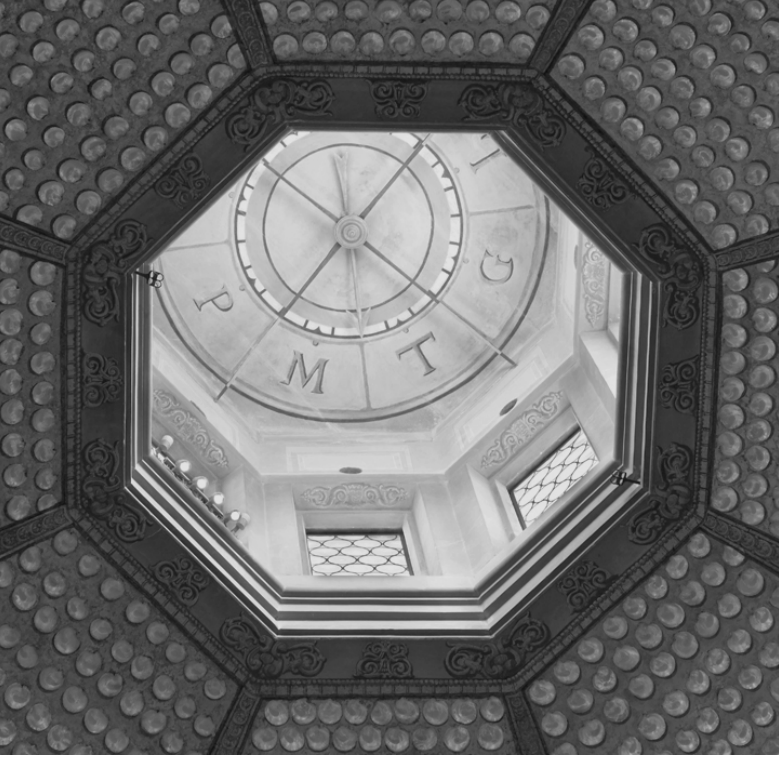
MI. I have often said how much our work involves the centrality of the project, contributing a specialist portion to a larger project. The lighting designer is inevitably going to work in a group, even more so in the artistic heritage sector where the skills in play are very varied: alongside typical design figures such as architects, exhibition designers and systems designers there are also curators, museum managers, communication, didactic and multimedia technology experts and so on. All these people help to define all aspects of the project as a whole and their interrelationships.

Working in a groups implies honours and obligations. It is fundamental to recognise the prerogative of others: the overall view should always be left to the director of the whole project thus avoiding the temptation to step into the limelight. On the other hand having roles means expecting reciprocal respect for one's own activity. In my many years in the business I have always obtained the best results when mutual respect for different roles worked well, triggering an overall growth of the group to the benefit of all the professionals involved and above all the project.

Q. Do you always manage to find the right products for your projects?

MI. The objective of our design is light; light fixtures are the devices that turn the project idea into reality. The verb "find" in your question could suggest that the lighting project limits itself to merely choosing fixtures from those available on the market. Unfortunately this is what many figures in the sector do, they are more interested in the commercial aspects that those connected to the project.

In reality, light fixtures must first be defined as if they do not exist by identifying all the characteristics according to all the project results that you want to obtain. Only then you start the search phase: you check if it is possible to "find" a fixture on the market that corresponds completely to these characteristics. Industrial output is extremely extensive and very often the search is successful. Equally often however serial products require significant modifications or you have to make heavy compromises. In many cases you find that the "right" product cannot be completely custom-made. So, no I don't always manage to find the right fixtures at least not find them ready in the catalogue. I believe rather it is impossible for any serious project. In my projects usually around half of the fixtures need some modifications to standard products, or they are entirely custom-made. To establish whether it is really necessary to create specially made fixtures, the aspects to which I attach the greatest importance are those relating to quality and the light distribution that is generated. In the office we have



a small yet complete photometric laboratory where we check the performance of products on the market and the prototypes we request from companies.

Over the last few years, following the diffusion of LED, problems relating to the production of non-standard products have increased. Fixtures have become increasingly more sophisticated; at the same time to make the most of their potential the number of requests from users and professionals has risen. All the leading companies now say they are ready to produce non-standard products; unfortunately however this availability is often limited to marginal changes to standard products, above all when the quantities in question are limited, as often happens in museum projects. Up until a few years ago to make special products "modular" management would have sufficed based on the availability of a limited number of standard components that could be combined in the most appropriate way each time. Today this approach is not enough: companies that want to really meet the needs of discerning users have to implement flexible production that allows them to tackle all aspects of projects, even for a limited number of pieces.

Q. Using LED sources has revolutionised the approach to lighting works of art. Is the theme of light-damage still relevant and how?

MI. Potential damage from light has always been one of the main factors you have to bear in mind when lighting works of art to reconcile the best way to enjoy them with the least risk of damage. The advent of LED has completely changed the approach to the problem. All constraints and recommendations on the matter were developed at a time when LED sources did not exist; they were based on technology that was around at the time and have proved inadequate to represent the current situation. LED technology, in addition to having lower emissions of potentially damaging radiation has the extraordinary potential to modulate colour spectra that makes it possible to minimise the damage factor without penalising colour rendering.

I am part of a working group that within UNI is participating in the development of new European standards on lighting artistic heritage. The approach it is following aims at replacing the old criteria based on simply complying with lighting limits, in favour of complete analysis of spectra which enables the potential for damage to be accurately assessed. In this way it will be possible to adopt higher luminance values where necessary bypassing all those limits that often penalise the success of an exhibition, always with the certainty of not damaging any works on display.

Q. Which projects you worked or are working on are the most significant to you and why?

MI. I have had the privilege and luck to work on many prestigious places; in all of them I have tried to give my all and all of them have given me great satisfaction. I can't choose one without the feeling of doing a disservice to all the others.

Without side-stepping the question I will mention just one symbolically: it is a very particular project which has the peculiarity of never being the same and changing constantly: the project that means most to me is the one I have on my desk every day.

03

Art in the spotlight

“An artist’s work does not end with their painting: it ends in the eyes of those that behold it”.

Alberto Sughi

Light is orientation, perception, emotion and sensation

The relationship between Art and Light

Art and light have a timeless and unbreakable bond. Art has always spoken of this fascinating relationship. Just think of the prodigious light that bursts into the dramatic and theatrical paintings by Caravaggio, the diffused and vibrant light in portraits by Rembrandt and the disturbing and metaphysical "Piazze d'Italia" by De Chirico which are deserted and furrowed by long shadows. In sculpture light has always generated shapes, it moulds them giving them a specific undercurrent. Just think of David by Michelangelo, of his perfection, the moulding of the muscles which are the expression of continuous dialogue between light and materials and the penetrating and realistic stare obtained by the artist with a play of light. Equally tied to light is the work by Boccioni "Forme uniche nella continuità dello spazio"; the human figure walks in a decisive way and the body gradually loses consistency to allow itself to be traversed by movement. Light emphasises sudden movement, tension, strength and vitality, it is the completion of a thought and an expression.

This timeless and unbreakable bond is extremely evident in exhibitions of these works of art which are celebrations of shape and light. Any kind of exhibition space has to consider the lighting project as an element of prime importance to perceive and enjoy the environment and the works of art on display.

LOUIS VUITTON FOUNDATION — PARIS, FRANCE
PROJECT: GEHRY PARTNERS, LLP
ENGINEERING: SETEC BÂTIMENT
LIGHTING DESIGN: HERVÉ DESCOTTES (L'OBSERVATOIRE INTERNATIONAL)
PHOTO: GILLES FREE

Exhibition spaces today

Exhibition spaces today have a dual purpose: to spread culture and stimulate the economy. They are strategic places in all countries around the world that have an artistic heritage. They are increasingly attracting attention from private institutions and individuals because the number of people going to them is rising steadily. Museums, art galleries, temporary exhibitions set up inside museums or in environments with different uses often need to be completely redesigned. There are many different people involved – artists, curators, entrepreneurs and gallery owners – and each one of them have specific needs that need to be met with extensive knowledge and experience in the field. Lighting in the museum environment for designers is a great challenge and opportunity to compare themselves with important artistic styles and figures in the sector.

The Uffizi Museum, the Salone dei Cinquecento and the Cappella di Eleonora in Palazzo Vecchio in Florence, the Confucius Museum in China and the Louis Vuitton Foundation in Paris are just some of the artistic wonders that are illuminated by Targetti around the world, which bear witness to the passion and experience that has always set us apart.

Light in exhibition spaces is direction, perception, emotions and feelings; it must guide visitors to reveal woks and their characteristics with the utmost clarity. *"Light should allow for easy, clear and unadulterated reading of works of art to find authenticity of colours without exaggeration"* explained Antonio Natali, art historian and Director of the Uffizi until 2015.

Clarity is one of the main objectives of any project and installation and must be presented on two different levels. The first is the big picture, the exhibition concept that conveys the message the curator wants to communicate by working on the connection between the works of art on display and the surrounding space. This level focuses on atmosphere, use of space, style, perception with an eye on energy consumption and maintenance. The second level tackles the more delicate themes of reading and perception of the works, effective lighting must ensure this without altering the message of the artists and safeguard their conservation.

Irrespective of the scale we work on, the choice of fixtures is of prime importance because they generate light with a characteristic colour (spectrum of emission and colour temperature), which can be more or less suitable to the chromatic properties of the works on display. The advent of LED sources changed the concept of light quality, in particular in museum environments, where conservation of the works has always been a starting point to find the best light depending on the photosensitivity of materials.

CONFUCIUS MUSEUM — QUFU, CHINA
PROJECT: LIANGYONG WU - CHEN WU
LIGHTING DESIGNER: LIE ZHANG - QIJUN YAO

CONFUCIUS MUSEUM — QUFU, CHINA
PROJECT: LIANGYONG WU - CHEN WU
LIGHTING DESIGNER: LIE ZHANG - QIJUN YAO

Today working with high quality low-medium luminance LED sources, it makes less sense to talk about light-damage: heat (infrared) is dissipated in the opposite direction to light emission and the emission spectrum of LED sources does not produce ultraviolet light which are both responsible for light-damage. However, initial visible radiation (blue light) can cause slight damage and some LED sources have significant amounts. This is the reason why it is so important to work with low luminance values in compliance with reference standards depending on the materials to be lit (UNI 10829:1999; MiBAC 2001; UNI EN 12665:2011; UNI EN 12464-1:2011) to be sure not to damage them with continuous radiation. Today more than ever it is important to work with quality LED sources and the choice must follow different criteria: excellent colour rendering, good spectral quality and life expectancy.

Colour rendering is evaluated using the Colour Rendering Index Ra also called CRI which describes the ability of light sources to faithfully reveal the colours of lit objects. It is a dimensionless index that varies on a scale from 0 to 100, where 0 represents the minimum colour rendering and 100 the maximum. It is essential to know this value that all light source or light fixture producers must provide.

Field experts believe however that the CRI method is obsolete as it sometimes provides inadequate values in particular for LED light sources.

A CRI index of 100 has always be given to incandescent lamps (traditional and halogen) that despite having a continuous spectrum appear slightly poor in blue tones and therefore less suitable to enhance colours with this dominant value.

LED sources today can obtain a maximum CRI of 97 despite having a continuous spectrum with peaks on specific colours. In addition LED technology makes it possible to combine several LED sources with different colour characteristics on just one chip in order to create a complex source complete with all wavelengths.

Even the quantity and choice of sample colours and the light fixtures mentioned in the CRI method (only 8+6) points to the inadequacy of this index, especially when applied to modern light sources.

The TM30 – 2015 method of the IES (Illuminating Engineering Society) is much more reliable.

The TM-30 index is based on the colour rendering comparison of 99 “colour patches” which produces 2 values:

- Rf Fidelity index
- Rg Gamut Index

It also introduces important indications on the ability of various sources to faithfully reveal materials and colour distortion diagrams that represent tone and saturation variations of all sources.

Every light fixture in the Targetti collection has their own “identity card” that identifies the colour characteristics

Every light fixture in the Targetti collection has their own “identity card” that identifies the colour characteristics of all sources they are equipped with. In product documentation the colour characteristics are expressed using both the CRI code as well as the TM30 coordinates in order to provide lighting designers with all necessary information to choose the best light depending on the works of art to be illuminated.

TIZIANO - TEMPORARY EXHIBITION – SCUDERIE DEL QUIRINALE ROMA, ITALY
LIGHTING DESIGN: CONSULINE ARCHITETTI ASSOCIATI
PHOTO: GERMANO BORRELLI

In museums that display ancient art contrasts between the background and the works are preferred to create a classic space and focus attention on the works themselves.

In art galleries that deal mainly with contemporary art however, uniformity is the choise and is often obtained through careful integration of natural and artificial light and with an almost total absence of shading.

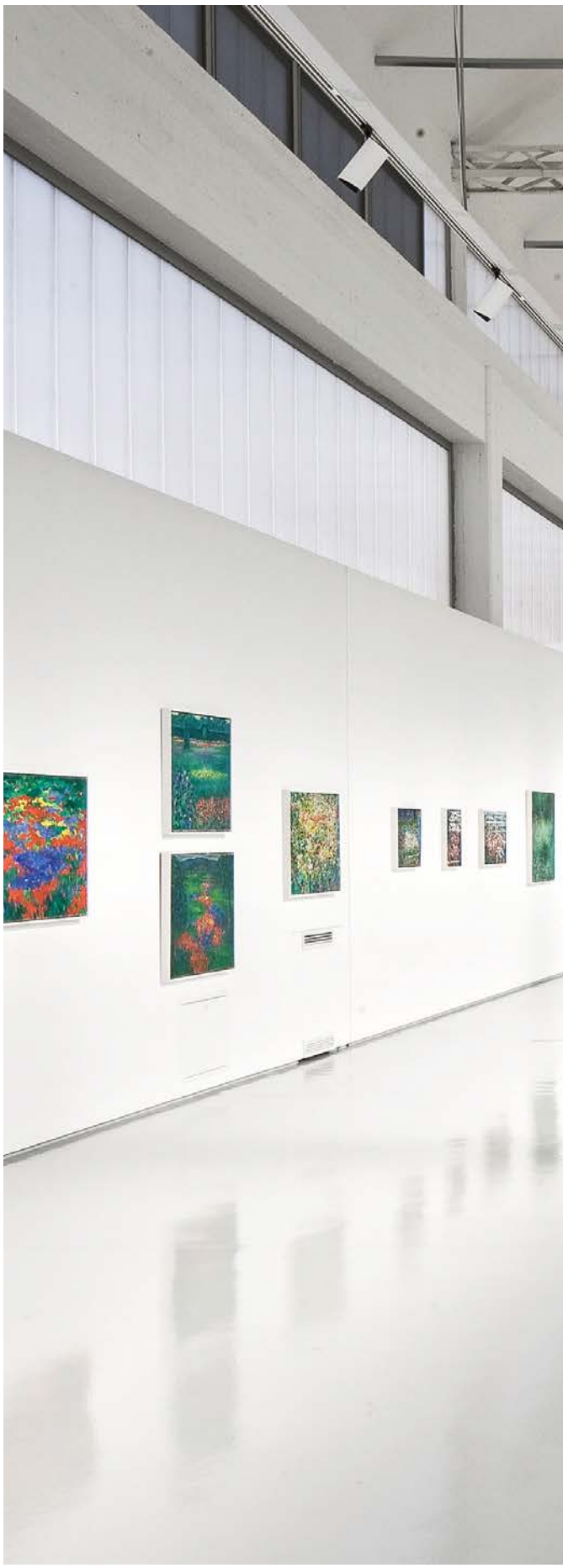
MUSEO NIVOLA – ORANI (NU), ITALY
PROJECT: PETER CHERMAYEFF
UMBERTO FLORIS – ALESSANDRO FLORIS
PHOTO: ALESSANDRO MAURELLI

Harmony of uniformity

To create a soft and enveloping atmosphere diffused lighting without contrasts is chosen that interacts with the architecture. The benefits are a uniform focus on the works and the space without any distortion or overuse of one or the other. Spaces become neutral and contemporary containers where works can be exhibited in total freedom.

In lighting design terms total uniformity must be obtained on all three planes in the space, in particular on the vertical by using reflector optics with very wide beams or wall washer optics that make it possible to have walls “washed” with light in a uniform way. The optics chosen in addition to being wide beams must have a soft gradient tone that is typical of reflector optics.

This type of effect is used in particular in contemporary or minimal spaces as well as where it is necessary to establish a dialogue between natural and artificial light. Natural light is nevertheless filtered in order to eliminate direct components which are harmful to the works on display as it is rich in infrared and ultraviolet light, in favour of a softer and more subdued light that eliminates contrasts.



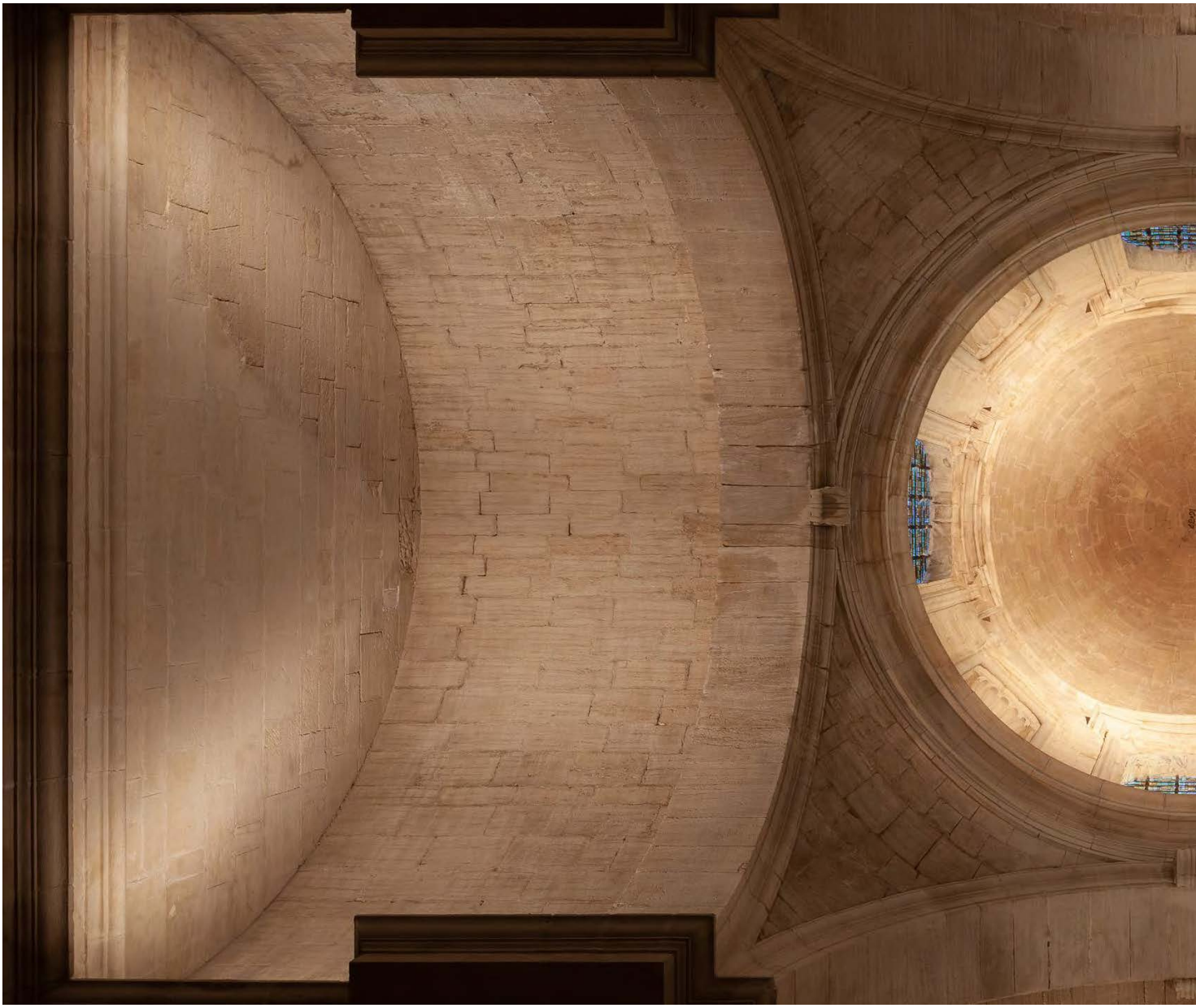
MEF MUSEUM — TURIN, ITALY
PROJECT: ALEX CEPERNICH
COURTESY OF MEF

The atmosphere of contrast

Contrast in a lighting project is a matter of style on its own but a means of conveying a message, creating an atmosphere and telling the story of works of art in an emotional way.

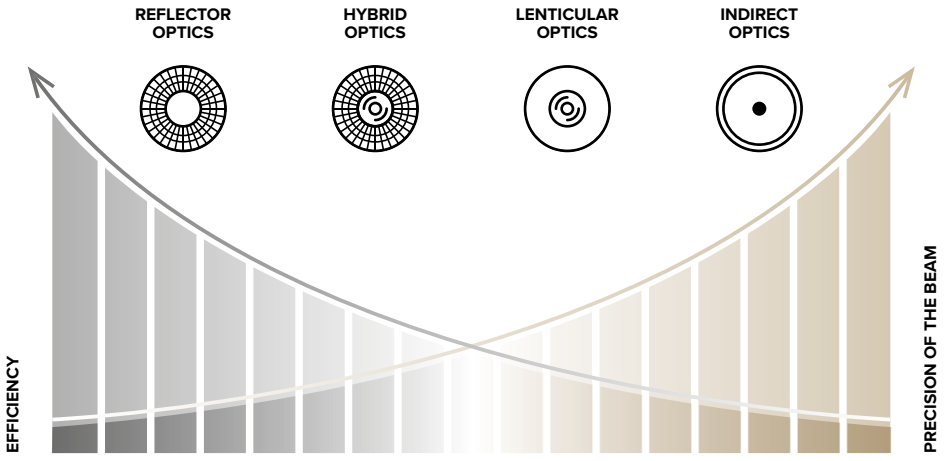
The tension between light and shade and the relationship between the works and their background catalyse attention almost immediately. Low luminance values are sufficient to create contrast if luminance ratios are focused on correctly, so as to conserve works of art or objects that are highly light-sensitive. An atmosphere that is the result of the contrast between the works and the space around them can be sober, attractive and evocative with varying luminance values and gradient tones.

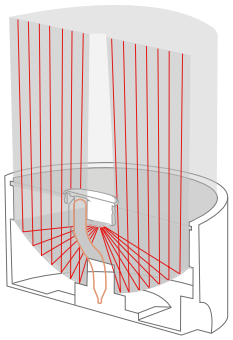
TIZIANO - TEMPORARY EXHIBITION – SCUDERIE DEL QUIRINALE ROMA, ITALY
LIGHTING DESIGN: CONSULINE ARCHITETTI ASSOCIATI
PHOTO: GERMANO BORRELLI

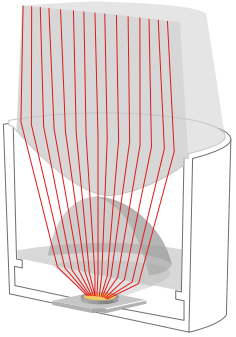


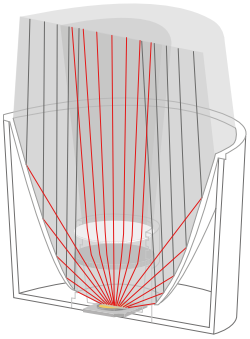
Optical systems

The optical system of a light fixture designed by Targetti can model light emission not only in terms of width but above all definition. In addition to the beam opening it is therefore important to choose the kind of optical system carefully.


REFLECTOR OPTICS
HYBRID OPTICS
LENTICULAR OPTICS
INDIRECT OPTICS
EFFICIENCY
PRECISION OF THE BEAM







INDIRECT OPTICS

Millimetre beam precision for evocative effects

One of the optics in the Targetti range is the indirect version, that makes it possible to obtain an extremely narrow light beam (6°) that is precise and well defined even at great distances. It uses the principle of lighting technology where a parabolic reflector is lit by a light source that is turned backwards and completely hidden from view. It works therefore by reflection, but the special shape makes the beams converge in an extraordinary way to create an extremely narrow, focused and defined effect with no falloff which is a normal result of uncontrolled light. Given its sophisticated shape this optic is only available in a Narrow Spot version.

LENTICULAR OPTICS

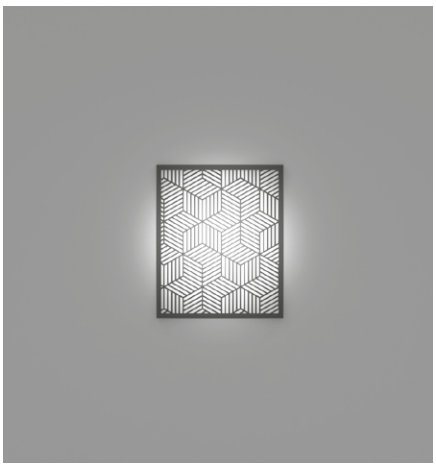
Sophisticated shapes for precise beams

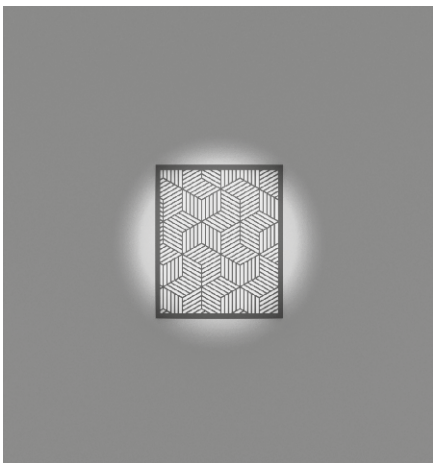
These are most commonly used in museums because they make it possible to obtain precise and defined beams that frame works of art without interfering with the background. They are available from Narrow Spot right up to Flood openings. They are small in size, use high quality materials and have sophisticated shapes to collimate beams eliminate all indirect emission components. This extreme precision entails a small sacrifice in terms of performance which in museums is not an essential requirement because low power fixtures are often used.

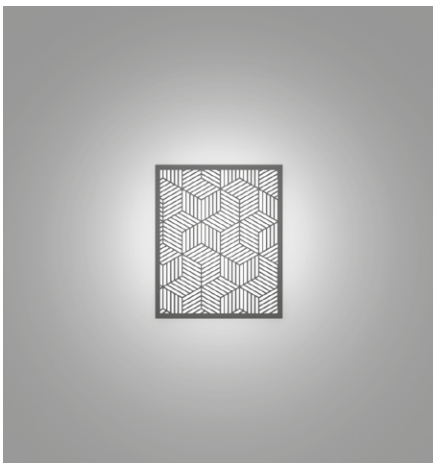
HYBRID OPTICS

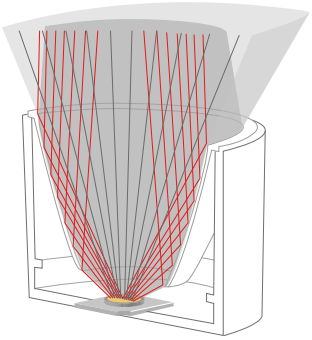
The best compromise between beam efficiency and definition

The light emission of these type of optics is the result of the combined use of reflectors and lenses. A reflector controls peripheral light while one or more lenses manage the central part of the beam which is usually uncontrolled. Cancelling “spurious” light is combined with flow recovery and an increase in the intensity inside the beam. These optics are available for Spot and Flood emissions.





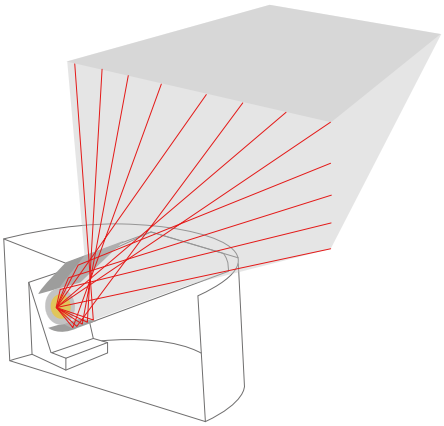




REFLECTOR OPTICS

Precise and enveloping light

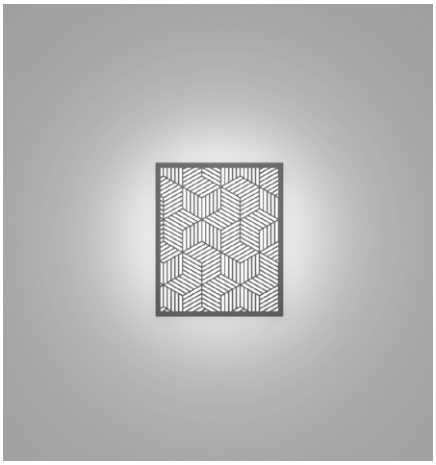
These optics ensure the best performance and are available with all beam spread (spot, flood, medium wide flood and wide flood). They allow for excellent light mixing with broad, soft tones between light and shade. They are particularly suitable when a homogeneous balance between luminance and a more neutral and less dramatic effect is required. The reflective aluminium or metallised polycarbonate they are made of ensure high optical efficiency.

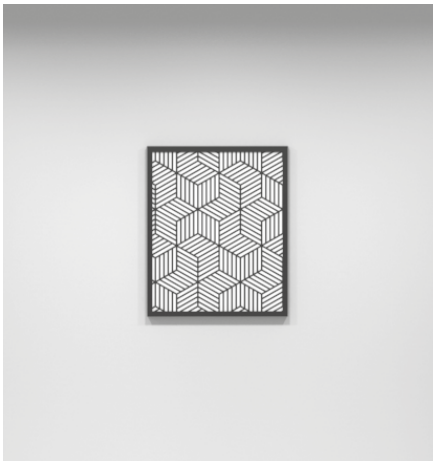


WALL WASHER OPTICS

Uniform light, contemporary atmosphere

These type of optics allow for completely uniform effects even on large wall surfaces. What makes them unique is the ability to direct the light right to the top of the surface and to its full height. The distance between different fixtures will provide uniformity along the entire length of the wall.
Wall-washer optics are ideally used where uniformity is required in the entire space or where particular emphasis on a large work of art displayed on a wall is needed.





CHAPELLE DU COLLÈGE — CARPENTRAS, FRANCE
SACHA LERAY EXPOSITION
PHOTO: HUGO HEBRARD

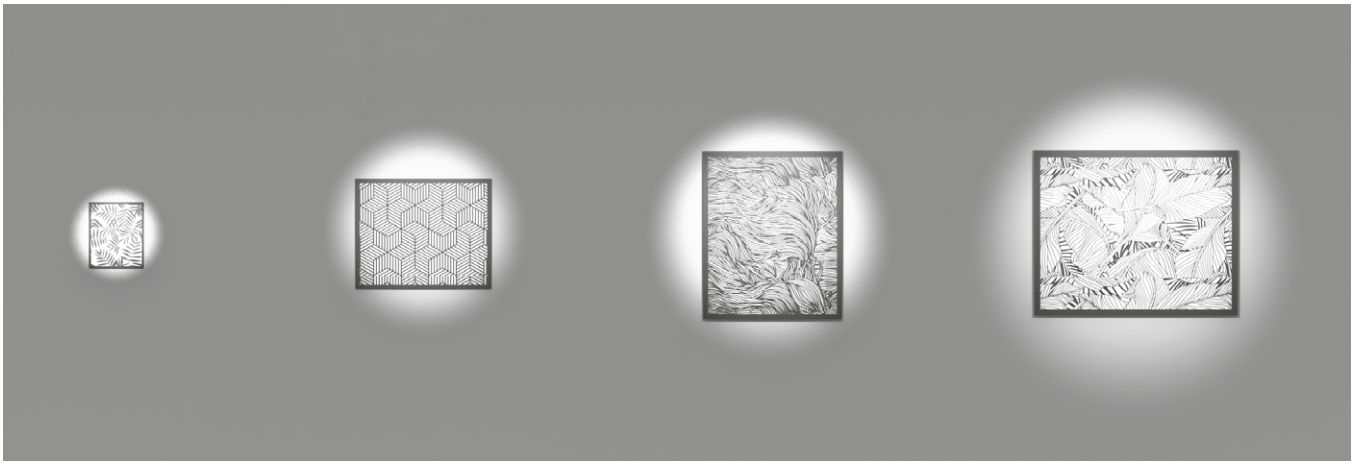
DBS

Tailor made effect

The combination of the expertise of Targetti and the exclusive technology from the American company Lens Vector, brought about the development of fixtures fitted with an optical system that can dynamically vary the beam opening angle gradually changing from a more concentrated SPOT type of emission (around 10°) to a wider one WIDE FLOOD (around 50°), flowing fluidly through all the points in between. This technology based on the use of liquid crystal lenses makes it possible to vary the beam using a remote IoT control system by Casambi application available for IOS and Android. With the App it is possible to dim the source, set the desired beam opening, create dynamic scenes.

Particularly suitable for example in art galleries, where the dimensions of the exhibited works can change and therefore it is necessary to adapt lighting to the new exhibition or where you need to change the space atmosphere without using a double switching and double fixture installation.

In this first phase the Lens Vector technology is available on different product ranges: **ZENO, CORO, CLOUD, LEDÒ, CCT.**



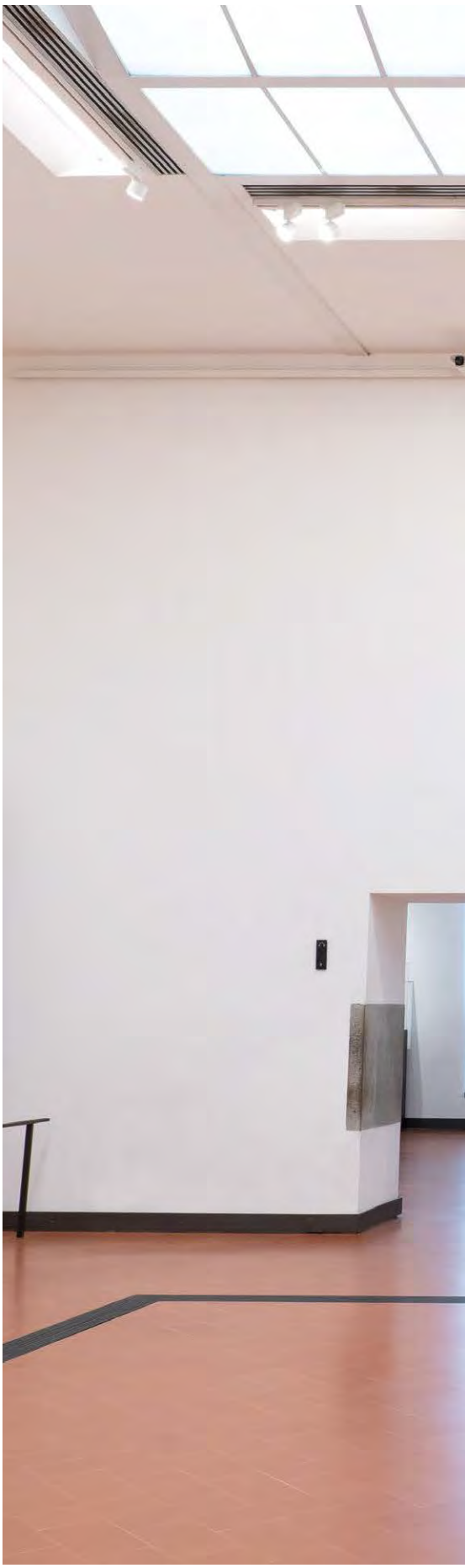
APE PARMA MUSEUM
CULTURAL AND MUSEUM CENTER OF THE MONTEPARMA FOUNDATION - PARMA, ITALY
LIGHTING DESIGN: POZZI ASSOCIATI LUCE

Galleria delle statue e delle pitture degli Uffizi

2012 - 2018 | **Florence, Italy**

Safeguarding the works of art and ensuring they can be seen and enjoyed by all are the main objectives of the project. Entirely custom-made by developing a variety of carefully studied systems, the project is based on the different characteristics and needs of the different areas.

Lighting Design
Massimo Iarussi, architect



The “Galleria delle statue e delle pitture” known as the Uffizi Gallery is one of the most important museums in the world. The building was commissioned by Cosimo I de’Medici and designed by Giorgio Vasari. Originally it was intended to be home to the “Uffizi” i.e. the administrative and judicial offices of Florence but at the end of the sixteenth century the cultured and refined Francesco I De’Medici ordered a real gallery to be built on the second floor of the building to house the large collection of works of art of the powerful Florentine family.

Today the Gallery is the most visited museum in Italy and the eighth in Europe- data from 2018. The heritage inside this museum is a real journey through Italian Medieval and Renaissance art with extraordinary works by Giotto, Piero della Francesca, Leonardo, Raffaello, Botticelli, Michelangelo and Caravaggio.

The partnership between Targetti, the Polo Museale Fiorentino (State Museums of Florence) and the Superintendence for Archaeology, Fine Arts and Landscape started in 2004 as part of the “New Uffizi”, project; one of the most extensive of its kind in Europe in the museum field. This partnership was put into practice for the first time in 2012 with the project to light the Tribuna by the lighting designer Massimo Iarussi.

This was an important project that marked the first step away from traditional lamps included in the project in 2004 to the use of LED.

All the restoration work and the installation of new systems, including lighting, were carried out guaranteeing that all museum activitieswere not interrupted in any way balong the process; to do this it was necessary to perform preliminary investigations, studies and forecasts of the effects on every possible aspect of the context involved in the project.

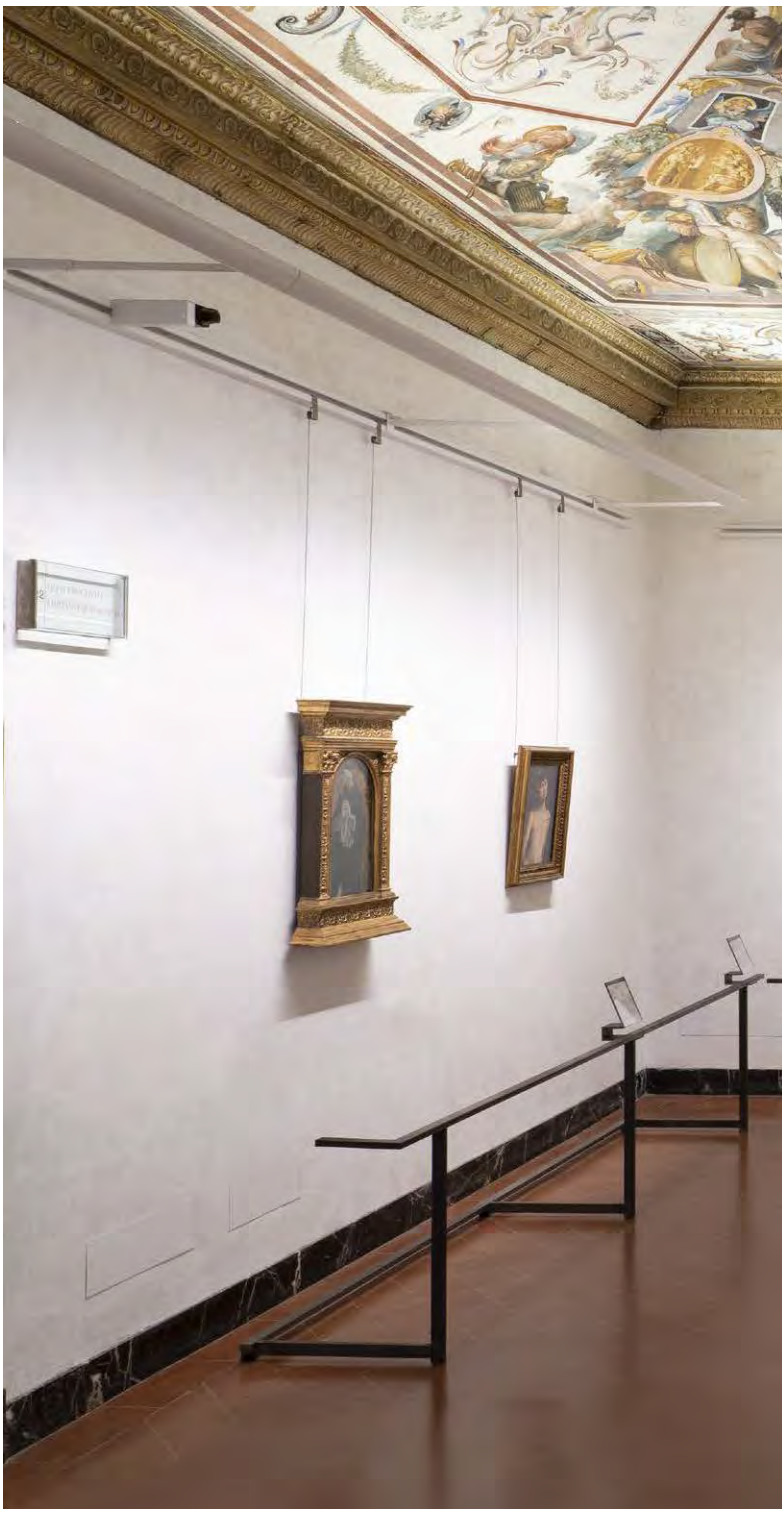
In addition to the Statues located on the ground floor that underwent an extreme transformation the most complex work was on the second floor, in particular in the main corridor and the rooms leading off the first corridor called di Levante. These are very different spaces with diverse characteristics: heights, ceilings and types of paintings. This is the reason the lighting for each room has different characteristics to ensure that each and every work of art can be seen and enjoyed with the greatest respect for their safeguard and protection. A careful check on the luminance values on the works from an accurate selection of luminous spectra of individual sources was carried out so as not to modify the colour of the works of art and reproduce them with absolute faithfulness.

The Thirteenth Century Room and Giotto

This room has an imposing wooden ceiling with exposed trusses. The lighting system focused on flexibility and lightness, is an H shaped metal profile that provides direct and indirect lighting. This suspension fixture is equipped on the upper part with linear sources to illuminate the ceiling and high colour rendering LEDO projectors for the works of art. The projectors are fitted with differentiated optics accessorised with holographic filters to further soften the beams. The great installation height of the system combined with optical systems with high luminance control make it possible to enjoy the works on display from any observation point without the risk of glaring. The projectors are equipped with 3000K and Ra97 sources to ensure full appreciation and enhancement of the gold backgrounds that are characteristic of the paintings displayed in this room.

Fifteenth Century Italian Rooms

The Fifteenth Century Italian Rooms are smaller in size and have important architectural details such as vaulted, frescoed ceilings, that do not allow for any suspended light fixtures to be installed. In order to light these rooms a solution that integrates the system of hanging the works on display with the lighting system was designed. It is an extruded metal wall bracket that houses the wires inside on which lighting fixtures were fixed using brackets. The lighting designer designed a linear projector equipped with LED boards for direct and indirect lighting positioned at a distance of around 75 cm from the works on display, using special support arms. This distance combined with the asymmetrical optics in the LED boards and the anti-glare grill make it possible to focus the light only on vertical planes where the works are positioned.



Second floor corridors

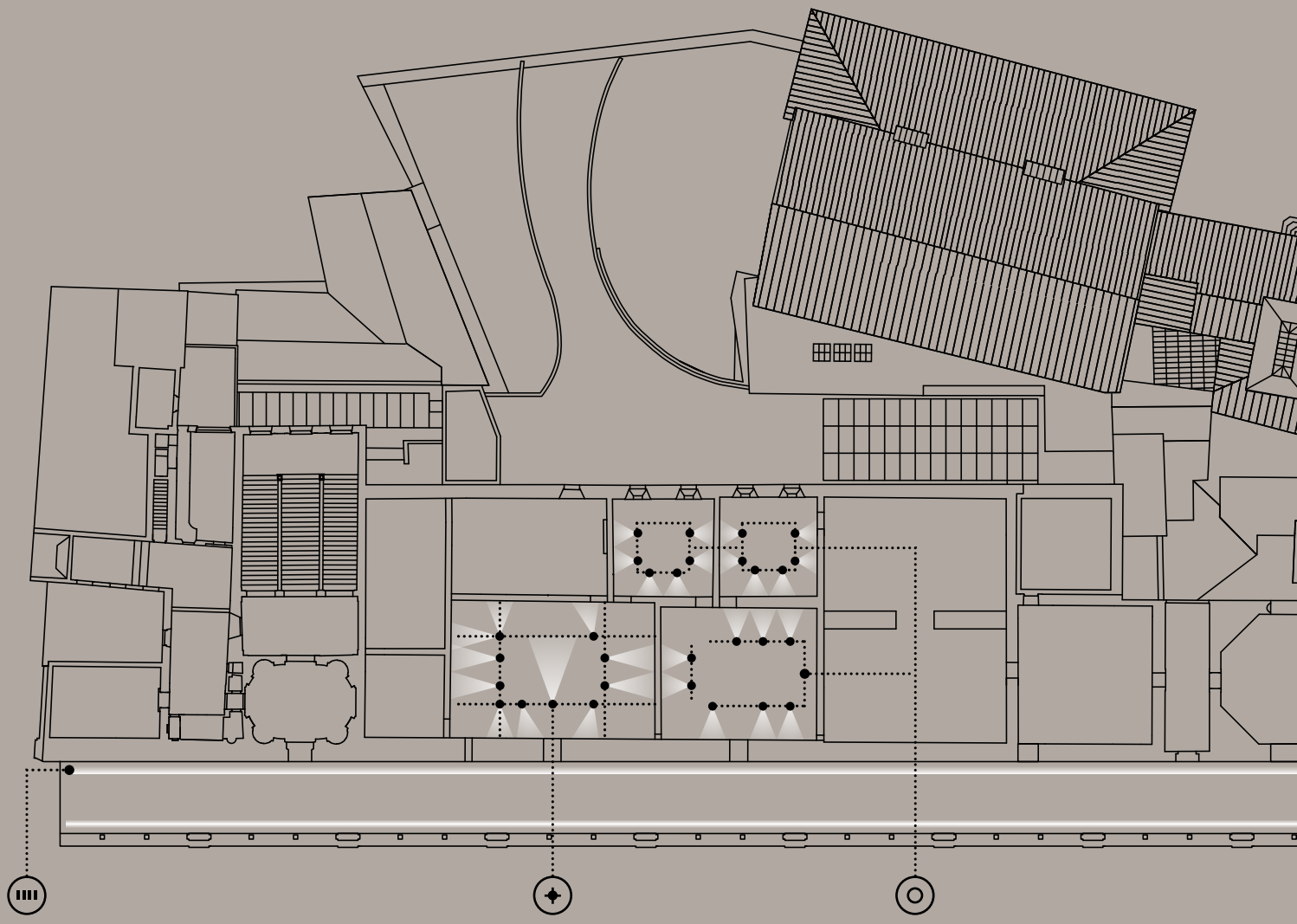
It is probable that the same term Gallery, universally used to define a collection of works of art originates from this place. There are three wide corridors – the first di levante, the second di mezzogiorno and the third di ponente – located on the top floor of the Uffizi. This is a real gallery that overlooks the main Florentine monuments which was originally designed to exhibit the collection of works of art owned by the Medici family.
At one time used as simple spaces linking the various rooms today they are fascinating exhibitions spaces once again. The ceilings are frescoed with paintings dating from the end of the Sixteenth century, while on the highest part of the walls there are portraits from the Gioviana collection, a unique collection in the world with 488 portraits of the most important figures between the Sixteenth and Seventeenth centuries. There are also a great variety of Greek and Roman statues which are also part of the Medici family collection.

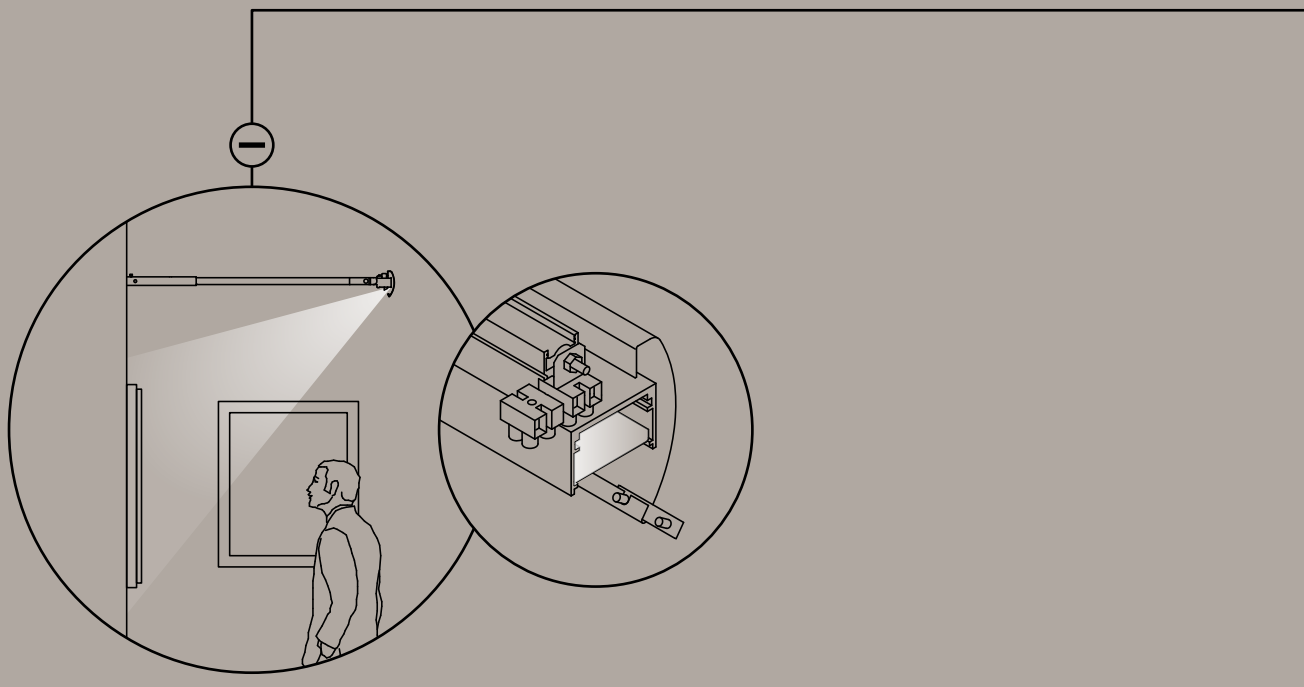
Lighting these spaces is not easy given the coexistence of different functional needs: lighting the frescoed ceiling, the sculptures, the Gioviana collection and being able to do it in the best way by integrating all elements with the existing structure and the natural light coming through the large windows.

The lighting designer studied a multifunctional system that replaced the previous installation that simulated a frame with a simple fluorescent tube inside. Using the same space he created a painted metal profile that runs along the entire corridor on both sides which not only houses the different lighting systems but also becomes a specific cavity to pass electric wires through to various parts of the system. The system has a threefold role of lighting the vaulted ceiling and the Gioviana collection using crossed beams, lighting the sculptures and finally providing a grazing light on the vertical wall.

A LED board was also positioned on the upper part fitted with a diffusing filter to soften the beams. On the lower part the same board was completed with a special anti-glare grill which further hides the source from view and harmonises it with the context. Projectors with a custom-made fixing system were designed to be installed onto the system and illuminate the sculptures from both sides.

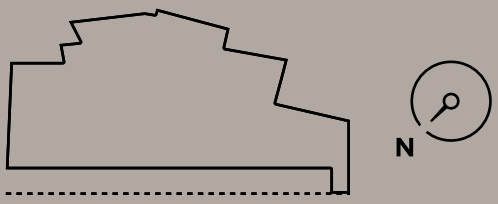
The result is completely natural as the system integrates completely with the architecture; the enveloping effect with soft lighting on the vaulted ceiling allows for clear and unprecedented views of every detail and the Gioviana Collection regains its original uniqueness. Thanks to the intuition to add projectors with zooms to light the sculptures, which now may maintain their rhythmicity even during the night.

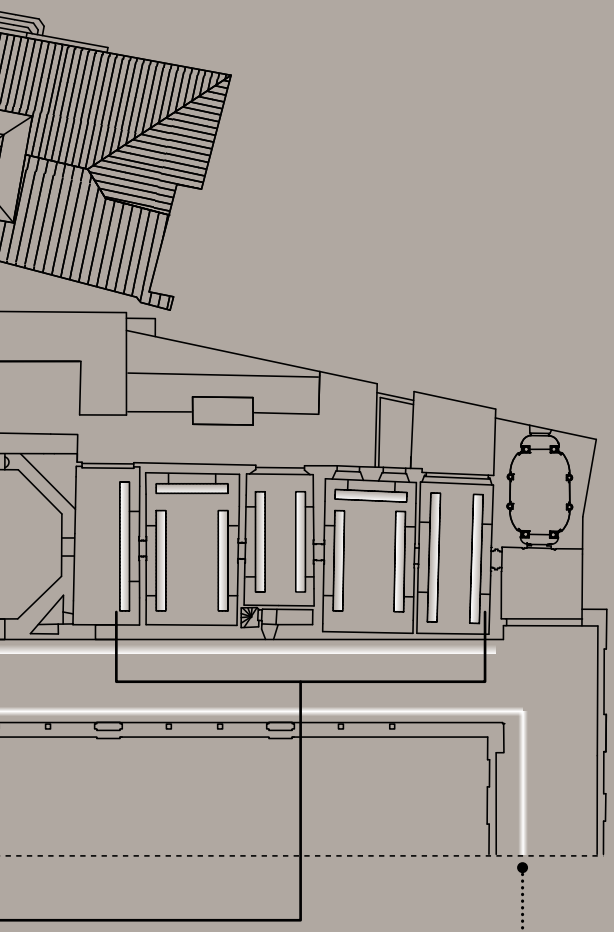


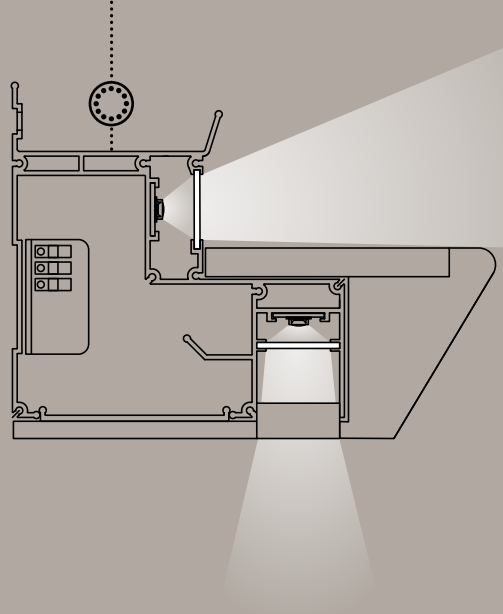


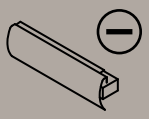
Galleria delle statue e delle pitture degli Uffizi

2012 — 2018 | **Florence, Italy**







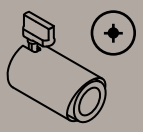


CUSTOM-MADE CANTILEVER FIXTURE

LED boards • 40° lens for direct lighting of the works
30W/m
3000K • Ra 90

Strip LED for indirect lighting
19.5W/m
2700K • Ra 90

DALI power supply



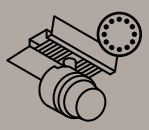
LEDÒ

Track mounted LED projector
25W • Optic SP
25W • Optic FL
3000K • Ra 97 - Rf 96 - Rg 102

CUSTOM-MADE PROFILE

Multifunction custom-made profile

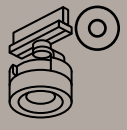
Projectors
18W • Optic SP + zoom accessories



LED boards + anti-glare black grid for direct lighting
15W/m
3000K • Ra 80

LED boards • 40° lens for vault lighting
30W/m
3000K • Ra 90

DALI power supply



CUSTOM-MADE PROJECTOR

Design based custom-made projector
12W
3000K • Ra 97 - Rf 96 - Rg 102

MEF Museo Ettore Fico

2014 | **Turin, Italy**

Enhance the contemporary soul of a space located at the heart of an abandoned industrial area which is the focus of a large redevelopment programme.
Establish a perfect dialogue between natural and artificial light while maintaining good uniformity, despite the great heights in the space and the distance of the fixtures in relation to the works on display on the walls.

Project
Alex Cepernich Architettura

The exhibition space in the “MEF Museo Ettore Fico” covers three different levels: the first is dedicated to monographic exhibitions of great masters or historical displays of educational nature; the second level is for projects with contemporary artists who work directly with the museum space; the third level features between different artistic disciplines (fashion, design, cinema, etc).

Ground Floor

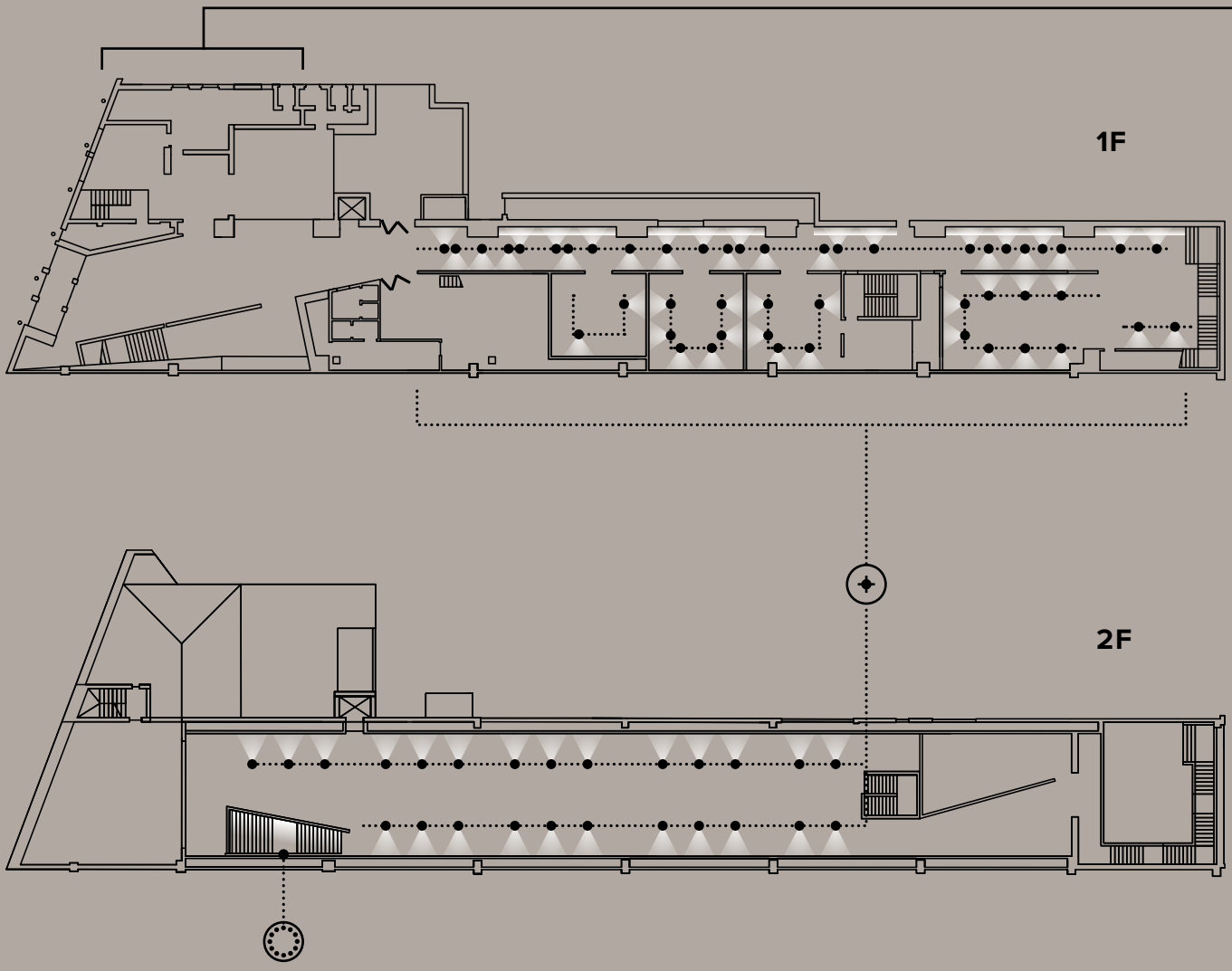
From the entrance on the ground floor there is a large 5 metre corridor which the exhibition rooms overlook, a teaching space, a multifunctional room and support rooms. The completely white corridor which is an integral part of the exhibition area is illuminate by LED projectors from the LEDÒ range installed on a track recessed into the slightly lowered plasterboard ceiling. The large installation height combined with reflector optics make it possible to obtain a soft effect on the walls without any glaring. To further soften contrasts a LED strip, installed in the ceiling, softly lights the walls making everything more ethereal.

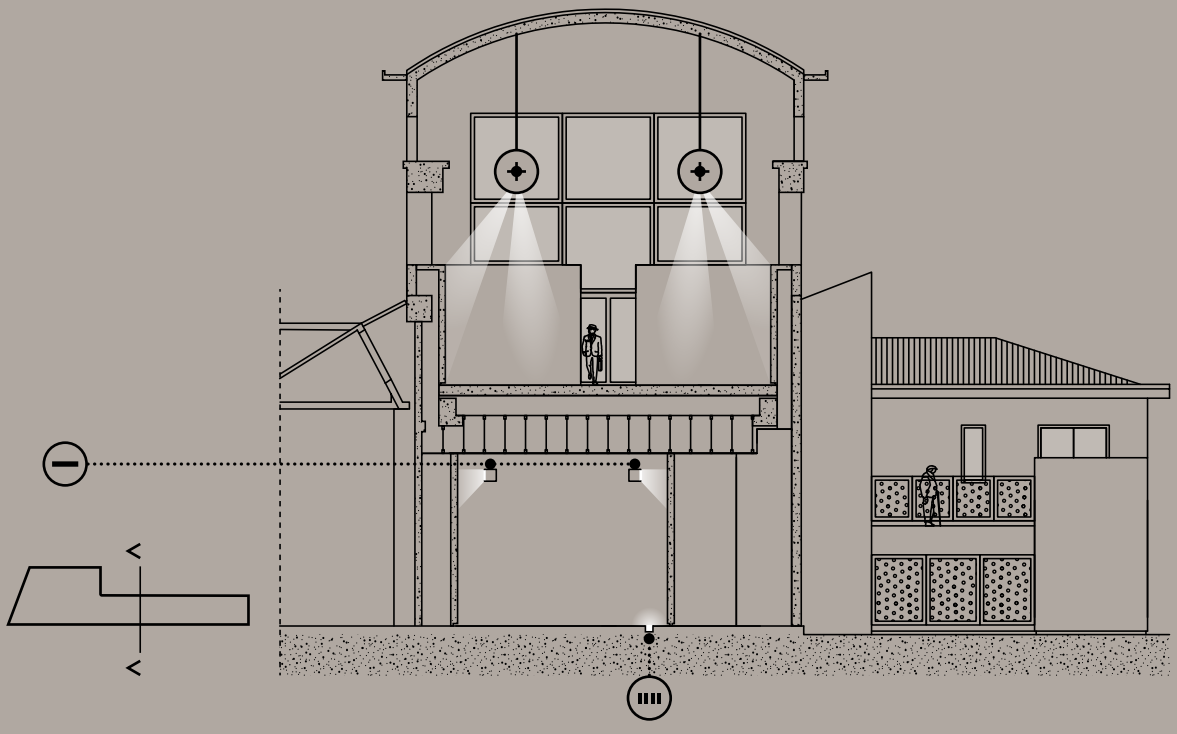
First Level

The corridor ends with the central block of the stairwell, a regular shape flooded with natural light coming from the floor above. An explosion of light takes visitors to the first floor, a versatile exhibition space with high ceilings and enhanced by strip windows along the entire perimeter. Natural light creates a surreal atmosphere, amplifies the proportions of the space and crops metaphysical visuals. Also here, LEDÒ projectors installed on suspended tracks softly illuminate the works on display. A lighting system calibrated for the different needs of the works of art on display.

The LED sources the LEDÒ projectors are equipped with have extremely high colour rendering with Ra97 – Rf 96 and Rg 102.

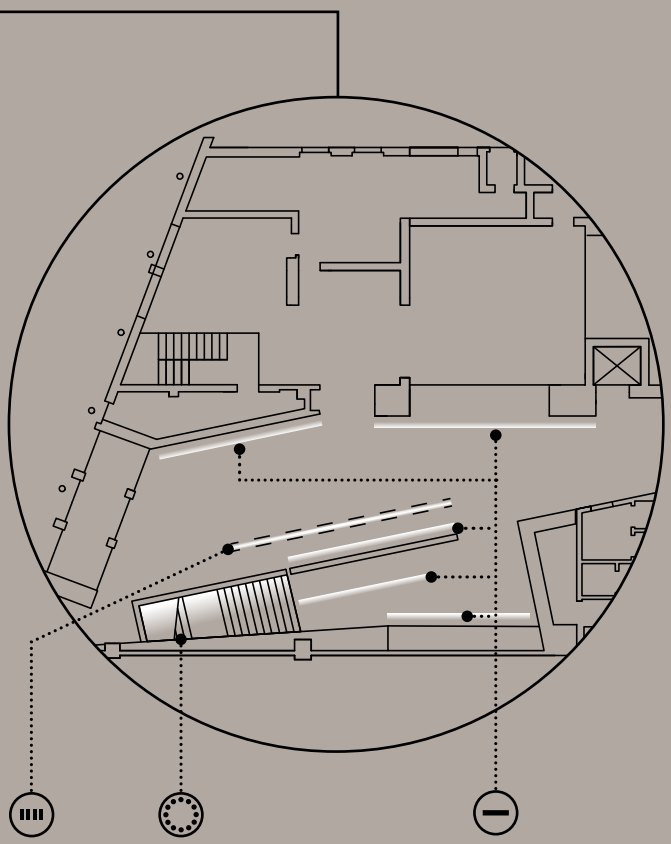

01696

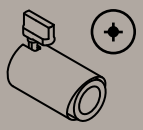

1F
2F



MEF Museo Ettore Fico

2016 | **Turin, Italy**

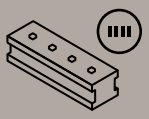




LEDÒ

Projector
25W • Optic FL
3000K • Ra 97 - Rf 96 - Rg 102

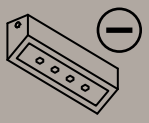
230V eurostandard track
Recessed • Suspended



DURASTRIP PRO

Stripled
10W/ml
3000K - ANSI/SDCM: 2 step

Strip Led housed in a special walk-over recessed profile



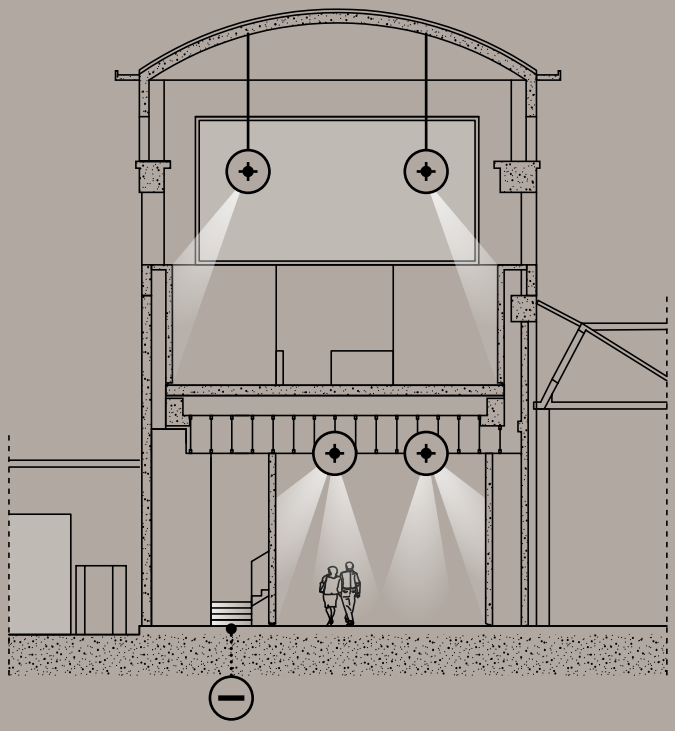
DURASTRIP PRO

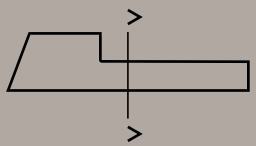
Stripled
10W/ml
3000K - ANSI/SDCM: 2 step

Strip Led housed in a special ceiling profile with lateral emission

DURASTRIP PRO

Stripled
5W/ml
3000K - ANSI/SDCM: 2 step
Cove light to light the stairs





04

Evocative light

“The best light is the one that remains in the shadow”

Massimo Iarussi

CATHEDRAL OF NOTRE DAME- PARIS, FRANCE
LIGHTING DESIGN: ARMAND ZADIKIAN

Light as the first creative act

Already 800 years ago in 1219, the Franciscan teacher at Oxford, Roberto Grossatesta, was writing about the materiality of light in his tomes "De luce". Grossatesta observed the world and nature with the admiring eyes of a man of faith, with the typical Franciscan wonder for the beauty of creation, with a careful and meticulous curiosity which made people talk about him as one of the forerunners of modern science. "Light is a raw material, identified in the same physicality or physical three-dimensionality". These reflections influenced, guided and motivated the magnificent architecture of gothic churches, large rose windows or stain glass windows to make natural light part of architecture.

The question of artificial light is however relatively recent and linked to the advent of electricity. In medieval times religious buildings were light only by natural light or that produced by candles or oil lamps that only allowed for modest visibility of the space and the works of art on display. This was sufficient because works of art were not supposed to be enjoyed by worshipers but rather were intended to enhance the place of worship so that it would be more worthy of God.

Today however, illuminate places of worship means creating a system that diversifies the lighting of a church-building and place of historical and artistic interest from that of the church understood as the house of the faithful that fulfils liturgical requirements.

The church as a building

Enhancing and using domus-ecclesia necessarily requires light. Light must take into account the monumentality of architectural characteristics by enhancing the structure and elements to make surfaces vibrate and reveal details. To maintain the spirituality of the place it is important to know how to dose light adequately to give the right weight to different parts of the space. Every project is as unique as every piece of architecture.

A lighting design project starts with an analysis of the key architectural and artistic features. This analysis is fundamental to understand which elements should be illuminate to have a clear reading and a correct appreciation of the space and functional details such as installing fixtures and wiring.

Targetti has extensive experience in this field because because has been illuminating places of worship for many years capturing the different atmospheres, peculiarities, limits and needs. To meet the lighting requirements of these places has created specific product ranges; fixtures that can blend in with the architectural mouldings in terms of shape, colour, mechanical and electric characteristics.

ST GERMAIN DU PRÉ CHURCH - PARIS, FRANCE
LIGHTING DESIGN: ARMAND ZADIKIAN
PHOTO: HUGO HEBRARD

ST GERMAIN DU PRÉ CHURCH - PARIS, FRANCE
LIGHTING DESIGN: ARMAND ZADIKIAN
PHOTO: HUGO HEBRARD

The church as a place of prayer

Every place of worship is a treasure chest of values for a religious community and it is here that worshipers gather to contemplate the values of the faith in a place steeped in history. The atmosphere one breathes here is largely due to the solemnity of the place and also created by light, especially during services.
Lighting a liturgical service is not like illuminate a play even if liturgy does have a certain "theatrical" element. Lighting a liturgical service depends as much on its nature as where it takes place.
In catholic churches light must be functional to the celebration of the Eucharist as well as prayer and meditation.

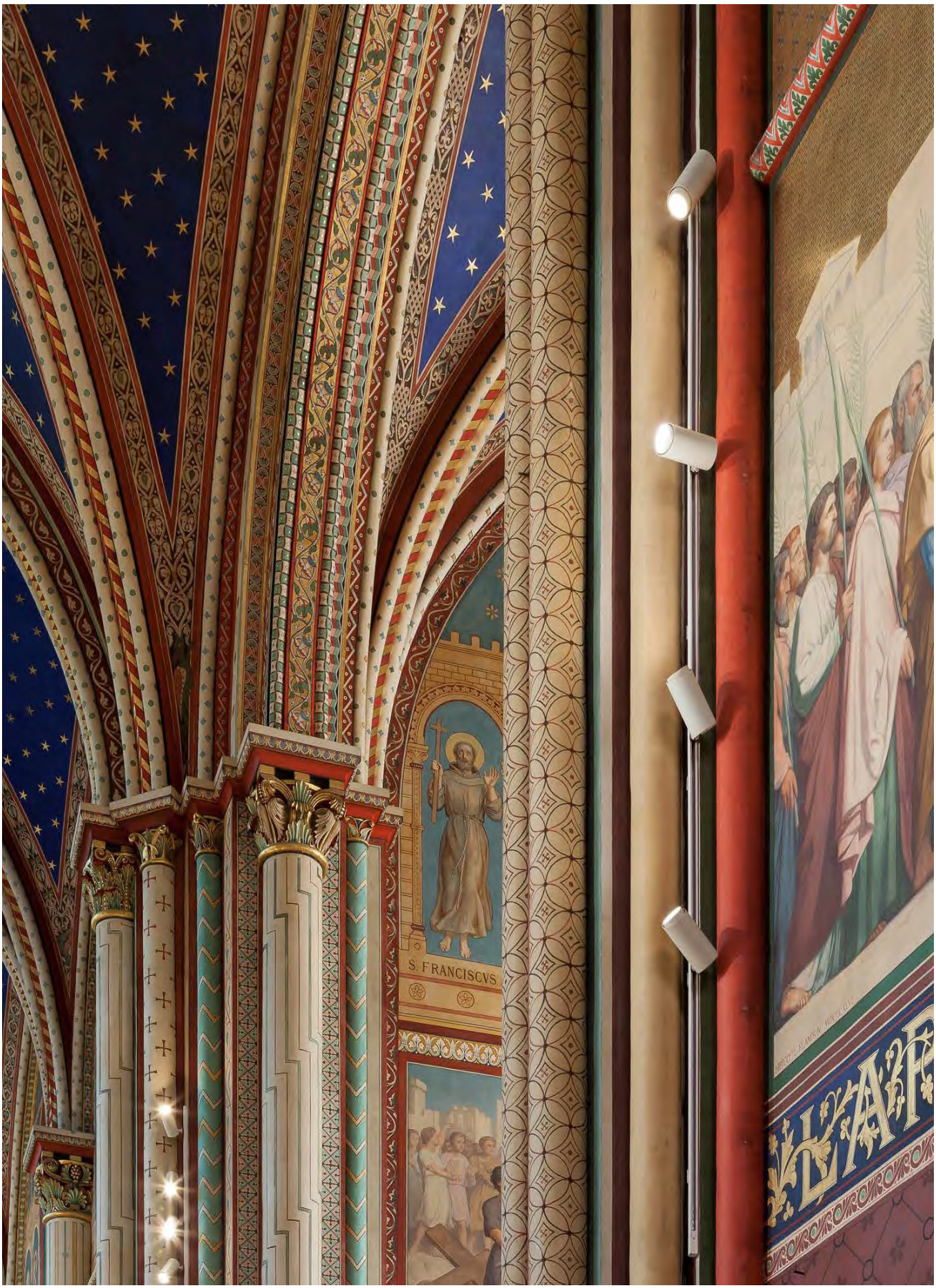
During services there are passages that are carried out in specific places and require specific illumination. The Pulpit and the Altar are key elements in religious services and must therefore be at the heart of the lighting project. The Pulpit is the fulcrum of the liturgy of the word and the Altar is the focal point for the eucharistic liturgy. For the former it is important to light the Bible while on the Altar it is fundamental to illuminate the Communion Bread, the Chalice and the Missal. Candles on the altar must be left in the shadows to enhance their flames as the expression of the authentic value of life. During services there are no other elements to be lit so it is necessary to create an atmosphere that embraces and involves those present and allows them to follow the readings independently.

Flexible light: control systems

Depending on its historical-artistic value a church can be defined as a “basilica” and must therefore have the necessary means to maintain the decorum required by the title. The same services can be more solemn and require particular light scenes: lighting that is functional to the architecture and prayer but also different scenes depending on the services or changes during the same services.

To do this it is necessary to use a control system that makes it possible to manage individual fixtures as well as the entire lighting system.

ST GERMAIN DU PRÉ CHURCH - PARIS, FRANCE
LIGHTING DESIGN: ARMAND ZADIKIAN
PHOTO: HUGO HEBRARD


S. FRANCISCVS

DALI CONTROL

The DALI (Digital Addressable Lighting Interface) protocol is certainly the most widely used. It is a digital interface to manage electronic lighting systems.
The DALI protocol is particularly suitable for large systems that need to be managed by a complex control system. All fixtures in the Targetti collection are equipped with DALI drivers so they can be managed with a standard protocol..

Main characteristics

- Turn single or groups of fixtures on and off
- Dim single or groups of fixtures
- Create lighting scenes
- Activate scenes created easily
- Updates on the dimming status of fixtures
- Request specific design and electrical installation to pass 5 pin cables

CASAMBI CONTROL

In order to further simplify the management and control of a lighting system and above all to take advantage of the current electrical system we have created a new control system. It is the LMS Casambi lighting control system that only needs a smartphone or a tablet and a WI-FI network that interacts with light fixtures that are equipped with a special Casambi interface.

Main characteristics

- Managed using an app compatible with IOS and Android systems for tablets and smartphones
- Free creation of fixture networks
- Dim single or groups of fixtures
- Create lighting scenes and recall them immediately and easily using the app
- Control colour temperature for “Tunable light” fixtures that can vary the colour temperature
- Create dynamic scenes
- Remote control using the Cloud
- Compatible with iBeacon technology

CATHEDRAL OF THE ASSUMPTION OF MARY - HILDESHEIM, GERMANY
PHOTO: WALTER BAMBERGER

SAN LORENZO TEMPLE - VICENZA, ITALY
PHOTO: ANTONINO CIDDIO

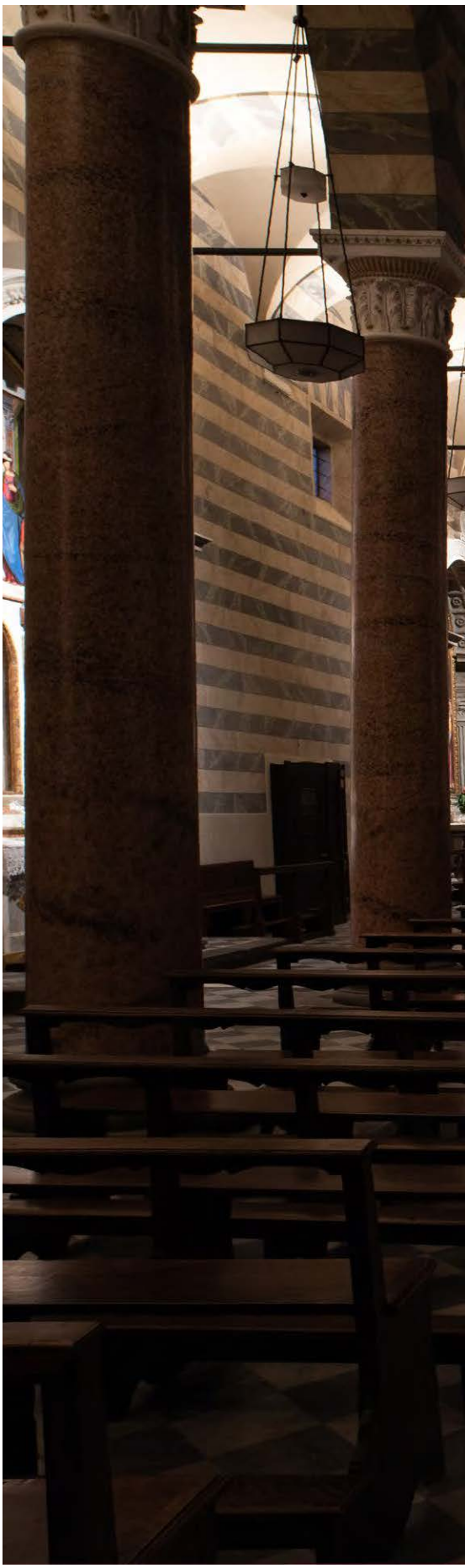
The Cathedral of Santa Maria Assunta

2019 | **Volterra, Italy**

The project is based on the concept of “light that remains in the shadow”: an organic presence in the space around it, that allows visitors to appreciate the architectural and artistic details in the Cathedral and not only its light.

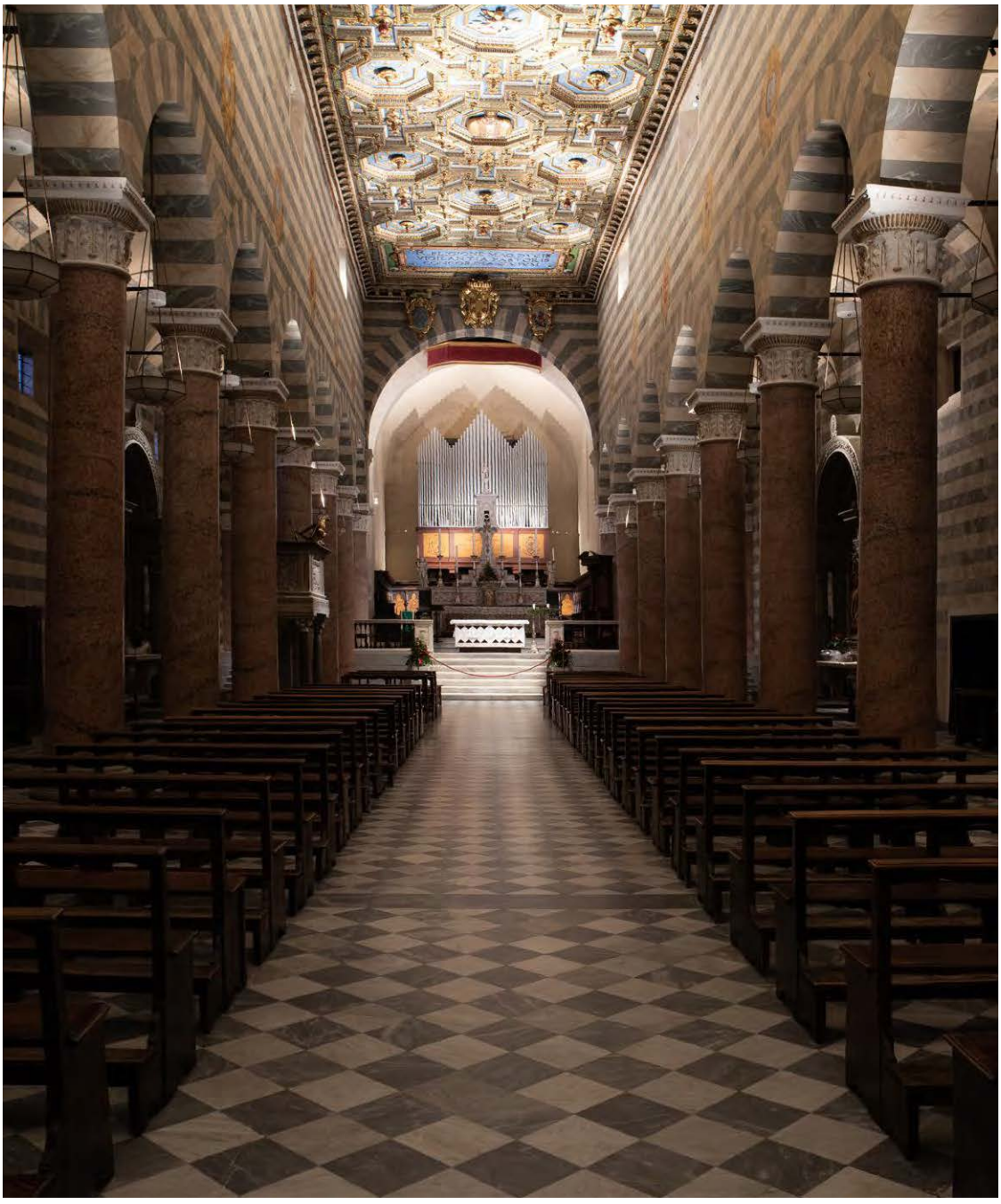
Restoration project
Giorgio Bascià, architect

Lighting design
Massimo Iarussi, archiect



Volterra is the city of alabaster, well-known and visited by discerning tourists looking for less-known artistic treasures but of great historical-artistic value. The cathedral of Santa Maria Assunta is one of these places, the symbol of medieval Volterra and one of the finest examples of Pisan Romanesque architecture. Consecrated in 1120, the cathedral is home to both precious antique and modern works of art. In 2016 to mark the 900th anniversary of its consecration the diocese in Volterra decided to start restoration work on the whole church, both architectural and structural work, including the lighting system. The lighting project was entrusted to the architect and lighting designer Massimo Iarussi given his particular talent and experience in the historical-artistic field.

The project is once again in-keeping with the concept of "light that remains in the shadow", as Iarussi likes to define it where light does not intend to take centre stage, be self-referential and an end in itself, but appears to be rather "organic" to the space that surrounds it; perceived as intrinsic in the space. Visitors can enjoy the entire space and not specifically its light.



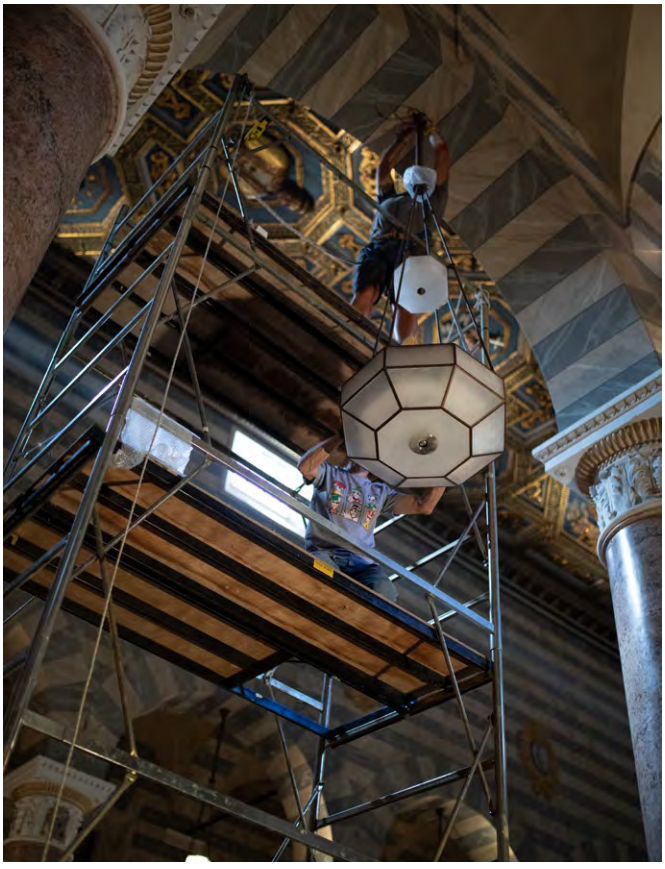
The centrale nave

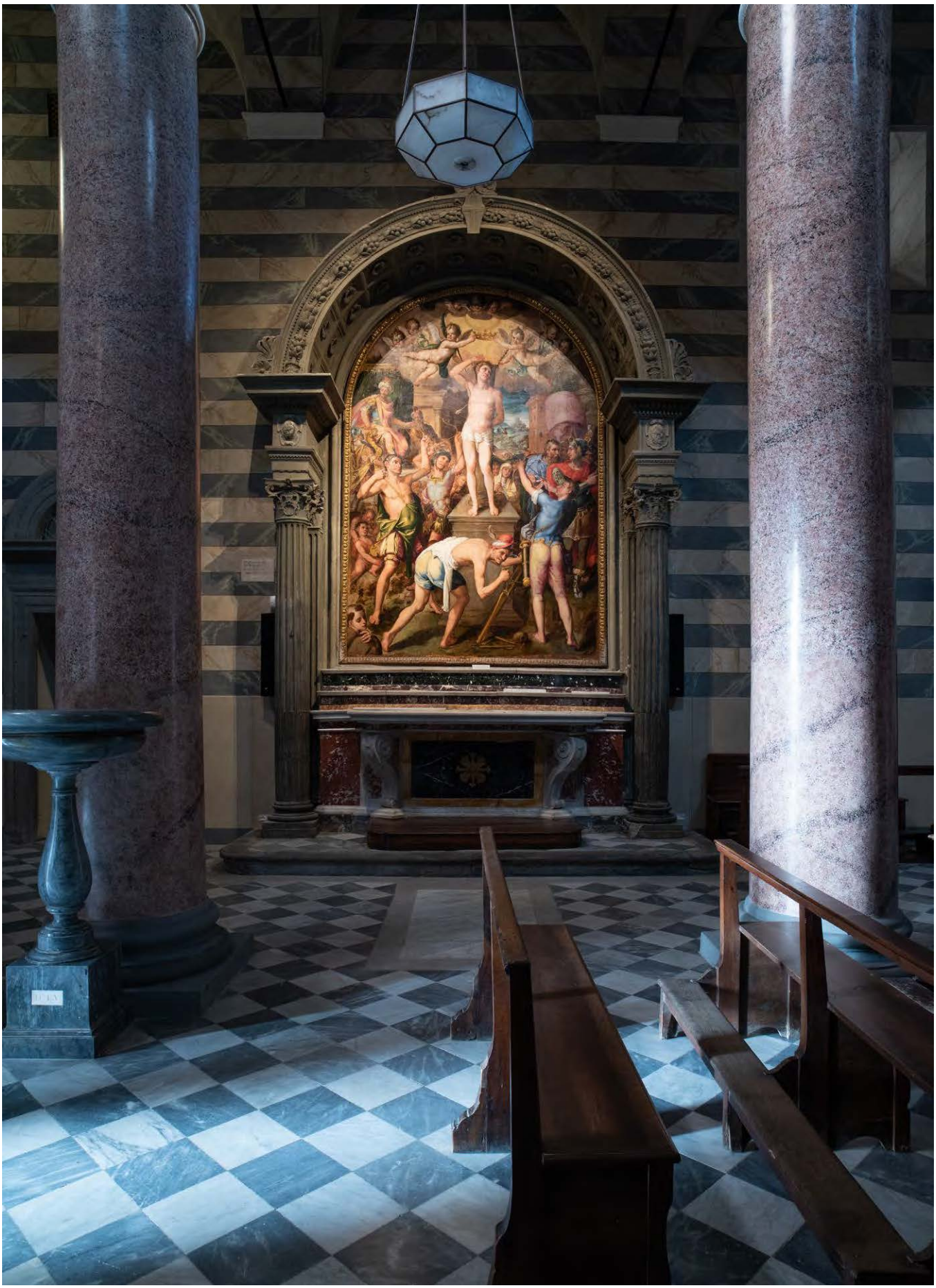
With the same aim the architect decided to design dedicated suspension fixtures made of alabaster for diffused lighting in the church and to hide the projectors that illuminate the coffered ceiling.

This idea was dictated by the already present overlapping of elements and styles from different eras inside the church, which make it a work of inestimable artistic value. The space, while retaining the Latin-cross basilica shape with three naves also has a late Renaissance aspect. The coffered ceiling dates back to the late sixteenth century while the stucco coating on the columns, the floor and the walls painted in white and grey bands all date back to restoration work carried out in the nineteenth century.

The suspension fixtures therefore add a new element to the Cathedral, an expression of artistic and artisan work from the third millennium. The entire project has a common theme of softness of light and perfect balance of luminance between the various areas of the church. Everywhere architectural details have been used to install fixtures and hide them as much as possible from view, except for the lanterns that also become important decorative elements. The central nave is illuminate with diffused light from the new alabaster lanterns positioned below the arches that divide the naves. This is a tribute that the lighting designer wanted to pay to the city, the European capital for processing this precious mineral. The lanterns represent the masterful work of different artisans. The artisan who worked on the alabaster, the blacksmith who made the metal structure and Targetti who designed the technological heart.

The R&D department at Targetti created a metal tray to house the fixtures for different lighting scenes. The lanterns play a triple role of contributing to the general lighting in the church, lighting the coffered ceiling and providing a more scenographic zenith light for the floor.
A of ring made of LED strips surrounds the metal tray to provide a backlight for the alabaster suspension fixtures.
Inside they are equipped with custom-made projectors inspired by the ZENO range, fitted with a special adjustable bracket to illuminate the coffered ceiling. Finally, in the lower part of the lanterns there are small recessed projectors derived from the LABEL 48V range which are fixed to the metal trays using rods and zenithally illuminate the floor.





The side naves

The side naves are light indirectly. A decision was made to enhance the vaulted ceiling using linear lighting positioned on the existing chains. The effect is extremely soft without any particular focus. The lighting designer studied the right power and the distances between the walls so as not to create any blurring. Black 48 V tracks equipped with LABEL mini projectors are also attached to the chains to light the side chapels that are full off with precious frescoes.


ANNO SALVTIS M·D·X XII SEXTO KALENDAS MARTIAS

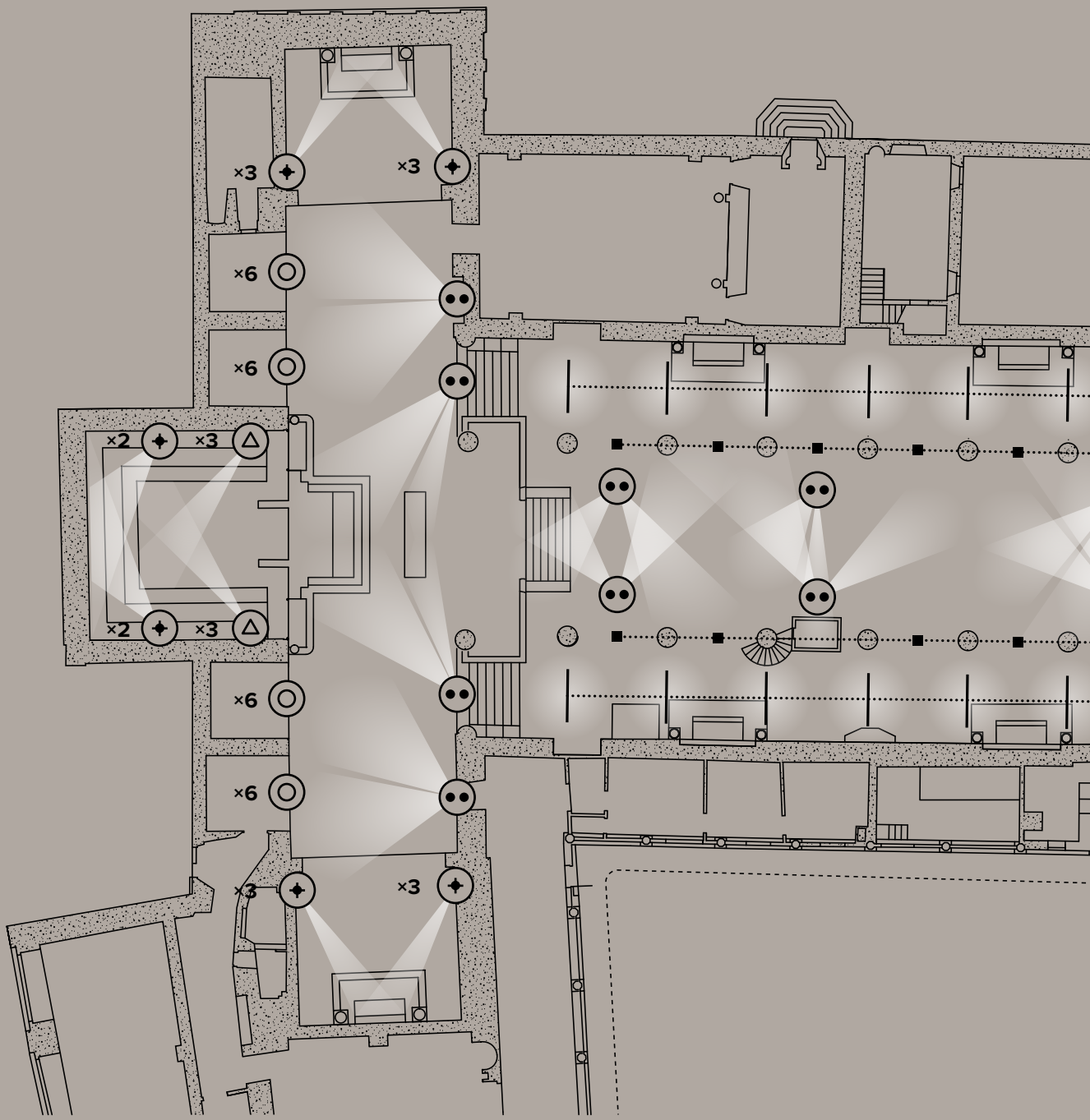
The transept and altar area

The altar area is sober in terms of lighting sculptures and religious elements. Lighting is provided by custom-made projectors inspired by the ZENO range, positioned on a metal plate rather than on a track, which illuminate different vertical planes: the face of the celebrant and the Altar that is home to the holy relics. The organ behind the majestic Altar is lit with reflected light coming from the apse's ceiling, so to leave it, almost in dim light in order to focus attention on elements of more religious significance.

Particular attention was paid to the front chapels of the transept which are home to the main works of art in the cathedral, such as the beautiful wooden deposition of Christ. They have preserved their medieval character, escaping subsequent alterations and are lit with low luminance levels and warmer tones.
All lighting is managed using a sophisticated DALI BUS system that makes it possible to create different scenes according to requirements, both in museums and places of worship. The cathedral on one hand is a place of continuous pilgrimage for visitors to Volterra, on the other, seeing as it is an episcopal see, it performs various religious functions from simple gatherings for recollection and prayer to more solemn services.

Iarussi created 8 different scenes where the different sculptural and architectural elements are treated differently – by dimming the lights – depending on the time the scene is used during services. For example, the historic high altar (the pre-conciliar one where the celebrant has his back to worshipers) is slightly dimmed during liturgical services so as not to compete with the modern conciliar altar facing towards the faithful which is the fulcrum of the scene. In the scenes designed for tourist visits or concerts on the other hand, the focus is on the historic altar which constitutes the fulcrum of the architecture, while the contemporary altar is left in the shadow.

A similar criteria is also applied to the paintings and all the other architectural elements: elements that constitute a symbolic reference to liturgical aspects are only lit lightly during tourist visits where there are no services; on the contrary those with predominantly artistic value are in the shadows during services. Solemn occasions therefore create a link by maximising all the works of art and architectural elements. All the scenes can be recalled using a push-button panel located in the sacristy of the church which means that it is easily accessible to all those involved in managing the Cathedral.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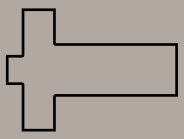
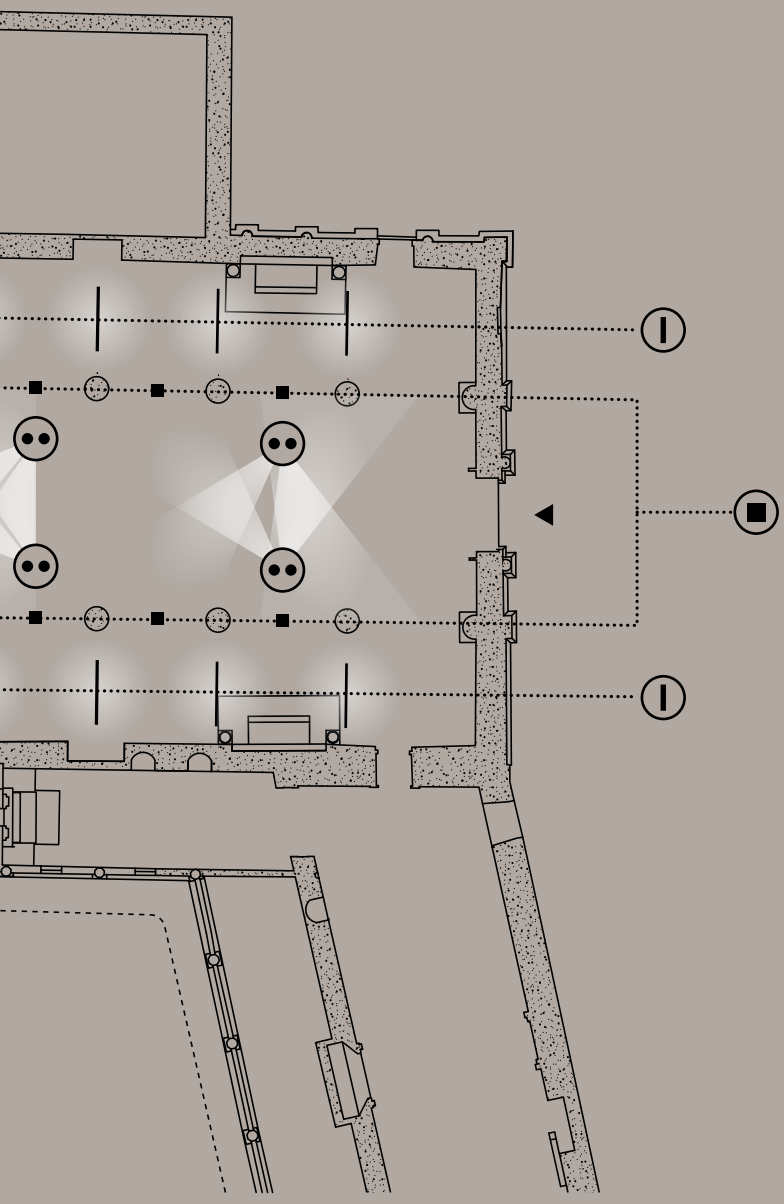
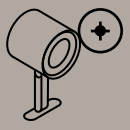
The Cathedral of Santa Maria Assunta

2019 | **Volterra, Italy**

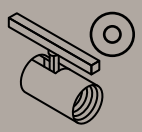






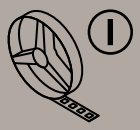
CORO

LED projector
18W • SP Optic
25W • FL Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



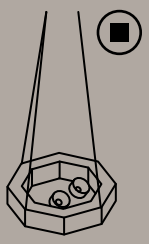
FORTYEIGHT LABEL

LED projector for 48V track
6W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



DURASTRIP HIGH DENSITY

LED strip inserted into an aluminium profile
24W/ml • VWFL Optic
3000K — Ra 95
DALI power supply

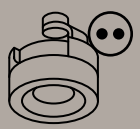


CUSTOM SUSPENSION

LED strip module
3000K — Ra 95

2 LED Projectors
12 W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply

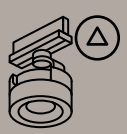
LABEL 4 48V
6W • SP Optic
3000K • Ra90



ZENO CUSTOM

Custom-made LED projector on a plate installed on window jambs

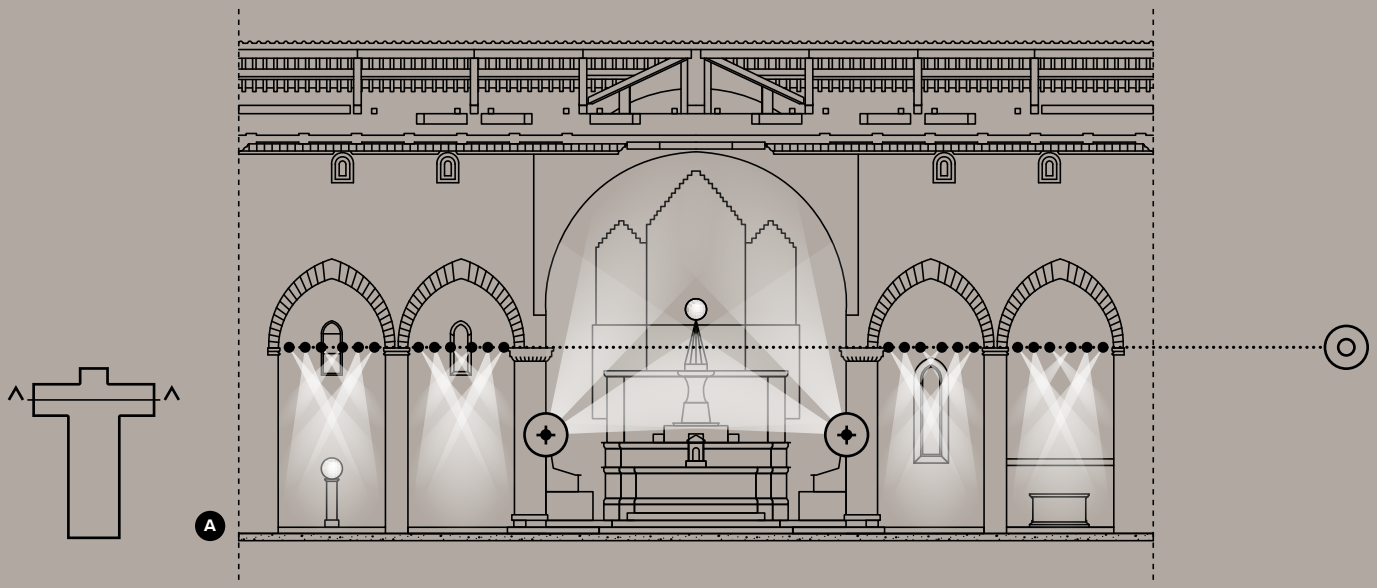
18W • NSP Optic
26W • SP Optic
26W • FL Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



ZENO SMALL CUSTOM

Custom-made LED projector on a single plate installed on the cornice

12W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102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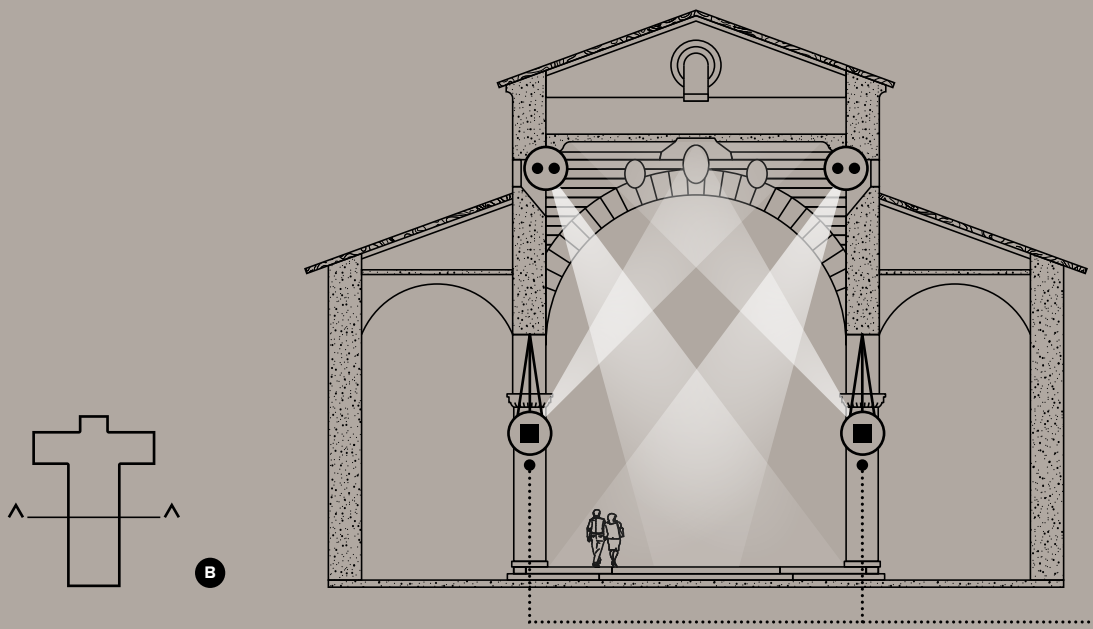
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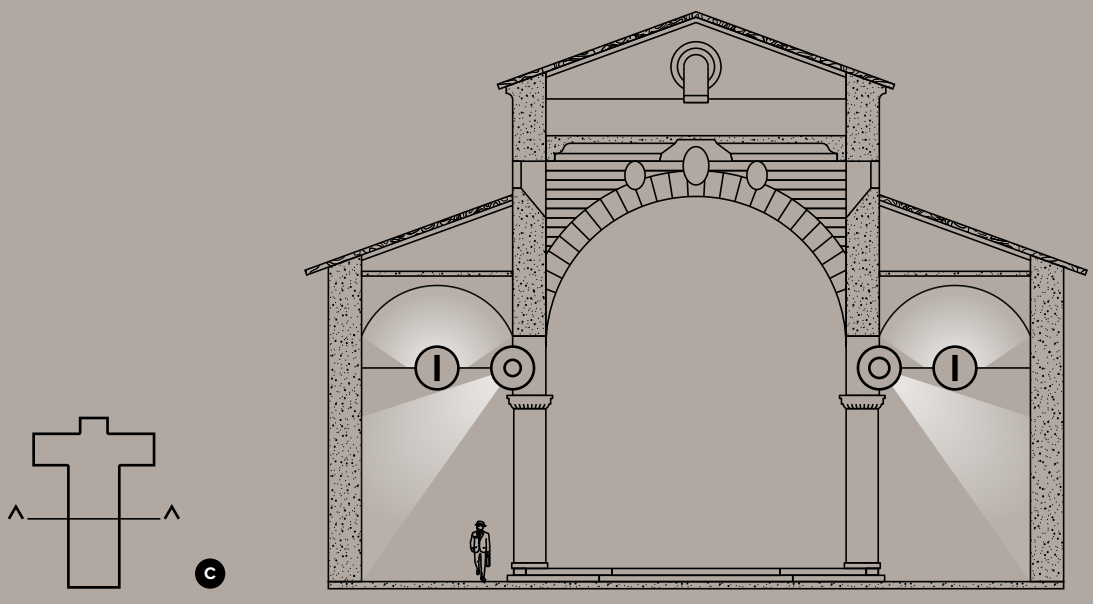
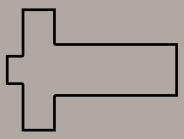
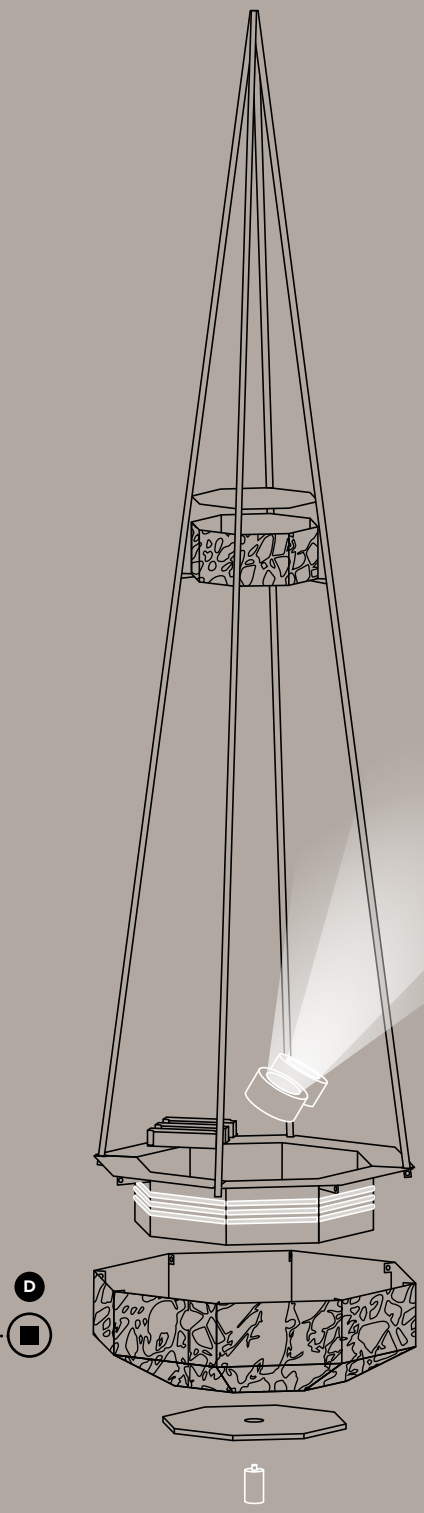

C

The Cathedral of Santa Maria Assunta

2019 | **Volterra, Italy**



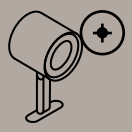


A. Lighting for transept
LED projector **CORO**
LED projector **FORTYEIGHT LABEL**

B. Lighting for central nave
LED projector **ZENO CUSTOM**
Suspension **CUSTOM MADE**

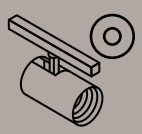
C. Lighting for side nave
LED projector **FORTYEIGHT LABEL**
Stripled **DURASTRIP**

D. Custom-made suspension detail
Custom made suspension fixture for diffused, direct and indirect light.



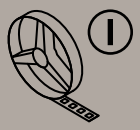
CORO

LED projector
18W • SP Optic
25W • FL Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



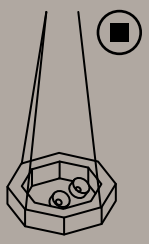
FORTYEIGHT LABEL

LED projector for 48V track
6W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



DURASTRIP HIGH DENSITY

LED strip housed in an aluminium profile
24W/ml • VWFL Optic
3000K — Ra 95
DALI power supply

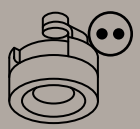


CUSTOM SUSPENSION

LED strip module
3000K — Ra 95

2 LED Projectors
12 W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply

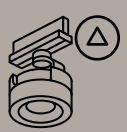
LABEL 4 48V
6W • SP Optic
3000K • Ra90



ZENO CUSTOM

Custom-made LED projector on a plate installed on window jambs

18W • NSP Optic
26W • SP Optic
26W • FL Optic
3000K • Ra 97 - Rf 96 - Rg 102
DALI power supply



ZENO SMALL CUSTOM

Custom-made LED projector on a single plate installed on the cornice

12W • SP Optic
3000K • Ra 97 - Rf 96 - Rg 102

The Cathedral of Santo Eccehomo

2019 | **Valledupar, Colombia**

Emphasise the messages expressed by the different architectural elements. A project in line with the contemporary style of the church, where light never appears contrasted but harmonises with great naturalness in the space in continuous dialogue with natural light.

Project
Gustavo Vasquez, architect

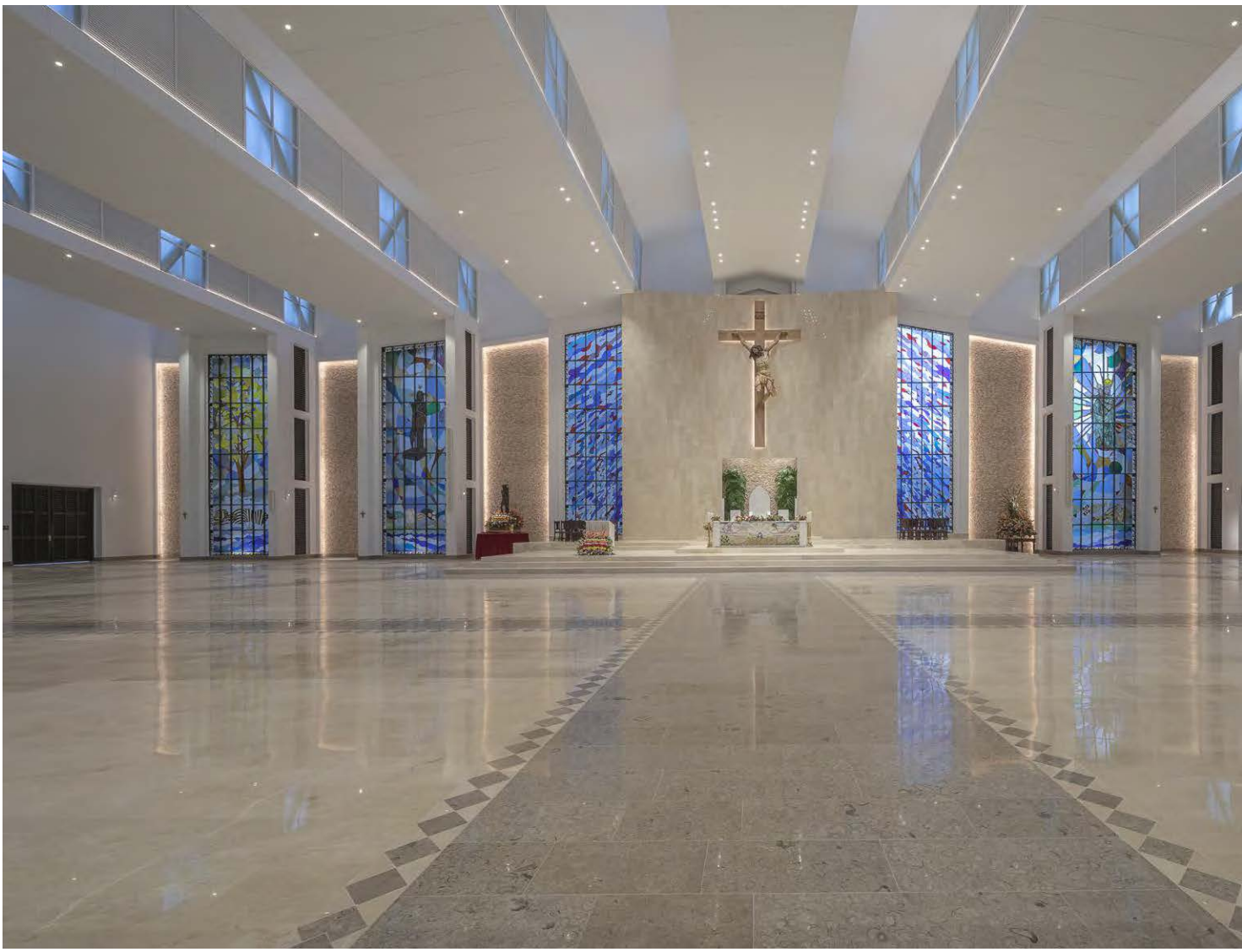
The new Cathedral of Santo Eccehomo, the largest church in Colombia, was built to give the constantly expanding archdiocese of Valledupar a structure that could house the thousands of worshipers that gather here to take part in important services. The architect Gustavo Vasquez, commissioned in 2013 to design the new Cathedral, has created a space that can seat around 4000 people with modern architecture that maintains a strong religious identity.

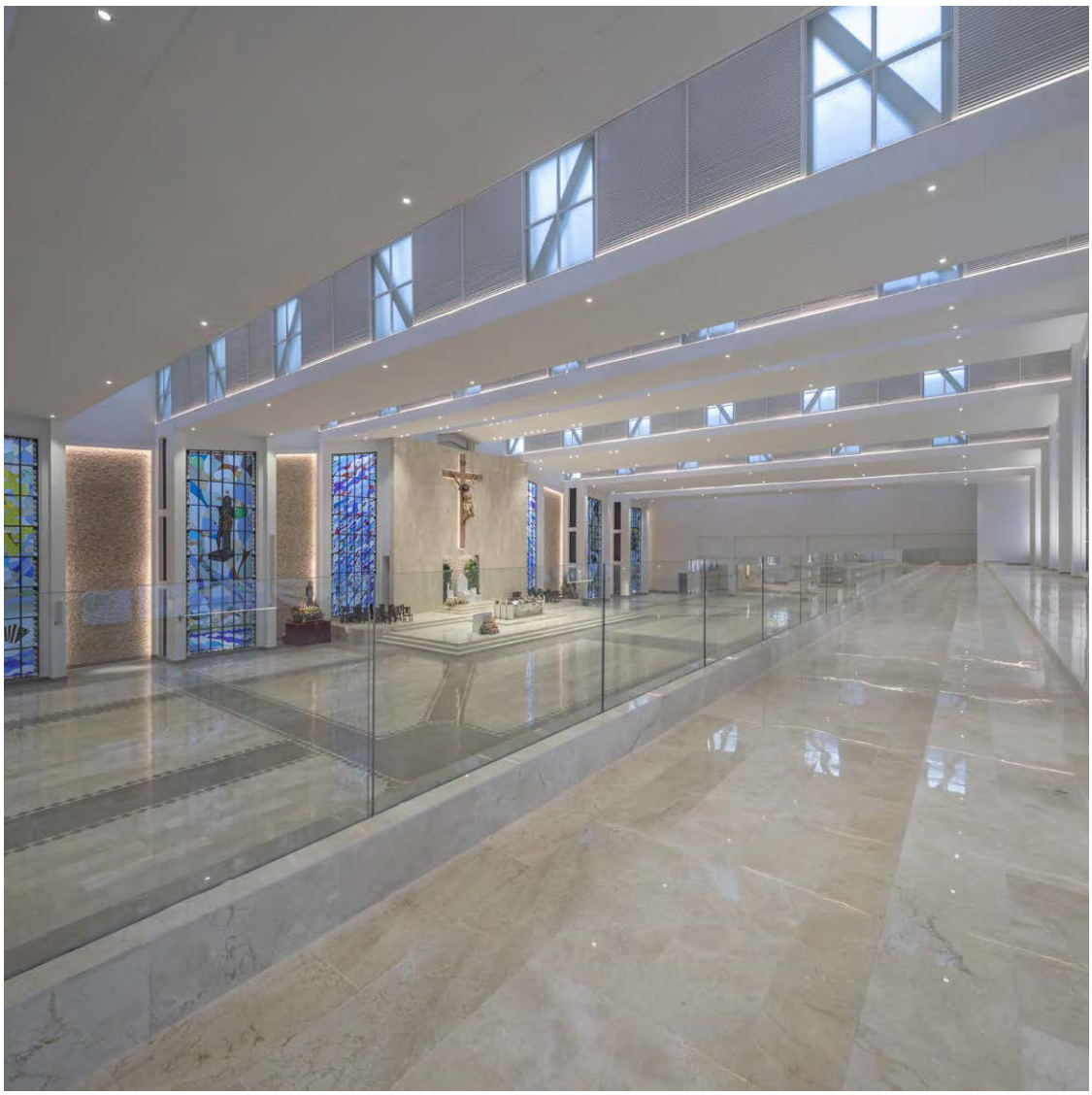
Vasquez's project symbolically expresses the ascension of all believers from the underworld towards God in Heaven. On the façade the architect has placed large vertical buttress walls that represent the 7 sacraments of the catholic faith. Moving from the outside towards the centre the walls get higher and higher to culminate in a bell tower where the imposing crucifix is located.

The church, which has a central-plan design is composed of a large space of around 60 metres wide where worshipers can gather around the Diocesan Bishop and the altar where Mass is celebrated.

As in most modern churches even in the Cathedral in Valledupar the space is filled with light. The relationship between architecture and natural light is extremely important and is a fundamental part of the project. Eleven stained glass windows that represent Christian faith and Vallenato culture allow light to flood in. There are also large windows on the external walls which guide the light to the central body of the church thus minimising the need for artificial light.

The lighting concept was developed taking into account the important role the Cathedral plays as host to the most important religious services in the country. It focuses on integrating natural and artificial light, enhancing the architecture and the possibility of creating different lighting scenes based on different liturgical functions. This last requirement was answered by using a DALI control system that can create and recall different scenes depending on the event in question. This also allowed for substantial energy savings and makes it easier to manage for users.





Indoor

Inside the Cathedral is made up of a main body, a chapel and the Baptistry. The main body is flooded with light with large windows around the perimeter and on the ceiling. It is an immense, neutral space where artificial light is used to accompany the various liturgical functions and to focus attention on the altar area which appears as a sort of scenographic backdrop.

The different lighting systems used are mostly hidden from view. The scenographic lighting that highlights the vertical surfaces along the back wall of the altar is obtained by using LED strips installed on custom-made profiles placed along the entire perimeter. The grazing effect highlights the texture of the surface giving it a strong materiality and emphasises the clear and precise alternation between full and empty spaces.

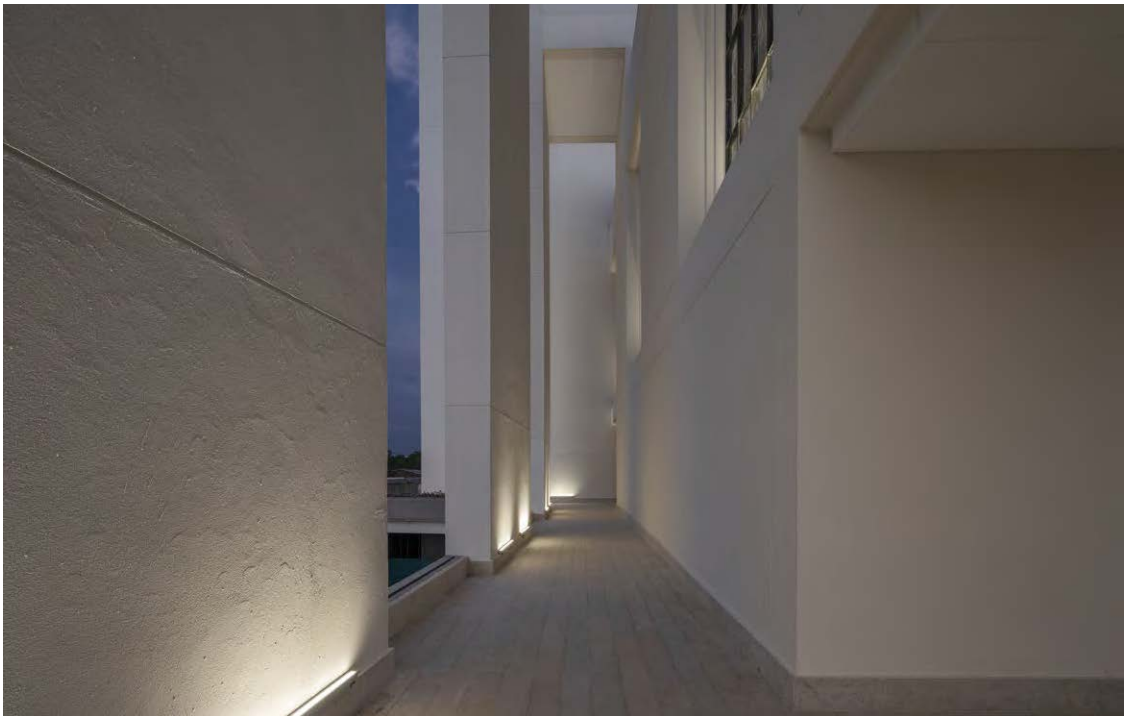
The only visible fixtures are miniaturised STORE MINI projectors which are recessed into the ceiling that ensure general lighting in the church body, on the altar and the sculptures. The low luminance of their optical system allows for controlled lighting despite the high installation height.

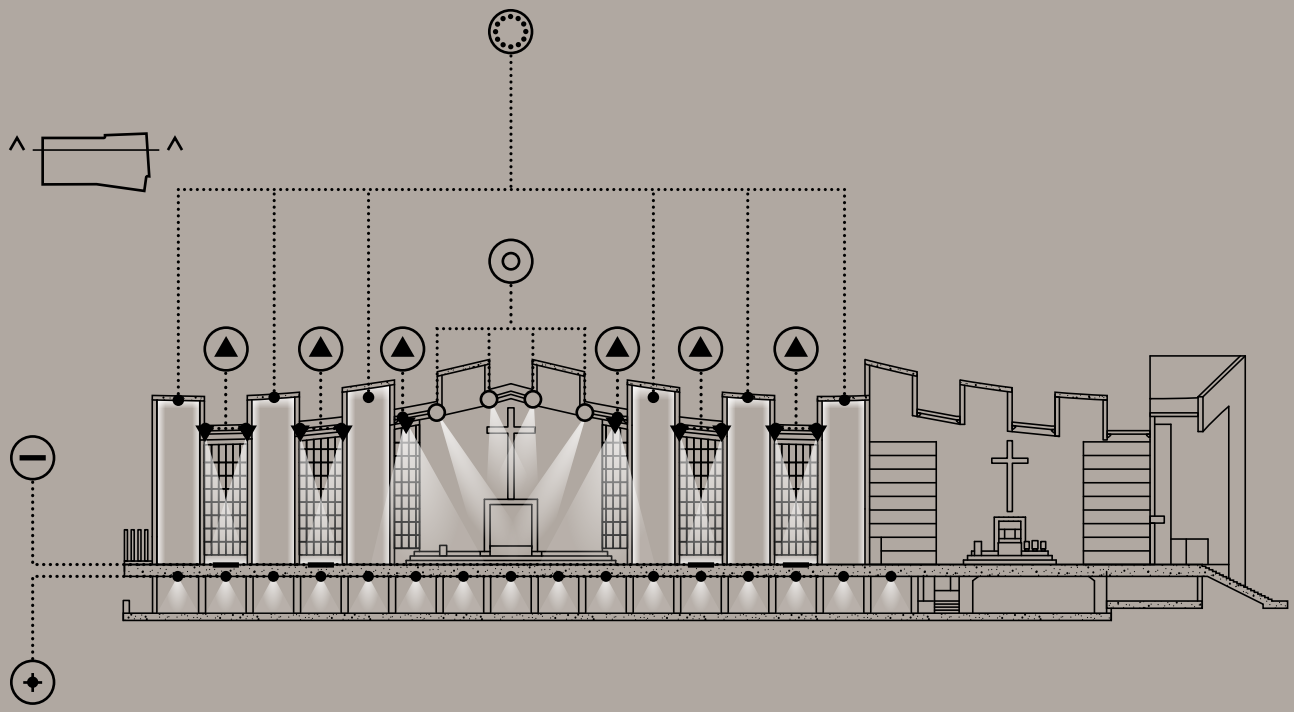
Outdoor

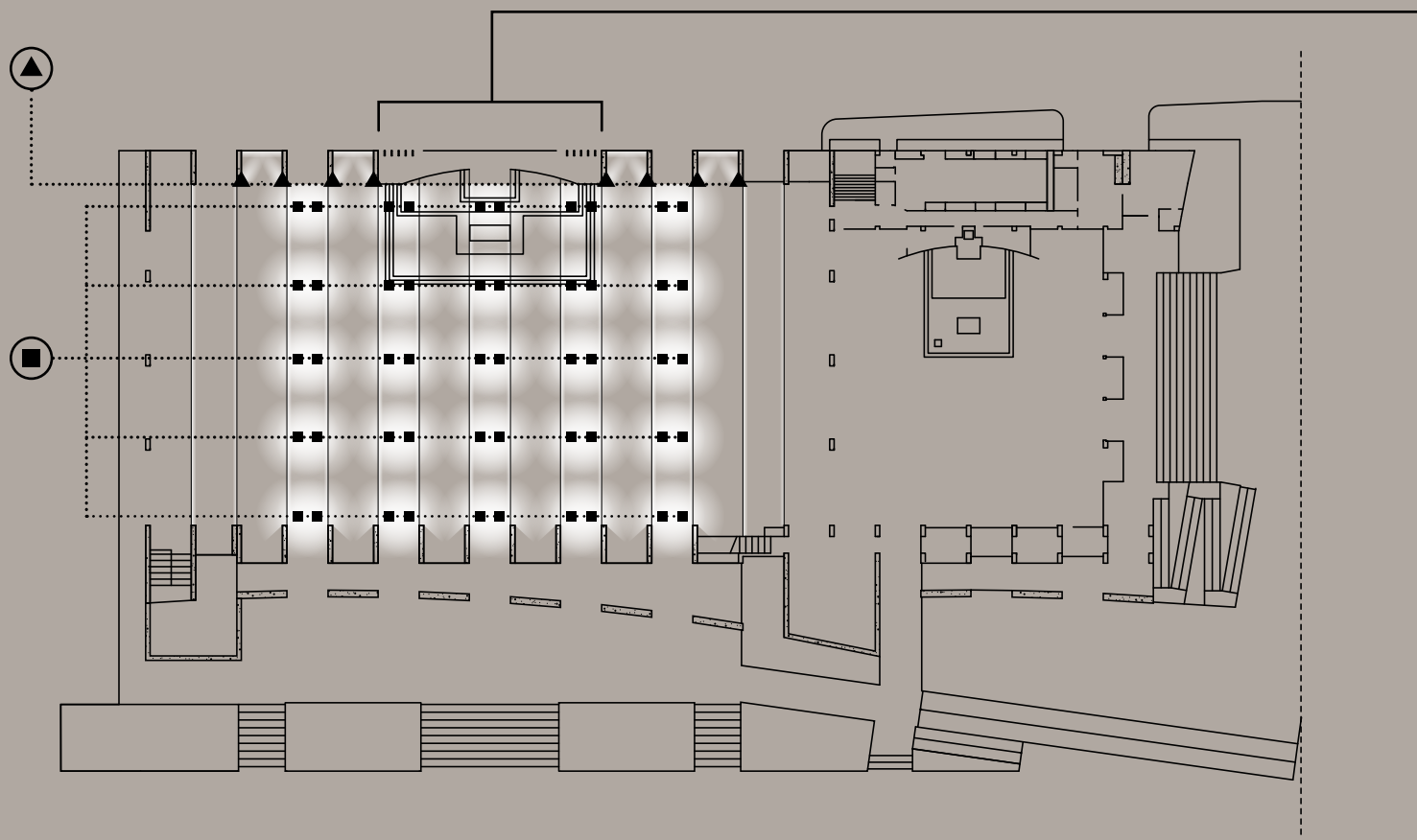
Lighting on the outside is sober and solemn and enhances the three-dimensionality of the architecture without having any visible fixtures. The resulting natural depth and three-dimensionality is obtained using a play of reflections. A single linear projector with a grazing optic is fixed to the base of the wall behind each vertical buttress wall in order to illuminate the entire height of the surface it is installed on and the overhanging portico.

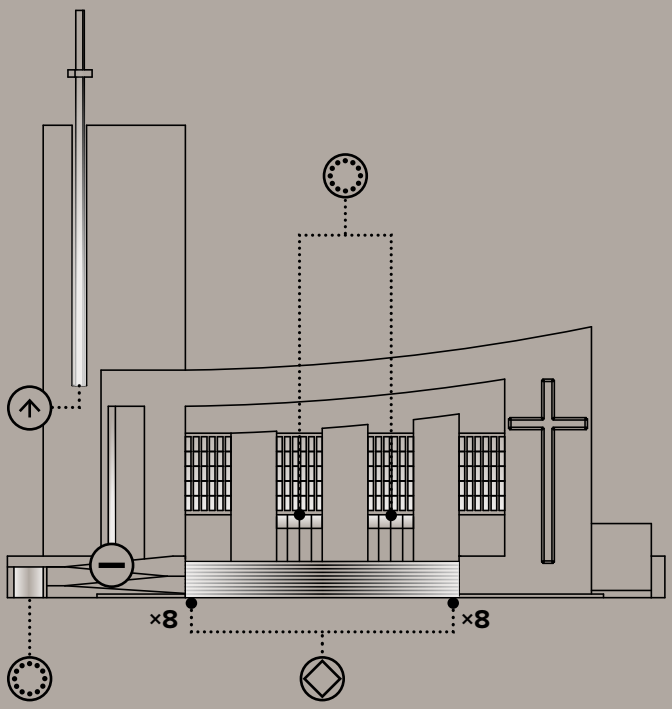
The vertical walls become large reflective surfaces that light the large walls in front of them in a soft, uniform way. The result is an alternation of full and empty spaces where the architecture acquires a natural depth.
The colourful stained glass windows which during the day irradiate coloured light inwards, at night spread the artificial light emitted by linear projector towards the outside; an inviting and welcoming message to the community.
The main entrance is marked by a double LED strip on both sides that, like a guiding light accompanies visitors on their spiritual journey.

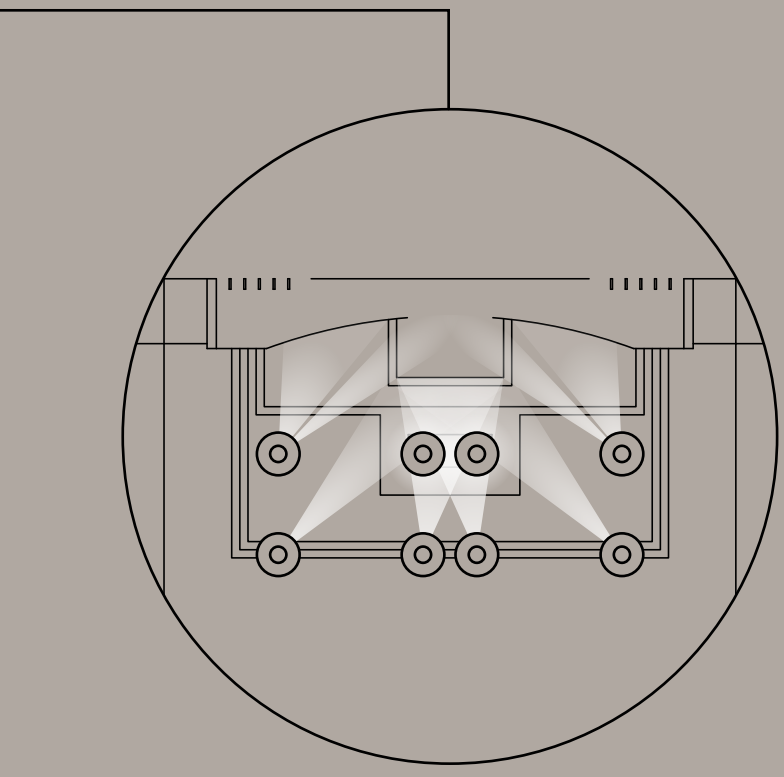
The large flight of steps at the entrance is lit using small version step-marker fixtures from the ZEDGE range that have the same finish as the stones used on the steps to ensure total integration of light and architecture.





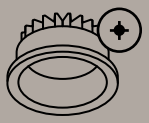






The Cathedral of Santo Eccehomo

2019 | **Valledupar, Colombia**

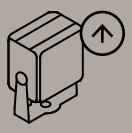


CCT LED TRIM SMART

Recessed trimless LED downlight
25W • WFL Optic
3000K • Ra 84
DALI power supply

CLOUD

Extractable recessed LED projectors
50W • FL Optic
50W • SP Optic
3000K • Ra 84 - Rf 84 - Rg 98
DALI power supply

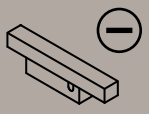


DART MAXI

Adjustable LED projector
51W • SP Optic
3000K
DALI power supply

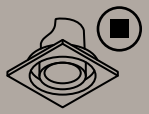
DURASTRIP PRO

LED strip
5W/ml
2700K
DALI power supply



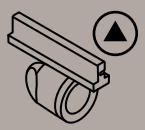
JEDI COMPACT L 1200mm

Adjustable linear LED projector
48W • Grazing Optic
3000K • Ra 84
DALI power supply



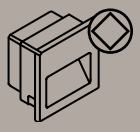
STORE

Adjustable recessed LED projector
33W • MWFL Optic
3000K • Ra 84 - Rf 84 - Rg 98
DALI power supply



STORE MINI PRJ

Compact LED projector
11W • SP Optic
3000K • Ra 84 - Rf 84 - Rg 98
DALI power supply



ZEDGE

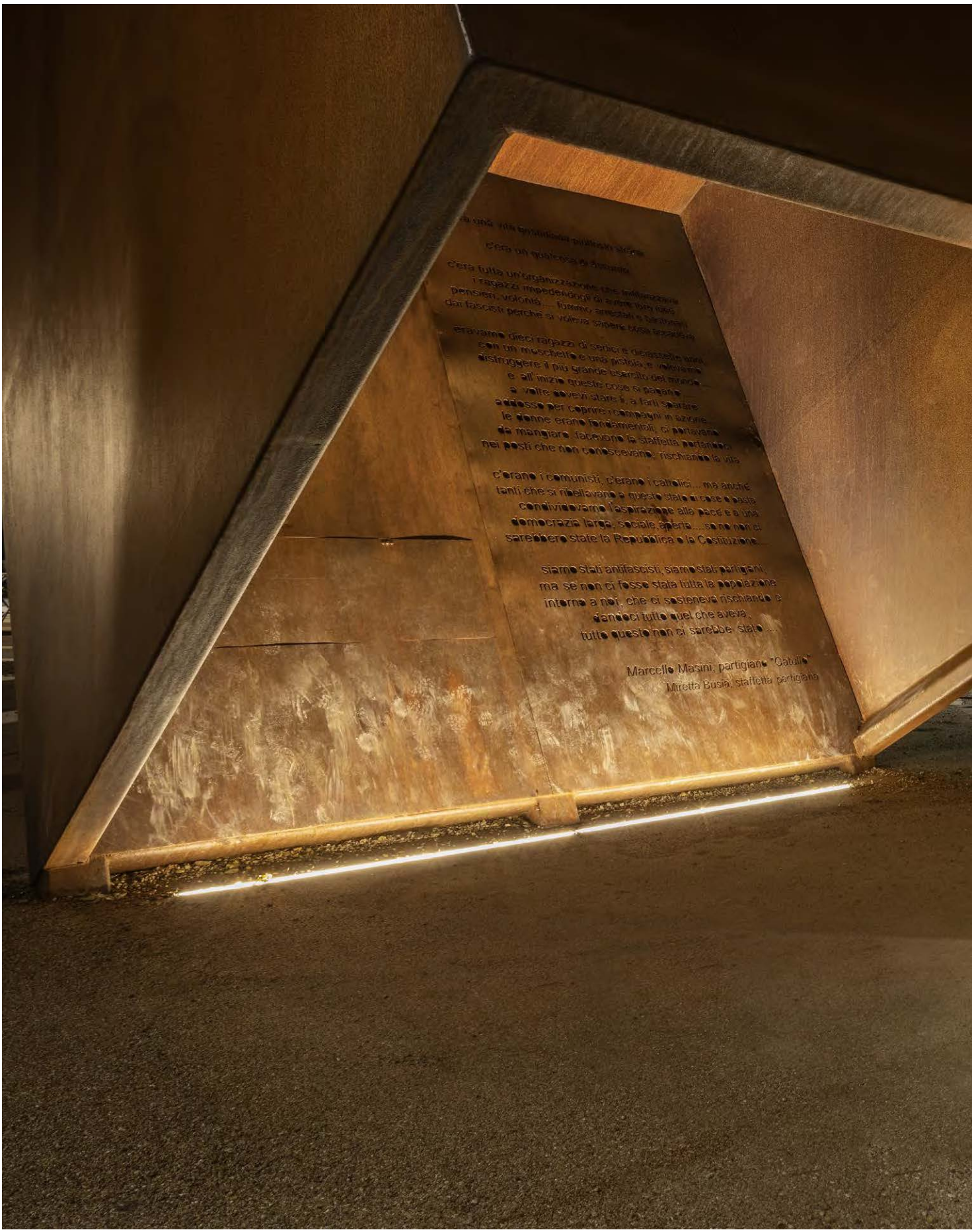
Steplight Heritage Brown finishes
4W • Floor Washer Optic
3000K • Ra 84

05

Lighting our cultural heritage

“There is a crack in everything.
That’s how the light gets in”.

Leonard Cohen


siamo stati antifascisti, siamo stati partigiani
ma se non ci fosse stata tutta la popolazione
intorno a noi, che ci sosteneva rischiando e
dandoci tutto quel che aveva,
tutto questo non ci sarebbe stato ...
Marcello Masini, partigiano "Catullo"
Miretta Busia, staffetta partigiana

PIAZZA DELLA LIBERTÀ - CERTALDO - FLORENCE, ITALY
PROJECT: POLITECNICA
SCULPTURE: CHRISTIAN BALZANO
PHOTO: IVAN ROSSI

Enhancing historical and artistic heritage using light

Light transforms architecture, it shapes it giving it concreteness, meaning and legibility. Despite being impalpable and changeable, light is itself an architectural material like concrete, steel and wood.
The theme of illuminating historical buildings is closely linked to the life and function of the space, a space that is filled with symbolic, historical, political, social and economic references.

Designing with light means recovering the historical memory of a building, observing, reviewing, re-reading and reinterpreting with eyes of knowledge and scientific thought. It means knowing how to read the existing technical solutions and lighting system and imagine new ones that restore their cultural, historical-architectural and perceptive value through a philological reading of the space.

Lighting design means conveying curiosity, surprise, enchantment and disenchantment, stimulating vision and recalling something that belongs to the past, to our experience. In brief, with light it is possible to recover historical memory and favour a philological reading of the spaces we move around and live in.

The approach to lighting design is different for indoor and outdoor since the context and the functions of these environments are so diverse.

LOGGIA DEL PESCE - FLORENCE, ITALY
PHOTO: IVAN ROSSI

Illuminated architecture in the city

"It is light that emphasises the wise distribution of the masses, that helps us to distinguish the top from the bottom, round from straight, curved from flat, smooth from rough and black from white. By playing with mouldings, softening in niches, reflecting on marble and diffusing on stone and cement, light creates a wonderful picture of architectural work for the eye of the observer." *Architecture and Decorative Art - Guido Jellinek, 1929.*
The first writings on the intimate union between light and architecture in outdoor environments dates back to the forties, when the illustrated volume of international projects "Architetture luminose" (G. Canesi, A. Cassi Ramelli, 1941) was published, which dealt extensively with the concept of "new art" where light was considered a real building material.

A few years before its publication Joachim Teichmüller, the German lighting engineer had coined the term Lichtarchitektur (light architecture)- the ability of light fixtures and light to configure space.

Teichmüller was surprised that only a few architects had recognised the artistic potential of electrical light as a new design tool, although its many uses had already been discussed at many large national and international exhibitions. Electricity was considered the symbol of technical progress of the modern society: Filippo Tommaso Marinetti, in his manifesto of futurism in 1909 wrote «the vibrant night-time fervour of arsenals and shipyards set on fire by violent electric moons» and exalted the light bulb which had «introduced a new era» as the result and symbol of that great change.

Despite Marinetti it was only in the years following the First World War that electricity was made widely available; light inside buildings and in outdoor spaces gave architects, urban planners and lighting technicians a new task, designing the night time appearance of buildings, roads and squares using light. The approach to this task was immediately twofold; on one side the so-called "illuminated architecture", projected lighting with very wide beams, for an effect that is not so different to the one during the day. On the other hand "luminous architecture" i.e. those buildings where artificial light shines from within through the transparent parts making the inversion of light-dark ratios emerge for the first time.

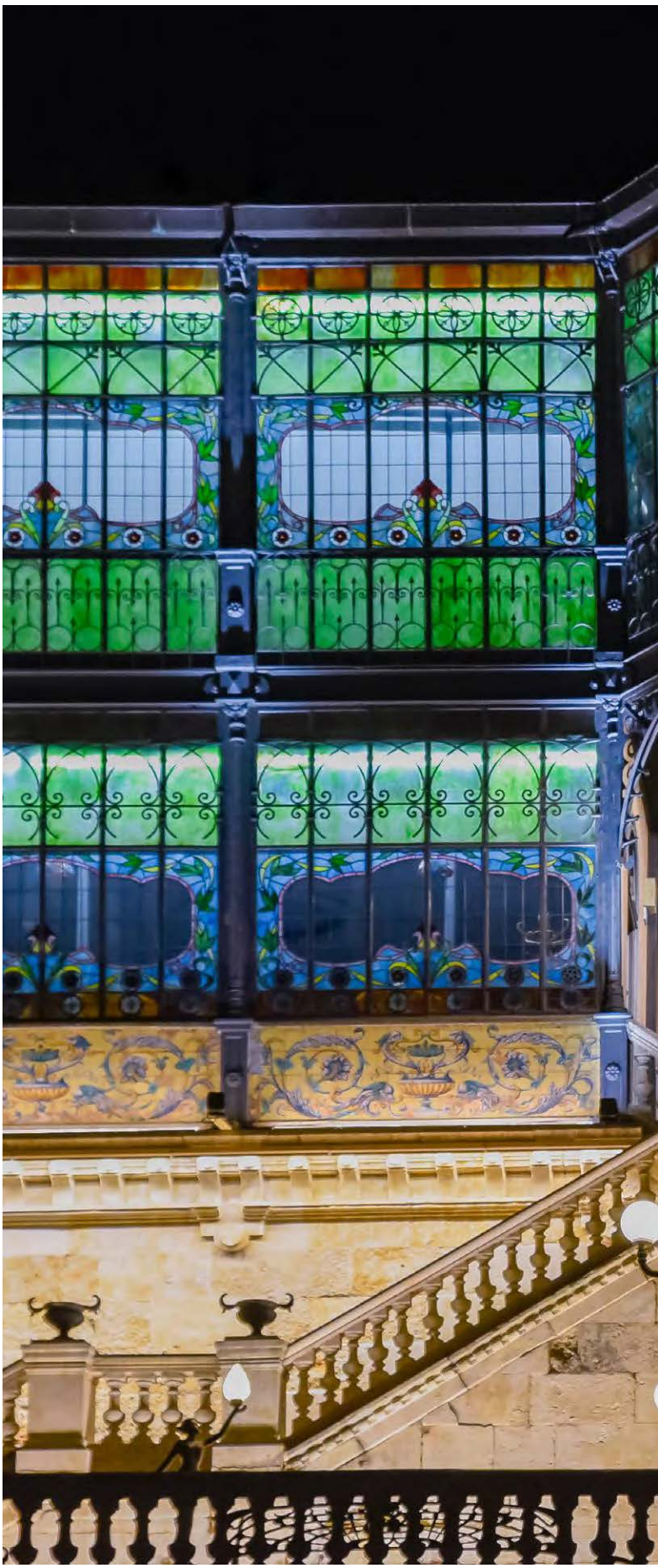
This interest for "night light" can be found in the urban architecture projects of the time which for the first time also had a night vision. An example of this is the Rome Termini train station by Angiolo Mazzoni where the large open atrium of the station is presented as a space full of light on a black background.

The contrast of night and day visions highlights the different volumes of the building and the versatility of its architectural expression.

To these two approaches to illuminating architecture which are still used today, the use of grazing light has been added recently which, thanks to the evolution of optical systems, is the best way to enhance the texture of architectural materials.

Illuminating buildings, especially if they are historically-artistically important, does not mean just choosing the right design methodology but, above all, carefully assessing the relationship with the urban context during the day so as not to upset it at night. It means respecting their identity, their visual usability and characteristics. It means giving the right value to the overall vison and details in order to maintain the same readability they have during the daytime.

The advent of LED technology at the beginning of the 2000 s brought a new "enlightenment" especially in the Cultural Heritage sector because it radically changed the link between art, light and technology. Managing and conservation bodies modified their relationship with lighting systems, attracted by the prospect of finally being able to experiment with a less damaging light from a conservation point of view and less invasive on a visual and architectural plane.



MUSEUM OF ART NOUVEAU AND ART DECÒ CASA LIS SALAMANCA, SPAIN
PHOTO: CARLOS HORCAJADA

TORRE HUAYCHO - ESPINAR, PERÙ
LIGHTING DESIGN: GERARDO SÁNCHEZ SUCSA - PEPE SÁNCHEZ SUCSA
PHOTO: JAMES ARAGÓN CARRASCO

LED technology – more efficient in terms of energy and far less expensive from a management point of view – has considerably reduced not only out-of-pocket expenses but above all maintenance which has always been complex and difficult to manage.

If today therefore it is possible to design light for historical-artistic buildings with more technical freedom, particular attention must be paid to the total integration of the system with the architecture and a design approach that allows for a philological reading of monuments. The lighting designer's task is to best interpret the architectural style to be enhanced and the task of companies in the business is to provide the most suitable tools to do so.

Minimalism and miniaturisation of Targetti LED fixtures derive from their willingness to light monumental architecture by reducing the identity of fixtures , making them capable of integrating completely thus contributing to the recovery and enhancement– visual and functional– of the architectural object.

The ease of control of optical systems, combined with the wide flexibility of installation systems, makes it possible to create precise and accurate solutions that are "tailor made" for individual specific cases. It is of the utmost importance and relevance not to "waste" emitted light with unnecessary dispersion; in order to comply with light pollution regulations as well as to reduce the power used and obtain considerable energy savings.

PONTE DI RIALTO - VENICE, ITALY
PHOTO: IVAN ROSSI

The right finish for maximum integration with the architecture

Indeed the extensive experience of Targetti in the field of historical-artistic illumination has allowed the company to identify several colour palettes that blend perfectly with typical materials used in historical environments.

To obtain maximum integration between light and architecture all fixtures in the Targetti indoor and outdoor collections are available with the following standard finishes: Bianco Fiorentino, Ferrite, Heritage Brown and, after checking feasibility above all for outdoor installations, also in a selection of RAL colours.

STANDARD FINISHES

 Bianco fiorentino

 Ferrite

 Heritage Brown

AVAILABLE RAL FINISHES


8001 8002 8003 8004 8007 8011


8012 8014 8015 8016 8017 8019


8022 8024 8028


7000 7001 7002 7003 7004 7005


7006 7010 7011 7012 7013 7015


7016 7021 7022 7023 7024 7026


7030 7031 7032 7033 7035 7036


7037 7038 7039 7040 7042 7043


7044 7045 7046 7047

Illuminating history from inside

Lighting a historical building does not mean establishing the right light quantity and quality by following the relevant regulations and functional needs of the space, but above all by involving users in reading the space, architecture and history.

By means of light, it is possible to create suggestions and show the space and objects displayed there in a completely different way; allow for a philological reading of the various elements and necessary functions to be carried out. The task of light is to improve the perception of a space without taking centre stage, users must be able to appreciate the architecture and history of a place, not the light.

This is a concept we specifically care about, because it represents the essence of our way of producing light fixtures: instruments that are functional to architecture and do not overpower it.

CARREAU DU TEMPLE -PARIS, FRANCE

Salone dei Cinquecento

2017 | **Florence, Italy**

A challenging project that combines the conservation of the works on display with the visual comfort of visitors and to support the functions the environment is intended for.

The "Salone dei Cinquecento" is one of the symbols of Florence and is of exceptional historic-artistic value. In keeping with its original role it is still the seat of city institutions, a place of representation and the fulcrum of political and ceremonial activity in the city.

The new lighting project required years of study by a multidisciplinary group, who carried out a complete and in-depth analysis of the actual condition of the hall, the different functions of the space, the pre-existing architecture and the materials and lighting conditions at different times during the day. This made it possible to have in-depth knowledge of the different needs and constraints of this space, which is used for numerous different functions such as a museum and for exhibitions as well as to host receptions and events of various kinds. At first glance the Salone seems to have a simple, regular shape but in fact it has a complex number of both architectural and artistic elements. It has a trapezoidal shape with a surface of around 1000 m^2 and a ceiling height of about 19 metres. It has large windows, large paintings on the east walls as well as various sculptures and numerous niches.

The current configuration dates back to the arrival of Cosimo I de'Medici and his appointment as the Grand Duke of Tuscany who asked Giorgio Vasari to totally redesign the space. To accentuate the grandeur of the hall Vasari raised the ceiling by about 7 metres and created 39 panels which are entirely painted and framed by gold carvings as a tribute to the grandeur of Cosimo de Medici and his family. He also created large windows on the walls whose objective was to enhance the majesty of the ceiling and the panels through the use of light.
This was the first and unbreakable link between art and light in the Salone.

The building is subject to restrictions and protective measures established by the Superintendence for Archaeology, Fine Arts and Landscape and to protect the works on display it is necessary to comply with the limit values indicated in current regulations for the conservation of works of art (UNI 10829:1999; MiBAC 2001; UNI EN 12665:2011; UNI EN 12464-1:2011).

The main focus of the project was the MiBAC guideline. This guideline indicates the annual light dose limit (LO), for pictorial works and works consisting of organic materials which fall into the category of Photosensitivity Average of 500.000 lux hour/year and 150lux for the maximum illuminance.

A propaedeutic and meticulous analysis was performed before defining the project. The study measured the lighting values – referred to natural and artificial light – in different situations throughout the seasons of the year and was performed on the large east and west frescoed walls as well as on the Vasarian ceiling.

The analysis, combined with the wishes of the client and the constraints of the superintendence and in compliance with relevant regulations produced a project with the following fundamental characteristics: flexibility, integration and respect.

Project objectives:

- to ensure the philological-historical aspects of the space
- to allow main functions to continue
- not to interfere with the architectural space and works on display

The lighting project was divided into 4 macro-themes, each one with specific requirements:

- The North Wall Udienza Gallery Area
- Paintings on the East and West Wallst
- The Vasari Ceiling
- Accent lighting on statues

The North Wall Udienza Gallery

This is the most important area in the Salone, the place where all representative and event-related activities take place. This function together with enhancing the main architectural features was the basis for the project design for this specific area. The right balance between lighting the background and functional elements was required. The cornice that runs along both sides up to the stairs, was used as a support element to install various 25W CORO model surface mounted projectors with different optics depending on the elements to be illuminate. Working with crossed and overlapping FL beams both the speaker and lectern area are lit with precision and without any risk of glare. To enhance the main artistic and architectural features like the blackboards, FL optics were used while SP optics were used for accent light on the statues and the background of the Udienza Gallery. A surface mounted LED profile installed on the cornice was added to these elements which lights the balustrade with a grazing light at the request of the client to highlight the work Vasari did on raising the height of the space. Originally the previous ceiling was located where the balustrade is now.

Paintings on the East and West Walls

Lighting these great works by Vasari, Bacio Bandinelli, Giovanni Caccini and Vincenzo de Rossi, distributed over the entire length of the Salone, was one of the most complex themes of the project. The project choice had to take into consideration the large scale of the paintings, the great height and the lack of cornices to install fixtures on. Specially designed "free-standing lamps" were chosen that were able to integrate discretely into the environment, so to leave space for light alone.

These custom-made fixtures have a very sophisticated technological heart made up of a series of projectors, each with different characteristics, that are suitable to illuminate different portions of the space in the best way. 59 W projectors with FL and WFL optics complete with blade light filters fitted with LED sources with customised light spectra – some with dominant red, other with dominant blue, all with Ra>90 – all properly pointed at the adjacent wall, illuminate a wide portion of it in a uniform way, while enhancing the different colours in the paintings and revealing interesting and unexpected details and features. Four free-standing lamps on each side ensure the effect is uniform along the entire length of the Salone. Inside the same custom elements there are also elements to light the floor; integrated step-markers fitted with wall washer optics ensure the luminance levels required by regulations in specific situations.

The Vasari Ceiling

The Vasari Ceiling highlights the function and role the Salone has always had over time and for this reason requires specific, dedicated and ever present lighting. This task was fulfilled by special 59 W projectors with WFL optics installed inside the custom made free-standing lamps and above the cornice near the Udienza Gallery.

Accent lighting on statues

To light the statues, specially designed linear LED fixtures were used that were integrated discreetly into the base of each one. fixtures illuminate the sculptures with the sculptures with a grazing light to create a striking dramatic effect. The addition of lighting reflected from the Vasari ceiling softens contrasts and harmonises the figures in the space..

Careful evaluation of the specific needs of the four macro-areas, identification and creation of special solutions combined harmoniously and the use of wireless control system made it possible to create and manage different lighting scenes according to the specific uses and needs of the Salone. Depending on the desired effect it is possible to create scenes, adjust the luminous intensity of the fixtures and modulate light even in terms of colour temperature. This is an ideal system to exalt the different essences of the Salone in perfect harmony.

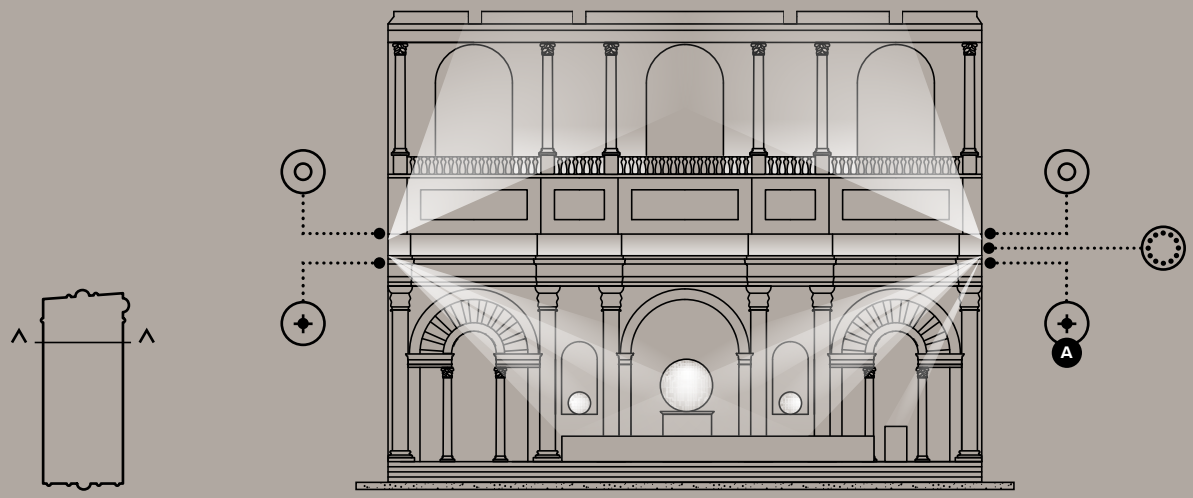
EVENT FUNCTIONS: GALA DINNERS
EVERYTHING LIT APART FROM THE STEP-MARKERS AND EVERYTHING DIMMED DEPENDING ON THE REQUIRED ATMOSPHERE.

The result is an apparent naturalness that in reality conceals a complex and sophisticated wireless controlled system.

EVENT FUNCTIONS: CONFERENCES
LIGHTING THE COFFERED CEILING AND THE ENTIRE UDIENZA GALLERY AREA.

EVENT FUNCTIONS: SCREENINGS
STEP-LIGHT AND THE LINEAR PROJECTORS ILLUMINATE THE EAST AND WEST WALLS; PROJECTORS INSTALLED IN THE FLOOR LAMP TO LIT THE COFFERED CEILING

MUSEUM FUNCTIONS
LIGHTING THE PAINTINGS ON THE EAST AND WEST WALLS, THE STATUES AND THE COFFERED CEILING. DIMMED LIGHTING FOR PROJECTORS IN THE BACKGROUND AND THE UDIENZA GALLERY.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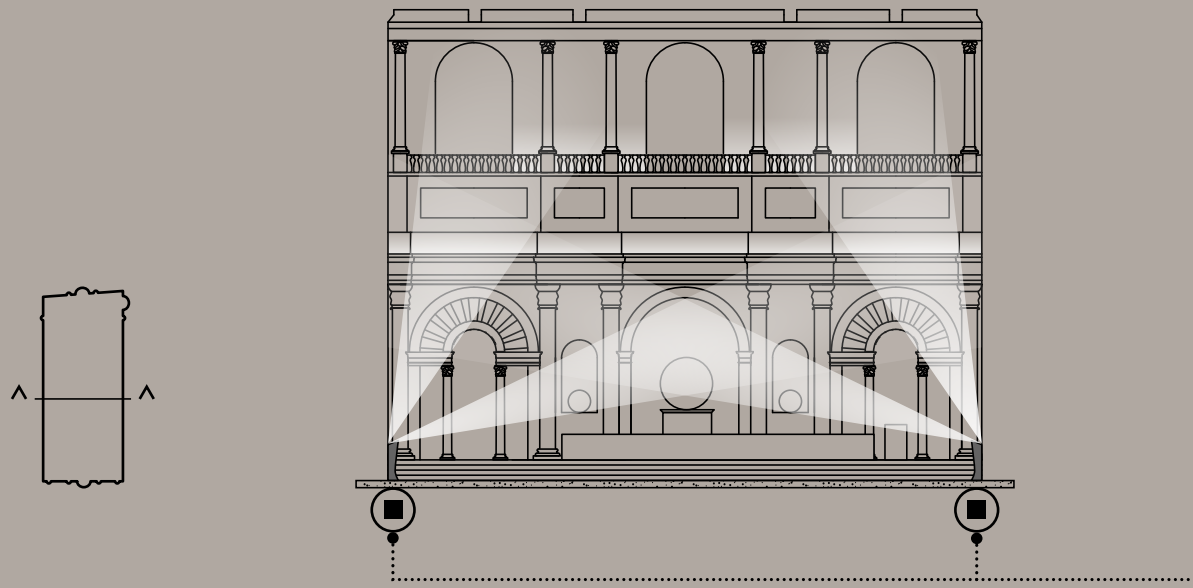
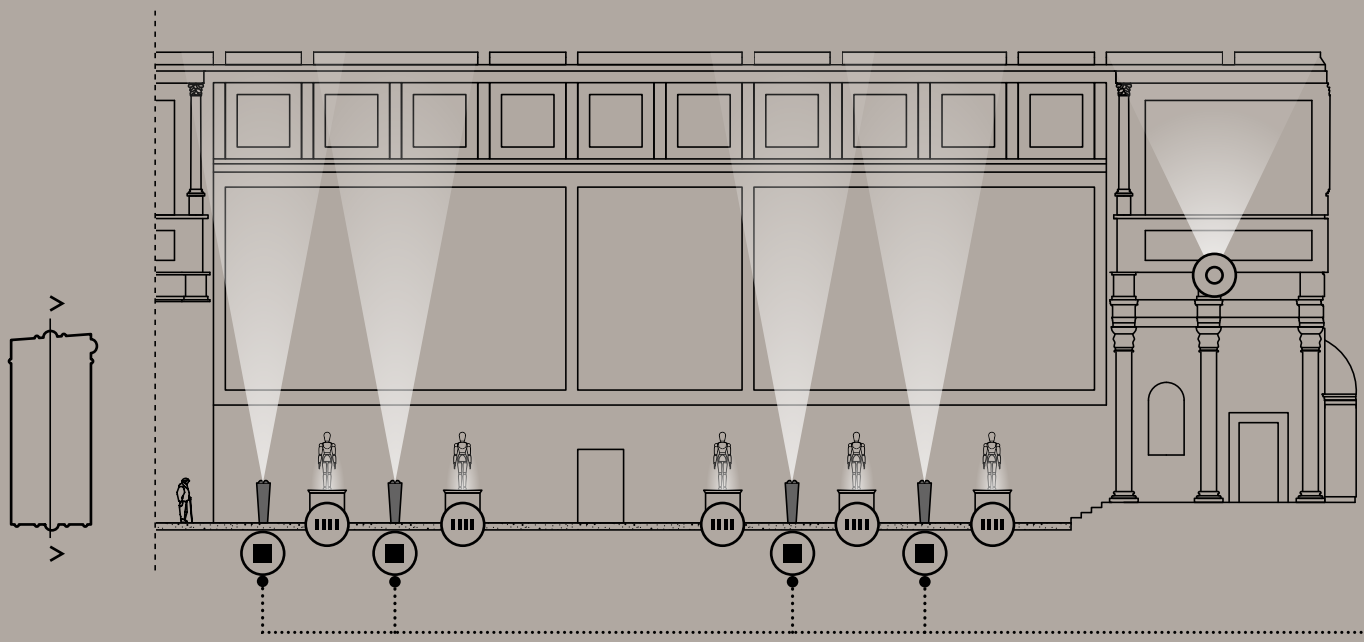
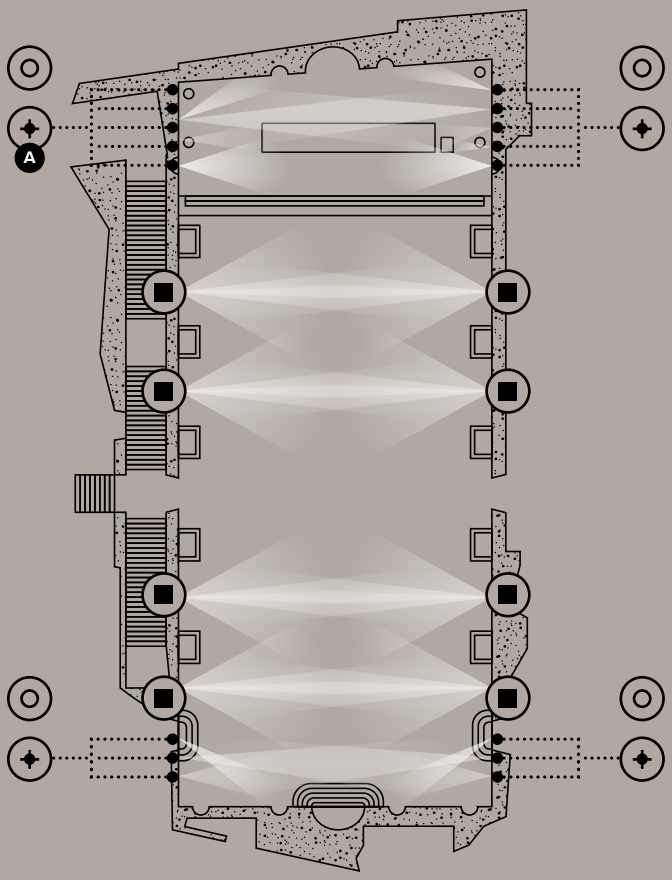
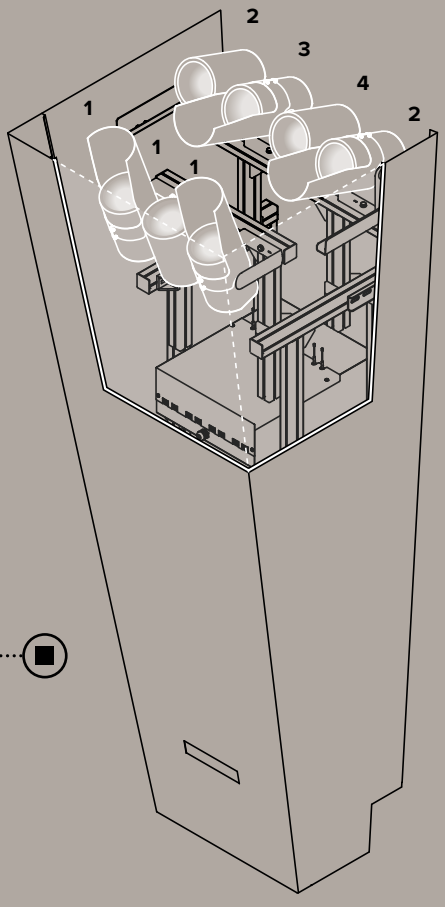


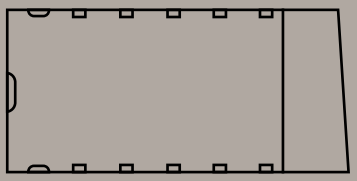


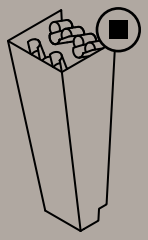




Salone dei Cinquecento

2017 | **Florence, Italy**

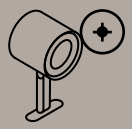




CUSTOM-MADE FREE STANDING LAMP

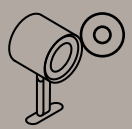
Custom-made free-standing lamp complete with projectors and step-marker

1. ×3 **RAY** customised version
   59W • WFL Optic
   3000K • Ra 97 - Rf 96 - Rg 102
2. ×2 **RAY** customised version
   59W • FL Optic
   3000K • Ra 97 - Rf 96 - Rg 102
3. **RAY** customised version
   59W • FL Optic
   Customised light spectrum with dominant red
4. **RAY** customised version
   59W • FL Optic
   Customised light spectrum with dominant blue



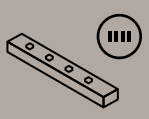
CORO

Surface mounted LED projector on a plate
25W • Optique SP - direct light
25W • Optique FL - direct light
25W • Optique MWFL - direct light
3000K • Ra 97 - Rf 96 - Rg 102



CORO

Surface mounted LED projector on a plate
25W • Optique WFL - indirect light
3000K • Ra 97 - Rf 96 - Rg 102



CUSTOM MADE PROFILE

Custom-made profile for for accent lighting of the sculptures
24W/ml
3000K

CUSTOM MADE LED BOARD

Strip Led inserted into a special profile
15W/ml
3000K

Piazza dei Miracoli and Bell Tower of Cathedral of Santa Maria Assunta

2012 — 2018 | **Pisa, Italy**

Three-dimensionality and transparency are the key words which dictated the guidelines of the lighting project. The results are obtained with a “tailor-made” light which is due to research and continuous on site tests.

Beside
CATHEDRAL OF SANTA MARIA ASSUNTA - PISA, ITALY

Below
MONUMENTAL CEMETERY - PISA, ITALY

The work on enhancing the Tower of Pisa with new lighting is part of an extensive project involving the most important monuments in the famous "Piazza dei Miracoli": the Duomo, the Baptistry, the Camposanto Monumentale Cemetery, the Sinopie Museum and the bell tower of the Cathedral known as the Leaning Tower.

The lighting project, started in 2011, required in-depth studies, an uncommon historical sensitivity and the ability to tie the individual identities of the monuments in the piazza using a new light designed by Targetti. Until now the Leaning Tower, the star of the Piazza, flattened the depth and volumes making it a ghostly presence at night.

In 2012 the need to restore visible usability of this unique monument of historic and engineering importance to the city emerged. The project focused on enhancing the contrast between solidity and lightness which distinguishes this monument.

The Tower: from the first to the sixth level

The Tower which is the bell tower of the cathedral has eight floors, six of which are surrounded by a loggia with round arches that pick up on the motif of the façade of the cathedral. To get the desired result it was necessary to work by subtraction by lighting the tower from the innermost level. It was decided to "wash" the vertical surfaces and the vaults of the arches which are around 6 metres high in a uniform way by highlighting the external mouldings at the same time in a play of full and empty shapes and light and shade.

Under the careful supervision of the Opera Primaziale Pisana, the Superintendence for Archaeology, Fine Arts and Landscape and the Delegazione Pisana, many tests were carried out on site to identify the ideal solution to enhance the three-dimensionality and transparency of the Tower at night which are clearly visible during the day.

In 2012, during the initial phase of the project linear LED elements were installed temporarily on every floor of the loggia. These elements housed in special aluminium profiles fitted with opal screens capable of softly diffusing the light were then covered with a special dichroic filter and dimmed so as to obtain the ideal colour tone and luminance value to allow the Tower to interact with the other monuments in the Piazza in the best way. This type of installation produced an extraordinary three-dimensional rendering of the monument at night while minimising the visual impact of the light fixtures.

In 2015 the final installation was carried out. Custom-made calendered linear fixtures were designed where their bending angle made it possible to gird each ring of the tower with the utmost precision once all the fixtures were linked together.

The custom fixtures ensured extraordinary benefits in terms of performance and installation.

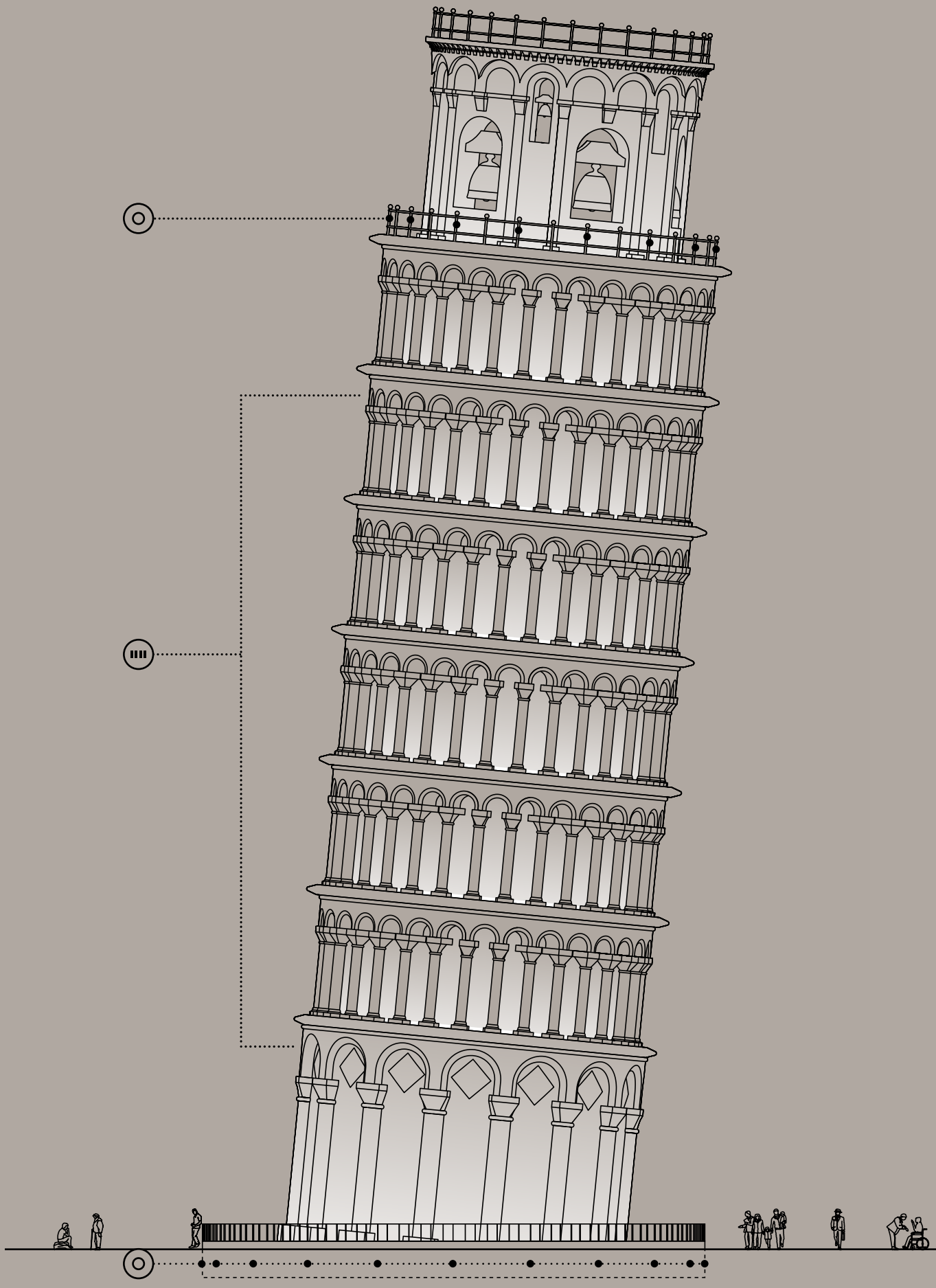
> The spectrum of the light sources with a colour temperature of 2450 K was custom-made according to tests carried out in previous years;

Thus avoiding the use of corrective filters with consequent performance optimisation. The through wiring in the profile and the mechanical connection between the fixtures allowed for installation without the need for masonry work, brackets or plugs.

The Tower: belfry and apsidal conch

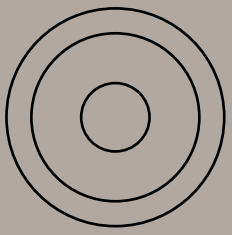
The last part of the work carried out in 2018 focused on lighting the apsidal conch of the Tower and the belfry. For both Wall Washer optics from a fixture in the outdoor collection STILO were used, installed backwards and inserted into a special “hinged” plate that can follow the progress of the Tower and compensate for the lean. This sophisticated lighting effect, i.e. complete uniformity both horizontally and vertically, was obtained after carrying out several tests aimed at identifying the exact distance between fixtures, the right dimming level and the most suitable dichroic filter to standardise the effect on the rest of the Tower.

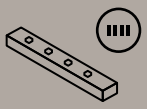
Today the lighting on the Tower of Pisa is complete and this highly successful project shows its full majesty when it is lit up during the feast of San Ranieri, the patron saint of Pisa. This important project focused on enhancing the historical and cultural heritage of the city of Pisa and the world as a whole.



Bell Tower of Cathedral of Santa Maria Assunta

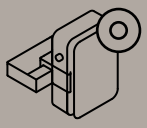
2012 — 2018 | **Pisa, Italia**





CUSTOM-MADE CALENDERED PROJECTOR

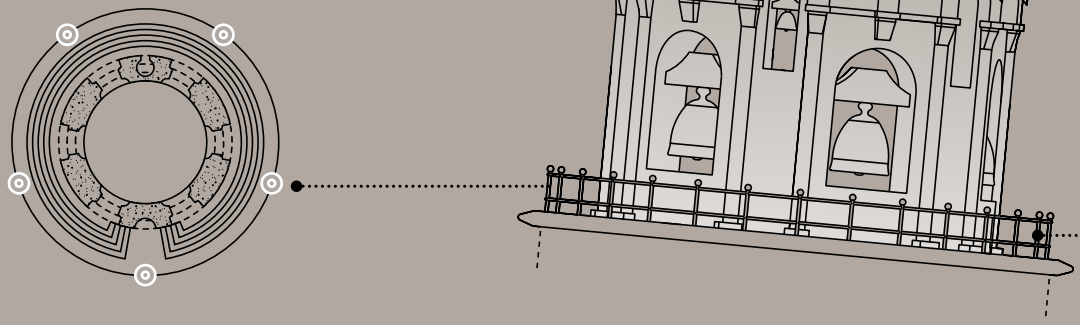
30° calendered profile equipped with strip Led
35W
2450K • Ra 95
Feed through-wiring
DALI power supply



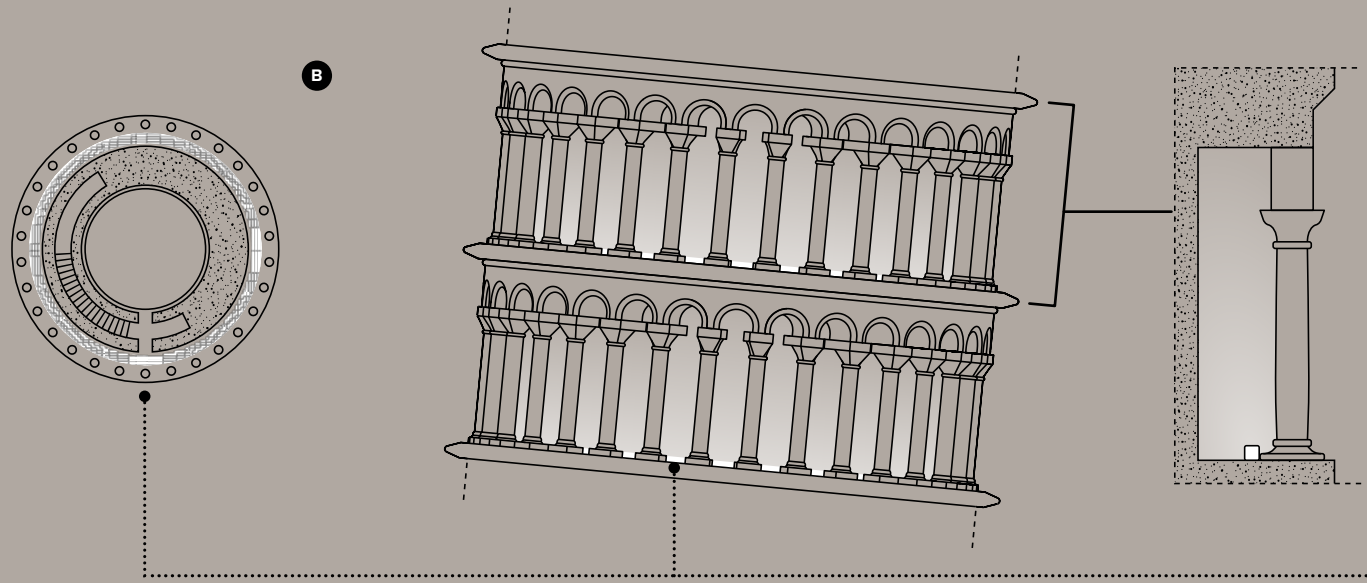
STILO CUSTOM MADE

Custom-made LED projector fitted with a special hinge system plate accessory
33W • WW Optic
3000K + dichroic filter • Ra 84
DALI power supply

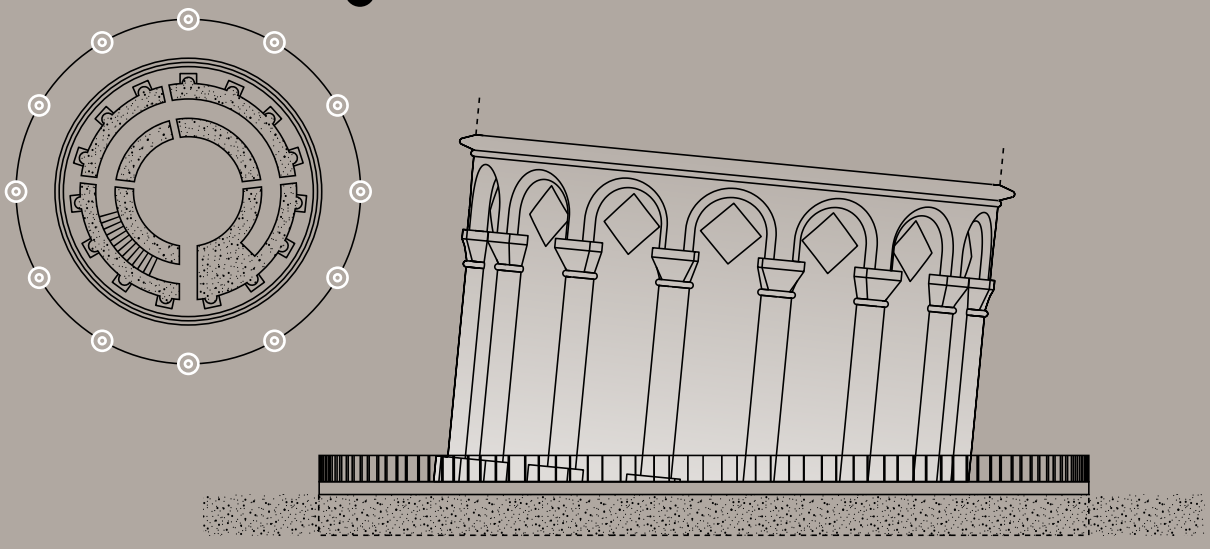
A

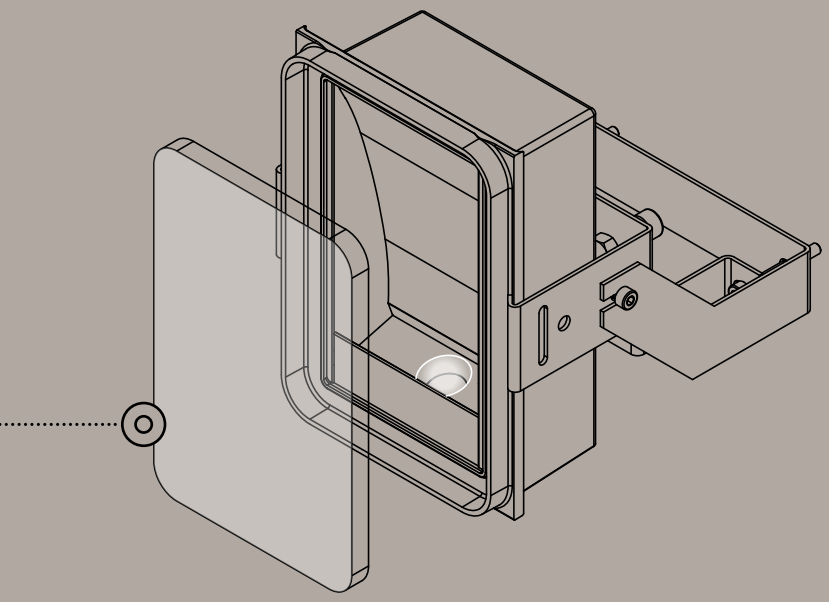


B



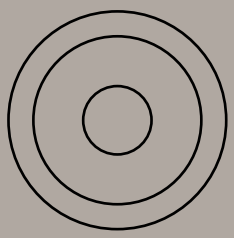
C

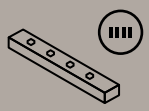




Bell Tower of Cathedral of Santa Maria Assunta

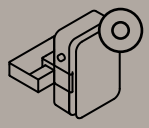
2012 — 2018 | **Pisa, Italia**





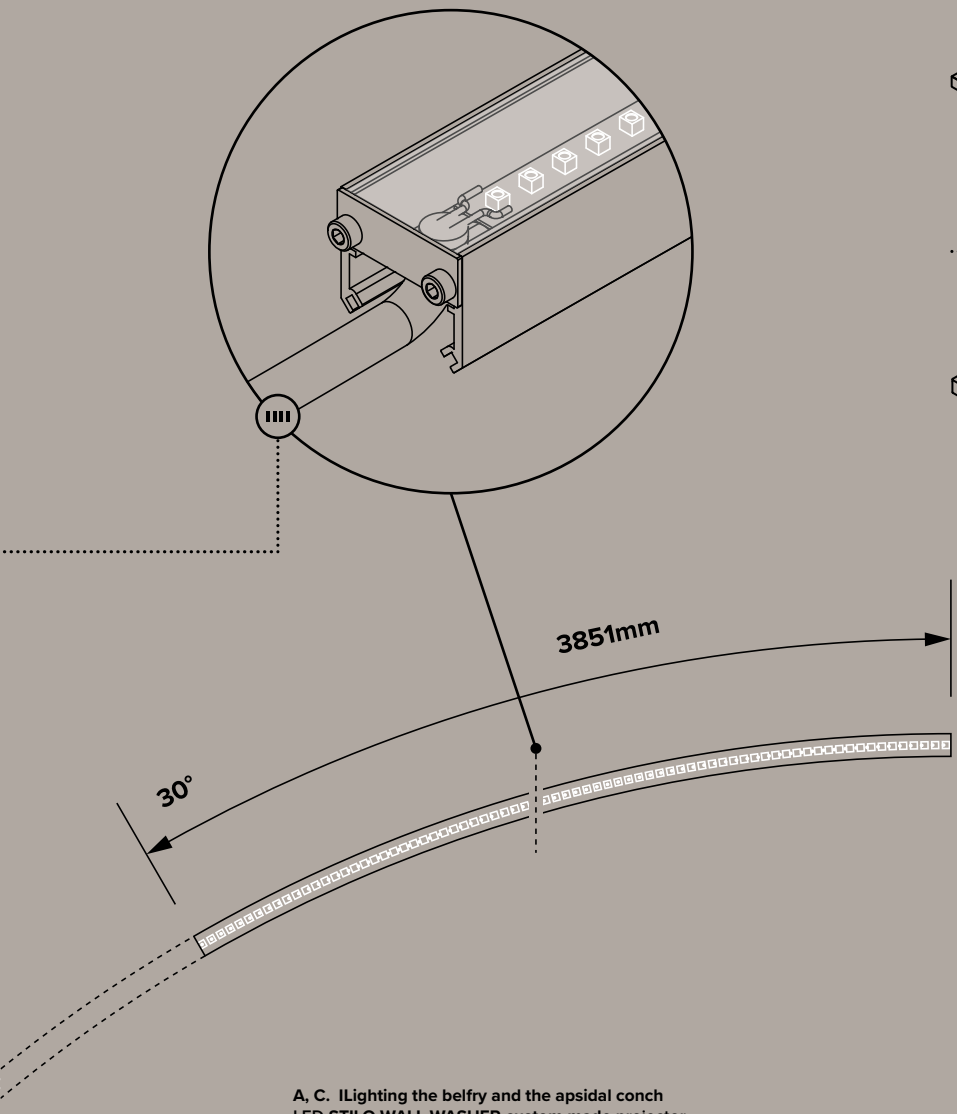
CUSTOM-MADE CALENDERED PROJECTOR

30° calendered profile equipped with strip Led
35W
2450K • Ra 95
Feed through-wiring
DALI power supply



STILO CUSTOM MADE

Custom-made LED projector fitted with a special hinge system plate accessory
33W • WW Optic
3000K + dichroic filter • Ra 84
DALI power supply



A, C. ILighting the belfry and the apsidal conch
LED **STILO WALL WASHER custom made** projector

B. Lighting the external loggia
Custom made calendered fixture

Italy

Museum and Exhibition

Museo delle Statue e delle Pitture degli Uffizi, Firenze
Tribuna degli Uffizi, Firenze
Cappella di Eleonora, Firenze
Archivio Pucci, Firenze
Museo Stibbert - Le stanze Giapponesi, Firenze
Fondazione Franco Zeffirelli, Firenze
Museo delle Sinopie, Pisa
Esposizione “Angels” by Igor Mitoraj, Pisa
Fondazione Magnani Rocca, Parma
APE Parma Museo - Parma
Museo del Vittoriano, Roma
Museo Napoleonico, Roma
Musei Capitolini, Roma
Casa del Cinema, Roma
Casina delle Rose in Villa Borghese, Roma
Museo Carlo Bilotti in Villa Borghese, Roma
Centrale Montemartini, Roma
Museo di Scultura Giovanni Barracco, Roma
Museo di Roma in Trastevere, Roma
Esposizione temporanea Lorenzo Lotto - Scuderie del Quirinale, Roma
Castello Odescalchi, Bracciano - Sala delle Armi, Bracciano - Roma
MEF Museo Ettore Fico, Torino
Centro Espositivo Rocca Paolina “CERP”, Perugia
Museo Aperto Antonio Asturi, Vico Equense - Napoli
Museo Archeologico Nazionale, Reggio Calabria

Places of worship

Cattedrale di Santa Maria Assunta, Pisa
Cattedrale di Santa Maria Assunta, Volterra - Pisa
Cattedrale di Santa Maria Assunta e Santa Giustina - Piacenza
Cattedrale di San Siro, Genova
Cattedrale di Santa Caterina, Bertinoro - Forlì-Cesena
Cattedrale di San Giorgio Martire, Ferrara
Cattedrale di San Giustino, Chieti
Cattedrale di Sant’ Agata, Catania
Chiesa di San Servolo, Venezia
Chiesa di San Lorenzo, Vicenza
Chiesa di Santa Cristina, Sepino - Campobasso

Monuments and historical-artistic buildings

Salone dei Cinquecento, Firenze
Loggia del Pesce, Firenze
Grotta del Buontalenti, Firenze
Forte Belvedere, Firenze
Piazza Libertà, Certaldo (FI)
Piazza del Duomo, Prato
Torre Pendente, Pisa
Campo dei Miracoli, Pisa
Piazza Castello, Torino
Palazzo Merendoni, Bologna
Mura Vaticane, Roma
Passetto di Borgo, Roma
Palazzo dell’Apollinare, Roma
PNAC Pontificio Collegio Americano del Nord, Roma
Reggia di Colorno, Parma
Forte dei Borgia, Viterbo

Light of Florence in the world

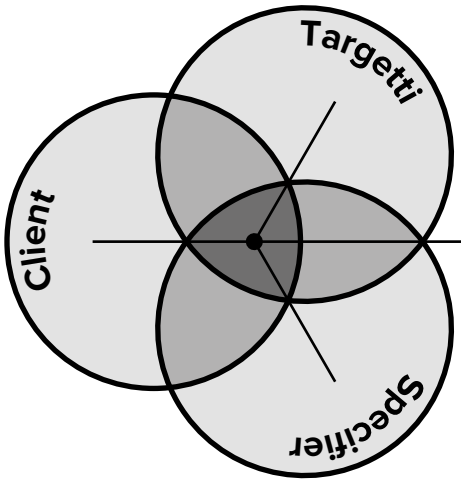
Europe	Americas	Asia
Fondation Louis Vuitton, Paris - France V&A Victoria & Albert Museum, Dundee - UK New National Museum, Oslo - Norge The LEGO House, Billund - Danmark Museo del Ejercito, Toledo - España Exposición temporal El Greco de Toledo, Toledo - España Museo Art-deco, Salamanca - España Muża - National Community Art Museum, Valletta - Malta Autoville Private Collections Museum, Москва – Россия	Museo de la Tertulia, Cali - Colombia Palacio Pereira, Santiago de Chile - Chile	Confucius Museum, Beijing - China
Cathédrale de Notre-Dame, Paris - France Basilique di San Germain De Pres, Paris - France Basilique del Sacro Cuore, Grenoble - France Catedral de Santa Maria, Toledo - España Catedral de Santa Maria e San Giuliano, Cuenca - España Catedral dell' Almudena, Madrid - España Katedrala San Pietro e Paolo, Dakovo - Hrvatska Církevní Zvestovani Panny Marie, Praha - Česká Republika Kaple San Florian, Praha - Česká Republika	Cathedral di Cristo, Garden Grove - USA Catedral de Valledupar – Colombia	Chinese Temple, Singapore
Wiener Staatsoper, Wien - Austria Landestheater, Salzburg - Austria Le château de Chenonceau, Chenonceau - France Montseveroux Castle, Montseveroux - France Toulouse Bazacle, Tolosa - España Parlament de Catalunya, Barcelona - España Casa Lis, Salamanca - España Stadtpalais Liechtenstein, Vienna – Österreich	Iglesia de San Ignacio, Valparaiso - Chile Templo Baha'i, Cali – Colombia	

Targetti light for art

Designing the best light requires close collaboration between professional figures with different skills; different well-orchestrated voices so that the timbre of the opera being worked on is flawless.
Our role is to provide solutions that can give shape to the project idea and the imagined and desired lighting effect. The solution could be one of the thousands of standard products in the catalogue but it may also need to be refined, customised and designed.
Our origins are well rooted in the Florentine artisan tradition and we have inherited our Italian "know-how" from this, our natural ability to produce custom-made products for every project.
We have always had a specialised team inside our R&D department who develop custom-made products. Customisation can relate to the finish, the fixing system or the types of power supply but we are also able to provide complex customisations such as for example luminous spectra of sources or the creation of ad hoc products that are designed and developed according to customer specifications.
All that matters is always the result, ever.

In this publication we have highlighted a small selection of standard products particularly suitable for installation in historical-artistic environments, due to installation characteristics, optical performancs, sources quality and finishes as well. This does not exclude that in Targetti collection, not represented here, there is the most suitable solution for a specific project. For an overview of the collection, please refer to the General Catalog or the website.

A solution to every request



STANDARD PRODUCT

Product selected from the Targetti collection

MODIFIED PRODUCT

SIMPLE

Simple complexity modifications

- Finish selected from the variations of “Colours Targetti”
- Colour rendering different to that available in the catalogue*
- Colour temperature different to that available in the catalogue **
- DALI power supply where not included in the catalogue

INTERMEDIO

Medium complexity modifications

- Finish different to those available in the catalogue chosen from 90 variations of “Targetti RAL colours”
- Specific colour rendering not provided for in simple complexity modifications
- Cataphoresis treatment
- Remote power supply where not included in the catalogue

COMPLEX

High complexity modifications

- Custom-made sizes (extruded profiles, tracks etc...)
- Creation of the product with different materials
- Custom design of fixing and installation systems
- Customised optic design
- Customised filter design with specific emission spectrum

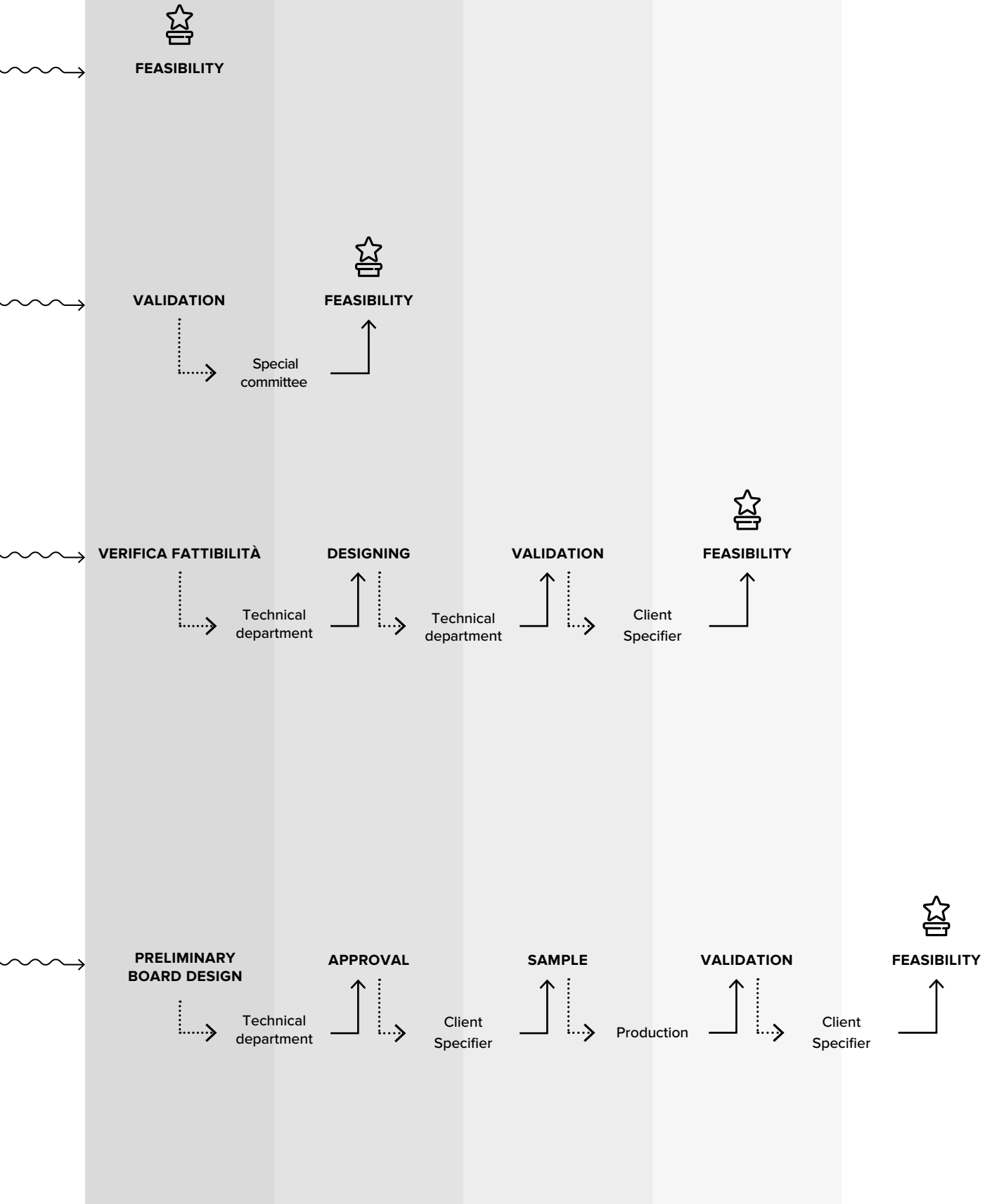
CUSTOM MADE PRODUCT

PURE CUSTOMIZATION

Custom-made product development

New product design for a specific project developed by Targetti according to customer specifications.

* Ra 90
** 4000 K


FEASIBILITY
VALIDATION
Special committee
FEASIBILITY
VERIFICA FATTIBILITÀ
Technical department
DESIGNING
Technical department
VALIDATION
Client Specifier
FEASIBILITY
PRELIMINARY BOARD DESIGN
Technical department
APPROVAL
Client Specifier
SAMPLE
Production
VALIDATION
Client Specifier
FEASIBILITY

CORO

IP20

A range of cornice, capital and shelf projectors particularly suitable for installation in prestigious architectural environments. Available in two different sizes - LARGE and SMALL - each with two different length arms.

OPTICS

NSP (only for SMALL version)
SP • FL • MWFL • WFL
DBS Ottica variabile (only for LARGE version)

POWER SUPPLY

Electronic
DALI
CASAMBI on board

LED

From 200lm to 7130lm
3000K
Ra 80 (only NSP optic)
Ra84 • Rf84 • Rg98
Ra97 • Rf96 • Rg102

FINISHES

- Bianco fiorentino
- Sandstone grey

EFFECTS

Optics with reflector
Wide, soft beams suitable for uniform lighting of walkways and vaulted ceilings.
CORO LARGE: SP • FL • MWFL
CORO SMALL: MWFL • WFL

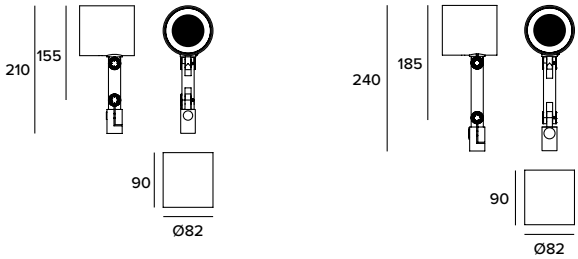
Hybrid optics
Excellent ratio between efficiency and beam definition for lighting particular architectural details even from long distances.
CORO LARGE: SP • FL

Optics with lenses
Narrow, defined beams suitable for lighting works of art or where a stark contrast between light and shadow is required.
CORO SMALL: NSP • SP • FL

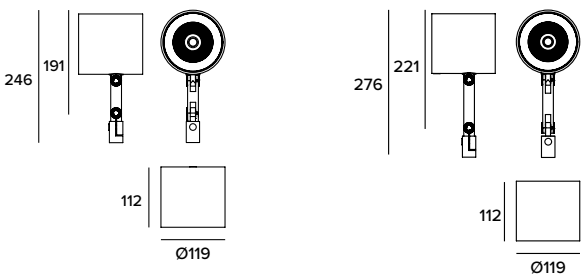
CONTROL

Remote control
Variation of beam opening thanks to the DBS system with a variable optic and variation of emission intensity using Casambi.

CORO SMALL



CORO LARGE



INSTALLATION

A **Mounting rail for surfaces up to 900mm long. The projectors can be fixed to any point on the rail which can also house all the electrical conduits of the system.**

B **Base for surface mounting**

C **Base for surface mounting with an integrated driver also available in a Casambi version.**

ZENO

IP40

A range of professional projectors especially for museum lighting, given the quality of the LED sources, the cutting edge optics and installation flexibility. Available in three size.

OPTICS

NSP (6° - 9°)
SP FL MWFL WFL WW
DBS - Digital beam opening control

POWER SUPPLY

Electronic
DALI
CASAMBI on board

LED

From 1430lm to 5121lm
3000K • 4000K
Ra97 - Rf96 - Rg102

FINISHES

○ White

● Black

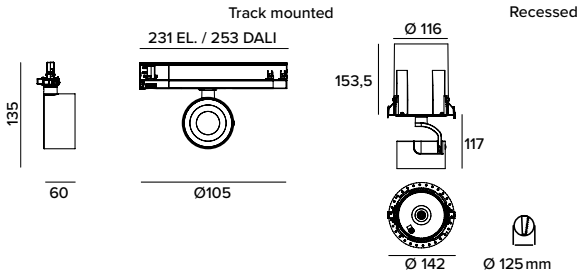
INSTALLATION

Track mounted

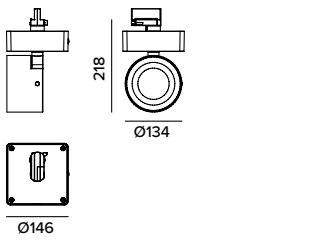
Recessed

Applique

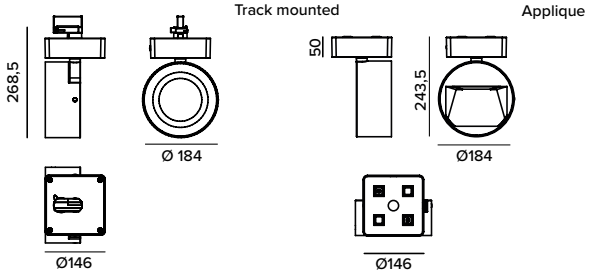
ZENO SMALL

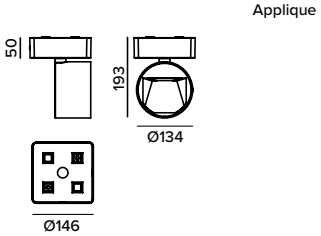


ZENO MEDIUM



ZENO LARGE





Great variety of optical accessories (Flap, Zoom, Cut-Off) to satisfy even the most complex lighting requirements.

A Indirect optics

B Optic with lens

C Hybrid optics

D Wall Washer optic

LEDÒ

IP20

Track projectors designed for museum lighting given the precise beam modelling, the high colour quality of the light and excellent colour rendering.

OPTICS

SP • FL • MWFL • WFL
DBS - Digital beam opening control

POWER SUPPLY

Electronic
DALI

LED

From 2524lm to 3155lm
3000K
Ra97 • Rf96 • Rg102

4000K
Ra97 • Rf93 • Rg100

From 1960lm to 2125lm
TUNABLE 2700K • 5700K
Ra90 • Rf90 • Rg98

FINISHES

- White
- Bianco Fiorentino
- Grey
- Black

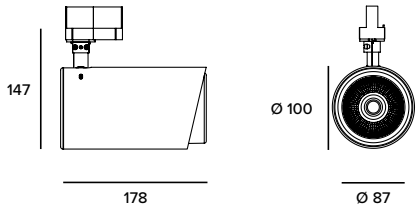
CONTROL

DALI
Dimmer on board
CASAMBI on board

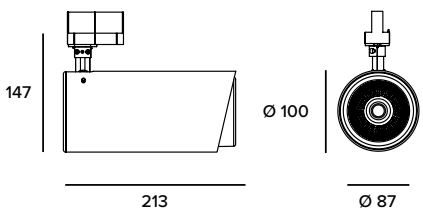
INSTALLATION

Track mounted

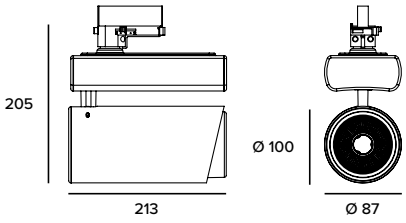
LEDÒ



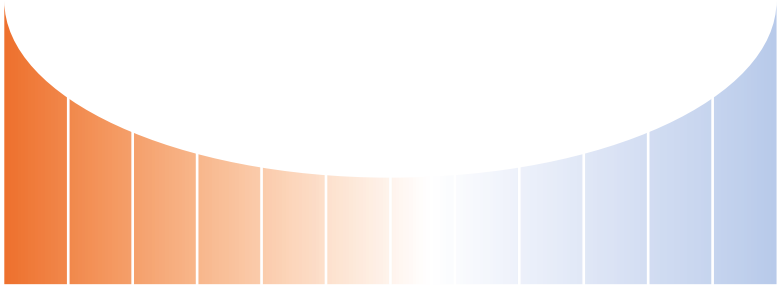
LEDÒ DBS



LEDÒ TUNABLE



The TUNABLE version makes it possible to modulate light tones remotely thus varying the colour temperature from 2700 to 5700K. This makes it possible to modulate the emission spectrum directly on the works of art on display to enhance the colours.



2700K 5700K

A large range of optical accessories to modify light according to different needs: Zoom, Cut-off, and colour and corrective filters.

LABEL 48V - 230V

IP20

Very compact projectors for track installation available in a double version for installation on FORTYEIGHT 48V system and EUROSTANDARD 230V track.
Available in four different size:
⌀20 ⌀40 ⌀60 ⌀90

OPTICS

SP • FL • MWFL

POWER SUPPLY

Electronic
DALI
Casambi: the DALI version + special accessories

LED

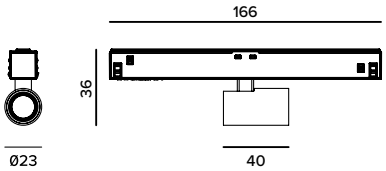
48V
From 912lm to 1821lm
2700K • 3000K • 4000K
Ra90 • Rf90 • Rg98

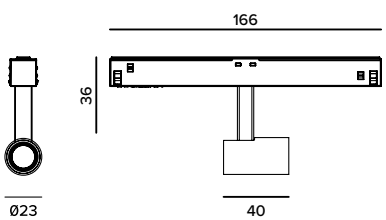
230V
From 2100lm to 3287lm
3000K • 4000K
Ra97 • Rf96 • Rg102

FINISHES

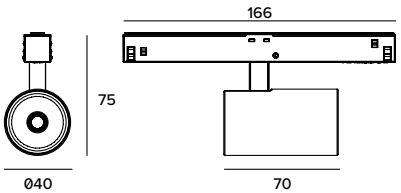
- White
- Black
- Grey

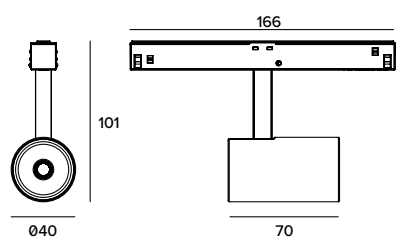
LABEL 2 48V



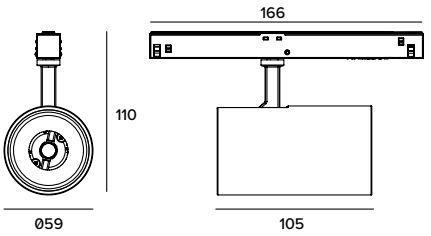


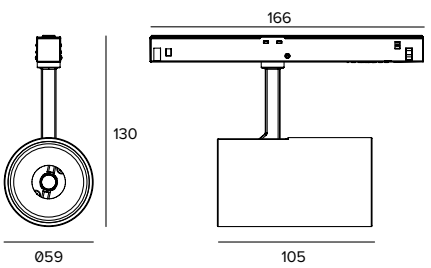
LABEL 4 48V





LABEL 6 48V





LABEL 2
48V

LABEL 4
48V

LABEL 6
48V

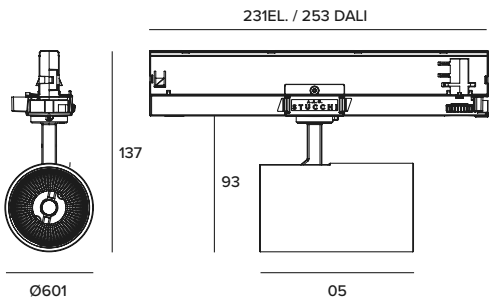
INSTALLATION

The small size of the projectors and the track make them particularly suitable for concealed installation on arches and vaults or on the edges of complex architectural structures.

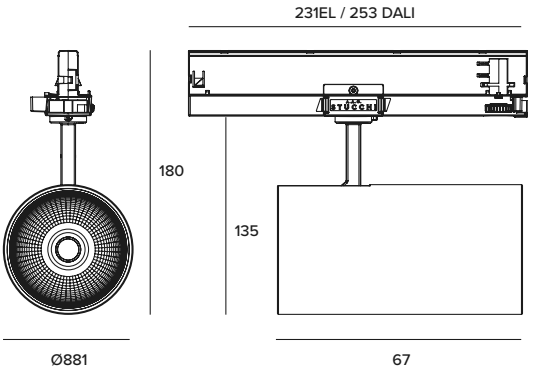
LABEL 6
230V

LABEL 9
230V

LABEL 6 230V



LABEL 9 230V



VOLTA

IP66

Professional adjustable LED projector for wall or cornice installation, for indoor and outdoor installation.
Particularly suitable for installation on cornices for lighting vaulted ceilings or pedestrian areas.

OPTICS

NSP
ASYM
ELLIPTICAL

POWER SUPPLY

Electronic
DALI
Casambi: the DALI version + special accessories

LED

From 650lm to 3187lm
3000K
Ra80
Ra84 - Rf84- Rg98

FINISHES

- Bianco Fiorentino
- Heritage Brown
- Ferrite
- Sandstone grey

EFFECTS

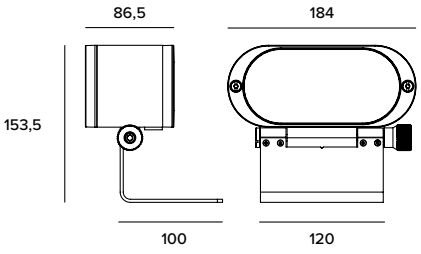
Narrow spot optic
for precision lighting from long distances.

Elliptic optic
to light large walls

Wall washer optic
to light vaulted ceilings and walkways

INSTALLATION

Surface mounting
Allows for wide rotation on the vertical plane. The handle on the side of the bracket makes it possible to lock the aim without the use of tools.



CCTLED TUBE

IP20

A range of controlled direct light fixtures with great installation flexibility and many different optical solutions. Also available in a recessed version.

OPTICS

SMART
TECH
FEEL
DEEP

POWER SUPPLY

Electronic
DALI
DALI Emergency
Casambi: the DALI version + special accessories

LED

From 2269lm to 4462lm
3000K • 4000K
Ra84 - Rf84- Rg98
Ra90 - Rf90 - Rf98
Ra97 on request

FINISHES

White

Bianco Fiorentino

Black

EFFECTS

SMART optic
for diffused lighting

TECH optic
for highly controlled lighting

FEEL optic
for controlled yet effective light

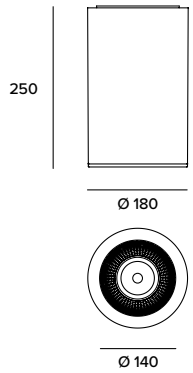
DEEP optic
for lighting from great heights

INSTALLATION

Suspension

Ceiling

Applique



TONES

IP20 - IP68

**A range of new generation LED strips.
The light tonality of TONES is customised depending on the specific colour characteristics of the space to be lit.
24 Vdc**

OPTICS

120°

POWER SUPPLY

DALI

LED

Custom

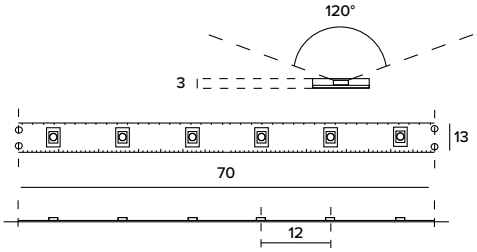
Colour temperature customised on customer request. Eight light tones already available with the same number of light spectra.

The light tones available in the catalogue were created in partnership with the American firm Gensler with the objective of enhancing different combinations of materials to the full.

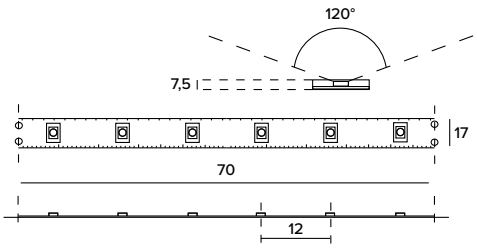
CONTROL

Already complete with a control system for remote management of light intensity.

TONES IP20



TONES IP68



DURASTRIP HIGH DENSITY

IP20

A range of Led strips with a homogeneous and uninterrupted light emission and superior performance in terms of lumen/W. 24 Vdc

OPTICS

120°

POWER SUPPLY

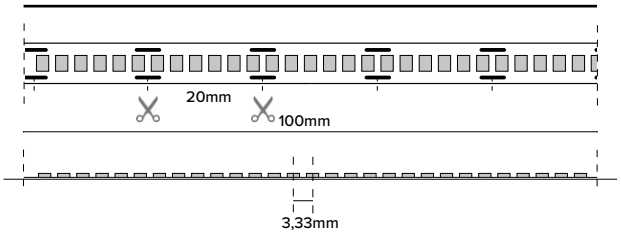
DALI - DMX
Casambi compatible

LED

2200K - 2700K - 3000K - 3500K
4000K - 6000K
Ra95

L70 60,000 H. Excellent thermal management for long LED life and performance maximisation.

High quality LED with the Bin centred on the Planck curve. McAdam 2 step tolerance



Dimmable from 0 to 100%

KEPLERO

IP66 - IP67 - IP68 - IP69K

A complete range of recessed LED up-lights for outdoor lighting. Two different sizes to illuminate small or big buildings and facades, with a wide range of optics with white LED or RGBW lamps with different lumens output.

OPTICS

SP • FL • MWFL • WFL • WW

POWER SUPPLY

Electronic
DALI
1-10V

LED

From 826lm to 4665lm
3000K • 4000K
Ra84

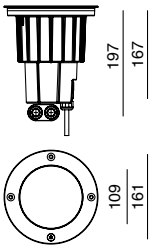
FINISHES

Brushed steel

INSTALLATION

in ground recessed

KEPLERO MINI



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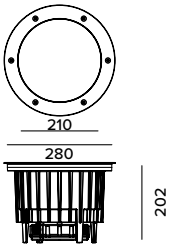
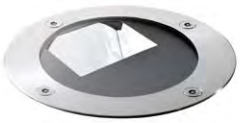


ZOOM
SPOT, FLOOD, MEDIUM WIDE FLOOD, WIDE FLOOD

GIMBAL
SPOT FLOOD

WALL WASHER



HI-EFFICACY
SPOT, FLOOD, MEDIUM WIDE FLOOD

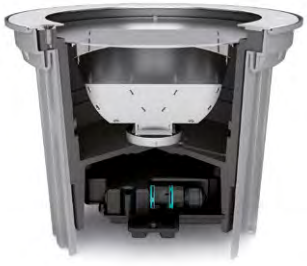
ZOOM
SPOT, FLOOD, MEDIUM WIDE FLOOD, WIDE FLOOD

GIMBAL
NARROW SPOT, FLOOD, FLOOD RETANGLE

WALL WASHER

Variable Zoom optical system
The large version is equipped with an optical system that makes it possible to modify the beam opening. Just move the optical unit on the graduated ring to change the beam from a spot to wide flood.

Gimbal optic
A real recessed, high performance projector with a precise and defined beam. Can be adjusted up to 40°.



Wall Washer optic
Ideal for lighting large vertical surfaces in a uniform way from a distance of around 80/100 cm. Ensures uniformity on large vertical surfaces and light diffusion from very close to the floor.

JEDI COMPACT

IP40 - IP67

Compact, high performance linear LED fixture. Suitable for installation on small grooves or very thin ledges. Ideal for lighting walkways, vaulted ceilings or walls. Available in a double indoor and outdoor version.

IP40

IP67

OPTICS

FL • WALL WASHER
GRAZING

POWER SUPPLY

Electronic
DALI
Casambi: the DALI version + special accessories

LED

From 623lm to 7180lm
2700K • 3000K • 3500K • 4000K
Ra84

FINISHES

Anodised aluminium

EFFECTS

Flood
to light plaster mouldings

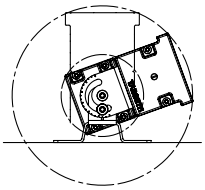
Grazing
for a grazing light effect

Wall Washer Optic
for uniform lighting of vertical surfaces and vaulted ceilings

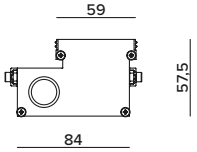
Two profiles available
With a remote driver on the extremely thin profile or an integrated driver for faster electrical connection.

INSTALLATION

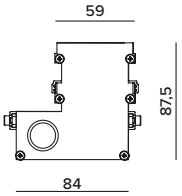
Surface mounting
Surface installation or using brackets that allow the projector to rotate from -145° to +145° for the indoor version and from -90° to +90° for the outdoor version.



Recessed
Inground recessed installation for IP67 version equipped with Insertion Box available as accessory

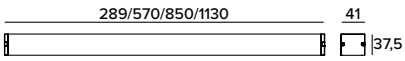


Insertion box for remote driver

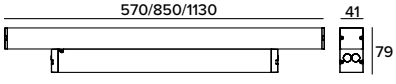


Insertion box for driver onboard

JEDI COMPACT IP40

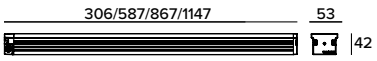


Removable driver

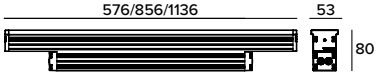


Removable driver

JEDI COMPACT IP67



Remote driver



Integrated driver

JEDI Compact IP40 can be accessorised with a special anti-glare grill, while the IP67 versions are already available with or without grills.

DART

IP66

Range of professional al projectors for outdoor architectural lighting, available in three different sizes Small, Medium, Maxi; Available with different lumens and optics for accent lighting or uniform lighting of large surfaces.

OPTICS

NSP – SP – FL – MWFL
for all versions
WFL – ASYM
for versions Medium and Maxi
Narrow ASYM
for versions Medium)

LED

from 200lm 8978lm
3000K • 4000K
Ra80 • Ra84

POWER SUPPLY

Electronic
DALI
1-10V
Casambi: the DALI version + special accessories

FINISHES

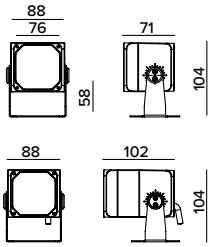
Ferrite

Mini Version
with a remote power supply for installation in extremely confined spaces and with an integrated driver to simplify installation and accommodate cables on building facades.

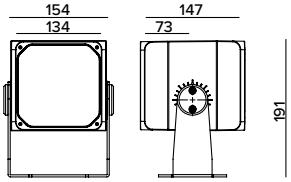
Medium Version
Available in two different asymmetric optics: one more open version on the horizontal axis that makes it possible to widen the pitch between fixtures and a second version defined as Narrow Asymmetric that is more comfortable and controlled.

Maxi Version
Designed for lighting details or wide surfaces from long distances. The only one in the range to have a NSP 6° indirect optic.

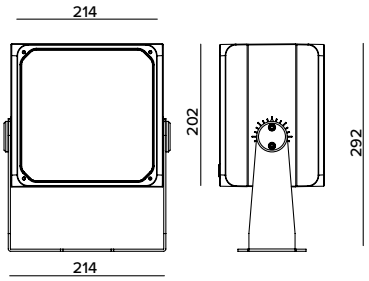
DART MINI



DART MEDIUM



DART MAXI



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