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July 26th, 2023

Riot Glass
17941 Brookshire Lane
Huntington Beach, CA 93647
ATTN: Brad Campbell

Dear Mr. Campbell,

Enclosed, please find a copy of Oregon Ballistic Laboratories' test report entitled: ASTM F3038 - Test Report of 15-minute testing of Riot Glass Compression Window System infill AP750-BR (3/4" Material) Samples, along with the photos of the Forced Entry, Concentrated Assault tests.

The Riot Glass Compression Window System infill AP750-BR (3/4" Material) Sample **PASSED** the 15-min performance requirements defined by Section 16 of ASTM F3038 (mod). **The standard was modified to omit attacks on the brick portion of the test buck where the compression feet were anchored per the customer's request.**

Very Respectfully,

Darius Nuttbrock
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Oregon Ballistic Laboratories
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ASTM F3038 - Test Report

15-minute FE testing of Riot Glass Compression Window System infill AP750-BR
(3/4" Material) Sample

OBL 072623

Prepared for

Riot Glass
17941 Brookshire Lane
Huntington Beach, CA 93647

By

Oregon Ballistic Laboratories, LLC
2873 22nd St. SE
Salem, Oregon 97302

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General Description

In June of 2023, Riot Glass submitted a request to test their Compression Window System to ASTM F3038. This request specified ASTM F3038 15-Minute Forced Entry Testing be conducted at Oregon Ballistic Laboratories.

The Compression Window System Sample was shipped directly to Oregon Ballistic Laboratories, where preparations began for the July 18th, 2023, test date.

Oregon Ballistic Laboratories conducted 15-minute Forced Entry tests on July 18th, 2023, on the Compression Window System Sample.

Sample Preparation

Upon arrival on July 17th of 2023, the Framed Glass Sample was uncrated and rigidly mounted against a heavy steel frame constructed of ½" thick structural steel per Section 8 of ASTM F3038.

Forced Entry Test Setup

Riot Glass requested that The Forced Entry Test Resources (tools) for the 15-minute Concentrated Assault be used as specified in Table A1.1 of F3038-14. The pass/fail shapes, a 12" x12" x8" rigid rectangular shape and a 12" diameter and 12" high rigid cylinder, were provided to the attack teams. The names, ages, weights, heights, and dominant hands of the test personnel for each 15-minute test sequence are listed in the forced entry test results section tables. After every 15-minute attack, test personnel were substituted on an as-needed basis. Photographs of the provided tools are located in Appendix A.

Photographs were taken before and after each test period. These photos are located in Appendix A.

Documentation

Customer was on sight for installation.

Forced Entry Test Results

Sample 3 – Test 1

The six-man Forced Entry, Concentrated Assault team (shown in the table below) **COULD NOT DEFEAT** the transparent portion of the test after **15:00**(mm:ss). Photographs of the resulting damage are located in Appendix A.

Test 1 – Transparency				
Name	Handed	Weight	Shoulder Cir.	Age
Aubrey Rogers	Right	208	44	31
Andrew Jacobson	Right	203	50	33
Jason Stone	Right	145	45	41
Hunter Cook	Right	160	48	23
Chris Moe	Right	295	60	44
Damian Moe	Right	195	48	25

Sample 3 – Test 2

The six-man Forced Entry, Concentrated Assault team (shown in the table below) **COULD NOT DEFEAT** the frame edge portion of the test after **15:00**(mm:ss). Photographs of the resulting damage are located in Appendix A.

Test 2 – Frame Edge				
Name	Handed	Weight	Shoulder Cir.	Age
Aubrey Rogers	Right	208	44	31
Andrew Jacobson	Right	203	50	33
Jason Stone	Right	145	45	41
Hunter Cook	Right	160	48	23
Chris Moe	Right	295	60	44
Damian Moe	Right	195	48	25

Sample 3 – Test 3

The six-man Forced Entry, Concentrated Assault team (shown in the table below) **COULD NOT DEFEAT** the compression system portion of the test after **15:00**(mm:ss). **The standard was modified to omit attacks on the brick portion of the test buck where the compression feet were anchored per the customer's request.** Photographs of the resulting damage are located in Appendix A.

Test 3 – Compression System				
Name	Handed	Weight	Shoulder Cir.	Age
Aubrey Rogers	Right	208	44	31
Andrew Jacobson	Right	203	50	33
Jason Stone	Right	145	45	41
Hunter Cook	Right	160	48	23
Tyler Andrews	Right	265	56	27
Damian Moe	Right	195	48	25

The toolset used for all attacks was F-3038 – 14 Table "A1.1 Tool Resource Table" as seen below.



F3038 – 14

TABLE A1.1 Tool Resource Table

Resource Name and Nominal Description	Quantity
Note—Sharp-edged tools shall not be re-sharpened once testing has begun.	
Bolt Cutters—1200 mm (48 in.)	1
Broom, Push—Wooden	1
Pliers, Tongue and Groove—Channel lock style, straight jaw, 250 mm (10 in.)	1
Chisel, Cold—25 mm (1 in.) wide blade	2
Chisel, Cold—20 mm (¾ in.) wide blade	2
Chisel, Masonry—55 mm (2¼ in.) wide blade	2
Bar, Pinch Point—1500 mm (60 in.)	2
Bar, Ripping or Crowbar—1200 mm (48 in.)	2
Bar, Ripping or Crowbar—600 mm (24 in.)	2
End Nippers—350 mm (14 in.)	1
Hammer, Club or Drilling—1.36 kg (3 lb)	2
Hammer, Claw—450 g (16 oz)	2
Hammer, Sledge—5.4 kg (12 lb) head, 760 mm (30 in.) long	2
Hammer, Sledge—4.5 kg (10 lb) head, 760 mm (30 in.) long	2
Hatchet—460 mm (18 in.), 0.68 kg (1.5 lb)	1
Punch, Center—10 mm (¾ in.) diameter	1
Punch, Center—6.4 mm (¼ in.) diameter	1
Ram—54.4 kg (120 lb), 2 man, Impact area = 100 by 100 ± 6 mm (4 by 4 ± 0.25 in.)	1
Saw, Hack—300 mm (12 in.) hacksaw, all-purpose blade	2
Screwdriver, Flat—250 mm (10 in.) shank, 10 mm (¾ in.) wide flat blade	2
Screwdriver, Flat—6 mm (¼ in.) flat blade	2
Screwdriver, Phillips—250 mm (10 in.) shank, #2 drive	2
Screwdriver, Phillips—100 mm (4 in.) shank, #1 drive	2
Pliers, Locking, Vise Grip—300 mm (12 in.), large jaw	1
Wedge, Wood Splitting—235 mm (9¼ in.) long, 63 mm (2½ in.) wide blade, square head, 2.3 kg (5 lb)	3
Wrench, Adjustable—380 mm (15 in.)	1
Wrench, Adjustable—250 mm (10 in.)	2

Conclusion

The Riot Glass Compression Window System infill AP750-BR (3/4" Material) Sample **PASSED** the 15-min performance requirements defined by Section 16 of ASTM F3038 (mod). **The standard was modified to omit attacks on the brick portion of the test buck where the compression feet were anchored per the customer's request.**

ASTM F3038 - Test Report

15-minute FE testing of Riot Glass Compression Window System infill AP750-BR (3/4"
Material) Sample

Appendix A – Photographs



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ASTM F-3038 – Attack Tools / Fail Shapes



Sample 3 - Test 1 / Transparency – Pre Test



Sample 3 - Test 1 / Transparency – Post Test



This report pertains only to the samples tested and must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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Sample 3 - Test 2 / Frame Edge – Pre Test



Sample 3 - Test 2 / Frame Edge– Post Test



Sample 3 - Test 3 / Compression System – Pre Test

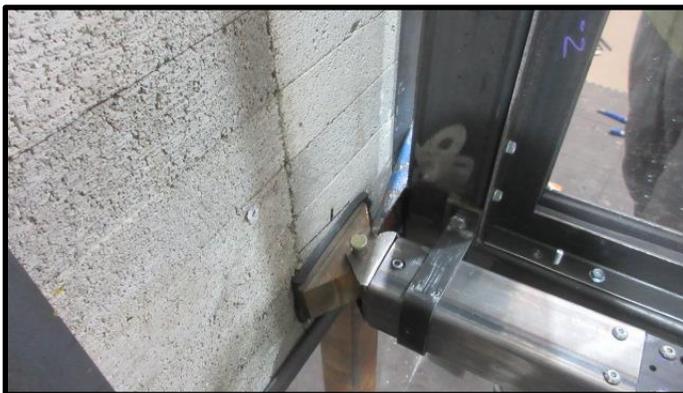


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Sample 3 - Test 3 / Compression system – Post Test



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