

## WINDOW LISTING PROGRAM

Customer: Lux Windows & Glass Ltd.  
 Class: Fenestration Energy Performance  
 Location: Calgary, Alberta  
 Website: Luxwindows.com  
 Listing No. W475-1  
 Report No. W475-1, Edition 5  
 Effective Date: March 21, 2011  
 Last Revised Date: April 26, 2017  
 Expires: <N/A>

Standards: CSA A440.2-09 and 14 "Fenestration Energy Performance"

Product: Fenestration Products

Markings: Each product is marked with the following content on a permanent label that is readily visible after installation:

- Manufacturer's Name, Trademark or other recognized symbol of identification
- QAI File Number (W475)
- QAI logo with "c" indicator
- "Evaluation for energy performance in accordance with CSA A440.2"
- "Évalué pour la performance d'énergie en accord à la norme CSA A440.2"

Models /  
 Ratings:

### 1404 Aluminum Clad Wood Awning Window:

| Product Model Code:                               | U-Value<br>(W/m <sup>2</sup> *K) | Energy<br>Rating |
|---|----------------------------------|------------------|
| A-LE(3,e.042)-Arg(14)-Cl(3)                       | 1.58                             | 22               |
| A-Cl(3)-Air(9.5)-Cl(3)-Air(9.5)-Cl(3)             | 1.88                             | 27               |
| A-LE(3,e.042)-Arg(9.5)-Cl(3)-Air(9.5)-Cl(3)       | 1.39                             | 25               |
| A-LE(3,e.042)-Arg(9.5)-Cl(3)-Arg(9.5)-LE(3,e.042) | 1.15                             | 29               |
| A-LE(5,e.042)-Arg(11.5)-Cl(5)                     | 1.60                             | 22               |
| A-LE(5,e.042)-Arg(11.5)-Cl(5)-G1                  | 1.63                             | 20               |
| A-LE(5,e.042)-Arg(11.5)-Cl(5)-G2                  | 1.64                             | 19               |
| A-LE(5,e.022)-Arg(11.5)-i89(5,e.149)              | 1.40                             | 20               |
| A-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G1           | 1.40                             | 20               |
| A-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G2           | 1.41                             | 19               |
| A-LE(3,e.042)-Arg(14.5)-Cl(3)                     | 1.62                             | 21               |
| A-LE(3,e.042)-Arg(14.5)-Cl(3)-G1                  | 1.63                             | 20               |
| A-LE(3,e.042)-Arg(14.5)-Cl(3)-G2                  | 1.64                             | 19               |
| A-LE(3,e.022)-Arg(14.5)-i89(3,e.149)              | 1.40                             | 20               |
| A-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G1           | 1.40                             | 20               |



# LABORATORIES

CERTIFICATION TESTING INSPECTION

VANCOUVER, BC: 877.461.8378 ph. | 604.527.8368 fx.  
 LOS ANGELES, CA: 909.483.0250 ph. | 909.483.0336 fx.  
 WASHINGTON, DC: 540.636.9445 ph. | 540.636.9414 fx.  
 TULSA, OK: 918.437.8333 ph. | 918.437.8487 fx.  
 TORONTO, ON: 905.605.5444  
 SEATTLE, WA: 425.512.8419  
 WEBSITE: WWW.QAI.ORG

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|---|------|----|
| A-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G2               | 1.41 | 19 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)           | 1.39 | 25 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G1        | 1.39 | 24 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G2        | 1.40 | 24 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)     | 1.16 | 29 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G1  | 1.17 | 28 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G2  | 1.17 | 27 |
| A-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)    | 1.25 | 23 |
| A-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G1 | 1.25 | 22 |
| A-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G2 | 1.26 | 21 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)           | 1.58 | 21 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G1        | 1.63 | 19 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G2        | 1.65 | 18 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)     | 1.37 | 24 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G1  | 1.39 | 23 |
| A-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G2  | 1.40 | 22 |
| A-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)    | 1.40 | 20 |
| A-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G1 | 1.43 | 18 |
| A-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G2 | 1.44 | 18 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)             | 1.30 | 27 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G1          | 1.31 | 26 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G2          | 1.31 | 26 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)       | 1.05 | 31 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G1    | 1.05 | 31 |
| A-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G2    | 1.05 | 30 |
| A-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)      | 1.17 | 25 |
| A-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G1   | 1.17 | 24 |
| A-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G2   | 1.17 | 23 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)           | 1.36 | 25 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G1        | 1.37 | 24 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G2        | 1.38 | 23 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)     | 1.14 | 29 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G1  | 1.14 | 28 |
| A-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G2  | 1.15 | 27 |
| A-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)    | 1.22 | 23 |
| A-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G1 | 1.22 | 23 |
| A-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G2 | 1.23 | 22 |
| A-Cl(3)-Arg(14.5)-LE(3,e.068)                         | 1.68 | 31 |
| A-Cl(3)-Arg(14.5)-LE(3,e.068)-G                       | 1.62 | 25 |
| A-Cl(5)-Arg(11.5)-LE(5,e.068)                         | 1.67 | 30 |
| A-Cl(5)-Arg(11.5)-LE(5,e.068)-G                       | 1.63 | 23 |
| A-GR(6,e.84)-Arg(11.5)-LE(4,e.042)                    | 1.63 | 11 |
| A-GR(6,e.84)-Arg(11.5)-LE(4,e.042)-G                  | 1.60 | 10 |
| A-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)           | 1.42 | 34 |
| A-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G         | 1.41 | 27 |
| A-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)               | 1.49 | 31 |
| A-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)-G             | 1.49 | 24 |
| A-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)          | 1.47 | 15 |



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| A-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)-G             | 1.48 | 13 |
| A-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)   | 1.12 | 25 |
| A-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)-G | 1.17 | 21 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)          | 1.22 | 28 |
| A-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G        | 1.22 | 24 |

1403 Aluminum Clad Wood Casement Window

| Product Model Code:                                   | U-Value (W/m <sup>2</sup> *K) | Energy Rating |
|---|-------------------------------|---------------|
| C-LE(3,e.042)-Arg(14)-Cl(3)                           | 1.53                          | 23            |
| C-Cl(3)-Air(9.5)-Cl(3)-Air(9.5)-Cl(3)                 | 1.84                          | 28            |
| C-LE(3,e.042)-Arg(9.5)-Cl(3)-Air(9.5)-Cl(3)           | 1.37                          | 26            |
| C-LE(3,e.042)-Arg(9.5)-Cl(3)-Arg(9.5)-LE(3,e.042)     | 1.13                          | 30            |
| C-LE(5,e.042)-Arg(11.5)-Cl(5)                         | 1.61                          | 21            |
| C-LE(5,e.042)-Arg(11.5)-Cl(5)-G1                      | 1.64                          | 20            |
| C-LE(5,e.042)-Arg(11.5)-Cl(5)-G2                      | 1.66                          | 19            |
| C-LE(5,e.022)-Arg(11.5)-i89(5,e.149)                  | 1.38                          | 21            |
| C-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G1               | 1.41                          | 20            |
| C-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G2               | 1.42                          | 19            |
| C-LE(3,e.042)-Arg(14.5)-Cl(3)                         | 1.62                          | 21            |
| C-LE(3,e.042)-Arg(14.5)-Cl(3)-G1                      | 1.64                          | 20            |
| C-LE(3,e.042)-Arg(14.5)-Cl(3)-G2                      | 1.65                          | 19            |
| C-LE(3,e.022)-Arg(14.5)-i89(3,e.149)                  | 1.39                          | 21            |
| C-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G1               | 1.41                          | 20            |
| C-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G2               | 1.41                          | 20            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)           | 1.39                          | 25            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G1        | 1.41                          | 24            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G2        | 1.42                          | 23            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)     | 1.17                          | 29            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G1  | 1.18                          | 28            |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G2  | 1.19                          | 27            |
| C-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)    | 1.24                          | 23            |
| C-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G1 | 1.26                          | 22            |
| C-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G2 | 1.27                          | 21            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)           | 1.58                          | 20            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G1        | 1.65                          | 18            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G2        | 1.67                          | 18            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)     | 1.38                          | 24            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G1  | 1.41                          | 22            |
| C-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G2  | 1.42                          | 22            |
| C-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)    | 1.38                          | 20            |
| C-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G1 | 1.43                          | 19            |
| C-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G2 | 1.45                          | 17            |
| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)             | 1.31                          | 27            |
| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G1          | 1.32                          | 26            |
| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G2          | 1.33                          | 25            |
| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)       | 1.06                          | 31            |



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| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G1         | 1.06 | 31 |
| C-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G2         | 1.06 | 30 |
| C-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)           | 1.16 | 25 |
| C-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G1        | 1.17 | 24 |
| C-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G2        | 1.18 | 23 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)                | 1.37 | 25 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G1             | 1.39 | 24 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G2             | 1.40 | 23 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)          | 1.15 | 29 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G1       | 1.16 | 28 |
| C-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G2       | 1.17 | 27 |
| C-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)         | 1.21 | 23 |
| C-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G1      | 1.23 | 23 |
| C-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G2      | 1.24 | 22 |
| C-Cl(3)-Arg(14.5)-LE(3,e.068)                              | 1.68 | 32 |
| C-Cl(3)-Arg(14.5)-LE(3,e.068)-G                            | 1.65 | 24 |
| C-Cl(5)-Arg(11.5)-LE(5,e.068)                              | 1.68 | 30 |
| C-Cl(5)-Arg(11.5)-LE(5,e.068)-G                            | 1.67 | 22 |
| C-GR(6,e.84)-Arg(11.5)-LE(4,e.042)                         | 1.64 | 11 |
| C-GR(6,e.84)-Arg(11.5)-LE(4,e.042)-G                       | 1.64 | 9  |
| C-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)                | 1.43 | 34 |
| C-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G              | 1.44 | 26 |
| C-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)                    | 1.50 | 30 |
| C-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)-G                  | 1.53 | 23 |
| C-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)               | 1.48 | 15 |
| C-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)-G             | 1.51 | 12 |
| C-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)   | 1.12 | 25 |
| C-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)-G | 1.20 | 21 |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)          | 1.23 | 28 |
| C-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G        | 1.25 | 24 |

1401 Aluminum Clad Wood Picture Window

| Product Model Code:                               | U-Value (W/m <sup>2</sup> *K) | Energy Rating |
|---|-------------------------------|---------------|
| P-LE(3,e.042)-Arg(14)-Cl(3)                       | 1.54                          | 28            |
| P-Cl(3)-Air(9.5)-Cl(3)-Air(9.5)-Cl(3)             | 1.90                          | 34            |
| P-LE(3,e.042)-Arg(9.5)-Cl(3)-Air(9.5)-Cl(3)       | 1.29                          | 31            |
| P-LE(3,e.042)-Arg(9.5)-Cl(3)-Arg(9.5)-LE(3,e.042) | 0.99                          | 36            |
| P-LE(5,e.042)-Arg(11.5)-Cl(5)                     | 1.53                          | 28            |
| P-LE(5,e.042)-Arg(11.5)-Cl(5)-G1                  | 1.58                          | 26            |
| P-LE(5,e.042)-Arg(11.5)-Cl(5)-G2                  | 1.60                          | 25            |
| P-LE(5,e.022)-Arg(11.5)-i89(5,e.149)              | 1.24                          | 27            |
| P-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G1           | 1.28                          | 25            |
| P-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G2           | 1.30                          | 24            |
| P-LE(3,e.042)-Arg(14.5)-Cl(3)                     | 1.56                          | 27            |
| P-LE(3,e.042)-Arg(14.5)-Cl(3)-G1                  | 1.59                          | 25            |
| P-LE(3,e.042)-Arg(14.5)-Cl(3)-G2                  | 1.60                          | 25            |



# LABORATORIES

CERTIFICATION TESTING INSPECTION

VANCOUVER, BC: 877.461.8378 ph. | 604.527.8368 fx.  
 LOS ANGELES, CA: 909.483.0250 ph. | 909.483.0336 fx.  
 WASHINGTON, DC: 540.636.9445 ph. | 540.636.9414 fx.  
 TULSA, OK: 918.437.8333 ph. | 918.437.8487 fx.  
 TORONTO, ON: 905.605.5444  
 SEATTLE, WA: 425.512.8419  
 WEBSITE: WWW.QAI.ORG

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|---|------|----|
| P-LE(3,e.022)-Arg(14.5)-i89(3,e.149)                  | 1.25 | 26 |
| P-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G1               | 1.29 | 25 |
| P-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G2               | 1.29 | 24 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)           | 1.25 | 32 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G1        | 1.27 | 31 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G2        | 1.29 | 30 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)     | 0.96 | 37 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G1  | 0.98 | 36 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G2  | 0.99 | 35 |
| P-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)    | 1.05 | 30 |
| P-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G1 | 1.08 | 28 |
| P-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G2 | 1.09 | 28 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)           | 1.48 | 27 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G1        | 1.58 | 24 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G2        | 1.61 | 23 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)     | 1.22 | 31 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G1  | 1.27 | 29 |
| P-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G2  | 1.29 | 28 |
| P-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)    | 1.23 | 26 |
| P-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G1 | 1.30 | 24 |
| P-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G2 | 1.33 | 23 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)             | 1.17 | 34 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G1          | 1.19 | 33 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G2          | 1.20 | 32 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)       | 0.85 | 40 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G1    | 0.86 | 38 |
| P-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G2    | 0.86 | 38 |
| P-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)      | 0.98 | 31 |
| P-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G1   | 1.00 | 30 |
| P-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G2   | 1.01 | 29 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)           | 1.23 | 33 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G1        | 1.26 | 31 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G2        | 1.28 | 30 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)     | 0.96 | 37 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G1  | 0.97 | 36 |
| P-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G2  | 0.98 | 35 |
| P-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)    | 1.04 | 30 |
| P-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G1 | 1.07 | 29 |
| P-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G2 | 1.08 | 28 |
| P-Cl(3)-Arg(14.5)-LE(3,e.068)                         | 1.63 | 40 |
| P-Cl(3)-Arg(14.5)-LE(3,e.068)-G                       | 1.59 | 30 |
| P-Cl(5)-Arg(11.5)-LE(5,e.068)                         | 1.61 | 39 |
| P-Cl(5)-Arg(11.5)-LE(5,e.068)-G                       | 1.6  | 29 |
| P-GR(6,e.84)-Arg(11.5)-LE(4,e.042)                    | 1.55 | 15 |
| P-GR(6,e.84)-Arg(11.5)-LE(4,e.042)-G                  | 1.56 | 12 |
| P-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)           | 1.28 | 44 |
| P-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G         | 1.30 | 33 |
| P-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)               | 1.39 | 39 |



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| P-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)-G                  | 1.43 | 29 |
| P-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)               | 1.36 | 19 |
| P-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)-G             | 1.41 | 15 |
| P-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)   | 0.90 | 32 |
| P-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)-G | 1.00 | 27 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)          | 1.02 | 37 |
| P-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G        | 1.06 | 30 |

1402 Aluminum Clad Wood Fixed Window

| Product Model Code:                                   | U-Value (W/m <sup>2</sup> *K) | Energy Rating |
|---|-------------------------------|---------------|
| F-LE(5,e.042)-Arg(11.5)-Cl(5)                         | 1.54                          | 25            |
| F-LE(5,e.042)-Arg(11.5)-Cl(5)-G1                      | 1.58                          | 23            |
| F-LE(5,e.042)-Arg(11.5)-Cl(5)-G2                      | 1.60                          | 22            |
| F-LE(5,e.022)-Arg(11.5)-i89(5,e.149)                  | 1.28                          | 25            |
| F-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G1               | 1.32                          | 23            |
| F-LE(5,e.022)-Arg(11.5)-i89(5,e.149)-G2               | 1.33                          | 22            |
| F-LE(3,e.042)-Arg(14.5)-Cl(3)                         | 1.56                          | 25            |
| F-LE(3,e.042)-Arg(14.5)-Cl(3)-G1                      | 1.59                          | 24            |
| F-LE(3,e.042)-Arg(14.5)-Cl(3)-G2                      | 1.60                          | 23            |
| F-LE(3,e.022)-Arg(14.5)-i89(3,e.149)                  | 1.29                          | 24            |
| F-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G1               | 1.32                          | 23            |
| F-LE(3,e.022)-Arg(14.5)-i89(3,e.149)-G2               | 1.33                          | 22            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)           | 1.30                          | 29            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G1        | 1.33                          | 28            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-Cl(3)-G2        | 1.34                          | 27            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)     | 1.05                          | 33            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G1  | 1.07                          | 32            |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.042)-G2  | 1.07                          | 32            |
| F-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)    | 1.13                          | 27            |
| F-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G1 | 1.16                          | 26            |
| F-LE(3,e.022)-Arg(9.8)-Cl(4)-Arg(9.8)-i89(3,e.149)-G2 | 1.17                          | 25            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)           | 1.51                          | 24            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G1        | 1.60                          | 22            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-Cl(5)-G2        | 1.63                          | 20            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)     | 1.27                          | 28            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G1  | 1.32                          | 26            |
| F-LE(5,e.042)-Arg(6.5)-Cl(6)-Arg(6.5)-LE(5,e.042)-G2  | 1.34                          | 25            |
| F-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)    | 1.29                          | 23            |
| F-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G1 | 1.36                          | 21            |
| F-LE(5,e.022)-Arg(6.5)-Cl(6)-Arg(6.5)-i89(6,e.149)-G2 | 1.38                          | 20            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)             | 1.23                          | 31            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G1          | 1.25                          | 29            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-Cl(3)-G2          | 1.25                          | 29            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)       | 0.94                          | 36            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G1    | 0.95                          | 35            |
| F-LE(3,e.042)-Arg(13)-Cl(4)-Arg(13)-LE(3,e.042)-G2    | 0.95                          | 34            |
| F-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)      | 1.06                          | 28            |



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| F-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G1        | 1.08 | 27 |
| F-LE(3,e.022)-Arg(13)-Cl(4)-Arg(13)-i89(3,e.149)-G2        | 1.08 | 27 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)                | 1.29 | 29 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G1             | 1.32 | 28 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-Cl(5)-G2             | 1.33 | 27 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)          | 1.04 | 33 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G1       | 1.05 | 32 |
| F-LE(5,e.042)-Arg(9.8)-Cl(6)-Arg(9.8)-LE(5,e.042)-G2       | 1.06 | 31 |
| F-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)         | 1.11 | 27 |
| F-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G1      | 1.14 | 26 |
| F-LE(5,e.022)-Arg(9.8)-Cl(6)-Arg(9.8)-i89(5,e.149)-G2      | 1.15 | 25 |
| F-Cl(3)-Arg(14.5)-LE(3,e.068)                              | 1.62 | 36 |
| F-Cl(3)-Arg(14.5)-LE(3,e.068)-G                            | 1.59 | 27 |
| F-Cl(5)-Arg(11.5)-LE(5,e.068)                              | 1.61 | 35 |
| F-Cl(5)-Arg(11.5)-LE(5,e.068)-G                            | 1.59 | 26 |
| F-GR(6,e.84)-Arg(11.5)-LE(4,e.042)                         | 1.56 | 14 |
| F-GR(6,e.84)-Arg(11.5)-LE(4,e.042)-G                       | 1.56 | 12 |
| F-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)                | 1.34 | 39 |
| F-Cl(3)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G              | 1.35 | 29 |
| F-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)                    | 1.42 | 35 |
| F-Cl(5)-Arg(8)-Cl(6)-Arg(8)-LE(5,e.068)-G                  | 1.46 | 26 |
| F-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)               | 1.40 | 17 |
| F-GR(6,e.84)-Arg(8)-Cl(5)-Arg(8)-LE(4,e.042)-G             | 1.44 | 14 |
| F-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)   | 0.99 | 29 |
| F-LE(3,e.022)-Arg(9.8)-LE(4,e.068)-Arg(9.8)-i89(3,e.149)-G | 1.08 | 24 |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)          | 1.10 | 33 |
| F-LE(3,e.042)-Arg(9.8)-Cl(4)-Arg(9.8)-LE(3,e.068)-G        | 1.13 | 27 |

2450 Aluminum Clad Wood Patio Door

| Product Model Code:                    | U-Value (W/m <sup>2</sup> *K) | Energy Rating |
|--|-------------------------------|---------------|
| PD-LE(3,e.042)-Arg(9.5)-Cl(3)          | 1.85                          | 14            |
| PD-LE(3,e.042)-Arg(9.5)-Cl(3)-G        | 1.85                          | 8             |
| PD-LE(3,e.022)-Arg(9.5)-i89(3,e.149)   | 1.63                          | 13            |
| PD-LE(3,e.022)-Arg(9.5)-i89(3,e.149)-G | 1.78                          | 6             |
| PD-Cl(3)-Arg(9.5)-LE(3,e.068)          | 1.88                          | 23            |
| PD-Cl(3)-Arg(9.5)-LE(3,e.068)-G        | 1.88                          | 12            |
| PD-Cl(5)-Arg(6.5)-LE(5,e.068)          | 2.11                          | 17            |
| PD-Cl(5)-Arg(6.5)-LE(5,e.068)-G        | 2.19                          | 5             |
| PD-GR(6,e.84)-Arg(6.5)-LE(4,e.042)     | 2.08                          | 1             |
| PD-GR(6,e.84)-Arg(6.5)-LE(4,e.042)-G   | 2.18                          | -5            |
| PD-LE(3,e.042)-Arg(11.1)-(3,e.149)     | 1.55                          | 15            |
| PD-LE(3,e.042)-Arg(12.7)-(3,e.149)     | 1.55                          | 15            |
| PD-LE(3,e.042)-Arg(11.1)-(3,e.149)-G   | 1.63                          | 9             |
| PD-LE(3,e.042)-Arg(12.7)-(3,e.149)-G   | 1.67                          | 8             |

Hybrid Fir Patio Door

| Product Model Code:                               | U-Value<br>(W/m <sup>2</sup> *K) |
|---|----------------------------------|
| LUX-HFPD-SLD-3CL-3,068(4)-16,Ar-XL                | 1.75                             |
| LUX-HFPD-SLD-3CL-3,068(4)-16,Ar-XL-S              | 1.88                             |
| LUX-HFPD-SLD-6CL-3,068(4)-16,Ar-XL                | 1.74                             |
| LUX-HFPD-SLD-6CL-3,068(4)-16,Ar-XL-S              | 1.88                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-16,Ar-XL               | 1.61                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-16,Ar-XL-S             | 1.60                             |
| LUX-HFPD-SLD-6,042(2)- 3CL-16,Ar-XL               | 1.59                             |
| LUX-HFPD-SLD-6,042(2)- 3CL-16,Ar-XL-S             | 1.59                             |
| LUX-HFPD-SLD-6,SCG-3,042(3)-16,Ar-XL              | 1.59                             |
| LUX-HFPD-SLD-6,SCG-3,042(3)-16,Ar-XL-S            | 1.59                             |
| LUX-HFPD-SLD-3,022(2)-3,149(4)-16,Ar-XL           | 1.39                             |
| LUX-HFPD-SLD-3,022(2)-3,149(4)-16,Ar-XL-S         | 1.46                             |
| LUX-HFPD-SLD-3CL-3CL -3,068(6)-12,Ar-XL           | 1.44                             |
| LUX-HFPD-SLD-3CL-3CL -3,068(6)-12,Ar-XL-S         | 1.56                             |
| LUX-HFPD-SLD-6CL-3CL-3,068(6)-10,Ar-XL            | 1.47                             |
| LUX-HFPD-SLD-6CL-3CL-3,068(6)-10,Ar-XL-S          | 1.60                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-3CL-12,Ar-XL           | 1.36                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-3CL-12,Ar-XL-S         | 1.38                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-3,068(6)12,Ar-XL       | 1.22                             |
| LUX-HFPD-SLD-3,042(2)- 3CL-3,068(6)12,Ar-XL-S     | 1.30                             |
| LUX-HFPD-SLD-3,022(2)-3CL-3,149(6)-12,Ar-XL       | 1.23                             |
| LUX-HFPD-SLD-3,022(2)-3CL-3,149(6)-12,Ar-XL-S     | 1.30                             |
| LUX-HFPD-SLD-3,022(2)-3,068(4)3,149(6)-12,Ar-XL   | 1.01                             |
| LUX-HFPD-SLD-3,022(2)-3,068(4)3,149(6)-12,Ar-XL-S | 1.16                             |
| LUX-HFPD-SLD-6,SCG-3CL-3,149(6)-10,Ar-XL          | 1.39                             |
| LUX-HFPD-SLD-6,SCG-3CL-3,149(6)-10,Ar-XL-S        | 1.43                             |

Notes: Listed products meet the energy requirements of the standards listed above. Windows are not intended for installation in storefronts, non-operable portions of curtain wall, fixed glazing cast into precast concrete panels, greenhouses, skylights or sloped glazing. Test procedures are designed to test the performance of the test specimen only and are not necessarily used to test the performance of the installation, particularly the perimeter sealant joint and anchoring of the assembly.

Final acceptance of the product in a building is subject to approval by the authority having jurisdiction.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI.