

## DOCKETED

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| <b>Docket Number:</b>   | 16-BSTD-05  |
| <b>Project Title:</b>   | 2016 Nonresidential Compliance Manual Subchapters and Documents Related to Lighting Alterations |
| <b>TN #:</b>            | 210571  |
| <b>Document Title:</b>  | 2016-NRCC-LTI-03-E - Certificate of Compliance, Indoor Lighting Power Allowance                 |
| <b>Description:</b>     | 2016 Certificate of Compliance, Indoor Lighting Power Allowance                                 |
| <b>Filer:</b>           | Peter Strait  |
| <b>Organization:</b>    | California Energy Commission  |
| <b>Submitter Role:</b>  | Commission Staff  |
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| <b>Docketed Date:</b>   | 3/1/2016  |

**INDOOR LIGHTING POWER ALLOWANCE**CEC-NRCC-LTI-03-E (Revised **02/16**)

CALIFORNIA ENERGY COMMISSION



|   |                |               |
|---|----------------|---------------|
| CERTIFICATE OF COMPLIANCE                                   |                | NRCC-LTI-03-E |
| Certificate of Compliance - Indoor Lighting Power Allowance |                | (Page 1 of 4) |
| Project Name:   | Date Prepared: |               |

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:

☐ CONDITIONED spaces
 ☐ UNCONDITIONED spaces

**A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES**

- ☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.  
☐ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

|   | (a) |  |  | (b) |
|---|-----|--|--|-----|
| <u>01</u> - Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page) |     |  |  |     |
| <u>02</u> - Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)   |     |  |  |     |
| <u>03</u> - Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E                               |     |  |  |     |
| <b>TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1</b>                 |     |  |  |     |
| <input type="checkbox"/> Check here if building contains both conditioned and unconditioned areas.                |     |  |  |     |

**B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE**

|   | <u>202</u>                               |   | <u>303</u>             |   | <u>404</u>       |
|---|--|---|------------------------|---|------------------|
| TYPE OF BUILDING (From §140.6 Table 140.6-B)                              | WATTS<br>PER <del>(ft<sup>2</sup>)</del> | X | COMPLETE<br>BLDG. AREA | = | ALLOWED<br>WATTS |
|   |  |   |                        |   |                  |
| Total Area:   |  |   |                        |   |                  |
| Total Watts. Enter Total Watts into section A, row 1 (Above on this page) |  |   |                        |   |                  |

| <b>C-1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES <del>(D plus E)</del></b>  | <b>Watts</b> |
|--|--------------|
| Total from section C-2—.   |              |
| Total from section C-3—.   |              |
| Total Watts. Enter Total Watts into section A, row 2 (Above on this page)—.  |              |
| <b>For Alterations Only – Reduced lighting power option (Total Allowed Watts x 0.85). Enter this value into section A, row 2 if using this option.</b> |              |



NRCC-LTI-03-E

(Page 2 of 4)

Date Prepared:

- UNCONDITIONED spaces

☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in ~~§~~Section GB of NRCC-LTI-01-E.

☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

| <u>01</u>  |   | <u>02</u>                     | X | <u>03</u>  | = | <u>04</u>        |
|--|---|-------------------------------|---|------------|---|------------------|
| AREA CATEGORY (From §140.6 Table 140.6-C)  |   | WATTS<br>PER <del>(ft²)</del> |   | AREA (ft²) |   | ALLOWED<br>WATTS |
| Location in Building   | Primary Function Area per Table 140.6-C |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
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|  |   |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
|  |   |                               |   |            |   |                  |
| TOTALS   |   |                               |   |            |   |                  |
| Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance <del>form</del> <u>document</u> ) |   |                               |   |            |   |                  |
|  |   |                               |   |            |   | WATTS            |



## NRCC-LTI-03-E

(Page 3 of 4)

Date Prepared:

□ **CONDITIONED** spaces                      □ **UNCONDITIONED** spaces

[illegible]

1. Use linear feet only for additional allowance for white board or chalk board. -All other additional Area Category allowances shall use watts per square foot.
2. Additional watts are available only when allowed according to the footnotes on bottom of Table 140.6-C, which include: -Specialized task work; Ornamental lighting; Precision commercial and industrial work; Per linear foot of white board or chalk board; Accent, display and feature lighting; and Videoconferencing Sstudio lighting..
3. Luminaire classification and wattage shall be determined in accordance with §130.0(c) of the Standards.

**INDOOR LIGHTING POWER ALLOWANCE**CEC-NRCC-LTI-03-E (Revised **02/16**)

CALIFORNIA ENERGY COMMISSION



|   |                |                      |
|---|----------------|----------------------|
| <b>CERTIFICATE OF COMPLIANCE</b>                            |                | <b>NRCC-LTI-03-E</b> |
| Certificate of Compliance - Indoor Lighting Power Allowance |                | (Page 4 of 4)        |
| Project Name:   | Date Prepared: |                      |

|   |   |
|---|---|
| <b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b>   |   |
| 1. I certify that this Certificate of Compliance documentation is accurate and complete.  |   |
| Documentation Author Name:  | Documentation Author Signature:                   |
| Company:  | Signature Date:                                   |
| Address:  | CEA Certification Identification (if applicable): |
| City/State/Zip:   | Phone:  |
| <b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b>   |   |
| I certify the following under penalty of perjury, under the laws of the State of California:  |   |
| <ol style="list-style-type: none"> <li>1. The information provided on this Certificate of Compliance is true and correct.</li> <li>2. 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).</li> <li>3. 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.</li> <li>4. 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.</li> <li>5. 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.</li> </ol> |   |
| Responsible Designer Name:  | Responsible Designer Signature:                   |
| Company :   | Date Signed:                                      |
| Address:  | License:  |
| City/State/Zip:   | Phone:  |

**NRCC-LTI-03-E User Instructions**

This certificate is required for documenting how much indoor lighting power is allowed by the Standards, so that the allowed lighting power can be demonstrated to be greater than or equal to the installed lighting power in the summary table on NRCC-LTI-01-E.

The project name and date shall match those on the NRCC-LTI-01-E.

Indicate if this page is being used to document and calculate conditioned space or unconditioned space by checking the appropriate box.

**Section A. Summary of Lighting Power Allowances**

This section is used to summarize how many watts of lighting power are allowed to be installed. Separate cells are used to document the lighting power allowance when using the Complete Building Method, the Area Category Method, and/or the Tailored Method.

Check the correct box to indicate which method is being used to comply with the nonresidential indoor lighting Standards.

- Row 1 - If using the Complete Building Method, first fill out §Section B of this page. -Enter the sum total from §Section B into column (a) of this row. Bring this same number to the bottom of column (a). -This is the total allowed lighting power when using the Complete Building Method.
- Row 2 – If using the Area Category Method, first fill out §Sections C-1, C-2, and C-3 of this formcompliance document.- Enter the sum total from section C-1 into column (b) of this row.
- Row 3 – If using the Tailored Method, first fill out all of the pages in NRCC-LTI-04-E. Enter the sum total from §Section A of the Tailored Method Certificates of Compliance (Tailored Method Lighting power Allowance Summary) into column (b) of this row.
- Add together rows 2 and 3 and enter into the bottom of column (b). This is the total allowed lighting power when using the Area Category Method, Tailored Method, or a combination of both methods.

Check the box on the next row if the building contains both conditioned and unconditioned areas to alert the plan checker to look for additional documents.

**Section B. Complete Building Method Lighting Power Allowances**

This section is used to document and calculate how many watts of lighting power are allowed when using the Complete Building Method for compliance.

Lighting power allowances are not allowed to be traded between buildings. When there are multiple buildings in a project, each building shall be listed on a separate row. See Nonresidential Compliance Manual Chapter 5 for additional information about using the Complete Building Method.

1. List the type of building, in accordance with Table 146.0-B of the Standards, as defined in §100.1(b) of the Standards.
  2. Enter the allowed lighting power density (Watts per square foot), taken from Table 140.6-B.
  3. Enter the building total square feet (ft<sup>2</sup>).
  4. Multiply the allowed watts per square foot (W/ft<sup>2</sup>) times in B02, times the building area in B03.
- Enter the sum total in the bottom of this section. Also enter this sum total into row 1 of Section A of this formcompliance document.

**Section C-1. Area Category Method Total Lighting Power Allowances**

Section C is used to document and calculate how many watts of lighting power are allowed when using the Area Category Method for compliance.

Before §Section C-1 can be completed, first §Sections C-2 and C-3 must be filled out.

The project name and date shall match the information on page 1.

Indicate if this page is being used to document and calculate conditioned space or unconditioned space by checking the appropriate box.

### **Section C-2. Area Category Method General Lighting Power Allowances**

Section C-2 is used to document and calculate how many watts of general lighting power are allowed when using the Area Category Method for compliance.

1. Location in Building – is a description of the location in the building where the lighting is to be installed
- a. Primary Function - is the primary function area in accordance with Table 140.6-C, as defined in §100.1. See Nonresidential Compliance Manual Chapter 5 for additional information.
2. Enter the allowed lighting power density (Watts per square foot/ft<sup>2</sup>), taken from Table 140.6-C.
3. Enter the square feet (ft<sup>2</sup>) of the primary function area.
4. Multiply the allowed watts per square foot (W/ft<sup>2</sup>) times in column 02, times the building area in column 03.  
Enter the sum total in the bottom of this section. -Also enter this sum total into section C-1 of this form compliance document.

Indicate if this page is being used to document and calculate conditioned space or unconditioned space by checking the appropriate box.

### **Section C-3. Area Category Method – Additional Lighting Wattage Allowances** (from Table 140.6-C Footnotes)

Section C-3 is used to document and calculate how many watts of additional lighting power are allowed when using the Area Category Method, in accordance with the footnotes in Table 140.6-C.

1. Primary Function - is the primary function area in accordance with Table 140.6-C, as defined in §100.1(b). See Nonresidential Compliance Manual Chapter 5 for additional information.
2. Square Feet or Linear Feet - Use linear feet only for determining additional allowed wattage for white boards and chalk boards. Use watts per square foot (W/ft<sup>2</sup>) for all other additional allowed wattage.
3. Additional Watts Allowed - Enter the allowed lighting power density (Watts per square foot), taken from the footnotes to Table 140.6-C.
4. Wattage Allowance – Multiply the square feet (or linear feet) in column 02 times the Additional Watts Allowed in column 03.
5. Description and Quantity of Special Luminaire Types in each Primary Function Area.

Additional watts are available only when allowed according to the footnotes on bottom of Table 146-C, which includes:

- a. Specialized task work
- b. Ornamental lighting as defined in §100.1(b) and in accordance with §140.6.(c)2
- c. Precision commercial and industrial work
- d. Per linear foot of white board or chalk board
- e. Accent, display and feature lighting, luminaires adjustable or directional
- f. Decorative lighting, primary function shall be decorative and shall be in addition to general illumination
- g. Additional Videoconferencing sStudio lighting complying with all of the requirements in §140.6(c) and for which an Instillation Certificate is submitted.
6. Total Design Watts - Luminaire classification and luminaire input wattage shall be determined in accordance with §130.0(c) of the Standards.
7. Allowed Watts – the allowed watts shall be the smaller of the wattage allowance in column 04, or the total design watts in column 06. ~~Energy~~ Enter the smaller of those two number in column 07.

Total column 07 and enter into Ssection C-1 of this compliance form document.