

# SolaMaster 750DS Open Ceiling Double Dome Prismatic Diffuser

## Recommended Specification

### **SolaMaster 750DS (530mm diameter) Daylighting System a Diffuser. Manufactured by Solatube Australia PTY LTD**

#### **S750DS-O-DA-DAI-L2**

Roof Mounted Tubular Daylighting System with Raybender Dome, UV and Impact resistant Inner Dome that aides to providing high thermal performance, Spectralight Infinity 99.7% Spectral reflectivity solid tubing with ceiling level Prismatic Dual Glazed diffuser assembly, transferring sunlight to interior spaces.

**Roof Dome:** Raybender 3000 variable prism optic moulded into outer dome to capture low angle sunlight and limit high angle sunlight with Type DA Transparent, UV and impact resistant inner dome. 3.7 mm minimum thickness injection moulded acrylic, classified as CC2 material; UV inhibiting, impact modified acrylic blend. EDCS (Effective Daylight Capture Surface) of 750 square inches (4838cm<sup>2</sup>).

#### **Flashing:**

Flashing base supporting dome and top of tube as per manufacturers recommendations to suit roof profile.

#### **Tubing - 99.7% Spectrally Reflective Tubing:**

Aluminium sheet, thickness 0.5mm. Top Tube Angle Adapter, 406 mm long. Spectralight Infinity 99.7% high reflectance specular finish on exposed reflective surface. Visible spectrum (400 nm to 760 nm) greater than 99 percent. Total solar spectrum (400 nm to 2500 nm) less than 93 percent.

#### **Diffuser:**

Type L2 Prismatic lens designed to maximise light output and diffusion with extruded aluminium frame and EPDM foam seal to minimise condensation and bug, dirt and air infiltration. Visible light transmission shall be greater than 90 percent at 0.6mm tick, classified as CC2.

**Performance Tested:** NFRC (National Fenestration and Ratings Council). Meets SHGC and U-Value requirements set out in the BCA (Building Code of Australia) tables 3.12.1.2 and J1.4.

**SHGC = 0.23**

[NFRC TEST Results SHGC](#)

The **SHGC** is the fraction of incident solar radiation admitted, both directly transmitted and absorbed and subsequently released inward.

It is expressed as a number between 0 and 1. The lower a SHGC, the less solar heat it transmits.

**U-Factor = 7.15**

[NFRC TEST Results U Factor](#) (these are imperial measurements and must be converted to metric by multiplying by 5.687)

The rate of heat loss is indicated in terms of the **U-factor (U-value)**. The lower the **U-factor**, the greater resistance to heat flow and the better its insulating properties.

**Annual average VLT = 0.47** – test report G3705.02-301-41

The amount of light transmitted is specified by the visible light transmittance(VLT)

Rating vary between 0 and 1. The higher the value, the better.

**Light-to-Solar Gain** – (The ratio of the visible light transmittance to the Solar Heat Gain Coefficient.  $LSG = T_{vis}/SHGC$  A higher LSG ratio means sunlight entering the room is more efficient for daylighting, especially for summer conditions where more light is desired with less solar gain) =  $0.47/0.23 =$  and **LSG of 2.05**

**FM Approval – Solatube SolaMaster Series have FM Approval** - FM Approvals verify that products meet rigorous loss prevention standards of quality, technical integrity and performance —for use in commercial and industrial facilities [FM approval information](#) - link to STI website.