

# **Brighten Up Series 290DSe**

## **Recommended Specification**

### **Brighten Up Series 290DS (350mm diameter) Daylighting System manufactured by Solatube Australia PTY LTD**

#### **S290DS-DA-x-Exx-Lx**

Roof Mounted 350mm Tubular Daylighting System with UV and impact resistant Raybender 3000 Dome, Spectralight Infinity 99.7% Spectral reflectivity solid tubing with ceiling level Classic Vusion White Trim Dual Glazed diffuser assembly, transferring sunlight to interior spaces complying with ICBO/ICC AC-16.

**Roof Dome:** Raybender 3000 variable prism optic moulded into dome to capture low angle sunlight and limit high angle sunlight. 3.7 mm minimum thickness injection moulded acrylic, classified as CC2 material; UV inhibiting, impact modified acrylic blend. EDCS (Effective Daylight Capture Surface) of 290 square inches (1871cm<sup>2</sup>).

#### **Flashing:**

Flashing base supporting dome and top of tube as per manufacturer's 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:**

Solatube Classic Vusion Diffuser

**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 = 0.20**- Cert #6030

[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 = 2.61**– Cert #6030

[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 = 0.54**– test report E1047.02-301-41

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) =  $0.54/0.20 =$  and **LSG of 2.70**

**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.