



SKYLIGHT TEST NUMBER 9716S3

Test Client: Sola Skylights International Pty Ltd
Sample I.D: Non-vented 'Sola Skylights - Mark 2 flexible duct skylight' of circular throat size 550 mm in diameter. Dome fixed to top frame with four (4) screws.
Dome material: Injection moulded acrylic - main dome thickness: 3mm. Manufacturer's details are given in Sola Skylights' drawing No. 1028 dated 20/3/98.
Test Date(s): 20 March 1998
Test Results: The test sample was subjected to a number of the tests for Skylight assemblies nominated in Clause 11.2 of Australian Standard AS4285-1995, Skylights, with test methods and results as summarised below:

Watertightness

Method: AS2050 Appendix C modified as required in AS4285
Sample orientations: Ridge normal (N) and angled at 45° (A) to the wind stream.
Test pitch angle(s): 27° (N & A).....PASS
Observations: No water penetration was observed

Resistance to Concentrated Loads

Method: AS4040.1 modified as required in AS4285
Load applied: 1.1 kNPASS
Observations: No damage or sign of permanent deformation was observed.

Resistance to Wind Pressures for Non-cyclone Regions

Method: AS4040.2 modified as required in AS4285
Pressure(s) applied: +1.5, +3.0, 4.5 and +6.0 kPaPASS
('+' denotes external pressure) -1.5, -2.1, -2.4, -3.0, and -3.6 kPaPASS
-4.0 kPaFAIL

Duration: 1 minute at each pressure.
Observations: Failure at -4.0 kPa occurred when one of the four screws fixing the dome to the plastic top frame pulled through the top frame. Whilst the dome did not become completely removed from the top frame, the test load could not be sustained.
Maximum Strength Limit State pressure(s) sustained: +6.0 & -3.6 kPa

Conclusion:

The test sample passed the requirements of Australian Standard AS4285-1995 for Resistance to Wind Pressures for Non-cyclone Regions and Resistance to Concentrated Loads. The sample also passed the Watertightness test at the default pitch angle of 27°.

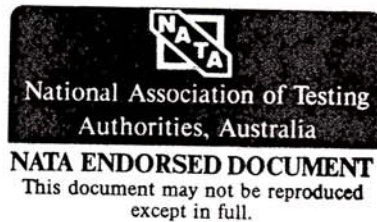
The test of Resistance to Wind Pressures for Non-cyclone Regions determined the maximum Strength Limit State pressures (p_u) sustained by the skylight during testing. The corresponding Permissible-Stress Design Wind Pressure (p_p) values for Australian Regions A and B, using : $p_p = \frac{p_u}{1.5}$ (based on Section 3 and Appendix E of AS1170.2) are:

Regions A and B	
Permissible-stress Design Wind Pressure	
+ 4000 Pa	- 2400 Pa

Note: These results are not applicable for Australian cyclonic regions C & D.

Test Location: Ian Bennie and Associates Test Centre
1 Luisa Avenue
Dandenong South, Victoria

Testing Officer: Derek Dubout (Authorised NATA Signatory)



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Signed.....
Derek Dubout
7 April 1998