

**COMcheck Software Version 4.1.0.0**  
**Interior Lighting Compliance**  
**Certificate**

**Section 1: Project Information**

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

Construction Site: 8018 Concord Mills Blvd., Concord, NC 28027  
 Owner/Agent: Krissy Krème Doughnut Corp., 370 Kneeland Street, Winston Salem, NC 27103, 336-733-3745  
 Designer/Contractor: WD Partners, 7007 Discovery Blvd., Dublin, OH 43017, 614-634-7000, davis.lourey@wdpartners.com

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

A Area Category	B Floor Area (sq ft)	C Allowed Watts (W/sq ft)	D Allowed Watts (W)
Wash (Common Space Types: Food Preparation)	143	0.99	142
Freezer (Common Space Types: Active Storage)	130	0.63	82
Storage (Common Space Types: Active Storage)	575	0.63	362
Production (Common Space Types: Food Preparation)	1141	0.39	445
Allowance: Other retail highlighting / Fix. ID: F	4000.0	0.4	1600.0
Manager's Office (Office Enclosure)	96	1.11	107
Sales (Common Space Types: Food Preparation)	272	0.99	269
Dining (Dining: Banquet/Lounge/Lounges/Lounges/Lounges)	384	1.4	538
Allowance: Other retail highlighting / Fix. ID: EAF	6000.0	0.4	2400.0
Vestibule (Common Space Types: Corridor/Transition)	62	0.65	41
Unisex 01 (Common Space Types: Restroom)	62	0.65	41
Unisex 02 (Common Space Types: Restroom)	62	0.65	41
<b>Total Allowed Watts =</b>			<b>3990</b>

(a) Area claimed must not exceed the illuminated area permitted for this allowance type.  
 (b) Allowance is (D x C) or the fixture given in Section 2, whichever is less.

**Section 3: Interior Lighting Fixture Schedule**

Fixture ID - Description / Lamp / Wattage Per Lamp / Ballast	A	B	C	D	E
	Lamp	# of Fixtures	Wattage	Wattage	Wattage
Freezer (Common Space Types: Active Storage) [30 sq ft]	LED 12-W: Other	1	2	40.4	40.4
Freezer (Common Space Types: Active Storage) [30 sq ft]	LED 12-W: Other	1	2	40.4	40.4
Storage (Common Space Types: Active Storage) [575 sq ft]	LED 12-W: Other	1	12	42	504
Storage (Common Space Types: Active Storage) [575 sq ft]	LED 12-W: Other	1	12	42	504
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	1	51.8	51.8
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	4	51.8	207.2
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	2	20.8	41.6
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	2	20.8	41.6
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	9	51.6	464.4
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	24	20.4	492.0
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	5	12	60
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	3	6	24
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	0	0	240	240
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	7	30.6	105.6
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	1	12	12
Production (Common Space Types: Food Preparation) [143 sq ft]	LED 12-W: Other	1	7	6	42
Dining (Dining: Banquet/Lounge/Lounges/Lounges/Lounges) [384 sq ft]	LED 12-W: Other	1	12	35	420
Dining (Dining: Banquet/Lounge/Lounges/Lounges/Lounges) [384 sq ft]	LED 12-W: Other	1	2	20.8	41.6
Dining (Dining: Banquet/Lounge/Lounges/Lounges/Lounges) [384 sq ft]	LED 12-W: Other	1	6	12	72
Dining (Dining: Banquet/Lounge/Lounges/Lounges/Lounges) [384 sq ft]	LED 12-W: Other	0	0	950	950
Vestibule (Common Space Types: Corridor/Transition) [62 sq ft]	LED 12-W: Other	1	2	20.8	41.6
Vestibule (Common Space Types: Corridor/Transition) [62 sq ft]	LED 12-W: Other	1	2	20.8	41.6
<b>Total Proposed Watts =</b>					<b>3884</b>

**Section 4: Requirements Checklist**

- Lighting Wattage:**  
 Total proposed watts must be less than or equal to total allowed watts.  
 Allowed Watts: 3990, Proposed Watts: 3884, Complies: YES
- Controls, Switching, and Wiring:**
- Separate lighting controls present for: Display/Accent Lighting, Casing Lighting, lighting for nonstandard applications (e.g., such as plant growth and food warming), lighting equipment that is for use in or for demonstration lighting exhibition, and other lighting equipment.
  - Hotel and motel guest rooms and guest suites have a master control device at the main room entry that controls all lighting in the room.
  - Supplemental task lighting has a control device integral to the luminaire or is controlled by a remote control device located in the room.
  - 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.
  - Individual dwelling units separately metered.
  - Medical task lighting or ambulatory display lighting claimed to be exempt from compliance with a control device independent of the control of the nonstandard lighting.
- Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate luminaires, switching the middle lamp luminaires independently or other lamps, or switching both luminaires or each lamp.
- Exceptions:**
- Only one luminaire in space.
  - An occupant sensing device controls the area.
  - The area is a corridor, stairway, or emergency egress route.
  - Areas that use less than 0.1 watt per square foot.
- Automatic lighting shut-off in buildings greater than 5,000 sq ft.
- Exceptions:**
- Signage, patient rooms, and other areas where automatic shut-off would endanger safety or security.
  - Emergency lighting for 24-hour operation.
  - High-bay lighting for 24-hour operation.
  - Uninterruptible power supply (UPS) ballasted luminaires (No single lamp ballasts).
- Additional Efficiency Package Requirements:**
- The reduced interior lighting power option has been selected as the additional efficiency package required by this energy code. Requirements in this package are optional to the interior lighting allowance calculations. Full compliance with the 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 COMcheck Version 4.1.0.0 and to comply with the mandatory requirements in the Requirements Checklist.

Design: J. Mince, PE, Date: 10/31/18

**COMcheck Software Version 4.1.0.0**  
**Exterior Lighting Compliance**  
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**Section 2: Exterior Lighting Area/Surface Power Calculation**

A Exterior Area/Surface	B Quantity	C Allowed Watts (W/sq ft)	D Allowed Watts (W)	E Trappable Watts (W)	F Proposed Watts (W)
Drive Thru Windows (Drive up windows/dormers)	422	No	2200	127	
Entry Canopy (Entry canopy)	50 sq ft	0.25	13	42	
Overhead Door Lighting (Other door (not main entry))	7 ft of door width	20	Yes	140	23
Planning (Lighting area)	3252 sq ft	0.26	Yes	2013	816
North Elevation (Illuminated area of facade wall or surface)	180 sq ft	0.1	No	18	189
South Elevation (Illuminated area of facade wall or surface)	232 sq ft	0.1	No	24	182
West Elevation (Illuminated area of facade wall or surface)	65 sq ft	0.1	No	7	32
Main Entrance Siding Area (Special feature area)	310 sq ft	0.14	Yes	43	289
Side Entrance Siding (Special feature area)	1018 sq ft	0.14	Yes	143	212
<b>Total Trappable Watts =</b>				<b>3601</b>	<b>1368</b>
<b>Total Allowed Watts =</b>					<b>620</b>

\* Wattage budgets are only allowed between trappable areas/surfaces.  
 \*\* A supplemental allowance equal to 600 watts may be applied toward compliance of both non-trappable and trappable areas/surfaces.

**Section 3: Exterior Lighting Fixture Schedule**

Fixture ID - Description / Lamp / Wattage Per Lamp / Ballast	A	B	C	D	E
	Lamp	# of Fixtures	Wattage	Wattage	Wattage
Drive Thru Windows (Drive up windows/dormers)	LED 12-W: Other	1	6	21	127
Entry Canopy (Entry canopy)	LED 12-W: Other	1	2	21.2	42
Overhead Door Lighting (Other door (not main entry))	LED 12-W: Other	1	23	23	23
Planning (Lighting area)	LED 12-W: Other	1	1	100	100
Planning (Lighting area)	LED 12-W: Other	1	3	102	306
Planning (Lighting area)	LED 12-W: Other	1	2	204	406
North Elevation (Illuminated area of facade wall or surface)	LED 12-W: Other	1	3	72.4	289.6
South Elevation (Illuminated area of facade wall or surface)	LED 12-W: Other	1	3	72.4	289.6
West Elevation (Illuminated area of facade wall or surface)	LED 12-W: Other	1	3	72.4	289.6
Main Entrance Siding Area (Special feature area)	LED 12-W: Other	1	3	72.4	289.6
Side Entrance Siding (Special feature area)	LED 12-W: Other	1	3	72.4	289.6
<b>Total Trappable Proposed Watts =</b>					<b>1368</b>

**Section 4: Requirements Checklist**

- Lighting Wattage:**  
 Within each non-trappable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all trappable 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:**
- All exterior lighting is associated with fixtures that have a control device independent of the control of the nonstandard lighting.
  - Lighting not designated for dusk-to-dawn operation is controlled by either a photo sensor (with time switch), or an astronomical time switch.
  - Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photo sensor.
  - All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.
  - 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.
- Exterior Lighting Efficacy and Application:**
- All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumens/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 safety statute, ordinance, or regulation.
  - Emergency lighting that is automatically off during normal building operation.
  - Lighting that is controlled by motion sensor.
- Exterior lighting fixtures are fully shielded fixtures unless a lighting plan is submitted showing that the use of alternative fixtures would provide greater energy efficiency.
- Exceptions:**
- Luminaires with an output of 150 Watts or less, or the equivalent light output.
  - Luminaires intended to illuminate the facade of buildings or to illuminate other objects including but not limited to fountains, landscaping and water features, statuary and works of art.
  - Luminaires for historic lighting on the premises of an historic building as defined in the or within a designated historic district.
  - Outdoor sports facility lighting of the participant sport area.
  - Emergency exit discharge lighting.
  - Sign illumination, business lighting, low voltage landscape lighting.
  - Temporary lighting for emergency, repair, construction, special events or similar activities.

**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 2012 North Carolina Energy Conservation Code requirements in COMcheck Version 4.1.0.0 and to comply with the mandatory requirements in the Requirements Checklist.

Design: J. Mince, PE, Date: 10/31/18

Order Plans

architect + engineer

**wd PARTNERS**  
 brand : operations + design

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 DUBLIN, OH 43017  
 614-634-7000  
 WDPARTNERS.COM

project no. | KRK05003

owner

**Krissy Krème DOUGHNUTS**

project info

CONCORD  
 NORTH CAROLINA

issue dates

submission: Date  
 OWNER/LL REVIEW: 11/01/2018  
 BID SET: 11/01/2018  
 PERMIT SET: 11/01/2018

revisions:

#	Description	Date

seal

SEAL  
 025967  
 ENGINEER  
 DONNA J. MILLER  
 NOV 02 2018

sheet info

ELECTRICAL  
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 COMPLIANCE  
 FORMS  
**E900**

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