

STEP ONE Determine if Lighting Controls are required

Do any of the following criteria apply?
 1. Is the area designated as security or emergency, requiring continuous light?
 2. Is the area an interior exit stairway, ramp, or passageway?
 3. Is the lighting emergency egress lighting that is normally off?

YES → Lighting Control is not required

NO → Lighting Controls are required
 Continue to Step 2

STEP TWO Determine Lighting Control requirements

Do any of the following criteria apply?
 Classroom/Lecture/Training Room
 Conference/Meeting/Multipurpose Room
 Copy/Print Room
 Lounge
 Employee Lunch/Break Room
 Private Office
 Restroom
 Storage Room
 Janitorial Closet
 Locker Room
 Enclosed (F-T-C) Room > 300sf
 Warehouse

YES → Occupant Sensor Controls are required
 Continue to Step 3

NO → Lighting Controls are required
 Continue to Step 4

STEP THREE Determine Occupant Sensor Control requirements (30 min max time-out)

Public Corridors, Stairways, Restrooms, Primary Entrances, Lobbies → **Occupancy Sensor**
 **Manual Control may be required for off function.

Warehouses (Aisles and Open Areas) → **Occupancy Sensor**
 **Manual Control not required
 50% Max Unoccupied Level
 Aisles to be independent

All Other Spaces → **Occupancy Sensor**
 Up to 50% OR
 Vacancy Sensor
 **Manual Control

Continue to Step 5

STEP FOUR Determine Additional requirements

Are Occupant Sensor Controls provided according to criteria in Step 3?
NO → Additional Controls not required
 Continue to Step 5

Is Light-Reduction Control achieved by a Manual Control for one of the following areas/situations?
 Sleeping Units
 Patient Care Areas
 Safety/Security Areas
 Lighting intended for continuous operation
 Shop and Laboratory Classrooms

YES → Additional Controls not required
 Continue to Step 5

NO → Time-Switch Controls required
 Continue to Step 4a

STEP FOUR A Implement Time-Switch Control requirements

Malls, Arcades, Auditoriums, Single-Tenant Retail Spaces, Industrial Facilities and Arenas → Relay Panel System:
 7-Day Clock
 7-Day Types per Week
 Holiday "Shut-off"
 Program Backup (10h)
 Override Switches:
 Manual Control
 >2h Maximum Override with Captive Key Device
 20,000 sf Maximum Area

All other Areas → Relay Panel System:
 7-Day Clock
 7-Day Types per Week
 Holiday "Shut-off"
 Program Backup (10h)
 Override Switches:
 Manual Control
 2h Maximum Override
 5,000 sf Maximum Area

Continue to Step 4B

STEP FOUR B Implement Light-Reduction Controls

Is the Area provided with **Manual Control and meets one of the following criteria?
 Has one luminaire rated less than 100W
 Uses less than 0.6W/sf
 Daylight Zone w/ Daylight Responsive Controls
 Corridor, Equipment Room, Public Lobby, Electrical or Mechanical Room

YES → Light Reduction Controls are not required
 Continue to Step 5

NO → Provide **Manual Control for one of the following:
 1) Dimming
 2) Step-Dimming
 3) Dual-Level Switching
 4) a/b Zone Switching
 5) Digital Dimming
 Continue to Step 5

STEP FIVE Determine Daylight-Responsive Controls requirements

Do any of the following criteria apply?
 1) Patient care area
 2) Dwelling unit or sleeping unit
 3) Specific application controls RE: Step 6
 4) Sidelight Daylight Zones on the first floor in Group A-2 of M Occupancies

YES → Daylight Controls are not required
 Continue to Step 6

NO → Daylight Controls required
 Continue to Step 5A

****Manual Control:** Dimmer, Switch or Keypad that is located in a readily accessible location, and where the controlled lights are visible or where the device identifies the area served with indicated status.

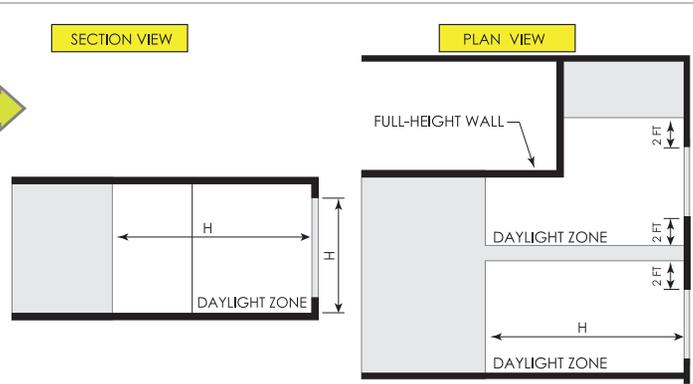
Define Daylight Zones

STEP FIVE A

Sidelight Daylight Zone

Conditions:

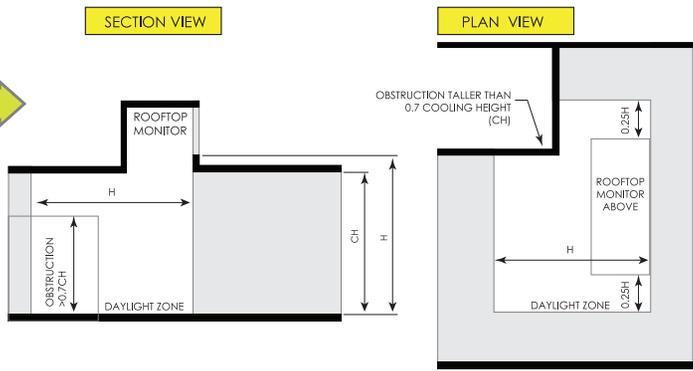
- 1) General Lighting must exceed 150W
- 2) Fenestration area must be at least 24sf
- 3) Fenestration must have a visible transmittance of not less than 0.20
- 4) Adjacent building and geological formations should be considered



Monitor Daylight Zone

Conditions:

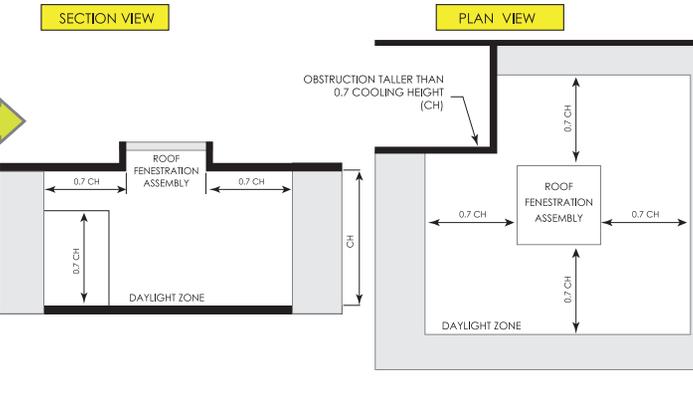
- 1) General Lighting must exceed 150W
- 2) Fenestration area must be at least 24sf
- 3) Fenestration must have a visible transmittance of not less than 0.20
- 4) Adjacent building and geological formations should be considered



Toplight Daylight Zone

Conditions:

- 1) General Lighting must exceed 150W
- 2) Adjacent building and geological formations should be considered at peak solar angle on the summer solstice
- 3) Fenestration must have a visible transmittance of not less than 0.20



Continue to Step 5b

Implement Daylight-Responsive Controls

STEP FIVE B

- 1) Toplight and Sidelight Daylight Zones must be controlled independently
- 2) Daylight Responsive Controls must be configured/calibrated from within that space
- 3) Calibration mechanism must be readily accessible
- 4) Offices, classrooms, laboratories and library reading room must dim continuously from 100% to 15% (or lower)
- 5) Daylight Controls must be capable of complete shutoff
- 6) Sidelight Daylight Zones facing different cardinal orientations (N/S/E/W) must be controlled independently (Exception: 150W or less)

Daylight Sensor
Dimming Ballast/Drivers
Continue to Step 6

Specific Applications

STEP SIX

- Display, Accent, Display Case, Non-Visual (Grow-lights), Demonstration Lighting
- Hotel, Motel & Guest Suites
- Supplemental Task Lighting (Undercabinet)

- Provide dedicated control independent of other controls within the space
 - Provide master control device that is capable of automatically switching off all installed and switched receptacles within 20 minutes after all occupants leave the room
 - Provide control device integral to the luminaire of provide a wall-mounted control that is readily accessible
- Continue to Step 7

Exterior Lighting Controls

STEP SEVEN

- Do any of the following criteria apply?
- 1) Emergency lighting intended to be automatically off during building operation
 - 2) Health and life safety lighting
 - 3) Decorative gas lighting systems

- YES** → Exterior Lighting Controls not required
 - NO** → Exterior Lighting Controls are required
- Continue to step 7a

Implement Exterior Lighting Control requirements

STEP SEVEN A

- Facade & Landscape Lighting **YES**
- All other Exterior Lighting **NO**

- Automatic shutoff as a function of dusk/dawn and business open/close
- Automatic shutoff via TC/PC and > 30% reduction:
 - 1) Midnight to 6AM
 - 2) One hour after close to one hour before open
 - 3) Fifteen minutes of Inaction

NEED HELP WITH YOUR DESIGN? HAVE QUESTIONS ABOUT HOW TO APPLY THE CODE TO YOUR PROJECT? WE ARE HERE TO HELP! CALL US: 303-861-8448 OR EMAIL US: CONTROLS@VISUALINTEREST.COM