
SPORTS FIELD LIGHTING – CERTIFICATE OF COMPLIANCE

CLIENT: **Fairfield City Council**

JOB ADDRESS: **Fairfield Showground**

SURVEY DATE: **7th June 2023**

The lighting of all playing fields must comply with Australian Standards AS2560.2 – 2021 Lighting for Football (all codes) for training and competition matches.

The Standard requires, at an amateur level, semi-professional level and professional level, the below minimum requirements are to be met:

Lighting Criteria:

Level of Play	Level of Play	Level of Play	
Recreational level			
Touch and tag	Touch and tag	Touch and tag	Touch and tag
Amateur level			
Ball and physical training	Ball and physical training	Ball and physical training	Ball and physical training
Club competition and match practice	Club competition and match practice	Club competition and match practice	Club competition and match practice
Semi-professional level			
Ball and physical training	Ball and physical training	Ball and physical training	Ball and physical training
Match practice	Match practice	Match practice	Match practice
Semi-professional competition	Semi-professional competition	Semi-professional competition	Semi-professional competition
Professional Level			
Ball and physical training	Ball and physical training	Ball and physical training	Ball and physical training
Match practice	Match practice	Match practice	Match practice
Professional competition	Professional competition	Professional competition	Professional competition

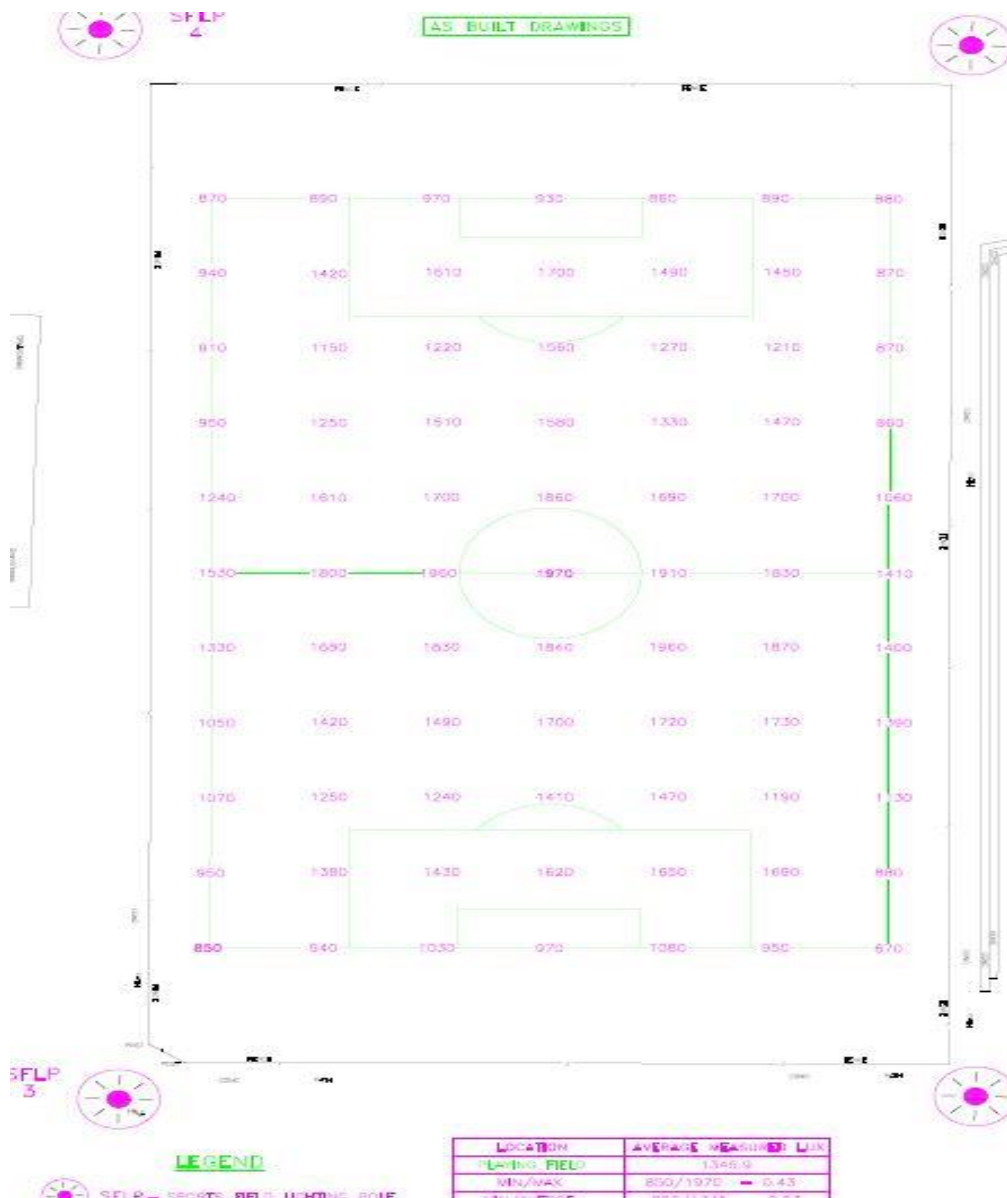
Illuminance requirements	Grade 3 Standard training	Grade 2 Match practice	Grade 1 FIFA World Cup training
Ev 0° (vertical illuminance on 0° reference plane)	<i>not applicable</i>	<i>not applicable</i>	Minimum > 350 lux Average > 500 lux
Uniformity U1v-0°	<i>not applicable</i>	<i>not applicable</i>	> 0.30
Uniformity b	<i>not applicable</i>	<i>not applicable</i>	> 0.40
Ev 90° (vertical illuminance on 90° reference plane)	Minimum > 150 lux Average > 200 lux	Minimum > 275 lux Average > 400 lux	Minimum > 350 lux Average > 500 lux
Uniformity U1v-90°	> 0.30	> 0.30	> 0.30
Uniformity U2v-90°	> 0.40	> 0.40	> 0.40
Ev 180° (vertical illuminance on 180° reference plane)	<i>not applicable</i>	<i>not applicable</i>	Minimum > 350 lux Average > 500 lux
Uniformity U1v-180°	<i>not applicable</i>	<i>not applicable</i>	> 0.30
Uniformity U2v-180°	<i>not applicable</i>	<i>not applicable</i>	> 0.40
Ev 270° (vertical illuminance on 270° reference plane)	Minimum > 150 lux Average > 200 lux	Minimum > 275 lux Average > 400 lux	Minimum > 350 lux Average > 500 lux
Uniformity U1v-270°	> 0.30	> 0.30	> 0.30
Uniformity U2v-270°	> 0.40	> 0.40	> 0.40
Eh ave (average horizontal illuminance)	Average > 300 lux	Average > 500 lux	Average > 750 lux
Uniformity U1h	> 0.40	> 0.40	> 0.40
Uniformity U2h	> 0.60	> 0.60	> 0.60
Flicker factor (FF)	<i>not applicable</i>	<i>not applicable</i>	< 1%
Reference grid	40 points	40 points	96 points
Goal line illuminance test	<i>not applicable</i>	<i>Required for FWWC. Otherwise not applicable.</i>	Required
Colour temperature (Tc)	4,200–6,200K	5,000–6,200K	5,000–6,200K
Colour rendering (Ra)	≥ 70Ra	≥ 70Ra	≥ 80Ra
Glare rating (RG)	< 50	< 50	< 50
Maintenance factor (MF)	0.9 LED or 0.8 HID	0.9 LED or 0.8 HID	0.9 LED or 0.8 HID
Power supply	FPS D	FPS D	FPS D

METHOD

Measurement points were set out on the playing field and taken at ≤10m intervals as per AS 2560.2.3-2007. The measurement extended between the sideline and the in goal lines. Horizontal illuminance measurements were taken at ground level with a Yokogawa 510 illuminance meter that has been calibrated at a NATA accredited laboratory. Our calculations have been made at night and in accordance with AS2560.2-2021

Test Equipment Used : Yokogawa 510 Light Meter
 Serial Number : 180116
 Date of last Calibration : October 2022
 Date Next Calibration Due : October 2023

Below are the recorded values measured at each point and results:



	Elite Field
Min lux	850
Max lux	1970
Calculate Average lux	1345.9
Min / Avg	0.63
Min / Max	0.43
Complies (Y/N)	Yes

Notes: **Min/Avg.** is the ratio of the minimum lux level reading in comparison to the field **average** lux reading.

Min/Max. is the ratio of the minimum lux level reading in comparison to the field **maximum** lux reading, both figures relate to the uniformity of the light distribution over the playing area.

CONCLUSION

Soccer Field.

The measured results show that the average illuminance levels and the uniformity ratios **comply** to the requirements of Australian Standards AS2560.2-2021 Sports Lighting Lighting for Football (all codes). These measurements were taken with all the light's "ON"

Accuracy & Tolerance Outdoor.

The testing procedure carried out in this report is within reasonable tolerances and accuracy as explained in AS3827.1:1998 and AS3827.2:1998 Lighting system performance- Accuracies and tolerances.

Fairfield Showground Elite Field complies with the following levels of play.

Recreational level: Touch and Tag.
Amateur level: Ball and physical training, Club competition.
Semi Professional: Ball and physical training, Match practice,
And Competition.
Professional: Ball and physical training, Match practice,
And Competition.
FIFA World Cup Training: Grade 1

Yours faithfully,



Adam Potuzanski