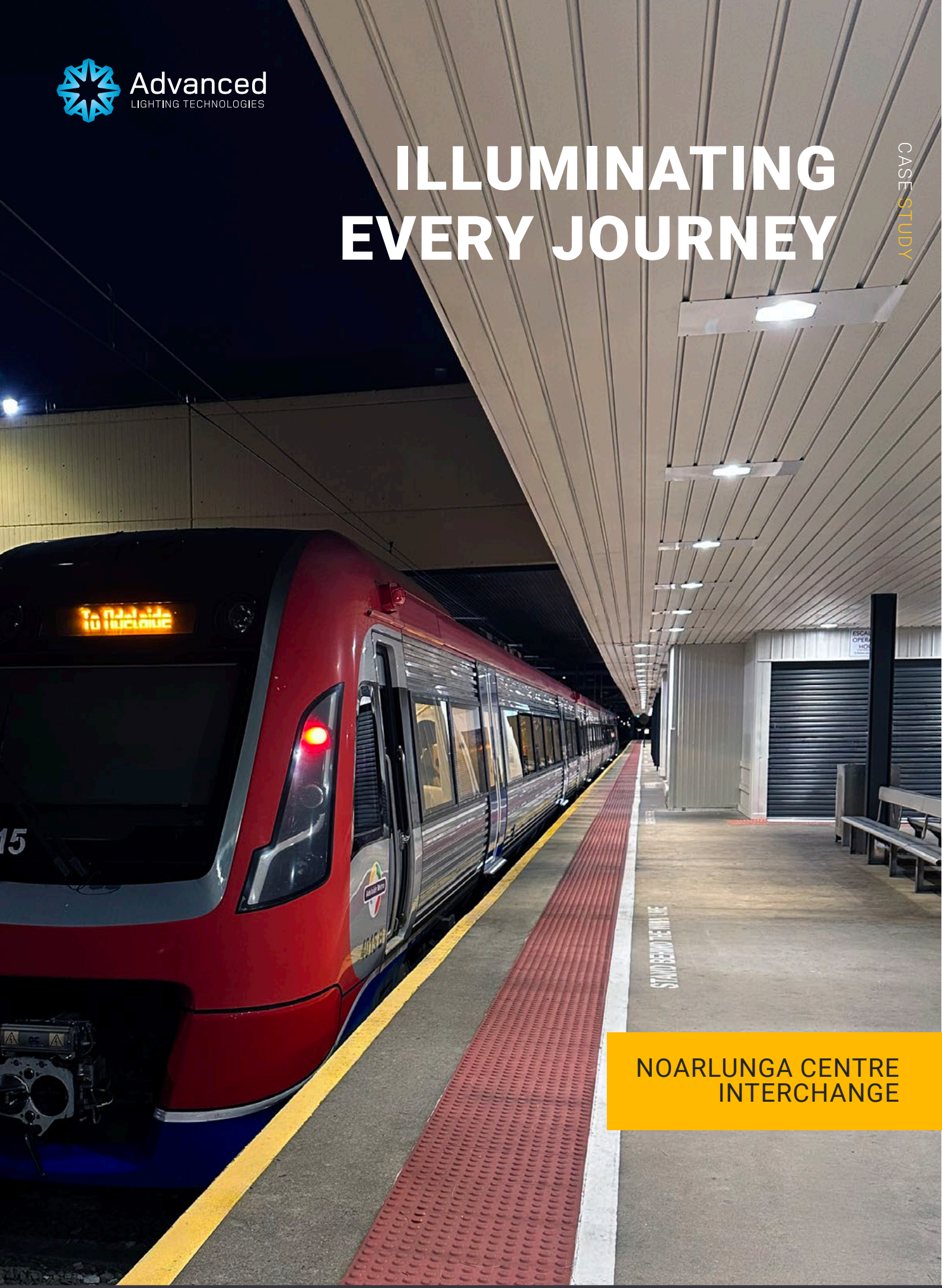
Advanced
LIGHTING TECHNOLOGIES

# ILLUMINATING EVERY JOURNEY

CASE STUDY

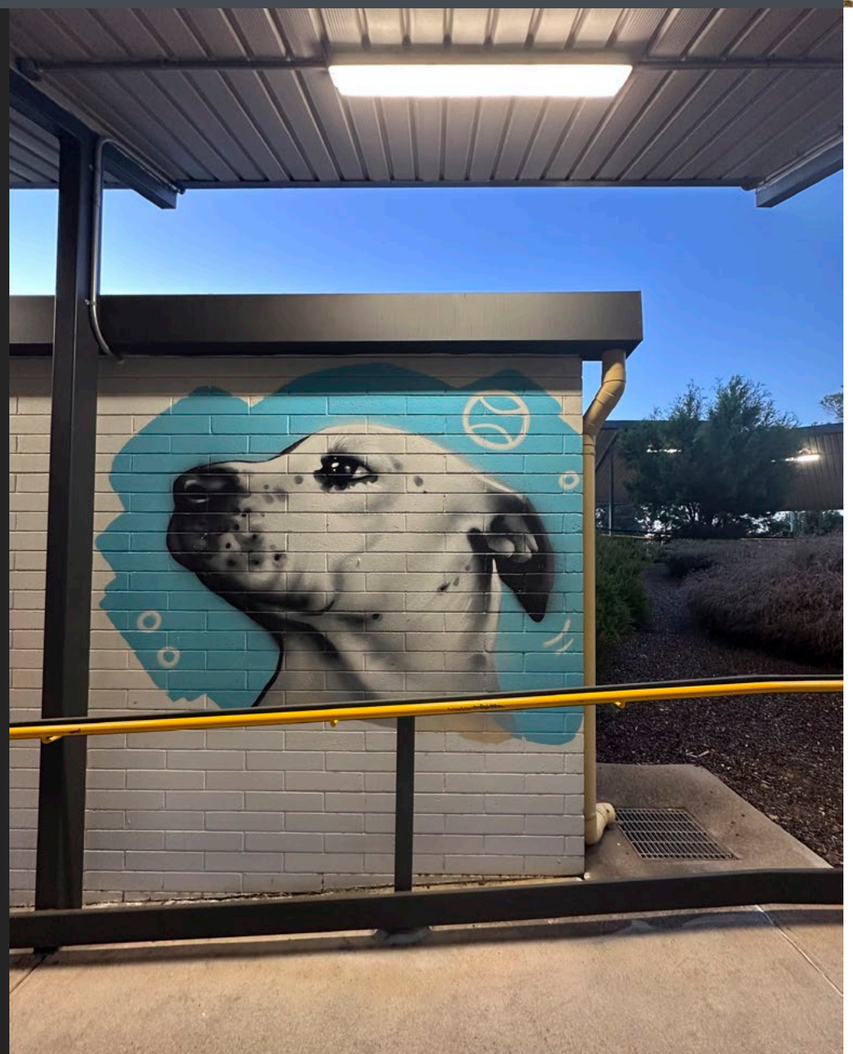



## NOARLUNGA CENTRE INTERCHANGE

# Intermodal illumination

Located in Adelaide's southern suburbs, the Noarlunga Centre Interchange recently underwent a lighting overhaul as part of a larger $2 million amenity and security upgrade.

Advanced Lighting Technologies supplied a complete exterior lighting solution, covering applications like platform lighting, bus stop lighting, ramp and walkway lighting, road lighting and more.



CLIENT

DEPARTMENT FOR INFRASTRUCTURE AND TRANSPORT (DIT)

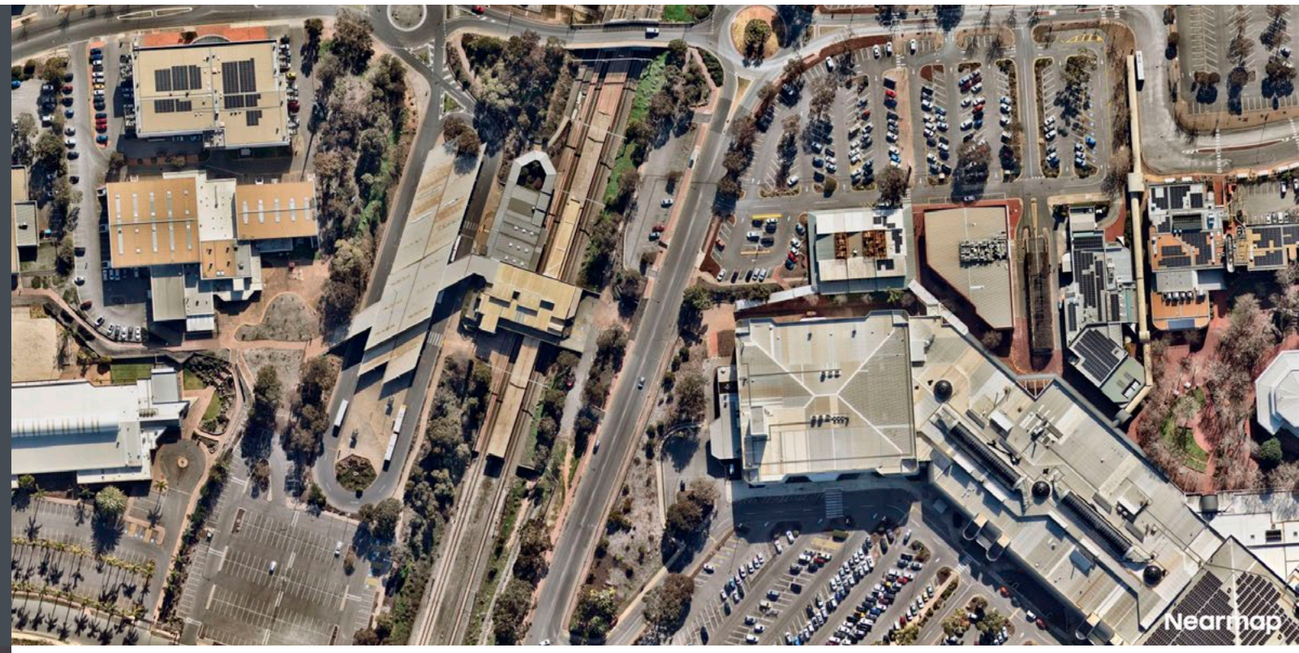
CONTRACTOR

EDC GROUP

LOCATION

NOARLUNGA CENTRE, SOUTH AUSTRALIA

Aerial imagery courtesy of Nearmap




# The Facility

Located about 25 kilometres southwest of Adelaide's CBD, the Noarlunga Centre Interchange encompasses a railway station, a large bus terminal and a commuter park & ride facility.

Situated on the Seaford line, the railway station comprises of three platforms servicing two tracks and offers commuters a direct connection to central Adelaide, while the bus interchange includes eight different zones servicing fifteen bus lines.

Located adjacent to a large shopping centre and a community recreation precinct, the Interchange plays an important role in linking rail and bus services in Adelaide's southern suburbs.

# Requirements & Challenges

Lighting plays a crucial role in the safety and functionality of a transport hub like Noarlunga Centre Interchange. Well-designed lighting enhances visibility for commuters, train and bus drivers and station personnel, reducing the risk of accidents and improving overall safety. Effective lighting can also contribute to a sense of security and comfort for passengers, staff and other visitors.

In 2023, South Australia's Department for Infrastructure and Transport (DIT) invited select lighting suppliers to design and propose a lighting solution upgrade at Noarlunga Centre Interchange that would encompass both the railway station and bus interchange, as well as connecting roads and pedestrian walkways.

Any proposed lighting solution had to utilise existing luminaire installation locations (wall, ceiling and pole mount) while relevant sections had to achieve compliance with DIT's strict lighting design standards - many of which go above and beyond the light technical parameters required by the equivalent or relevant Australian Standards.

The light technical parameters in the undercover areas also had to comply with AS/NZS 1680.2 for safe movement.

Luminaires proposed for use at Noarlunga also had to meet DIT's strict set of criteria regarding their durability, serviceability, expected lifetime, energy efficiency, certification and more.





# The Solution

After a lengthy evaluation process, Advanced Lighting Technologies were chosen and commissioned to supply a complete exterior lighting solution at Noarlunga Centre Interchange.

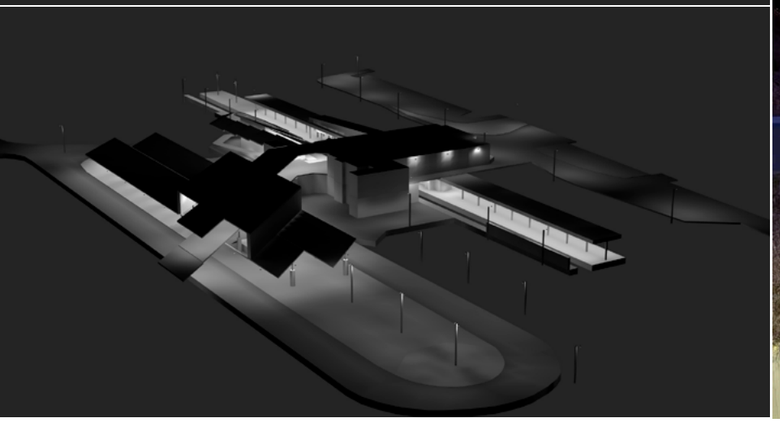
> Our solution included luminaires from some of the world's leading lighting manufacturers, including Cree Lighting and Holophane.

Our team of experts were able to design a solution that met all of DIT's criteria, as well as offer a significant increase in energy efficiency, compared to our nearest competitor's design.

Drawing on our team's technical skill set and driven by a desire to exceed our client's expectations, our comprehensive lighting design also contained far greater detail than others, including a number of intricate 3D renders that offered a clear, visual representation of how the proposed solution would look and perform at Noarlunga.







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.

| | | |
|---|---|---|
| LUMENS | 1,000L - 30,000L | |
| WATTAGE | 8W - 182W | |
| CCT | 3000K \| 4000K | |
| CRI | 70 CRI \| 80 CRI | |
| RATINGS | IP66 \| IK10 | |
| OPTIONS | NEMA \| ZHAGA | |
| TOLERANCE | -40°C UP TO +50°C | |
| WARRANTY | 5 YEARS | Extended warranty (up to 10 years) available on approved projects. |
| HIGHLIGHT | LOW GLARE | |
| COLOURS | BLACK \| SILVER \| SAPPHIRE GREY | |

All lumen and wattage figures nominal.


Noarlunga Centre



## NOW IN **IK10** FOR MAXIMUM IMPACT RESISTANCE

Now engineered for even greater durability! The Noarlunga Centre Interchange project was the catalyst for the **Cree Lighting Dot Series** to be upgraded from IK09 to IK10.



CREE LIGHTING

# Dot Series

RAILWAY PLATFORMS | FLOOD & SECURITY

The Dot Series from Cree Lighting is a compact and flexible lighting solution suitable for endless applications, including both retrofit and new construction. The range features optics and mounting options designed for petrol canopy and soffit lighting (Dot Fuel) and for flood, security and general area lighting (Dot Multi).

Available in up to four lumen packages with a complete range of optics, the Dot Series features diecast aluminium with low copper content and offers excellent thermal performance to maximise reliability. Dot was created as a minimalist, no-excess lighting solution that fully meets the requirements of those specifying it, installing it or passing under it.

A wide range of mounting options, trims and colour temperatures combined with robust design and outstanding efficacy (up to 160 lm/w*) completes the package.

| | |
|---|---|
| LUMENS | 4,000L - 23,600L |
| WATTAGE | 29W – 159W |
| CCT | 2200K \| 2700K \| 3000K \| 4000K \| 5700K |
| CRI | 70 CRI \| 80 CRI |
| RATINGS | IP66 \| IK10 |
| OPTIONS | SENSOR \| DALI \| ZHAGA |
| TOLERANCE | -40°C UP TO +50°C |
| WARRANTY | 5 YEARS — Extended warranty (up to 10 years) available on approved projects. |
| HIGHLIGHT | HIGHLY FLEXIBLE |
| COLOURS | WHITE \| SAPPHIRE GREY |

All lumen and wattage figures nominal



HOLOPHANE

# Denver iD Wall

SECURITY & FLOOD | WALL & CEILING

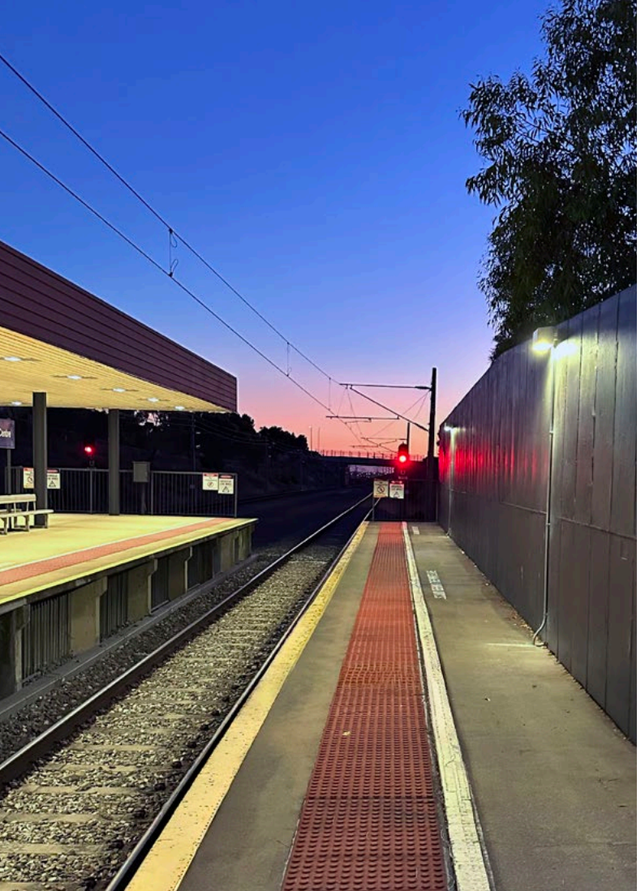
The Holophane Denver iD Wall combines clean styling with unrivalled system performance - perfect for creating the ideal design-inspired landscape. Featuring a patented Transition Zone, the Denver iD Wall offers improved visual comfort; perfect for the unique requirements of pedestrian friendly amenity spaces like Noarlunga Centre Interchange.

Coupled with the latest LED technologies, smart controls integration and class-leading optical performance, the new Denver iD Wall truly combines form with a feature-rich luminaire system.

The Denver iD Family from Holophane consists of Pole, Wall and Bollard luminaires, offering the complete solution for your outdoor lighting needs.

| | |
|---|---|
| LUMENS | 700L - 4,000L |
| CCT | 2700K \| 3000K \| 4000K |
| CRI | > 70 CRI |
| RATINGS | IP65 \| IK10 |
| OPTIONS | SENSOR \| DALI \| ZHAGA |
| TOLERANCE | -20°C UP TO +45°C |
| WARRANTY | 5 Years |
| HIGHLIGHT | DARK SKY INTERNATIONAL APPROVED* |
| COLOURS | SMOOTH WHITE<br>SMOOTH GRAPHITE<br>SMOOTH GREY<br>TEXTURED BLACK<br>METALLIC SILVER |

All lumen and wattage figures nominal. | *Optional / Model Dependant.



Advanced LIGHTING TECHNOLOGIES

# DuraRail LED

RAILWAY PLATFORMS | PEDESTRIAN WALKWAYS

The DuraRail LED batten from Advanced Lighting Technologies is perfect for tough environments where durability and performance are key. Boasting an impact resistance rating of IK10, the DuraRail LED delivers up to 8,200 lumens at an economical and affordable price.

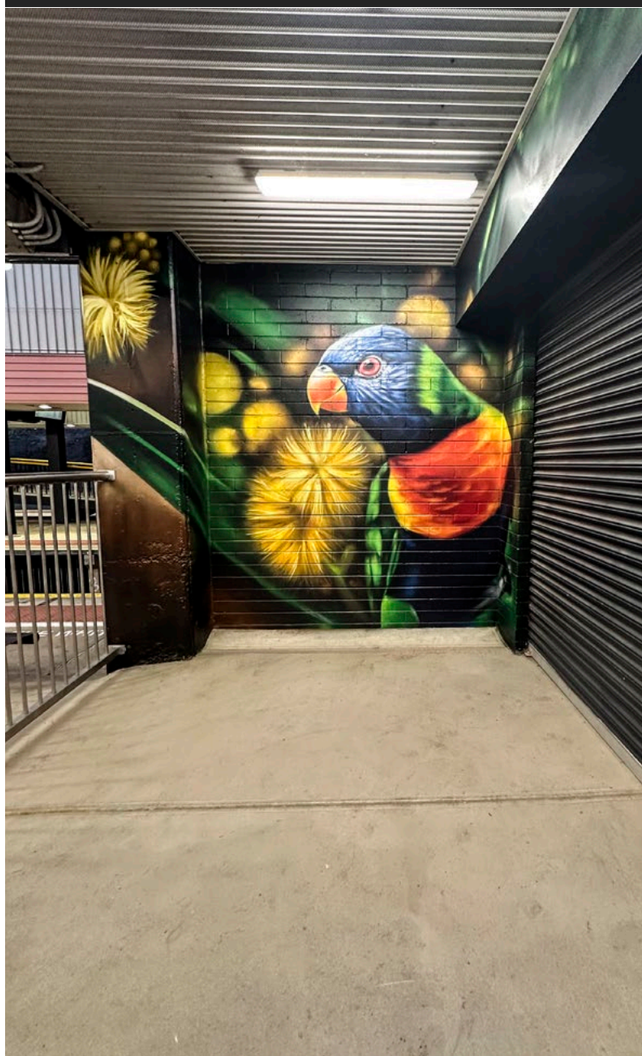
Built with durability and reliability in mind, the DuraRail LED was designed to withstand the rigours of tough applications like railway platforms, pedestrian walkways and other challenging areas of the urban environment.

Whether replacing outdated fluorescent battens or installing as new construction, the DuraRail LED is the perfect choice for installation in harsh conditions.

| | |
|---|---|
| LUMENS | 4,400L - 8,200L |
| WATTAGE | 35W – 65W |
| CCT | 4000K |
| CRI | > 80 CRI |
| OPTICS | 120° |
| RATINGS | IP66 \| IK10 |
| OPTIONS | SENSOR \| DALI \| EMERGENCY (MOQ) |
| TOLERANCE | -20°C UP TO +50°C |
| WARRANTY | 5 YEARS |
| HIGHLIGHT | IMPACT RESISTANT |
| COLOURS | WHITE |

All lumen and wattage figures nominal.





# The Result

Upgrading the lighting at Noarlunga Centre Interchange was a complex task. Factors like compliance, glare, safety, robustness, suitability and visibility all needed to be carefully considered during each phase of the project - including design, installation and evaluation.

Advanced Lighting Technologies' solution has delivered improvements in performance, efficiency and user experience at Noarlunga Centre Interchange. Our selection of modern luminaires equipped with precise optical control - combined with intelligent lighting design - has resulted in the upgraded lighting at Noarlunga achieving uniform illumination across platforms, concourses, ramps, walkways and roadways. The upgrade has enhanced visibility and safety for passengers and station staff, while also ensuring train and bus drivers can clearly see their surroundings when arriving and departing.

The **Cree Lighting Energy Series** was supplied in all three variants - Uno, Due and Tre - at Noarlunga. A mix of optics, wattages and mounting configurations were used to ensure light was directed exactly where needed, while utilising only existing luminaire locations and poles.

Custom-built rectangular panels were designed to integrate the **Cree Lighting Dot Series** into holes left by the larger outdated fluorescent luminaires they replaced along the ramps and platforms, while Advanced Lighting Technologies' versatile surface mount housing for the Dot Series was installed along covered concourse and bus interchange areas.

Our **DuraRail LED** battens provide an efficient and cost-effective option for illuminating stairways and low ceiling walkways, while **Holophane's Denver iD Wall** offers a robust yet low-profile wall mount solution to safely light platforms and pathways with adjacent walls.

Compliance with the light technical parameters listed in DIT's Standard, as well as relevant Australian Standards was achieved where required. The result is well-balanced lighting that minimises glare, eliminates dark spots and ensures reliable and safe transport operations can occur in all types of weather and conditions.

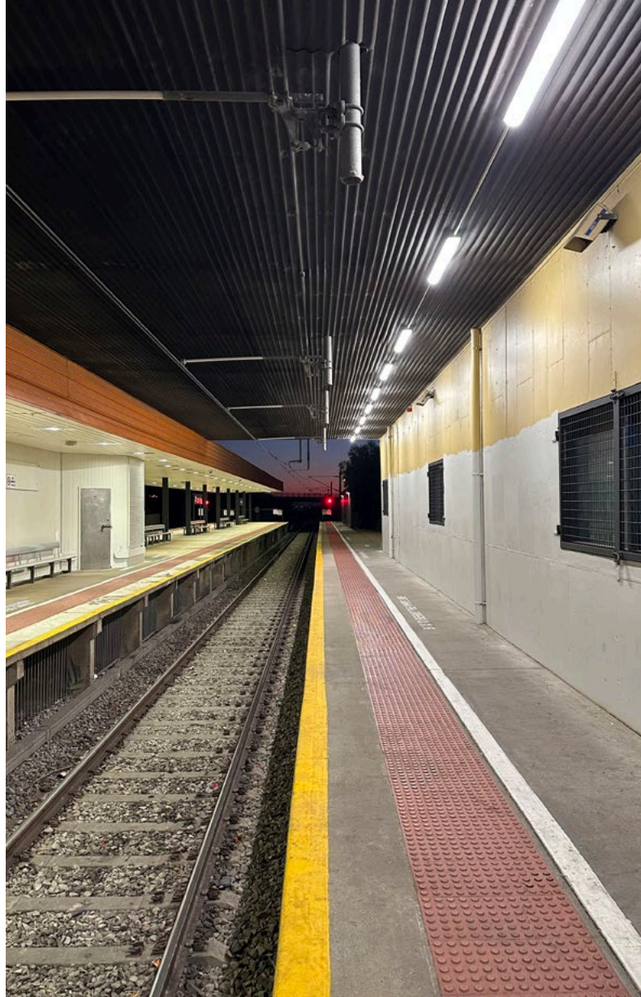
Local artists were also commissioned to paint murals in and around Noarlunga Centre Interchange, helping to create vibrant, welcoming environments that reflect the area's unique identity, culture and history.

Installing luminaires with high CRI levels like the **Dot Series** and **DuraRail LED** ensures the artworks are illuminated with accurate colour rendering, showcasing their true colour tones and details, even at night or in lowlight conditions.

Overall, the lighting and other functional and aesthetic improvements have helped further enhance Noarlunga Centre Interchange's reputation as a modern, safe and efficient transport hub for commuters in Adelaide's south, and Advanced Lighting Technologies are extremely proud to have contributed to the project.

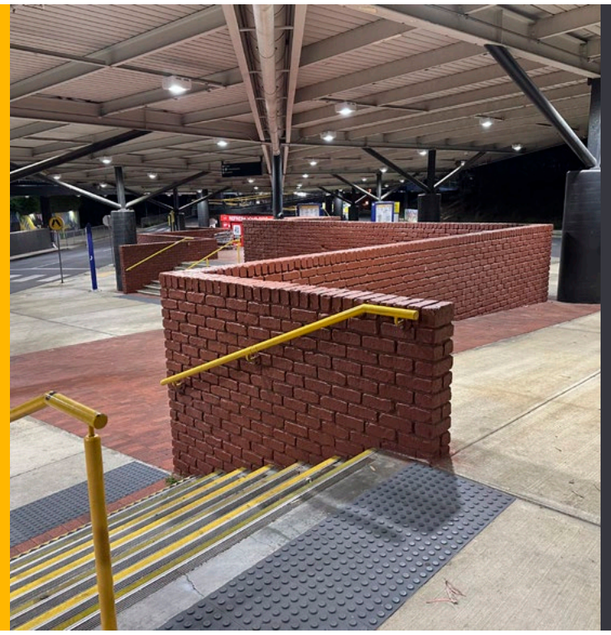
## MEETING EVERY TECHNICAL BENCHMARK

**The lighting at Noarlunga Centre Interchange was designed achieve the light technical parameters recommended by the South Australian Department for Infrastructure and Transport's own Standards, including a recommended minimum horizontal illuminance of 150 lux along the yellow lines near platform edges.**



## 30%
## REDUCTION IN ENERGY

**When compared to our nearest competitor's proposed design, Advanced Lighting Technologies' solution offered a thirty percent reduction in energy usage, translating into long-term operational savings and improved sustainability outcomes for the Department for Infrastructure and Transport.**



**Advanced Lighting Technologies** has a wealth of railway lighting experience. We've provided energy efficient lighting solutions to some of Australia's largest railway operators and offer a wide range of lighting solutions perfectly suited for rail applications.





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

Advanced
LIGHTING TECHNOLOGIES

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