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ORANGEBOX USA
Date: February 13, 2017
P.O. No. . P000230-5

Report No.:102843179GRR-001J
Quote No.: Qu-00744466

Test Report For:

ORANGEBOX USA

ANSI/BIFMA X5.4-2012
LOUNGE and PUBLIC SEATING TEST STANDARD

Cubb 9

Lynwood Pearson
Project Manager

James Jantz
Reviewer

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DATE RECEIVED: February 2, 2017
DATES TESTED: February 9 – February 15, 2017

DESCRIPTION OF SAMPLES:
Condition of Test Sample: New
Part Description: Cubb 9

WORK REQUESTED/APPLICABLE DOCUMENTS:
To test the submitted sample per ANSI/BIFMA X5.4-2012 Test Standard for the following test program:

Test No.	Test Description:
9	Arm Strength - Horizontal
10	Arm Strength - Vertical
13	Arm Durability Single Seating Units - Angular

CONCLUSION:

Test	Results	Notation
ANSI/BIFMA 5.4-2012 #9 Arm Strength - Horizontal	Compliant	No loss of serviceability.
ANSI/BIFMA 5.4-2012 #10 Arm Strength - Vertical	Compliant	No loss of serviceability.
ANSI/BIFMA 5.4-2012 #13 Arm Durability Single Seating Units - Angular	Compliant	No loss of serviceability.

TEST EQUIPMENT:

Asset #	Description	Last Cal	Next Due
138112	Graduated Rule 36"	10/11/2013	10/11/2018
138148	Digital Protractor	9/20/2016	9/20/2017
138272	Load Cell 0-10000#	10/19/2016	10/19/2017
138282	Steel Rule 0-72" x 1/64	6/20/2016	6/20/2017
138343	Arm Durability Station	VBU	VBU
138400	SCIENTIFIC STOPWATCH	4/26/2016	4/26/2017
354050	SCIENTIFIC STOPWATCH	3/18/2016	3/18/2017

9. ARM STRENGTH TEST - HORIZONTAL:

Date Tested February 13, 2017
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.4-2012 Test No. 9

Inside arm width: 19.5”

Functional Load: 100 lbf. Arm less than 35” inside
Functional Load: 133 lbf. Arm greater than 35” inside

Proof Load: 150 lbf. Arm less than 35” inside
Proof Load: 200 lbf. Arm greater than 35” inside

Number of Samples Tested: One (1)

Acceptance Criteria:
Functional Load: There shall be no loss of serviceability to the unit.

Proof Load: There shall be no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.

Results:

Sample ID	Static Load	Description of Results
1	Inward	
	Functional Load: 100 lbf.	Pass
	Proof Load: 150 lbf.	Pass
	Outward	
	Functional Load: 100 lbf.	Pass
	Proof Load: 150 lbf.	Pass

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for photograph.

Arm Strength Test – Horizontal – Inward Force

Arm Strength Test – Horizontal – Outward Force

10. ARM STRENGTH TEST - VERTICAL:

Date Tested: February 15, 2017
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.4-2012 Test No. 10

Functional Load: 200 lbf. For arm width greater than 3”
Functional Load: 169 lbf. For arm width less than or equal to 3”

Proof Load: 300 lbf. For arm width greater than 3”
Proof Load: 253 lbf. For arm width less than or equal to 3”

Arm width: 0.5”

Number of Samples Tested: One (1)

Acceptance Criteria:
Functional Load: There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within .25” from it original set position as the result of the loading is considered a loss of serviceability.

Proof Load: There shall be no sudden and major change in the structural integrity of the unit.

Results:

Sample ID	Static Load	Description of Results
1	169 lbf.	Pass
	253 lbf.	Pass

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for photograph.

Arm Strength Test – Vertical

13. ARM DURABILITY TEST - SINGLE SEATS- ANGULAR:

Date Tested: February 9 – February 13, 2017
Condition of Test Sample: New

Test Procedure:
Test Method: ANSI/BIFMA X5.4-2012; Test No. 13

Load To Each Arm: 90 lbf.
Angle of Force: 10 Degrees from Vertical
Number of Cycles Required: 60,000
Cycles per Minute: 10 to 30

Number of Samples Tested: One (1)

Acceptance Criteria:
There shall be no loss of serviceability to the unit.

Results:

Sample ID	Number of Cycles	Description of Results
1	60,000	Pass

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for photograph.

Arm Durability Test - Angular

Revisions Made To Test Report

Date	Revision Description	Revised by	Revised by
23-Feb-2017	Initial release.	Lynwood Pearson	Lynwood Pearson