



IECC 2015 Code Summary

CODE SECTION	CODE REQUIREMENTS	SUMMARY
C405.2 Lighting controls (Mandatory)	Lighting systems shall be provided with controls as specified in Sections C405.2.1, C405.2.2, C405.2.3, C405.2.4 and C405.2.5. Exceptions: Lighting controls are not required for the following: 1. Areas designated as security or emergency areas that are required to be continuously lighted. 2. Interior exit stairways, interior exit ramps and exit passageways. 3. Emergency egress lighting that is normally off.	With few exceptions, lighting controls are now required in all size buildings, and in all areas of the building. Exceptions: Interior exit stairways, ramps, passageways, security areas required to be continuously lit, emergency egress that is normally off.
C405.2.1 Occupant Sensor Controls	Occupant sensor controls shall be installed to control lights in the following space types: Classrooms/lecture/training rooms, Conference / meeting / multipurpose rooms, Copy/print rooms, Lounges, Employee lunch and break rooms, Private offices, Restrooms, Storage rooms, Janitorial closets, Locker rooms, and other spaces 300 square feet or less that are enclosed by floor-to-ceiling height partitions, Warehouses.	Areas required to have occupancy sensor control have been greatly expanded.
C405.2.1.1 Occupant sensor control function.	Occupant sensor controls in spaces other than warehouses specified in Section C405.2.1 shall comply with the following: <ul style="list-style-type: none"> Automatically turn off lights within 30 minutes of all occupants leaving the space. Be manual on or controlled to automatically turn the lighting on to not more than 50 percent power. Shall incorporate a manual control to allow occupants to turn lights off. 	With a few exceptions, occupancy sensor control shall be vacancy, or half occupancy, and must include a manual control to turn lights off. Exceptions: Automatic on permitted to control public corridors, stairways, restrooms, primary entrance and lobbies, and areas where manual on would endanger safety or security of occupants.
C405.2.1.2 Occupant sensor control function in warehouses.	In warehouses, the lighting in aisle ways and open areas shall be controlled with occupant sensors that automatically reduce lighting power by not less than 50 percent when the areas are unoccupied. The occupant sensors shall control lighting in each aisle way independently and shall not control lighting beyond the aisle way being controlled by the sensor.	Warehouses are now required to use occupancy sensors, and may not control more than one aisle. Lights must be able to reduce power by at least 50% when unoccupied.
C405.2.2 Time-switch controls	Each area of the building that is not provided with occupant sensor controls shall be provided with time switch controls.	With few exceptions all areas not covered by occupancy controls will include time based controls with manual override, 2 hour max override, and controlling not more than 5000 square feet.
C405.2.2.2 Light-reduction controls	Spaces required to have light-reduction controls shall have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern by at least 50 percent.	Light reduction may be achieved by dimming, lamp switching, or fixture control as long as it is done in a reasonably uniform illumination pattern.



<p>C405.2.3 Daylight-responsive controls</p>	<p>Daylight-responsive controls shall be provided to control the electric lights within daylight zones in the following spaces:</p> <ul style="list-style-type: none"> • Spaces with a total of more than 150 watts of general lighting within sidelight daylight zones. • Spaces with a total of more than 150 watts of general lighting within top light daylight zones. <p>Daylight responsive controls are not required for the following:</p> <ul style="list-style-type: none"> • Spaces in health care facilities where patient care is directly provided. • Dwelling units and sleeping units. • Lighting that is required to have specific application control. • Sidelight daylight zones on the first floor above grade in Group A-2 and Group M occupancies. 	<p>With few exceptions, daylight responsive controls are required in all spaces with more than 150 watts of general lighting within their daylight zones. Daylight zones are now defined as two feet on either side of window, and window head height into the space. (floor to the top of the fenestration)</p>
<p>C405.2.3.1 Daylight-responsive control function</p>	<p>Where required, daylight-responsive controls shall be provided within each space for control of lights in that space and shall comply with all of the following:</p> <ul style="list-style-type: none"> • Lights in top light daylight shall be controlled independently of lights in sidelight daylight zones. • Daylight responsive controls within each space shall be configured so that they can be calibrated from within that space by authorized personnel. • Calibration mechanisms shall be readily accessible. • Where located in offices, classrooms, laboratories and library reading rooms, daylight responsive controls shall dim lights continuously from full light output to 15 percent of full light output or lower. • Daylight responsive controls shall be capable of a complete shutoff of all controlled lights. 	<p>Spaces requiring daylight responsive controls will require a photo sensor that can be adjusted from within the space, can be calibrated from the floor, and in classrooms and offices must allow for dimming to at least 15%. In other spaces the sensor must at a minimum be able to turn the lights off in response to daylight.</p>
<p>C405.2.5 Exterior lighting controls</p>	<p>Lighting for exterior applications other than emergency lighting that is intended to be automatically off during building operation, lighting specifically required to meet health and life safety requirements or decorative gas lighting systems shall:</p> <ul style="list-style-type: none"> • Be provided with a control that automatically turns off the lighting as a function of available daylight. • Where lighting the building façade or landscape, the lighting shall have controls that automatically shut off the lighting as a function of dawn/dusk and a set opening and closing time. • 3. Where not covered in Item 2, the lighting shall have controls configured to automatically reduce the connected lighting power by not less than 30 percent from not later than midnight to 6 a.m., from one hour after business closing to one hour before business opening or during any period when activity has not been detected for a time of longer than 15 minutes. 	<p>Façade and landscape lighting must have its own schedule and also incorporate a photo sensor. All other lighting (with a few exceptions) must be able to reduce its connected load by 30% either based on a schedule or on occupancy.</p> <p><i>Exceptions: Lighting for covered vehicle entrances or exits from buildings or parking structures where required for safety, security or eye adaptation.</i></p>
<p>C406 Additional efficiency package options</p>	<p>Buildings shall comply with at least one of the following:</p> <ul style="list-style-type: none"> • More efficient HVAC performance. • Reduced lighting power density • Enhanced lighting controls • On-site supply of renewable energy • Provision of a dedicated outdoor air system for certain HVAC equipment • 6. High-efficiency service water heating 	<p>One must be chosen. Enhanced controls includes dimming in all fixtures, individual fixture control, a digital control system with programmable sensors, keypads, user control of overhead lighting in open offices, and load shedding.</p>