

A photograph of an indoor sports hall with a basketball court. The ceiling features a large, white, modular lighting fixture. A silhouette of a basketball player is visible on the wall. The text 'INDOOR SPORTS' is in white and 'KRYPTON' is in red.

# **INDOOR SPORTS** **KRYPTON**

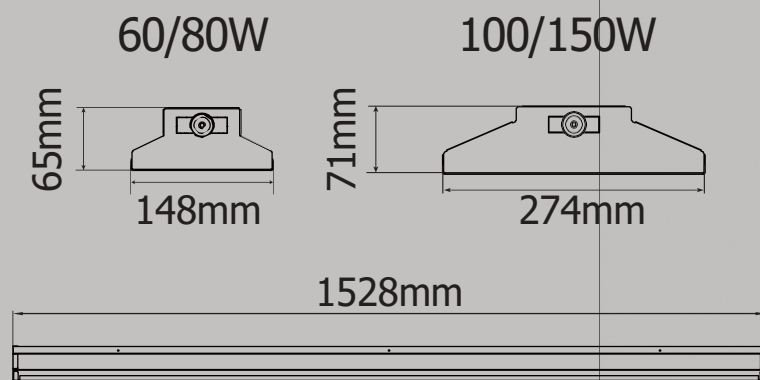
*Easy installation & Modular design & Sustainable lighting & Smart solution*

# INDOOR SPORT LUMINAIRE-V1

V12 indoor sports hall luminaire is totally modern design with perfect slim structure, which is more competitive on weight, installation and power consumption and with same low glare optic and ball proof certification which is welcomed for all the new indoor sports hall building.

## Feature

- Flicker free
- UGR < 22
- 5 wires through
- Ball-proof DIN18032-3
- High efficiency up to 150lm/w
- DALI2 & smart sensor available
- Driver & LED module replaceable
- Openable fixture, saving installation costs



DIN18032-3



RoHS



SPORTS LIGHTING



# INDOOR SPORTS LUMINAIRE



# CHARACTERISTICS

## Mechanical Characteristics

Certification	DIN18032-3 / CE / ROHS
Ingress protection rating(IP)	IP20
Impact resistance(IK)	IK08
Ambient temperature	-20~40°C
Protective class	Class I
Glow wire	650°C
Profile	Sheet metal
Cable entry	Entry on both ends
Terminal connector	3/5 push-in terminal connector
Housing color	White
Weight(Net)	6.02KG(60/80W); 9.92KG(100/150W)
Installation	Ceiling mounted   Suspension
Installation Height	4-20M

## Electrical Characteristics

Wiring	3/5x1.5mm <sup>2</sup> wires through; 3/5x2.5mm <sup>2</sup> wires through				
Power	60W/80W/100W/150W				
Mains voltage	AC/DC 220~240V 50/60Hz				
Power factor	≥0.9				
THD	<20%				
Flicker factor	<1%				
SVM	<0.4				
Pst	<1				
Function	DALI   1-10V Dimmable   Motion Sensor   Emergency				
Circuit breakers		B10	B16	C10	C16
	60W	15	24	24	40
	80W	15	24	19	30
	100W	11	18	15	24
	150W	7	12	10	16

## Photometrical Characteristics

CCT	3000 / 4000 / 5000 / 6500K
CRI	80~95
Luminous flux	9000 / 12000 / 15000 / 22500lm
Luminous efficacy	150lm/w
SDCM	3
Beam angle	80°
UGR	22
Service life	L80B10:100000h
Photobiological safety	RG0



# SMART CONTROL



Design of the lighting installation for multi-sports halls is a complex matter in which the conflicts between the requirements of different sports need to be resolved. A multi-sports hall with games or activities of handball, bandy, volleyball, basketball, pretty much any- thing.

**DALI** lighting control at the planning stage is advisable. Sometimes there is a folding partition wall in the center enabling physical education lessons to be split over two areas or the hall is twice the size with a partition wall in the middle to make two full-sized playing areas. Some halls divide the surface into smaller sections, these divisions with partition walls should also divide occupancy detection in the premises.

# BROADCASTING & FLICKER FREE



Super Slow Motion (SSM) cameras operate at shutter speeds above 150 frames per second (fps) and are now typically used between 300 fps and 600 fps to produce slow motion clips of the action. Cameras with speeds above 300 fps are usually called 'ultra-slow-motion'(USM).

Both traditional lamp and lighting technologies and control gear as well as solid-state light sources and drivers can produce a 100 Hz light modulation which is detectable to the camera at these frame rates. The 100 Hz or higher light modulation frequencies become visible as artefacts when SSM/USM recordings are displayed. Typical artefacts are flickering displays or banding. The severity and type of visible artefact depend on the type of shutter and on the frame rate selected. To avoid visibility of artefacts due to light modulations detected by SSM/USM cameras it is necessary to specify the maximum values of these light modulations. The specification is expressed using the metric modulation depth, more commonly referred to as Flicker Factor.

Flicker Factor FF (Modulation Depth) is defined with Formula (3) and can be derived by the illuminance modulation over time.

$$FF(\%) = \frac{E_{hor Max} - E_{hor Min}}{E_{hor Max} + E_{hor Min}} \times 100$$

Where

$E_{hor Min}$  the minimum horizontal illuminance in time at point on the calculation grid;

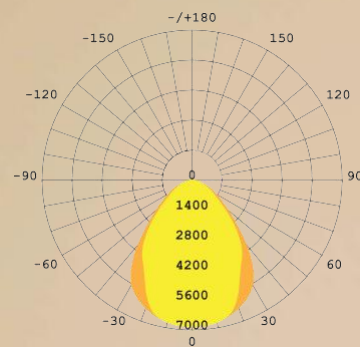
$E_{hor Max}$  the maximum horizontal illuminance in time at the corresponding point on the calculation grid.

For integration times of 1/15 s to 1/2 000 s a  $FF < 1\%$  will give flicker free pictures. This is independent of illuminance level. For frequencies above 40 kHz the FF should be relaxed to  $\leq 5\%$ .

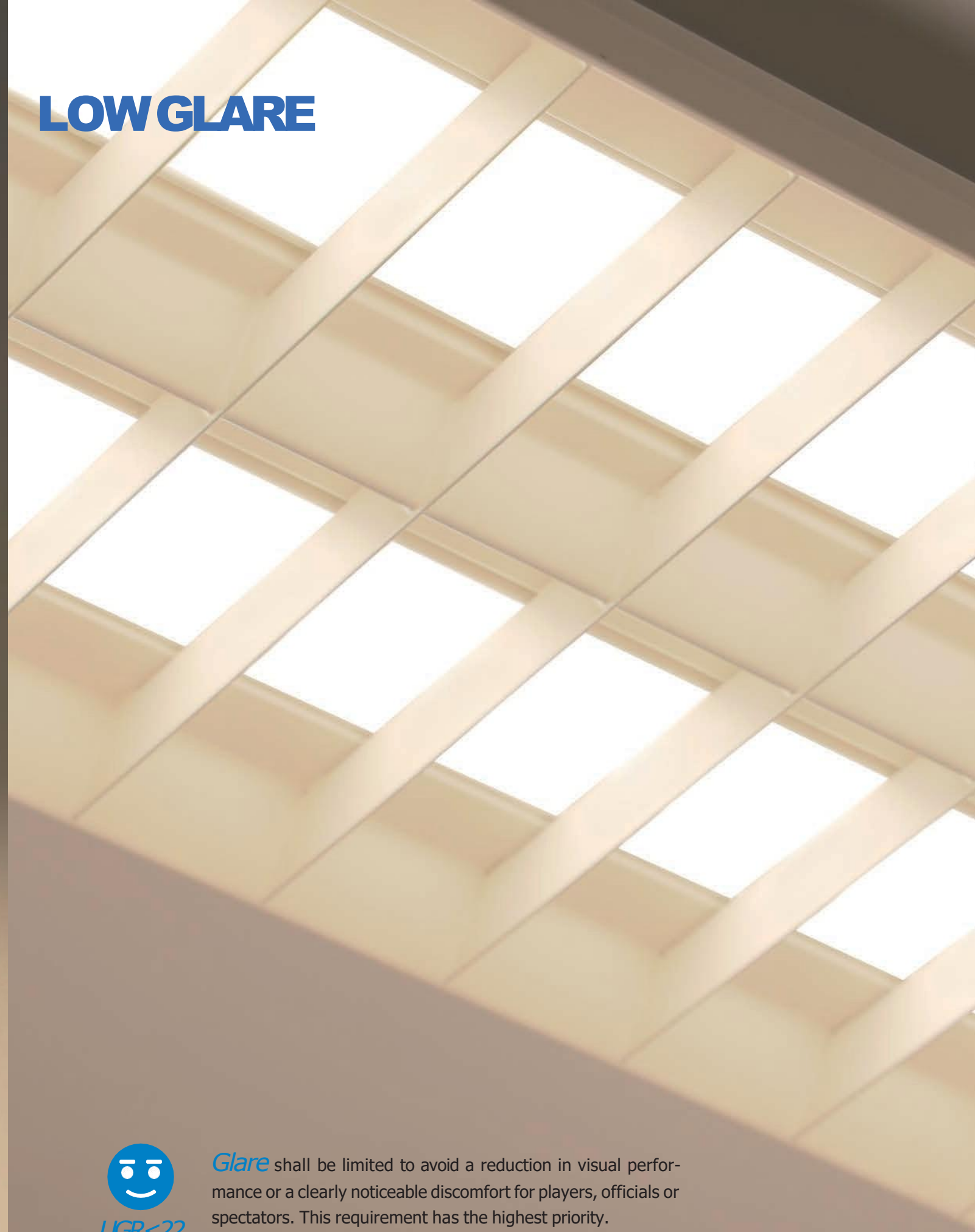
Unwanted artefacts caused by flicker can be controlled by.



# LOW GLARE

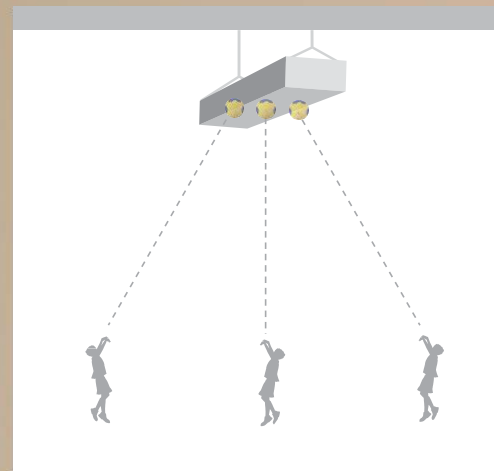
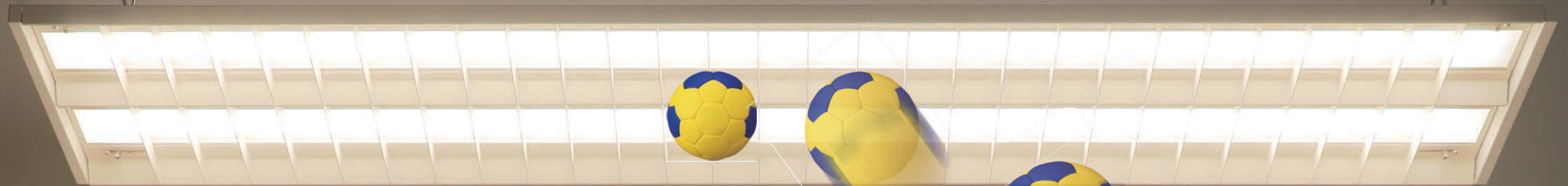


- Beam angle 80°
- Efficacy 150 lm/w
- Up to 22500lm
- Ra > 80
- SDCM < 3



*Glare* shall be limited to avoid a reduction in visual performance or a clearly noticeable discomfort for players, officials or spectators. This requirement has the highest priority.

# BALL-PROOF-DIN18032-3



## Safety first

When we are playing ball games, the ball moving at a high speed will sometimes collide with the lamp installed on the roof, which will cause safety hazards. Such safety hazards involve human life, which should be paid attention to. So this requires that our products must meet the requirements of the ball impact resistance, through professional testing standards. DIN18032-3, which requires that the luminaire must withstand **36** handball shots with the maximum speed of **60 km/h** from three different directions.

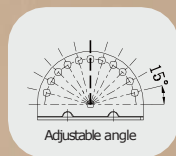
# ACCESSORY



Surface mounting Screws



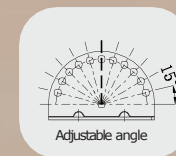
Suspension Kits



Adjustable angle



Angle adjustable bracket



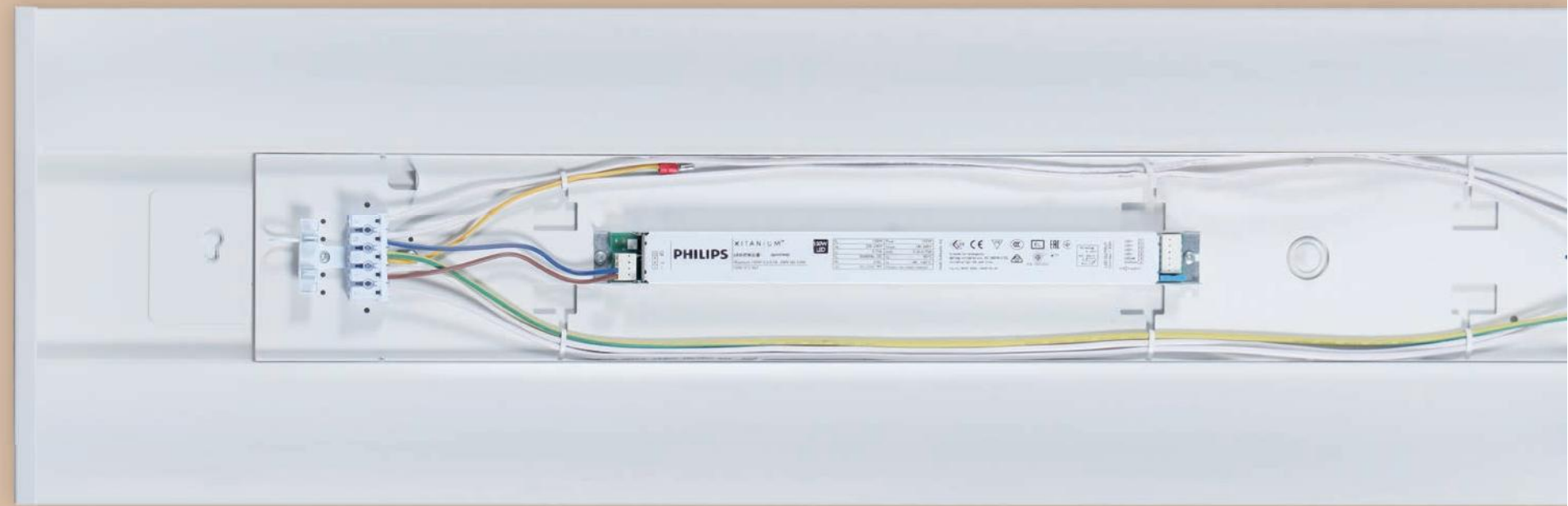
Adjustable angle





# EASY MAINTENANCE

**DRIVER&PCB  
EASY REPLACED**



**OPENABLE  
PROTECTION COVER**

