

**Test Report For:**  
**ANSI/BIFMA X5.1-2017**  
**General-Purpose Office Chairs**  
**Highmark Polaris Task Chair**



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**Work Requested By:**

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**Date Received: 1/9/2018****Date(s) Tested: 1/9/2018 – 2/26/2018****Description of Test Samples:**

Model / Part Number:

Condition of Item Sample: New Production

Sample 1: 5" Cylinder  
 Sample 2: 5" Cylinder  
 Sample 3: 5" Cylinder  
 Sample 4: 4" Cylinder  
 Sample 5: 4" Cylinder  
 Sample 6: 4" Cylinder  
 Sample 7: 5" Cylinder - New Mech Components  
 Sample 8: 5" Cylinder - New Mech Components  
 Sample 9: 5" Cylinder - New Mech Components  
 Sample 10: 5" Cylinder - Aluminum Base

Lab Technician(s): Derek Libbert

**Work Requested / Applicable Documents:**

Determine if the submitted test samples meet the acceptance level criteria of the applicable test standard(s):

**ANSI / BIFMA X5.1-2017 General-Purpose Office Chairs**

| <u>Test No.</u> | <u>Test Description</u>                         | <u>Sample No.</u> | <u>Results</u> |
|-----------------|-------------------------------------------------|-------------------|----------------|
| 5.0             | Backrest Strength Test – Static – Type I and II | 2                 | Passed         |
| 7.0             | Drop Test – Dynamic                             | 1, 8b, 10a        | Passed         |
| 8.0             | Swivel Test – Cyclic                            | 1                 | Passed         |
| 9.0             | Tilt Mechanism Test – Cyclic                    | 7                 | Passed         |
| 10.0            | Seating Durability Test – Cyclic                | 4, 9              | Passed         |
| 11.0            | Stability Test                                  | 1                 | Passed         |
| 12.0            | Arm Strength Test – Horizontal – Static         | 6                 | Passed         |
| 13.0            | Backrest Durability Test – Cyclic – Type I      | 6                 | Passed         |
| 14.0            | Backrest Durability Test – Cyclic – Type I      | 2                 | Passed         |
| 16.0            | Caster/Chair Base Durability Test – Cyclic      | 3                 | Passed         |
| 20.0            | Arm Durability Test – Cyclic                    | 6                 | Passed         |

**ANSI / BIFMA X5.1-2011 General-Purpose Office Chairs**

| <u>Test No.</u> | <u>Test Description</u> | <u>Sample No.</u> | <u>Results</u> |
|-----------------|-------------------------|-------------------|----------------|
| 7.0             | Base Test               | 6, 10b            | Passed         |

**Conclusion:**

The submitted sample(s) met the acceptance criteria of the tests listed above.

**1. Backrest Strength Test – Static – Type I and II:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 5.

**Notes:**

- Temperature / Humidity: 67°F / 40 RH%.
- Tilt tension: Midpoint.
- Tilt lock: Disengaged.
- Chair height: Midpoint.
- Loads were applied at a 70 degree angle to the backrest at its fully tilted position, centered 16 inches above the seat.
- Functional load: 150 lbs. for 1 minute.
- Proof load: 225 lbs. for 1 minute.
- See Photo 1 for set up.



| Specimen | Load (lbs.) | Time (sec.) | Observation                                                  |
|----------|-------------|-------------|--------------------------------------------------------------|
| 2        | 150         | 60          | No loss of serviceability.                                   |
|          | 225         | 60          | No sudden and major change in structural integrity of chair. |

**Acceptance Level:**

Functional Load: There shall be no loss of serviceability to the chair.

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

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-008.4), Tape Measure (TD-002), CMD (TD-006), Stop Watch (TD-008.11), Digital Level (TD-021) |
|------------|--------------------------------------------------------------------------------------------------------------|

**2. Drop Test – Dynamic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 7.

**Notes:**

- Temperature / Humidity: 68°F / 39 RH%.
- Tilt tension: Midpoint.
- Load dropped from a height of 6 inches through a 16 inch diameter bag.
- Functional load: 225 lbs.
- Proof load: 300 lbs.
- See Photos 2 & 3 for set up.



| Specimen | Chair Height | Load (lbs.) | Observation                                                  |
|----------|--------------|-------------|--------------------------------------------------------------|
| 1        | Maximum      | 225         | No loss of serviceability.                                   |
|          | Maximum      | 300         | No sudden and major change in structural integrity of chair. |
|          | Minimum      | 225         | No loss of serviceability.                                   |
|          | Minimum      | 300         | No sudden and major change in structural integrity of chair. |

**Acceptance Level:**

Functional Load: There shall be no loss of serviceability to the chair.

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

|            |                                           |
|------------|-------------------------------------------|
| Equipment: | Tape Measure (TD-002), Weight Bags (WB25) |
|------------|-------------------------------------------|

**3. Drop Test – Dynamic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 7.

**Notes:**

- Temperature / Humidity: 70°F / 39 RH%.
- Tilt tension: Midpoint.
- Load dropped from a height of 6 inches through a 16 inch diameter bag.
- Functional load: 225 lbs.
- Proof load: 300 lbs.
- See Photos 4 & 5 for set up.



Photo 4



Photo 5

| Specimen | Chair Height | Load (lbs.) | Observation                                                  |
|----------|--------------|-------------|--------------------------------------------------------------|
| 8b       | Maximum      | 225         | No loss of serviceability.                                   |
|          | Maximum      | 300         | No sudden and major change in structural integrity of chair. |
|          | Minimum      | 225         | No loss of serviceability.                                   |
|          | Minimum      | 300         | No sudden and major change in structural integrity of chair. |

**Acceptance Level:**

Functional Load: There shall be no loss of serviceability to the chair.

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

|                   |                                           |
|-------------------|-------------------------------------------|
| <b>Equipment:</b> | Tape Measure (TD-002), Weight Bags (WB25) |
|-------------------|-------------------------------------------|

**4. Drop Test – Dynamic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 7.

**Notes:**

- Temperature / Humidity: 69°F / 42 RH%.
- Tilt tension: Midpoint.
- Load dropped from a height of 6 inches through a 16 inch diameter bag.
- Functional load: 225 lbs.
- Proof load: 300 lbs.
- See Photos 6 & 7 for set up.



| Specimen | Chair Height | Load (lbs.) | Observation                                                  |
|----------|--------------|-------------|--------------------------------------------------------------|
| 10a      | Maximum      | 225         | No loss of serviceability.                                   |
|          | Maximum      | 300         | No sudden and major change in structural integrity of chair. |
|          | Minimum      | 225         | No loss of serviceability.                                   |
|          | Minimum      | 300         | No sudden and major change in structural integrity of chair. |

**Acceptance Level:**

Functional Load: There shall be no loss of serviceability to the chair.

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

|            |                                           |
|------------|-------------------------------------------|
| Equipment: | Tape Measure (TD-002), Weight Bags (WB25) |
|------------|-------------------------------------------|

**5. Swivel Test – Cyclic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 8.

**Notes:**

- Temperature / Humidity: 68 - 71°F / 38 - 52 RH%.
- Tilt tension: Midpoint.
- The base was cycled 360 degrees with 270 lbs. loaded on the seat, 2 inches in front of the spindle. The chair was cycled in both the maximum and minimum seat height settings.
- Test rate: 13 cpm.
- See Photos 8 & 9 for set up.



| <u>Specimen</u> | <u>Chair Height</u> | <u>Cycles</u> | <u>Observation</u>                     |
|-----------------|---------------------|---------------|----------------------------------------|
| 1               | Maximum             | 0             | Test began at the highest position.    |
|                 |                     | 60,000        | No loss of serviceability.             |
|                 | Minimum             | 60,000        | Test continued at the lowest position. |
|                 |                     | 120,000       | No loss of serviceability.             |

**Acceptance Level:** There shall be no loss of serviceability to the chair.

|            |                                                                                                |
|------------|------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-001), Tape Measure (TD-002), Stop Watch (TD-008.10), Weight Bags (WB10, WB50) |
|------------|------------------------------------------------------------------------------------------------|

**6. Tilt Mechanism Test – Cyclic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 9.

**Notes:**

- Temperature / Humidity: 68 - 70°F / 37 - 52 RH%.
- Tilt tension: Midpoint.
- Chair height: Midpoint.
- The tilt mechanism was cycled from all the way forward to all the way rearward and back while 240 lbs. was resting in the seat.
- Test rate: 19 - 20 cpm.
- See Photo 10 for set up.



| Specimen | Load (lbs.) | Observation                                                 |
|----------|-------------|-------------------------------------------------------------|
| 7        | 0           | Test began.                                                 |
|          | 300,000     | No loss of serviceability, tilt mechanism still functional. |

**Acceptance Level:** There shall be no loss of serviceability to the tilt mechanism.

|            |                                                                                                                                      |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-011.2), Tape Measure (TD-002), Stop Watch (TD-008.11), Digital Level (TD-021), Weight Bags (WB05, WB10, WB25, WB50) |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|

**7. Seating Durability Tests – Cyclic – Center Impact:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 10.3.

**Notes:**

- Temperature / Humidity: 68 - 71°F / 38 - 52 RH%.
- A 125 lb. load was dropped through a 16 in. diameter bag from 1.4 in. above uncompressed seat surface. The bag was placed 0.5 inches forward the backrest and centered side to side.
- Test rate: 24 - 27 cpm.
- See Photo 11 for set up.



Photo 11

| Specimen | Load (lbs.) | Cycles  | Observation                |
|----------|-------------|---------|----------------------------|
| 4        | 125         | 0       | Test began.                |
|          | 125         | 100,000 | No loss of serviceability. |

**Acceptance Level:** There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests. If applicable, the chair base (center structure) shall not touch the test platform as a result of the impact loads.

|            |                                                                      |
|------------|----------------------------------------------------------------------|
| Equipment: | Test Machine (TM-004), Tape Measure (TD-002), Stop Watch (TD-008.13) |
|------------|----------------------------------------------------------------------|

**8. Seating Durability Tests – Cyclic – Front Corner Load Ease:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 10.4.

**Notes:**

- Temperature / Humidity: 70 - 71°F / 38 - 42 RH%.
- Two 200 lb. loads were applied alternately through 8 inch load pads positioned at the front corners of the seat, flush with the load bearing surface to the front and sides.
- Test rate: 11 - 12 cpm.
- See Photo 12 for set up.



Photo 12

| Specimen | Load (lbs.) | Cycles | Observation                |
|----------|-------------|--------|----------------------------|
| 4        | 200         | 0      | Test began.                |
|          | 200         | 20,000 | No loss of serviceability. |

**Acceptance Level:** There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests. If applicable, the chair base (center structure) shall not touch the test platform as a result of the impact loads.

|            |                                                                                   |
|------------|-----------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-012.1 & TM-012.2), Tape Measure (TD-002), Stop Watch (TD-008.10) |
|------------|-----------------------------------------------------------------------------------|

**9. Seating Durability Tests – Cyclic – Center Impact:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 10.3.

**Notes:**

- Temperature / Humidity: 69 - 70°F / 37 - 52 RH%.
- A 125 lb. load was dropped through a 16 in. diameter bag from 1.4 in. above uncompressed seat surface. The bag was placed 0.5 inches forward the backrest and centered side to side.
- Test rate: 22 - 24 cpm.
- See Photo 13 for set up.



Photo 13

| Specimen | Load (lbs.) | Cycles  | Observation                |
|----------|-------------|---------|----------------------------|
| 9        | 125         | 0       | Test began.                |
|          | 125         | 100,000 | No loss of serviceability. |

**Acceptance Level:** There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests. If applicable, the chair base (center structure) shall not touch the test platform as a result of the impact loads.

|            |                                                                      |
|------------|----------------------------------------------------------------------|
| Equipment: | Test Machine (TM-004), Tape Measure (TD-002), Stop Watch (TD-008.13) |
|------------|----------------------------------------------------------------------|

**10. Seating Durability Tests – Cyclic – Front Corner Load Ease:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 10.4.

**Notes:**

- Temperature / Humidity: 69°F / 41 - 43 RH%.
- Two 200 lb. loads were applied alternately through 8 inch load pads positioned at the front corners of the seat, flush with the load bearing surface to the front and sides.
- Test rate: 18 - 19 cpm.
- See Photo 14 for set up.



Photo 14

| <u>Specimen</u> | <u>Load (lbs.)</u> | <u>Cycles</u> | <u>Observation</u>         |
|-----------------|--------------------|---------------|----------------------------|
| 9               | 200                | 0             | Test began.                |
|                 | 200                | 20,000        | No loss of serviceability. |

**Acceptance Level:** There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests. If applicable, the chair base (center structure) shall not touch the test platform as a result of the impact loads.

|            |                                                                                   |
|------------|-----------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-012.1 & TM-012.2), Tape Measure (TD-002), Stop Watch (TD-008.10) |
|------------|-----------------------------------------------------------------------------------|

**11. Stability Test – Rear Stability:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 11.

**Notes:**

- Temperature / Humidity: 68°F / 40 RH%.
- Type III rear stability performed with 6 discs in seat, force applied to front of top disc, tilt lock fully engaged in upright position.
- Type III rear stability force: 1.1 (47 – H). The load shall not be less than 20.9 lbs.
- Type I rear stability performed with 13 discs in seat, tilt lock disengaged.
- Seat height (H): 23.75 inches.
- See Photos 15 & 16 for set up.



| Specimen | Direction     | Required Force (lbs.) | Achieved Force (lbs.) | Observation                 |
|----------|---------------|-----------------------|-----------------------|-----------------------------|
| 1        | Rear Type III | 25.9                  | > 25.9                | The chair did not tip over. |
|          | Rear Type I   | NA                    | NA                    | The chair did not tip over. |

**Acceptance Level:** The chair shall not tip over.

|            |                                                                                                                         |
|------------|-------------------------------------------------------------------------------------------------------------------------|
| Equipment: | Tape Measure (TD-002), Support Fixture (TD-010), Force Gauge (TD-011), Stability Disks (TD-013), Digital Level (TD-021) |
|------------|-------------------------------------------------------------------------------------------------------------------------|

**12. Stability Test – Front Stability:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 11.

**Notes:**

- Temperature / Humidity: 68°F / 40 RH%.
- Vertical force: 135 lbs. was hung 2.4 in. back from the front of the seat pan.
- Horizontal force: 4.5 lbs. level with seat pan.
- See Photo 17 for set up.



| <u>Specimen</u> | <u>Direction</u> | <u>Required Force (lbs.)</u> | <u>Achieved Force (lbs.)</u> | <u>Observation</u>          |
|-----------------|------------------|------------------------------|------------------------------|-----------------------------|
| 1               | Front            | 4.5                          | > 4.5                        | The chair did not tip over. |

**Acceptance Level:** The chair shall not tip over as the result of the (4.5 lb.) force application.

|            |                                                                                            |
|------------|--------------------------------------------------------------------------------------------|
| Equipment: | Tape Measure (TD-002), Force Gauge (TD-011), Weight Scale (TD-020), Digital Level (TD-021) |
|------------|--------------------------------------------------------------------------------------------|

**13. Arm Strength Test – Vertical – Static:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 12.

**Notes:**

- Temperature / Humidity: 71<sup>0</sup>F / 38 RH%.
- Loads were applied using a 5 inch adapter positioned at the weakest position of the armrest.
- Functional load: 169 lbs. held for 1 minute.
- Proof load: 253 lbs. held for 15 seconds.
- See Photo 18 for set up.



| Specimen | Load (lbs.) | Time (sec.) | Observation                              |
|----------|-------------|-------------|------------------------------------------|
| 6        | 169         | 60          | No loss of serviceability.               |
|          | 253         | 15          | No sudden and major change to the chair. |

**Acceptance Level:**

Functional Load: There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its 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 chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable.

|            |                                                                                                |
|------------|------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-008.2), Tape Measure (TD-002), Stop Watch (TD-008.11), Digital Level (TD-021) |
|------------|------------------------------------------------------------------------------------------------|

**14. Arm Strength Test – Horizontal – Static:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 13.

**Notes:**

- Temperature / Humidity: 71<sup>o</sup>F / 38 RH%.
- Loads were applied at the weakest position of the armrest.
- Functional load: 100 lbs. held for 1 minute.
- Proof load: 150 lbs. held for 15 seconds.
- See Photo 19 for set up.



Photo 19

| Specimen | Load (lbs.) | Time (sec.) | Observation                              |
|----------|-------------|-------------|------------------------------------------|
| 6        | 100         | 60          | No loss of serviceability.               |
|          | 150         | 15          | No sudden and major change to the chair. |

**Acceptance Level:**

Functional Load: A functional load applied once shall cause no loss of serviceability.

Proof Load: A proof load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.

|            |                                                                                                |
|------------|------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-008.2), Tape Measure (TD-002), Stop Watch (TD-008.11), Digital Level (TD-021) |
|------------|------------------------------------------------------------------------------------------------|

**15. Backrest Durability Test – Cyclic – Type I:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 14.

**Notes:**

- Temperature / Humidity: 70 - 71°F / 38 - 52 RH%.
- Tilt tension: Midpoint.
- Chair height: Midpoint.
- Tilt lock: disengaged.
- A 100 lb. force was applied at the specified location of the backrest at a 90 degree angle to the backrest, 16 inches above the seat. A 240 lb. load was placed in the seat.
- 80,000 cycles at the center of the back, 20,000 cycles 4” left of center, and 20,000 cycles 4” right of center.
- Test rate: 22 - 25 cpm.
- See Photos 20 & 21 for set up.



Photo 20



Photo 21

| Specimen | Segment  | Cycles  | Observation                                         |
|----------|----------|---------|-----------------------------------------------------|
| 2        | Center   | 0       | Test began at the center on the backrest.           |
|          |          | 80,000  | No loss of serviceability.                          |
|          | 4” left  | 80,000  | Test continued offset to the left on the backrest.  |
|          |          | 100,000 | No loss of serviceability.                          |
|          | 4” right | 100,000 | Test continued offset to the right on the backrest. |
|          |          | 120,000 | No loss of serviceability.                          |

**Acceptance Level:** There shall be no loss of serviceability.

|            |                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-008.4), Tape Measure (TD-002), CMD (TD-006), Stop Watch (TD-008.11), Digital Level (TD-021), Weight Bags (WB05, WB10, WB25, WB50) |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

**16. Caster/Chair Base Durability Test – Cyclic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 16.

**Notes:**

- Temperature / Humidity: 69 - 71°F / 38 - 52 RH%.
- The casters are required to carry the weight of the chair plus 270 lbs.
- The specimen was cycled over three 0.125” obstacles for 2,000 cycles. The obstacles were then removed and the chair was cycled over a smooth surface for the duration of the test. After the cycles were complete, each caster was subjected to a 5 lb. caster retention test.
- Test rate: 8 - 9 cpm.
- See Photos 22 & 23 for set up.



| Specimen | Segment        | Cycles  | Observation                                                  |
|----------|----------------|---------|--------------------------------------------------------------|
| 3        | Obstacles      | 0       | Test began over obstacles.                                   |
|          |                | 2,000   | No changes.                                                  |
|          | Smooth Surface | 2,000   | Test continued over smooth surface.                          |
|          |                | 100,000 | No loss of serviceability.                                   |
|          | Pull Force     | N/A     | Each caster exceeded the 5 lb. caster retention requirement. |

**Acceptance Level:** There shall be no loss of serviceability. No part of the caster shall separate from the chair as a result of the application of the 22 N (5 lbf.) force.

|            |                                                                                                                                                                                   |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-007), Tape Measure (TD-002), Stop Watch (TD-008.13), Force Gauge (TD-011), Weight Scale (TD-020), Obstacles (TD-028), Weight Bags (WB01, WB05, WB10, WB25, WB50) |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**17. Arm Durability Test – Cyclic:**

Testing was performed per ANSI/BIFMA X5.1 – 2017, Section 20.

**Notes:**

- Temperature / Humidity: 71°F / 46 - 52 RH%.
- A force of 90 lbs. was applied to each arm simultaneously at an initial 10° to the arm through a 4 inch loading device.
- Test rate: 22 - 24 cpm.
- See Photo 24 for set up.



Photo 24

| Specimen | Force (lbs.) | Cycles | Observation                |
|----------|--------------|--------|----------------------------|
| 6        | 90           | 0      | Test began.                |
|          | 90           | 60,000 | No loss of serviceability. |

**Acceptance Level:** There shall be no loss of serviceability to the chair.

|            |                                                                                              |
|------------|----------------------------------------------------------------------------------------------|
| Equipment: | Test Machine (TM-003), Tape Measure (TD-002), Stop Watch (TD-008.13), Digital Level (TD-021) |
|------------|----------------------------------------------------------------------------------------------|

**18. Base Test - Static:**

Testing was performed per ANSI/BIFMA X5.1 – 2011, Section 7.

**Notes:**

- Temperature / Humidity: 70°F / 40 RH%.
- Casters were removed from stems; each stems was then inserted into the base.
- 2,500 lbs of force was applied for 1 minute, then released.
- 2,500 lbs of force was applied a second time for an additional minute, then released.
- See Photo 25 for set up.



Photo 25

| <u>Specimen</u> | <u>Load (lbs.)</u> | <u>Time (sec.)</u> | <u>Observation</u>                                  |
|-----------------|--------------------|--------------------|-----------------------------------------------------|
| 6               | 2,500              | 60                 | No sudden and major change in structural integrity. |
|                 | 2,500              | 60                 | No sudden and major change in structural integrity. |

**Requirement:** There shall be no sudden and major change in the structural integrity of the base.  
The center column may not touch the test platform during the load applications.

|                   |                                               |
|-------------------|-----------------------------------------------|
| <b>Equipment:</b> | Test Machine (TM-005), Stop Watch (TD-008.10) |
|-------------------|-----------------------------------------------|

**19. Base Test - Static:**

Testing was performed per ANSI/BIFMA X5.1 – 2011, Section 7.

**Notes:**

- Temperature / Humidity: 70°F / 42 RH%.
- Casters were removed from stems; each stems was then inserted into the base.
- 2,500 lbs of force was applied for 1 minute, then released.
- 2,500 lbs of force was applied a second time for an additional minute, then released.
- See Photo 26 for set up.



Photo 26

| Specimen | Load (lbs.) | Time (sec.) | Observation                                         |
|----------|-------------|-------------|-----------------------------------------------------|
| 10b      | 2,500       | 60          | No sudden and major change in structural integrity. |
|          | 2,500       | 60          | No sudden and major change in structural integrity. |

**Requirement:** There shall be no sudden and major change in the structural integrity of the base. The center column may not touch the test platform during the load applications.

|            |                                               |
|------------|-----------------------------------------------|
| Equipment: | Test Machine (TM-005), Stop Watch (TD-008.13) |
|------------|-----------------------------------------------|