



## A COMPLETE NEW RANGE OF REFLECTORS TO MEET EVERYONE'S NEEDS.

The main goal in designing the Ultra Optics Reflector was to achieve the highest efficiency (light output) possible. It's designed according to the SBCS (Single Bounce Clear Sight) principle which means that each light beam reflects only one single time in the reflector and then goes out directly (Single Bounce). After reflection, the beam is not hindered by the lamp or other parts (Clear Sight). The design from the reflector is optically perfect so that no hammered or textured pattern is needed to spread hotspots. Hammered or textured reflective reflectors are made to improve uniformity and create undesirable multiple reflections inside the reflector and cause internal reflections from the reflector to the lamp causing a decrease in efficiency. These techniques used in our reflector combined with the use of Miro Silver mirror will provide unparalleled results.



## **ULTRA OPTICS HYBRID 98%**

The Hybrid reflector ensures a deep penetration into the plants, while having a larger overlap with other fixtures for better uniformity. The area it illuminates has an aspect ratio of 1.3:1. This reflector is the ideal choice for many scenarios because it combines the best qualities of the Deep and Wide reflectors. This reflector can be used for all types of crops.

For a fixture spacing of 1.2 by 1.6 meter (1.92m²), the recommended reflector height is 80cm.



## **ULTRA OPTICS DEEP 98%**

The Deep reflector allows the light to penetrate very deep into the canopy. Because the Deep reflector directs more light downwards and less to the sides, losses due to walls and walking paths are minimized. The area it illuminates has an aspect ratio of 1:1, square.

This reflector can be used for plants taller than about 75cm, or have a very closed canopy (less plant spacing, more bushy plants). This is also ideal for use in a growing tent, where there would be more wall reflection-losses than in a larger room.

For a fixture spacing of 1.4 by 1.4 meter ( $1.96m^2$ ), the recommended reflector height is 100cm.



## **ULTRA OPTICS WIDE 98%**

The Wide reflector illuminates a much wider area, which allows for a very short distance between the plants and the reflector. Because of the wider spread, the distance between the crop and reflector for the 1000W fixture is about the same as a regular 600W system. The area it illuminates has an aspect ratio of 2:1, a rectangle. The large side of the rectangle is perpendicular to the lamp. This reflector can be used for plants shorter than about 75cm, or have a very open canopy (more plant spacing, less bushy plants). This is also ideal for rooms with a very low ceiling, or which have a rectangular cultivation surface.

For a fixture spacing of 1 by 2 meter (2m²), the recommended reflector height is 70cm.

The Wide reflector is also ideal for combining HID fixtures with LED fixtures.

