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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 Toringdon Way, Suite 100
Charlotte, North Carolina 28277

Owner/Agent:
Fusion Academy
72 Monroe Center NW, Suite 8
Grand Rapids, Michigan 49503

Designer/Contractor:
Kevin Turner
National Engineering
788 Morrison Rd.
Columbus, [illegible] 43230
[illegible]
[illegible]@nationalengineering.com

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Office Style Classrooms (School/University)	[illegible]880	0.882	6950
		Total Allowed Watts =	6950

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt	E (C X D)
Office Style Classrooms (School/University [illegible] sq.ft.)				
A: A: Recessed 4" can light: Other:	1	210	14	2940
A1: A1: Recessed 4" can light with EM : Other:	1	12	14	168
[illegible]: Recessed 4" wallwash/accent can: Other:	1	44	14	616
D: [illegible] LED pendant: Other:	1	48	8	384
E: E: [illegible] Linear LED: Other:	1	53	14	742
H: H: [illegible] lighting: Other:	1	1	1	1
J: J: 4" adjustable cylinder: Other:	1	6	14	84
			Total Proposed Watts =	4935

Section 4: Requirements Checklist

[illegible]

Lighting Wattage:

- [ ] 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
6950	4935	YES

Controls, Switching, and Wiring:

- [ ] 2. Separate lighting controls present for: Display/Accent Lighting, Case Lighting, lighting for nonvisual 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 switched receptacles.
- [ ] 4. Supplemental task lighting has a control device integral to the luminaires or be 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.

- [ ] 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 art/history 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, dual switching of alternate rows of 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 occupant-sensing device controls the area.
  - [ ] The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
  - [ ] Areas that use less than 0.6 Watts/sq.ft.
- [ ] 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

  Exceptions:

  - [ ] Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.
- [ ] 10. Photocell/astronomical time switch on exterior lights.

  Exceptions:

  - [ ] Lighting intended for 24 hour use.
- [ ] 11. Tandem 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 pair.
- [ ] 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 schedule 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 COM*check-Web* and to comply with the mandatory requirements in the Requirements Checklist.

Richard T. Jones, PE — 08.16.2019

Name - Title / Signature / Date

fusion

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CHARLOTTE, NC 28277

ENERGY CODE COMPLIANCE

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ISSUANCE/REVISIONS	
	ISSUE FOR PERMIT 08/19/19
1	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

NORTH CAROLINA PROFESSIONAL SEAL 031346 ENGINEER RICHARD T. JONES
Signed 08.30.2019

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

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