

PLYLIGHT
SCIENCE & LIGHT

SOLARMERSION™

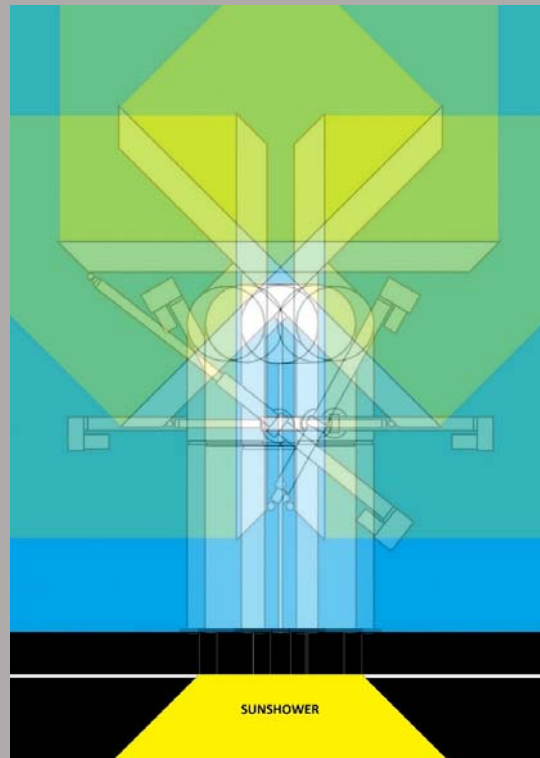
PLYLIGHT'S SOLAR HYBRID LIGHTING SYSTEM

WITH PARABOLIC OR *RADIAL* SUN TRACKERS AND OPTIONAL *INTEGRAL* PVC PANELS

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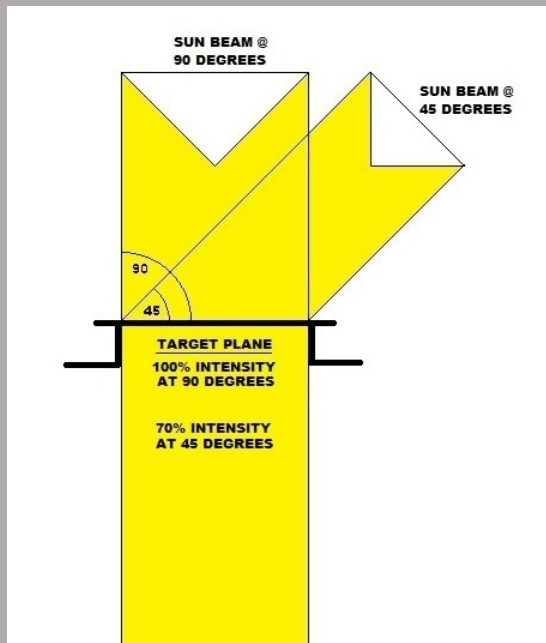


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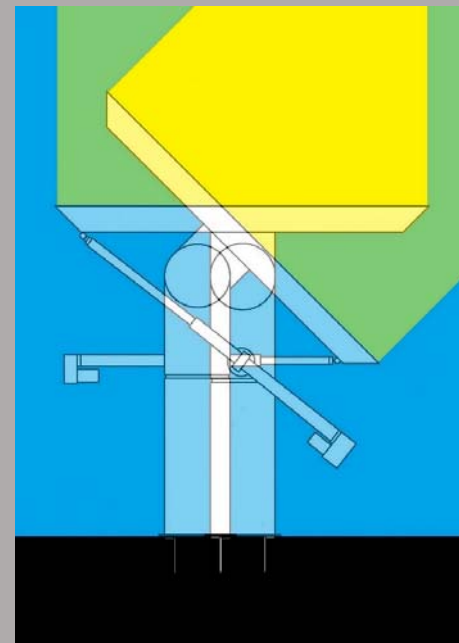
WHY TRACK THE SUN? FOR MORE LIGHT

SINE OF THE SUN ANGLE = THE % OF SUN INTENSITY (SINE OF 45 = 70%)

WITHOUT SOLARMERSION™ THE TARGET RECEIVES VARYING AMOUNTS OF SUNLIGHT



WITH SOLARMERSION™ THE TARGET RECEIVES 100% SUNLIGHT ALL DAY EVERY DAY

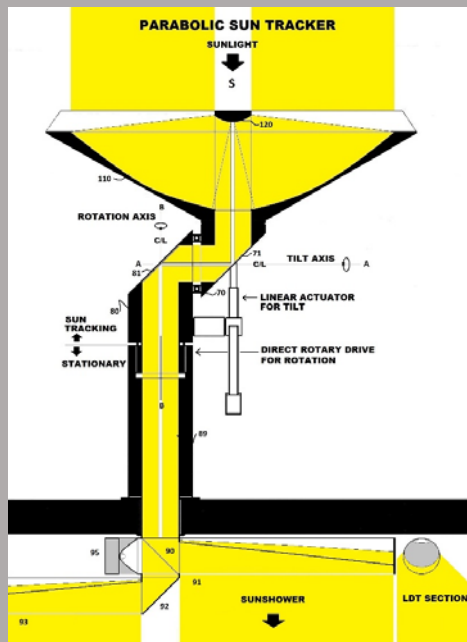


SOLARMERSION™

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THE INVENTION

PARABOLIC SUN TRACKER



THE CONCEPT

SOLARMERSION™

PLYLIGHT'S SOLAR HYBRID LIGHTING SYSTEM:

Our patented Solar Hybrid Lighting System is the first and only system that distributes sunlight and artificial light singly or in combination through one linear light distribution system. It can track the sun at anytime and anywhere and deliver fully collimated and concentrated sunlight into a space. It uses the sunlight directly – there are no photovoltaic conversion costs or losses. A combination of materials selected for our reflectors and lenses, and the re-collimation of the concentrated sunlight, allow us to deliver up to 50 suns safely through our 7.5" diameter light distribution tubes (LDTs); or the light can be delivered as a *sun shower* into a room or underground garden – anywhere where direct sunlight is desired all day long.

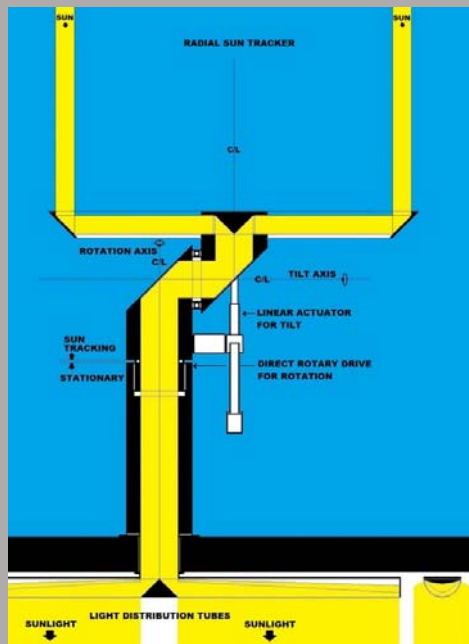
THE FOUR BASIC COMPONENTS:

1. THE SUNLIGHT COLLECTOR / CONCENTRATOR:
2. THE ELBOWS:
3. THE LIGHT BLENDER BOX:
4. THE LIGHT DISTRIBUTION SYSTEM:

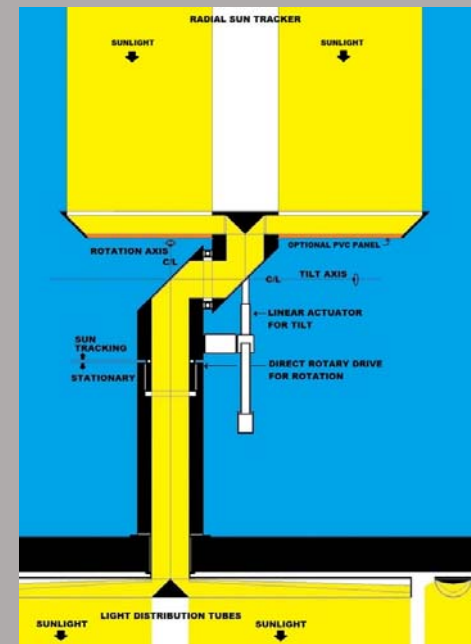
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RADIAL SUN TRACKER - OPTIONS

RADIAL SUN TRACKER



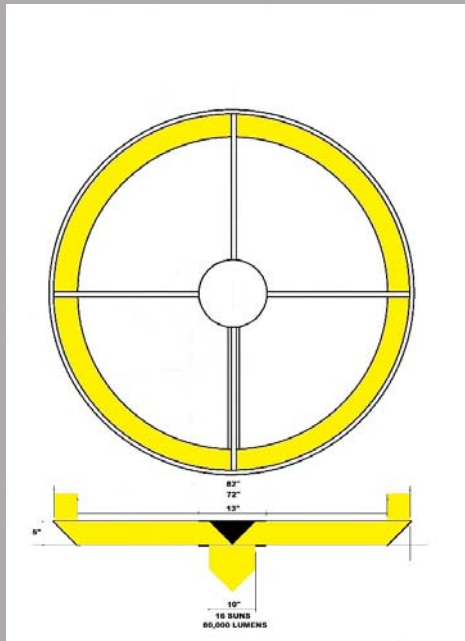
RADIAL SUN TRACKER WITH PVC



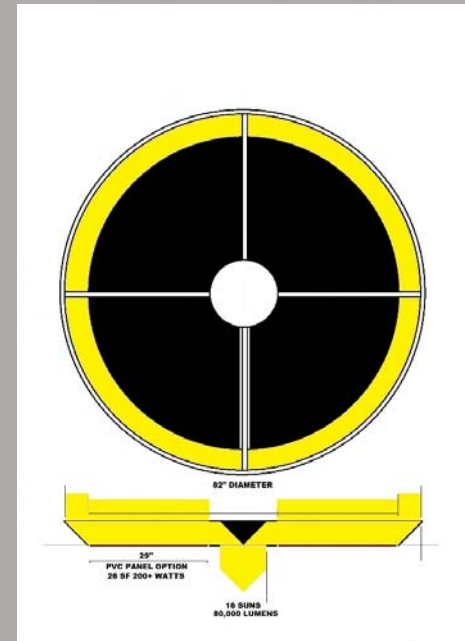
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RADIAL SUN TRACKER - OPTIONS

SUNLIGHT CONCENTRATOR – 16 SUNS

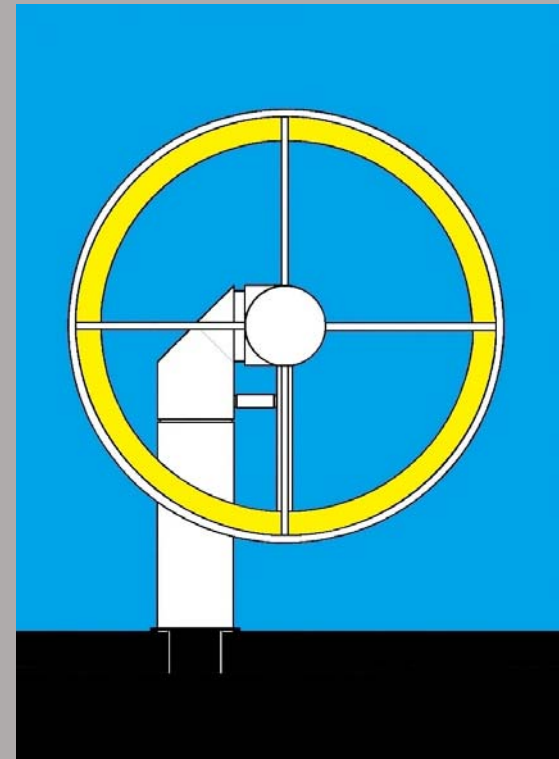
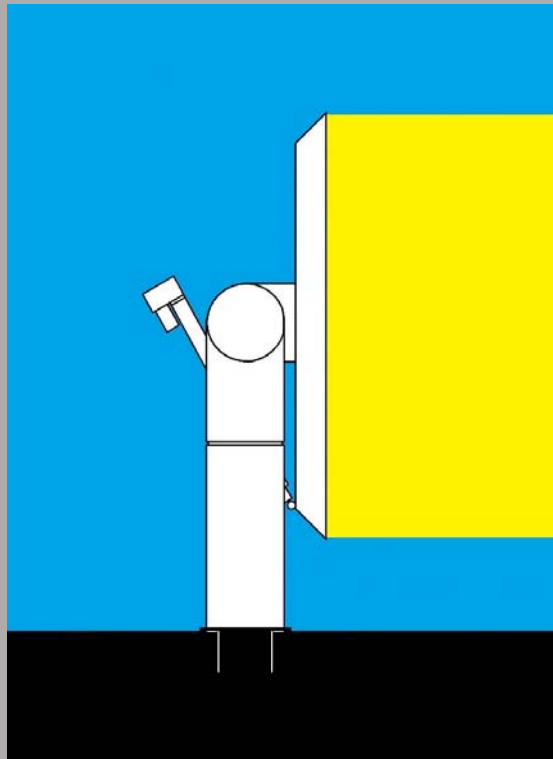


SUNLIGHT CONCENTRATOR WITH PVC



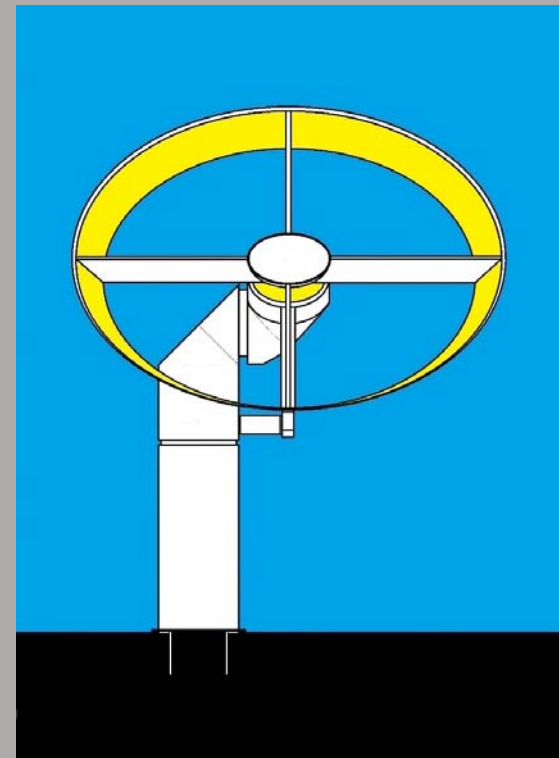
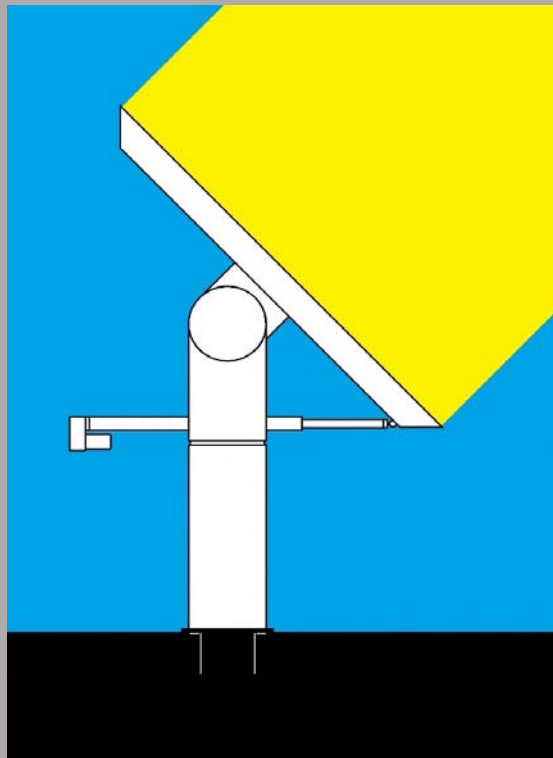
DAILY POSITION: MORNING

0° TILT / 90° ROTATION



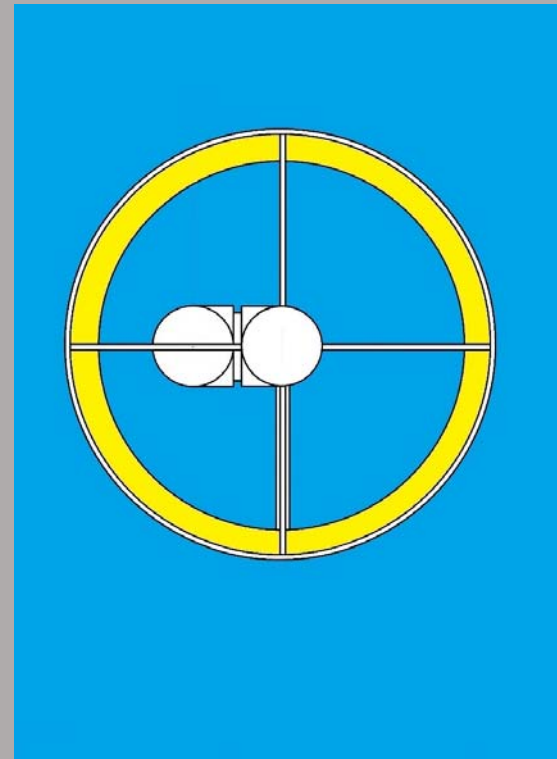
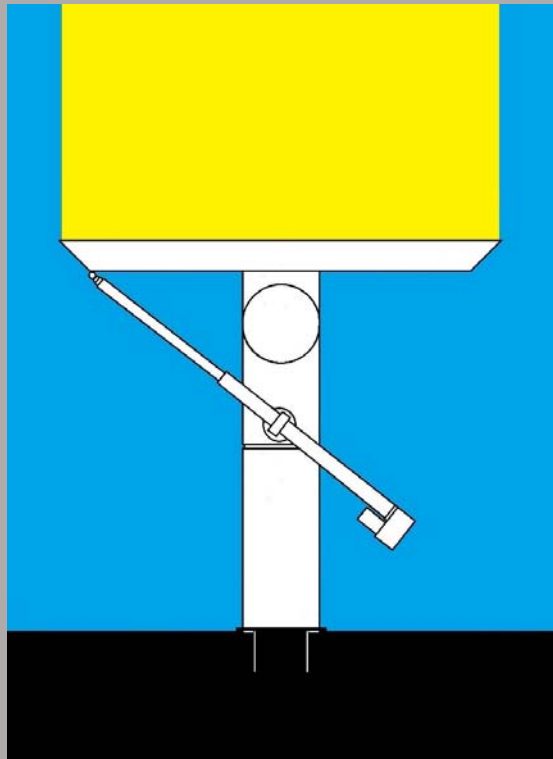
DAILY POSITION: MID MORNING

45° TILT / 135° ROTATION



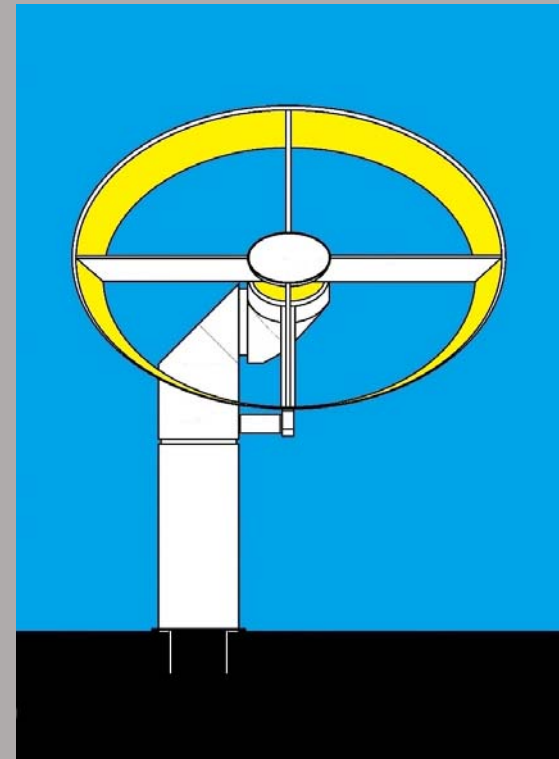
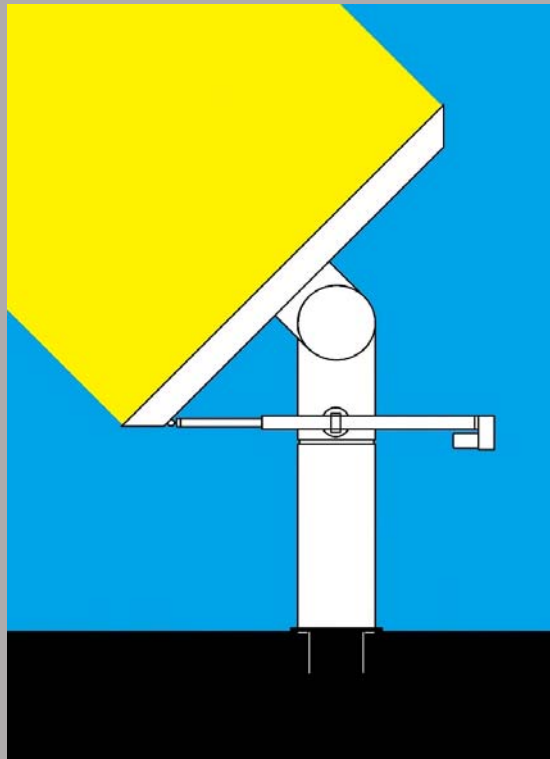
DAILY POSITION: NOON

90° TILT / 180° ROTATION



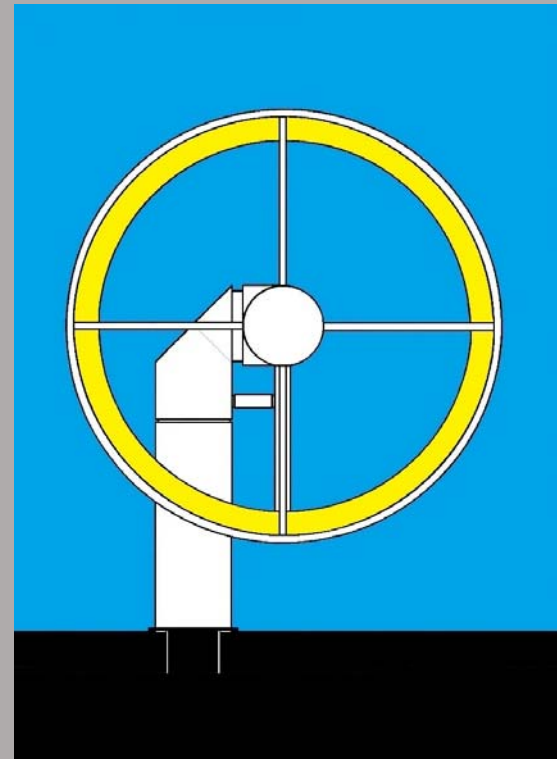
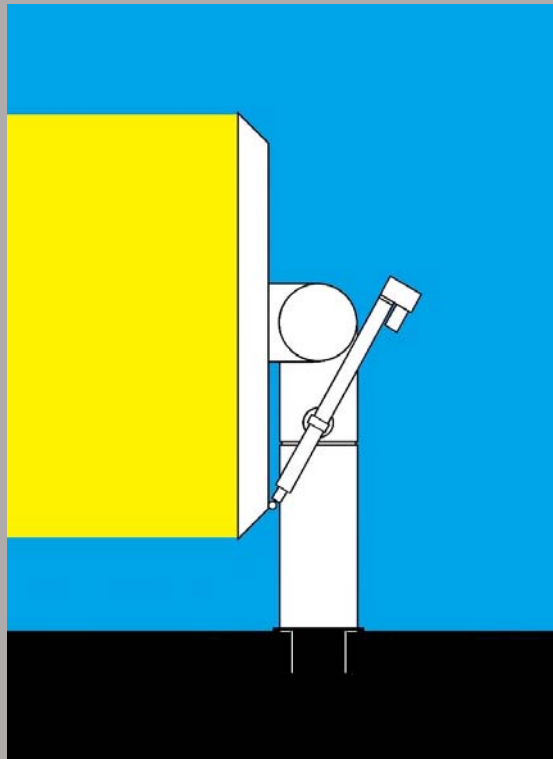
DAILY POSITION: MID AFTERNOON

45° TILT / 225° ROTATION



DAILY POSITION: AFTERNOON

0° TILT / 270° ROTATION



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BACKGROUND:

In 1989 Walter A. Johanson founded a company that has evolved into **PLYLIGHT**. He is the sole owner, and is focused on the design and manufacture of light distribution systems (LDTs). To this day he continues to explore concepts, design systems, and invent components to achieve his goal of blending *science and light*.

Walter holds numerous patents on tubular and solid structures for the controlled diffusion and distribution of light. His patent on a solar hybrid lighting system describes a system that can collect, concentrate, and recollimate sunlight, and then distribute that sunlight, with or without artificial light, in the same. This system he calls SOLARMERSION™. In addition, he has a patent on a tubular structure for the distribution of light in a liquid environment to aid in the cultivation of algae. This system he calls AQUAMERSION™.

Walter has a Master of Architecture degree from the University of Pennsylvania and a Bachelor of Arts degree in Physical Science from Colgate University.



For inquires please send an email to: wajohanson@plylight.com

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