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**Interior Lighting Compliance  
 Certificate**

**Section 1: Project Information**

Energy Code: **2009 IECC**  
 Project Title: AC Hotel Portland ME  
 Project Type: New Construction

Construction Site:	Owner/Agent:	Designer/Contractor:
Fore, Hancock & Thames St Portland, Maine 04101 Permit No. 2017-00354	Portland Norwich Group, LLC c/o Norwich Partners of Florida, 25 Foothill St, Suite 1A Lebanon, New Hampshire 03766	Opechee Construction Corporation 11 Corporate Drive Belmont, New Hampshire 03220 603-527-9090

**Section 2: Interior Lighting and Power Calculation**

A Area Category	B Floor Area (ft <sup>2</sup> )	C Allowed Watts / ft <sup>2</sup>	D Allowed Watts (B x C)
Hotel	105975	1	105975
Total Allowed Watts =			105975

**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)
Hotel (105975 sq.ft.)				
1st Floor Stair Lighting: EL-07: LED MR 10W:	1	11	10	110
1st Floor Workroom/Office Lighting: F06: 48" T8 32W: Electronic:	3	5	81	405
1st Floor Workroom/Office Lighting: F05: Triple 4-pin 42W: Electronic:	3	7	99	693
1st Floor Mech Lighting: F07: 48" T8 28W (Super T8): Electronic:	2	14	55	770
1st Floor Employee, Linen, Food Prep Lighting: F09: 48" T8 32W: Electronic:	4	51	105	5355
1st Floor Employee Bathrooms: R01: Quad 4-pin 13W: Electronic:	1	2	16	32
1st Floor Public Cove Lighting: LA: 3.7 Watts per linear foot: Other:	1	233	3.7	862.1
1st Floor Art Lightwash Lighting: LB: 6 Watts per linear foot: Other:	1	22	6	132
1st Floor Meeting/Community Rm Lighting: LC: 11 Watts per linear foot: Other:	1	71	11	781
1st Floor Fitness Linear Lighting: LD: 8 Watts per linear foot: LED Linear 8W:	1	27	8	216
1st Floor Library Linear Lighting: LE: 17 Watts per linear foot: LED Linear 17W:	1	82	17	1394
1st Floor Library Linear Shelf Lighting: LF: 7 Watts per linear Foot: Other:	1	33	7	231
1st Floor Lounge/Bar Linear Lighting: LG: 17 Watts per linear foot: LED Linear 17W:	1	300	17	5100
1st Floor Bar Millwork Bar Tape Light: LH: 4.4 Watts per linear foot: Other:	1	52	4.4	228.8
1st Floor Bar Lighting: MB: LED A Lamp 2.5W:	1	25	2.5	62.5
1st Floor Recessed LED Public Lighting: RA: Other:	1	46	33	1518
2nd Floor Mech/Eng Lighting: F07: 48" T8 28W (Super T8): Electronic:	2	8	55	440
2nd Floor Corridor Lighting: EL-07: LED MR 10W:	1	65	10	650
3rd Floor Corridor Lighting: EL-07: LED MR 10W:	1	74	10	740
4th Floor Corridor Lighting: EL-07: LED MR 10W:	1	74	10	740
5th Floor Corridor Lighting: EL-07: LED MR 10W:	1	74	10	740
1st Floor Recessed LED Public Lighting: RB: Other:	1	8	33	264
1st Floor Recessed LED Public Lighting: RC: LED Other Fixture Unit 16W:	1	73	16	1168
1st Floor Recessed LED Public Lighting: RD: LED Other Fixture Unit 16W:	1	9	16	144
1st Floor Wallwash LED: RE: Other:	1	4	33	132
1st Floor Wall wash LED: RF: LED Other Fixture Unit 16W:	1	24	16	384
1st Floor LED Accentlight: RG: Other:	1	8	33	264

1st Floor LED Accentlight: RH: LED Other Fixture Unit 16W:	1	21	16	336
1st Floor LED Acentlight: RI: Other:	1	3	33	99
1st Floor LED downlight: RJ: Other:	1	16	10	160
1st Floor LED Accentlight: RK: Other:	1	8	10	80
1st Floor LED Downlight: RL: Other:	1	16	4.8	76.8
6th Floor Corridor Lighting: EL-07: LED MR 10W:	1	74	10	740
2nd Floor House Keep/Utility Lighting: F09: 48" T8 32W: Electronic:	4	6	105	630
3rd Floor House Keep/Utility Lighting: F09: 48" T8 32W: Electronic:	4	6	105	630
4th Floor House Keep/Utility Lighting: F09: 48" T8 32W: Electronic:	4	6	105	630
5th Floor House Keep/Utility Lighting: F09: 48" T8 32W: Electronic:	4	6	105	630
6th Floor House Keep/Utility Lighting: F09: 48" T8 32W: Electronic:	4	6	105	630
2nd Floor Guestroom Downlight: EL-01: LED MR 10W: Exemption:Sleeping Unit Lighting	1	140	10	Exempt
3rd Floor Guestroom Downlight: EL-01: LED MR 10W: Exemption:Sleeping Unit Lighting	1	210	10	Exempt
4th Floor Guestroom Downlight: EL-01: LED MR 10W: Exemption:Sleeping Unit Lighting	1	210	10	Exempt
5th Floor Guestroom Downlight: EL-01: LED MR 10W: Exemption:Sleeping Unit Lighting	1	210	10	Exempt
6th Floor Guestroom Downlight: EL-01: LED MR 10W: Exemption:Sleeping Unit Lighting	1	210	10	Exempt
2nd Floor Guestroom Downlight: EL-02: LED Other Fixture Unit 16W: Exemption:Sleeping Unit Lighting	1	26	16	Exempt
3rd Floor Guestroom Downlight: EL-02: LED Other Fixture Unit 16W: Exemption:Sleeping Unit Lighting	1	38	16	Exempt
4th Floor Guestroom Downlight: EL-02: LED Other Fixture Unit 16W: Exemption:Sleeping Unit Lighting	1	38	16	Exempt
5th Floor Guestroom Downlight: EL-02: LED Other Fixture Unit 16W: Exemption:Sleeping Unit Lighting	1	38	16	Exempt
6th Floor Guestroom Downlight: EL-02: LED Other Fixture Unit 16W: Exemption:Sleeping Unit Lighting	1	38	16	Exempt
2nd Floor Guestroom Bed Lighting: Other: Exemption:Sleeping Unit Lighting	1	52	11	Exempt
3rd Floor Guestroom Bed Lighting: Other: Exemption:Sleeping Unit Lighting	1	76	11	Exempt
4th Floor Guestroom Bed Lighting: Other: Exemption:Sleeping Unit Lighting	1	76	11	Exempt
5th Floor Guestroom Bed Lighting: Other: Exemption:Sleeping Unit Lighting	1	76	11	Exempt
6th Floor Guestroom Bed Lighting: Other: Exemption:Sleeping Unit Lighting	1	76	11	Exempt

Total Proposed Watts = 28198

## Section 4: Requirements Checklist

**Interior Lighting PASSES:** Design 73% better than code.

### Lighting Wattage:

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

Allowed Watts	Proposed Watts	Complies
105975	28198	YES

### Controls, Switching, and Wiring:

2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
3. Daylight zones have individual lighting controls independent from that of the general area lighting.

#### Exceptions:

- Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
4. 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.
- 5. Master switch at entry to hotel/motel guest room.
- 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.

## 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 2009 IECC requirements in COMcheck-Web and to comply with the mandatory requirements in the Requirements Checklist.

DAVID SHETBORNE - ARCHITECT

Name - Title

Signature

Date

5-25-17



Generated by COMcheck-Web Software  
**Exterior Lighting Compliance Certificate**

### Section 1: Project Information

Energy Code: **2009 IECC**  
 Project Title: AC Hotel Portland ME  
 Project Type: New Construction  
 Exterior Lighting Zone: 4 (High activity metropolitan commercial district)

Construction Site:	Owner/Agent:	Designer/Contractor:
Fore, Hancock & Thames St Portland, Maine 04101 Permit No. 2017-00354	Portland Norwich Group, LLC c/o Norwich Partners of Florida, 25 Foothill St, Suite 1A Lebanon, New Hampshire 03766	Opechee Construction Corporation 11 Corporate Drive Belmont, New Hampshire 03220 603-527-9090

### Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Building Facade That Has Exterior Fixtures (Illuminated area of facade wall or surface)	40625 ft2	0.2	No	8125	1424
Walkway >= 10 feet wide	2128 ft2	0.2	Yes	426	187
				Total Tradable Watts* =	426
				Total Allowed Watts =	8551
				Total Allowed Supplemental Watts** =	1300

\* Wattage tradeoffs are only allowed between tradable areas/surfaces.

\*\* A supplemental allowance equal to 1300 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

### Section 3: Exterior 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)	
Building Facade That Has Exterior Fixtures (Illuminated area of facade wall or surface, 40625 ft2): Non-tradable Wattage					
Linear Feature Light: EA: 1.97 Watts per linear foot: Other:	1	423	2	846	
LED Suspended Downlight: EB: Other:	1	8	23.6	188.8	
LED Wall Sconce: EC: Other:	1	13	30	390	
Walkway >= 10 feet wide (2128 ft2): Tradable Wattage					
LED Bollard Light: B: Other:	1	11	17	187	
				Total Tradable Proposed Watts =	187

### Section 4: Requirements Checklist

#### Lighting Wattage:

1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.  
**Compliance:** Passes.

#### Controls, Switching, and Wiring:

2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.  
 3. Lighting not designated for dusk-to-dawn operation is controlled by either a photosensor (with time switch), or an astronomical time switch.

- 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
- 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

**Exterior Lighting Efficacy:**

- 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

*Exceptions:*

- Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
- Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
- Emergency lighting that is automatically off during normal building operation.
- Lighting that is controlled by motion sensor.

**Section 5: Compliance Statement**

*Compliance Statement:* The proposed exterior 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 2009 IECC requirements in COMcheck-Web and to comply with the mandatory requirements in the Requirements Checklist.

DAVID SHERBORNE - ARCHITECT  
Name - Title

  
Signature

5-25-17  
Date