



# Football Lighting Policy & Requirements

## Season 2017

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The Football Lighting Policy & Requirements (the Policy) sets out the mandatory requirements for competition lighting at football (soccer) venues used by Clubs competing in Football Federation Victoria (FFV) competitions.

The primary reason for the requirements is to ensure that Clubs are compliant with relevant standards and applicable Occupational Health and Safety requirements. Other reasons include enabling higher quality play, providing a satisfactory experience for spectators and ensuring that football venues are “good neighbours” in residential areas.

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### **Mandatory Requirements for Competition Lighting**

These requirements apply to Matches between FFV clubs, including friendlies and practice matches. These requirements may also apply to Matches played in Victoria against non-Victorian or non-FFV clubs.

They form Schedule 2 of the Rules of Competition for all divisions.

This document:

- explains the background to the requirements;
- specifies the standards to be met for each level of competition; and
- details the process which must be followed to gain approval for evening matches;
- details the conditions under which approval for night fixtured matches may be retained by clubs.

## 1 Background

The Federation Internationale de Football Association (FIFA) has produced technical recommendations and requirements for televised and non-televised Football however it has not mandated specific lighting standards for competitions of the type managed by FFV.

Football Federation Australia (FFA) has likewise not mandated specific lighting standards for competitions of the type managed by FFV.

FFV has therefore adopted the Australian Standard *AS2560.2.3-2007, Sports Lighting - Lighting for All Football Codes (Australian Standard)* as the minimum for lighting levels and lighting infrastructure requirements for FFV managed competitions.

The Australian Standard applies to football (soccer) as well as other codes played in Australia. The Australian Standard provides different minimum requirements for competitions and training.

While FFV supports Clubs wishing to expand their audiences or provide better opportunities through evening matches, Clubs must be aware that compliance with these requirements is a precondition of FFV's approval of night fixturing.

## 2 Requirements

The requirements detailed below are enforceable under FFV's Rules of Competition for each league administered by FFV and must be read in conjunction with the Rules of Competition as published from time to time. The requirements detailed below are mandatory for Matches to be played under lights.

These standards are the MINIMUM required for FFV competitions.

FFV encourages achievement of higher lighting levels where practicable.

The Australian Standard identifies several levels of competition and specifies lighting standards for each. The levels are:

- Amateur;
- Semi-Professional; and,
- Professional.

These levels align with FFV's Rules of Competition in which only two leagues may employ contracted players and are deemed "semi-professional" for our purposes under the Australian Standard. In Victoria, these leagues are the National Premier League (NPL) and NPL2. Some matches may require Professional lighting either for television coverage or to host A-League teams or other professional teams.

Therefore, based on the Australian Standard, the following table details the minimum requirements for competition lighting, including both minimum lux levels and minimum horizontal uniformities.

COMPETITION		MINIMUM LUX†	MINIMUM HORIZONTAL UNIFORMITIES	
			U <sub>1</sub>	U <sub>2</sub>
<b>PROFESSIONAL*</b>	Competition	500	0.70	0.50
	Match Practice Training	200	0.60	0.40
<b>SEMI-PROFESSIONAL</b> (NPL and NPL2)	Competition	200	0.60	0.40
	Match Practice Training	100	0.50	0.30
<b>AMATEUR</b> (All other competitions)	Competition	100	0.50	0.30
	Match Practice Training	100	0.50	0.30

† The minimum Lux refers to the maintained average as actually measured in field audits, not the levels provided for in design documents.

\* Certain night fixtures may require professional standard lighting. These may include some televised matches, and FFA Cup finals. In all cases, FFV will notify a Club if the minimum lighting requirements are above what its nominated home ground can accommodate.

NB. The maximum glare rating for all competitions is 50.

To avoid doubt, professional training lighting requirements do not apply to NPL and NPL2.

Lighting installations shall be designed with minimum obtrusive light as per the Australian Standard to ensure that no disturbance or discomfort is caused to neighbouring properties and residents, or spectators.

Stakeholders must consider whether the following may cause disturbance or discomfort and address these issues as soon as practicable.

- Light falling on vertical surfaces or entering a property via windows etc,
- The brightness or intensity of the installation from specific observer positions looking toward the installation,
- The light emitted upward (above horizontal) from each floodlight. This effect is often referred to as “sky glow,”

### 3 Process

Where a Club wishes to schedule Matches at times requiring lighting, the Club must ensure that it has certified lighting system in line with the Australian Standard.

Certification is based on an audit of the lighting system by a suitable consultant.

The Club or ground manager must pay the cost of the audit.

The lighting consultant must be confirmed as suitable to FFV in advance of the audit being conducted. Suitability is based on the qualifications and experience of the consultant in floodlighting for sports purposes, especially football. Suitable lighting consultants will include but are not limited to Members of the Illuminating Engineering Society of Australia and New Zealand Limited (IES - The Lighting Society).

As part of the audit, the lighting consultant must:

- undertake a review of the installed equipment to assess its characteristics and current potential for compliance with the Australian Standard;
- make such calculations as are necessary to assess compliance with the required Glare Rating;
- undertake an on-field audit using appropriate equipment measuring in accordance with Clause 6.3 of the Australian Standard and assess compliance with the lux levels and their uniformity – noting that for this purpose of Certification:
  - the tests must cover the entire field of play within the marked lines – this area is referred to as the Principal Playing Area<sup>1</sup> (tests across half field only are not acceptable);
- identify any issues of concern regarding the uniformity of vertical illuminance affecting illumination of the ball on medium and high trajectory paths;
- identify any issues of concern relating to the lighting system's reliability, including a check of the switchboard/lighting control systems to confirm that they are able to be fully secured and are in good working order ; and
- report to FFV on compliance with the Australian Standard or otherwise and any other matters affecting the performance and reliability of the system.

The lighting consultant's report to FFV must include details of the installation, measurements obtained in the on-field audit and the calculation of maintained average lux level and uniformities. This shall include comments on uniformity of vertical illuminance and glare in relation to the existing pole heights, luminaire aiming and total system reliability.

FFV will provide a prescribed form (**Appendix 1**) for the lighting consultant to complete which will provide space for the required information. The test readings must be attached to this form. The form must be completed and signed by the lighting consultant.

Certification is subject to satisfactory compliance with the Australian Standard and acceptable reliability.

Once a signed Certification by an approved lighting consultant is submitted to FFV with all information on the form and with the required attachments, FFV will check the Certification for completeness and accuracy. If FFV is satisfied the information and lighting performance meet FFV's requirements, FFV will register a venue as compliant for either semi-professional or amateur level matches as appropriate. FFV reserves the right to seek additional information or testing from the Club or lighting consultant, to be provided at the Club's cost.

Certification will be accepted by FFV for a period of two years or as otherwise determined by FFV, after which another audit must be undertaken and Certification provided if the Club wishes to continue to hold Matches at times requiring lighting.

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<sup>1</sup> Clause 3.2 of the Australian Standard AS2560.2.3-2007 (2.3 Lighting for Football) defines the Principal playing area (PPA) as "All portions of the playing surface within the boundary lines...but excluding the areas within the goal nets in the case of soccer."

FFV will not approve fixtures that require lighting without the Certification and subsequent FFV registration of the venue.

#### 4 Ongoing compliance

The Club must ensure that the Australian Standard is always met for night Matches.

Where a Club becomes aware that lighting for a Match is not likely to meet the Australian Standard it must immediately notify FFV in writing of that fact, whereby FFV will arrange a change of fixture.

Where a referee has made a report in relation to the adequacy of the lighting at a venue or FFV has concerns that a venue may not currently meet the Australian Standard, FFV may engage a suitable lighting consultant to undertake a field audit to test compliance as detailed above. If the lighting is found to meet the Australian Standard FFV will bear the cost of the audit.

If the lighting is not found to meet the Australian Standard, the Club is responsible for the costs of the audit and FFV approval for fixtures requiring lighting at the venue will be removed until the lighting is maintained, repaired or modified to comply with the Australian Standard.

If a Match is unable to commence, halted temporarily or abandoned due to the failure of the lighting to meet the Australian Standard or failure to function at all during a Match (**Lighting Failure**), the Club must provide evidence to FFV as to the causes of such failure.

If the Lighting Failure was due to circumstances beyond the control of the Club, including network system failure, weather, accidental damage or offsite equipment failure or any other extraordinary circumstances accepted by FFV, no penalty will be imposed and subject to FFV being satisfied that the lighting for the Club's subsequent night fixtures will meet the Australian Standard, those fixtures will remain as scheduled.

If the Lighting Failure was due to any other reason, including deliberate interference:

- (a) the Club may be penalised subject to FFV's discretion; and,
- (b) if the Match is required to be rescheduled it will be scheduled at the home ground of the opposition team on a date to be set by FFV; and,
- (c) the Club must pay for a further audit in accordance with the process detailed in section 3 above; and
- (d) the Club will not be permitted to hold night Matches at the venue until an audit demonstrates compliance with the Australian Standard.

If a Lighting Failure occurs on a second, third or subsequent occasion within two concurrent seasons for any reason, FFV in its sole discretion may not accept the relevant venue for further night fixtures, except on such conditions that FFV shall determine. Notwithstanding this, a venue subject to the above may be disqualified from hosting night fixtures for such a period as determined by FFV.

# APPENDIX 1 – 2017 Lighting Audit Report Form

## TO BE COMPLETED BY QUALIFIED LIGHTING CONSULTANT AND SENT TO FFV WITH READINGS

The audit on which this report is based has been conducted to ascertain compliance with Football Federation Victoria's *Competition Lighting Policy and Requirements 2017* and Australian Standard AS2560.2.3-2007.

<b>Report PREPARED by (Lighting Consultant Name and Company)</b>			
<b>Contact telephone</b>			
<b>Contact e-mail</b>			
<b>Date of Audit Inspection</b>		<b>Date of Report</b>	

<b>Venue</b>			
<b>Address</b>			
<b>Pitch Name or Number</b>			

<b>Report commissioned by (club/Council)</b>			
<b>Contact Person at Club/Council</b>			
<b>Contact telephone</b>			

### Details of the Test Equipment

Equipment Used (make and model)		Date of most recent calibration	
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**A copy of the most recent calibration certificate MUST be attached**

<b>Lines Marked</b>	Yes No (circle)		
<b>Field Dimensions</b> (in metres, line to line)	Length	Width	

*Note: lines must be marked and goals in place for the audit to take place*

### Details of the Lighting System **Sketch to be provided showing approximate locations**

Number of poles/masts		Height of masts	
Location (circle)	Side / corners	Brand of floodlight	
Type of floodlight		Lamp Wattage	
Total lamps		Lamps operating	

### **Illuminance, Uniformity and Glare**

**A copy of the recorded light meter readings across the ground MUST be attached**

<b>Illuminance</b>	
Measured <i>horizontal</i> illuminance level (average lux at 0.00 metres)	
If this system has recently been installed or upgraded apply 80% factor to assess maintained value.	

<b>Uniformity</b>			
Minimum		Maximum	
U1 (Min:Ave)		U2 (Min:Max)	
<b>Glare</b>			
Insert Comment on compliance with Australian Standard:			
<b>Vertical Illuminance</b>			
Comment on the uniformity of vertical illuminance affecting illumination of the ball on medium and high trajectory paths and perception of the ball by players:			
Insert Comment:			

**System Reliability**

<p>Comment on whether the lighting system is sufficiently reliable to enable Matches to be scheduled with strong confidence there will not be disruption to the lighting. These comments relate to a visual inspection of the on-site lighting infrastructure and review of plans if available, not detailed testing. Specifically the switchboard should be checked for any apparent problems – eg able to be securely locked, loose switches etc. Similarly the poles should be checked for any apparent problems which could lead to a lack of reliability in the system (eg loose covers).</p>			
<b>Switchboard visually examined</b>	Yes No (circle)	<b>Poles visually examined</b>	Yes No (circle)
Insert Comment:			

**Summary Comments**

*Include any comments on the system which you consider the governing body FFV should be aware of in relation to this system.*

*Please include any remediation required to enable the system to meet the required standards.*

Insert Comment:

**Certification**

I declare that:

1. I have inspected the lighting at the above named venue in accordance with the Australian Standard AS2560.2.3-2007.
2. The details regarding my inspection, the measurements obtained, the resulting calculations and my professional opinion regarding the condition of the lighting system have been accurately recorded on this form.
3. I have applied my independent professional expertise to this audit and report and have not been influenced in my assessment by any inducement or instruction by the commissioning organisation or any party associated with the venue.
4. On the basis of my inspection the Lighting System on the pitch specified in this report:  
*(Please tick ONE box next to the applicable statement)*

<b>meets</b> Australian Standard AS2560.2.3-2007 for <b>semi-professional</b> competition; OR	
<b>meets</b> Australian Standard AS2560.2.3-2007 for <b>amateur</b> competition; OR	
<b>does not meet</b> Australian Standard AS2560.2.3-2007 for either amateur or semi-professional competition	

5. The Lighting System (including electrical infrastructure) inspected:  
*(Please tick ONE box next to the applicable statement)*

<b>does not</b> have discernable characteristics, whether as installed or due to maintenance or otherwise, which would make it unreliable for competition match lighting;	
<b>does</b> have discernable characteristics, whether as installed or due to maintenance or otherwise, which would make it unreliable for competition match lighting.	

<b>SIGNED</b>	
<b>NAME</b>	
<b>COMPANY</b>	
<b>DATE</b>	