COMcheck Software Version 4.1.1.0

Interior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: BURGER KING
Project Type: New Construction

Construction Site:
SC Hwy. S 781 & SC Hwy. 125
Beech Island, SC 29842

Owner/Agent:
Bruce Daniels
Carolina Franchise Holdings, LLC
P.O. Box711
Greenwood, SC 29648

Designer/Contractor:
J. Michael Jones, P.E.
Marshall & Bollwerk Eng., Inc.
8681 Highway 92
Suite 400
Woodstock, GA 30189
678-795-0333
mjones@mbeinc.net

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
DINING (Dining: Cafeteria/Fast Food)	2300	1.4	3220
		Total Allowed Watts =	3220

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)
DINING (Dining: Cafeteria/Fast Food 2300 sq ft)				
LED 1: Types "G", "G1": LED Other Fixture Unit 80W:	1	25	10	250
LED 2: Type "C4w": LED Other Fixture Unit 13W:	1	15	15	225
LED 2: Type "D4w": LED Other Fixture Unit 13W:	1	3	12.5	37.5
LED 6: Type "A": LED A Lamp 9W:	1	2	10	20
LED 6: Type "B": LED A Lamp 6W:	1	4	6	24
LED 5: Type "I": LED Panel 60W:	1	18	60	1080
LED 7: Type "E": LED MR 10W:	1	1	10	10
LED 8: Type "F": LED Linear 33W:	1	1	49	49
			Total Proposed Watts =	1696

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
3220	1696	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/sitory 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 Version 4.1.1.0 and to comply with the mandatory requirements in the Requirements Checklist.

J Michael Jones, PE — 8/21/19
Name - Title — Signature — Date

COMcheck Software Version 4.1.1.0

Exterior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: BURGER KING
Project Type: New Construction
Exterior Lighting Zone: 2 (Neighborhood business district)

Construction Site:
SC Hwy. S 781 & SC Hwy. 125
Beech Island, SC 29842

Owner/Agent:
Bruce Daniels
Carolina Franchise Holdings, LLC
P.O. Box711
Greenwood, SC 29648

Designer/Contractor:
J. Michael Jones, P.E.
Marshall & Bollwerk Eng., Inc.
8681 Highway 92
Suite 400
Woodstock, GA 30189
678-795-0333
mjones@mbeinc.net

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
DT (Drive-up windows/doors)	2 windows or doors	400	No	800	80
MAIN ENTRY (Main entry)	3 ft of door width	20	Yes	60	40
SIDE & REAR (Other door (not main entry))	6 ft of door width	20	Yes	120	130
CANOPIES (Free standing/attached sales canopy)	150 ft2	0.6	Yes	90	200
EXT WALL/CANOPIES (Illuminated length of facade wall or surface)	40 ft	2.5	No	100	180
			Total Tradable Watts* =	270	450
			Total Allowed Watts =	1170	
			Total Allowed Supplemental Watts** =	600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 600 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)
DT (Drive-up windows/doors 2 windows or doors): Non-tradable Wattage				
LED 9: Type "M": LED Other Fixture Unit 40W:	1	2	40	80
MAIN ENTRY (Main entry 3 ft of door width): Tradable Wattage				
LED 9 copy 1: Type "M": LED Other Fixture Unit 40W:	1	1	40	40
SIDE & REAR (Other door (not main entry) 6 ft of door width): Tradable Wattage				
LED 10: Type "N": LED Panel 40W:	1	1	50	50
LED 9 copy 1: Type "M": LED Other Fixture Unit 40W:	1	2	40	80
CANOPIES (Free standing/attached sales canopy 150 ft2): Tradable Wattage				
LED 9 copy 1: Type "M": LED Other Fixture Unit 40W:	1	7	40	280
EXT WALL/CANOPIES (Illuminated length of facade wall or surface 40 ft): Non-tradable Wattage				
LED 8: Type "L": LED Other Fixture Unit 60W:	1	3	60	180
			Total Tradable Proposed Watts =	450

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 using supplemental allowance watts.

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 Version 4.1.1.0 and to comply with the mandatory requirements in the Requirements Checklist.

J Michael Jones, PE — 8/21/19
Name - Title — Signature — Date

Order Plans @ WWW.LDHine.com

B1931

DATE	RELEASE
08.26.19	FOR CONSTRUCTION
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CHECKED BY: JMJ
DRAWN BY: JMJ

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SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 27560 — MICHAEL JONES — 8/14/19

SC HWY. S-781 & SC HWY. 125
BEECH ISLAND, SC 29842

PROJECT: B1931
DATE: 07/22/2019

BURGER KING
RESTAURANT
#026-20-03-003

LIGHTING ENERGY COMPLIANCE CERTIFICATES

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