

Press Information

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Philips and the Rijksmuseum – shining new light on old masterpieces

Museums the world over are faced with a dilemma: the need to make works of art accessible, presenting them in the best light possible, and the need to preserve these works of art for future generations. Lighting in a museum thus plays an important role, influencing the way in which art is viewed and the overall enjoyment of the visitor. At the same time, the lighting must meet precise presentation and conservation standards - and therein lies the unique challenge of museum lighting.

A collaborative approach to light the “New Rijksmuseum”

The collaborative approach to lighting adopted for the “New Rijksmuseum” is particularly relevant given the endless options offered by LED lighting technology, due to its flexibility and versatility. The definition of the “ideal lighting” in which to view art is a subjective definition, and needed to be the result of a constant dialogue between a number of experts who together were able to deliver the desired end result.

The lighting of the Rijksmuseum signified the coming together of different experts from around the world:

- The Rijksmuseum in Amsterdam itself is home to some of the world’s preeminent experts in fine art. The curators were able to offer invaluable insight on the individual pieces of art and what the visitors to the museum would want to experience from their visit.
- Leading architecture firm Cruz y Ortiz from Seville in Spain was commissioned for the overall renovation of the Rijksmuseum
- Restoration architect van Hoogevest Architecten was brought in from The Hague in The Netherlands given the historic value of the Rijksmuseum building itself
- Global design and consulting firm Arup designed the lighting for the “New Rijksmuseum” under the leadership of Rogier van der Heide, who served as a Director and Global Leader of Lighting Design at the firm from 2003 until 2010
- Wilmette & Associés from Paris, France were responsible for the interior design and were responsible for the design of the “Light Racks” in partnership with Arup, represented by Rogier van der Heide
- Engineering of the Light Racks: Bronnenberg, The Netherlands
- The *Rijksgebouwendienst*, the Dutch Government Buildings Agency managed the museum’s renovation, as the building owner
- Lighting design company Beers Nielsen from Rotterdam in The Netherlands were brought in to finalize and execute the lighting design on site
- Philips added its experts in illumination and Iconic Projects to the team, including Rogier van der Heide, Chief Design Officer at Philips Lighting since 2010, and involved in the Rijksmuseum project from its very inception

Philips and the Rijksmuseum worked with all these project partners, pooling their knowledge in order to deliver the best possible outcome for the project. To illustrate,

Philips used its knowledge of illumination to interpret the curators' requirements for the art exhibitions, helping select the most impactful light effects and ambiances, and aligning these with the plans of the interior designer, architects and other partners to realize the museum's vision for the "New Rijksmuseum."

Another example is the development of the signature "Light Racks" to light the art exhibitions throughout the museum, designed by Wilmotte & Associés and Arup and engineered by Bronnenberg in The Netherlands. Philips took on the detailing, fabrication and implementation of these Light Racks, further enhancing the design in the process with technological know-how of how to customize lighting solutions to the very specific requirements of the Rijksmuseum.

Rendering paintings in "high definition" with Philips LED lighting

In 2011, the Rijksmuseum and Philips partnered to light Rembrandt's "*The Night Watch*", one of the most famous paintings in the world and a major draw for the museum. Philips and the Rijksmuseum used the opportunity as a prototype trial of lighting painting masterpieces with LED technology. Upon the successful completion of *The Night Watch* demonstration, Philips and the Rijksmuseum continued their collaboration and created the complete exhibition lighting of the Rijksmuseum, all using LED technology.

Traditionally, museum lighting has relied on incandescent halogen lamps to illuminate artwork. While incandescent lighting beautifully renders red and warm tones, this warmth often comes at the expense of rendering blues and greens: The art takes on a heavy amber tint, and does not show the richness of the full color palette. This amber tint is exaggerated even further when incandescent lamps are dimmed to maintain conservation standards for light levels.

One of the specific lighting choices made in the "New Rijksmuseum" was to shift the color temperature to slightly crisper, more neutral white light, in order to remove the heavy amber tint that is characteristic of conventional museum lighting. The color temperature simply refers to whether white light appears warm (reddish), neutral or cool (bluish) which effects how the painting appears to the visitor.

Philips' latest LED lighting used at the museum also offers two more distinct advantages: First, these LEDs permit a much more balanced light spectrum than was until now possible. Good LED lighting maintains the much sought-after appearance of warmth for the reds and yellows, while rendering the blues and greens equally well. Secondly, LEDs do not shift color when dimmed, maintaining a highly consistent presentation of the artwork throughout the museum.

The quality of the light is such that a greater range of color is visible, that can be described as an effect similar to viewing the painting in "high definition".

A total lighting solution

The Rijksmuseum or "National Museum" in Amsterdam is an enormous building complex that is architecturally varied. The art collection covers over 7,500 artifacts, exhibited throughout 9,500 sq/m of gallery space. To give a sense of scale to the project, close to $\frac{3}{4}$ of a million LEDs were used to light the interior of the Rijksmuseum and 1.8 kilometers

of LED up-lighting have been used in the largest renovation project in the museum's 213-year history.

The lighting needed to help create a uniform visitor experience as well as bring out the unique features of each work of art. The lighting of each piece thus needed to be individually tuned and focused to ensure the best visitor experience.

The lighting solution for the exhibitions thus harnesses the flexibility of LEDs as a digital light source, combining it with a state-of-the-art lighting control system, and allowing the light throughout the museum to be controlled via an easy-to-use web interface. This means that museum staff are able to control and set the lighting levels on individual works of art to ensure that all of the pieces are properly balanced throughout the museum.

From a customer service perspective, Philips has provided a turn-key solution – even developing the case to transport *The Night Watch* to its final hanging place in the "new" Rijksmuseum. Philips has provided a complete solution for the museum including the finalization of the lighting design, fabrication and installation of the signature "light racks", installation of all fixtures, system commissioning, and the final focus and adjusts. This again illustrates the value Philips creates through collaboration with all stakeholders to provide a complete service.

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