



# Interior Lighting Compliance Certificate

## Project Information

Energy Code: 2018 IECC  
Project Title: CFA - OLDHAM VILLAGE FSU (LEE'S SUMMIT, MO)  
Project Type: New Construction

Construction Site:	Owner/Agent:	Designer/Contractor:
SW CORNER US HWY 50 & MO	CHICK-FIL-A	DICKERSON ENGINEERING, INC.
STATE ROUTE 291	5200 BUFFINGTON ROAD	3343 N RIDGE AVE
LEE'S SUMMIT, Missouri 64081	ATLANTA, Georgia 30349	ARLINGTON HEIGHTS, Illinois 60004
		847-966-0290

## Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed  
Reduced Lighting Power, 1.0 credit

## Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-RISER & TECH CLOSET (Common Space Types:Electrical/Mechanical)	75	0.39	29
2-OFFICE (Common Space Types:Office - Enclosed)	75	0.84	63
3-TEAM MEMBER ROOM (Common Space Types:Lounge/Breakroom)	210	0.56	118
4-KITCHEN & SERVING (Common Space Types:Food Preparation)	2350	0.95	2232
5-RESTROOMS (Common Space Types:Restrooms)	350	0.77	270
6-DINING & PLAY (Common Space Types:Dining Area - Cafeteria/Fast Food)	1544	0.57	880
7-ENTRY VESTIBULE (Common Space Types:Lobby - General)	70	0.90	63
8-STORAGE & CLOSET (Common Space Types:Storage)	100	0.57	57
Total Allowed Watts =			3712

## Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
<u>1-RISER &amp; TECH CLOSET (Common Space Types:Electrical/Mechanical)</u> LED: G1 / G1E: LED 4' STRIP LIGHT: Other:	1	2	44	88
<u>2-OFFICE (Common Space Types:Office - Enclosed)</u> LED: A2 / A2E: 2'X2' LED: Other:	1	1	38	38
<u>3-TEAM MEMBER ROOM (Common Space Types:Lounge/Breakroom)</u> LED: D3 / D3E: LED DOWNLIGHT: Other:	1	7	21	147
<u>4-KITCHEN &amp; SERVING (Common Space Types:Food Preparation)</u> LED: A2 / A2E: 2'X2' LED: Other: LED: B1: SHELVING LIGHT: Other: Exemption:Furniture-mounted supplemental task lighting LED: D3 / D3E: LED DOWNLIGHT: Other:	1 1 1	41 4 6	38 32 21	1558 Exempt 126
<u>5-RESTROOMS (Common Space Types:Restrooms)</u> LED: D3 / D3E: LED DOWNLIGHT: Other:	1	8	21	168

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LED: N: LED WALL SCONCE: Other:	1	4	11	44
<b>6-DINING &amp; PLAY (Common Space Types:Dining Area - Cafeteria/Fast Food)</b>				
LED: D3 / D3E: LED DOWNLIGHT: Other:	1	42	21	882
LED: U: RED FRIT GLASS PENDANT: Other:	1	4	9	36
LED: P1: PEACH BASKET PENDANT: Other:	1	2	16	32
<b>7-ENTRY VESTIBULE (Common Space Types:Lobby - General)</b>				
LED: D3 / D3E: LED DOWNLIGHT: Other:	1	2	21	42
<b>8-STORAGE &amp; CLOSET (Common Space Types:Storage)</b>				
LED: D3 / D3E: LED DOWNLIGHT: Other:	1	1	21	21
LED: A2 / A2E: 2'X2' LED: Other:	1	1	38	38
Total Proposed Watts =				3220

**Interior Lighting PASSES: Design 13% better than code**

### Interior Lighting Compliance Statement

*Compliance Statement:* The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Gregory Doffin, PE

Name - Title

Signature

11/18/2024

Date



# Exterior Lighting Compliance Certificate

## Project Information

Energy Code: 2018 IECC  
Project Title: CFA - OLDHAM VILLAGE FSU (LEE'S SUMMIT, MO)  
Project Type: New Construction  
Exterior Lighting Zone: 4 (High activity metropolitan commercial district (LZ4))

Construction Site:  
SW CORNER US HWY 50 & MO  
STATE ROUTE 291  
LEE'S SUMMIT, Missouri 64081

Owner/Agent:  
CHICK-FIL-A  
5200 BUFFINGTON ROAD  
ATLANTA, Georgia 30349

Designer/Contractor:  
DICKERSON ENGINEERING, INC.  
3343 N RIDGE AVE  
ARLINGTON HEIGHTS, Illinois 60004  
847-966-0290

## Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
ENTRY/EXIT CANOPIES (Entry canopy)	202 ft2	0.4	Yes	81
ILLUMINATED WALLS (Illuminated area of facade wall or surface)	2480 ft2	0.15	No	372
ORDER/MEAL DELIVERY CANOPIES (Free standing/attached sales canopy)	3741 ft2	0.7	Yes	2619
PARKING LOT/DRIVE THRU (Parking area)	41660 ft2	0.08	Yes	3333
Total Tradable Watts (a) =				6032
Total Allowed Watts =				6404
Total Allowed Supplemental Watts (b) =				900

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 900 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

## Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
<u>ENTRY/EXIT CANOPIES (Entry canopy, 202 ft2): Tradable Wattage</u>				
LED: Z1: LED CANOPY DOWNLIGHT: Other:	1	6	12	72
<u>ILLUMINATED WALLS (Illuminated area of facade wall or surface, 2480 ft2): Non-tradable Wattage</u>				
LED: OA: WALL SCONCE: Other:	1	15	34	510
<u>ORDER/MEAL DELIVERY CANOPIES (Free standing/attached sales canopy, 3741 ft2): Tradable Wattage</u>				
LED: Z2: LED CANOPY LIGHTS: Other:	1	16	74	1184
<u>PARKING LOT/DRIVE THRU (Parking area, 41660 ft2): Tradable Wattage</u>				
LED: OD1: LED PARKING LOT LIGHT: Other:	1	2	52	104
LED: OD2: LED PARKING LOT LIGHT: Other:	1	4	96	384
LED: OD3: LED PARKING LOT LIGHT: Other:	1	2	262	524
Total Tradable Proposed Watts =				2268

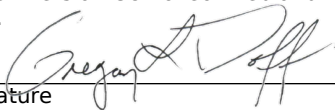
## Exterior Lighting Compliance Statement

*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 exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Gregory Doffin, PE

Name - Title

Signature



11/18/2024

Date



# Inspection Checklist

Energy Code: 2018 IECC

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C103.2 [PR8] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C406 [PR9] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22] <sup>1</sup>	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern $\geq 50$ percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1, C405.2.1.1 [EL18] <sup>1</sup>	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces $\leq 300$ sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1.2 [EL19] <sup>1</sup>	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C405.2.1.3 [EL20] <sup>1</sup>	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces $\geq 300$ sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas $\leq 600$ sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by $\geq 80\%$ of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21] <sup>2</sup>	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23] <sup>2</sup>	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Sidelit zones on first floor in Group A-2 and M occupancies.
C405.2.4 [EL26] <sup>1</sup>	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 [EL27] <sup>1</sup>	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.5 [EL28] <sup>null</sup>	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.6 [EL30] <sup>null</sup>	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 [EL6] <sup>1</sup>	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.6 [EL26] <sup>2</sup>	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C405.7 [EL27] <sup>2</sup>	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2, C405.8.2.1 [EL28] <sup>2</sup>	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C405.9 [EL29] <sup>2</sup>	Total voltage drop across the combination of feeders and branch circuits ≤ 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17] <sup>3</sup>	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1 [FI18] <sup>1</sup>	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C405.5.1 [FI19] <sup>1</sup>	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.
C408.1.1 [FI57] <sup>1</sup>	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5.1 [FI16] <sup>3</sup>	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3 [FI33] <sup>1</sup>	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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