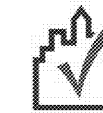


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Interior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: 2012 North Carolina Energy Conservation Code
 Project Title:
 Project Type: New Construction

Construction Site: 3540 Torrington Way, Suite 100, Charlotte, North Carolina 28277
 Owner/Agent: 72 Monroe Center NW, Suite 8, Grand Rapids, Michigan 49503
 Designer/Contractor: Kevin Turner, National Engineering, 798 Marquette St, Columbus, Ohio 43230, 614.751.9670, nationalengineering.com

Section 2: Interior Lighting and Power Calculation

A	B Area	C Allowed Watts / ft ²	D Allowed Watts
Office Study Classrooms (School/University)	860	0.882	850
Total Allowed Watts =			850

Section 3: Interior Lighting Fixture Schedule

Fixture ID : Description : Lamp : Watts Per Lamp : Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt	E (C x D)
A. A. Recessed 4" compact fluorescent (30 watt)	1	216	14	2942
A. Recessed 4" compact fluorescent with E18 f. Other:	1	12	14	168
A. Recessed 4" compact fluorescent with E18 f. Other:	1	44	14	616
D. Recessed 4" compact fluorescent with E18 f. Other:	1	48	8	384
E. E. Linear LED Other:	1	53	14	742
H. H. Linear Lighting Other:	1	1	1	1
F. F. Fluorescent cylinder, Other:	1	8	14	84
Total Proposed Watts =				4935

Section 4: Requirements Checklist

Lighting Wattage:
 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
850	4935	YES

Controls, Switching, and Wiring:
 2. Separate lighting controls present for: Display/Accent Lighting, Case Lighting, lighting for individual applications (e.g., such as plant growth and food warming), lighting equipment that is for sale or for demonstrations in lighting education
 3. Hotel and motel guest rooms and guest suites have a master control device at the main room entry that controls all permanently installed luminaires and related receptacles.
 4. Supplemental task lighting has a control device integral to the luminaire or is controlled by a wall-mounted control device provided the control device is readily accessible and located so that the occupant can see the controlled lighting.

Project Title: Data filename: Report date: 07/26/19 Page 1 of 2

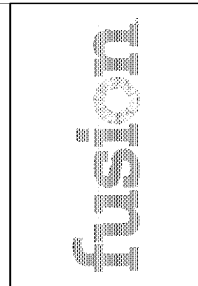
- 5. Independent controls for each space (switch/occupancy sensor).
 Exceptions:
 Areas designated as security or emergency areas that must be continuously illuminated.
 Lighting in stairways or corridors that are elements of the means of egress.
- 6. Individual dwelling units separately metered.
- 7. Medical task lighting or arbitrary display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
- 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dimming or selectively de-energizing luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.
 Exceptions:
 Only one luminaire in space.
 An occupancy-sensing device controls the area.
 The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
 Areas that are less than 0.6 Watts/sq. ft.
- 9. Automatic lighting shutoff control in buildings larger than 8,000 sq. ft.
 Exceptions:
 Sleeping units, patient care areas, and spaces where automatic shutoff would endanger safety or security.
- 10. Photoelectric sensor switch on exterior lights.
 Exceptions:
 Lighting intended for 24-hour use.
- 11. Tandom wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
 Exceptions:
 Electronic high-frequency ballasts. Luminaires on emergency circuits or with no available path.
- 12. Lighting controls are tested to ensure that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to ensure they operate in accordance with approved plans and specifications.

Additional Efficiency Package Requirements:
 1. The reduced interior lighting power option has been selected as the additional efficiency package required by this energy code. Requirements for this package are applied to the interior lighting allowance calculations. Full compliance with this efficiency option requires inspection and verification that the interior lighting allowances and fixture schedules are compliant and deemed to pass.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2012 North Carolina Energy Conservation Code requirements in COMcheck-Web and to comply with the mandatory requirements in the Requirements Checklist.

Richard T. Jones, PE Name Title Date: 08.16.2019 Signature: [Signature] Date: 08.16.2019



FUSION ACADEMY - Charlotte, NC
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 Contact: Richard T. Jones
 (614) 308-3022
 RT.Jones@NationalEngineering.com
NATIONAL ENGINEERING, L.P.C.

ISSUANCE/REVISIONS

▲	ISSUE FOR PERMIT	08/19/19
▲	REV 1 PER CITY	08/21/19
▲	REV 2 PER CITY	08/21/19
▲	REV 3 PER CITY	08/26/19
▲	REV 4 PER CITY	08/29/19
▲	REV 5 PER CLIENT AND ISSUE FOR BID	08/30/19
▲		
▲		

Signed 08.30.2019

North Carolina Firm Registration
 NCBOE: P-0612
 Sec of State: 0909178

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