


**PHIUS Certified Products**

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Calculation based on ISO 15099

|  |                                     |                  |  |              |   |             |              |             |
|--|-------------------------------------|------------------|--|--------------|---|-------------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                                     |                  | Center-of-glass properties   |              |   |             |              |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone            | North,<br>East,<br>South-<br>facing | West -<br>facing |  |              | Cardinal E180 / ARG90 / CLR / ARG90 /<br>E180 (3MM/3MM/3MM) - 1-3/8" IG<br>No Grids |             |              |             |
| Climate specific recommendations:                                |                                     |                  |  |              | Whole-window installed U-value  |             | Ucog-Value   |             |
|  |                                     |                  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K       | BTU/hr.ft2.F |             |
| 8  |                                     |                  | 0.96   | 0.17         | 0.561   | 0.757       | 0.133        |             |
| 7  |                                     |                  | 0.96   | 0.17         | 0.561   | 0.749       | 0.132        |             |
| 6  |                                     |                  | 0.95   | 0.17         | 0.561   | 0.746       | 0.131        |             |
| 5  |                                     |                  | 0.95   | 0.17         | 0.561   | 0.746       | 0.131        |             |
| 4  |                                     |                  | 0.96   | 0.17         | 0.561   | 0.748       | 0.132        |             |
| Marine North   |                                     |                  | 0.96   | 0.17         | 0.561   | 0.750       | 0.132        |             |
| Marine South   |                                     |                  | 0.96   | 0.17         | 0.561   | 0.754       | 0.133        |             |
| 3  |                                     |                  | 0.96   | 0.17         | 0.561   | 0.752       | 0.132        |             |
| 2 West   |                                     |                  | 0.97   | 0.17         | 0.561   | 0.762       | 0.134        |             |
| 2 East   |                                     |                  | 0.97   | 0.17         | 0.561   | 0.762       | 0.134        |             |
| Plesio Select Series 86 Stand<br>Cardinal Endur                  | FRAME                               |                  |  |              | Psi-spacer  |             | Psi-opaque   |             |
|  | Frame height                        |                  | U-frame  |              | Ψ   |             | W/mK         |             |
|  | mm                                  | in               | W/m2K  | BTU/hr.ft2.F | W/mK  | BTU/hr.ft.F |              |             |
|  | Head                                | 117              | 4.60   | 1.05         | 0.19  | 0.012       | 0.007        | 0.150       |
|  | Sill                                | 117              | 4.60   | 1.05         | 0.19  | 0.012       | 0.007        | BTU/hr.ft.F |
| left jamb  | 117                                 | 4.60             | 1.07   | 0.19         | 0.013   | 0.007       | 0.086        |             |
| right jamb   | 117                                 | 4.60             | 1.07   | 0.19         | 0.013   | 0.007       | Grade B      |             |


Valid through February 2021

Calculation based on ISO 15099

|  |  |  |              |  |            |              |            |             |
|--|--|--|--------------|--|------------|--------------|------------|-------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |  | Center-of-glass properties   |              |  |            |              |            |             |
| ASHRAE/IECC /DOE North American Climate Zone                     | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / CLR / ARG90 / E180 (3MM/3MM/3MM) - 1-3/8" IG |            |              |            |             |
|  |  |  |              | Internal grids < 25.4mm maintain 3mm clearance                       |            |              |            |             |
| Climate specific recommendations:                                |  | Whole-window installed U-value   |              | Ucog-Value   |            |              |            |             |
|  |  | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K      | BTU/hr.ft2.F |            |             |
| 8  |  | 0.96   | 0.17         | 0.486  | 0.757      | 0.133        |            |             |
| 7  |  | 0.96   | 0.17         | 0.486  | 0.749      | 0.132        |            |             |
| 6  |  | 0.95   | 0.17         | 0.486  | 0.746      | 0.131        |            |             |
| 5  |  | 0.95   | 0.17         | 0.486  | 0.746      | 0.131        |            |             |
| 4  |  | 0.96   | 0.17         | 0.486  | 0.748      | 0.132        |            |             |
| Marine North   |  | 0.96   | 0.17         | 0.486  | 0.750      | 0.132        |            |             |
| Marine South   | ✓  | 0.96   | 0.17         | 0.486  | 0.754      | 0.133        |            |             |
| 3  | ✓  | 0.96   | 0.17         | 0.486  | 0.752      | 0.132        |            |             |
| 2 West   |  | 0.97   | 0.17         | 0.486  | 0.762      | 0.134        |            |             |
| 2 East   |  | 0.97   | 0.17         | 0.486  | 0.762      | 0.134        |            |             |
| Plesio Select Series 86 Stand Cardinal Endur                     | FRAME                                      |  |              |  | Psi-spacer |              | Psi-opaque |             |
|  | Frame height                               |  | U-frame      |  | Ψ          |              | W/mK       |             |
|  | mm   | in   | W/m2K        | BTU/hr.ft2.F   | W/mK       | BTU/hr.ft.F  |            |             |
|  | Head                                       | 117  | 4.60         | 1.05   | 0.19       | 0.012        | 0.007      | 0.150       |
|  | Sill                                       | 117  | 4.60         | 1.05   | 0.19       | 0.012        | 0.007      | BTU/hr.ft.F |
| left jamb  | 117  | 4.60   | 1.07         | 0.19   | 0.013      | 0.007        | 0.086      |             |
| right jamb   | 117  | 4.60   | 1.07         | 0.19   | 0.013      | 0.007        | Grade B    |             |

Valid through February 2021

Calculation based on ISO 15099


|  |  |  |              |   |       |              |
|--|--|--|--------------|---|-------|--------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |  | Center-of-glass properties   |              |   |       |              |
| ASHRAE/IECC /DOE North American Climate Zone                     | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / CLR / ARG90 / E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids < 25.4mm |       |              |
| Climate specific recommendations:                                |  |  |              | Whole-window installed U-value  |       | Ucog-Value   |
|  |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
| 8  |  | 1.02   | 0.18         | 0.486   | 0.757 | 0.133        |
| 7  |  | 1.01   | 0.18         | 0.486   | 0.749 | 0.132        |
| 6  |  | 1.01   | 0.18         | 0.486   | 0.746 | 0.131        |
| 5  |  | 1.01   | 0.18         | 0.486   | 0.746 | 0.131        |
| 4  |  | 1.01   | 0.18         | 0.486   | 0.748 | 0.132        |
| Marine North   |  | 1.01   | 0.18         | 0.486   | 0.750 | 0.132        |
| Marine South   | ✓  | 1.02   | 0.18         | 0.486   | 0.754 | 0.133        |
| 3  | ✓  | 1.02   | 0.18         | 0.486   | 0.752 | 0.132        |
| 2 West   |  | 1.02   | 0.18         | 0.486   | 0.762 | 0.134        |
| 2 East   |  | 1.02   | 0.18         | 0.486   | 0.762 | 0.134        |

|   |              |      |         |              |            |             |             |
|---|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Stand<br>Cardinal Endur | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|   | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|   | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head  | 117          | 4.60 | 1.05    | 0.19         | 0.012      | 0.007       | 0.150       |
| Sill  | 117          | 4.60 | 1.05    | 0.19         | 0.012      | 0.007       | BTU/hr.ft.F |
| left jamb                                       | 117          | 4.60 | 1.07    | 0.19         | 0.013      | 0.007       | 0.086       |
| right jamb                                      | 117          | 4.60 | 1.07    | 0.19         | 0.013      | 0.007       | Grade B     |

Valid through February 2021


Calculation based on ISO 15099

|   |  |  |              |  |       |              |
|---|--|--|--------------|--|-------|--------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b>  |  | Center-of-glass properties   |              |  |       |              |
| ASHRAE/IECC /DOE North American Climate Zone  | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / CLR / ARG90 / E180 (3MM/3MM/3MM) - 1-3/8" IG |       |              |
|   |  |  |              | Internal grids >= 25.4mm maintain 3mm clearance                      |       |              |
| <b>Climate specific recommendations:</b><br><div style="display: flex; flex-direction: column; gap: 2px;"> <div style="background-color: #4a4a8a; color: white; padding: 2px;">8</div> <div style="background-color: #8a1a1a; color: white; padding: 2px;">7</div> <div style="background-color: #1a4a8a; color: white; padding: 2px;">6</div> <div style="background-color: #1a8a4a; color: white; padding: 2px;">5</div> <div style="background-color: #8a8a1a; color: white; padding: 2px;">4</div> <div style="background-color: #8a8a1a; color: white; padding: 2px;">Marine North</div> <div style="background-color: #8a4a1a; color: white; padding: 2px;">Marine South <input checked="" type="checkbox"/></div> <div style="background-color: #8a4a1a; color: white; padding: 2px;">3 <input checked="" type="checkbox"/></div> <div style="background-color: #8a4a1a; color: white; padding: 2px;">2 West</div> <div style="background-color: #8a4a1a; color: white; padding: 2px;">2 East</div> </div> | Whole-window installed U-value             |  |              | <b>Ucog-Value</b>  |       |              |
|   |  | W/m2K  | BTU/hr.ft2.F | <b>SHGC</b>  | W/m2K | BTU/hr.ft2.F |
|   |  | 0.96   | 0.17         | 0.417  | 0.757 | 0.133        |
|   |  | 0.96   | 0.17         | 0.417  | 0.749 | 0.132        |
|   |  | 0.95   | 0.17         | 0.417  | 0.746 | 0.131        |
|   |  | 0.95   | 0.17         | 0.417  | 0.746 | 0.131        |
|   |  | 0.96   | 0.17         | 0.417  | 0.748 | 0.132        |
|   |  | 0.96   | 0.17         | 0.417  | 0.750 | 0.132        |
|   |  | 0.96   | 0.17         | 0.417  | 0.754 | 0.133        |
|   |  | 0.96   | 0.17         | 0.417  | 0.752 | 0.132        |
|   | 0.97                                       | 0.17   | 0.417        | 0.762  | 0.134 |              |
|   | 0.97                                       | 0.17   | 0.417        | 0.762  | 0.134 |              |

|                               |              |      |         |              |            |             |             |
|-------------------------------|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Stand | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|                               | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
| Cardinal Endur                | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head                          | 117          | 4.60 | 1.05    | 0.19         | 0.012      | 0.007       | 0.150       |
| Sill                          | 117          | 4.60 | 1.05    | 0.19         | 0.012      | 0.007       | BTU/hr.ft.F |
| left jamb                     | 117          | 4.60 | 1.07    | 0.19         | 0.013      | 0.007       | 0.086       |
| right jamb                    | 117          | 4.60 | 1.07    | 0.19         | 0.013      | 0.007       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|  |                                     |                  |  |   |              |              |             |
|--|-------------------------------------|------------------|--|---|--------------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                                     |                  |  | Center-of-glass properties  |              |              |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone            | North,<br>East,<br>West -<br>facing | South-<br>facing |  |   |              |              |             |
|  |                                     |                  |  | Cardinal E180 / ARG90 / CLR / ARG90 /<br>E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm |              |              |             |
|  |                                     |                  |  | Whole-window installed U-value  |              | Ucog-Value   |             |
| <b>Climate specific recommendations:</b>                         |                                     |                  |  | SHGC  |              |              |             |
|  |                                     |                  | W/m2K  | BTU/hr.ft2.F  | W/m2K        | BTU/hr.ft2.F |             |
| 8  |                                     |                  | 1.02   | 0.18  | 0.417        | 0.133        |             |
| 7  |                                     |                  | 1.01   | 0.18  | 0.417        | 0.132        |             |
| 6  |                                     |                  | 1.01   | 0.18  | 0.417        | 0.131        |             |
| 5  |                                     |                  | 1.01   | 0.18  | 0.417        | 0.131        |             |
| 4  |                                     |                  | 1.01   | 0.18  | 0.417        | 0.132        |             |
| Marine North   |                                     |                  | 1.01   | 0.18  | 0.417        | 0.132        |             |
| Marine South   | ✓                                   |                  | 1.02   | 0.18  | 0.417        | 0.133        |             |
| 3  | ✓                                   |                  | 1.02   | 0.18  | 0.417        | 0.132        |             |
| 2 West   |                                     |                  | 1.02   | 0.18  | 0.417        | 0.134        |             |
| 2 East   |                                     |                  | 1.02   | 0.18  | 0.417        | 0.134        |             |
| <b>Plesio Select Series 86 Stand</b>                             |                                     | FRAME            |  |   | Psi-spacer   |              | Psi-opaque  |
| <b>Cardinal Endur</b>  |                                     | Frame height     |  | U-frame   |              | Ψ            |             |
|  |                                     | mm               | in   | W/m2K   | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |
|  | Head                                | 117              | 4.60   | 1.05  | 0.19         | 0.012        | 0.007       |
|  | Sill                                | 117              | 4.60   | 1.05  | 0.19         | 0.012        | 0.007       |
|  | left jamb                           | 117              | 4.60   | 1.07  | 0.19         | 0.013        | 0.007       |
|  | right jamb                          | 117              | 4.60   | 1.07  | 0.19         | 0.013        | 0.007       |
|  |                                     |                  |  |   |              |              | W/mK        |
|  |                                     |                  |  |   |              |              | 0.150       |
|  |                                     |                  |  |   |              |              | BTU/hr.ft.F |
|  |                                     |                  |  |   |              |              | 0.086       |
|  |                                     |                  |  |   |              |              | Grade B     |


Valid through February 2021

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|  |   |  |         |   |              |             |            |              |
|--|---|--|---------|---|--------------|-------------|------------|--------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |   |  |         | Center-of-glass properties  |              |             |            |              |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone            | North,<br>East,<br>West -<br>South-<br>facing |  |         | Cardinal E272 / ARG90 / CLR / ARG90 /<br>E272 (5MM/5MM/5MM) - 1-3/8" IG<br>No Grids |              |             |            |              |
| Climate specific recommendations:                                |   |  |         | Whole-window installed U-value  |              | Ucog-Value  |            |              |
|  |   |  |         | W/m2K   | BTU/hr.ft2.F | SHGC        | W/m2K      | BTU/hr.ft2.F |
| 8  |   | 1.00   | 0.18    | 0.344   | 0.795        | 0.140       |            |              |
| 7  |   | 1.00   | 0.18    | 0.344   | 0.797        | 0.140       |            |              |
| 6  |   | 1.01   | 0.18    | 0.344   | 0.804        | 0.142       |            |              |
| 5  |   | 1.01   | 0.18    | 0.344   | 0.805        | 0.142       |            |              |
| 4  |   | 1.01   | 0.18    | 0.344   | 0.809        | 0.143       |            |              |
| Marine North   |   | 1.01   | 0.18    | 0.344   | 0.812        | 0.143       |            |              |
| Marine South   | ✓   | 1.02   | 0.18    | 0.344   | 0.817        | 0.144       |            |              |
| 3  | ✓   | 1.02   | 0.18    | 0.344   | 0.814        | 0.143       |            |              |
| 2 West   |   | 1.02   | 0.18    | 0.344   | 0.822        | 0.145       |            |              |
| 2 East   |   | 1.02   | 0.18    | 0.344   | 0.822        | 0.145       |            |              |
| Plesio Select Series 86 Stand<br>Cardinal Endur                  | FRAME   |  |         |   | Psi-spacer   |             | Psi-opaque |              |
|  | Frame height                                  |  | U-frame |   | Ψ            |             | W/mK       |              |
|  | mm  | in   | W/m2K   | BTU/hr.ft2.F  | W/mK         | BTU/hr.ft.F |            |              |
|  | Head  | 117  | 4.59    | 1.06  | 0.19         | 0.017       | 0.010      | 0.155        |
|  | Sill  | 117  | 4.59    | 1.06  | 0.19         | 0.017       | 0.010      | BTU/hr.ft.F  |
| left jamb  | 117   | 4.59   | 1.08    | 0.19  | 0.018        | 0.010       | 0.089      |              |
| right jamb   | 117   | 4.59   | 1.08    | 0.19  | 0.018        | 0.010       | Grade B    |              |

Valid through February 2021


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|  |                            |              |  |              |  |             |              |             |
|--|----------------------------|--------------|--|--------------|--|-------------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                            |              | Center-of-glass properties   |              |  |             |              |             |
| ASHRAE/IECC /DOE North American Climate Zone                     | North, East, West - facing | South-facing |  |              | Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG |             |              |             |
|  |                            |              |  |              | Internal grids < 25.4mm maintain 3mm clearance                       |             |              |             |
| Climate specific recommendations:                                |                            |              | Whole-window installed U-value   |              | Ucog-Value   |             |              |             |
|  |                            |              | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K       | BTU/hr.ft2.F |             |
| 8  |                            |              | 1.00   | 0.18         | 0.298  | 0.795       | 0.140        |             |
| 7  |                            |              | 1.00   | 0.18         | 0.298  | 0.797       | 0.140        |             |
| 6  |                            |              | 1.01   | 0.18         | 0.298  | 0.804       | 0.142        |             |
| 5  |                            |              | 1.01   | 0.18         | 0.298  | 0.805       | 0.142        |             |
| 4  |                            |              | 1.01   | 0.18         | 0.298  | 0.809       | 0.143        |             |
| Marine North   |                            |              | 1.01   | 0.18         | 0.298  | 0.812       | 0.143        |             |
| Marine South   | ✓                          | ✓            | 1.02   | 0.18         | 0.298  | 0.817       | 0.144        |             |
| 3  | ✓                          | ✓            | 1.02   | 0.18         | 0.298  | 0.814       | 0.143        |             |
| 2 West   | ✓                          | ✓            | 1.02   | 0.18         | 0.298  | 0.822       | 0.145        |             |
| 2 East   | ✓                          | ✓            | 1.02   | 0.18         | 0.298  | 0.822       | 0.145        |             |
| Plesio Select Series 86 Stand Cardinal Endur                     | FRAME                      |              |  |              | Psi-spacer   |             | Psi-opaque   |             |
|  | Frame height               |              | U-frame  |              | Ψ  |             | W/mK         |             |
|  | mm                         | in           | W/m2K  | BTU/hr.ft2.F | W/mK   | BTU/hr.ft.F |              |             |
|  | Head                       | 117          | 4.59   | 1.06         | 0.19   | 0.017       | 0.010        | 0.155       |
|  | Sill                       | 117          | 4.59   | 1.06         | 0.19   | 0.017       | 0.010        | BTU/hr.ft.F |
| left jamb  | 117                        | 4.59         | 1.08   | 0.19         | 0.018  | 0.010       | 0.089        |             |
| right jamb   | 117                        | 4.59         | 1.08   | 0.19         | 0.018  | 0.010       | Grade B      |             |

Valid through February 2021




Calculation based on ISO 15099

|  |                            |              |  |                                |   |            |             |              |
|--|----------------------------|--------------|--|--------------------------------|---|------------|-------------|--------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                            |              |  | Center-of-glass properties     |   |            |             |              |
| ASHRAE/IECC /DOE North American Climate Zone                     | North, East, West - facing | South-facing |  |                                | Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG<br>Internal grids < 25.4mm |            |             |              |
| Climate specific recommendations:                                |                            |              |  | Whole-window installed U-value |   | Ucog-Value |             |              |
|  |                            |              |  | W/m2K                          | BTU/hr.ft2.F  | SHGC       | W/m2K       | BTU/hr.ft2.F |
| 8  |                            |              | 1.06   | 0.19                           | 0.298   | 0.795      | 0.140       |              |
| 7  |                            |              | 1.06   | 0.19                           | 0.298   | 0.797      | 0.140       |              |
| 6  |                            |              | 1.06   | 0.19                           | 0.298   | 0.804      | 0.142       |              |
| 5  |                            |              | 1.07   | 0.19                           | 0.298   | 0.805      | 0.142       |              |
| 4  |                            |              | 1.07   | 0.19                           | 0.298   | 0.809      | 0.143       |              |
| Marine North   |                            |              | 1.07   | 0.19                           | 0.298   | 0.812      | 0.143       |              |
| Marine South   | ✓                          | ✓            | 1.07   | 0.19                           | 0.298   | 0.817      | 0.144       |              |
| 3  |                            |              | 1.07   | 0.19                           | 0.298   | 0.814      | 0.143       |              |
| 2 West   |                            |              | 1.08   | 0.19                           | 0.298   | 0.822      | 0.145       |              |
| 2 East   | ✓                          | ✓            | 1.08   | 0.19                           | 0.298   | 0.822      | 0.145       |              |
| Plesio Select Series 86 Stand                                    |                            | FRAME        |  |                                | Psi-spacer  |            | Psi-opaque  |              |
| Cardinal Endur   |                            | Frame height |  | U-frame                        |   | Ψ          |             | W/mK         |
|  |                            | mm           | in   | W/m2K                          | BTU/hr.ft2.F  | W/mK       | BTU/hr.ft.F |              |
| Head   |                            | 117          | 4.59   | 1.06                           | 0.19  | 0.017      | 0.010       | 0.155        |
| Sill   |                            | 117          | 4.59   | 1.06                           | 0.19  | 0.017      | 0.010       | BTU/hr.ft.F  |
| left jamb  |                            | 117          | 4.59   | 1.08                           | 0.19  | 0.018      | 0.010       | 0.089        |
| right jamb   |                            | 117          | 4.59   | 1.08                           | 0.19  | 0.018      | 0.010       | Grade B      |


Valid through February 2021

Calculation based on ISO 15099

|  |                            |              |  |              |  |       |              |             |
|--|----------------------------|--------------|--|--------------|--|-------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                            |              | Center-of-glass properties   |              |  |       |              |             |
| ASHRAE/IECC /DOE North American Climate Zone                     | North, East, West - facing | South-facing |  |              | Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG |       |              |             |
|  |                            |              |  |              | Internal grids >= 25.4mm maintain 3mm clearance                      |       |              |             |
| Climate specific recommendations:                                |                            |              | Whole-window installed U-value   |              | Ucog-Value   |       |              |             |
|  |                            |              | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K | BTU/hr.ft2.F |             |
| 8  |                            |              | 1.00   | 0.18         | 0.256  | 0.795 | 0.140        |             |
| 7  |                            |              | 1.00   | 0.18         | 0.256  | 0.797 | 0.140        |             |
| 6  |                            |              | 1.01   | 0.18         | 0.256  | 0.804 | 0.142        |             |
| 5  |                            |              | 1.01   | 0.18         | 0.256  | 0.805 | 0.142        |             |
| 4  |                            |              | 1.01   | 0.18         | 0.256  | 0.809 | 0.143        |             |
| Marine North   |                            |              | 1.01   | 0.18         | 0.256  | 0.812 | 0.143        |             |
| Marine South   | ✓                          | ✓            | 1.02   | 0.18         | 0.256  | 0.817 | 0.144        |             |
| 3  | ✓                          | ✓            | 1.02   | 0.18         | 0.256  | 0.814 | 0.143        |             |
| 2 West   | ✓                          | ✓            | 1.02   | 0.18         | 0.256  | 0.822 | 0.145        |             |
| 2 East   | ✓                          | ✓            | 1.02   | 0.18         | 0.256  | 0.822 | 0.145        |             |
| Plesio Select Series 86 Stand                                    |                            | FRAME        |  |              | Psi-spacer   |       | Psi-opaque   |             |
| Cardinal Endur   |                            | Frame height |  | U-frame      |  | Ψ     |              | W/mK        |
|  |                            | mm           | in   | W/m2K        | BTU/hr.ft2.F   | W/mK  | BTU/hr.ft.F  |             |
| Head   |                            | 117          | 4.59   | 1.06         | 0.19   | 0.017 | 0.010        | 0.155       |
| Sill   |                            | 117          | 4.59   | 1.06         | 0.19   | 0.017 | 0.010        | BTU/hr.ft.F |
| left jamb  |                            | 117          | 4.59   | 1.08         | 0.19   | 0.018 | 0.010        | 0.089       |
| right jamb   |                            | 117          | 4.59   | 1.08         | 0.19   | 0.018 | 0.010        | Grade B     |

Valid through February 2021

Calculation based on ISO 15099

|  |                                     |                  |  |                            |   |             |              |
|--|-------------------------------------|------------------|--|----------------------------|---|-------------|--------------|
| Product name: <b>Ventana Select Series 86 Standard Tilt Turn</b> |                                     |                  |  | Center-of-glass properties |   |             |              |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone            | North,<br>East,<br>West -<br>facing | South-<br>facing |  |                            | Cardinal E272 / ARG90 / CLR / ARG90 /<br>E272 (5MM/5MM/5MM) - 1-3/8" IG<br>Internal grids >= 25.4mm |             |              |
| Climate specific recommendations:                                |                                     |                  | Whole-window installed U-value   |                            | Ucog-Value  |             |              |
|  |                                     |                  | W/m2K  | BTU/hr.ft2.F               | SHGC  | W/m2K       | BTU/hr.ft2.F |
| 8  |                                     |                  | 1.06   | 0.19                       | 0.256   | 0.795       | 0.140        |
| 7  |                                     |                  | 1.06   | 0.19                       | 0.256   | 0.797       | 0.140        |
| 6  |                                     |                  | 1.06   | 0.19                       | 0.256   | 0.804       | 0.142        |
| 5  |                                     |                  | 1.07   | 0.19                       | 0.256   | 0.805       | 0.142        |
| 4  |                                     |                  | 1.07   | 0.19                       | 0.256   | 0.809       | 0.143        |
| Marine North   |                                     |                  | 1.07   | 0.19                       | 0.256   | 0.812       | 0.143        |
| Marine South   | ✓                                   | ✓                | 1.07   | 0.19                       | 0.256   | 0.817       | 0.144        |
| 3  |                                     |                  | 1.07   | 0.19                       | 0.256   | 0.814       | 0.143        |
| 2 West   |                                     |                  | 1.08   | 0.19                       | 0.256   | 0.822       | 0.145        |
| 2 East   | ✓                                   | ✓                | 1.08   | 0.19                       | 0.256   | 0.822       | 0.145        |
| Plesio Select Series 86 Stand<br>Cardinal Endur                  | FRAME                               |                  |  |                            | Psi-spacer  |             | Psi-opaque   |
|  | Frame height                        |                  | U-frame  |                            | Ψ   |             | W/mK         |
| mm   | in                                  | W/m2K            | BTU/hr.ft2.F   | W/mK                       | BTU/hr.ft.F   | BTU/hr.ft.F |              |
| Head   | 117                                 | 4.59             | 1.06   | 0.19                       | 0.017   | 0.010       | 0.155        |
| Sill   | 117                                 | 4.59             | 1.06   | 0.19                       | 0.017   | 0.010       | BTU/hr.ft.F  |
| left jamb  | 117                                 | 4.59             | 1.08   | 0.19                       | 0.018   | 0.010       | 0.089        |
| right jamb   | 117                                 | 4.59             | 1.08   | 0.19                       | 0.018   | 0.010       | Grade B      |

Valid through February 2021

Calculation based on ISO 15099

Product name: **Ventana Select Series 86**

Center-of-glass properties

ASHRAE/IECC  
/DOE North  
American  
Climate Zone

North,  
East,  
West -  
facing

South-  
facing



Cardinal E180 / ARG90 / CLR / ARG90 /  
E180 (3MM/3MM/3MM) - 1-3/8" IG  
No Grids

Whole-window installed U-value

Ucog-Value

Climate specific recommendations:

|  | W/m2K | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
|--|-------|--------------|-------|-------|--------------|
| 8  | 0.92  | 0.16         | 0.561 | 0.757 | 0.133        |
| 7  | 0.92  | 0.16         | 0.561 | 0.749 | 0.132        |
| 6  | 0.91  | 0.16         | 0.561 | 0.746 | 0.131        |
| 5  | 0.91  | 0.16         | 0.561 | 0.746 | 0.131        |
| 4  | 0.92  | 0.16         | 0.561 | 0.748 | 0.132        |
| Marine North <input checked="" type="checkbox"/> | 0.92  | 0.16         | 0.561 | 0.750 | 0.132        |
| Marine South                                     | 0.92  | 0.16         | 0.561 | 0.754 | 0.133        |
| 3  | 0.92  | 0.16         | 0.561 | 0.752 | 0.132        |
| 2 West   | 0.93  | 0.16         | 0.561 | 0.762 | 0.134        |
| 2 East   | 0.93  | 0.16         | 0.561 | 0.762 | 0.134        |


Plesio Select Series 86

Cardinal Endur

|            | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|------------|--------------|------|---------|--------------|------------|-------------|-------------|
|            | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|            | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head       | 117          | 4.60 | 0.92    | 0.16         | 0.013      | 0.007       | 0.133       |
| Sill       | 117          | 4.60 | 0.93    | 0.16         | 0.013      | 0.007       | BTU/hr.ft.F |
| left jamb  | 117          | 4.60 | 0.93    | 0.16         | 0.014      | 0.008       | 0.077       |
| right jamb | 117          | 4.60 | 0.93    | 0.16         | 0.014      | 0.008       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                                     |  |              |                   |              |  |             |
|---|-------------------------------------|--|--------------|-------------------|--------------|--|-------------|
| Product name: <b>Ventana Select Series 86</b>         |                                     |  |              |                   |              | Center-of-glass properties   |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone | North,<br>East,<br>West -<br>facing |  |              |                   |              | Cardinal E180 / ARG90 / CLR / ARG90 /<br>E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids < 25.4mm maintain 3mm<br>clearance |             |
|   |                                     | Whole-window installed U-value   |              | <u>Ucog-Value</u> |              |  |             |
| <b>Climate specific recommendations:</b>              |                                     | W/m2K  | BTU/hr.ft2.F | <b>SHGC</b>       | W/m2K        | BTU/hr.ft2.F   |             |
| 8   |                                     | 0.92   | 0.16         | 0.486             | 0.757        | 0.133  |             |
| 7   |                                     | 0.92   | 0.16         | 0.486             | 0.749        | 0.132  |             |
| 6   |                                     | 0.91   | 0.16         | 0.486             | 0.746        | 0.131  |             |
| 5   |                                     | 0.91   | 0.16         | 0.486             | 0.746        | 0.131  |             |
| 4   |                                     | 0.92   | 0.16         | 0.486             | 0.748        | 0.132  |             |
| Marine North  |                                     | 0.92   | 0.16         | 0.486             | 0.750        | 0.132  |             |
| Marine South  | ✓                                   | 0.92   | 0.16         | 0.486             | 0.754        | 0.133  |             |
| 3   | ✓                                   | 0.92   | 0.16         | 0.486             | 0.752        | 0.132  |             |
| 2 West  |                                     | 0.93   | 0.16         | 0.486             | 0.762        | 0.134  |             |
| 2 East  |                                     | 0.93   | 0.16         | 0.486             | 0.762        | 0.134  |             |
| <b>Plesio Select Series 86</b>                        |                                     | FRAME  |              |                   | Psi-spacer   |  | Psi-opaque  |
| <b>Cardinal Endur</b>                                 |                                     | Frame height   |              | U-frame           |              | Ψ  |             |
|   |                                     | mm   | in           | W/m2K             | BTU/hr.ft2.F | W/mK   | BTU/hr.ft.F |
| Head  |                                     | 117  | 4.60         | 0.92              | 0.16         | 0.013  | 0.007       |
| Sill  |                                     | 117  | 4.60         | 0.93              | 0.16         | 0.013  | 0.007       |
| left jamb   |                                     | 117  | 4.60         | 0.93              | 0.16         | 0.014  | 0.008       |
| right jamb  |                                     | 117  | 4.60         | 0.93              | 0.16         | 0.014  | 0.008       |
|   |                                     |  |              |                   |              | 0.133  | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |  |  |              |   |             |              |             |            |
|---|--|--|--------------|---|-------------|--------------|-------------|------------|
| Product name: <b>Ventana Select Series 86</b> |  | Center-of-glass properties   |              |   |             |              |             |            |
| ASHRAE/IECC /DOE North American Climate Zone  | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / CLR / ARG90 / E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids < 25.4mm |             |              |             |            |
| Climate specific recommendations:             |  | Whole-window installed U-value   |              | Ucog-Value  |             |              |             |            |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K       | BTU/hr.ft2.F |             |            |
| 8   |  | 0.98   | 0.17         | 0.486   | 0.757       | 0.133        |             |            |
| 7   |  | 0.97   | 0.17         | 0.486   | 0.749       | 0.132        |             |            |
| 6   |  | 0.97   | 0.17         | 0.486   | 0.746       | 0.131        |             |            |
| 5   |  | 0.97   | 0.17         | 0.486   | 0.746       | 0.131        |             |            |
| 4   |  | 0.97   | 0.17         | 0.486   | 0.748       | 0.132        |             |            |
| Marine North                                  |  | 0.97   | 0.17         | 0.486   | 0.750       | 0.132        |             |            |
| Marine South                                  | ✓  | 0.98   | 0.17         | 0.486   | 0.754       | 0.133        |             |            |
| 3   | ✓  | 0.98   | 0.17         | 0.486   | 0.752       | 0.132        |             |            |
| 2 West  |  | 0.98   | 0.17         | 0.486   | 0.762       | 0.134        |             |            |
| 2 East  |  | 0.98   | 0.17         | 0.486   | 0.762       | 0.134        |             |            |
| Plesio Select Series 86<br>Cardinal Endur     |  | FRAME  |              |   |             | Psi-spacer   |             | Psi-opaque |
|   |  | Frame height   |              | U-frame   |             | Ψ            |             | W/mK       |
| mm  | in   | W/m2K  | BTU/hr.ft2.F | W/mK  | BTU/hr.ft.F |              |             |            |
| Head  | 117  | 4.60   | 0.92         | 0.16  | 0.013       | 0.007        | 0.133       |            |
| Sill  | 117  | 4.60   | 0.93         | 0.16  | 0.013       | 0.007        | BTU/hr.ft.F |            |
| left jamb                                     | 117  | 4.60   | 0.93         | 0.16  | 0.014       | 0.008        | 0.077       |            |
| right jamb                                    | 117  | 4.60   | 0.93         | 0.16  | 0.014       | 0.008        | Grade B     |            |

Valid through February 2021

Calculation based on ISO 15099


|   |  |  |              |       |       |   |  |
|---|--|--|--------------|-------|-------|---|--|
| Product name: <b>Ventana Select Series 86</b> |  |  |              |       |       | Center-of-glass properties  |  |
| ASHRAE/IECC /DOE North American Climate Zone  | North, East, West - facing<br>South-facing |  |              |       |       | Cardinal E180 / ARG90 / CLR / ARG90 / E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm maintain 3mm clearance |  |
| Climate specific recommendations:             |  | Whole-window installed U-value   |              |       |       | Ucog-Value  |  |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F  |  |
| 8   |  | 0.92   | 0.16         | 0.417 | 0.757 | 0.133   |  |
| 7   |  | 0.92   | 0.16         | 0.417 | 0.749 | 0.132   |  |
| 6   |  | 0.91   | 0.16         | 0.417 | 0.746 | 0.131   |  |
| 5   |  | 0.91   | 0.16         | 0.417 | 0.746 | 0.131   |  |
| 4   |  | 0.92   | 0.16         | 0.417 | 0.748 | 0.132   |  |
| Marine North                                  |  | 0.92   | 0.16         | 0.417 | 0.750 | 0.132   |  |
| Marine South                                  | ✓  | 0.92   | 0.16         | 0.417 | 0.754 | 0.133   |  |
| 3   | ✓  | 0.92   | 0.16         | 0.417 | 0.752 | 0.132   |  |
| 2 West  |  | 0.93   | 0.16         | 0.417 | 0.762 | 0.134   |  |
| 2 East  |  | 0.93   | 0.16         | 0.417 | 0.762 | 0.134   |  |

|                         |              |      |         |              |            |             |             |
|-------------------------|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|                         | Frame height |      | U-frame |              | Ψ          |             |             |
| Cardinal Endur          | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F | W/mK        |
| Head                    | 117          | 4.60 | 0.92    | 0.16         | 0.013      | 0.007       | 0.133       |
| Sill                    | 117          | 4.60 | 0.93    | 0.16         | 0.013      | 0.007       | BTU/hr.ft.F |
| left jamb               | 117          | 4.60 | 0.93    | 0.16         | 0.014      | 0.008       | 0.077       |
| right jamb              | 117          | 4.60 | 0.93    | 0.16         | 0.014      | 0.008       | Grade B     |

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Calculation based on ISO 15099

|   |  |  |              |              |                   |   |                   |
|---|--|--|--------------|--------------|-------------------|---|-------------------|
| Product name: <b>Ventana Select Series 86</b>         |  |  |              |              |                   | Center-of-glass properties  |                   |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone | North,<br>East,<br>West -<br>South-<br>facing facing |  |              |              |                   | Cardinal E180 / ARG90 / CLR / ARG90 /<br>E180 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm |                   |
| <b>Climate specific recommendations:</b>              |  | Whole-window installed U-value   |              |              |                   | <u>Ucog-Value</u>   |                   |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC         | W/m2K             | BTU/hr.ft2.F  |                   |
| 8   |  | 0.98   | 0.17         | 0.417        | 0.757             | 0.133   |                   |
| 7   |  | 0.97   | 0.17         | 0.417        | 0.749             | 0.132   |                   |
| 6   |  | 0.97   | 0.17         | 0.417        | 0.746             | 0.131   |                   |
| 5   |  | 0.97   | 0.17         | 0.417        | 0.746             | 0.131   |                   |
| 4   |  | 0.97   | 0.17         | 0.417        | 0.748             | 0.132   |                   |
| Marine North  |  | 0.97   | 0.17         | 0.417        | 0.750             | 0.132   |                   |
| Marine South  | ✓  | 0.98   | 0.17         | 0.417        | 0.754             | 0.133   |                   |
| 3   | ✓  | 0.98   | 0.17         | 0.417        | 0.752             | 0.132   |                   |
| 2 West  |  | 0.98   | 0.17         | 0.417        | 0.762             | 0.134   |                   |
| 2 East  |  | 0.98   | 0.17         | 0.417        | 0.762             | 0.134   |                   |
| <b>Plesio Select Series 86</b>                        | <b>FRAME</b>   |  |              |              | <b>Psi-spacer</b> |   | <b>Psi-opaque</b> |
| <b>Cardinal Endur</b>                                 | Frame height   |  | U-frame      |              | Ψ                 |   | W/mK              |
|   | mm   | in   | W/m2K        | BTU/hr.ft2.F | W/mK              | BTU/hr.ft.F   |                   |
| Head  | 117  | 4.60   | 0.92         | 0.16         | 0.013             | 0.007   | 0.133             |
| Sill  | 117  | 4.60   | 0.93         | 0.16         | 0.013             | 0.007   | BTU/hr.ft.F       |
| left jamb   | 117  | 4.60   | 0.93         | 0.16         | 0.014             | 0.008   | 0.077             |
| right jamb  | 117  | 4.60   | 0.93         | 0.16         | 0.014             | 0.008   | Grade B           |

Valid through February 2021




Calculation based on ISO 15099

|   |  |  |              |  |              |              |             |             |
|---|--|--|--------------|--|--------------|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |  |              |              |             |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG<br>No Grids |              |              |             |             |
| Climate specific recommendations:                       |  | Whole-window installed U-value   |              |  | Ucog-Value   |              |             |             |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K        | BTU/hr.ft2.F |             |             |
| 8   |  | 0.96   | 0.17         | 0.344  | 0.795        | 0.140        |             |             |
| 7   |  | 0.97   | 0.17         | 0.344  | 0.797        | 0.140        |             |             |
| 6   |  | 0.97   | 0.17         | 0.344  | 0.804        | 0.142        |             |             |
| 5   |  | 0.97   | 0.17         | 0.344  | 0.805        | 0.142        |             |             |
| 4   |  | 0.97   | 0.17         | 0.344  | 0.809        | 0.143        |             |             |
| Marine North  |  | 0.98   | 0.17         | 0.344  | 0.812        | 0.143        |             |             |
| Marine South  | ✓  | 0.98   | 0.17         | 0.344  | 0.817        | 0.144        |             |             |
| 3   | ✓  | 0.98   | 0.17         | 0.344  | 0.814        | 0.143        |             |             |
| 2 West  |  | 0.98   | 0.17         | 0.344  | 0.822        | 0.145        |             |             |
| 2 East  |  | 0.98   | 0.17         | 0.344  | 0.822        | 0.145        |             |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |  | FRAME  |              |  | Psi-spacer   |              | Psi-opaque  |             |
| <b>Cardinal Endur</b>                                   |  | Frame height   |              | U-frame  |              | Ψ            |             | W/mK        |
|   |  | mm   | in           | W/m2K  | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |             |
| Head  |  | 117  | 4.59         | 0.94   | 0.16         | 0.018        | 0.010       | 0.139       |
| Sill  |  | 117  | 4.59         | 0.94   | 0.16         | 0.018        | 0.010       | BTU/hr.ft.F |
| left jamb   |  | 117  | 4.59         | 0.94   | 0.17         | 0.019        | 0.011       | 0.080       |
| right jamb  |  | 117  | 4.59         | 0.94   | 0.17         | 0.019        | 0.011       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                            |              |  |              |  |             |              |
|---|----------------------------|--------------|--|--------------|--|-------------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                            |              | Center-of-glass properties   |              |  |             |              |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing | South-facing |  |              | Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG |             |              |
|   |                            |              |  |              | Internal grids < 25.4mm maintain 3mm clearance                       |             |              |
| Climate specific recommendations:                       |                            |              | Whole-window installed U-value   |              | Ucog-Value   |             |              |
|   |                            |              | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K       | BTU/hr.ft2.F |
| 8   |                            |              | 0.96   | 0.17         | 0.298  | 0.795       | 0.140        |
| 7   |                            |              | 0.97   | 0.17         | 0.298  | 0.797       | 0.140        |
| 6   |                            |              | 0.97   | 0.17         | 0.298  | 0.804       | 0.142        |
| 5   |                            |              | 0.97   | 0.17         | 0.298  | 0.805       | 0.142        |
| 4   |                            |              | 0.97   | 0.17         | 0.298  | 0.809       | 0.143        |
| Marine North  |                            |              | 0.98   | 0.17         | 0.298  | 0.812       | 0.143        |
| Marine South  | ✓                          | ✓            | 0.98   | 0.17         | 0.298  | 0.817       | 0.144        |
| 3   | ✓                          | ✓            | 0.98   | 0.17         | 0.298  | 0.814       | 0.143        |
| 2 West  | ✓                          | ✓            | 0.98   | 0.17         | 0.298  | 0.822       | 0.145        |
| 2 East  | ✓                          | ✓            | 0.98   | 0.17         | 0.298  | 0.822       | 0.145        |
| Plesio Select Series 86 Tilt T                          |                            |              | FRAME  |              | Psi-spacer   |             | Psi-opaque   |
| Cardinal Endur  |                            |              | U-frame  |              | Ψ  |             | W/mK         |
|   | Frame height               |              | W/m2K  | BTU/hr.ft2.F | W/mK   | BTU/hr.ft.F |              |
|   | mm                         | in           |  |              |  |             |              |
| Head  | 117                        | 4.59         | 0.94   | 0.16         | 0.018  | 0.010       | 0.139        |
| Sill  | 117                        | 4.59         | 0.94   | 0.16         | 0.018  | 0.010       | BTU/hr.ft.F  |
| left jamb   | 117                        | 4.59         | 0.94   | 0.17         | 0.019  | 0.011       | 0.080        |
| right jamb  | 117                        | 4.59         | 0.94   | 0.17         | 0.019  | 0.011       | Grade B      |


Valid through February 2021

Calculation based on ISO 15099

|   |                  |                                     |  |         |  |              |             |             |
|---|------------------|-------------------------------------|--|---------|--|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                  |                                     | Center-of-glass properties   |         |  |              |             |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | South-<br>facing | North,<br>East,<br>West -<br>facing |  |         | Cardinal E272 / ARG90 / CLR / ARG90 /<br>E272 (5MM/5MM/5MM) - 1-3/8" IG<br>Internal grids < 25.4mm |              |             |             |
|   |                  | Whole-window installed U-value      |  |         | Ucog-Value   |              |             |             |
| <b>Climate specific recommendations:</b>                |                  | W/m2K                               | BTU/hr.ft2.F   | SHGC    | W/m2K  | BTU/hr.ft2.F |             |             |
| 8   |                  | 1.02                                | 0.18   | 0.298   | 0.795  | 0.140        |             |             |
| 7   |                  | 1.02                                | 0.18   | 0.298   | 0.797  | 0.140        |             |             |
| 6   |                  | 1.03                                | 0.18   | 0.298   | 0.804  | 0.142        |             |             |
| 5   |                  | 1.03                                | 0.18   | 0.298   | 0.805  | 0.142        |             |             |
| 4   |                  | 1.03                                | 0.18   | 0.298   | 0.809  | 0.143        |             |             |
| Marine North  |                  | 1.03                                | 0.18   | 0.298   | 0.812  | 0.143        |             |             |
| Marine South  |                  | ✓                                   | ✓  | 1.04    | 0.18   | 0.298        | 0.817       | 0.144       |
| 3   |                  | ✓                                   | ✓  | 1.03    | 0.18   | 0.298        | 0.814       | 0.143       |
| 2 West  |                  | ✓                                   | ✓  | 1.04    | 0.18   | 0.298        | 0.822       | 0.145       |
| 2 East  |                  | ✓                                   | ✓  | 1.04    | 0.18   | 0.298        | 0.822       | 0.145       |
| <b>Plesio Select Series 86 Tilt T</b>                   |                  | FRAME                               |  |         | Psi-spacer   |              | Psi-opaque  |             |
| <b>Cardinal Endur</b>                                   |                  | Frame height                        |  | U-frame |  | Ψ            |             | W/mK        |
|   |                  | mm                                  | in   | W/m2K   | BTU/hr.ft2.F   | W/mK         | BTU/hr.ft.F |             |
| Head  |                  | 117                                 | 4.59   | 0.94    | 0.16   | 0.018        | 0.010       | 0.139       |
| Sill  |                  | 117                                 | 4.59   | 0.94    | 0.16   | 0.018        | 0.010       | BTU/hr.ft.F |
| left jamb   |                  | 117                                 | 4.59   | 0.94    | 0.17   | 0.019        | 0.011       | 0.080       |
| right jamb  |                  | 117                                 | 4.59   | 0.94    | 0.17   | 0.019        | 0.011       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                            |                                |  |            |              |              |             |             |
|---|----------------------------|--------------------------------|--|------------|--------------|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                            |                                | Center-of-glass properties   |            |              |              |             |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing | South-facing                   |  Cardinal E272 / ARG90 / CLR / ARG90 / E272 (5MM/5MM/5MM) - 1-3/8" IG<br>Internal grids >= 25.4mm maintain 3mm clearance |            |              |              |             |             |
| Climate specific recommendations:                       |                            | Whole-window installed U-value |  | Ucog-Value |              |              |             |             |
|   |                            | W/m2K                          | BTU/hr.ft2.F   | SHGC       | W/m2K        | BTU/hr.ft2.F |             |             |
| 8   |                            | 0.96                           | 0.17   | 0.256      | 0.795        | 0.140        |             |             |
| 7   |                            | 0.97                           | 0.17   | 0.256      | 0.797        | 0.140        |             |             |
| 6   |                            | 0.97                           | 0.17   | 0.256      | 0.804        | 0.142        |             |             |
| 5   |                            | 0.97                           | 0.17   | 0.256      | 0.805        | 0.142        |             |             |
| 4   |                            | 0.97                           | 0.17   | 0.256      | 0.809        | 0.143        |             |             |
| Marine North  |                            | 0.98                           | 0.17   | 0.256      | 0.812        | 0.143        |             |             |
| Marine South  | ✓                          | 0.98                           | 0.17   | 0.256      | 0.817        | 0.144        |             |             |
| 3   | ✓                          | 0.98                           | 0.17   | 0.256      | 0.814        | 0.143        |             |             |
| 2 West  | ✓                          | 0.98                           | 0.17   | 0.256      | 0.822        | 0.145        |             |             |
| 2 East  | ✓                          | 0.98                           | 0.17   | 0.256      | 0.822        | 0.145        |             |             |
| Plesio Select Series 86 Tilt T                          |                            | FRAME                          |  |            | Psi-spacer   |              | Psi-opaque  |             |
| Cardinal Endur  |                            | Frame height                   |  | U-frame    |              | Ψ            |             | W/mK        |
|   |                            | mm                             | in   | W/m2K      | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |             |
| Head  |                            | 117                            | 4.59   | 0.94       | 0.16         | 0.018        | 0.010       | 0.139       |
| Sill  |                            | 117                            | 4.59   | 0.94       | 0.16         | 0.018        | 0.010       | BTU/hr.ft.F |
| left jamb   |                            | 117                            | 4.59   | 0.94       | 0.17         | 0.019        | 0.011       | 0.080       |
| right jamb  |                            | 117                            | 4.59   | 0.94       | 0.17         | 0.019        | 0.011       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                                     |                  |  |              |   |             |                   |
|---|-------------------------------------|------------------|--|--------------|---|-------------|-------------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                                     |                  | Center-of-glass properties   |              |   |             |                   |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | North,<br>East,<br>South-<br>facing | West -<br>facing |  |              | Cardinal E272 / ARG90 / CLR / ARG90 /<br>E272 (5MM/5MM/5MM) - 1-3/8" IG<br>Internal grids >= 25.4mm |             |                   |
| Climate specific recommendations:                       |                                     |                  |  |              | Whole-window installed U-value  |             | Ucog-Value        |
|   |                                     |                  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K       | BTU/hr.ft2.F      |
| 8   |                                     |                  | 1.02   | 0.18         | 0.256   | 0.795       | 0.140             |
| 7   |                                     |                  | 1.02   | 0.18         | 0.256   | 0.797       | 0.140             |
| 6   |                                     |                  | 1.03   | 0.18         | 0.256   | 0.804       | 0.142             |
| 5   |                                     |                  | 1.03   | 0.18         | 0.256   | 0.805       | 0.142             |
| 4   |                                     |                  | 1.03   | 0.18         | 0.256   | 0.809       | 0.143             |
| Marine North  |                                     |                  | 1.03   | 0.18         | 0.256   | 0.812       | 0.143             |
| Marine South  | ✓                                   | ✓                | 1.04   | 0.18         | 0.256   | 0.817       | 0.144             |
| 3   | ✓                                   | ✓                | 1.03   | 0.18         | 0.256   | 0.814       | 0.143             |
| 2 West  | ✓                                   | ✓                | 1.04   | 0.18         | 0.256   | 0.822       | 0.145             |
| 2 East  | ✓                                   | ✓                | 1.04   | 0.18         | 0.256   | 0.822       | 0.145             |
| <b>Plesio Select Series 86 Tilt T</b>                   | <b>FRAME</b>                        |                  |  |              | <b>Psi-spacer</b>   |             | <b>Psi-opaque</b> |
| <b>Cardinal Endur</b>                                   | Frame height                        |                  | U-frame  |              | Ψ   |             | W/mK              |
|   | mm                                  | in               | W/m2K  | BTU/hr.ft2.F | W/mK  | BTU/hr.ft.F |                   |
| Head  | 117                                 | 4.59             | 0.94   | 0.16         | 0.018   | 0.010       | 0.139             |
| Sill  | 117                                 | 4.59             | 0.94   | 0.16         | 0.018   | 0.010       | BTU/hr.ft.F       |
| left jamb   | 117                                 | 4.59             | 0.94   | 0.17         | 0.019   | 0.011       | 0.080             |
| right jamb  | 117                                 | 4.59             | 0.94   | 0.17         | 0.019   | 0.011       | Grade B           |


Valid through February 2021

Calculation based on ISO 15099

|   |  |  |              |   |              |              |             |             |
|---|--|--|--------------|---|--------------|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |   |              |              |             |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG No Grids |              |              |             |             |
| Climate specific recommendations:                       |  | Whole-window installed U-value   |              |   | Ucog-Value   |              |             |             |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K        | BTU/hr.ft2.F |             |             |
| 8   |  | 0.86   | 0.15         | 0.533   | 0.665        | 0.117        |             |             |
| 7   |  | 0.85   | 0.15         | 0.533   | 0.658        | 0.116        |             |             |
| 6   |  | 0.85   | 0.15         | 0.533   | 0.654        | 0.115        |             |             |
| 5   |  | 0.85   | 0.15         | 0.533   | 0.653        | 0.115        |             |             |
| 4   | ✓  | 0.85   | 0.15         | 0.533   | 0.652        | 0.115        |             |             |
| Marine North  | ✓  | 0.85   | 0.15         | 0.533   | 0.651        | 0.115        |             |             |
| Marine South  |  | 0.85   | 0.15         | 0.533   | 0.648        | 0.114        |             |             |
| 3   |  | 0.85   | 0.15         | 0.533   | 0.650        | 0.114        |             |             |
| 2 West  |  | 0.82   | 0.14         | 0.533   | 0.606        | 0.107        |             |             |
| 2 East  |  | 0.82   | 0.14         | 0.533   | 0.606        | 0.107        |             |             |
| Plesio Select Series 86 Tilt T                          |  | FRAME  |              |   | Psi-spacer   |              | Psi-opaque  |             |
| Cardinal Endur  |  | Frame height   |              | U-frame   |              | Ψ            |             | W/mK        |
|   |  | mm   | in           | W/m2K   | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |             |
| Head  |  | 117  | 4.60         | 0.97  | 0.17         | 0.006        | 0.003       | 0.132       |
| Sill  |  | 117  | 4.60         | 0.98  | 0.17         | 0.006        | 0.003       | BTU/hr.ft.F |
| left jamb   |  | 117  | 4.60         | 0.98  | 0.17         | 0.006        | 0.004       | 0.076       |
| right jamb  |  | 117  | 4.60         | 0.98  | 0.17         | 0.006        | 0.004       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |  |  |              |  |              |              |             |
|---|--|--|--------------|--|--------------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |  |              |              |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids < 25.4mm maintain 3mm clearance |              |              |             |
| Climate specific recommendations:                       |  |  |              | Whole-window installed U-value   |              | Ucog-Value   |             |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K        | BTU/hr.ft2.F |             |
| 8   |  | 0.86   | 0.15         | 0.462  | 0.665        | 0.117        |             |
| 7   |  | 0.85   | 0.15         | 0.462  | 0.658        | 0.116        |             |
| 6   |  | 0.85   | 0.15         | 0.462  | 0.654        | 0.115        |             |
| 5   |  | 0.85   | 0.15         | 0.462  | 0.653        | 0.115        |             |
| 4   |  | 0.85   | 0.15         | 0.462  | 0.652        | 0.115        |             |
| Marine North  |  | 0.85   | 0.15         | 0.462  | 0.651        | 0.115        |             |
| Marine South  | ✓  | 0.85   | 0.15         | 0.462  | 0.648        | 0.114        |             |
| 3   | ✓  | 0.85   | 0.15         | 0.462  | 0.650        | 0.114        |             |
| 2 West  |  | 0.82   | 0.14         | 0.462  | 0.606        | 0.107        |             |
| 2 East  |  | 0.82   | 0.14         | 0.462  | 0.606        | 0.107        |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |  | FRAME  |              |  | Psi-spacer   |              | Psi-opaque  |
| <b>Cardinal Endur</b>                                   |  | Frame height   |              | U-frame  |              | Ψ            |             |
|   |  | mm   | in           | W/m2K  | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |
|   | Head                                       | 117  | 4.60         | 0.97   | 0.17         | 0.006        | 0.003       |
|   | Sill                                       | 117  | 4.60         | 0.98   | 0.17         | 0.006        | 0.003       |
|   | left jamb                                  | 117  | 4.60         | 0.98   | 0.17         | 0.006        | 0.004       |
|   | right jamb                                 | 117  | 4.60         | 0.98   | 0.17         | 0.006        | 0.004       |
|   |  |  |              |  |              |              | W/mK        |
|   |  |  |              |  |              |              | 0.132       |
|   |  |  |              |  |              |              | BTU/hr.ft.F |
|   |  |  |              |  |              |              | 0.076       |
|   |  |  |              |  |              |              | Grade B     |

Valid through February 2021

Calculation based on ISO 15099

|   |  |  |              |   |       |              |
|---|--|--|--------------|---|-------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |   |       |              |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids < 25.4mm |       |              |
| Climate specific recommendations:                       |  |  |              | Whole-window installed U-value  |       | Ucog-Value   |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
| 8   |  | 0.91   | 0.16         | 0.462   | 0.665 | 0.117        |
| 7   |  | 0.91   | 0.16         | 0.462   | 0.658 | 0.116        |
| 6   |  | 0.91   | 0.16         | 0.462   | 0.654 | 0.115        |
| 5   |  | 0.91   | 0.16         | 0.462   | 0.653 | 0.115        |
| 4   |  | 0.90   | 0.16         | 0.462   | 0.652 | 0.115        |
| Marine North  |  | 0.90   | 0.16         | 0.462   | 0.651 | 0.115        |
| Marine South  | ✓  | 0.90   | 0.16         | 0.462   | 0.648 | 0.114        |
| 3   | ✓  | 0.90   | 0.16         | 0.462   | 0.650 | 0.114        |
| 2 West  |  | 0.87   | 0.15         | 0.462   | 0.606 | 0.107        |
| 2 East  |  | 0.87   | 0.15         | 0.462   | 0.606 | 0.107        |


  

|  |              |      |         |              |            |             |             |
|--|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Tilt T<br>Cardinal Endur | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|  | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|  | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head   | 117          | 4.60 | 0.97    | 0.17         | 0.006      | 0.003       | 0.132       |
| Sill   | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.003       | BTU/hr.ft.F |
| left jamb  | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.004       | 0.076       |
| right jamb                                       | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.004       | Grade B     |

Valid through February 2021



Calculation based on ISO 15099


|   |  |  |              |   |       |              |
|---|--|--|--------------|---|-------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |   |       |              |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm maintain 3mm clearance |       |              |
| Climate specific recommendations:                       |  |  |              | Whole-window installed U-value  |       | Ucog-Value   |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
| 8   |  | 0.86   | 0.15         | 0.397   | 0.665 | 0.117        |
| 7   |  | 0.85   | 0.15         | 0.397   | 0.658 | 0.116        |
| 6   |  | 0.85   | 0.15         | 0.397   | 0.654 | 0.115        |
| 5   |  | 0.85   | 0.15         | 0.397   | 0.653 | 0.115        |
| 4   | ✓  | 0.85   | 0.15         | 0.397   | 0.652 | 0.115        |
| Marine North  | ✓  | 0.85   | 0.15         | 0.397   | 0.651 | 0.115        |
| Marine South  | ✓  | 0.85   | 0.15         | 0.397   | 0.648 | 0.114        |
| 3   | ✓  | 0.85   | 0.15         | 0.397   | 0.650 | 0.114        |
| 2 West  |  | 0.82   | 0.14         | 0.397   | 0.606 | 0.107        |
| 2 East  |  | 0.82   | 0.14         | 0.397   | 0.606 | 0.107        |

|  |              |      |         |              |            |             |             |
|--|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Tilt T<br>Cardinal Endur | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|  | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|  | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head   | 117          | 4.60 | 0.97    | 0.17         | 0.006      | 0.003       | 0.132       |
| Sill   | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.003       | BTU/hr.ft.F |
| left jamb  | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.004       | 0.076       |
| right jamb                                       | 117          | 4.60 | 0.98    | 0.17         | 0.006      | 0.004       | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                            |              |  |                            |  |       |                   |             |
|---|----------------------------|--------------|--|----------------------------|--|-------|-------------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                            |              |  | Center-of-glass properties |  |       |                   |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing | South-facing |  |                            | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm |       |                   |             |
| Climate specific recommendations:                       |                            |              | Whole-window installed U-value   |                            | Ucog-Value   |       |                   |             |
|   |                            |              | W/m2K  | BTU/hr.ft2.F               | SHGC   | W/m2K | BTU/hr.ft2.F      |             |
| 8   |                            |              | 0.91   | 0.16                       | 0.397  | 0.665 | 0.117             |             |
| 7   |                            |              | 0.91   | 0.16                       | 0.397  | 0.658 | 0.116             |             |
| 6   |                            |              | 0.91   | 0.16                       | 0.397  | 0.654 | 0.115             |             |
| 5   |                            |              | 0.91   | 0.16                       | 0.397  | 0.653 | 0.115             |             |
| 4   |                            |              | 0.90   | 0.16                       | 0.397  | 0.652 | 0.115             |             |
| Marine North  |                            | ☑            | 0.90   | 0.16                       | 0.397  | 0.651 | 0.115             |             |
| Marine South  | ☑                          |              | 0.90   | 0.16                       | 0.397  | 0.648 | 0.114             |             |
| 3   | ☑                          |              | 0.90   | 0.16                       | 0.397  | 0.650 | 0.114             |             |
| 2 West  |                            |              | 0.87   | 0.15                       | 0.397  | 0.606 | 0.107             |             |
| 2 East  |                            |              | 0.87   | 0.15                       | 0.397  | 0.606 | 0.107             |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |                            | <b>FRAME</b> |  |                            | <b>Psi-spacer</b>  |       | <b>Psi-opaque</b> |             |
| <b>Cardinal Endur</b>                                   |                            | Frame height |  | U-frame                    |  | Ψ     |                   | W/mK        |
|   |                            | mm           | in   | W/m2K                      | BTU/hr.ft2.F   | W/mK  | BTU/hr.ft.F       |             |
|   | Head                       | 117          | 4.60   | 0.97                       | 0.17   | 0.006 | 0.003             | 0.132       |
|   | Sill                       | 117          | 4.60   | 0.98                       | 0.17   | 0.006 | 0.003             | BTU/hr.ft.F |
|   | left jamb                  | 117          | 4.60   | 0.98                       | 0.17   | 0.006 | 0.004             | 0.076       |
|   | right jamb                 | 117          | 4.60   | 0.98                       | 0.17   | 0.006 | 0.004             | Grade B     |


Valid through February 2021

Calculation based on ISO 15099

|   |                            |              |  |              |   |             |              |             |
|---|----------------------------|--------------|--|--------------|---|-------------|--------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                            |              | Center-of-glass properties   |              |   |             |              |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing | South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-5/8" IG No Grids |             |              |             |
| Climate specific recommendations:                       |                            |              | Whole-window installed U-value   |              | Ucog-Value  |             |              |             |
|   |                            |              | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K       | BTU/hr.ft2.F |             |
| 8   |                            |              | 0.85   | 0.15         | 0.534   | 0.655       | 0.115        |             |
| 7   |                            |              | 0.83   | 0.15         | 0.534   | 0.624       | 0.110        |             |
| 6   |                            |              | 0.81   | 0.14         | 0.534   | 0.590       | 0.104        |             |
| 5   | ✓                          | ✓            | 0.81   | 0.14         | 0.534   | 0.585       | 0.103        |             |
| 4   | ✓                          |              | 0.80   | 0.14         | 0.534   | 0.576       | 0.101        |             |
| Marine North  | ✓                          |              | 0.80   | 0.14         | 0.534   | 0.572       | 0.101        |             |
| Marine South  |                            |              | 0.79   | 0.14         | 0.534   | 0.566       | 0.100        |             |
| 3   |                            |              | 0.80   | 0.14         | 0.534   | 0.569       | 0.100        |             |
| 2 West  |                            |              | 0.77   | 0.14         | 0.534   | 0.533       | 0.094        |             |
| 2 East  |                            |              | 0.77   | 0.14         | 0.534   | 0.533       | 0.094        |             |
| Plesio Select Series 86 Tilt T Cardinal Endur           | FRAME                      |              |  |              | Psi-spacer  |             | Psi-opaque   |             |
|   | Frame height               |              | U-frame  |              | Ψ   |             | W/mK         |             |
|   | mm                         | in           | W/m2K  | BTU/hr.ft2.F | W/mK  | BTU/hr.ft.F |              |             |
|   | Head                       | 117          | 4.60   | 1.00         | 0.18  | 0.005       | 0.003        | 0.134       |
|   | Sill                       | 117          | 4.60   | 1.00         | 0.18  | 0.005       | 0.003        | BTU/hr.ft.F |
| left jamb   | 117                        | 4.60         | 1.00   | 0.18         | 0.005   | 0.003       | 0.078        |             |
| right jamb  | 117                        | 4.60         | 1.00   | 0.18         | 0.005   | 0.003       | Grade B      |             |


Valid through February 2021

Calculation based on ISO 15099

|   |  |  |              |              |  |              |             |            |
|---|--|--|--------------|--------------|--|--------------|-------------|------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |              |  |              |             |            |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-5/8" IG |              |             |            |
|   |  |  |              |              | Internal grids < 25.4mm maintain 3mm clearance                       |              |             |            |
| Climate specific recommendations:                       |  | Whole-window installed U-value   |              |              | Ucog-Value   |              |             |            |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC         | W/m2K  | BTU/hr.ft2.F |             |            |
| 8   |  | 0.85   | 0.15         | 0.463        | 0.655  | 0.115        |             |            |
| 7   |  | 0.83   | 0.15         | 0.463        | 0.624  | 0.110        |             |            |
| 6   |  | 0.81   | 0.14         | 0.463        | 0.590  | 0.104        |             |            |
| 5   | ✓  | 0.81   | 0.14         | 0.463        | 0.585  | 0.103        |             |            |
| 4   |  | 0.80   | 0.14         | 0.463        | 0.576  | 0.101        |             |            |
| Marine North  |  | 0.80   | 0.14         | 0.463        | 0.572  | 0.101        |             |            |
| Marine South  | ✓  | 0.79   | 0.14         | 0.463        | 0.566  | 0.100        |             |            |
| 3   | ✓  | 0.80   | 0.14         | 0.463        | 0.569  | 0.100        |             |            |
| 2 West  |  | 0.77   | 0.14         | 0.463        | 0.533  | 0.094        |             |            |
| 2 East  |  | 0.77   | 0.14         | 0.463        | 0.533  | 0.094        |             |            |
| Plesio Select Series 86 Tilt T<br>Cardinal Endur        |  | FRAME  |              |              |  | Psi-spacer   |             | Psi-opaque |
|   |  | Frame height   |              | U-frame      |  | Ψ            |             | W/mK       |
|   | mm   | in   | W/m2K        | BTU/hr.ft2.F | W/mK   | BTU/hr.ft.F  |             |            |
| Head  | 117  | 4.60   | 1.00         | 0.18         | 0.005  | 0.003        | 0.134       |            |
| Sill  | 117  | 4.60   | 1.00         | 0.18         | 0.005  | 0.003        | BTU/hr.ft.F |            |
| left jamb   | 117  | 4.60   | 1.00         | 0.18         | 0.005  | 0.003        | 0.078       |            |
| right jamb  | 117  | 4.60   | 1.00         | 0.18         | 0.005  | 0.003        | Grade B     |            |

Valid through February 2021

Calculation based on ISO 15099


|   |  |  |              |   |       |              |
|---|--|--|--------------|---|-------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |   |       |              |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-5/8" IG<br>Internal grids < 25.4mm |       |              |
| Climate specific recommendations:                       |  |  |              | Whole-window installed U-value  |       | Ucog-Value   |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
| 8   |  | 0.91   | 0.16         | 0.463   | 0.655 | 0.115        |
| 7   |  | 0.89   | 0.16         | 0.463   | 0.624 | 0.110        |
| 6   |  | 0.87   | 0.15         | 0.463   | 0.590 | 0.104        |
| 5   |  | 0.86   | 0.15         | 0.463   | 0.585 | 0.103        |
| 4   |  | 0.86   | 0.15         | 0.463   | 0.576 | 0.101        |
| Marine North  |  | 0.85   | 0.15         | 0.463   | 0.572 | 0.101        |
| Marine South  | ✓  | 0.85   | 0.15         | 0.463   | 0.566 | 0.100        |
| 3   | ✓  | 0.85   | 0.15         | 0.463   | 0.569 | 0.100        |
| 2 West  |  | 0.83   | 0.15         | 0.463   | 0.533 | 0.094        |
| 2 East  |  | 0.83   | 0.15         | 0.463   | 0.533 | 0.094        |

|  |              |      |         |              |            |             |             |
|--|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Tilt T<br>Cardinal Endur | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|  | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|  | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head   | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | 0.134       |
| Sill   | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | BTU/hr.ft.F |
| left jamb  | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | 0.078       |
| right jamb                                       | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | Grade B     |

Valid through February 2021

Calculation based on ISO 15099


|   |  |  |              |   |       |              |
|---|--|--|--------------|---|-------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  | Center-of-glass properties   |              |   |       |              |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |  |              | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-5/8" IG<br>Internal grids >= 25.4mm maintain 3mm clearance |       |              |
| Climate specific recommendations:                       |  |  |              | Whole-window installed U-value  |       | Ucog-Value   |
|   |  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F |
| 8   |  | 0.85   | 0.15         | 0.397   | 0.655 | 0.115        |
| 7   |  | 0.83   | 0.15         | 0.397   | 0.624 | 0.110        |
| 6   |  | 0.81   | 0.14         | 0.397   | 0.590 | 0.104        |
| 5   | ✓  | 0.81   | 0.14         | 0.397   | 0.585 | 0.103        |
| 4   | ✓  | 0.80   | 0.14         | 0.397   | 0.576 | 0.101        |
| Marine North  | ✓  | 0.80   | 0.14         | 0.397   | 0.572 | 0.101        |
| Marine South  | ✓  | 0.79   | 0.14         | 0.397   | 0.566 | 0.100        |
| 3   | ✓  | 0.80   | 0.14         | 0.397   | 0.569 | 0.100        |
| 2 West  |  | 0.77   | 0.14         | 0.397   | 0.533 | 0.094        |
| 2 East  |  | 0.77   | 0.14         | 0.397   | 0.533 | 0.094        |

|  |              |      |         |              |            |             |             |
|--|--------------|------|---------|--------------|------------|-------------|-------------|
| Plesio Select Series 86 Tilt T<br>Cardinal Endur | FRAME        |      |         |              | Psi-spacer |             | Psi-opaque  |
|  | Frame height |      | U-frame |              | Ψ          |             | W/mK        |
|  | mm           | in   | W/m2K   | BTU/hr.ft2.F | W/mK       | BTU/hr.ft.F |             |
| Head   | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | 0.134       |
| Sill   | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | BTU/hr.ft.F |
| left jamb  | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | 0.078       |
| right jamb                                       | 117          | 4.60 | 1.00    | 0.18         | 0.005      | 0.003       | Grade B     |


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Calculation based on ISO 15099

|   |                                     |                  |  |  |              |              |             |             |
|---|-------------------------------------|------------------|--|--|--------------|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                                     |                  |  | Center-of-glass properties   |              |              |             |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | North,<br>East,<br>West -<br>facing | South-<br>facing |  |  |              |              |             |             |
|   |                                     |                  |  | Cardinal E180 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-5/8" IG<br>Internal grids >= 25.4mm |              |              |             |             |
|   |                                     |                  |  | Whole-window installed U-value   |              | Ucog-Value   |             |             |
| <b>Climate specific recommendations:</b>                |                                     |                  |  | SHGC   | BTU/hr.ft2.F |              |             |             |
|   |                                     |                  | W/m2K  | BTU/hr.ft2.F   | W/m2K        | BTU/hr.ft2.F |             |             |
| 8   |                                     |                  | 0.91   | 0.16   | 0.397        | 0.115        |             |             |
| 7   |                                     |                  | 0.89   | 0.16   | 0.397        | 0.110        |             |             |
| 6   |                                     |                  | 0.87   | 0.15   | 0.397        | 0.104        |             |             |
| 5   |                                     |                  | 0.86   | 0.15   | 0.397        | 0.103        |             |             |
| 4   |                                     | ✓                | 0.86   | 0.15   | 0.397        | 0.101        |             |             |
| Marine North  |                                     | ✓                | 0.85   | 0.15   | 0.397        | 0.101        |             |             |
| Marine South  | ✓                                   |                  | 0.85   | 0.15   | 0.397        | 0.100        |             |             |
| 3   | ✓                                   |                  | 0.85   | 0.15   | 0.397        | 0.100        |             |             |
| 2 West  |                                     |                  | 0.83   | 0.15   | 0.397        | 0.094        |             |             |
| 2 East  |                                     |                  | 0.83   | 0.15   | 0.397        | 0.094        |             |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |                                     | FRAME            |  |  | Psi-spacer   |              | Psi-opaque  |             |
| <b>Cardinal Endur</b>                                   |                                     | Frame height     |  | U-frame  |              | Ψ            |             |             |
|   |                                     | mm               | in   | W/m2K  | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F | W/mK        |
|   | Head                                | 117              | 4.60   | 1.00   | 0.18         | 0.005        | 0.003       | 0.134       |
|   | Sill                                | 117              | 4.60   | 1.00   | 0.18         | 0.005        | 0.003       | BTU/hr.ft.F |
|   | left jamb                           | 117              | 4.60   | 1.00   | 0.18         | 0.005        | 0.003       | 0.078       |
|   | right jamb                          | 117              | 4.60   | 1.00   | 0.18         | 0.005        | 0.003       | Grade B     |

Valid through February 2021


Calculation based on ISO 15099

|   |                                     |                  |  |              |   |       |                   |             |
|---|-------------------------------------|------------------|--|--------------|---|-------|-------------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                                     |                  | Center-of-glass properties   |              |   |       |                   |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | North,<br>East,<br>South-<br>facing | West -<br>facing |  |              | Cardinal E366 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG No Grids |       |                   |             |
| Climate specific recommendations:                       |                                     |                  |  |              | Whole-window installed U-value  |       | Ucog-Value        |             |
|   |                                     |                  | W/m2K  | BTU/hr.ft2.F | SHGC  | W/m2K | BTU/hr.ft2.F      |             |
| 8   |                                     |                  | 0.84   | 0.15         | 0.236   | 0.637 | 0.112             |             |
| 7   |                                     |                  | 0.83   | 0.15         | 0.236   | 0.627 | 0.110             |             |
| 6   |                                     |                  | 0.83   | 0.15         | 0.236   | 0.620 | 0.109             |             |
| 5   |                                     |                  | 0.82   | 0.15         | 0.236   | 0.619 | 0.109             |             |
| 4   |                                     | ✓                | 0.82   | 0.14         | 0.236   | 0.617 | 0.109             |             |
| Marine North  |                                     | ✓                | 0.82   | 0.14         | 0.236   | 0.615 | 0.108             |             |
| Marine South  | ✓                                   | ✓                | 0.82   | 0.14         | 0.236   | 0.611 | 0.108             |             |
| 3   | ✓                                   | ✓                | 0.82   | 0.14         | 0.236   | 0.614 | 0.108             |             |
| 2 West  | ✓                                   | ✓                | 0.79   | 0.14         | 0.236   | 0.572 | 0.101             |             |
| 2 East  | ✓                                   | ✓                | 0.79   | 0.14         | 0.236   | 0.572 | 0.101             |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |                                     | <b>FRAME</b>     |  |              | <b>Psi-spacer</b>   |       | <b>Psi-opaque</b> |             |
| <b>Cardinal Endur</b>                                   |                                     | Frame height     |  | U-frame      |   | Ψ     |                   |             |
|   |                                     | mm               | in   | W/m2K        | BTU/hr.ft2.F  | W/mK  | BTU/hr.ft.F       | W/mK        |
|   | Head                                | 117              | 4.60   | 0.97         | 0.17  | 0.006 | 0.004             | 0.132       |
|   | Sill                                | 117              | 4.60   | 0.97         | 0.17  | 0.006 | 0.004             | BTU/hr.ft.F |
|   | left jamb                           | 117              | 4.60   | 0.97         | 0.17  | 0.007 | 0.004             | 0.076       |
|   | right jamb                          | 117              | 4.60   | 0.97         | 0.17  | 0.007 | 0.004             | Grade B     |

Valid through February 2021




Calculation based on ISO 15099

|   |                                     |                  |  |              |  |             |              |
|---|-------------------------------------|------------------|--|--------------|--|-------------|--------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                                     |                  | Center-of-glass properties   |              |  |             |              |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | North,<br>East,<br>West -<br>facing | South-<br>facing |  |              | Cardinal E366 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG |             |              |
|   |                                     |                  |  |              | Internal grids < 25.4mm maintain 3mm clearance                       |             |              |
| Climate specific recommendations:                       |                                     |                  | Whole-window installed U-value   |              | Ucog-Value   |             |              |
|   |                                     |                  | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K       | BTU/hr.ft2.F |
| 8   |                                     |                  | 0.84   | 0.15         | 0.205  | 0.637       | 0.112        |
| 7   |                                     |                  | 0.83   | 0.15         | 0.205  | 0.627       | 0.110        |
| 6   |                                     |                  | 0.83   | 0.15         | 0.205  | 0.620       | 0.109        |
| 5   |                                     |                  | 0.82   | 0.15         | 0.205  | 0.619       | 0.109        |
| 4   |                                     | ✓                | 0.82   | 0.14         | 0.205  | 0.617       | 0.109        |
| Marine North  |                                     | ✓                | 0.82   | 0.14         | 0.205  | 0.615       | 0.108        |
| Marine South  | ✓                                   | ✓                | 0.82   | 0.14         | 0.205  | 0.611       | 0.108        |
| 3   | ✓                                   | ✓                | 0.82   | 0.14         | 0.205  | 0.614       | 0.108        |
| 2 West  | ✓                                   | ✓                | 0.79   | 0.14         | 0.205  | 0.572       | 0.101        |
| 2 East  | ✓                                   | ✓                | 0.79   | 0.14         | 0.205  | 0.572       | 0.101        |
| Plesio Select Series 86 Tilt T<br>Cardinal Endur        |                                     |                  | FRAME  |              | Psi-spacer   |             | Psi-opaque   |
|   |                                     |                  | Frame height   |              | U-frame  |             | Ψ            |
| mm  | in                                  | W/m2K            | BTU/hr.ft2.F   | W/mK         | BTU/hr.ft.F  | BTU/hr.ft.F |              |
| Head  | 117                                 | 4.60             | 0.97   | 0.17         | 0.006  | 0.004       | 0.132        |
| Sill  | 117                                 | 4.60             | 0.97   | 0.17         | 0.006  | 0.004       | BTU/hr.ft.F  |
| left jamb   | 117                                 | 4.60             | 0.97   | 0.17         | 0.007  | 0.004       | 0.076        |
| right jamb  | 117                                 | 4.60             | 0.97   | 0.17         | 0.007  | 0.004       | Grade B      |


Valid through February 2021

Calculation based on ISO 15099

|   |              |                            |  |              |  |              |              |       |
|---|--------------|----------------------------|--|--------------|--|--------------|--------------|-------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |              |                            | Center-of-glass properties   |              |  |              |              |       |
| ASHRAE/IECC /DOE North American Climate Zone            | South-facing | North, East, West - facing |  |              | Cardinal E366 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG |              |              |       |
|   |              |                            |  |              | Internal grids < 25.4mm  |              |              |       |
| Climate specific recommendations:                       |              |                            | Whole-window installed U-value   |              | Ucog-Value   |              |              |       |
|   |              |                            | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K        | BTU/hr.ft2.F |       |
| 8   |              |                            | 0.89   | 0.16         | 0.205  | 0.637        | 0.112        |       |
| 7   |              |                            | 0.89   | 0.16         | 0.205  | 0.627        | 0.110        |       |
| 6   |              |                            | 0.88   | 0.16         | 0.205  | 0.620        | 0.109        |       |
| 5   |              |                            | 0.88   | 0.16         | 0.205  | 0.619        | 0.109        |       |
| 4   |              | ✓                          | 0.88   | 0.15         | 0.205  | 0.617        | 0.109        |       |
| Marine North  |              | ✓                          | 0.88   | 0.15         | 0.205  | 0.615        | 0.108        |       |
| Marine South  | ✓            | ✓                          | 0.88   | 0.15         | 0.205  | 0.611        | 0.108        |       |
| 3   | ✓            | ✓                          | 0.88   | 0.15         | 0.205  | 0.614        | 0.108        |       |
| 2 West  | ✓            | ✓                          | 0.85   | 0.15         | 0.205  | 0.572        | 0.101        |       |
| 2 East  | ✓            | ✓                          | 0.85   | 0.15         | 0.205  | 0.572        | 0.101        |       |
| Plesio Select Series 86 Tilt T                          |              |                            | FRAME  |              | Psi-spacer   |              | Psi-opaque   |       |
| Cardinal Endur  |              |                            | Frame height   |              | U-frame  |              | Ψ            |       |
|   |              |                            | mm   | in           | W/m2K  | BTU/hr.ft2.F |              |       |
| Head  |              |                            | 117  | 4.60         | 0.97   | 0.17         | 0.006        | 0.004 |
| Sill  |              |                            | 117  | 4.60         | 0.97   | 0.17         | 0.006        | 0.004 |
| left jamb   |              |                            | 117  | 4.60         | 0.97   | 0.17         | 0.007        | 0.004 |
| right jamb  |              |                            | 117  | 4.60         | 0.97   | 0.17         | 0.007        | 0.004 |
|   |              |                            |  |              |  |              | 0.132        |       |
|   |              |                            |  |              |  |              | BTU/hr.ft.F  |       |
|   |              |                            |  |              |  |              | 0.076        |       |
|   |              |                            |  |              |  |              | Grade B      |       |


Valid through February 2021

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|   |  |                                |  |            |              |              |             |             |
|---|--|--------------------------------|--|------------|--------------|--------------|-------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |  |                                | Center-of-glass properties   |            |              |              |             |             |
| ASHRAE/IECC /DOE North American Climate Zone            | North, East, West - facing<br>South-facing |                                |  Cardinal E366 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG<br>Internal grids >= 25.4mm maintain 3mm clearance |            |              |              |             |             |
| Climate specific recommendations:                       |  | Whole-window installed U-value |  | Ucog-Value |              |              |             |             |
|   |  | W/m2K                          | BTU/hr.ft2.F   | SHGC       | W/m2K        | BTU/hr.ft2.F |             |             |
| 8   |  | 0.84                           | 0.15   | 0.176      | 0.637        | 0.112        |             |             |
| 7   |  | 0.83                           | 0.15   | 0.176      | 0.627        | 0.110        |             |             |
| 6   |  | 0.83                           | 0.15   | 0.176      | 0.620        | 0.109        |             |             |
| 5   |  | 0.82                           | 0.15   | 0.176      | 0.619        | 0.109        |             |             |
| 4   |  | 0.82                           | 0.14   | 0.176      | 0.617        | 0.109        |             |             |
| Marine North  |  | 0.82                           | 0.14   | 0.176      | 0.615        | 0.108        |             |             |
| Marine South  | ✓  | 0.82                           | 0.14   | 0.176      | 0.611        | 0.108        |             |             |
| 3   | ✓  | 0.82                           | 0.14   | 0.176      | 0.614        | 0.108        |             |             |
| 2 West  | ✓  | 0.79                           | 0.14   | 0.176      | 0.572        | 0.101        |             |             |
| 2 East  | ✓  | 0.79                           | 0.14   | 0.176      | 0.572        | 0.101        |             |             |
| Plesio Select Series 86 Tilt T                          |  | FRAME                          |  |            | Psi-spacer   |              | Psi-opaque  |             |
| Cardinal Endur  |  | Frame height                   |  | U-frame    |              | Ψ            |             | W/mK        |
|   |  | mm                             | in   | W/m2K      | BTU/hr.ft2.F | W/mK         | BTU/hr.ft.F |             |
| Head  |  | 117                            | 4.60   | 0.97       | 0.17         | 0.006        | 0.004       | 0.132       |
| Sill  |  | 117                            | 4.60   | 0.97       | 0.17         | 0.006        | 0.004       | BTU/hr.ft.F |
| left jamb   |  | 117                            | 4.60   | 0.97       | 0.17         | 0.007        | 0.004       | 0.076       |
| right jamb  |  | 117                            | 4.60   | 0.97       | 0.17         | 0.007        | 0.004       | Grade B     |

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Calculation based on ISO 15099

|   |                                     |                  |  |              |  |       |                   |             |
|---|-------------------------------------|------------------|--|--------------|--|-------|-------------------|-------------|
| Product name: <b>Ventana Select Series 86 Tilt Turn</b> |                                     |                  | Center-of-glass properties   |              |  |       |                   |             |
| ASHRAE/IECC<br>/DOE North<br>American<br>Climate Zone   | North,<br>East,<br>West -<br>facing | South-<br>facing |  |              | Cardinal E366 / ARG90 / E180 / ARG90 / I89 (3MM/3MM/3MM) - 1-3/8" IG |       |                   |             |
|   |                                     |                  |  |              | Internal grids >= 25.4mm   |       |                   |             |
| Climate specific recommendations:                       |                                     |                  | Whole-window installed U-value   |              | Ucog-Value   |       |                   |             |
|   |                                     |                  | W/m2K  | BTU/hr.ft2.F | SHGC   | W/m2K | BTU/hr.ft2.F      |             |
| 8   |                                     |                  | 0.89   | 0.16         | 0.176  | 0.637 | 0.112             |             |
| 7   |                                     |                  | 0.89   | 0.16         | 0.176  | 0.627 | 0.110             |             |
| 6   |                                     |                  | 0.88   | 0.16         | 0.176  | 0.620 | 0.109             |             |
| 5   |                                     |                  | 0.88   | 0.16         | 0.176  | 0.619 | 0.109             |             |
| 4   |                                     | ✓                | 0.88   | 0.15         | 0.176  | 0.617 | 0.109             |             |
| Marine North  |                                     | ✓                | 0.88   | 0.15         | 0.176  | 0.615 | 0.108             |             |
| Marine South  | ✓                                   | ✓                | 0.88   | 0.15         | 0.176  | 0.611 | 0.108             |             |
| 3   | ✓                                   | ✓                | 0.88   | 0.15         | 0.176  | 0.614 | 0.108             |             |
| 2 West  | ✓                                   | ✓                | 0.85   | 0.15         | 0.176  | 0.572 | 0.101             |             |
| 2 East  | ✓                                   | ✓                | 0.85   | 0.15         | 0.176  | 0.572 | 0.101             |             |
| <b>Plesio Select Series 86 Tilt T</b>                   |                                     | <b>FRAME</b>     |  |              | <b>Psi-spacer</b>  |       | <b>Psi-opaque</b> |             |
| <b>Cardinal Endur</b>                                   |                                     | Frame height     |  | U-frame      |  | Ψ     |                   | W/mK        |
|   |                                     | mm               | in   | W/m2K        | BTU/hr.ft2.F   | W/mK  | BTU/hr.ft.F       |             |
|   | Head                                | 117              | 4.60   | 0.97         | 0.17   | 0.006 | 0.004             | 0.132       |
|   | Sill                                | 117              | 4.60   | 0.97         | 0.17   | 0.006 | 0.004             | BTU/hr.ft.F |
|   | left jamb                           | 117              | 4.60   | 0.97         | 0.17   | 0.007 | 0.004             | 0.076       |
|   | right jamb                          | 117              | 4.60   | 0.97         | 0.17   | 0.007 | 0.004             | Grade B     |

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