



Version  
1.0

# Ceiling Mounted Occupancy Sensors

# Greengate Ceiling Mounted Occupancy Sensors



**The new Greengate occupancy sensors are the best performing, broadest featured, most aesthetically pleasing ceiling mounted occupancy sensors available.**

Greengate ceiling mounted occupancy sensors are ideal for private offices, classrooms, conference rooms, open office areas, hallways and restrooms; where increased energy efficiency is desired; or to meet local, state, and federal codes.

These sensors utilize passive infrared, ultrasonic, and dual technologies making them ideally suited for a variety of applications.

Greengate ceiling mounted occupancy sensors include features such as Automatic and Manual-On Modes, optional built-in daylight sensors and BAS relay, manual adjustments, Zero Time Delay Mode, discrete time delays, Walk-Through Mode, and more.

- » **Industry’s best major motion coverage area and leading overall motion sensing performance**
- » **Broadest number of features available makes application and specification easier**
- » **Matching aesthetic to award-winning NeoSwitch and Wall/Corner Occupancy Sensor Devices**



OAC-DT-2000-R

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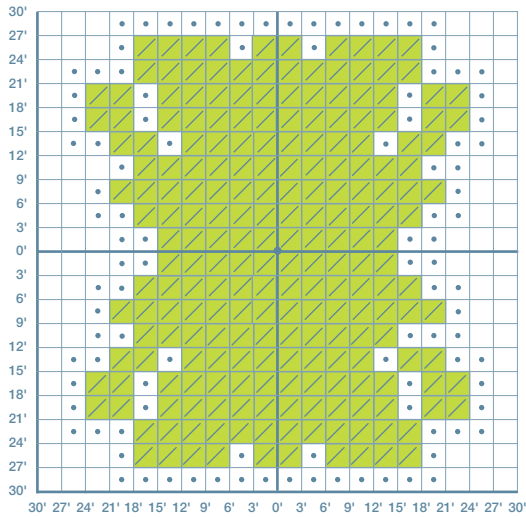
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# Best Performance - Passive Infrared Major Motion Coverage

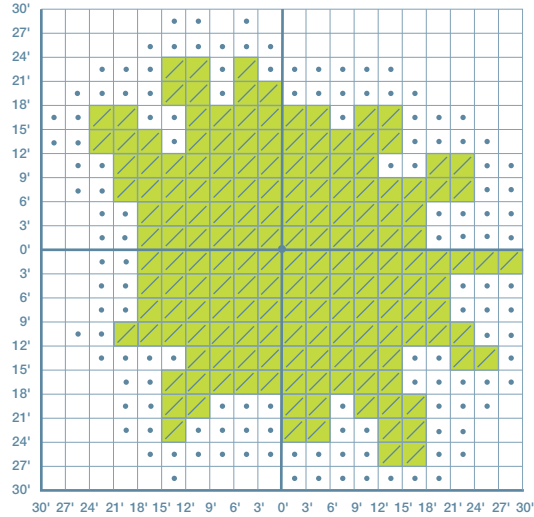
## Greengate Ceiling Sensors Provide the Best Major Motion Coverage Area and Initial Activation Performance in the Industry

- Lights turn ON sooner when walking into a room using Greengate Ceiling Sensors.
- Major Motion coverage area exceeds the competition by 5 to 42% when tested.

**Cooper Controls OAC-DT-2000-R**



**Hubbell OMNIDT2000RP**



**Legend**

- Tested & Motion Detected
- Tested & Motion Not Detected
- Not Tested

**Sample Test Results**

- » Greengate sensors have greater coverage area ensuring lights turn ON first.
- » Uniform distribution prevents oddities in performance or coverage gaps.

- Largest Major Motion coverage area of 1980 sq. ft.
- Initial activation area extends well into the corner of a room where a door or entry is typically located

- 1548 sq. ft. of coverage
- Coverage pattern inconsistent at the corners requiring field adjustment

**Major Motion**

Major motion is defined as movement of a person walking into or through an area.

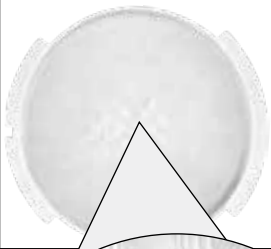


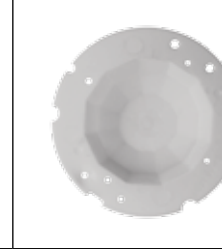

Typical examples are a person walking into a room or down a corridor.

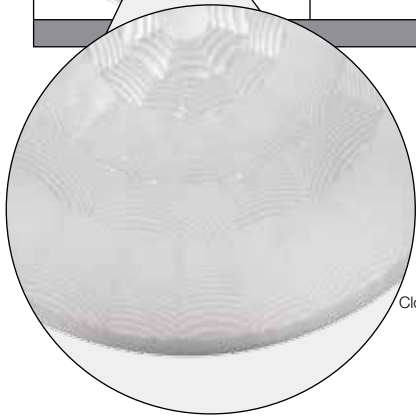
Major motion may be required to turn ON the lights, but transitions to minor motion once the occupant is in the room.



## Competitor Lens Comparison

- Sensors with Passive Infrared Technology have segmented lenses. For units to see motion, the person must cross between two segments/bands.
- The more segments and greater surface area of the lens allows the sensor to see further than any other sensor on the market today.
- Cooper Controls lens is up to 39% larger.

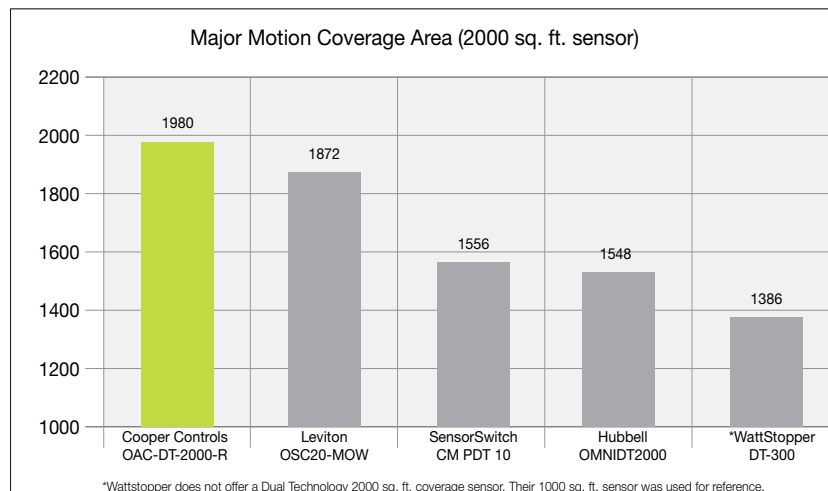
Cooper Controls	Leviton	SensorSwitch	Hubbell	WattStopper
2.25" Diameter Lens	1.44" Diameter Lens	1.38" Diameter Lens	1.38" Diameter Lens	1.5" Diameter Lens
PIR Major Motion: 1980 sq. ft.	PIR Major Motion: 1872 sq. ft.	PIR Major Motion: 1556 sq. ft.	PIR Major Motion: 1548 sq. ft.	PIR Major Motion: 1386 sq. ft.
				



Close up of lens showing segments

## Passive Infrared Major Motion Coverage Area Comparison

Products tested in identical manner, compliant to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard (see page 11).  
(Results may change based on your application)



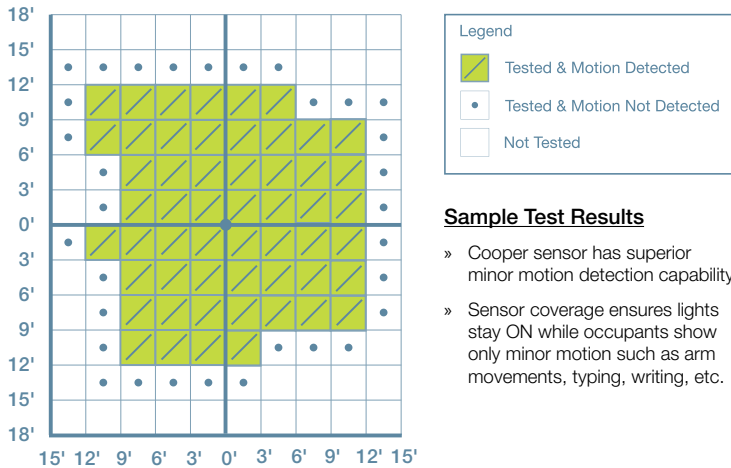


# Leading Performance - Ultrasonic Minor Motion Coverage

## Leading Minor Motion Ultrasonic Sensing Performance

Cooper Controls Ultrasonic and Dual Technology sensors utilize the latest in circuit design combined with innovative firmware that has continued to evolve over the last 30+ years delivering best-in-class minor motion coverage.

### Cooper Controls OAC-DT-1000-R



- Largest minor motion coverage area of 486 sq. ft.
- Lights stay ON when minimal amount of human motion is present



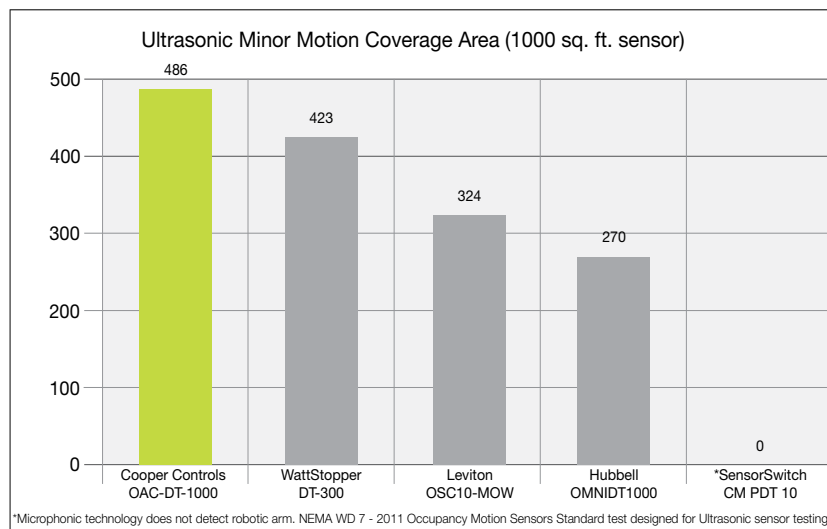
### Minor Motion

Minor motion is defined as movement of a person sitting at a desk reaching for a telephone, turning the pages of a book, opening a file folder, or picking up a cup of coffee.

It is important to pick up these type of motions to avoid occupant disturbance.

## Ultrasonic Minor Motion Coverage Area Comparison

Products tested in identical manner, compliant to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard (see page 11).  
(Results may change based on your application)

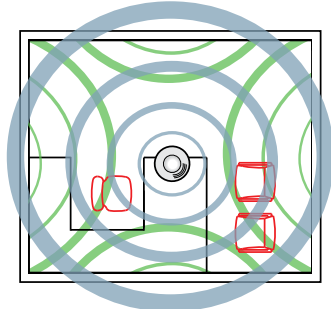




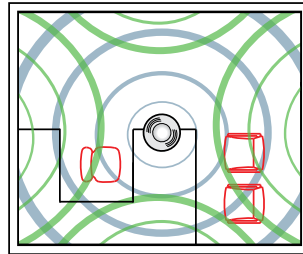
## Variable Drive Circuitry (VDC)

Ensures adequate detection for the space.

- In cases of over saturation from misapplication, standard adaptive sensors reduce detection capability without reducing volumetric output to compensate.
- Cooper Controls sensors adjust down volumetric output in a linear relationship with the detection to ensure optimal performance.



Typical case of over saturation

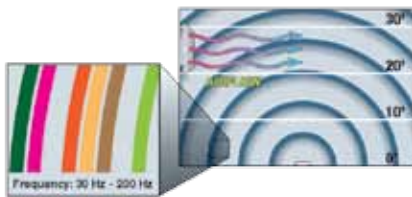


Properly adjusted with VDC

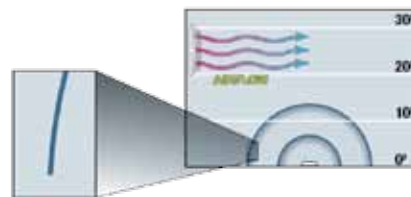
## MicroSet Technology

Prevents detuning which can lead to inadvertent lights out.

- Sensor will automatically and continually self-adjust to the optimal setting.
- Sensor will ignore specific frequency (like continuous noise from airflow) rather than detuning as with standard adaptive sensors.



MicroSet - adjust frequency without detuning

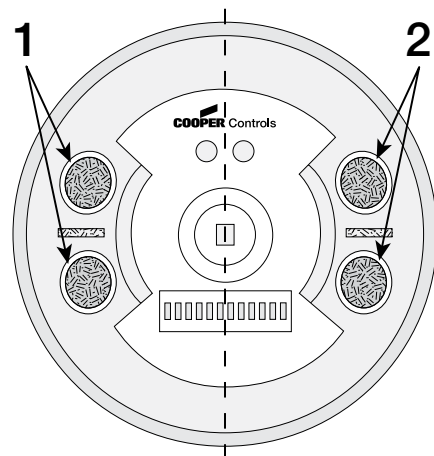


Typical Adaptive Ultrasonic Sensors detune

## Dual Pre Amp w/Independent AGC

Ensures optimum performance regardless of location or proximity to walls, structures, etc.

- Cooper Controls runs two independent sensor detection circuits simultaneously.
- Sensor can automatically adjust each circuit independently to ensure optimum performance regardless of location or proximity to wall, structures, etc.



## Broadest Feature Set

### Industry First - Installation & Performance Features

#### Tracking/HVAC Mode

When enabled, allows the device connected to the Form C BAS relay to remain ON when the lights are turned OFF manually unlike other sensors on the market today. (Low Voltage Units Only)

#### Relay Swap Option

A common problem in electric wiring is wiring the wrong wire to the wrong load. This can make control of loads confusing to an end user. The Relay Swap option (-DMV Units Only) solves the problem by swapping the relays after the unit is wired and installed.

#### Bathroom Mode

When selected, Bathroom Mode (-DMV Units Only) keeps the second relay ON for an additional 10 minutes, after the first relay has turned OFF. This is ideal for areas that require mechanical fans.

#### Zero Time Delay Mode

In Zero Time Delay Mode (Low Voltage Units Only), the output control signal is actuated for one second to signal another device that the space being monitored is occupied. Applications may include the use of a lighting control system to manage the time delay vs. adjusting time delay at sensor.

### Maximum Energy Savings Benefits

#### Daylighting Capabilities

When enabled, the daylighting feature (-R/MV/DMV Units Only) prevents lights from turning ON when the room is adequately illuminated by natural light.

- Full Logic Mode (-R Units Only) - should the ambient light level exceed the preset foot-candle level, the lights turn OFF. The lights will remain OFF, until the ambient light level falls below the set point.
- Half Logic Mode - If the amount of natural light available rises above the setpoint, the daylight sensor will not turn the lights OFF while occupancy is being detected.

#### Walk-Through Mode

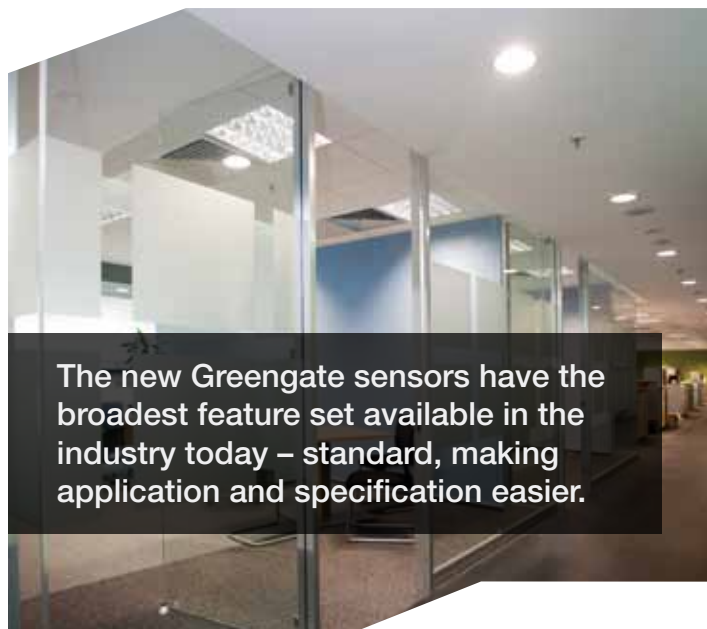
Walk-Through feature maximizes energy savings by not leaving the lights ON after a momentary occupancy.

#### BAS Relay (Form C Relay)

A popular application is to use the occupancy sensor to send an OFF command to a local VAV to turn OFF the air conditioning in a space. Available in -R Units.

#### Manual/Automatic ON Mode

In Automatic ON Mode, the lights turn ON when a person enters the room. In Manual ON Mode (-R Units Only), the lights are turned ON by activating a momentary switch (model # GMDS-\*) that is connected to the sensor.



The new Greengate sensors have the broadest feature set available in the industry today – standard, making application and specification easier.

### Application Options

#### 120 to 347 VAC, 50/60Hz (cULus Listed)

Line voltage ceiling sensors are available as one universal voltage model for global applications

#### Self-Adjusting or Manual Adjustment Options

Time, Delay, Sensitivity and Daylight can be adjusted to meet the needs of the desired application.

#### Discrete Time Delay Settings

Time Delays are set using DIP Switches allowing exact, separate, and distinct timing.



Sensor without cover showing DIP Switches and Daylighting adjustments.



Award Winning Aesthetic Uniformity Across Multiple Sensor Types



**Ceiling Sensor**  
OAC-P-1500-R



**NeoSwitch Wall  
Switch Sensor**  
ONW-D-1001-MV-N-W



**Wall/Corner Sensor**  
OAWC-DT-120W-R

Color Matched, Smooth Domed Lens Reduces Contrast Ensuring Sensor Blends with its Environment



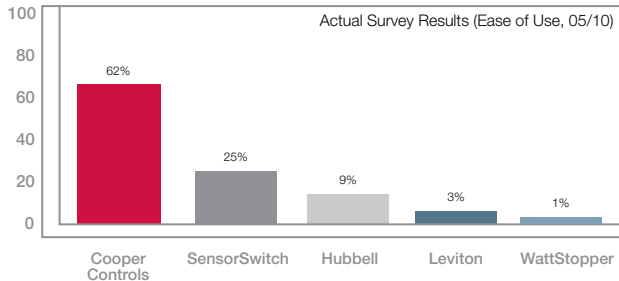
Lower contrast ratio between lens, sensor, and ceiling due to color match lens and matching electronics.



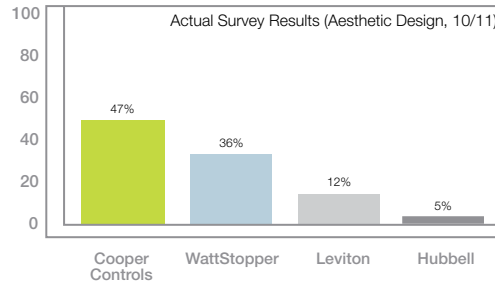
Higher contrast ratio between lens, sensor, and ceiling due to different color lens and dark, visible electronics.

Surveyed Users Chose Greengate Ceiling Sensors as the Most Aesthetically Pleasing Ceiling Mounted Occupancy Sensor Compared to Other Leading Manufacturers

**Greengate NeoSwitch Wall  
Switch Occupancy Sensors**



**Greengate Ceiling Mounted  
Occupancy Sensor**





## Passive Infrared Relay (PIR) Technology

- Designed to detect motion from a heat-emitting source (such as a person entering a room) within its field-of-view and automatically switch lights ON and OFF.
- PIR sensors are considered line-of-sight sensors, meaning that the sensor must be able to have a direct line-of-sight to the person making the motion.



## Ultrasonic (US) Technology

- Ultrasonic sensors use the Doppler principle.
- These sensors produce low intensity, inaudible sound and detect changes in sound waves caused by motion, such as walking into the room, reaching for a telephone, or turning in a chair.
- They are volumetric in nature and therefore not line-of-sight dependant.
- Since they fill the space with these sound waves, they are excellent in bathrooms with stalls or other oddly shaped rooms. In addition, they are much more sensitive to smaller motions.



## Dual Technology

- Dual Technology is the combination of PIR and Ultrasonic into one sensor and is the ultimate sensing solution available today.
- This pairing helps to eliminate false activations (both ON and OFF) thus saving additional energy use.
- Dual Technology sensors ensure the greatest sensitivity and coverage for tough applications without the threat of false triggers.



## Applications for Ceiling Mounted Occupancy Sensors



### Private Office

Size: 150 sq. ft.  
 LPD: 1.1 watt. sq. ft.  
 Lighting Hours: 3,500  
 Electricity Cost: 10.2/kwh

**45% Savings = \$26.51 Yearly**



### Hallway

Size: 450 sq. ft.  
 LPD: 0.5 watt. sq. ft.  
 Lighting Hours: 4,500  
 Electricity Cost: 10.2/kwh


**35% Savings = \$36.15 Yearly**



### Classroom

Size: 1200 sq. ft.  
 LPD: 1.4 watt. sq. ft.  
 Lighting Hours: 2,800  
 Electricity Cost: 10.2/kwh

**40% Savings = \$191.93 Yearly**

	Commercial Low Voltage Ceiling Sensors								Commercial Line Voltage Ceiling Sensors			
	Passive Infrared		Ultrasonic			Dual Technology			Passive Infrared			
	OAC-P-0500	OAC-P-1500	OAC-U-0501	OAC-U-1000	OAC-U-2000	OAC-DT-0501	OAC-DT-1000	OAC-DT-2000	OAC-P-0500-MV	OAC-P-0500-DMV	OAC-P-1500-MV	OAC-P-1500-DMV
Applications												
Cafeteria	Good	Good	Better	Better	Better	Best	Best	Best	Good	Good	Good	
Cafeteria High Ceiling	Best											
Classroom			Better	Better	Better	Best	Best	Best				
Closet (Utility)	Best								Best			
Computer Room	Better					Best	Best	Best	Better	Better		
Conference Room	Good	Good	Better	Better	Better	Best	Best	Best	Good	Good	Good	Good
Copy/File/Storage Room	Best	Best							Best	Best	Best	Best
Hallway	Good	Good	Best	Best	Best				Good		Good	
Office (Executive)	Good	Good	Better	Better	Better	Best	Best	Best	Good	Good	Good	Good
Office (Private)	Good	Good	Better	Better	Better	Best	Best	Best	Good	Good	Good	Good
Open Office w/ Cubicles			Best	Best	Best	Best	Best	Best				
Restroom Partitioned			Best	Best	Best	Best	Best	Best				
Vending Room	Best	Best							Best	Best	Best	Best

## Occupancy Motion Sensors Standard

1998 - Cooper Controls, under the Novitas brand, invented the robotic method to test and guarantee minor motion coverage.

2000 - NEMA adopted the Novitas robotic test method as the guide for occupancy sensor testing.

2011 - The NEMA Guide was updated and adopted as the NEMA WD 7 – 2011 Occupancy Motion Sensors Standard.

At the time it was approved, some of the members included the following:

- Cooper Industries — Peachtree City, GA
- Hubbell Incorporated — Bridgeport, CT
- Leviton Manufacturing Co., Inc. — Little Neck, NY
- Lutron Electronics Company, Inc. — Coopersburg, PA
- Pass & Seymour/Legrand — Syracuse, NY
- WattStopper, Inc./Legrand — Santa Clara, CA



The standard was created in order to promote uniformity for the definition and measurement of characteristics relevant to the use and application of occupancy motion sensors. Coverage claims that have not been verified using the NEMA WD 7 – 2011 Occupancy Motion Sensors Standard and robotic method are likely to be substantially overstated.

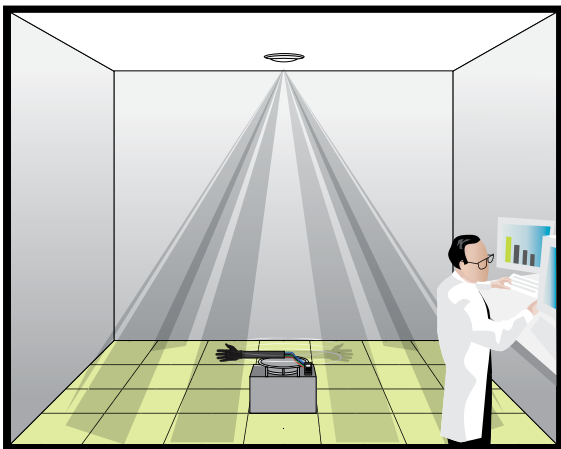
A free electronic copy of the standard may be downloaded at: <http://www.nema.org/stds/wd7.cfm#download>

### NEMA WD 7 Testing - How it Works

The testing criteria of NEMA WD 7 – 2011 Occupancy Motion Sensors Standard outlines specific environmental conditions, equipment, test subject height, weight, and clothing requirements, as well as test procedures for major and minor motion sensing.

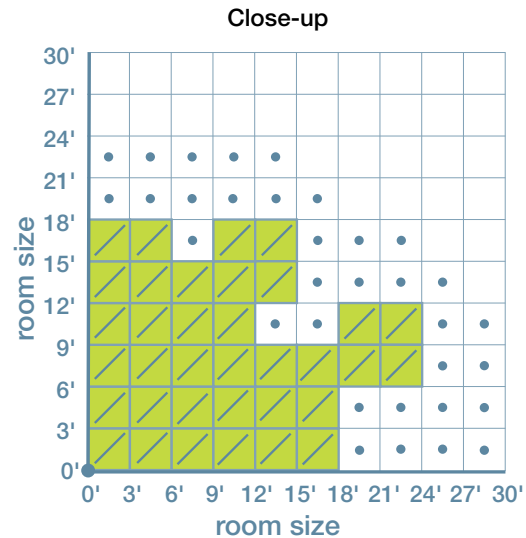
Cooper Control's Test Laboratory conducts extensive testing of motion sensitivity properties relevant to specific application and intended performance. The testing performed is capable of validating products to the NEMA WD 7 – 2011 Occupancy Motion Sensors Standard. Our occupancy sensor technology experts take great pride in their active involvement in creating, utilizing, and driving industry standards.

Upon completion of testing, an illustration of the horizontal or vertical fields of view of the sensor is developed. The illustration typically includes a grid pattern, with a maximum 3' x 3' cell size indicating major and/or minor motion detection. The illustration can be used to compare differing products and their sensitivity to major and/or minor motion.



### Sample Room Size Close-up (3' x 3' Cell)

This process, as dictated by the NEMA WD 7 - 2011 Occupancy Motion Sensors Standard testing method, was used to test all Cooper and competitive sensors.



#### 3' x 3' Cell Testing Legend

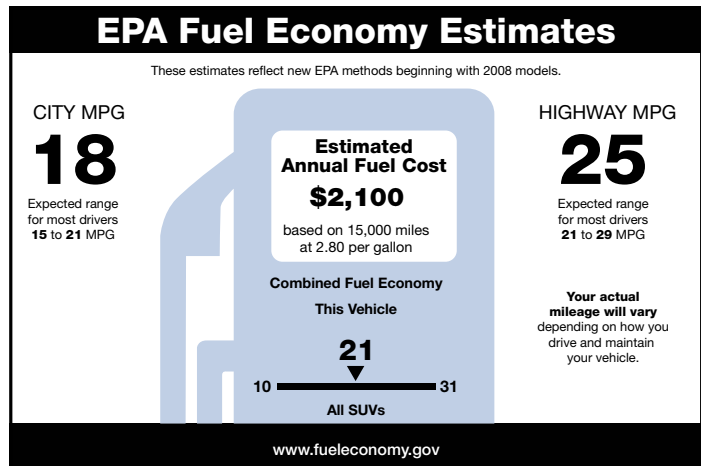
- Tested using robotic device and motion detected by sensor
- Tested using robotic device and motion was not detected
- Not Tested (if motion not detected in adjacent cell)

## NEMA WD 7 Illustrations are Comparable to MPG Data for Automobiles

NEMA WD 7 illustrations are a useful tool for comparing relative motion sensing performance of different occupancy sensors in like testing environments but may not accurately predict the exact coverage that you will see in your application.

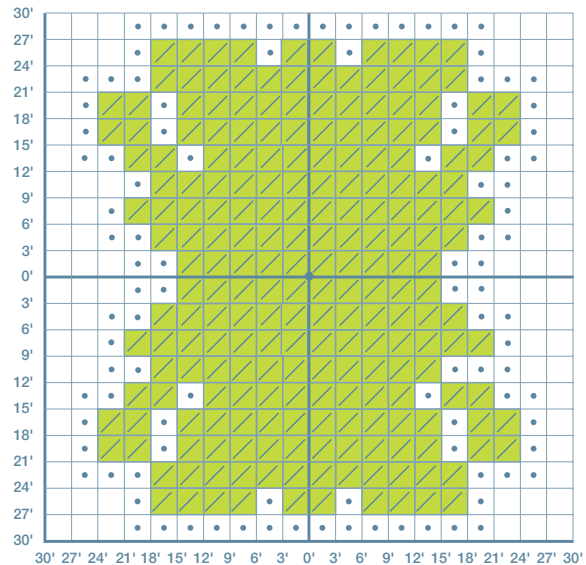
### Fuel Economy Label

- Helps car buyers choose the most fuel-efficient vehicle that meets their needs
- EPA tests are designed to reflect “typical” driving conditions
- Many factors affect “real world” performance
  - » How and where you drive
  - » Vehicle condition and maintenance
  - » Fuel variations
  - » Vehicle variations
  - » Engine break-in



### NEMA WD 7 Illustration

- Helps customers choose the best performing sensor for their needs
- NEMA WD 7 illustrations are designed to reflect “typical” indoor conditions
- Many factors affect “real world” performance
  - » Room size, shape and the presence of obstacles
  - » Heavy draperies or heavy carpeting
  - » Open or raised ceilings
  - » Excessive airflow
  - » Temperature



**Specify sensors tested to the NEMA WD 7 Standard to ensure optimum performance for your application.**





## Energy Codes

Energy costs and consumption continue to rise in the United States. Today, many energy codes and energy policies either require or incentivize the use of energy efficient lighting controls on commercial projects.

### ASHRAE 99.1-1999, 2001, 2004, 2007

In buildings over 5,000 square feet, all general lighting must be able to be automatically turned off.



- Occupancy sensors can be used through out the building, in lieu of programmable timing, to meet the Automatic-Off requirement outlined in the ASHRAE standard.
- In every building, regardless of size, ASHRAE requires that occupancy sensors be placed in classrooms, conference/meeting rooms, employee cafeterias and break rooms.

### LEED Green Building Rating System

Both of the above ASHRAE requirements must be met by any project hoping to earn LEED certification. Lighting controls can contribute toward meeting a prerequisite and earning up to 24 percent or 24 of the 100 points available in LEED 2009. Use occupancy sensors to earn LEED points by significantly improving the energy performance of the building.



#### Applicable Lighting Control Sections

Credit Number	Credit Name	Category	Possible Points
Prerequisite 2	Minimum Energy Performance	Energy & Atmosphere (EA)	Prerequisite
Credit 1	Optimize Energy Performance	Energy & Atmosphere (EA)	1-19 Points
Credit 5	Measurement & Verification	Energy & Atmosphere (EA)	3 points
Credit 6.1	Controllability of Systems: Lighting	Indoor Environmental Quality (EQ)	1 point
Credit 8	Light Pollution Reduction	Sustainable Sites (SS)	1 point

## IECC

ASHRAE and Title 24 requirements must be met.

- IECC 2003 & 2006, Occupants must be able to reduce lighting load in the space in a reasonably uniform pattern by at least 50%. Bi-Level occupancy sensors offering personal control can be used to comply with this mandatory requirement.

### California Title 24

Automatic shut-off occupancy sensors must be installed in the following areas to turn off the lighting when a space is unoccupied:



- Offices 250 sq. ft. or smaller
- Multipurpose rooms of less than 1000 sq. ft.
- Classrooms of any size
- Conference rooms of any size

Space Control - Requires individual control devices in spaces enclosed with floor-to-ceiling height partitions and include individual rooms for partitioned open offices.

Light Level Reduction Control - Requires simple switching strategies to reduce light levels by up to 50%. Bi-level occupancy sensors can also meet the requirements by offering 2 levels of control.

Programmable Timing - California, Title 24 mandates that the lighting system in any building, residential and non-residential, regardless of size, must include programmable timing.

### Commercial Building Tax Deduction

An incentive for building owners to adopt the most energy-efficient lighting control strategies with tax credit capped at 60¢ per square foot and was recently extended through December 31, 2013. To qualify for the tax deduction, bi-level switching is required in all occupancies except hotel and motel guest rooms, restrooms, and public lobbies.

- Bi-level occupancy sensors can also meet the bi-level switching requirements outlined in the Commercial Tax Deduction. These occupancy sensors turn all of the lights in a space on to 50% when an occupant enters a room. Occupants can then manually turn the lights on to 100%, if they require maximum illumination.

Ceiling Sensors Reference Guide						
Features	Greengate	WattStopper	Hubbell	Leviton	SensorSwitch	Benefit
Passive Infrared	<b>Yes</b>	Yes	Yes	Yes	Yes	Coverage cut-off - great line-of-sight
Ultrasonic Technology	<b>Yes</b>	Yes	Yes	Yes	No, Use Microphonics	Excellent minor motion (restrooms; cubicle areas; hallways)
Dual Technology	<b>Yes</b>	Yes	Yes	Yes	Use Microphonics	No gap coverage - ensures greatest sensitivity and coverage
Single and Dual Relay Line Voltage Units	<b>Yes</b>	No	No	No	Yes	Ease of installation
Universal Voltage 120 to 347 VAC 50/60Hz Line Voltage Units	<b>Yes</b>	Yes	No	120V to 277V Only	No	Ease of ordering; less cat #s to stock at distribution
Self-Adjusting	<b>Yes</b>	Yes	Yes	Yes	Yes	Ease of installation
Daylight Sensor	<b>Yes</b>	Yes	Yes	Yes	Yes	Provides increased energy savings
Smooth Domed PIR Lens	<b>Yes</b>	No	No	No	No	Premium aesthetic
Zero Time Delay Mode	<b>Yes</b>	No	No	No	No	Better integration with centralized lighting control systems
Industry's widest initial activation coverage as verified using the NEMA WD 7 Standard Guide	<b>Yes</b>	No	No	No	No	Ensures better initial activation and reduced false OFFs
Industry's leading major and minor motion coverage as verified using the NEMA WD7 Standard Guide	<b>Yes</b>	No	No	No	No	Excellent major and minor motion coverage reducing false OFFs
Walk-Through Mode	<b>Yes</b>	Yes	No	Yes	Yes	Prevent lights from being ON for unnecessary periods of time
Bathroom Mode for Dual Relay Line Voltage Units	<b>Yes</b>	No	No	No	No	Offers extra time delay for second relay
Relay Swap for Dual Relay Line Voltage Units	<b>Yes</b>	No	No	No	No	Ease of installation
Title 24 Compliant	<b>Yes</b>	Yes	Yes	Yes	Yes	Ease of specification
Matching aesthetic across multiple sensor platforms	<b>Yes</b>	No	No	No	No	Premium aesthetic - ease of specification
ROHS Compliant	<b>Yes</b>	Yes	Unable to validate	Unable to validate	Unable to validate	No lead, mercury, or other harmful chemicals as identified by RoHS

Note: Features and Specifications are subject to change.

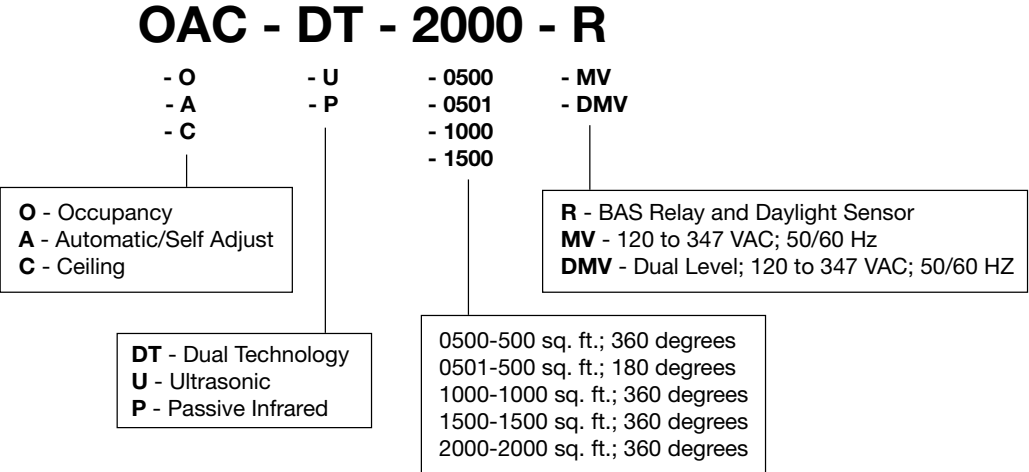
\*All information represented is to the best of Cooper's knowledge based on public information available in April 2012.

# Product Offering

Greengate Catalog Number	Description		Color	
<b>Ceiling Mount Sensors - MicroSet Self-Adjusting (Low Voltage)</b>				
	Dual Technology			
	OAC-DT-2000-R	MicroSet Dual Tech, 2000 sq. ft. (2-way) with BAS relay and daylight sensor, 32 kHz	W	
	OAC-DT-2000	MicroSet Dual Tech, 2000 sq. ft. (2-way), 32 kHz	W	
	OAC-DT-1000-R	MicroSet Dual Tech, 1000 sq. ft. (2-way) with BAS relay and daylight sensor, 32 kHz	W	
	OAC-DT-1000	MicroSet Dual Tech, 1000 sq. ft.(2-way), 32 kHz	W	
	OAC-DT-0501-R	MicroSet Dual Tech, 500 sq. ft. (1-way) with BAS relay and daylight sensor, 40 kHz	W	
	OAC-DT-0501	MicroSet Dual Tech, 500 sq. ft. (1-way), 40 kHz	W	
	Ultrasonic Technology			
	OAC-U-2000-R	MicroSet Ultrasonic, 2000 sq. ft. (2-way) with BAS relay and daylight sensor, 32 kHz	W	
	OAC-U-2000	MicroSet Ultrasonic, 2000 sq. ft. (2-way), 32 kHz	W	
	OAC-U-1000-R	MicroSet Ultrasonic, 1000 sq. ft. (2-way) with BAS relay and daylight sensor, 32 kHz	W	
	OAC-U-1000	MicroSet Ultrasonic, 1000 sq. ft. (2-way), 32 kHz	W	
	OAC-U-0501-R	MicroSet Ultrasonic, 500 sq. ft. (1-way) with BAS relay and daylight sensor, 40 kHz	W	
	OAC-U-0501	MicroSet Ultrasonic, 500 sq. ft. (1-way), 40 kHz	W	
	Passive Infrared Technology			
	OAC-P-1500-R	MicroSet PIR, 1500 sq. ft. (360 degrees) with BAS relay and daylight sensor	W	
	OAC-P-1500	MicroSet PIR, 1500 sq. ft. (360 degrees)	W	
	OAC-P-0500-R	MicroSet PIR, 500 sq. ft. (360 degrees) with BAS relay and daylight sensor	W	
	OAC-P-0500	MicroSet PIR, 500 sq. ft. (360 degrees)	W	
<b>Ceiling Mount Sensors - MicroSet Self-Adjusting (Line Voltage)</b>				
	Passive Infrared Technology			
	OAC-P-1500-DMV	MicroSet PIR, 1500 sq. ft. (360 degrees) with daylight sensor, dual relay, 120-347 VAC 50/60Hz	W	
	OAC-P-1500-MV	MicroSet PIR, 1500 sq. ft. (360 degrees) with daylight sensor, single load, 120-347 VAC 50/60Hz	W	
	OAC-P-0500-DMV	MicroSet PIR, 500 sq. ft. (360 degrees) with daylight sensor, dual relay, 120-347 VAC 50/60Hz	W	
	OAC-P-0500-MV	MicroSet PIR, 500 sq. ft. (360 degrees) with daylight sensor, single load, 120-347 VAC 50/60Hz	W	

How to Order:

Specifying and ordering the new Greengate Ceiling Sensors is fast and easy. Our descriptive catalog numbering structure allows you to quickly look at the catalog number and determine what to order.



Additional Greengate Occupancy Sensors

Throughout a commercial application, there are numerous spaces requiring a different lighting control solution to maximize energy savings. Cooper Controls offers a comprehensive offering of occupancy sensor solutions for almost any application.

Wall Switch Occupancy and Vacancy Sensors



OSW-P-1001-MV-W    ONW-D-1001-DMV-W

Ceiling and Wall Mounted Occupancy Sensors



OMR-P-1200R    OAWC-DT-120W-R

Highbay and Specialty Use Area Sensors



OEF-P-2MH0-MV-S    OXC-P-2MH0-R

Switchpacks



SP20-MV    SPD20-MV-NO

Timer Switches



TSW-MV-W

# Additional Services and Support

## Cooper Controls offers complete occupancy sensor layout services.

To streamline your building design process, occupancy sensor layout services are available, allowing you to focus your valuable time elsewhere.

Simply email us your reflected ceiling plan and within 3-5 business days, we will return a completed layout and a guaranteed bill of material.

### The program includes:

- Occupancy sensor layouts on CAD drawings along with a complete bill of materials.
- 3 to 5 business days turnaround time.
- Email notification(s) of receipt of layout request.
- Guaranteed sensor layout coverage performance.

Send an email including the DWG file (AutoCAD preferred), PDF or TIF file (10MB maximum file size) to: [sensorlayouts@cooperindustries.com](mailto:sensorlayouts@cooperindustries.com) to take advantage of this service today.



## Online Support

With the ever-increasing use of the Internet as a communication tool, Cooper Controls has created a comprehensive website that enables customers to access information effectively.

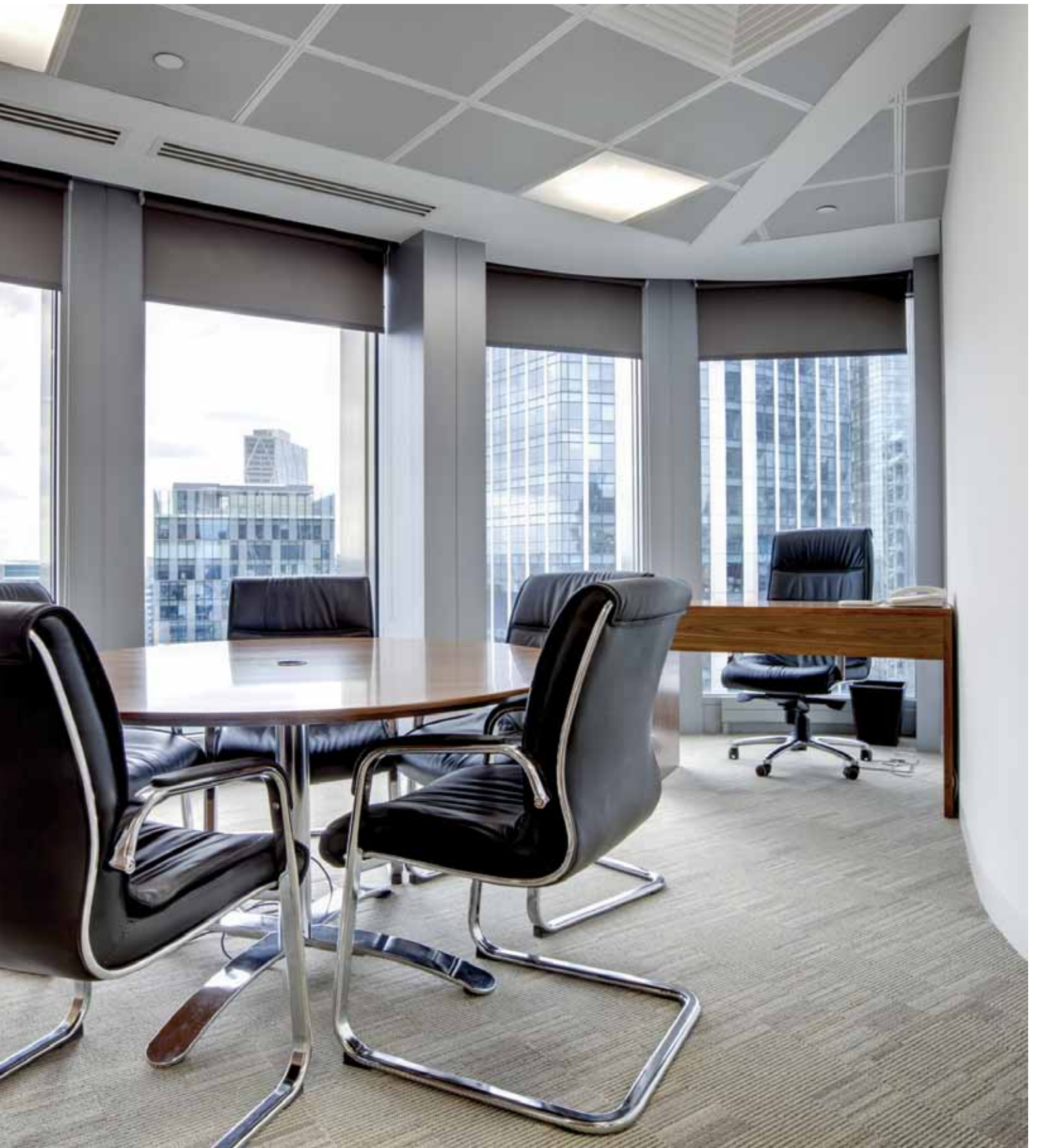
The website includes general product information, where to purchase, the latest news, and contact information. In addition, product specific information is available for download including:

- Spec sheets
- Installation instructions
- Technical specifications
- Coverage and wiring diagrams
- Sales brochures and guides

Visit us at: [www.coopercontrol.com](http://www.coopercontrol.com)

The screenshot shows the Cooper Controls website homepage. At the top, there is a navigation bar with the company logo and various menu items. A search bar is located in the top right corner. The main content area features a large banner image of a modern building interior. Below the banner, there are several sections: 'Advanced Metering Solutions', 'AP Classroom Solution (APCS)', 'BIM Files', and 'Quick Links'. A 'Cooper Controls News' section is also visible at the bottom.





Using this paper versus standard paper produced the following environmental benefits.



25% PCR<sup>F</sup>

**Based on Environmental Defense Fund Paper Calculator**

	Number of Trees Saved	12
	Total Energy Saved—Million BTU's	7.9
	Greenhouse Gas Reduction—lbs of CO <sup>2</sup>	4391
	Gallons of Water Saved	4129
	Solid Waste Reduction—lbs of Waste	683
	Kilo-watt (kwh) Hours Saved	1702

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