

TENNIS COURT PROJECT

Dear Friends,

We can congratulate our self for the completion of a very important project, namely a complete sports complex consisting of:

- Tennis court measuring 18 x 36 meters;
- Football field measuring 20x 40 meters
- Mini-football field measuring 15 x 20 meters;
- Volleyball / Basketball course 32 x 64 meters

The complex is fully illuminated by 240 watt "Hydra 240W252 - 230" luminaires, with 40 degree optics and 4 mm wide mounting supports, such as ones used in mounting loudspeakers.



The illumination of the complex is designed according to the customer's requirements and BDS EN 12193: 2009 - "Light and lighting. Lighting of sports facilities". The quantitative and qualitative indicators meet the standard values according to the type of sport. Average horizontal illumination E_m , lx, Illumination uniformity $E_{min} / E_m \geq 0.6$; Color rendering index ≥ 60 ; Blinking index ≤ 50 ; Initially, the same number of 400 watt metal halogen lamps were planned to be installed with a total power consumption of 480 watts. After a careful analysis, investors chose a lighting option with "Hydra 240W252 - 230" luminaires with 240W for the following reasons:

- Two times lower consumption of metal halogen spotlights;
- Appropriate optics and light distribution to achieve high illumination uniformity and very low dazzling readings;

- A much lower degree of dazzle due to the optics used;
- Instant start of 100% lighting when lighting is on;
- Correlated color temperature (CCT) tailored to customer requirements ranging from 4,000 to 5,500 Kelvin.
- Very good color rendering index CRI> 80 (this index shows how real the colors are).
- 5 mm hardened glass allowing the shooting of the shooter.
- Power supply which allows dimming (increase or decrease of illumination) of the system;
- Water and moisture isolated power supply with IP67 and additional surge protections and network peaks;
- Last generation LEDs of Osram with high efficiency and extended life;
- Full five-year warranty for light fixtures with post-warranty repair.

This project has proven the possibility of replacing previously used luminaires with much more efficient LEDs. The main problem with the cooling of LEDs at high power is solved with the help of a passive radiator made of aluminum with increased heat exchange. The dimensions of the 500 x 500 cm illuminator, as well as the large number of LEDs (252 units), solve another major problem with high-power luminaires, namely blinding. This problem is further neutralized with the help of the targeting lens we use. The cost of such a luminaire, combined with the five-year warranty and almost complete lack of maintenance, fully compensates for the low prices of conventional light fittings. The cost of one "Hydra 240W252 - 230" LED is commensurate with that of high-quality metal-halogen lamps in the West Europe