RCL-CP Series
Installation Instructions

TRACE●LITE
BARRON
commercial & industrial lighting

IMPORTANT SAFEGUARDS
READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

When using electrical equipment, basic safety precautions should always be followed including the following:
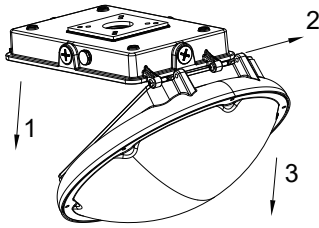
- **DISCONNECT AC POWER SUPPLY BEFORE SERVICING.**
- Installation and servicing of this equipment should be performed by qualified service personnel only.
- Ensure that the electrical wiring conforms to the National Electrical Code NEC® and local regulations if applicable.
- Do not mount near gas or electrical heaters.
- Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Any modification or use of non-original components will void the warranty and product liability.
- Do not use this equipment for other than intended use.

SAVE THESE INSTRUCTIONS!

Technical Support ■ (623) 580-8943 ■ technicalsupport@barronltg.com

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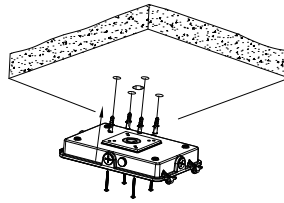**TRACE★LITE**
commercial & industrial lighting
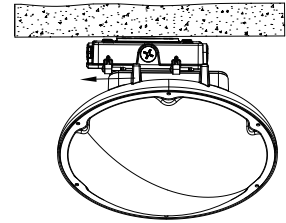
Surface Mount Installation

Fig. 1

Unlock the two buckles on the side of the fixture and open the fixture body. Remove the green ground wire that is connected to the bottom cover. Push out the lamp along the rotating axis and remove the bottom cover from the lamp. Unscrew the waterproof cover in the center. (Fig. 1)
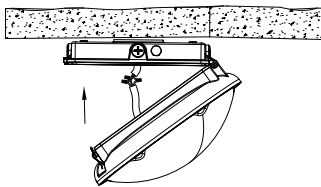
Fig. 2

Located and install appropriate anchors into the surface the fixture is being mounted. Guide the buildings power supply wires through the center hole of the bottom cover and attach bottom cover to building surface. (Fig. 2)
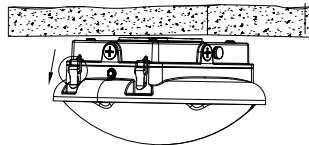
Fig. 3

Put the lamp body back onto the bottom cover. Connect the green ground wire to the ground wire terminal on the bottom cover. (Fig. 3)

Fig. 4

Make electrical connections. (Fig. 4); see **Electrical Connections** section.
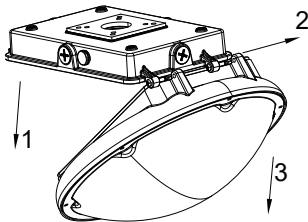
Fig. 5

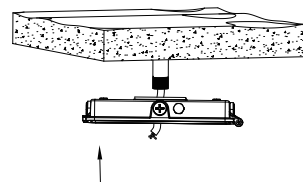Close the lamp body along the rotating axis and fasten the two side buckles. (Fig. 5)
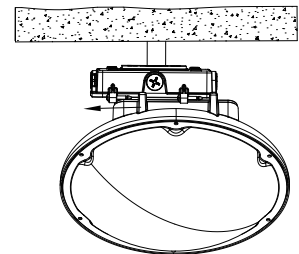
Pole Mount Installation

Fig. 7

Unlock the two buckles on the side of the fixture and open the fixture body. Remove the green ground wire that is connected to the bottom cover. Push out the lamp along the rotating axis and remove the bottom cover from the lamp. Unscrew the waterproof cover in the center. (Fig. 7)

Fig. 8

Guide the buildings power supply wires through the center hole of the bottom cover and thread the bottom cover onto the pole tightly. (Fig. 8)
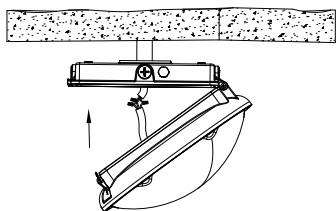
Fig. 9

Put the lamp body back onto the bottom cover. Connect the green ground wire to the ground wire terminal on the bottom cover. (Fig. 9)
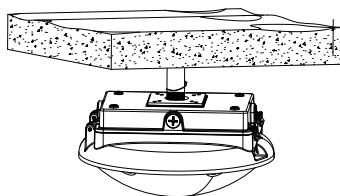
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Pole Mount Installation, Cont'd.

Fig. 10

Fig. 11

Make electrical connections. (Fig. 10); see **Electrical Connections** section.

Close the lamp body along the rotating axis and fasten the two side buckles. (Fig. 11)

Electrical Connections

Make electrical connections per the **Wiring Diagram**. (Fig. 12-14)

   a. Connect the line fixture lead to the black supply lead.
   b. Connect the common fixture lead to the white supply lead.
   c. Connect the ground lead from the service to the ground lead coming from the driver plate.
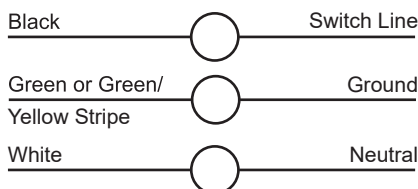
Fig. 12 - RCL-CP Wiring Diagram

Black	Switch Line
Green or Green/ Yellow Stripe	Ground
White	Neutral

Fig. 13 - RCL-CP with Motion Sensor Wiring Diagram

Black	Switch Line
Green or Green/ Yellow Stripe	Ground
White	Neutral
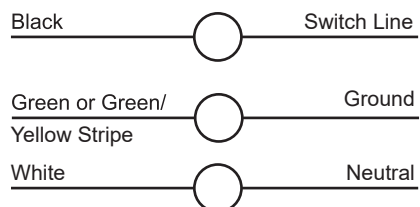
Fig. 14 - RCL-CP with Motion Sensor & Battery Backup Wiring Diagram

Red	Unswitched Line
Black	Switch Line
Green or Green/ Yellow Stripe	Ground
White	Neutral
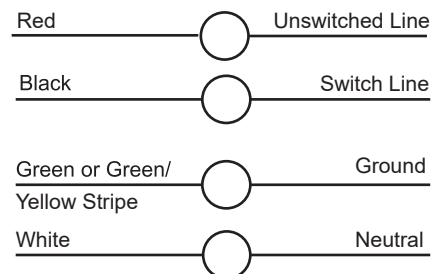
Troubleshooting

If the unit does not turn "ON".

1. Check incoming voltage to the LED driver. On the Switch/Un-switched line it must be a minimum of 120VAC and no greater than 277VAC.

2. Are all LEDs on the light engine "OFF"? If so, the LED driver may be defective. Using a voltmeter, check to see if the voltage is present at the output of the power supply. If low or no voltage is found, contact technical support.

3. If any individual LEDs are "OFF" the LED light engine may be defective. Please have the Trace-Lite catalog number of the fixture off the light engine available when you contact technical support.

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Battery Backup Information and Operation
1. Make sure battery is connected prior to closing fixture.

2. Battery requires up to 24 hours to fully charge after connecting to unswitched line power.

3. Battery backup has a momentary test button with a red LED indicator light.
   • Steady red indicator light ON: Indicates there is unswitched power to the battery backup and it is in charging mode.
   • Indicator light OFF: Battery backup is in discharging mode and there is no power to the unswitched line. Fixture LEDs illuminated by battery power.

4. Pressing and holding the momentary test button simulates the loss of power to the unswitched line. The solid red indicator light should go OFF and the fixture LEDs should illuminate under battery power. Releasing the test button resumes normal operation.

Motion Sensor and Remote Information and Operation
1. Motion sensor operates by using microwaves to detect motion and a photocell to measure ambient light levels.

2. Default operation of the motion sensor is:
   • Motion sensor has a 10 second warm up at 100% power on initial power up.
   • Brightness is set to 100%
   • Motion sensitivity is set to 100%
   • Hold time is set to 5 minutes
   • Daylight sensor is set to OFF
   • Stand-by Dimming level is set to 30%
   • Stand-by Dimming time is set to 60 minutes

3. Optional remote control provides additional features and overrides default motion sensor operation. Remote control sends motion sensor commands via infrared (IR) signal. The motion sensor will beep on receipt of commands from the remote. The motion sensor has an internal memory that remembers the last programming from the remote, even after power loss. Remote control part #TL-MSSW-REMOTE. Remote control not required if default settings are acceptable.

4. Full motion sensor and optional remote instructions are included in the box or available on the **Barron Lighting Group** website.

5. Sensor can be disabled by disconnecting the low voltage gray and purple wires from the sensor; cap unused wires.

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TL-MSSW-REMOTE Remote Functions

BRIGHTNESS
• High end trim turning function (to set the output level of connected lighting during occupancy).

SENSITIVITY
• To set the occupancy sensing sensitivity of the sensor.

HOLD TIME
• The time that the sensor will turn off (if you choose stand-by; level is 0) or dim the light to a low level after area is vacated.

DAYLIGHT SENSOR
• Represents various thresholds of natural light level for the sensor.
  👁 • To select the current surrounding lux value as the daylight threshold. This feature enables the fixture to function well in any real application circumstances.
  ☼ • The daylight sensor stops working, and all motion detected could turn on the lighting fixture, no matter how bright the natural light is.
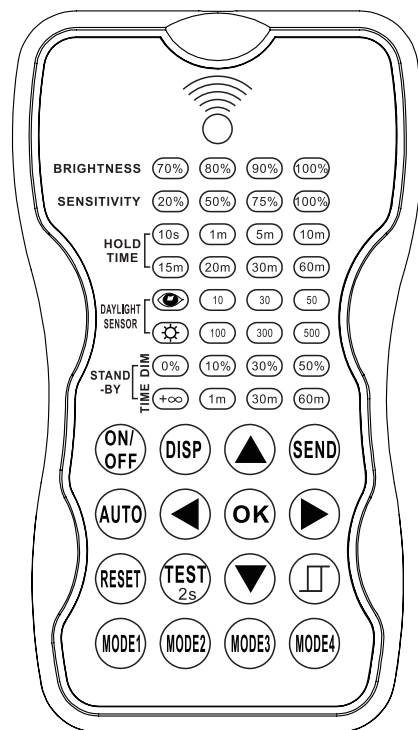
STAND-BY DIM
• To set the output level of connected lighting during vacancy. The sensor will regulate the lighting output at the set level. Setting the STAND-BY DIM level at 0 means light is fully off during vacancy.

STAND-BY TIME
• Represents the time that the sensor will keep the light at a low dim level after the HOLD TIME has elapsed.

BUTTON OPERATION

Button	Description
ON/OFF	Press this button and the light goes to permanent on or permanent off mode and the sensor is disabled. (MUST press AUTO button to quit this mode for setting)
DISP	Display the current/latest setting parameters in LED indicators (the LED indicators will be on to show the setting parameters).
RESET	Press this button and all settings go back to settings of dip switch in sensor.
▲▼	Enter in the setting condition, the parameter LEDs of the remote will flash to be selected. Navigate UP and DOWN to choose selected parameters using LED indicators.
OK	Confirm the selected parameters.
SEND	Press this button to upload the current parameters to the sensor(s). The LED light will flash on/off to confirm sensor connection successful.
MODE1 MODE2 MODE3 MODE4	4 Scene modes with preset parameters which are available to be changed and saved in modes.

Button	Description
AUTO	Press this button and the sensor will begin to function. All settings will remain the same as the latest status before the light is switched on/off.
TEST 2s	This button is for testing sensitivity levels only. After you choose the sensitivity threshold, press this button and the sensor will go into test mode automatically (hold time is only 2s). Meanwhile the stand-by period and daylight sensor are disabled. (Press AUTO button to quit from this mode.)
◀▶	Navigate to LEFT and RIGHT for choose selected parameters using LED indicators.
⊐	Press this button to open and close the smart daylight sensor. Press ▲ or ▼ and select the setting condition. The LEDs of the chosen parameter will flash on the remote.

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Settings

The settings content contains all available settings and parameters for the remote sensors. It allows you to change the available control, parameters and operation of the sensor from the factory defaults or current parameters.

Changing multiple settings of sensor(s)

1. Press the (DISP) button, the remote control LEDs will show the latest parameters that are set.
   NOTE: If you push the (ON/OFF) button before, you must push the (AUTO) button to unlock the sensor.
2. Press (▲) or (▼) to enter in the setting condition, the parameter LEDs of the remote will flash to be selected. Navigate to the desired setting by pressing (▲)(▼)(◀)(▶) to select the new parameters.
3. Press (OK) to confirm all settings and to save.
4. Aim at the target sensor and press (SEND) to upload the new parameters. When the sensor connects the light will flash on/off to confirm.
   NOTE: If you push the (DISP) button, the remote LED indicators will show the latest parameters which were sent to the sensors.

Changing multiple settings of sensor(s) with smart photocell sensor

1. Press the (DISP) button, the remote control LEDs will show the latest parameters that are set.
   NOTE: If you push the (ON/OFF) button before, you must push the (AUTO) button to unlock the sensor.
2. Press (▲) or (▼) to enter in the setting condition, the parameter LEDs of the remote will flash to be selected. Navigate to the desired setting by pressing (▲)(▼)(◀)(▶) to select the new parameters.
3. Press the (⊓) button, 2 LED indicators will flash in daylight sensor settings, select daylight (10) (30) (50) as a setpoint for turning on lights automatically. Select daylight (100) (300) (500) as setpoint for turning off lights automatically.
4. Press (OK) to confirm all settings and to save.
5. Aim at the target sensor and press (SEND) to upload the new parameters. When the sensor connects the light will flash on/off to confirm.
   NOTE: If you push the (DISP) button, the remote LED indicators will show the latest parameters which were sent to the sensors.

NOTE: (⊓) is disabled by default

1. Open or close the smart daylight sensor by pushing the (⊓) button when the remote control is in the setting condition.
2. When the smart daylight sensor is open, 2 LED indicators will flash in the daylight sensor setting. Select daylight (10) (30) (50) as the setpoint for turning on lights automatically. Select daylight (100) (300) (500) as setpoint for turning off lights automatically. When the smart daylight sensor is closed, 1 LED indicator will flash in the daylight sensor setting for the chosen daylight sensor threshold.
3. When the smart daylight sensor is open, the standby time is only (+∞).
4. See **Daylight Sensor Function.**

Corridor Function

This function inside the motion sensor achieves tri-level control for some areas which require a light change notice before switching off. The sensor offers three levels of light (100% to dimmed light, when natural light is insufficient, to off), two periods of selectable waiting time (motion hold-time and stand-by period), selectable daylight threshold and freedom of detection area.
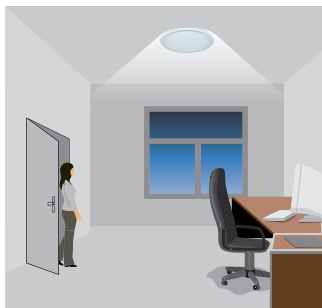
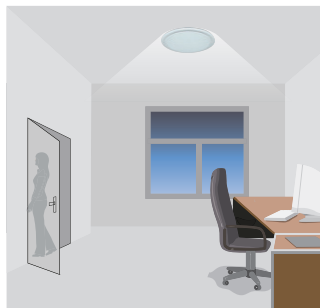# RCL-CP Series
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Corridor Function, Cont'd.
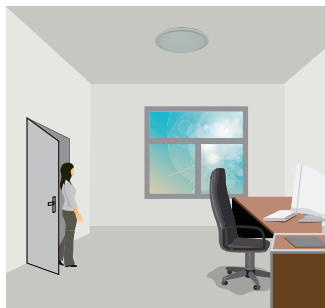
With sufficient natural light, the light does not switch on when presence is detected.

With insufficient natural light, the sensor switches on the light automatically when presence is detected.
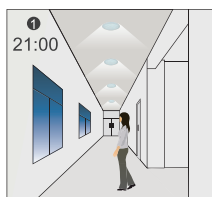
After hold-time, the light dims to stand-by level if the surrounding natural light is below the daylight threshold.
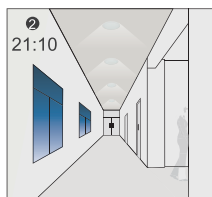
Light switches off automatically after the stand-by period elapses.
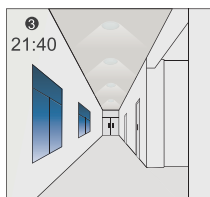
Daylight Sensor Function

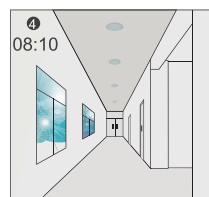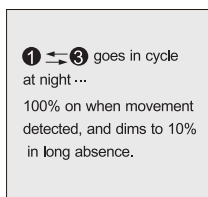Open the daylight sensor by pushing the ⟨⏚⟩ button when the remote control is in setting condition.

❶ 21:00 The light switches on at 100% when there is movement detected.

❷ 21:10 The light dims to stand-by level after the hold-time.

❸ 21:40 The light remains in dimming level at night.

❶ ⇄ ❸ goes in cycle at night ···
100% on when movement detected, and dims to 10% in long absence.

❹ 08:10 When the natural light level exceeds setpoint off, the light will turn off even if the space is occupied.

❺ 17:40 The light automatically turns on at 10% when natural light is insufficient (no motion).

Settings in this demonstration:
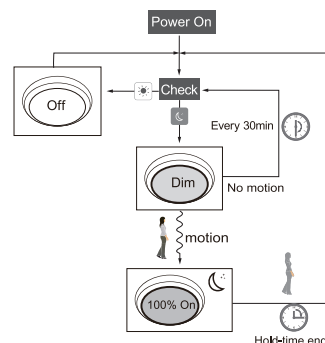Hold-time: 30 min
Setpoint to light on: 50 lux
Setpoint to light off: 300 lux
Stand-by Dim: 10%
Stand-by period: +∞
(When the smart photocell sensor is open, the stand-by time is only +∞

Power On
Off — Check
Every 30min
Dim — No motion
motion
100% On
Hold-time ends

Corridor Function VS Daylight Sensor Function

1. In the corridor function, the light turns on if the natural light level is lower than the daylight sensor setting and there is occupancy. In smart daylight sensor function, the lights turn on if the natural light level is lower than the daylight setpoint even if vacant.
2. In corridor function, the lights turn off after the room is vacant and the hold-time has elapsed. In smart daylight sensor function, the lights turn off if the natural light level is higher than the daylight setpoint even if there is occupancy.
3. In smart daylight sensor function, the natural light level must be higher or lower than the daylight setpoint for at least 1 minute to turn off/on the lights automatically.

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About Reset and Mode (1, 2, 3, 4)
The remote control comes with 4 scene MODES which are not default. You may make desired parameters and save as the new MODE (1, 2, 3, 4) to configure the installed sensors.

RESET:
- All settings go back to the settings of the DIP switch in the sensor.

Scene MODES (1, 2, 3, 4)

Application	Scene Options	Brightness	Detection Area	Hold Time	Stand-by Time	Stand-by Dim Level	Daylight Sensor
Indoor	Mode 1	100%	75%	5min	30min	30%	⚙
Indoor	Mode 2	100%	75%	1min	+∞	30%	⚙
Indoor	Mode 3	100%	75%	5min	30min	30%	30LUX
Outdoor	Mode 4	100%	75%	1min	+∞	30%	(30LUX/300LUX)

Change the MODES:
1. Press the (MODE1) / (MODE2) / (MODE3) / (MODE4) buttons and the remote control LED indicators will show the existing parameters.
2. Press the (▲)(▼)(◀)(▶) buttons to select the new parameters.
3. Press (OK) to confirm all parameters and save in that mode.

UPLOAD
The upload function allows you to configure the sensor with all parameter in one operation. You may select the current setting parameters or the MODE for uploading. Current setting parameters or the MODE are displayed on the remote control.

Upload the current parameters to sensor(s) and duplicate the sensor parameters from one to another:
1. Press the (DISP) button or (MODE1)/ (MODE2) / (MODE3) / (MODE4) buttons, all parameters will be displayed on the remote control.
   NOTE: Check if all parameters are correct, if not, change them to the correct ones.
2. Aim at the sensor and press the (SEND) button, the light that the sensor is connect to will flash on/off to confirm.
   NOTE: If another sensor needs the same parameters, aim at the next sensor and press the (SEND) button.