

# Application Portfolio



ARCHITECTURAL & FACADE LIGHTING | [lumascope.com](http://lumascope.com)



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# Marischal College | Aberdeen, Scotland, United Kingdom





## Flinders Street Railway Station | Melbourne, Victoria, Australia

As part of the Victorian government's refurbishment plan, the iconic Flinders Street Railway Station received a range of exterior and interior upgrades, including a dynamic new facade lighting system.

The original station was completed in 1910, designed by James Fawcett and H.P. Ashworth from the Railways Department. Today, it is the busiest railway station in Australia. More than 90,000 passengers come through the entrance each day. Flinders Street's facade depicts classic Edwardian architecture that makes it one of the most well-known icons in Melbourne.

In 2018, a state-of-the-art LED lighting system was unveiled that included over 90,000 LEDs and an advanced control network. The nighttime transformation of the building's classical architecture is stunning.

The project features more than 12 mi (20 km) of cable and 1,100 automated LED light fixtures that can be operated remotely. From the beautiful, classic colors of red, blue, and green, to dynamic, high-impact lighting effects, the lighting system on Flinders Street knows no bounds. The facade lighting can also change colors to celebrate social and cultural events in the city such as Australia Day, St. Patrick's Day, Breast Cancer Awareness Month, and more.

While the incredible transformation of the train station is clearly visible at night, what is less obvious is the level of intelligence in the control system behind it all. The optimized system delivers detailed reports in real time, facilitates easy maintenance, and simplifies customized lighting effects — all via the internet.

Lumascap supplied PowerSync™ enabled luminaires, including the next-generation Vestalux V1 direct view linear outliners, to add definition to the facade and highlight the building accents.

Key considerations in partnering with Lumascap included significant energy savings from the transition to LED technology coupled with long-term maintenance savings through the fully monitored solution.

Lumascap is honored to have had the opportunity to work with Darkon and Apec Electrical to create a special lighting show on such a quintessential building in the heart of Melbourne.





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“ Voted the World’s  
Greatest Place in 2018.”

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– TIME Magazine



## Morpheus Hotel | Cotai, Macau, China

The striking Morpheus Hotel is the fifth tower in Macau's City of Dreams. Standing 40 stories high, Morpheus includes 780 luxury guest rooms, suites, and villas, as well as retail stores, restaurants, meeting and event spaces, a casino, spa, and sky pool.

The grand hotel is the world's first high-rise with a free-from exoskeleton design. It was created by Pritzker Prize-winning architect Dame Zaha Hadid. The awe-inspiring structure consists of two towers blended together with internal voids through the center to create a window connecting the hotel's interior, communal space with the city outside.

The unique nature of the exoskeleton concept provided an intricate canvas for Isometrix, the project's lead lighting designer, to incorporate architectural luminaires.

The exoskeleton contains several free-form structures. Integrating powerful luminaires to up light the morphing shapes in each bay was the primary challenge.

The complex installation process required multiple calculations, studies, and mock-ups to develop luminaires that were right for this unique application.

Lumascap designed custom solutions to deliver uniform and consistent light across the entire facade. One of the main considerations for this profile was that the lighting needed to blend seamlessly into the exoskeleton.

To meet such difficult requirements, Lumascap developed unique optics to light the inside of the exoskeleton, enhancing its three-dimensional form while keeping direct light away from the windows behind.

After numerous sample submittals, CLA — Lumascap's partner in Asia — was awarded the supply and installation contract with luminaires from Lumascap that incorporated proprietary PowerSync™ technology.

One luminaire was a 9 W RGBW with a horizontal narrow beam, designed to up light the underside of each facade section. The second was a 100 W RGBW floodlight to up light the external spaces in the central core of the building.

Since its inception, the Morpheus Hotel has received several prestigious awards for design, including:

- World's Greatest Places 2018 by TIME Magazine, awarded just two months after opening
- Best Hotel Architecture Macau, 2019
- Best New Hotel Construction & Design Macau, 2019
- Building of the Year 2019 by ArchDaily, the world's most visited architecture website; and more.





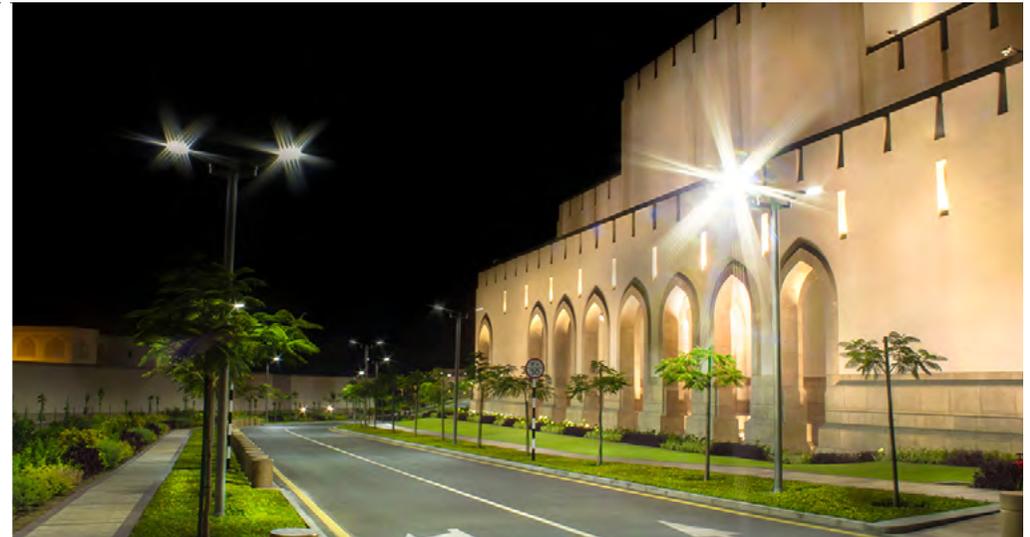
## Majlis Oman | Muscat, Oman

Oman's vision to build a modern civilization with roots in the arts and culture of its past is unsurpassed.

The simple lines and arches common in local traditional forts and castles often serve as inspiration for nation's contemporary architecture. Thanks to the precise technologies of today, Oman has succeeded in creating some of the most astonishing architectural masterpieces in the world.

Majlis Oman, the new parliament building in the capital of Muscat, is the latest of these landmark buildings. Situated in the prestigious Al Bustan area of the city, it overlooks the tranquil Gulf of Oman and is encompassed by a stunning, mountainous backdrop. The outdoor lighting system was designed to accentuate the building's unique architectural features.

A primary challenge with this installation was that the luminaires had to illuminate extremely large surface areas with minimal glare, while ensuring long-term sustainability. This huge project was successfully achieved thanks to modern, high-performance LS3080 in-ground luminaires from Lumascope.





## The Founder's Memorial | Abu Dhabi, United Arab Emirates

The breathtaking Founder's Memorial, located at the intersection of 1st and 2nd Streets along Abu Dhabi's popular Corniche, serves as a permanent tribute to Sheikh Zayed, the founding father of the United Arab Emirates.

The centerpiece of the 3.3-hectare space is The Constellation, a dynamic, three-dimensional portrait of Sheikh Zayed. Viewers are invited to experience this monumental public artwork from multiple vantage points to create a series of infinitely evolving personal encounters with the image.

Housed within a 100' (30 m) pavilion, The Constellation — one of the largest art installations of its kind — contains 1,327 stainless steel objects suspended on 1,110 vertical steel wire cables.

The memorial was designed by acclaimed sculptor Ralph Helmick, renowned worldwide for his large-scale suspended sculptures.

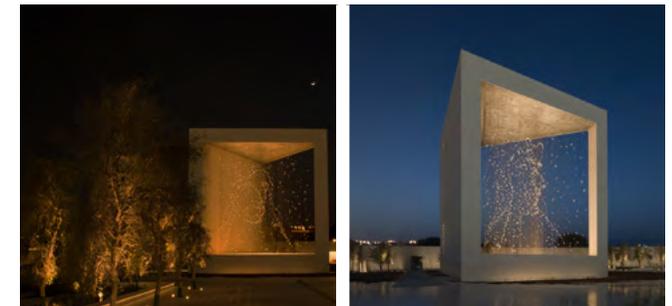
For this special project, Lumascape provided 1,985 luminaires mounted to the floor and ceiling to illuminate the monument. The specific installation locations for each luminaire were not evenly positioned. Instead, they were determined by the artist to achieve the desired vision and complement the monument's features.

On the triangular floor, 1,203 up lights were delicately mounted to the floor substrate, then buried up to their apertures with sandstone gravel. The luminaires can be aimed 15° vertically in any direction, a convenient feature in complex environments such as this.

The remaining 782 luminaires are down lights. They were installed in the monument's soffit from behind, pointing vertically down into the space. The length of each luminaire was adjusted individually on-site to align flush with the ceiling.

All luminaires were supplied with a color temperature of 3,000K, a 10° beam angle, and controlled directly by a PowerSync™ backbone. The DMX data from the show control hardware is provided to a bank of low-voltage PowerSync masters mounted into two racks. This setup allowed the team to work together to adjust the intensity levels and achieve the desired result.

Lumascape is incredibly honored to have played such an important role in the construction of this national tribute to Sheikh Zayed.



# Casino de Montreal | Montreal, Canada







## Carlsbad Caverns | Carlsbad, New Mexico, USA

Located in the vast Chihuahuan Desert of New Mexico lies Carlsbad Caverns National Park, a one-of-a-kind natural masterpiece. It is among the largest publicly accessible cave systems in the world, spreading over 4 mi (6.5 km) long. This 250-million-year-old UNESCO World Heritage Site hosts countless natural wonders, including 17 species of bats.

To upgrade the park's 30-year-old lighting system, a panel of U.S. National Park Service staff undertook a rigorous selection process. They tested products from several other manufacturers with unfavorable results before selecting Lumascope as the turnkey luminaire and controls solution provider for this historic project due to our unrivaled product testing processes.

Carlsbad Caverns presented a unique and enticing challenge — one that required a custom-tailored approach, beyond the simple considerations of quality and durability.

To comply with the need for an environmentally conscious, long-term solution, Lumascope committed to surpassing every request. The complex project took almost seven years from conception to completion. Lumascope delivered a lighting system that mitigated algae growth on the luminaires, utilized LEDs operating at frequencies safe for bats, allowed for remote maintenance inspections, and offered an operational lifespan of over 30 years.

The custom lighting solution redefined the caverns' natural architecture and included more than 600 IP68 fixtures made from 316 grade stainless steel.

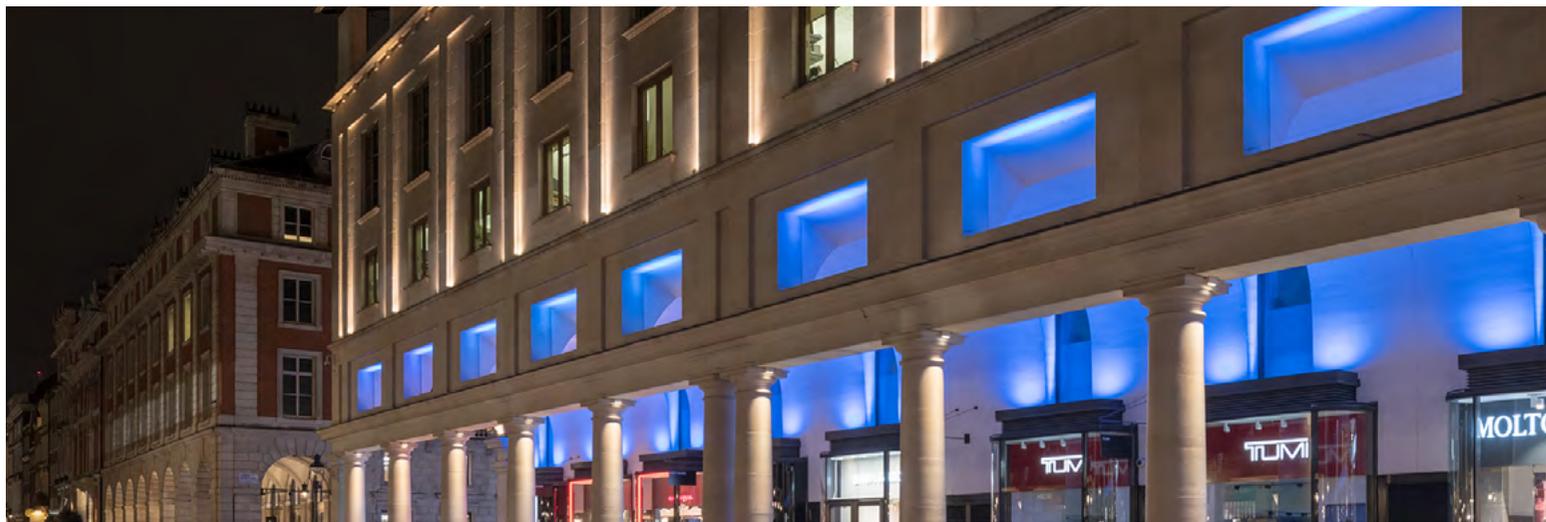
Innovative use of color temperatures has helped visitors better experience the grand scale of the underground space, while the custom control solution allowed for remote commissioning and maintenance reporting with a portable, wireless control terminal and software developed specifically for the project.

Rangers have praised the new system for its efficiencies in both management and energy savings, and visitors to the cavern are astounded by the aesthetic transformation to the space.

Lumascope is thankful to have played such a fundamental role in this significant project for one of the most beloved national parks in the United States.



# Royal Opera House Arcade | London, England, United Kingdom





# Rialto Melbourne | Melbourne, Victoria, Australia







## Sydney Opera House | Sydney, New South Wales, Australia

The award-winning Sydney Opera House in Australia is a globally recognized architectural masterpiece. The iconic sails are a beacon for art and design through innovative lighting displays, while the site itself is an acclaimed performance venue, host to more than 1,800 events each year.

Inside the Concert Hall at one of the world's most recognized and celebrated buildings, lighting engineers were faced with a considerable challenge. The aging system was experiencing regular transformer failures and decreased efficiency as its components were reaching the end of their usable life. The traditional 250 W halogen lamps were obsolete and increasingly difficult to find.

LEDs were a logical consideration to utilize new advancements in lighting technology, in addition to the benefits of long-term energy savings. After completing several successful projects at the Opera House, Lumascope offered their expertise in LED lighting systems to ultimately develop a custom solution that would meet the needs of the Concert Hall. The project was managed in-house by the Sydney Opera House projects group.

Lumascope created a plan that met the specialized artistic, aesthetic, and sustainability needs of the Opera House. Lumascope understood that a new lighting solution would only be successful if it adhered to the building's strict architectural and performance heritage requirements. Aesthetically, the housing needed to remain intact to avoid changing the look or feel of the Concert Hall.

Smooth, flicker-free, fade-to-black dimming was a critical feature in the design of the system. This ensured the Concert Hall would evoke the feelings audiences have come to expect when watching performances. Individual red, blue, green, white, and amber LEDs were mixed to achieve a CRI above 97, dimming from bright white to a warm orange glow to black with the same intensity and color as incandescent. The result perfectly mimicked the traditional lighting aesthetic, evoking the nostalgic feeling of the original hall.

The addition of RGB capabilities and subsequent improvements have added a new dimension to Concert Hall performances, delighting performers and audiences alike.

Now considered a next-generation venue, the different effects and control of individual color channels make the Concert Hall an attractive site for a wider variety of performances. Performers are also pleased to know they can record shows at 1080HD without the presence of banding lines caused by LEDs with slower dimming frequencies. The upgrade to LED technology, which took nearly two years to develop and implement, has also offered significant benefits beyond aesthetic values to maximize energy savings across the entire facility. Ultimately, three types of luminaires were developed: a lower-level fitting (70 W; replaced 250 W) over the boxes, high-level house lights within the stalls, and crown lights (200 W; replaced 1,000 W) directly above the stage.

Benefits of the upgrade include:

- A 75% reduction in electricity consumption, with estimated savings of \$70,000 AUD per year
- Greatly reduced need for staff to work in confined ceiling spaces to replace lights (five times a year before upgrade)
- Increased capacity to create ambient and specific lighting effects, without the cost of hanging additional lights
- Removal of about four tons of air-conditioning ducting, thanks to less heat being generated.

For the project, Lumascope received the coveted Product Innovation Award in 2015 by Australian Business Awards for advancing of the art and science of lighting. The Concert Hall project was also a finalist in the New South Wales government's prestigious 2014 Green Globe Awards, which recognize organizations that show outstanding environmental and sustainability leadership.

## Merah Putih Bridge | Ambon, Indonesia

The Merah Putih Bridge is a cable bridge located in Ambon, Indonesia, that spans across picturesque Ambon Bay. It was built to improve travel time between the airport and city center.

At over 3,740' (1,140 m) long, it stands as the longest bridge in eastern Indonesia. Since its completion in 2016, it has quickly become an area landmark, attracting tourists from across the world eager to watch the bridge light up against the night sky.

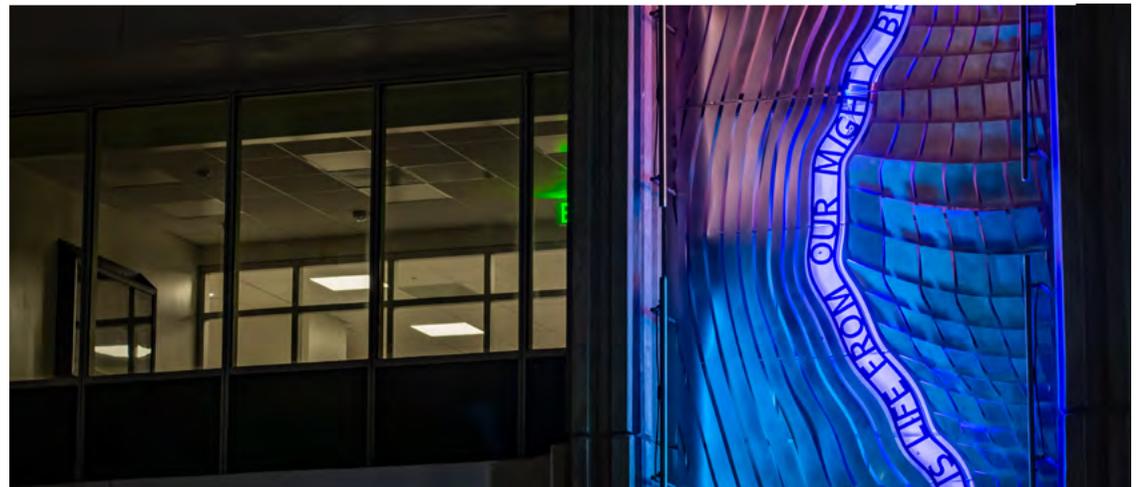
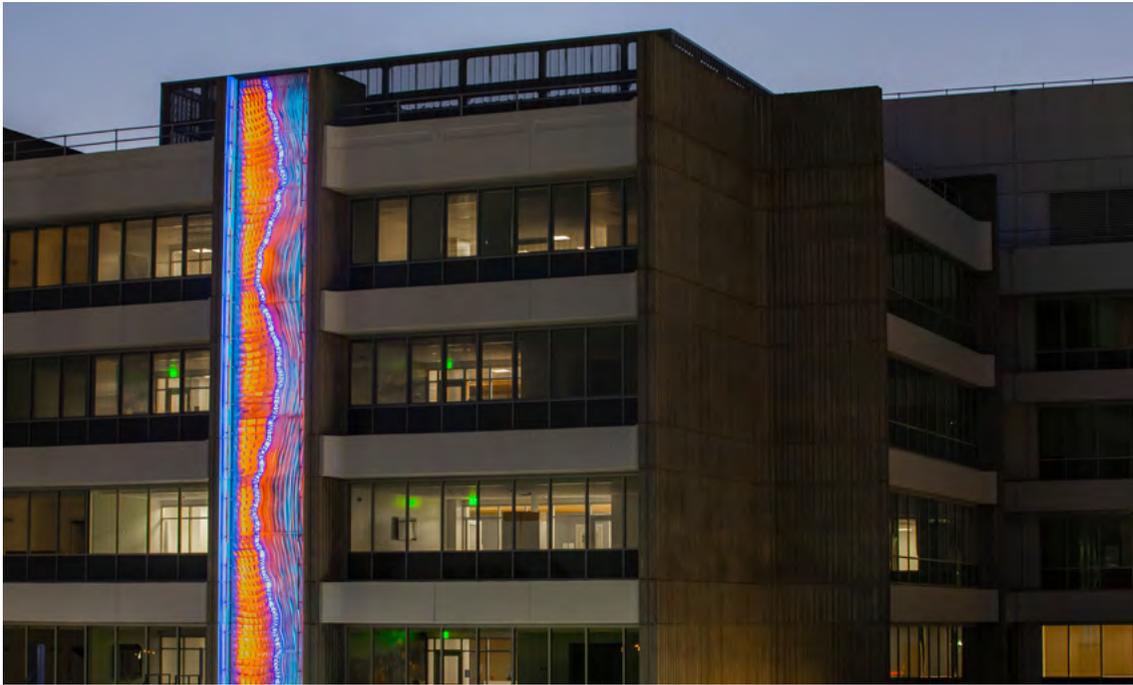
To highlight the bridge's features and allow the creation of light shows at night, officials selected a next-generation solution with colored lights from Lumascape.

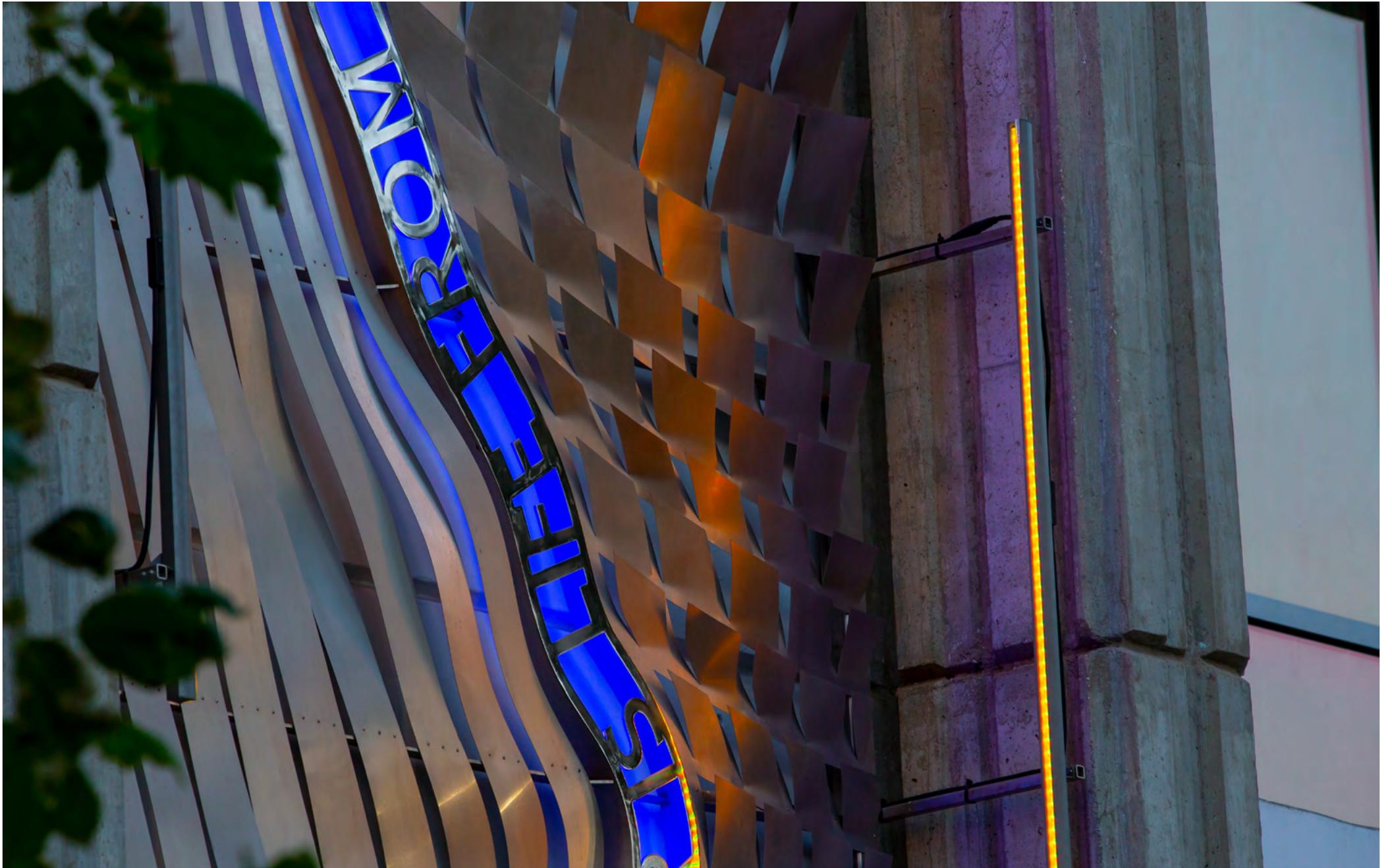
Color-changing Quadralux Q6 (LS9160) and Q8 (LS9180) architectural flood lights were installed across the bridge to highlight its beautiful architectural features.

The Merah Putih Bridge has been transformed by the new lighting system and is now a dazzling feature of the evening skyline.



# MLK Community Healthcare | Los Angeles, California, USA





## Brisbane Busways | Brisbane, Queensland, Australia

Since construction in the mid-1990s, Brisbane Busways has allowed for fast, frequent, and reliable public transport and has eased congestion by separating buses from the general traffic.

To both facilitate safe passage and refresh the space, the Department of Transport and Main Roads commissioned a new LED lighting system. The client required a long-lasting lighting solution that was maintenance-friendly.

The project required the luminaires to conform to the depth and width of the existing space. They had to operate in ceiling voids up to 140°F (60°C) while producing evenly distributed light levels and minimizing glare to waiting passengers and oncoming drivers.

For this project, Lumascope engineered and manufactured a high-lumen, high-efficacy downlight suitable for mounting in external soffits exposed to the elements.

These intelligent luminaires use the latest LED technology and are specifically designed to produce an even light distribution. Together with light distribution, these luminaires offer significant improvements to light intensity, vertical illumination (important for facial recognition), color temperature, color rendering, glare control, and power consumption.

The luminaires feature a strong and easy-to-use mounting system that is completely hidden with a snap-in outer trim and a 0.3" (8 mm) OptiClear™ toughened glass lens for excellent light transmission. They also have a sturdy IK8 rating for vandal resistance.

Lumascope is pleased to have helped reinvigorate the Brisbane Busways. The lighting system has since been retrofitted on all bus stations that are part of the busway network in Brisbane.





## Al-Wakra Celebration Hall Complex | Al Wakrah, Qatar

Qatar's elegant Al-Wakra Celebration Hall Complex combines features of traditional Qatari culture with modern architecture. Free of charge to area residents, the facility plays a significant role in reducing marriage expenses for youth, with the hall able to accommodate at least 500 people. Through collaboration with our partners in the region, Lumascope was contracted to provide an architectural lighting solution for the space.

The client required high-performance, in-ground lighting fixtures that provided a consistent warm wash over specific areas of the facade.

To properly execute this vision, Lumascope selected the premium in-ground LS343. With marine-grade 316 stainless steel, fully sealed housing, a submersion rating for up to 33' (10 m), built-in HumanTouch™ technology for safe operation in

public areas, and an extensive choice of lamps and accessories, the LS343 was the ideal choice for this dynamic application. The complex has been transformed by Lumascope's premier lighting solution and now serves as a beacon of celebration for the city.





## Semanggi Interchange | Jakarta, Indonesia

Jakarta's massive, clover-shaped Semanggi Interchange is yet another progressive infrastructure initiative from the government of Indonesia. The groundbreaking project was inaugurated by President Jokowi Widodo in 2017 in conjunction with the 72nd anniversary of Indonesia's Independence Day.

The governor of Jakarta, Djarot Saiful Hidayat, described it as a "special gift for Jakartans and for the nation." Designed to accelerate the flow of traffic in the congested area by up to 37%, it has been heralded as one of the city's most notable and efficiently executed projects.

One of the major project developments was the successful installation of a color-changing architectural LED lighting system from Lumascape. A primary challenge for this lighting project was the difficulty of getting contractors into the area.

Due to the high traffic, construction workers and other contractors were often only able to work at night. It was crucial that the lighting system was durable, always able to operate at maximum output, and deliver exceptional light quality with little maintenance required.

Lumascape's proven product testing and manufacturing processes, as well as our record of accomplishment in similar projects, were significant factors in being selected.

A Lumascape technical lighting specialist flew in from Australia to ensure successful installation and operation. Through collaboration with our distributor, Creative Lighting Asia, and other important members of the project, the interchange is now lined with over 1,600 Quadralux Q2, Quadralux Q4, and Linealux L5 architectural luminaires.

The inauguration of the interchange was attended by President Widodo and Governor Hidayat. Since then, the architectural lighting has provided a beautiful spectacle for residents and visitors alike.

# Weston Milling | Melbourne, Victoria, Australia



# Almiri Diwan | Doha, Qatar



# Building Facade in Belgravia | London, England, United Kingdom





# Zhuhai Chang Long Hengqin Bay Hotel | Zhuhai, China





# Huntingdale Golf Club | Melbourne, Victoria, Australia





# Broadmeadows Town Centre | Melbourne, Victoria, Australia



# Willow Pass | Concord, California, USA



# Bobrowiecka 6 & 8 | Warsaw, Poland







## Yongxin Plaza | Shanghai, China

Bustling Yongxin Plaza is located in People's Square, a prosperous business district in central Shanghai. The plaza provides a comfortable and contemporary office environment for workers in the area. It is also China's first LEED platinum project certified by the U.S. Green Building Council.

As a premier example of green infrastructure, Yongxin Plaza is a landmark of engineering, and needed a lighting system to match. Lumascape LS793LED luminaires were installed to meet the project's lighting requirements.

These compact, in-ground luminaires feature a small aperture, excellent technical capabilities, and unmatched production quality, making them the ideal choice for this modern design initiative.



# Eastmark Great Park | Mesa, Arizona, USA





## Nirvana Spa | Wokingham, England, United Kingdom







## Fiesta Paseo Nodes and Shade Structure | Mesa, Arizona, USA

The busy Fiesta District has quickly emerged as a vital business area in the growing city of Mesa, Arizona.

The construction project along Southern Avenue was part of the city's long-term plan to improve local streets. The goal was to define a unique sense of place and community pride while improving the transportation and pedestrian linkages in the area. Refurbishments included the addition of several pocket parks and paseos — a strategy to highlight human scale among the desert landscape.

The Paseo Nodes and accompanying shade structures were designed to encourage interaction between people and boost the community's identity.

Initial planning stages revealed that the signature pieces would require a custom lighting solution. Lumascape was selected due to our proven history of creating bespoke solutions, as well as our successful track record designing other lighting systems in the area.

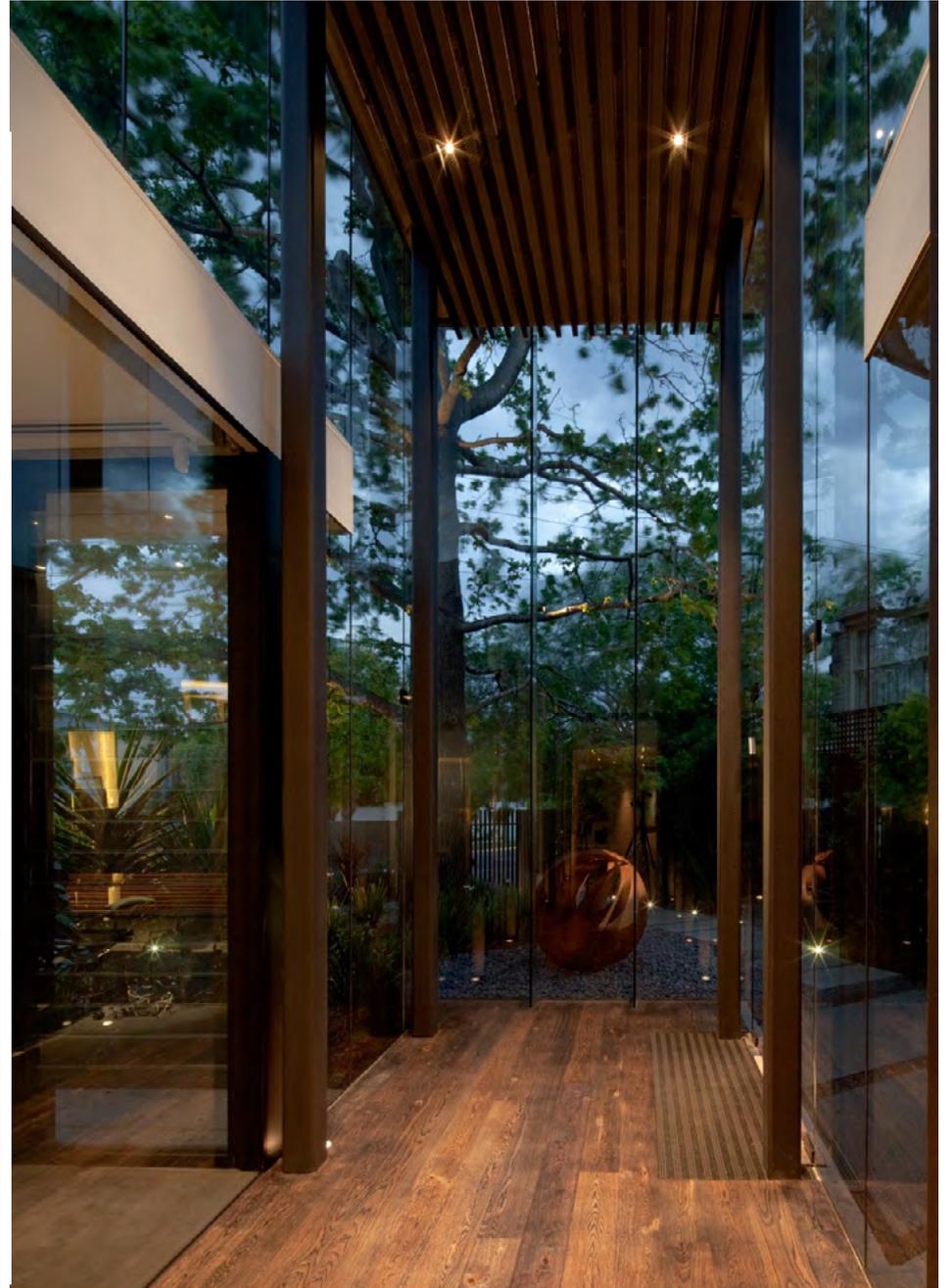
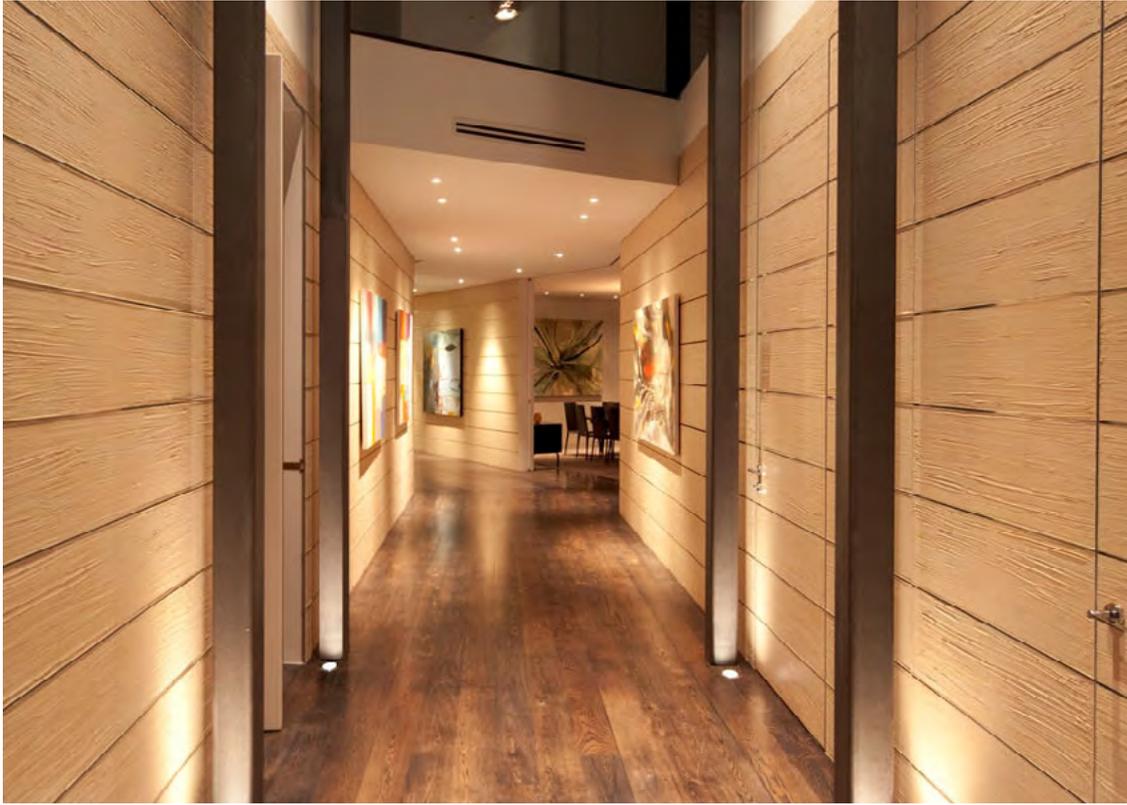
Considerable planning was required to model and develop the geometrical designs of the structures. As such, the lighting system required an in-depth and carefully crafted approach.

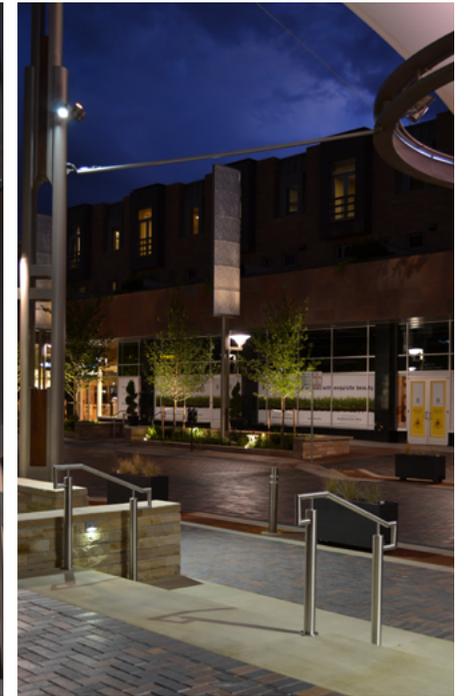
The final design includes luminaires that gently backlight the structures, carefully coordinated with the surrounding pedestrian lighting and overall branding of the district. Lumascape would like to offer a special thanks to our partners on this project for their invaluable contributions to its success.



# Kooyong Road | Brisbane, Queensland, Australia







## Cherry Creek North | Denver, Colorado, USA

Cherry Creek North is renowned for innovative development. Since the settlement was founded over 140 years ago, it has become an integral part of the fabric of greater Denver. Today it serves as a mixed-use district home to approximately 600 businesses. Residents and tourists come here to relax and indulge in the mix of classic and contemporary retail stores, restaurants, and live events.

The area is built on a foundation of high-quality construction and refined design. When the client engaged Lumascape, we were immediately invested in determining which products would meet their precise requirements.

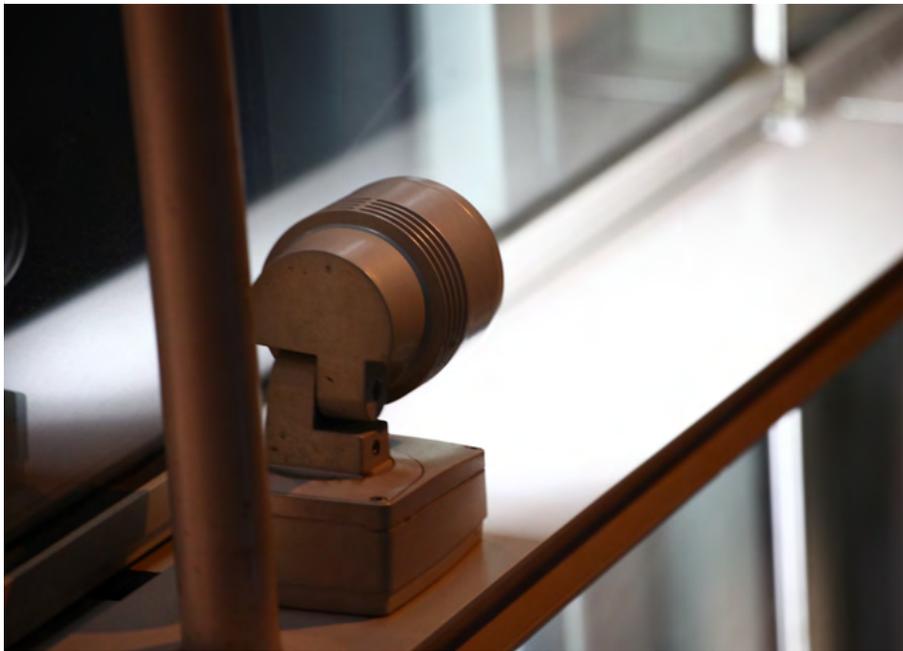
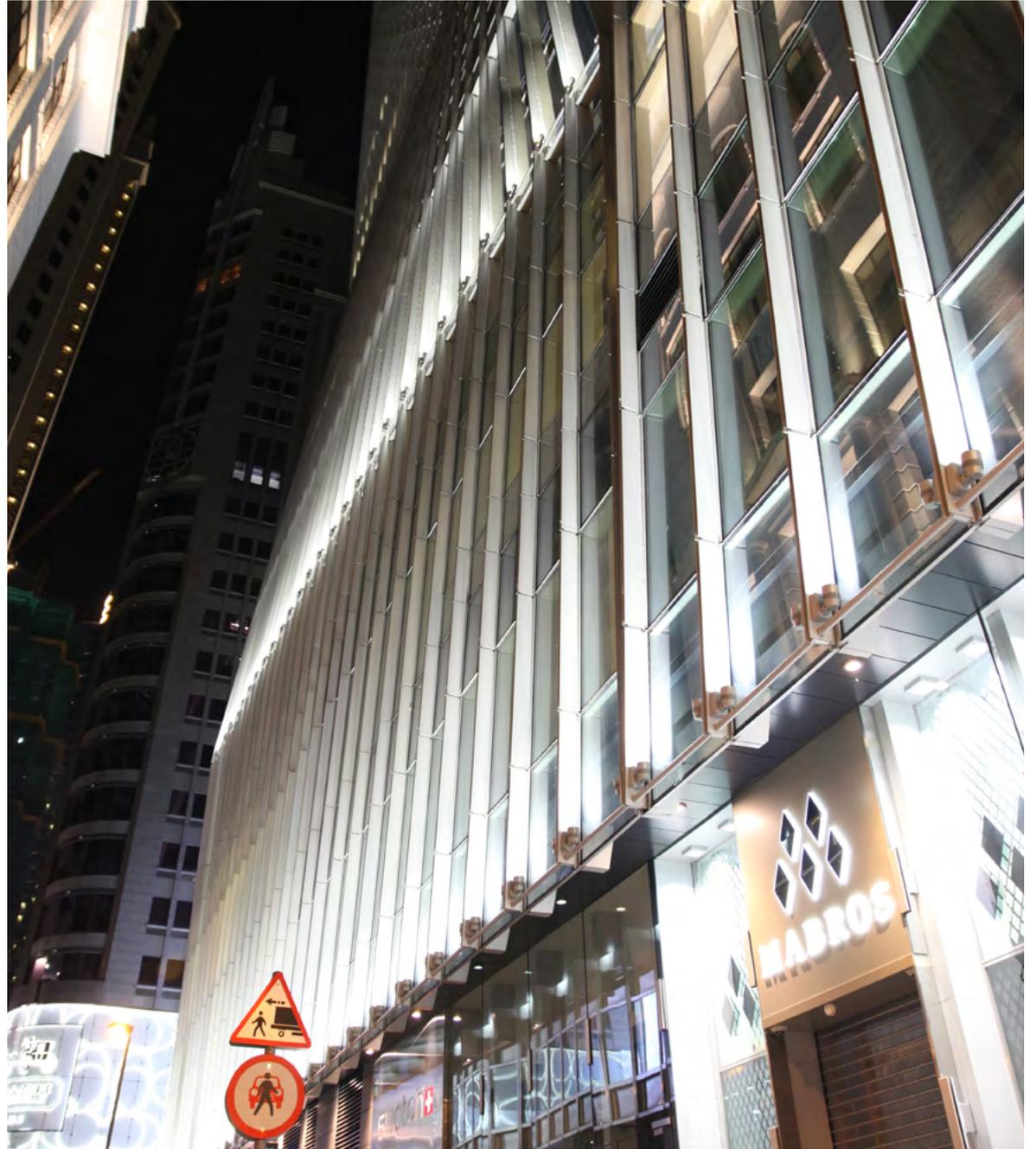
Unique to the project was a series of striking sails cleverly scattered throughout the area. The client wanted to utilize these elements to manipulate light and influence ambience to positively impact the moods of people in the space.

Because the area hosts live events at all hours of the day, dimming and light show capabilities were essential. To achieve the desired effects, the color-changing, wall-mounted LS421LED Centria was selected to provide stunning light output at maximum longevity, beautifully complementing the client's vision.

Equipped with its state-of-the-art LED lighting system, Cherry Creek North will continue to blossom as the premium standard for living and recreation in Colorado.

# LHT Tower | Hong Kong, China





## Sun Lake Hotel | Ningbo, China

Sun Lake Hotel offers the perfect combination of traditional Chinese culture and modern architectural style. The hotel provides guests with a quiet and beautiful environment, convenient transportation, and an excellent location.

To create a lighting system to match the hotel's distinct feel, Lumascape selected LS393 luminaires. These compact, in-ground lights utilize 12 V halogen MR-16 lamps up to 35 W or 6 W LED.

Built-in HumanTouch technology is a critical feature of these luminaires, allowing safe installation in publicly accessible areas. Convenient lamp adjustability ensures light is delivered exactly where it is required. From design and appearance to safety and technical capabilities, the world-class lighting system complements the elegant atmosphere of the hotel.



## LV Tower | Shanghai, China



# Restoration Hardware | Tampa, Florida, USA





# Cleveland Library | Cleveland, Queensland, Australia



## Darling Harbour Playground | Sydney, New South Wales, Australia

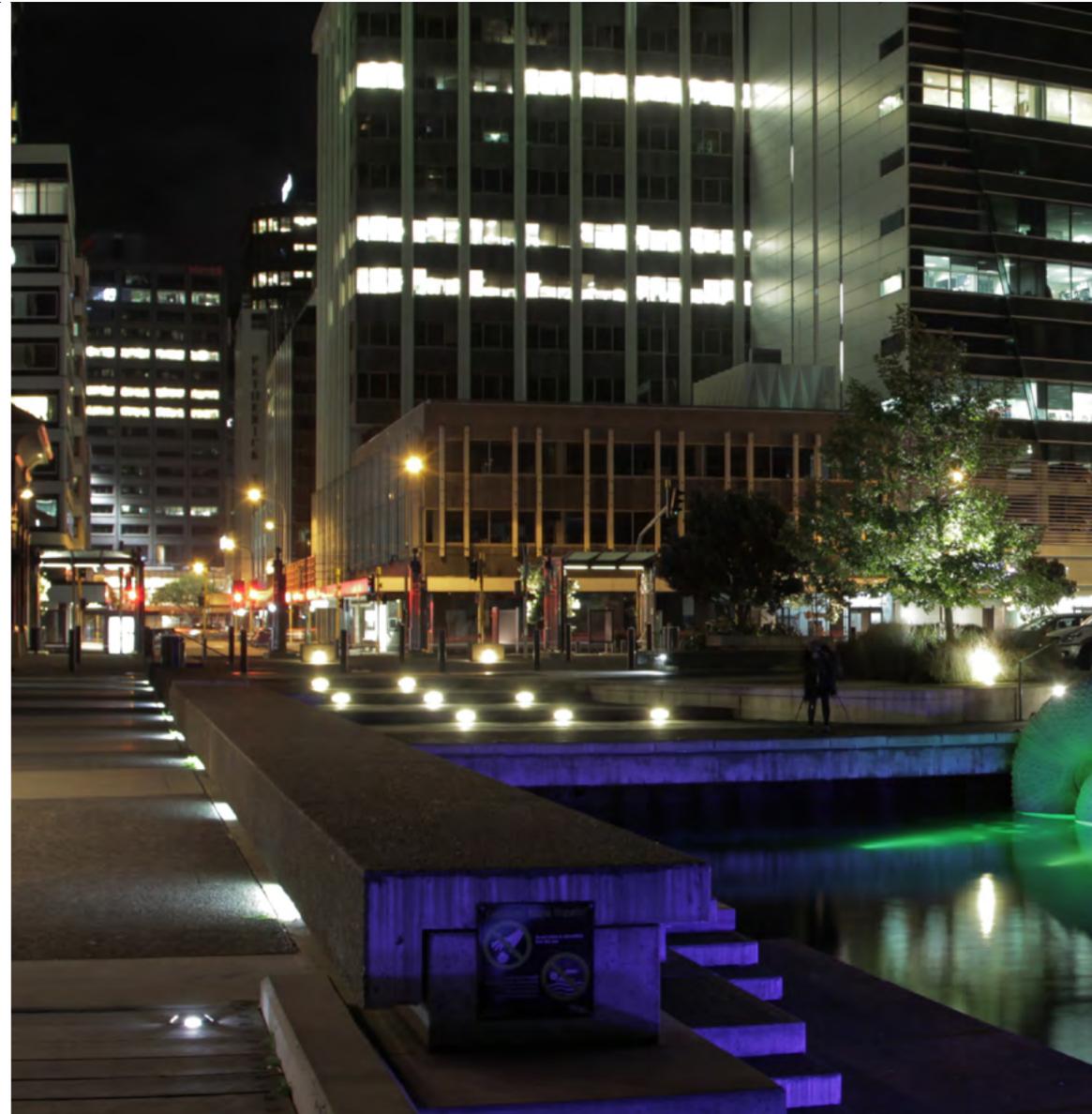


## Southbank Pagoda | Brisbane, Queensland, Australia





# Nga Kina | Wellington, New Zealand





# Google Campus | Mountain View, California, USA

Google is more than a multinational tech giant — it's a household name. From online advertising and search engine development to cloud computing, the company is founded upon a belief that to be successful, you must be prepared to break through boundaries by challenging the status quo.

The modern architecture at the company's California headquarters reflects this philosophy, and when looking for a lighting provider, Google wanted a company with similar values. The lighting designer proposed a simple yet high-performance solution that efficiently illuminated each component of the structure while minimizing glare.

To meet these requirements, Lumascape selected the in-ground LS853LED, a shallow-depth luminaire ideal for applications that require a low-profile design. The luminaires illuminate the architecture with beautiful light without overpowering it.

Selected for its superior performance, longevity, controllability, and unique features, Lumascape's in-ground lighting solution has effectively converted the large entryway into a captivating beacon for all who walk past.





## The Cauldron, GBK Stadium | Jakarta, Indonesia



# Mercedes-Benz Display | Augusta, Georgia, USA



# Coles Fountain | Melbourne, Victoria, Australia





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