Super-Spreader

The Super-Spreader (light spreader, heat deflector / dissipater) is a "v - shaped" perforated metal plate designed to fit just below horizontally mounted HID lamps, and reflect excess light and heat away from the "hot spot" towards grow-room extremities. At the same time a balanced portion of light is allowed to pass through the perforations to maintain uniformity across centre and edge portions of the growing enclosure. Removing the hotspot and spreading it strategically can deliver incredible benefits. Lights can be placed closer to plants than was ever dreamt of, area covered by each light is increased, light power and penetration is multiplied, and heat is greatly reduced. Yes its all true!

The Super-Spreader is a simple device that performs some "amazing tricks" using basic science;

The inverse square law

Most people reading this paper will be familiar with the inverse square law, "light intensity decreases at a rate equal to the inverse square ($1/X$ sq) of the distance from its source". Eg) two times closer = Four times more intense, three times further away = nine times less intense ... etc.. etc. Horticultural lights fitted with Super-Spreaders can operate two times closer to the plant layer than is otherwise possible giving the grower four times the light to spread around!! With four times the light being splashed around, how much light actually makes it to the plants? Good question! Hope you like your maths! Read on.

Reflection Theory

"Reflected light incurs a loss in power, relative to the surface properties of the reflector". Eg) light striking a 90% reflective surface, immediately loses 10% of its power. "The angle of incidence (light striking a reflective surface) is equal to the angle of reflection". The Super Spreader reflects approximately 25% of total light towards the grow-room extremities which, due to the angle of incidence, travels on average ?? times the distance it would have travelled if emitted by a standard reflector.

Extra information