



# ETC Laboratories

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ENGINEERING DEPT

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## Fenestration Impact Test Report

Rendered To:

Atlantic Premium Shutters  
29797 Beck Road  
Wixom, MI. 48393

### **Summary Description:**

The products tested were shutters of varying materials and styles. Each shutter was 30 inches wide x 102 inches high covered with a protective 1/8 inch thick polycarbonate facing, secured to the exterior of the products with #12 x 1 inch long pan head screws. The overall rough opening was 60-1/4 wide x 102-1/4 high framed with 2 x 10 lumber and covered with plywood. The shutters were braced to the exterior face with two L shaped bars 60 inches wide x 2 inches high x 3 inches deep.

### **Specification:**

The test specimens were impacted in accordance with ASTM test method E1886-05 and pressure cycling section was not performed.

**Impact Test Results**  
**Standard Mount Horizontal Storm Bar**  
**Atlantic Classic Collection Board and Batten Shutters**

Impact Location Specimens 1-3	Missile Speed (ft/sec)	Missile Orientation (deg.)	X Measurement (in.)	Y Measurement (in.)
Center of right panel	50.5	2.4	46-1/2	52
Upper right corner of right panel	49.5	2.5	55	7
Lower left corner of right panel	50.5	2.1	37-1/2	95-1/2
Center of right panel	49.5	2.4	46-1/2	53-1/2
Upper right corner of right panel	50.5	2.4	55	6-1/2
Center of right panel	50.3	2.3	45	53
Mid-span of bottom brace	49.5	3.0	31	76

**Test Notes for Impact Tests**

1. All three specimens were of identical construction.
2. The circles on the diagrams indicate the impact locations for that specimen.
3. The X measurement is from the left edge of the specimen.
4. The Y measurement is from the top edge of the specimen.
5. The large missile used was a piece of #2 southern yellow pine 2 x 4 dimensional lumber 92 inches long and weighing 9.0 lbs.
6. The specimens were conditioned in an environment with a temperature between 65 and 75 degrees F for at least 48 hr prior to testing.
7. Shutter cracked at impact locations, top corner impacts bent hinge.
8. Wind Zone 4 definition per ASTM E1996-05b. Section 6.2.2.4 *Wind Zone 4*-basic wind speed > 140 mph (63 m/s).

**Summary of Results**

Missile level resisted	D
Nominal missile speed resisted	15.25 m/sec (50ft/sec)
Wind zone achieved	4

**NOTE:** The test specimens were only tested to the impact portion of ASTM specification E 1886-05 and pressure cycling section was not performed.