



Advanced
LIGHTING TECHNOLOGIES

ADLT.COM.AU

ABOVE THE COMPETITION



BASKETBALL COURT LIGHTING GUIDE

LIGHTING UP THE COURT

Basketball in Australia is enjoying a recent surge in popularity, with superstar athletes driving renewed interest in elite competitions both here and overseas. At the local level, participation rates in organised basketball have always been strong, with thousands of players from all ages and walks of life taking to courts around the country each day.

To help ensure the safety of participants, supporters and officials, stadium operators should provide lighting that complies with the recommendations listed in the relevant Australian Standards.

Advanced Lighting Technologies Can Help. We've been a leader in the lighting market for over 25 years, and have proudly supplied reliable, energy-efficient lighting solutions to dozens of basketball stadiums, school gymnasiums and multi-purpose indoor sports facilities around Australia.

HIGH QUALITY HIGH PERFORMANCE LOW GLARE

Our qualified industry experts can design a customised lighting solution to suit any indoor stadium, ensuring full compliance with AS 2560.2.2-1986. We offer a range of lighting products to suit any budget, sourced from some of the world's leading lighting manufacturers



DESIGN EXCELLENCE

Good basketball lighting begins with good lighting design. These are the main factors to consider during the design process.

Light Quantity

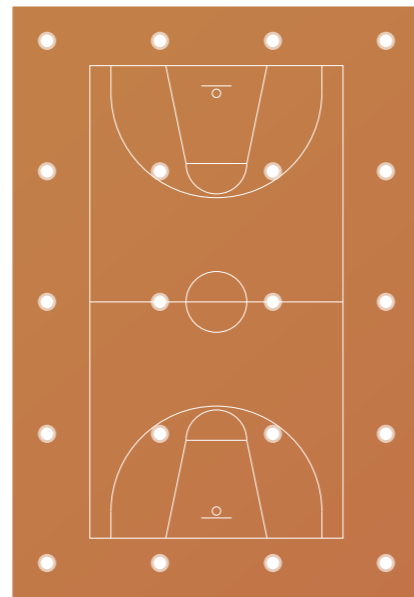
A fast-moving, dynamic sport like basketball requires quick thinking and accurate decisions from participants and officials alike.

There must be sufficient light for players, referees, scorers and spectators to see everything happening in and around the playing area.

The quantity of light is expressed as an average lux level and is usually determined by the level of basketball to be played.

General guidelines recommend lower lighting levels for social play and training, medium levels for club standard and higher levels for international or professional basketball.

Australian Standard Recommendations



TYPICAL SINGLE COURT LIGHTING DESIGN
COMPETITION STANDARD
5 x 4 LAYOUT - TOTAL OF 20 LUMINAIRES



Light Quality

The quality of light is evaluated by the degree of light uniformity and lack of glare.

Optimum uniformity is achieved by using luminaires that provide appropriate light distribution and are positioned strategically to evenly illuminate the playing area, avoiding lines of site where possible (for example, directly above each basket or the centre circle).

Light loss factor

Lighting proposals should also take into account that the light output of a luminaire will gradually decline over time. Qualified lighting designers are well-versed at including these light loss factors into their designs, and will be able to provide an estimate for how long the lighting solution is expected to remain compliant for.

Safety

A lighting solution must provide enough light to offer a clear view of the playing area and its immediate surrounds. This can include the court itself, team benches, scoring facilities, seating and more.

There also must be sufficient light to enable players, officials and spectators to safely enter and exit the stadium, keeping in mind obstacles like stairs, turnstiles, barriers and other crowd control devices.



Save Energy & Maintenance Costs

When compared to traditional lighting sources like HID, LED luminaires consume far less energy and require almost zero maintenance.

In a recent retrofit project, we replaced existing HID high-bays with LED. The uniformity and light levels achieved exceeded the requirements, reducing the amount of fittings per court by half. The project saw a massive reduction in energy consumption of **75%**.

Comfort

Glare can disrupt the visual comfort of those participating, officiating or watching a basketball game, potentially affecting their ability to see the play clearly and make accurate decisions. However, there are a few ways to minimise or reduce any instances of glare.

Using a luminaire with a diffuser or specially-designed reflector can create a shielding angle, reducing glare significantly. The positioning of luminaires above and

around the court is also important. Where possible, care should be taken to ensure luminaires aren't mounted directly above areas on the court where players and officials spend the most time looking up (around each basket, or the centre circle for example).

Indirect glare (light reflecting off a glossy surface within the stadium) can be difficult to predict and manage, however consideration should be given to the different viewing angles spectators may experience when sitting in tiered, stadium-style seating (if applicable).

VENTURE LIGHTING
VLED HIGH BAY

Venture Lighting's VLED high-bay offers a high-efficiency, low-maintenance LED luminaire for those on a budget, perfectly suited for basketball and other indoor sports.

50,000 HOUR LIFETIME

200 WATT (100 & 150 WATT ALSO AVAILABLE)

AVAILABLE IN 4000K & 5000K COLOUR TEMPERATURES

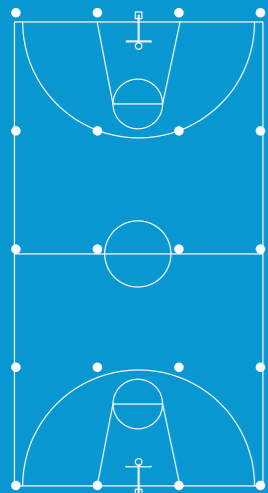
5 YEAR MANUFACTURER'S WARRANTY



TYPICAL SINGLE COURT DESIGN

- CREE CXB - 233W
- MOUNTING HEIGHT: 8M
- AVERAGE OF 598 LUX
- UNIFORMITY: 0.78
- 5 x 4 LAYOUT
- TOTAL OF 20 LUMINAIRES
- COMPLIES WITH LIGHT LEVELS STIPULATED IN AS 2560.2.2-1986
- SIMILAR RESULTS ACHIEVABLE USING VLED HIGHBAY

VLED/CXB DESIGN



CREE LIGHTING

CXB SERIES HIGH BAY

Cree's CXB Series LED high-bay matches exceptional performance with an extended lifetime in a compact, lightweight luminaire. The CXB's aluminium reflector provides an excellent shielding angle, reducing glare and minimising distraction to players, officials and spectators alike.

100,000 HOUR LIFETIME

233 WATT (155 WATT ALSO AVAILABLE)

AVAILABLE IN 4000K & 5000K COLOUR TEMPERATURES

INDUSTRY-LEADING 10 YEAR MANUFACTURER'S WARRANTY



Advanced Lighting Technologies is the **sole authorised distributor** of Cree lighting products in Australia.

CREE CXB-A SERIES PICTURED



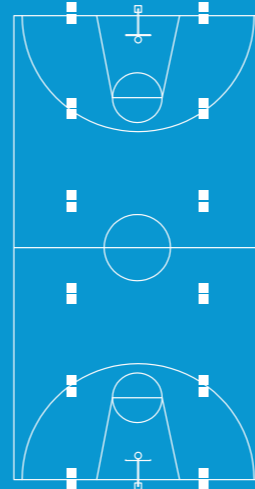
PRACHT LIGHTING
QUADRONIUS HIGH BAY

The PRACHT Quadronius LED high-bay combines specification-grade components with precision German engineering to create a flexible yet robust luminaire, specifically designed to withstand impact from basketballs.

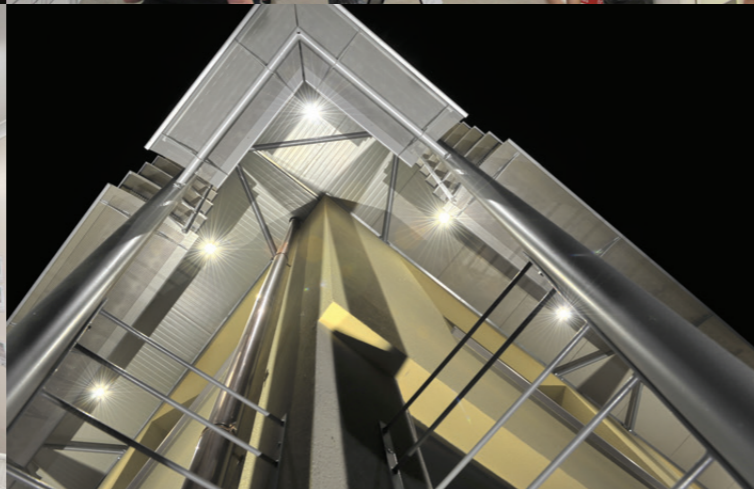
- 100,000 HOUR LIFETIME
- 143 WATT (SINGLE OR DOUBLE MODULE)
- AVAILABLE IN 4000K COLOUR TEMPERATURE
- 5 YEAR MANUFACTURER'S WARRANTY

TYPICAL SINGLE COURT DESIGN
 PRACHT QUADRONIUS 2 x 143W
 MOUNTING HEIGHT: 8M
 AVERAGE OF 528 LUX
 UNIFORMITY: 0.70
 6 x 2 LAYOUT
 TOTAL OF 12 LUMINAIRES
 COMPLIES WITH LIGHT LEVELS
 STIPULATED IN AS 2560.2.2-1986

QUADRONIUS DESIGN



USES 40% FEWER FITTINGS



THE COMPLETE LIGHTING SOLUTION ON & OFF THE COURT

Advanced Lighting Technologies offers more than just basketball court lighting – we can supply a complete lighting solution for stadium operators.

- CAR PARK LIGHTING
- STREET & ROADWAY LIGHTING
- PATHWAY & ENTRANCE LIGHTING
- OFFICE LIGHTING
- CANTEEN/CAFÉ LIGHTING
- COOL ROOM LIGHTING
- BATHROOM/CHANGE ROOM LIGHTING
- OUTDOOR SPORTS LIGHTING

 **Advanced** LIGHTING TECHNOLOGIES | VISIT ADLT.COM.AU TO VIEW OUR EXTENSIVE PRODUCT RANGE



\$23M REDEVELOPMENT
UPTO 4,000 SPECTATORS
2,700M²

CASE STUDY

BENDIGO STADIUM'S WORLD CLASS REDEVELOPMENT

After recently undergoing a \$23m redevelopment, Bendigo Stadium has become the envy of regional Victoria.

Bendigo Stadium

Capable of holding up to 4,000 spectators, the venue caters to local and international sporting and entertainment events.

Advanced Lighting Technologies supplied the high-bay LED lighting featured in this world-class facility.

Retractable stadium seating allows the space to be configured for a variety of sports and events. When fully retracted, 3 separate multi-purpose courts can be used at the one time. For major events, the seating can be lowered to create a single show arena that accommodates up to 4,000 patrons.

CHALLENGES

FLEXIBILITY TO MATCH DYNAMIC VENUE

DIFFERING LIGHT LEVELS DEPENDING ON STANDARD OF PLAY

GENERATE MINIMAL GLARE

BENEFITS

INSTANT ON/OFF

UNIFORM ILLUMINATION

ALMOST ZERO MAINTENANCE

EXTENDED LIFETIME

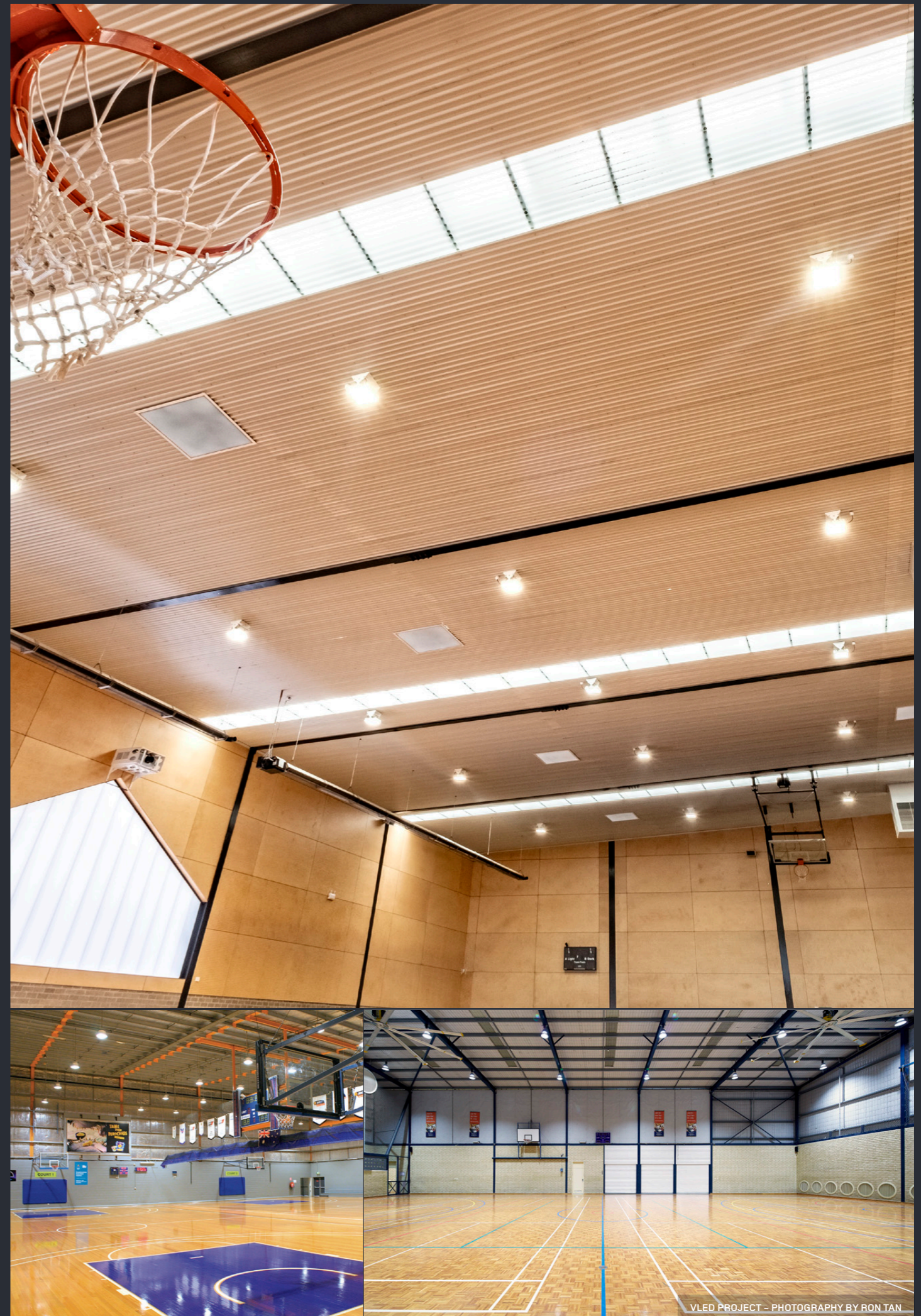


Solution

A dynamic, modern venue like Bendigo Stadium requires an equally-capable lighting solution. This has been achieved with the **Cree CXB Series LED High-bay**. The CXB's exceptional uniformity and colour rendering means spectators won't miss a moment of the action when cheering on their team, while the glare-reducing reflectors means players and officials won't be distracted during that crucial jump-ball or free throw.

Excellent lighting starts with excellent lighting design, and clever spacing of the luminaires has resulted in uniform illumination across not only the playing area, but the sidelines and scorer's tables too, reducing the risk of an incorrect call or a controversial refereeing decision affecting the outcome of a game.

SEE THE CASE STUDY IN FULL @ ADLT.COM.AU





Advanced
LIGHTING TECHNOLOGIES

Advanced Lighting Technologies are striving to revolutionise the lighting industry by delivering high-quality, sustainable LED lighting that is affordable and available to all. We're dedicated to developing new LED lighting solutions that improve our clients' infrastructure and reduce energy costs.

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