



Mānawa Bay, Retail Lighting

AUCKLAND, NEW ZEALAND

LOCATION

AUCKLAND, NEW ZEALAND

END USER

AUCKLAND INTERNATIONAL AIRPORT LIMITED

ELECTRICAL CONSULTANT

ELECTRICAL CONSULTING SERVICES (ECS)

ELECTRICAL CONTRACTOR

COLL ELECTRICAL



Mānawa Bay

Mānawa Bay is a premium outlet shopping centre situated near Auckland International Airport.

Nestled along the water's edge and surrounded by park-like landscapes with views of Auckland's Manukau Harbour mangroves, Mānawa Bay is set to become New Zealand's ultimate outlet shopping destination.

Featuring over 100 iconic stores and an unparalleled selection of brands alongside a diverse range of dining experiences, Mānawa Bay is redefining outlet shopping in Aotearoa New Zealand.

Advanced Lighting Technologies supplied an array of exterior and an interior lighting solution for the Mānawa Bay project. The exterior lighting solution included luminaires from Cree Lighting's OSQ and OSQ High Output Series for the customer carpark in front of the building, luminaires from the Energy Series along the path to the staff carpark and inside it and XSPW wall-mounted luminaires on the backside of the building. For selected areas of the interior, Advanced Lighting Technologies supplied VLED Hyskier high bays from Venture Lighting. All the Energy and OSQ luminaires onsite are mounted on ADLT Square Poles.

Challenges

- Achieve a 5-star Green Star Design rating for Credit 11 (interior) and Credit 26 (exterior)
- Comply with all relevant New Zealand Standards
- Minimise spill light and glare – which was particularly important due to the proximity to Auckland Airport
- Consideration of the native flora and fauna

Solutions

- Cree Lighting OSQ Series & OSQ High Output Series
- Cree Lighting Energy Series
- Cree Lighting XSPW Series
- Venture Lighting VLED Hyskeir
- ADLT Square Pole Series, 6m, 7.6m, 9m with inground footings and above ground crash plinths

Results

- **Significantly enhanced site safety, visibility, and security** ensuring a safer environment for staff and visitors day and night
- **Advanced precision optics** delivering targeted illumination with minimal light spill and glare, supporting compliance with best-practice lighting standards
- **Custom-engineered lighting design** tailored to varied operational zones across the site, maximising performance and consistency
- **Efficiency-by-design approach** achieving required lighting levels with the minimum number of poles and luminaires, reducing installation footprint and whole-of-life operating costs



MĀNAWA BAY

NO PUBLIC ACCESS

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STOP

P ENTRY
P ENTRY



The Development

Manawa Bay was developed by Auckland International Airport Limited as part of a NZ\$200 million investment in the region. Sustainability is at its core with the centre achieving a 5-star Green Star Design rating – the first dedicated shopping centre to receive a Green Star rating for its design.

The 35,000m² building also has New Zealand's largest rooftop solar system at 2.3 megawatts. This solar array offsets approximately 386 tonnes of CO₂ emissions per year and will help Auckland Airport reach their goal of net-zero carbon emissions by the year 2030.

Mānawa Bay has also adopted a zero natural or LPG gas policy, which is expected to eliminate up to 57% of greenhouse gas emissions from its kitchens. In addition, an extensive planting and stormwater management system has been integrated throughout the site, creating an environment where diverse native flora and fauna can thrive.

Mānawa Bay features over 40,000m² of green space, offering open public areas where visitors can relax and take in views of the mangroves and upper Manukau Harbour. The customer car park accommodates 1,400 vehicles and is equipped with smart sensors that display real-time availability across clearly marked zones, ensuring a seamless parking experience. In support of sustainable transport, Mānawa Bay also provides paid charging stations for electric vehicles and complimentary charging for eBikes.

Requirements & Challenges

Situated less than three kilometres from Auckland Airport, the lighting design at Mānawa Bay needed to comply with stringent requirements for obtrusive light. Its proximity to Manukau Harbour also demanded the use of highly durable luminaires, capable of withstanding exposure to salty air and high humidity.

All exterior luminaires feature a 3000K warm-white colour temperature, while perimeter-mounted OSQ fittings were equipped with backlight shields to minimise light spill and reduce disturbance to native lizards and nesting dotterels in the surrounding wetland habitat. Our backlight shields are low profile attachments that do not subtract from the aesthetics of the luminaires. The lower colour temperature, together with compliance to AS/NZS 1158.3.1:2020 (Lighting for roads and public spaces) and AS/NZS 4282:2019 (Control of the Obtrusive Effects of Outdoor Lighting), ensures the installation is dark-sky friendly. All Cree luminaires on site are officially DarkSky Approved (OSQ, OSQ High Output, Energy, XSPW) reinforcing Mānawa Bay's commitment to responsible and sustainable lighting design.



Alongside the environmental considerations, Mānawa Bay required careful attention to a range of technical and practical challenges. Electrical Consulting Services (ECS) was able to use the comprehensive portfolio of exterior lighting solutions offered by ADLT to meet the specific needs of diverse application across the site:

Customer Car Park & Staff Car Park

Designing effective car park lighting requires a careful balance of factors to ensure safety, visibility, and compliance. Optimal illumination for both vehicles and pedestrians, controlled glare, and uniform light distribution across the site are all critical to achieving a safe and comfortable environment.

Compliance with New Zealand Standard AS/NZS 1158.3.1:2020 – which outlines lighting requirements for public outdoor car parks – is vital to ensuring a safe, efficient, and visually comfortable environment. The standard specifies key criteria for illuminance, uniformity, and glare control to achieve best-practice lighting outcomes.

The advanced precision optics of the OSQ and Energy Series luminaires – supported by OSQ backlight shields – delivered exceptional light control with minimum impact on the surrounding environment, while still meeting the strict lighting requirements for accessible carparks, staff parking, and pedestrian crossing areas.

Pathway Connecting the Customer & Staff Carpark

The pathway linking the customer and staff car parks at Mānawa Bay is illuminated with Energy UNO fittings featuring precision optics that provide effective, focused lighting while minimising spill into the surrounding trees and harakeke bushes. Compliance with New Zealand Standard AS/NZS 1158.3.1:2020 was also a key consideration, ensuring the pathway receives optimal illumination levels to support pedestrian safety and comfort.

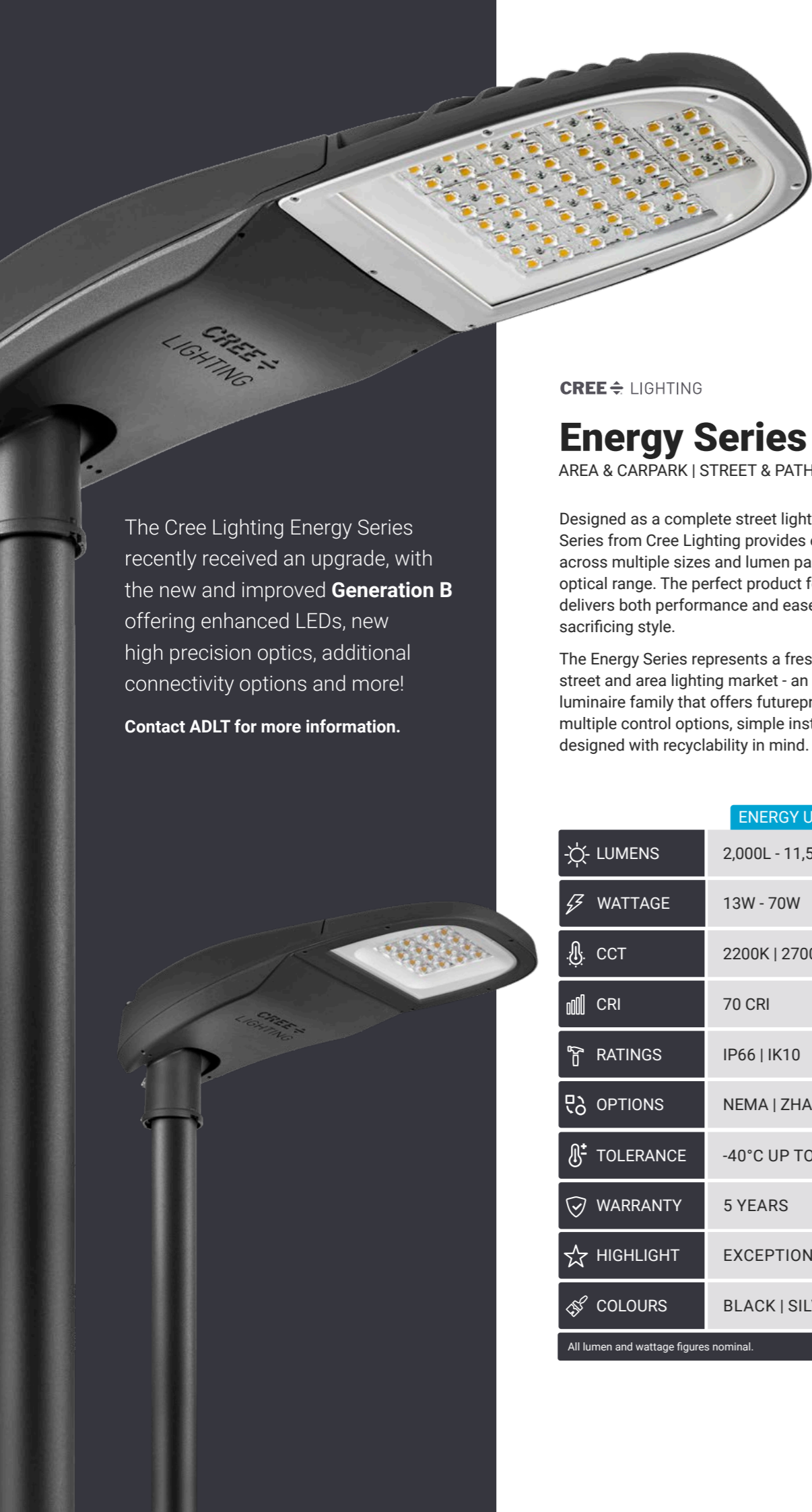
Playground Area

At the rear of Mānawa Bay, the food court opens out to a welcoming alfresco dining area that flows into a playground – a space where families can relax and enjoy the sunshine while children play nearby. This area is illuminated by Cree Lighting's XSPW wall-mounted luminaires, installed along the building's rear façade to provide effective, unobtrusive lighting. Compliance with New Zealand Standard AS/NZS 1158.3.1:2020 was a key consideration to ensure a safe and comfortable environment for customers and staff after dusk.

Shopping Centre Interior

Selected areas of the interior Mānawa Bay is illuminated with VLED Hyskeir fittings from Venture Lighting, delivering high-quality, energy-efficient illumination throughout the space. To achieve a Green Star rating, the interior lighting design was required to meet best-practice illuminance levels appropriate to its use with a maintained illuminance that meets the values recommended in New Zealand Standard AS/NZS 1680.1:2006 (Interior and workplace lighting).

Additional criteria outlined in the Green Star Buildings NZ Submission Guidelines also had to be satisfied, including a colour rendering index (CRI) of 80 or higher, specific glare control parameters, and compliance with both horizontal and vertical illuminance requirements.



The Cree Lighting Energy Series recently received an upgrade, with the new and improved **Generation B** offering enhanced LEDs, new high precision optics, additional connectivity options and more!

Contact ADLT for more information.

CREE LIGHTING

Energy Series

AREA & CARPARK | STREET & PATH

Designed as a complete street lighting system, the Energy Series from Cree Lighting provides extraordinary efficiency across multiple sizes and lumen packages with a complete optical range. The perfect product for urban applications, it delivers both performance and ease of installation without sacrificing style.

The Energy Series represents a fresh approach for the street and area lighting market - an efficient, modular luminaire family that offers futureproof connectivity, multiple control options, simple installation and was designed with recyclability in mind.

	ENERGY UNO	ENERGY TRE
LUMENS	2,000L - 11,500L	24,000L - 33,000L
WATTAGE	13W - 70W	140W - 195W
CCT	2200K 2700K 3000K 4000K	
CRI	70 CRI	
RATINGS	IP66 IK10	
OPTIONS	NEMA ZHAGA	
TOLERANCE	-40°C UP TO +50°C	
WARRANTY	5 YEARS <small>Extended warranty (up to 10 years) available on approved projects.</small>	
HIGHLIGHT	EXCEPTIONAL LIGHT CONTROL	
COLOURS	BLACK SILVER SAPPHIRE GREY	

All lumen and wattage figures nominal.







OSQ Series

AREA & CARPARK | STREET & PATH

The Cree Lighting OSQ Series Area & Flood Light was selected to illuminate the customer car park and building perimeter at Mānawa Bay, blending extreme optical control with modern, clean aesthetics. Built to withstand the site's coastal conditions, the rugged cast aluminium housing features an integral, weather-tight LED driver compartment. Its slim, low-profile design minimises wind load requirements while providing the uniform, quality illumination necessary for a safe retail environment.

- ① Wildlife & DarkSky Approved
- ② Durable Against Coastal Weather
- ③ Extreme Optical Control

LUMENS	8,500L - 31,000L
WATTAGE	103W - 208W
CCT	3000K 4000K 5700K
CRI	70 CRI 80 CRI @3000K
RATINGS	IP66 IK08
OPTIONS	NEMA
TOLERANCE	-40°C UP TO +50°C
WARRANTY	10 YEARS
HIGHLIGHT	NANOOPTIC® PRECISION DELIVERY
COLOURS	BLACK SILVER
All lumen and wattage figures nominal.	

- MOQ may apply for certain variations.
- All lumen and wattage figures nominal.
- Mount must be ordered separately.
- Not all variants available in all models.

The Cree Lighting OSQ Series boasts a well-earned reputation but these particular models are now closer to the end of their life cycle than the beginning. Advanced Lighting Technologies will continue to offer limited quantities for project use until our supplies are exhausted. We recommend considering modern alternatives where possible - contact us for more information.



MĀNĀWA BAY





OSQ High Output Series

AREA & CARPARK | STREET & PATH

The Cree Lighting OSQ High Output (HO) Area & Flood Light changes the standard for high output lighting. With high lumen output, one luminaire can replace multiple metal halide fixtures, resulting in more than 80 percent energy savings at exceptional performance levels. At Mānawa Bay, these luminaires were strategically positioned near pedestrian crossings in the staff car park to provide additional illumination where it was most needed.

While the Mānawa Bay project utilised the warm-white model, the 5000K version features TrueWhite Technology, which renders true-to-life colours with a CRI score of 90 and optical distributions that are optimized for automotive frontlines, large parking lots and high mast applications.

LUMENS	42,000L - 80,000L
WATTAGE	304W – 533W
CCT	3000K 4000K 5000K 5700K
CRI	70 CRI 90 CRI @ 5000K
RATINGS	IP66 IK08
OPTIONS	NEMA, DALI
TOLERANCE	-40°C UP TO +50°C
WARRANTY	10 YEARS
HIGHLIGHT	NANOOPTIC® PRECISION DELIVERY
COLOURS	BLACK SILVER

All lumen and wattage figures nominal.

- MOQ may apply for certain variations.
- All lumen and wattage figures nominal.
- Mount must be ordered separately.
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- ① Up to 80,000 Lumens
- ② Slim, low-profile design
- ③ 10-year limited warranty



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XSPW Series

SECURITY & FLOOD | WALL & CEILING

Featuring a slim, low-profile design, the Cree Lighting XSPW Wall Mount offers durability and efficiency without sacrificing performance. The rugged aluminium housing and mounting box are designed for easy installation, offering through-wired or conduit entry from the top, bottom, sides and rear.

At Mānawa Bay, the XSPW serves as a premier site lighting solution along the building's rear façade. It incorporates exceptional thermal management with high-quality components and Cree Lighting's industry-leading NanoOptic® Precision Delivery Grid system to deliver effective, unobtrusive illumination for the alfresco dining and playground zones.

LUMENS	2,500L - 8,500L
WATTAGE	18W - 66W
CCT	3000K 4000K 5700K
CRI	70 CRI
RATINGS	IP66 IK08
OPTIONS	DALI
TOLERANCE	-40°C UP TO +40°C
WARRANTY	10 YEARS
HIGHLIGHT	DELTAGUARD FINISH
COLOURS	BLACK SILVER

All lumen and wattage figures nominal.

- ① Shadow-free illumination
- ② Rugged lightweight housing
- ③ Easy installation





VLED Hyskeir

HIGHBAY

The VLED Hyskeir Highbay is a high-efficiency, low-maintenance LED luminaire designed to mimic the classic highbay style. With its robust construction and long life, the Hyskeir Highbay is suitable for demanding industrial and commercial applications.

At Mānawa Bay, the Hyskeir Highbay was selected as a key interior lighting solution, illuminating the walkways throughout the building. This versatile LED luminaire features a 120° beam angle, with options for a 90° Polycarbonate Refractor or a 90° Aluminium Reflector.

- ① Low-maintenance
- ② Flicker free
- ③ DALI Dimming as standard

LUMENS	28,000L - 32,000L
WATTAGE	200W
CCT	4000K
CRI	80+ CRI
RATINGS	IP65 IK10*
OPTIONS	DALI
TOLERANCE	-30°C UP TO +50°C
WARRANTY	5 YEARS
HIGHLIGHT	DALI DIMMING & FLICKER FREE
COLOURS	BLACK
<small>*IK10 rating doesn't include reflector Not all variants available in all models All wattage and lumen figures nominal</small>	



Results

Mānawa Bay’s vision is to inspire New Zealanders with the ultimate outlet shopping experience. The luminaires supplied by Advanced Lighting Technologies play an important role in realising this vision – delivering high-quality illumination that enhances both safety and ambience while complementing the site’s modern, sleek aesthetic.

Given the extensive car park area at Mānawa Bay, where both vehicles and pedestrians move throughout the space, safety was a key design priority. Achieving uniform, comfortable lighting was essential. Advanced Lighting Technologies supplied the Cree Lighting OSQ Series and Energy Series to illuminate the customer and staff car parks, respectively. OSQ High Output luminaires were strategically positioned near pedestrian crossings in the staff car park to provide additional illumination where it was most needed.

In line with Electrical Consulting Services’ (ECS) design, Advanced Lighting Technologies was able to provide pole heights that optimised the spacing between fittings. This approach not only enhanced the aesthetics of the site and reduced the likelihood of vehicle collisions but also improved the overall efficiency of the installation. Crash plinths were incorporated below the Square Poles within the customer car park to protect them from impact damage, helping to preserve the system’s long-term integrity. Additionally, the minimal number of poles and fittings helped to reduce both installation and ongoing maintenance costs. Standards that our Square Poles are designed to, that speak to their durability and corrosion resistance are NZTA M26 and NZS 3404:2009 (Steel structures Standard) and they have a 7-year warranty.

The use of Cree Lighting’s NanoOptic® Precision Delivery Technology in the OSQ range, combined with advanced optics in the Energy Series, ensured exceptional light control with minimal obtrusive spill. Backlight shields were also integrated on OSQs near the perimeter to further reduce light trespass and maintain visual comfort for nearby wildlife.

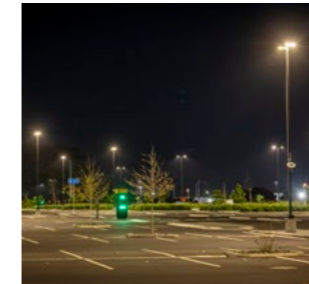
Engineered for durability, the Energy Series features a low-copper die-cast aluminium body with a lead-free powder coating that conforms to the following requirements:

- Adhesion - test complies with ISO 2409
- Salt spray - NSS test complies with ISO 9227
- Accelerated Weathering - UV test complies with ISO 16474-2 (ex ISO 11507)
- Constant humidity - test complies with ISO 6270-1

The die cast, low copper, aluminium alloy housing of the OSQ and XSPW Series is built for long weathering and reliability. They also feature Cree Lighting’s DeltaGuard® protective coating – providing superior resistance to corrosion, UV damage, and harsh environmental conditions such as the salty, humid coastal air at Mānawa Bay. Both luminaires and their finishes are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117. Together, these technologies deliver a robust, efficient, and long-lasting lighting solution built for years of reliable performance.

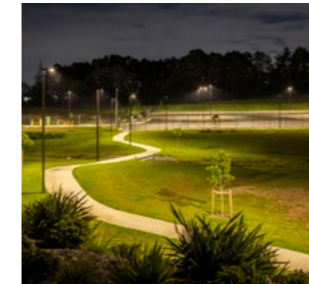
Advanced Lighting Technologies also supplied Cree Lighting’s XSPW wall-mounted luminaires for the back of the building where not as much light was required. Venture Lighting’s VLED Hyskeir high bays were supplied as the main interior lighting solution for Mānawa Bay and illuminate the walkways throughout the building.

Lighting supplied by Advanced Lighting Technologies at Manawa Bay were designed to comply with the light technical parameters recommended by the following New Zealand Standards:



Customer Car Park & Staff Car Park

AS/NZS 1158.3.1:2020 - Lighting for Roads & Public Spaces / Pedestrian Area Lighting
 - Subcategory PC2 - All Access Roads
 - Subcategory PC3 (Outdoor Car Parks)
 - Subcategory PCD (Outdoor Car Parks for People with Disabilities)
 - Subcategory PCX (Pedestrian Crossings)



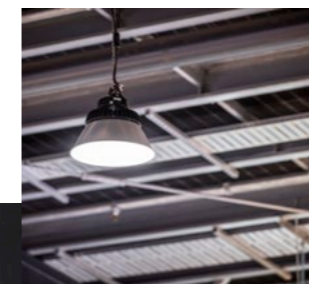
Pathway Connecting the Customer & Staff Carpark

AS/NZS 1158.3.1:2020 - Lighting for Roads & Public Spaces / Pedestrian Area Lighting
 - Subcategory PP3 (Outdoor Car Parks)



Playground Area

AS/NZS 1158.3.1:2020 - Lighting for Roads & Public Spaces / Pedestrian Area Lighting



Shopping Centre Interior

AS/NZS 1680.1:2006 - Interior and workplace lighting





ANAWA BAY

GIVE WAY

D
231
Spaces available
1028



↑ 657
Car Park

→ 587
Car Park
Exit
South Dock

↑ 10.6



Advanced Lighting Technologies are specialists in commercial and industrial lighting. **Whatever the application, whatever the budget - we'll have a solution that fits your needs.**



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