



Ice hockey arena HK Nitra, Slovakia Unique LED lighting solution - 4K!

The new LED system achieved significant energy savings and brought excellent visual comfort and uniform lighting distribution at each level.

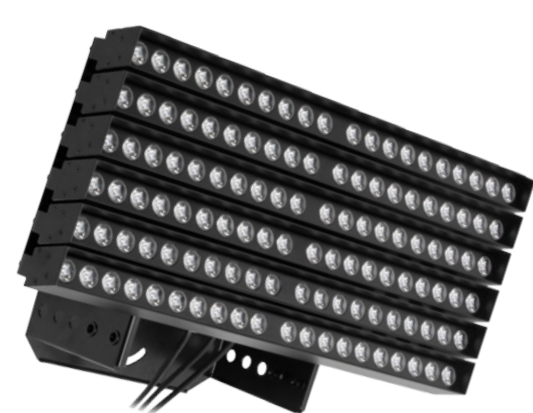
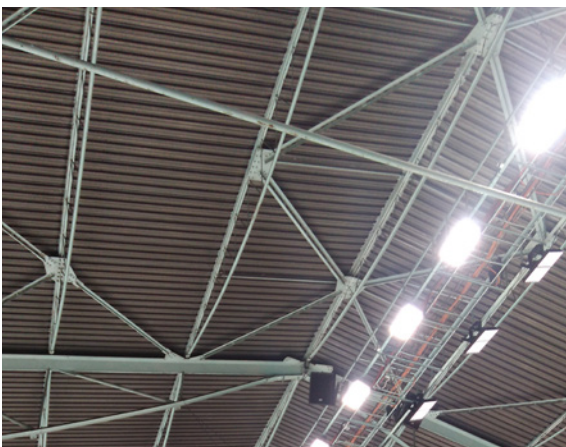
Arena is brighter so you'll see every detail and every emotion. This is the economical, high-performance 4K lighting solution of the future.

Savings done

21 kW

saving in energy consumption





PROJECT INFORMATION

Realisation: July 2016

Investor: City Nitra



ACHIEVED BENEFITS

- 4K broadcast quality
- Energy saving: 36 %
- Reduced CO₂ emissions
- Excellent color rendering: CRI > 90
- Light color CCT: 5.600 K
- Smooth dimming: 0 – 100 %
- Instant start / restart
- Perfect illumination uniformity for all lighting levels
- Flicker-free drive
- Long lifespan 100.000 hours

	LIGHTING SOLUTION	
	OLD	NEW – LED
Luminares	54 x MVF with HPI-T 1.000 W and MHN-LA 1.000 W	148 x LL SPORT 4K - 250 W
CCT	4.200 K – 4.300 K	5.600 K
CRI	57 – 70	> 90
Lifespan	8.000 – 10.000 hours	100.000 hours
Dimming	no	0 – 100 %
Total power	57,66 kW	37,00 kW
Calculated illuminance	1.450 lux*	1.373 lux*
Uniformity	0,5 – 0,8 depend on level	0,8
Maintenance factor*	0,8 should be less	0,8

The new Icehockey arena HK Nitra LED illumination meets the strictest requirements for 4K TV broadcast.

In addition to significant reduction of electricity consumption increased many qualitative parameters:

- **Color Rendering Index > 90:** provides better recognition of the colors and increase visual acuity. The viewer is pulled into the game and sense all the details. Advertisement on the boards and on the playing field shines and is easy to read.
- **Light color CCT = 5600 K.** The human eye receptors are more sensitive to white light. The light illumination appears higher.
- **High Uniformity** is constant for all levels of illumination $E_{min} / E_m = 0.842$. The old discharged lighting system allowed only stepped switch on/off, because the lamps were not dimmable. The new LED solution is smoothly dimmable from 0 – 100%. Lighting levels can be set to any level without compromise on uniform quality. In addition, the dimming extend the lifespan of LED luminares.
- **Instant start / restart.** The previous system was fully light up after approx. 20 minutes. In case of unwanted downtime is the after restart time shorter, because it is not necessary to wait for cool down of the lamp.
- **Long lifespan** - about 100,000 hours, affects ten times longer maintenance period for re-lamping, it is also reflected in the additional financial costs.