

## **Retrofit Polaris LED Installation Guide**

### **WARNING: TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY, OBSERVE THE FOLLOWING:**

- A. Use these fixtures only in the manner intended by the manufacturer. If you have any questions, contact SCHOTT Gemtron @ 1-800-326-2717
- B. Before servicing or cleaning unit, switch power off at the service panel.

### **FOR YOUR SAFTY**

Read and observe all CAUTIONS and WARNINGS shown throughout this guide.

### **PREPARE ELECTRICAL WIRING**

Electrical Requirements – This lighting system must be supplied with 120V, 60Hz and connected to an individual properly grounded circuit. Wiring must be 2 wires with ground. All wiring and connections must meet applicable local and NEC requirements.

### **Ground Instructions-Cable Direct**

The lighting system must be connected to a grounded metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and be connected to the equipment grounding terminal or lead on the lighting fixture.

### **CAUTION**

The Polaris LED luminary **MUST** be installed with the LED POWER SUPPLY specified by SCHOTT Gemtron for this lighting system.

### **Remove Existing Fluorescent Lighting – Prepare for mounting light fixture mounting clips.**

- Shut off the circuit breaker for the lighting circuit of the case where the LED light fixtures are being installed.
- Turn the light switch to “off”. The switch is located inside the case on the door mullion.
- Remove appropriate panels in order to access the electrical raceway and remove raceway cover.
- Use a Voltmeter to check that there is no voltage in the ballasts.
- Remove lenses covering the fluorescent tubes.
- Remove the fluorescent tubes
- Remove the tombstones from the mounting clips. Discard tombstones by cutting the wires as close to the tombstones as possible. Leave existing fluorescent ballast wires protruding from the mullion for connection to the LED light fixtures.
- Use an appropriate size drill bit to remove rivets or an appropriate tool to remove screws holding the upper tombstone mounting clip in place. Remove and discard all upper clips.
- The lower tombstone clips can be left in place on all center mullions. This will help to locate and hold the new LED fixture.

- The lower clips should be removed from all end mullions. Use an appropriate size drill bit or tool to remove the rivets or screws holding the lower tombstone mounting clips in place.
- Remove the light reflectors from the end mullions. The reflector is a sheet metal part, painted white that runs the length of the end mullion. It will interfere with the installation if not removed. Use an appropriate size drill bit to remove the rivets holding the tombstone clips and reflectors in place. Wear gloves to prevent injury when handling the reflector. Use a flat blade screw driver to pry the reflector from its mounting if necessary.
- Remove the ballast from the electrical raceway.

#### Install the Polaris LED Lighting System

- Mount the LED power supply in the electrical raceway near where the previous fluorescent ballast was located.
- The power supply(Advance 100 Watt Model # LEDINTA-0024V-41FO) has 120V to 277V 50/60Hz input and 24V DC output.
- Using the appropriate wiring diagram connect the original load and neutral wires to the LED power supply input wires (black and white wires) using approved connection method.
- Mount one (1) DC module per door frame in close proximity to the LED power supply.
- Install LED luminary into space where previous fluorescent tube was with the wires exiting the top of the luminary. Fasten each luminary with an appropriate size screw at the top and bottom, or by using a minimum of two bolts thru the back of the luminary.
- Connect the LED Luminary output wires to the wires that previously went to the upper fluorescent tombstones, using approved connectors for low temperature usage. Note: Polaris LED light fixtures are NOT polarity sensitive.
- Additional conductors may be needed to connect the power supply to the existing wiring in the raceway.
- The LED power supply case is grounded. Attach the LED power supply to a ground point in the refrigerated case either directly with a screw, or by using a green wire to attach to a remote ground point.
- Connect remaining wires by following the wiring diagram provided from the LED luminary to the DC module.
- Connect the DC module to the LED power supply by following the wiring diagram provided.
- Double check your wiring methods and be sure that all wires are properly connected with suitable connectors.
- Turn the lights back on to the case and inspect all lights to insure that they are functioning properly.
- Reinstall all access panels and return the case to its original appearance prior to starting this process.

#### Contact Information

SCHOTT Gemtron Corporation  
 2840 Nebo Road  
 Madisonville, KY 42431  
 Toll Free: 800.326.2717  
 Fax: 270.326.3624  
[www.gemtrondoors.com](http://www.gemtrondoors.com)

## CURRENT REGULATOR TROUBLESHOOTING GUIDE

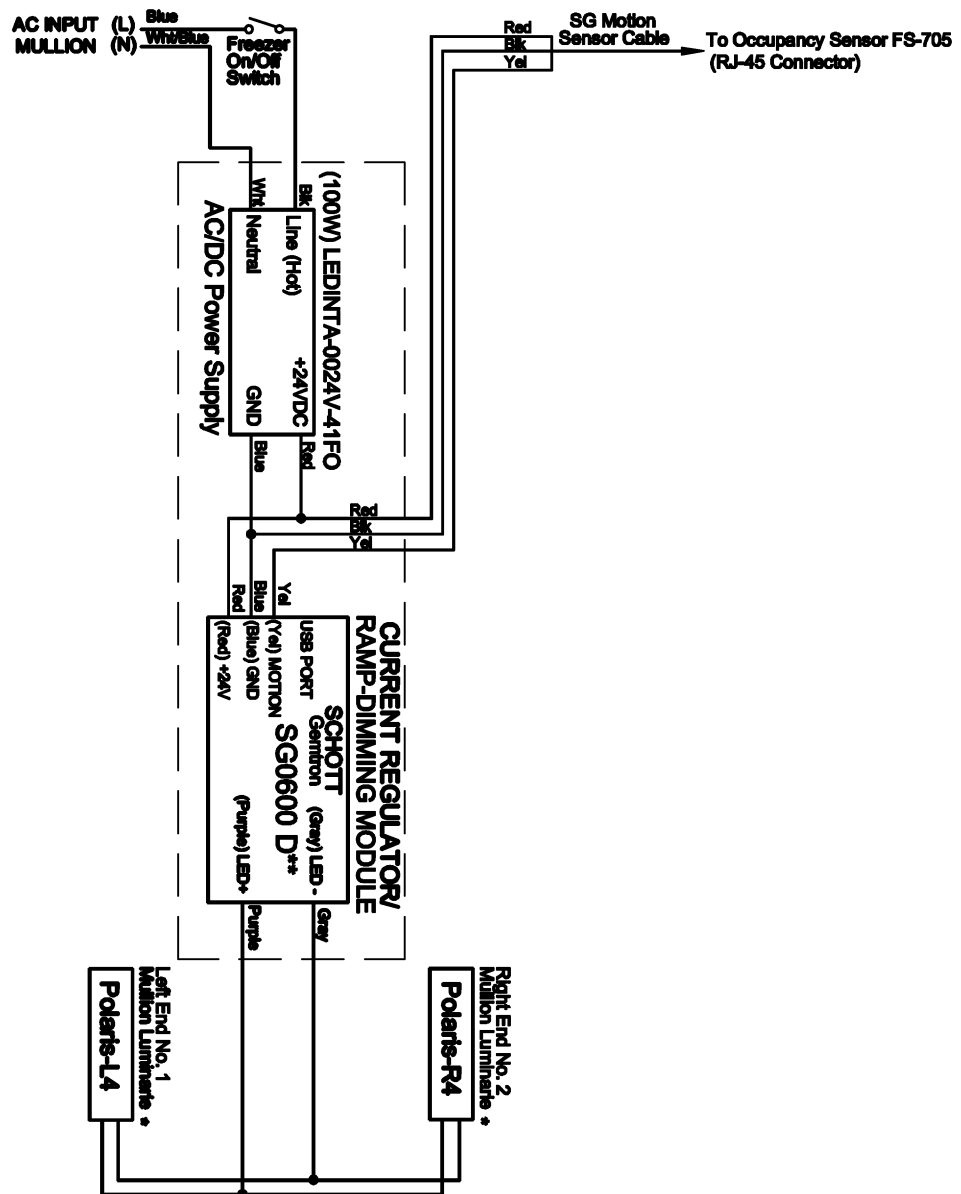
LED COLOR:	PROBLEM:	POSSIBLE SOLUTION:
NO COLOR	NO +24VDC POWER	CHECK (BLUE) AND (RED) WIRES BETWEEN POWER SUPPLY AND THE CURRENT REGULATOR INPUT FOR CORRECT WIRING. MEASURE VOLTAGE AT (BLUE) AND (RED) WIRES ON CURRENT REGULATOR TO MAKE SURE THAT +24VDC IS PRESENT. IF NOT PRESENT, REPLACE POWER SUPPLY.
BLINKING GREEN / RED	FACTORY TEST MODE	CURRENT REGULATOR IS IN FACTORY TEST MODE. PROGRAM THE APPROPRIATE CURRENT SETTING INTO THE REGULATOR.
RED	SHORT ON OUTPUT	CHECK (GREY) AND (PURPLE) WIRES ON THE REGULATOR OUTPUT TO MAKE SURE THAT THEY ARE NOT SHORTED TOGETHER. CHECK WIRING TO THE LIGHT STICK FOR A SHORT. REPLACE CURRENT REGULATOR IF NO SHORT IS FOUND.
BLINKING RED	LOW INPUT VOLTAGE	MEASURE VOLTAGE AT (BLUE) AND (RED) WIRES ON THE CURRENT REGULATOR INPUT TO MAKE SURE THAT +24VDC IS PRESENT. IF VOLTAGE IS LOWER THAN +23.0 VDC, REPLACE POWER SUPPLY.
BLINKING GREEN	UNIT OK, NO MOTION	THE CURRENT REGULATOR IS OK. <b>MOTION IS NOT BEING DETECTED.</b> IF YOU THINK THAT MOTION SHOULD BE DETECTED, MAKE SURE THE (YELLOW) INPUT WIRE ON THE CURRENT REGULATOR IS CONNECTED TO THE MOTION SENSOR, AND ALL OTHER WIRES FROM THE MOTION SENSOR ARE CONNECTED TO THE POWER SUPPLY. IF EVERYTHING LOOKS OK, REPLACE MOTION SENSOR.
GREEN	UNIT OK, MOTION	THE CURRENT REGULATOR IS OK. <b>MOTION IS BEING DETECTED.</b> IF YOU THINK THAT MOTION SHOULD NOT BE DETECTED, MAKE SURE THE (YELLOW) INPUT WIRE ON THE CURRENT REGULATOR IS CONNECTED TO THE MOTION SENSOR, AND ALL OTHER WIRES FROM THE MOTION SENSOR ARE CONNECTED TO THE POWER SUPPLY. IF EVERYTHING LOOKS OK, REPLACE MOTION SENSOR.

# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 1-Door 1-100W PS

### Ramp-Dimming



\* The power inputs of the Polaris Series luminaire are polarity independent. These conductors may be connected to either LED+ (purple) OR LED- (gray) on the SC Current Regulator Module.

\*\* The SG Current Regulator Module MUST be used in all applications.  
Failure to use may cause damage to the power supply and the Polaris luminaire.

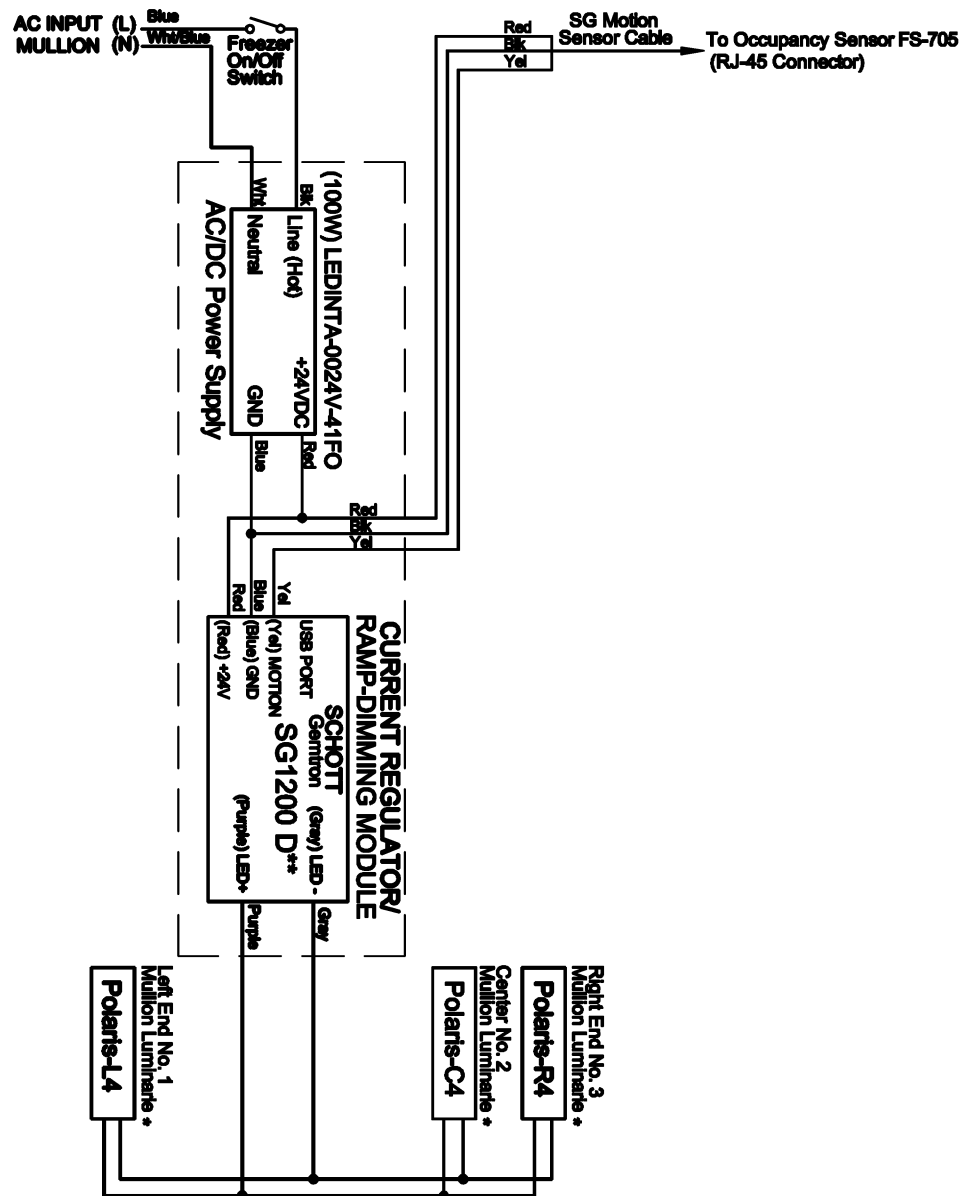
\*\*\* To convert the SC Current Regulator/Dimming Module to Non-Dimming, connect the motion input (yellow wire) to the +24V (red wire) input line.

# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 2-Door 1-100W PS

### Ramp-Dimming



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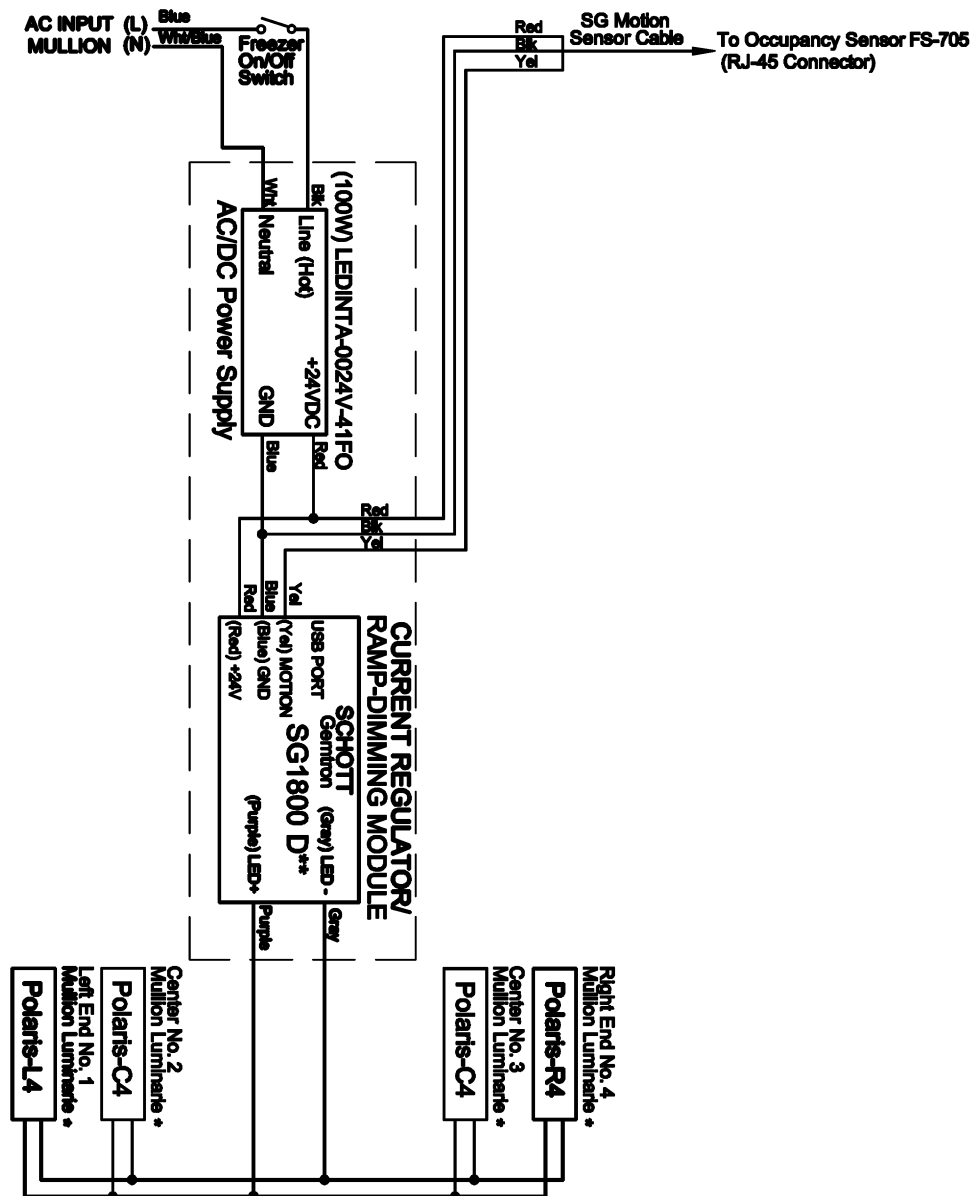
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 3-Door 1-100W PS

### Ramp-Dimming



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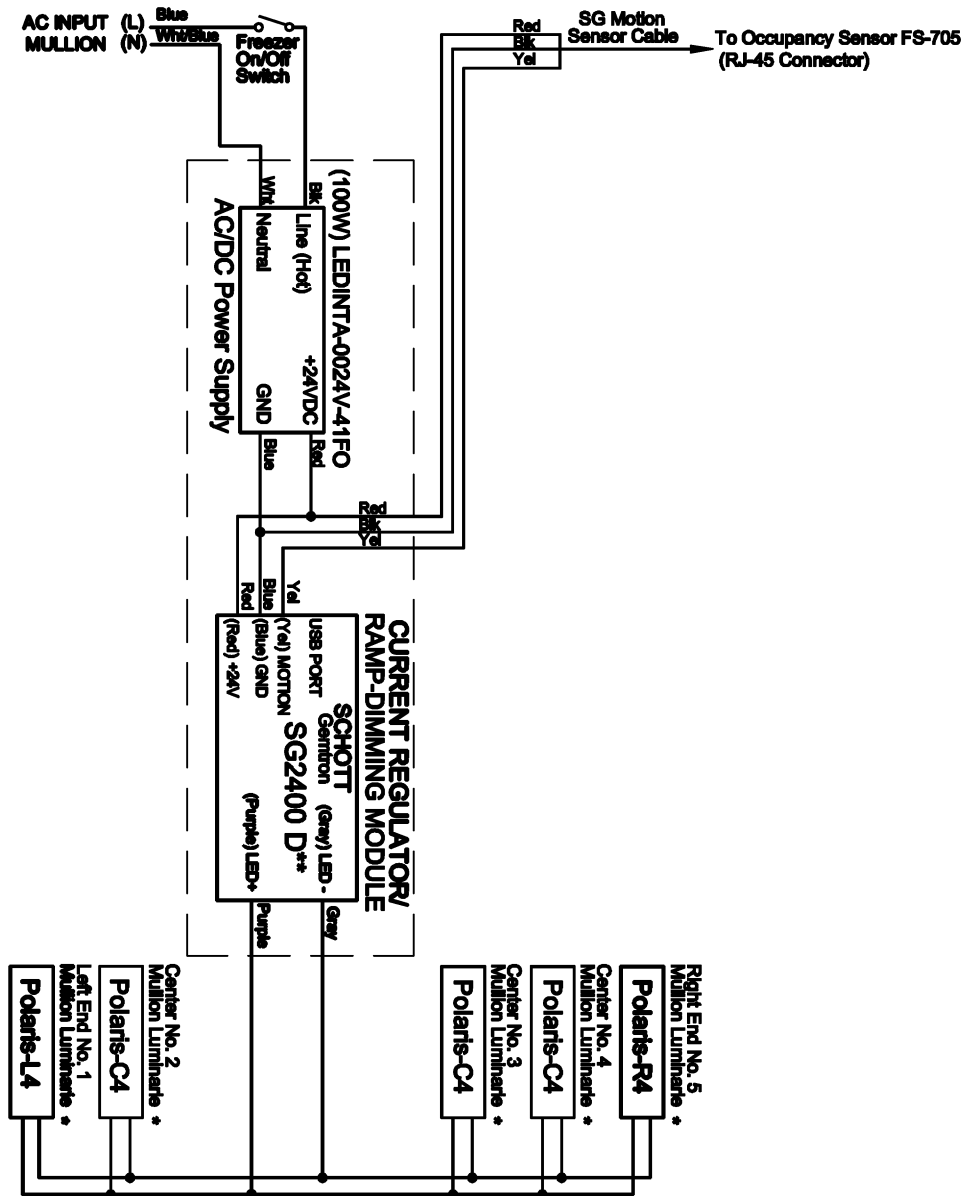
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 4-Door 1-100W PS

### Ramp-Dimming



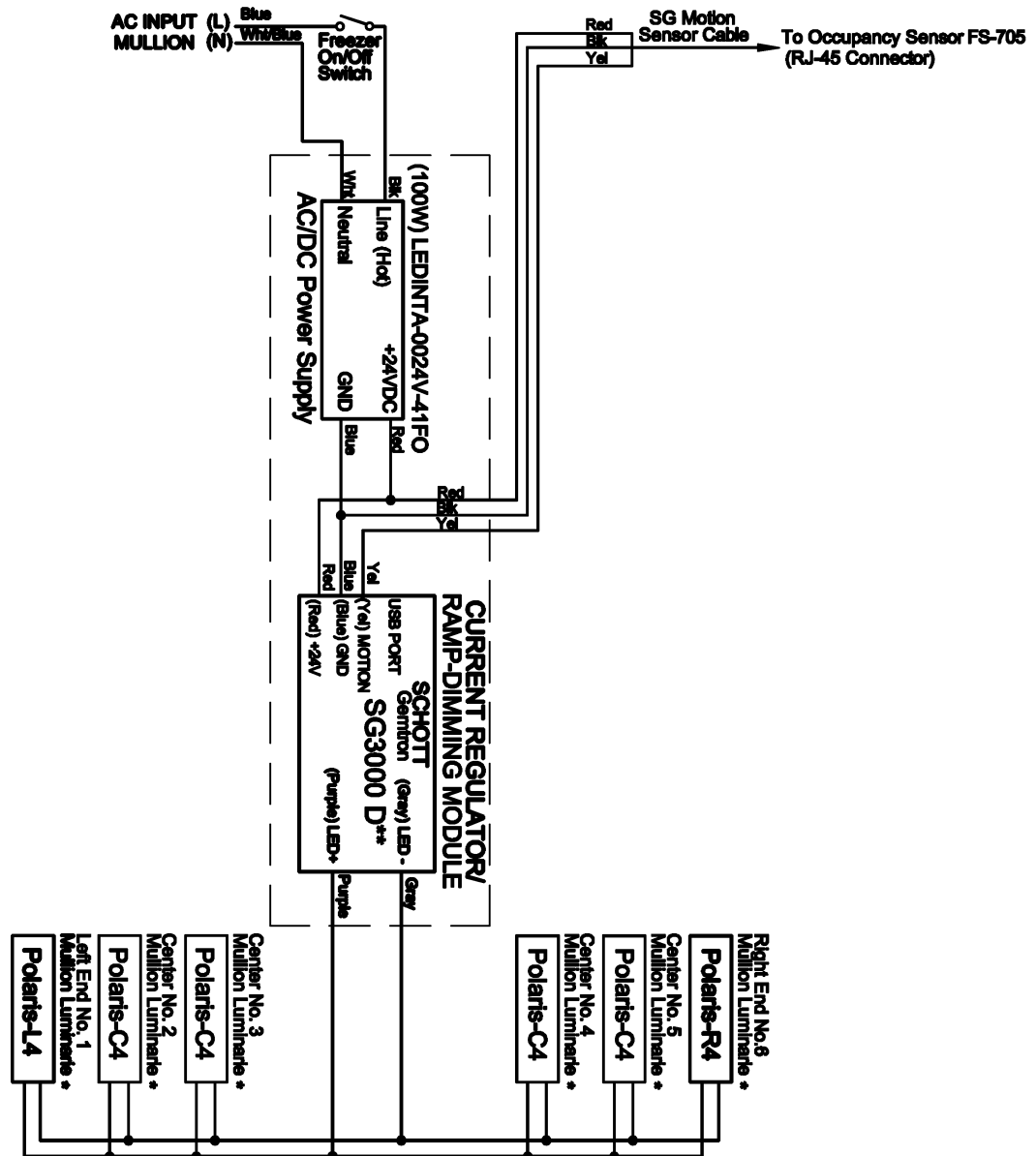
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 5-Door 1-100W PS

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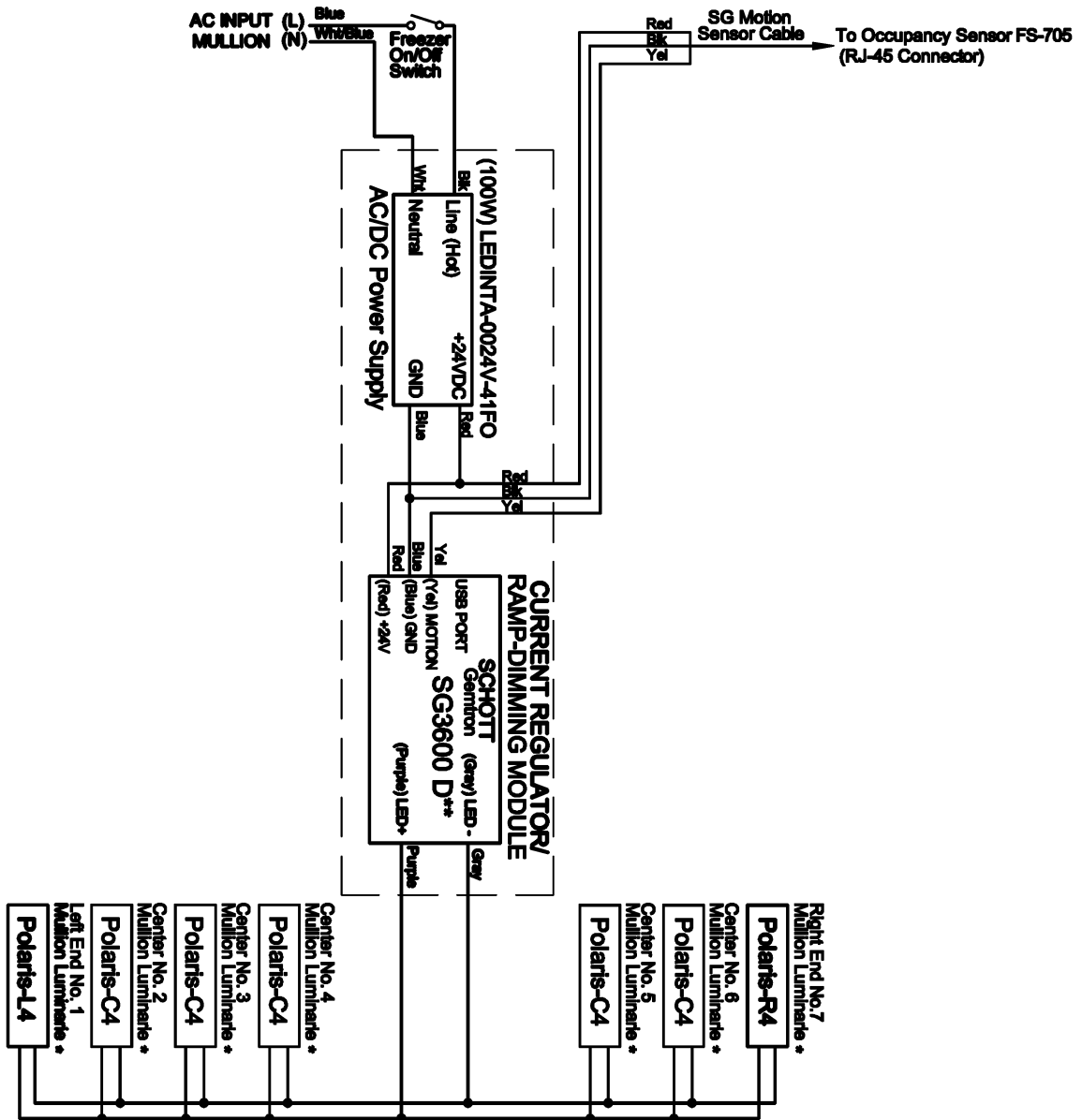
\*\* The SG Current Regulator Module **MUST** be used in all applications.  
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 4ft. Luminaire

### Wiring Diagram 6-Door 1-100W PS Ramp-Dimming



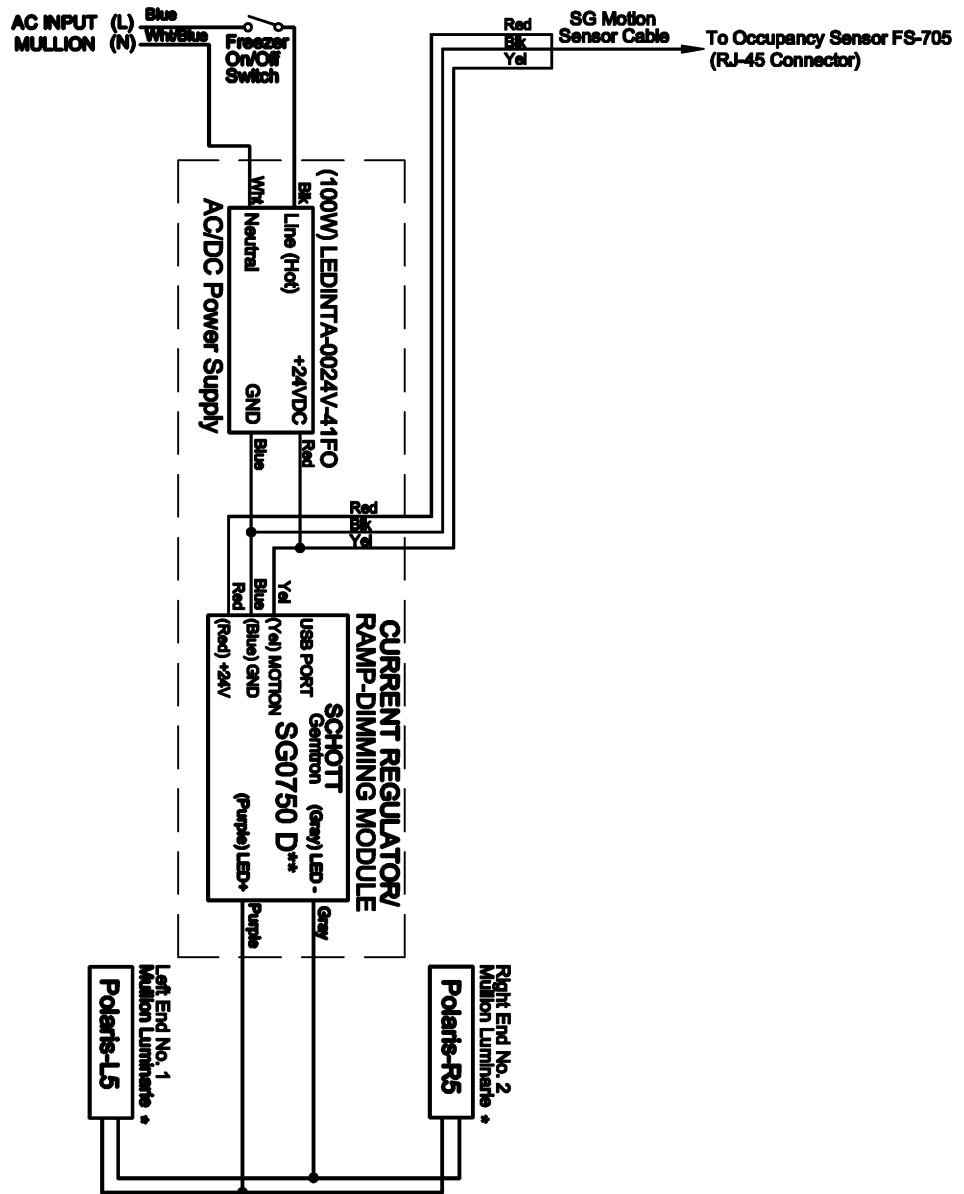
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 5ft. Luminaire

### Wiring Diagram 1-Door 1-100W PS

### Ramp-Dimming



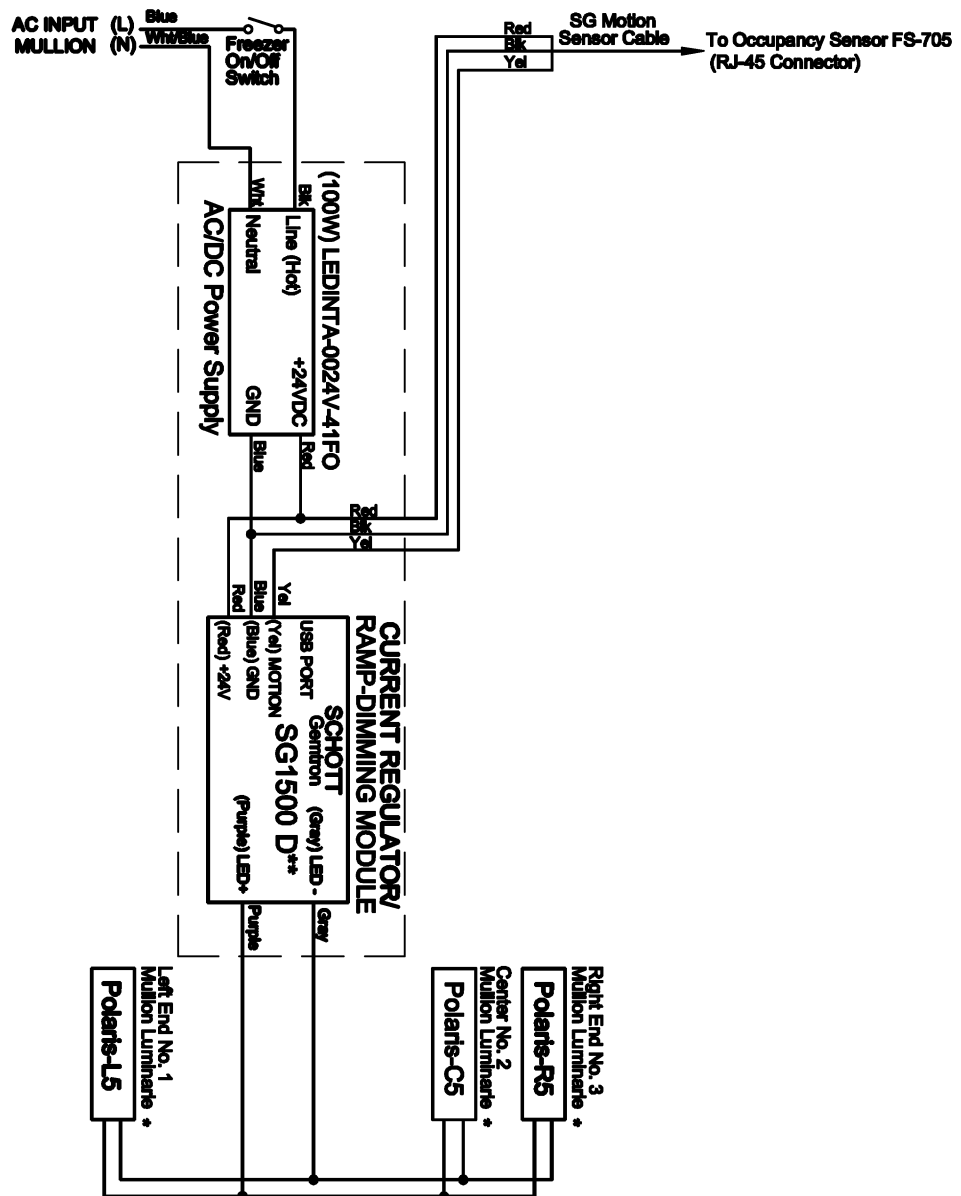
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# SCHOTT Gemtron Polaris® Luminaire Installation

## 5ft. Luminaire

### Wiring Diagram 2-Door 1-100W PS

### Ramp-Dimming



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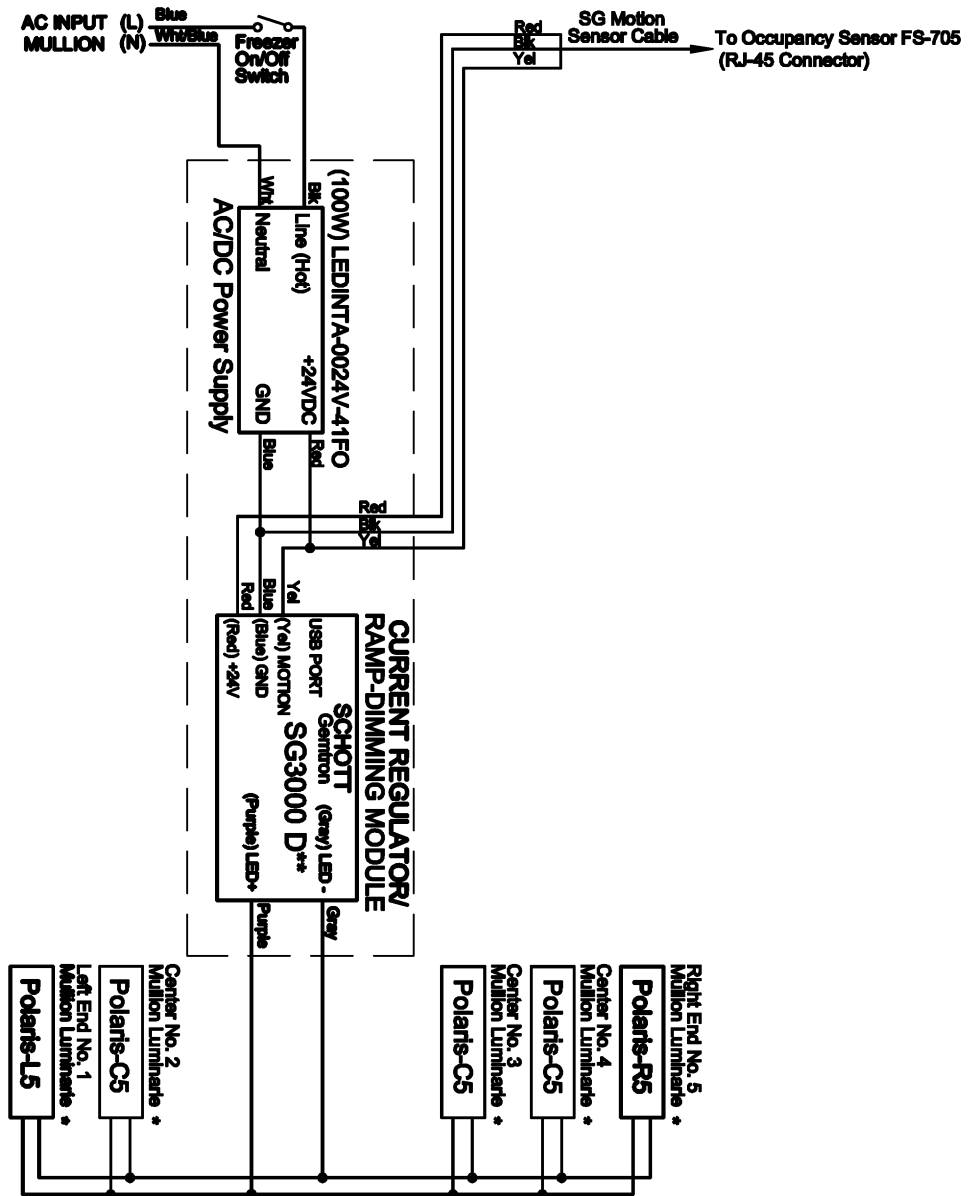


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## 5ft. Luminaire

### Wiring Diagram 4-Door 1-100W PS

### Ramp-Dimming



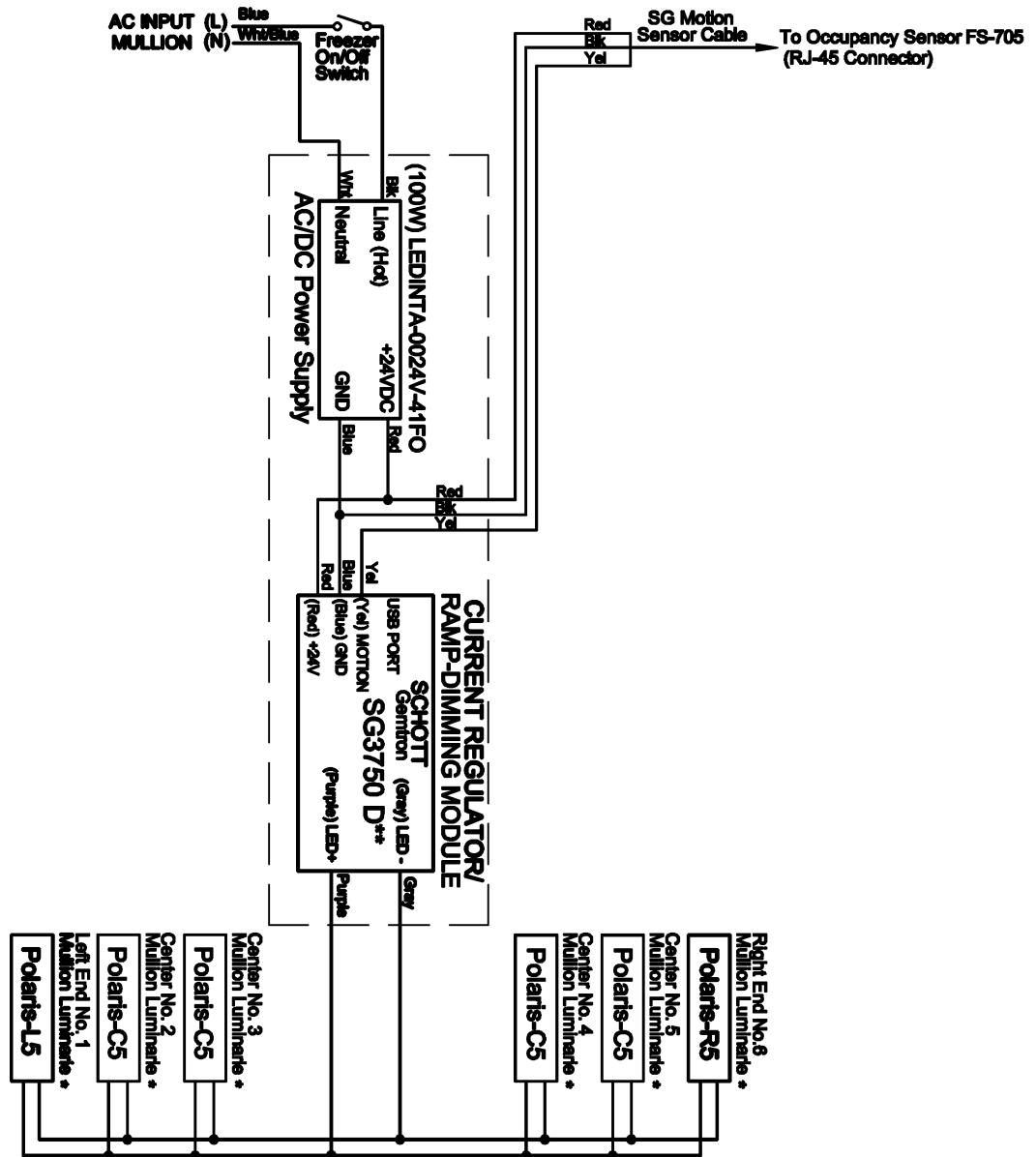
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## 5ft. Luminaire

### Wiring Diagram 5-Door 1-100W PS

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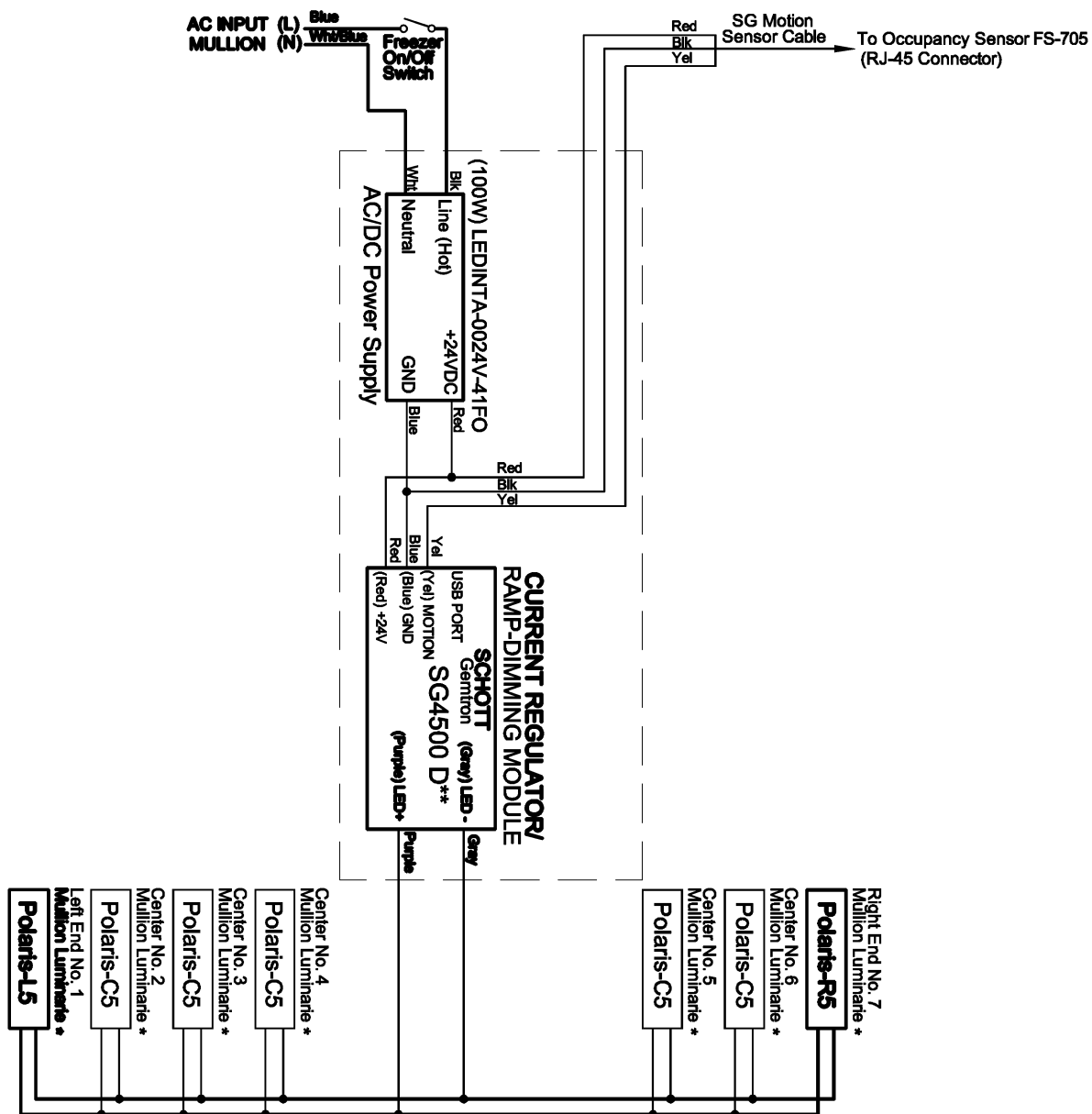
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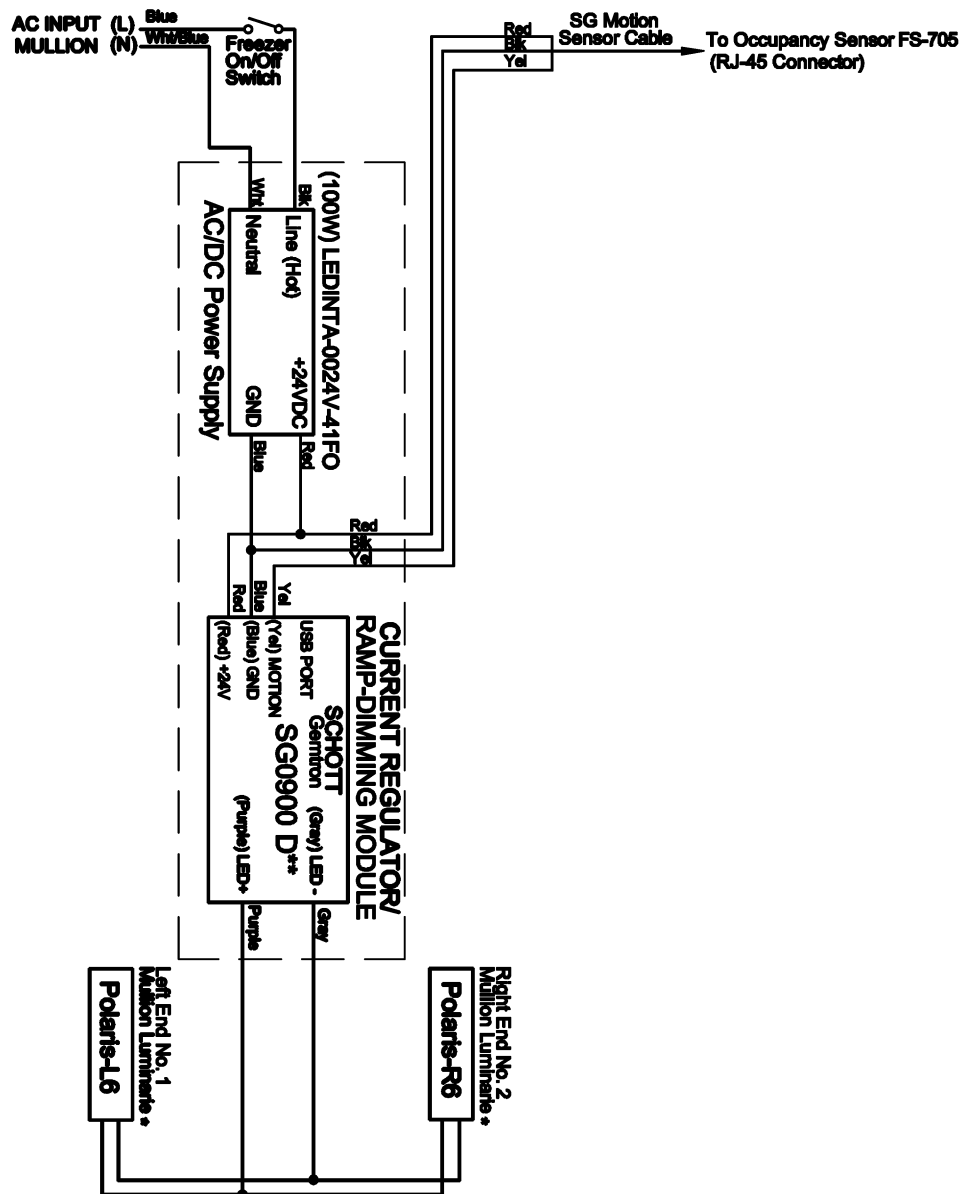
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### Wiring Diagram 1-Door 1-100W PS

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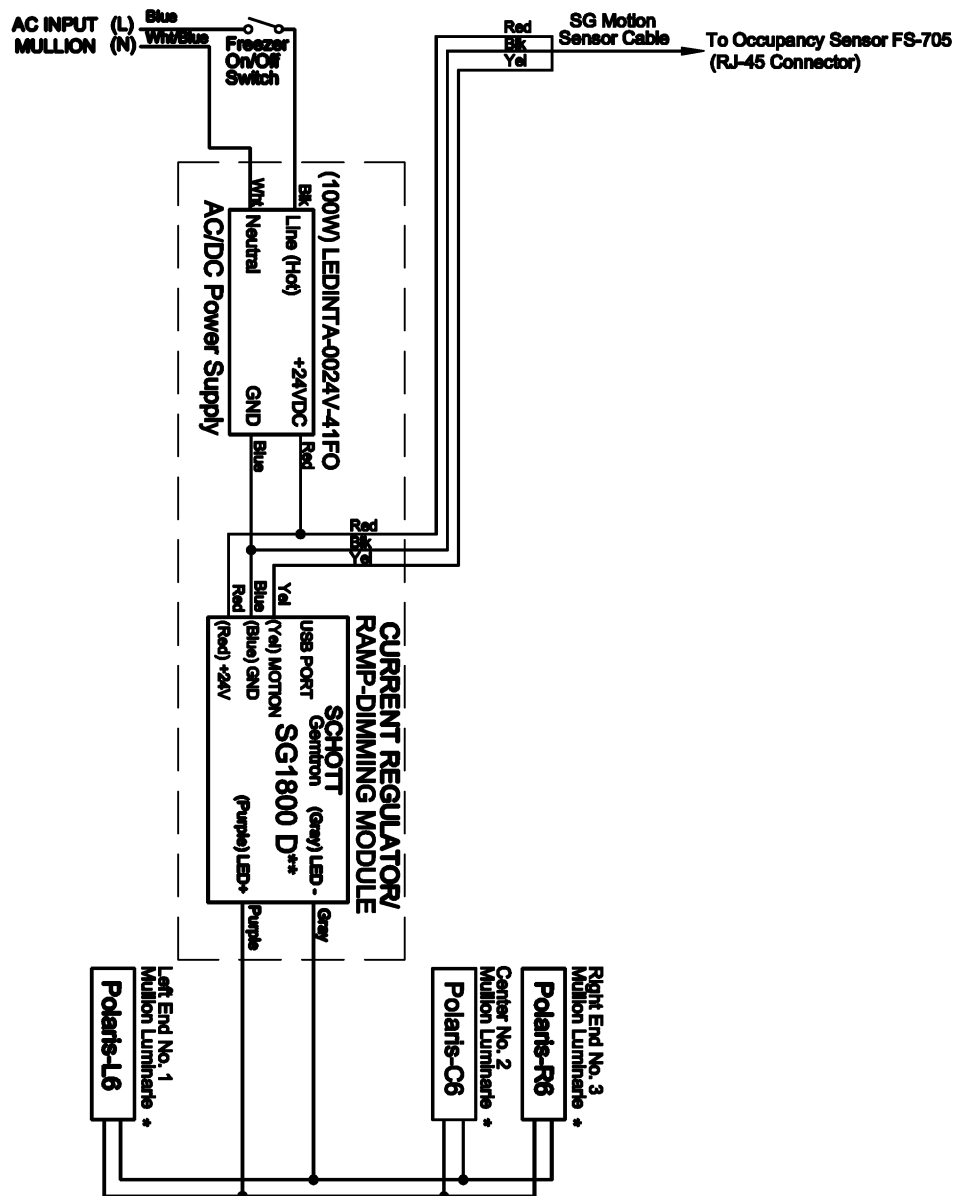
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### Wiring Diagram 2-Door 1-100W PS

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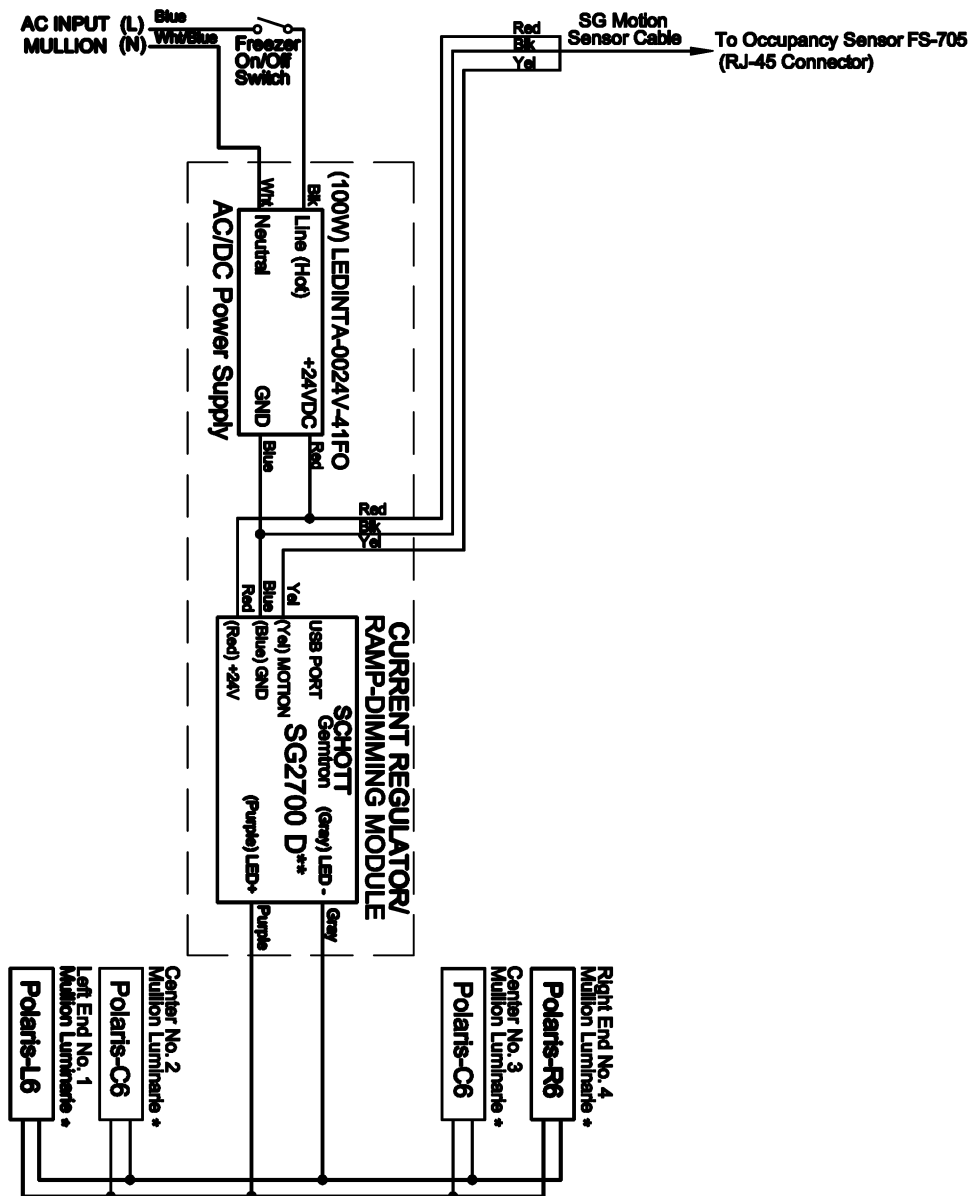
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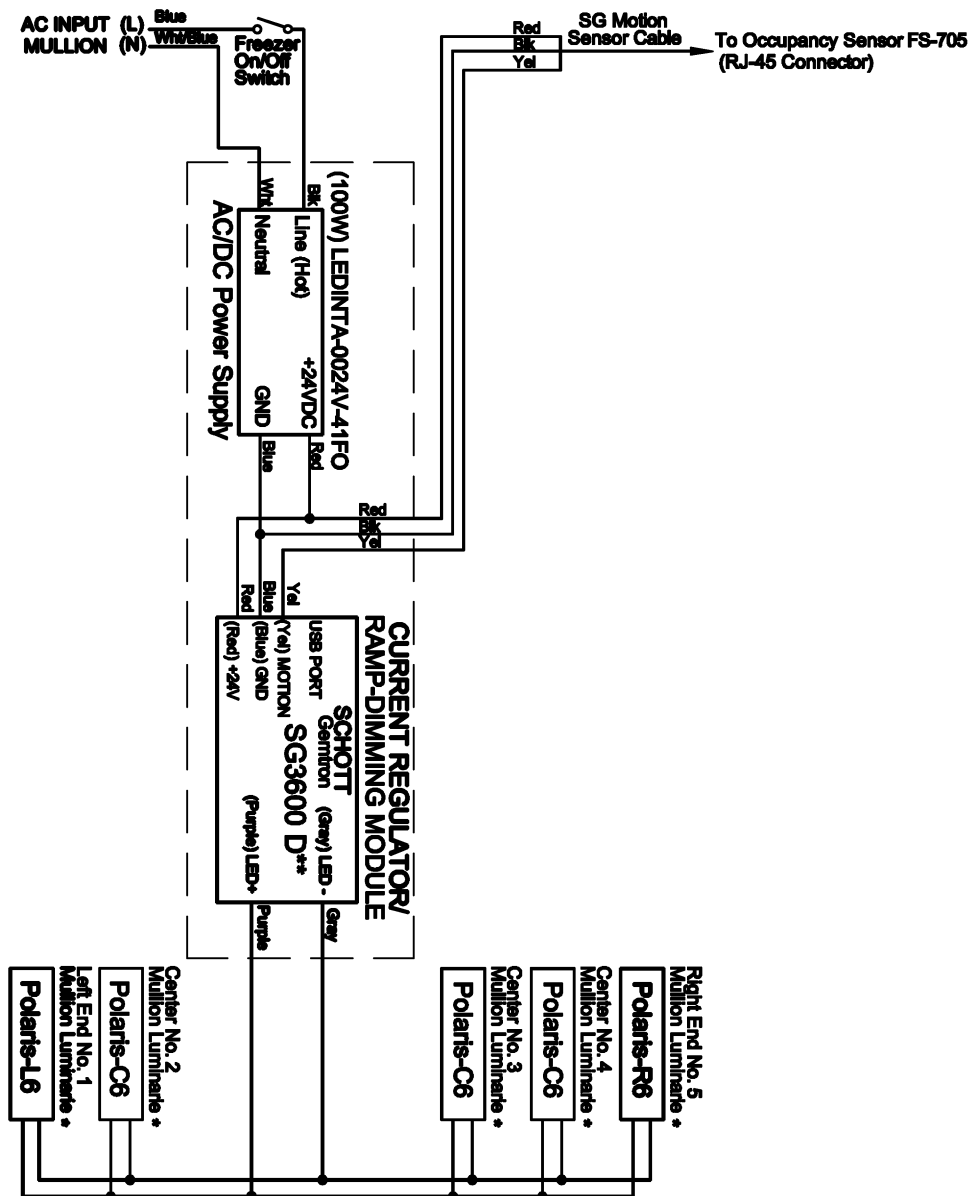
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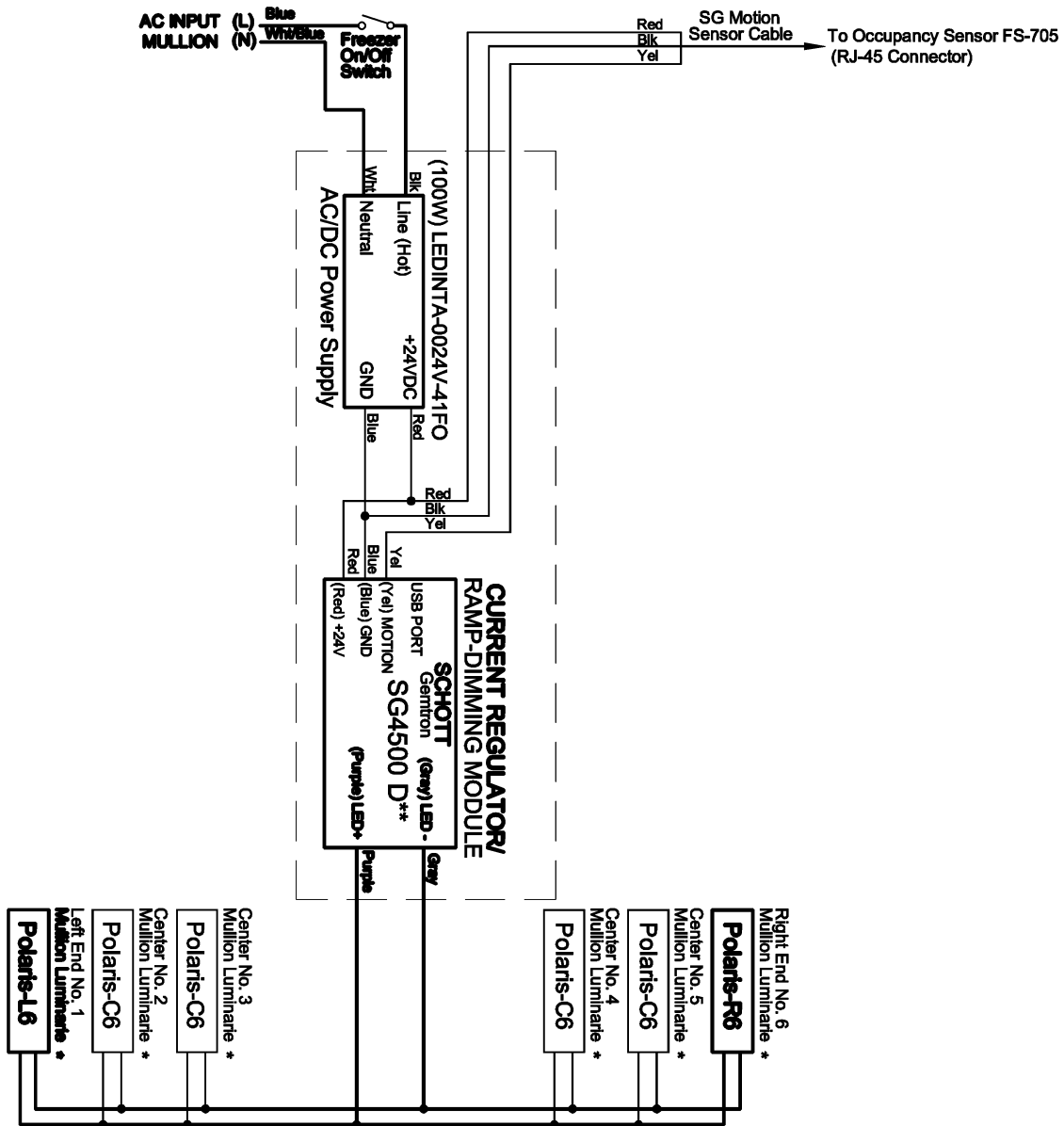
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## 6ft. Luminaire

### Wiring Diagram 5-Door 1-100W PS

### Ramp-Dimming

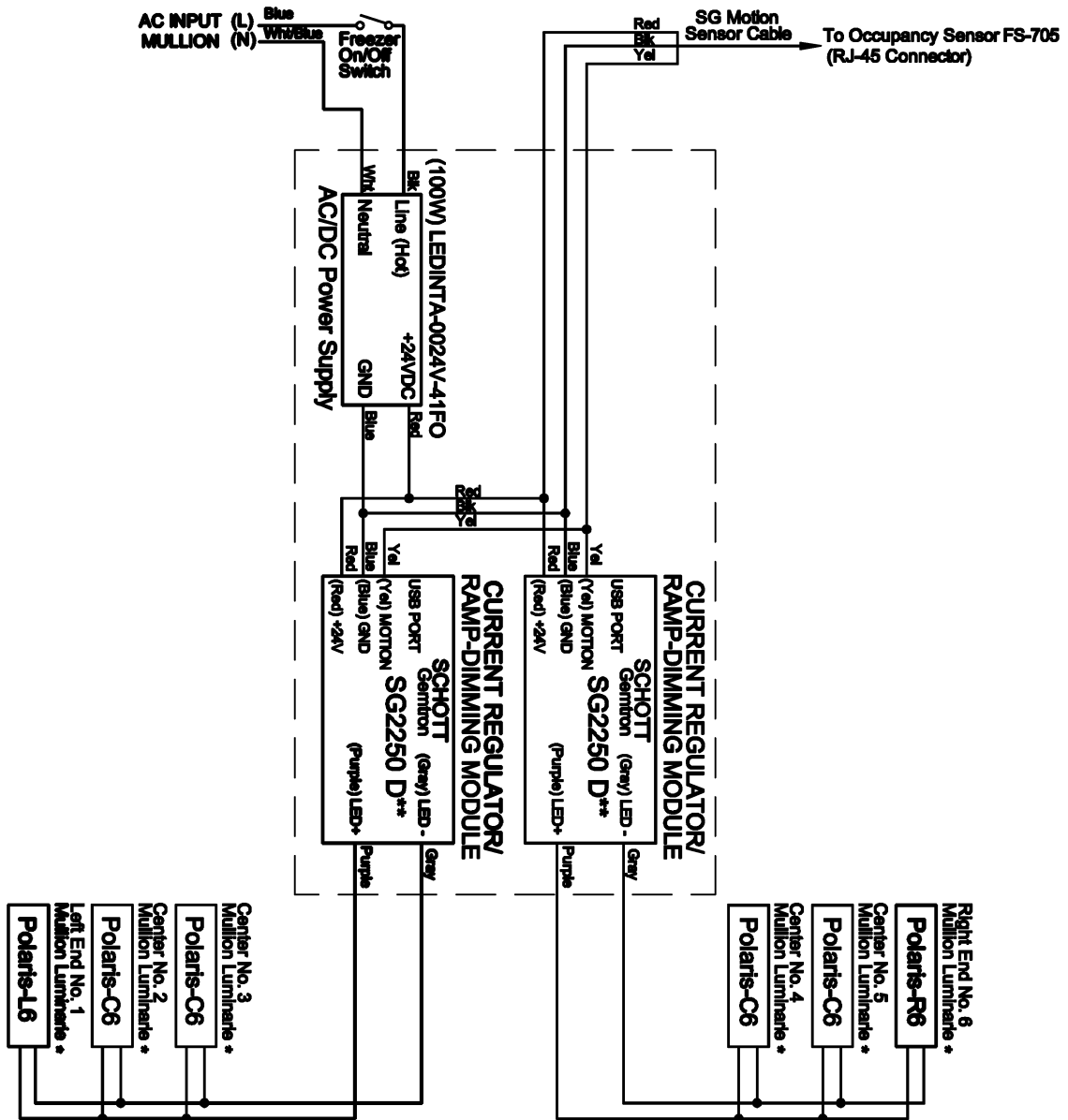


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