SUMMARY
Proper lighting that emphasizes daylighting with natural light provides a more focused meeting environment. This application illustrates how conference rooms can use daylight dimming in conjunction with natural light entering the space, while providing Scene Control/Automatic Off and receptacle control to achieve energy savings up to 65% and achieve higher quality lighting. Providing optional control of individual lighting zones and HVAC output will allow for even greater energy savings.

The Room Controller QuickKit is shipped preconfigured to work out-of-the-box minimizing installation and setup time, while ensuring maximum energy savings. Using this design guide to specify your room with a Room Controller QuickKit catalog number will guarantee that after installation the lighting control system will work immediately as defined on this application guide.

ROOM CONTROLLER SAMPLE ROOM LAYOUT (10’X15’)

Room Controller QuickKit
RCQK-OS3E-CR2-ZAD-W1-D1-P-W

CONTROL SEQUENCE
- Scene Control/Automatic Off
- Individual Zone Raise/Lower control
- Occupancy based HVAC or Egress control
- Automatic multi-zone daylight dimming out-of-the-box
- Automatic Demand Response 10%-40% reduction based on input
- Receptacle Control for additional energy savings
- UL 924 emergency relay control
- High-end trim/tuning to define target light levels
- After-hours warn Offs and timers to ensure maximum efficiency and savings

INTEGRATED CAPABILITIES
- Occupancy/Vacancy Sensing
- Daylighting Control
- Manual Control
- Receptacle Control
- Emergency
- Integration
- Demand Response

COOPER LIGHTING GUARANTEED COMPATIBLE FIXTURES
- Corelite LED Room Controller Conference Room Lighting Layouts
- Corelite LFL Room Controller Conference Room Lighting Layouts
- Neoray LED Room Controller Conference Room Lighting Layouts
- Neoray LFL Room Controller Conference Room Lighting Layouts

Refer to these Cooper Lighting data sheets for lighting layouts and illuminance value information.

www.coopercontrol.com
The RC3DE will automatically recognize any smart device connected with the QuickConnect cable (provided) and start working immediately upon power up with no programming required. The RC3DE defaults to Manual On/Automatic Off vacancy sensor mode for maximum energy savings. Entry wallstations will provide On/Off control of the Yellow load. Teacher stations provide On/Off control of the Red and Purple loads as well as manual Raise/Lower of all dimmers.

The daylight sensor will automatically, on power up, provide multi-zone daylight dimming in the space. (Remote adjustments can be made later.)

*Refer to Room Controller website for more information on other integral no programming required benefits like Demand Response, Solatube Control, Egress Control, BMS Output, Alert Mode, Emergency Lighting Control, and Slider Stations.

**Emergency Note:**
Emergency load tracks with normal lighting YELLOW load for On/OFF. If dimming it will be adjusted with the dimming zone it is connected to. Upon loss of normal power to the RC3DE, the emergency load will be forced On and full bright to 100%.

In room ladderless testing is done by pressing the "All Off" button four times, within 3 seconds.

The RC3DE is UL 924 listed.

**0-10V Dimming Zone Note:**
The 0-10V dimming zones within the Room Controller can be wired and controlled independent of the connected loads. This allows each load to have a dedicated 0-10V dimming zone or a single load to have up to three 0-10V dimming zones.

**Receptacle Control:**
20Amp 120 VAC receptacle control immediately works upon power up and connection to the Room Controller. Receptacle turns On by button press or occupancy and Off when space is vacant.

**Emergency Lighting Load (3)**
Requires 0-10V dimming ballasts

**Daylight sensor**
"Immediately provides multi-zone daylight dimming upon powerup"

**Dual Technology Wall Corner Occupancy/Vacancy Sensor**
"Defaults to vacancy sensor mode Manual On/Automatic Off (all loads) for maximum energy savings"
MOUNTING THE ROOM CONTROLLER
The Room Controller mounts above the ceiling in the space it is controlling, typically above the door to the room. The Room Controller includes breakouts for direct conduit connection limiting the need for additional junction boxes. Mount the Room Controller using the keyhole slots at the top and secure to the wall using the holes at the bottom of the Room Controller.

Connect conduit to the line voltage breakout connections and connect the line and load wires. Connect low voltage cables either through the low voltage breakout openings or by connecting low voltage conduit to the breakouts on the low voltage side of the Room Controller.

Sample Placement Diagram
(for example purposes only)

Daylight Sensor Ceiling Location
1. Mount the daylight sensor one to two times the window height from the window wall.
2. Position the sensor so its arrow is pointed toward the nearest window.
3. Ensure the daylight sensor is not obstructed or looking directly at electric light.
4. For narrow spaces mount the daylight sensor near the window facing into the space.

Sample Placement Diagram (for example purposes only)

WIRING DIAGRAM

ROOM CONTROLLER - CONFERENCE ROOM
w/Daylight Dimming, Receptacle Control and Emergency Control

ROOM CONTROLLER - CONFERENCE ROOM
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DIMMER CONNECTIONS

Dimmer 1: Near the Window
Dimmer 2: Middle of Room
Dimmer 3: Far from Window

The daylight sensor will automatically provide multi-zone daylight dimming based on this wiring configuration.

OCCUPANCY SENSOR COVERAGE DIAGRAM (OAWC-DT-120W)

The NEMA WD 7 Guide and robotic method were utilized to verify coverage patterns.

CONNECTIONS

Room Controller 0-10V Dimming Connections

- 0-10V Dimming
- 0-10V Gray (-)
- 0-10V Violet (+)

Room Controller and Smart Devices use Click & Go Connections

1. Wallstations (up to four)
2. Slider Station Connection (one)
3. Occupancy Sensors (up to two)
4. Daylight Sensor (one)
5. Receptacle Control or BMS Output
6. Switchpack (controlled with Load 1 for alternate voltage)
ORDERING

RCQK - OS3E

Room Controller
QuickKit

Office Stations (Choose up to 4)
OS1 - Half Lights, Full Lights, All Off
(OS1 - 3 Large Buttons)
OS2 - Half Lights, Full Lights, Raise, Lower, All Off †
(OS2 - 5 Small Buttons)
OS3 - Half Lights, Full Lights, Under Cabinet, Raise, Lower, All Off †
(OS3 - 6 Small Buttons - Scenes)
OS4 - All On, All Off (2 Large Buttons)
CR1 - General, Meeting, Whiteboard, Presentation, Raise, Lower
(CR1 - 6 Small Buttons - Scenes)
CR2 - General, Meeting, Whiteboard, Presentation, All Off
(SS1 - 6 Small Buttons - Scenes)
CR3 - All On, All Off (2 Large Buttons)
CR4 - Zone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 DN
(ZAD - 6 Small Buttons - Scenes)

Daylight
D1 - Multi-zone Daylight Sensor
DH - Multi-zone Daylight Sensor w/ Handheld Remote

Occupancy Sensor
C1 - Ceiling DT 2000 sq. ft.
C2 - Ceiling PIR 2000 sq. ft.
C3 - Ceiling DT 1000 sq. ft.
W1 - Wall Corner DT
W2 - Wall Corner PIR
W3 - Hallway PIR

Station Color
W - White
G - Gray
V - Ivory
B - Black

Options
P - Plug Load
B - BMS/Egress

Catalog #
Project
Comments
Prepared by
Date

www.coopercontrol.com