

AREA WEIGHTED AVERAGE CALCULATION WORKSHEET



CERTIFICATE OF COMPLIANCE		NRCC-ENV-06-E
Area Weighted Average Calculation Worksheet		(Page 1 of 5)
Project Name:	Date Prepared:	

The Area-Weighted Average Worksheet can be used to meet the Mandatory Requirements of Section §120.7, or the Prescriptive Requirements of Section §140.3. In meeting the Mandatory Requirements, the user may not area-weight mass walls (light or heavy) or F-factor. In meeting the Prescriptive Requirements, user must meet the requirements of Table 140.3-B, C or D.

Weighted averaging is used when there is more than one level of insulation or more than one type of fenestration which would not otherwise meet mandatory and/or prescriptive compliance requirements. When a window has an overhang, calculate the RSHGC first (see Equation 140.3-A), then determine the weighted averaged if need be. Weighted averaging is not allowed for chromogenic glazing, and should never be used for R-values. Only U-factors, SHGC, RSHGC, or VT can be area-weighted.

Property Being Averaged:	<input type="checkbox"/>	Opaque Surface - Roofs	<input type="checkbox"/>	Opaque Surface - Walls	<input type="checkbox"/>	Opaque Surface - Floors
	<input type="checkbox"/>	Fenestration U-factor	<input type="checkbox"/>	Relative Solar Heat Gain Coefficient (RSHGC)	<input type="checkbox"/>	Visible Transmittance (VT)

A. Envelope Area-Weighted Average Calculation – Roofs						
01	02	03	04	05	06	07
Tag /Identification	Roof Type	Surface Feature Area (ft ²)	Required U-factor (Table 140.3-B, C or D)	Required (Area * U-factor)	Proposed U-factor	Proposed (Area * U-factor)
Total						
Required Area-Weighted Average U-factor						
Proposed Area-Weighted Average U-factor =						
<ol style="list-style-type: none"> 1. Area weighting is only allowable for like surfaces. You may for example area weight two roof assemblies but not a roof and a wall. 2. "Area" can be replaced throughout the formula by "Length" or any other unit of measure used for the value being averaged. Mixture of different units not allowed. 3. Enter the above Weighted Average Value on the NRCC-ENV-01-E and NRCC-ENV-02-E compliance document and attach this sheet. 						

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B. Envelope Area-Weighted Average Calculation – Walls						
01	02	03	04	05	06	07
Tag /Identification	Wall Type	Surface Feature Area (ft ²)	Required U-factor (Table 140.3-B, C or D)	Required (Area * U-factor)	Proposed U-factor	Proposed (Area * U-factor)
Total						
Required Area-Weighted Average U-factor						
Proposed Area-Weighted Average U-factor =						
<ol style="list-style-type: none"> 1. Area weighting is only allowable for like surfaces. You may for example area weight two roof assemblies but not a roof and a wall. 2. "Area" can be replaced throughout the formula by "Length" or any other unit of measure used for the value being averaged. Mixture of different units not allowed. 3. Enter the above Weighted Average Value on the NRCC-ENV-01-E and NRCC-ENV-02-E compliance document and attach this sheet. 						

C. Envelope Area-Weighted Average Calculation – Floors						
01	02	03	04	05	06	07
Tag /Identification	Floor Type	Surface Feature Area (ft ²)	Required U-factor (Table 140.3-B, C or D)	Required (Area * U-factor)	Proposed U-factor	Proposed (Area * U-factor)
Total						
Required Area-Weighted Average U-factor						
Proposed Area-Weighted Average U-factor =						
<ol style="list-style-type: none"> 1. Area weighting is only allowable for like surfaces. You may for example area weight two roof assemblies but not a roof and a wall. 2. "Area" can be replaced throughout the formula by "Length" or any other unit of measure used for the value being averaged. Mixture of different units not allowed. 3. Enter the above Weighted Average Value on the NRCC-ENV-01-E and NRCC-ENV-02-E compliance document and attach this sheet. 						

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D. Fenestration Area-Weighted Average - U-factor						
01	02	03	04	05	06	07
Tag/ Identification	Fenestration Type	Surface Feature Area (ft ²)	Required U-Factor (Table 140.3-B, C or D)	Required (Area * U-Factor)	Proposed U-factor	Proposed (Area * U-factor)
Total						
Required Area-Weighted Average U-factor =						
Proposed Area-Weighted Average U-factor =						
<i>Note: If the proposed U-factor is less than or equal to the required U-factor, then the windows meet the prescriptive U-factor requirement.</i>						

E. Fenestration Area-Weighted Average - Relative Solar Heat Gain Coefficient (RSHGC)						
01	02	03	04	05	06	07
Tag/ Identification	Fenestration Type	Surface Feature Area (ft ²)	Required SHGC (Table 140.3-B, C or D)	Required (Area * SHGC)	Proposed SHGC	Proposed (Area * SHGC)
Total						
Required Area-Weighted Average SHGC =						
Proposed Area-Weighted Average SHGC =						
<i>Note: If the proposed SHGC is less than or equal to the required SHGC, then the windows meet the prescriptive SHGC requirement.</i>						

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F. Fenestration Area-Weighted Average – Visible Transmittance (VT)						
01	02	03	04	05	06	07
Tag/ Identification	Fenestration Type	Surface Feature Area (ft ²)	Required VT (Table 140.3-B, C or D)	Required (Area * VT)	Proposed VT	Proposed (Area * VT)
Total						
Required Area-Weighted Average VT =						
Proposed Area-Weighted Average VT =						
<i>Note: If the proposed VT is greater than or equal to the required VT, then the windows meet the prescriptive VT requirement.</i>						

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California:	
<ol style="list-style-type: none"> The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 	
Responsible Designer Name:	Responsible Designer Signature:
Company :	Date Signed:
Address:	License:
City/State/Zip:	Phone: