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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
<b>FAN ASSEMBLIES</b>				<b>LAMPS AND BALLASTS</b>			
<b>8 Ft &amp; 12 Ft</b>				D.		Ballast, Electronic	(4)
A.		<b>7W Standard Energy Efficient Fan Assembly</b> (1)		0480130		2 lamps (BA.4481676)	
	0477654	Fan Motor, Evaporator (MO.4410545)		0480131		3 lamps (BA.4481654)	
	0142780	Fan Blade (FB.0142780)		0480132		4 lamps (BA.4481677)	
<b>THERMOSTATS</b>				E.		Fluorescent Lamp	(5)
B.		Optional Adjustable Refrigeration Thermostat(2)				<i>Replace with like fixtures</i>	
<b>HEATERS</b>				<b>LED FIXTURES AND POWER SUPPLY</b>			
C.		Canopy Anti-Sweat Heater (3)		F.	0501213	Power Supply (EP.4481861)	(6)
	0512499	4 ft (HE.4851174)		G.		LED Canopy Fixture	(7)
	0512501	8 ft (HE.4851176)				<i>Replace with like fixtures.</i>	
	0512503	12 ft (HE.4851178)		H.		LED Shelf Fixture	(8)
						<i>Replace with like fixtures.</i>	

Data sheet-Excel-C2X-EP

Note: Revision P: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

# Engineering Plan Views

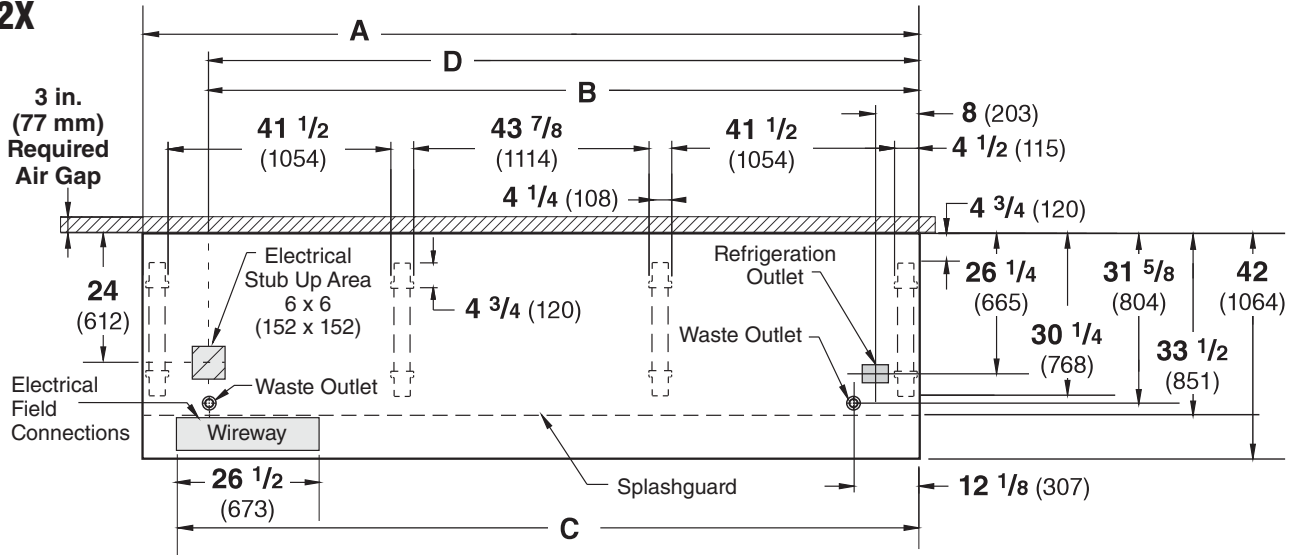
PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	7/8

## Dairy/Delicatessen Precut & Packaged Produce

Dimensions shown as inches and (mm).





01-2005

**C2X**



**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

**FRONT**

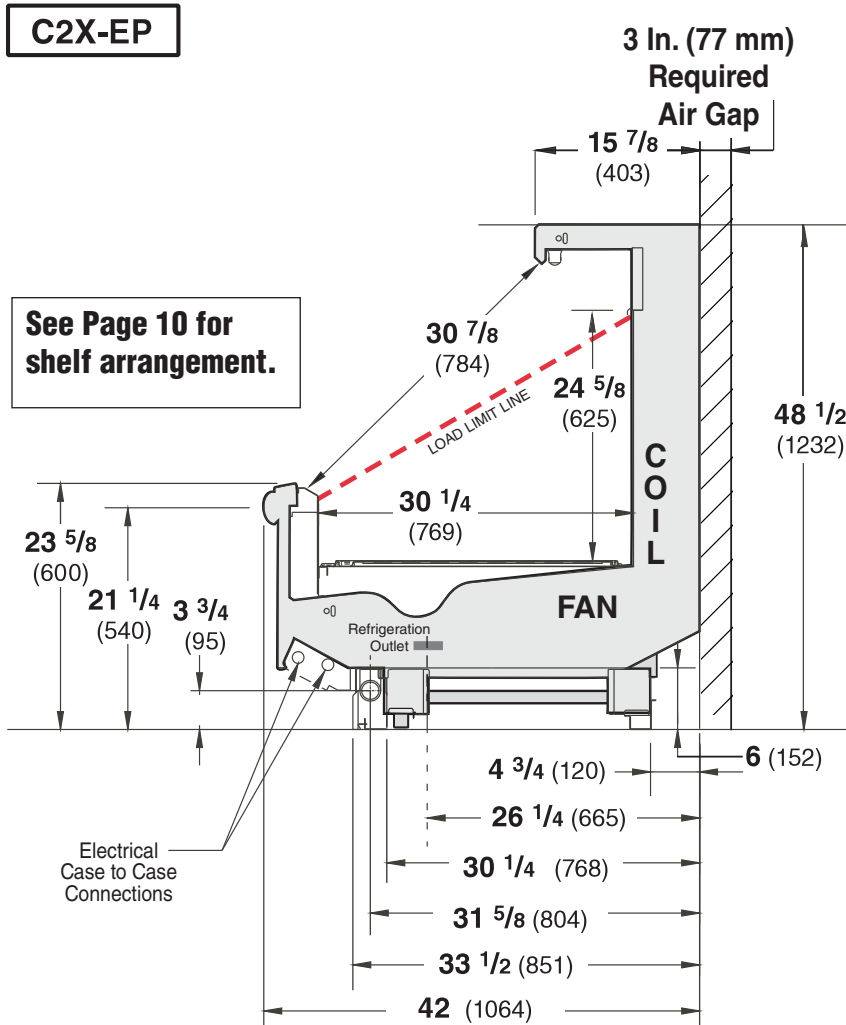
	4 ft	8 ft	12 ft
<b>General</b>			
<b>(A) Case Length</b> <i>(without ends or partitions)</i> <i>(Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.)</i> Maximum O/S dimension of case back to front <i>(includes bumper)</i>	48 3/8 (1229)	96 3/8 (2448)	144 1/2 (3670)
Back of case to front of splashguard	42 (1064)	42 (1064)	42 (1064)
Back of case to O/S edge of front leg	33 1/2 (851)	33 1/2 (851)	33 1/2 (851)
Distance between edges of external legs and center legs	NA	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	NA	43 7/8 (1114)
Distance between front legs and splashguard	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
<b>Electrical Service</b>  <i>(Electrical Field Wiring connection point)</i>			
<b>(B) RH End of case to center of stub up area</b>	36 1/4 (921)	84 1/4 (2140)	132 3/8 (3363)
Back of case to center of stub up area	24 (612)	24 (612)	24 (612)
Length of electrical wireway 	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C) RH End of case to LH end of wireway</b>	42 1/8 (1070)	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets</b> <i>(One each end)</i> 			
<b>(D) RH End of case to the center of LH waste outlet</b>	36 1/4 (921)	84 1/4 (2140)	132 3/8 (3363)
RH End of case to the center of RH waste outlet	12 1/8 (307)	12 1/8 (307)	12 1/8 (307)
Back O/S of case to center of waste outlets	31 5/8 (804)	31 5/8 (804)	31 5/8 (804)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
<b>Refrigeration Outlet</b> 			
Back of case to center of refrigeration outlet	26 1/4 (665)	26 1/4 (665)	26 1/4 (665)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

Multi-deck, 3 Display Levels, 48 In. Back



Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

Dimensions shown as inches and (mm).



See Page 10 for shelf arrangement.

**NSF Certification**

This merchandiser model is manufactured to meet NSF/ANSI (National Sanitation Foundation) Standard #7 requirements for construction, materials & cleanability.

Estimated Charge **		C2X-EP	
4 ft	1.4 lb	22 oz	0.6 kg
8 ft	2.7 lb	43 oz	1.2 kg
12 ft	3.9 lb	62 oz	1.8 kg

\*\*This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz/0.2 kg).

**Excel C2X-EP**  
**Dairy/Delicatessen**  
**Precut & Packaged Produce**

**REFRIGERATION DATA**

**Note:** This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H.

C2X-EP§	Dairy/Deli/Produce		Meat	
	UNLIT	LIT	UNLIT	LIT
Discharge Air °F	33	31	30	28
Evaporator °F	28	26	25	23
Unit Sizing °F	26	24	23	21

§ Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.

**Btu/hr/ft — Unlit Shelves †**

C2X-EP	Dairy/Deli/Produce	Meat
PARALLEL	569	599
CONVENTIONAL	594	624

† Add 10 Btu/hr/ft per shelf row for LED fixtures.  
Add 20 Btu/hr/ft per shelf row for fluorescent lamps.

**DEFROST DATA**

	C2X-EP
Frequency (hr)	12
Defrost Water (lb/ft/day)	6
(±15% based on case configuration and product loading.)	

OFFTIME	C2X-EP
Time (minutes)	30

*ELECTRIC OR GAS* Not Recommended

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control**

C2X-EP	Dairy/Deli/Produce	Meat
CI/CO*	19°F / 9°F	16°F / 6°F

**Indoor Unit Only, Pressure Defrost**

Termination\* 48°F

\*Use a Temperature Pressure Chart to determine PSIG conversions.

**Excel C2X-EP**  
**Dairy/Delicatessen**  
**Precut & Packaged Produce**

**Electrical Data**

	4 ft	8 ft	12 ft			
Number of Fans—7W	1	2	3			
	Amperes			Watts		
	4 ft	8 ft	12 ft	4ft	8 ft	12 ft
<b>Evaporator Fan</b>						
120V 50/60Hz Standard Energy Efficient	0.19	0.38	0.57	14	28	42
230V 50/60Hz Standard Energy Efficient	0.10	0.20	0.30	14	28	42
230V 60Hz Export	0.25	0.50	0.75	39	78	117
230V 50Hz Export	0.28	0.56	0.84	42	84	126
<b>Minimum Circuit Ampacity †</b>						
120V 50/60Hz Standard Energy Efficient	0.39	0.58	0.77			
230V 50/60Hz Standard Energy Efficient	0.30	0.40	0.50			
230V 60Hz Export	0.45	0.70	0.95			
230V 50Hz Export	0.48	0.76	1.04			
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>	<b>20</b>			
<b>Maximum Over Current Protection 230V</b>	15	15	15			
<b>Anti-sweat Heaters</b>						
120V 50/60Hz Standard	0.10	0.20	0.30	12	24	36
<b>Standard Lighting (T-8 Fluorescent)</b>						
1 Row Canopy	0.26	0.51	0.77	30	59	85
<b>ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2017 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.</b>						
<b>Optional Lighting (T-8 Fluorescent)</b>						
Additional 1 Row Canopy	0.26	0.51	0.77	30	59	85
1 Row Rail Light	0.26	0.51	0.77	30	59	85
2 Rows of Shelves	0.51	1.02	1.54	59	118	170
<b>EcoShine II Canopy</b>						
1 Row Canopy — EcoShine II	0.16	0.32	0.48	19.3	38.6	58.0
1 Row Canopy — EcoShine II HO	0.22	0.44	0.66	26.5	53.0	79.4
<b>EcoShine II Rail Light —1 Row</b>	0.08	0.16	0.25	9.9	19.8	29.7
<b>EcoShine II Shelf</b>						
2 Rows of Shelves	0.16	0.33	0.49	19.8	39.5	59.3

120V Fluorescent Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

120V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting + Optional Rail Lighting

230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

† MCA does not include Canopy A/S Heaters because heaters are wired separately from fans.

Please note: some combinations of fluorescent lights on this case model may not be compliant with DOE 2017 and may not be available to order in the US and Canada. More lighting options are available with LED lights. The Hussmann Product Configurator will not allow lighting options that do not comply with the DOE 2017 standards.

**Product Data**

<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Ft)	3.08 ft <sup>3</sup> /ft (0.29 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	2.63 ft <sup>2</sup> /ft (0.80 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	5.04 ft <sup>2</sup> /ft (1.54 m <sup>2</sup> /m)

- <sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft<sup>3</sup>/ft [m<sup>3</sup>/m]
- <sup>2</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, ft [m]
- <sup>3</sup> Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (1) row of 12-inch shelf and (1) row of 18-inch shelf.

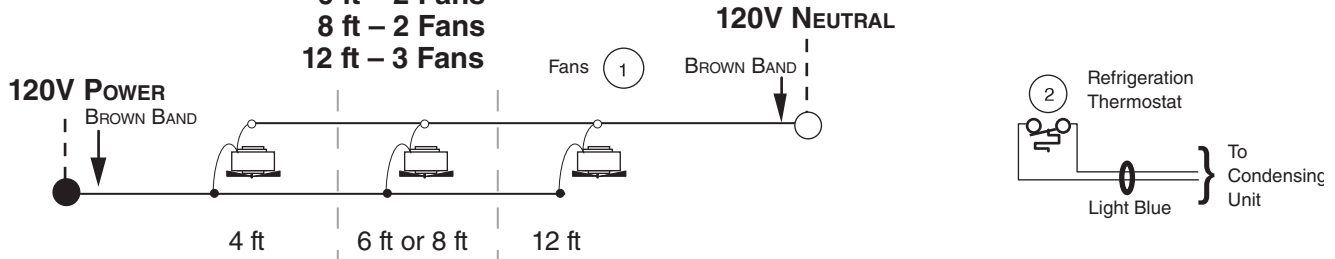
<b>ESTIMATED SHIPPING WEIGHT <sup>4</sup></b>				
<b>Case</b>	<i>4 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<b>Solid End</b>
				<i>(each)</i>
<b>lb (kg)</b>	600 (272)	1000 (454)	1200 (544)	75 (34)

<sup>4</sup> Actual weights will vary according to optional kits included.

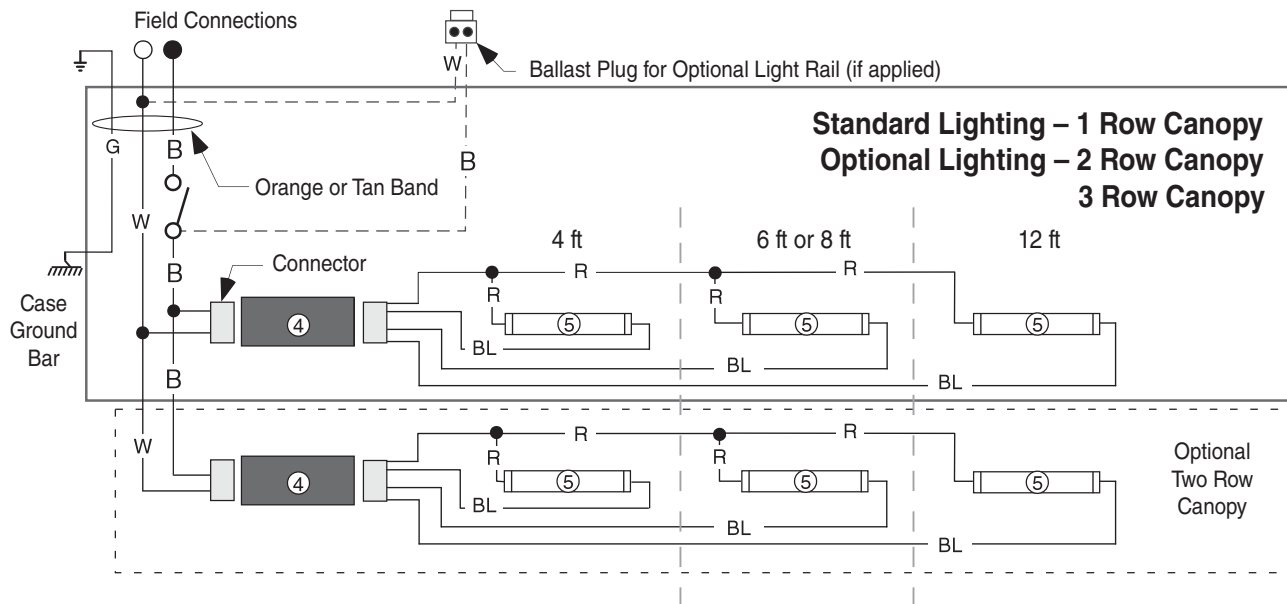
# Fan Wiring Offtime Defrost

1, 2 & 3 Fans

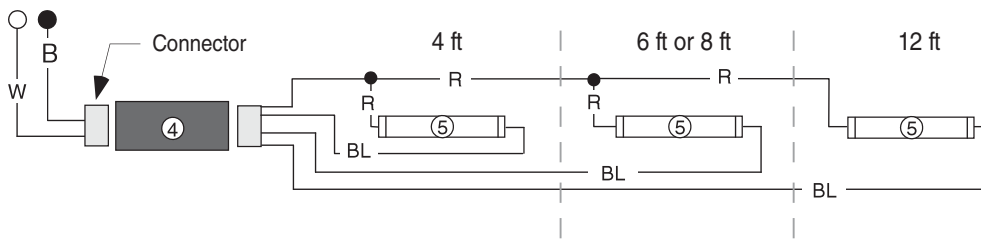
4 ft – 1 Fan  
6 ft – 2 Fans  
8 ft – 2 Fans  
12 ft – 3 Fans



# Light Circuits



## Optional Lighting – 1 Row Rail



### WARNING

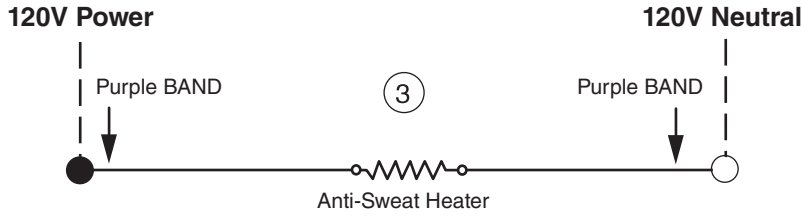
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red    Y = Yellow    G = Green    BL = Blue    BK = Black    W = White

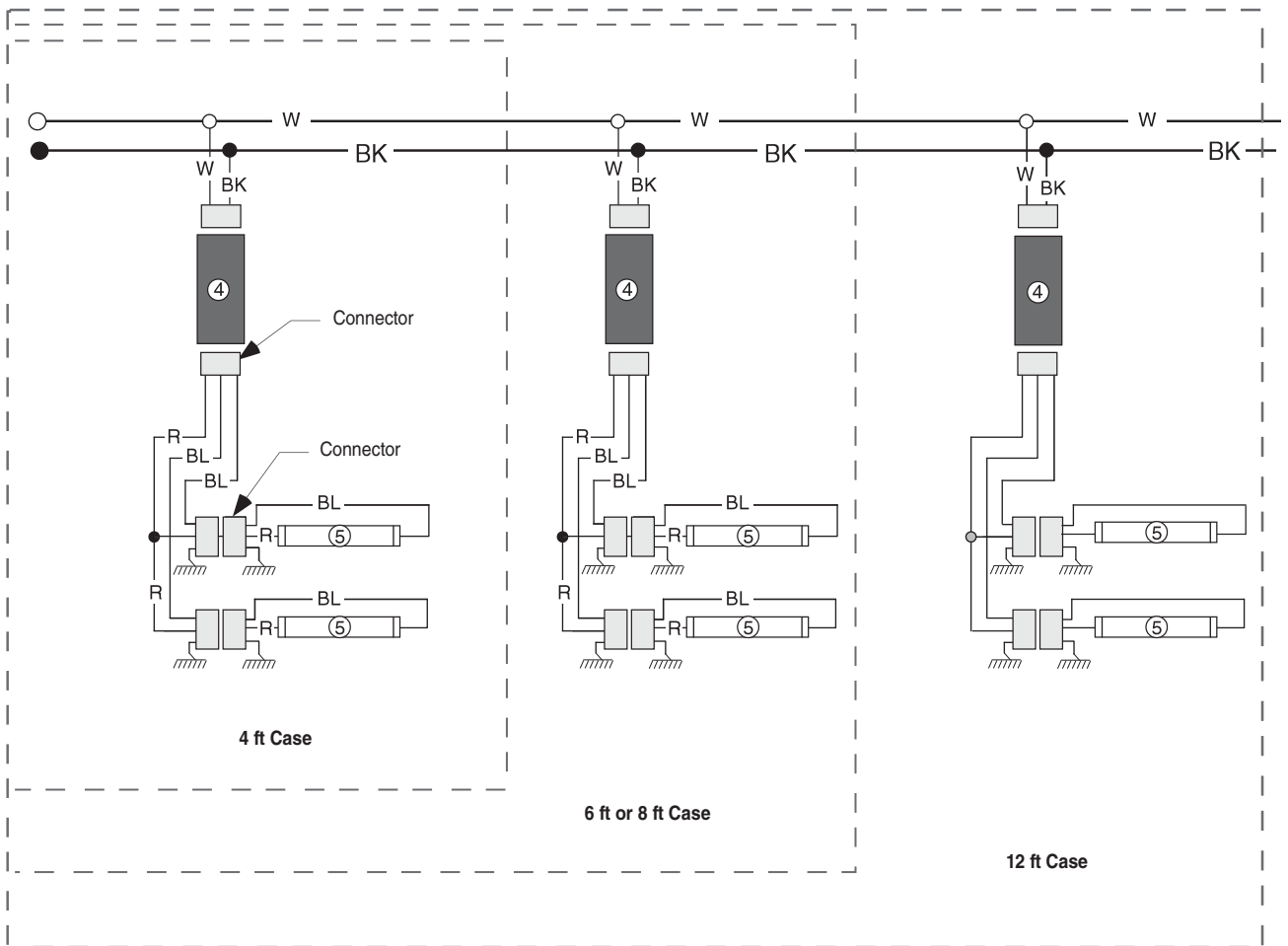
● = 120V POWER    ○ = 120V NEUTRAL    ⊥ = FIELD GROUND    ≡ = CASE GROUND

## Canopy Anti-Sweat Heater



## Optional Shelf Lighting Fluorescent Fixtures

### Optional Shelf Harness and Light Circuits for Two Rows of Shelves



### WARNING

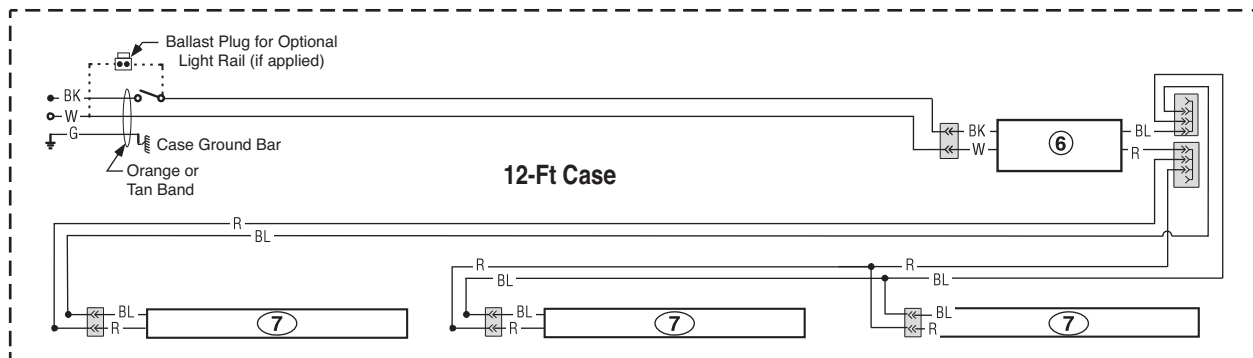
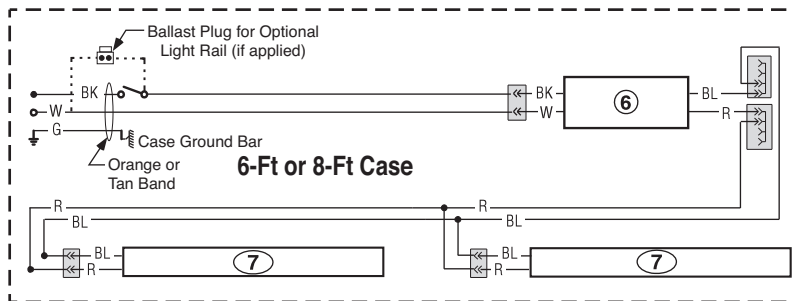
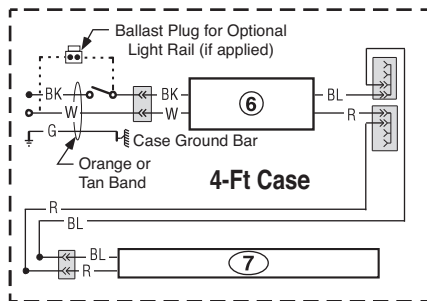
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

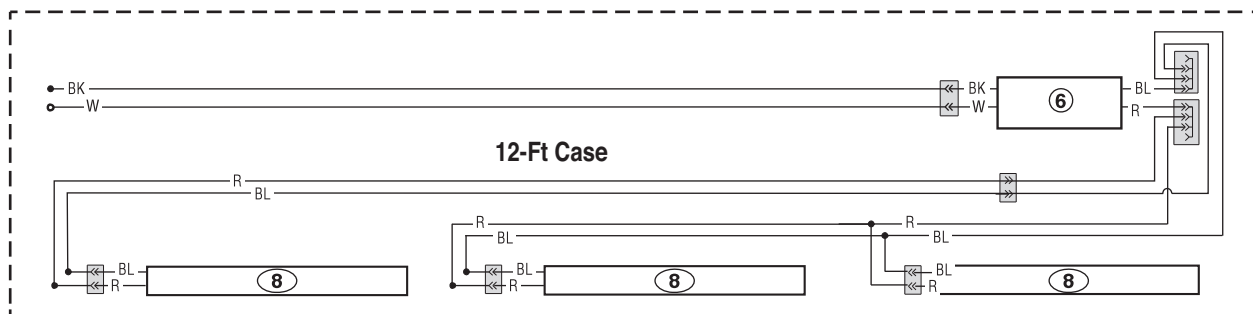
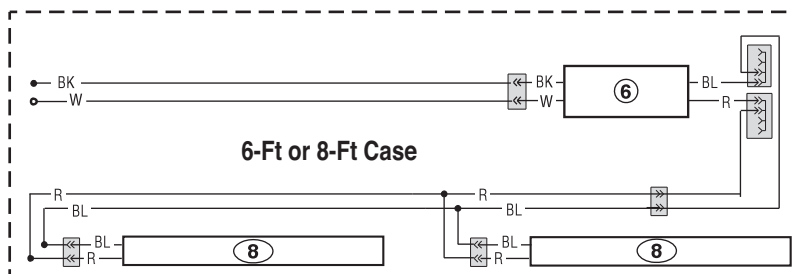
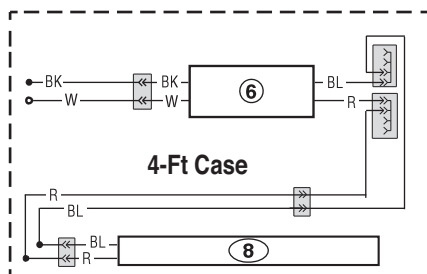
R = Red    Y = Yellow    G = Green    BL = Blue    BK = Black    W = White  
 ● = 120V POWER    ○ = 120V NEUTRAL    ⚬ = FIELD GROUND    ≡ = CASE GROUND

# Optional Canopy and Rail Light Circuits — LED Fixtures

## EcoShine II LED Canopy Lighting – 1 Row



## EcoShine II LED Rail Lighting – 1 Row



### WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

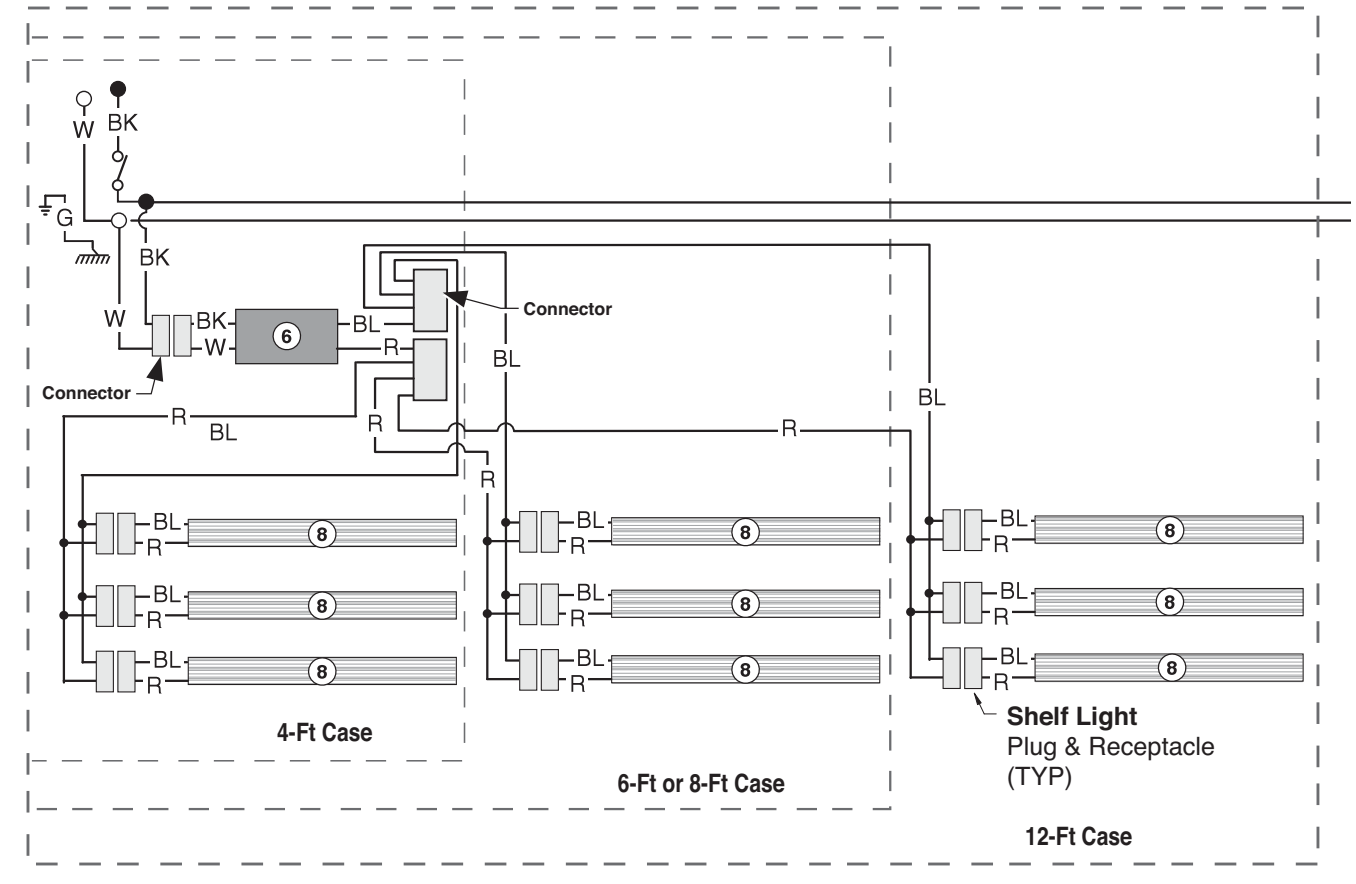
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red    Y = Yellow    G = Green    BL = Blue    BK = Black    W = White  
 ● = 120V POWER    ○ = 120V NEUTRAL    ⊥ = FIELD GROUND     $\overline{\text{m}}$  = CASE GROUND



# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED Light Circuits for 2 or 3 Rows of Shelves



### WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red      G = Green      BL = Blue      BK = Black      W = White  
 ● = 120V POWER      ○ = 120V NEUTRAL      ⊥ = FIELD GROUND      ≡ = CASE GROUND

**Excel C2X-EP**  
**Dairy/Delicatessen**  
**Precut & Packaged Produce**

**SHELF CONFIGURATION**

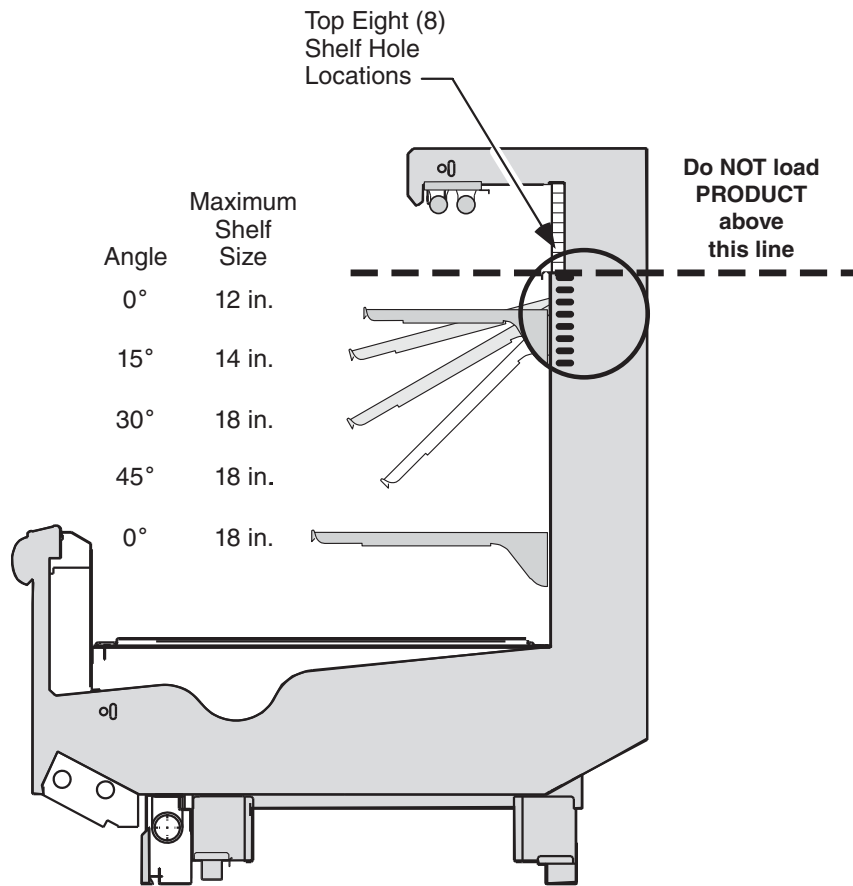
This merchandiser is designed for one or two shelves.

The depth of the shelf used in the top eight (8) shelf hole locations is critical to case performance.

If a shelf is placed in one of the top eight (8) locations it must comply with the angle/depth requirements listed below.

Shelf Angle	Maximum Shelf Depth
0°	12 in.
15°	14 in. or less
30°	18 in. or less
45°	18 in. or less

**NOTE:** Shelves placed in the lower positions may be up to 18 in. deep when positioned at a 0° angle.



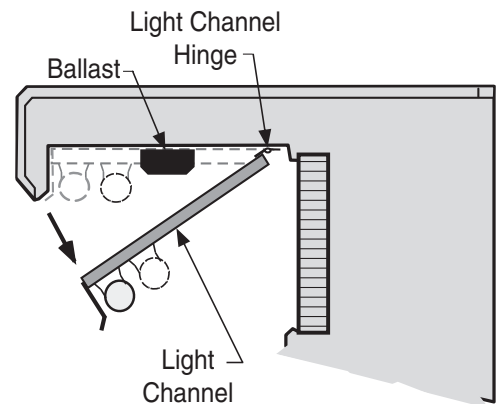
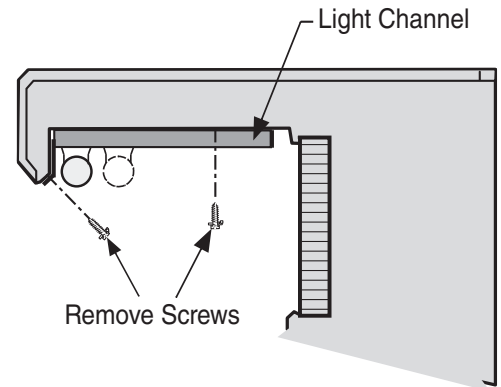
**Excel C2X-EP**  
**Dairy/Delicatessen**  
**Precut & Packaged Produce**

The ballast for the canopy and shelf lamps is located behind the canopy on the left-hand end (when facing case) of the merchandiser.

To access the ballast:

1. Remove screws at bottom edge of canopy and rear of light channel.
2. Lower light channel which will pivot on hinge.
3. Service or replace ballasts as required.
4. Reassemble items as they were originally installed.

**NOTE:** Rail lamp ballast is located in the electrical raceway.



### CANOPY ANTI-SWEAT HEATER

The canopy anti-sweat heater location is shown below. Connections are in the electrical wireway.

