

We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

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</b> Fan Assembly		(1)	0480130	2 lamps (BA.4481676)		
	0058698	Fan Motor, Evaporator (MO.4410102)		0480131	3 lamps (BA.4481654)		
	0142780	Fan Blade (FB.0142780)		0480132	4 lamps (BA.4481677)		
	<b>7W Energy Efficient</b> Fan Assembly		(1)	E.	Fluorescent Lamp		(5)
	0477654	Fan Motor, Evaporator (MO.4410545)			<i>Replace with like fixtures</i>		
	0142780	Fan Blade (FB.0142780)		<b>LED FIXTURES AND POWER SUPPLY</b>			
<b>THERMOSTATS</b>				F.	0501213	Power Supply (EP.4481861)	(6)
B.	Optional Adjustable Refrigeration Thermostat		(2)	G.	LED Canopy Fixture		(7)
<b>HEATERS</b>						<i>Replace with like fixtures — See Page 5.</i>	
C.	Canopy Anti-Sweat Heater		(3)	H.	LED Shelf Fixture		(8)
	<u>0512501</u>	8 ft (HE.4851176)			<i>Replace with like fixtures — See Page 5.</i>		
	<u>0512503</u>	12 ft (HE.4851178)					

Note: Rev. I adds Btu note (page 3), EcoShine LED (page 4) and parts (page 5), and revises canopy wiring diagram (page 6). Other changes marked by underline or circle.



# Engineering Plan Views

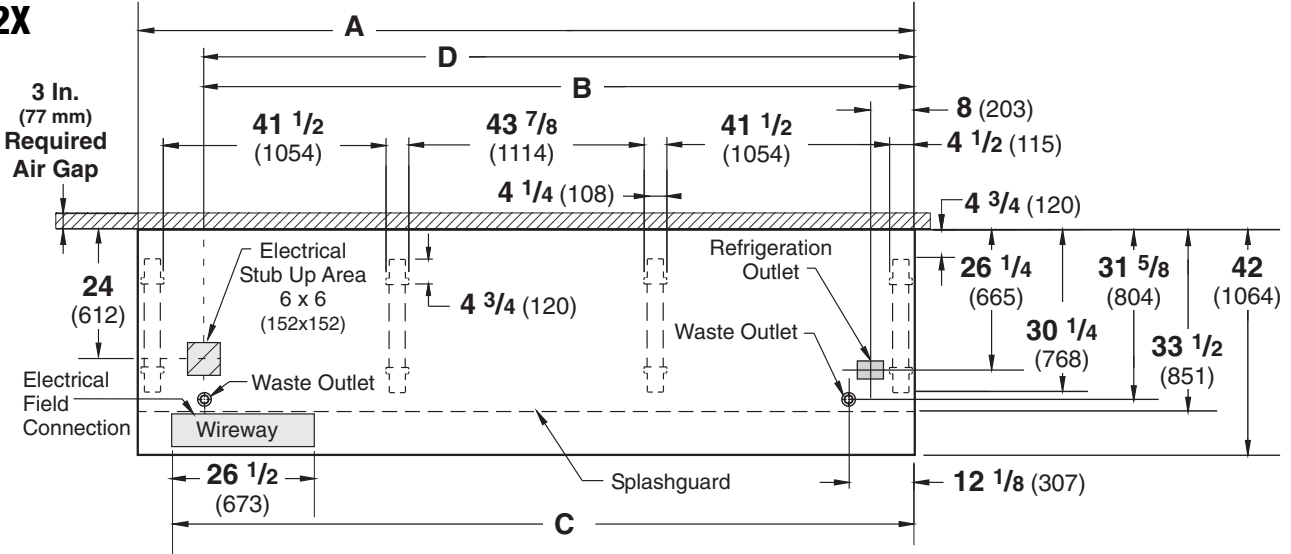
PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	7/8

## Dairy/Delicatessen Precut & Packaged Produce

01-2005





Dimensions shown as inches and (mm).

**C2X**



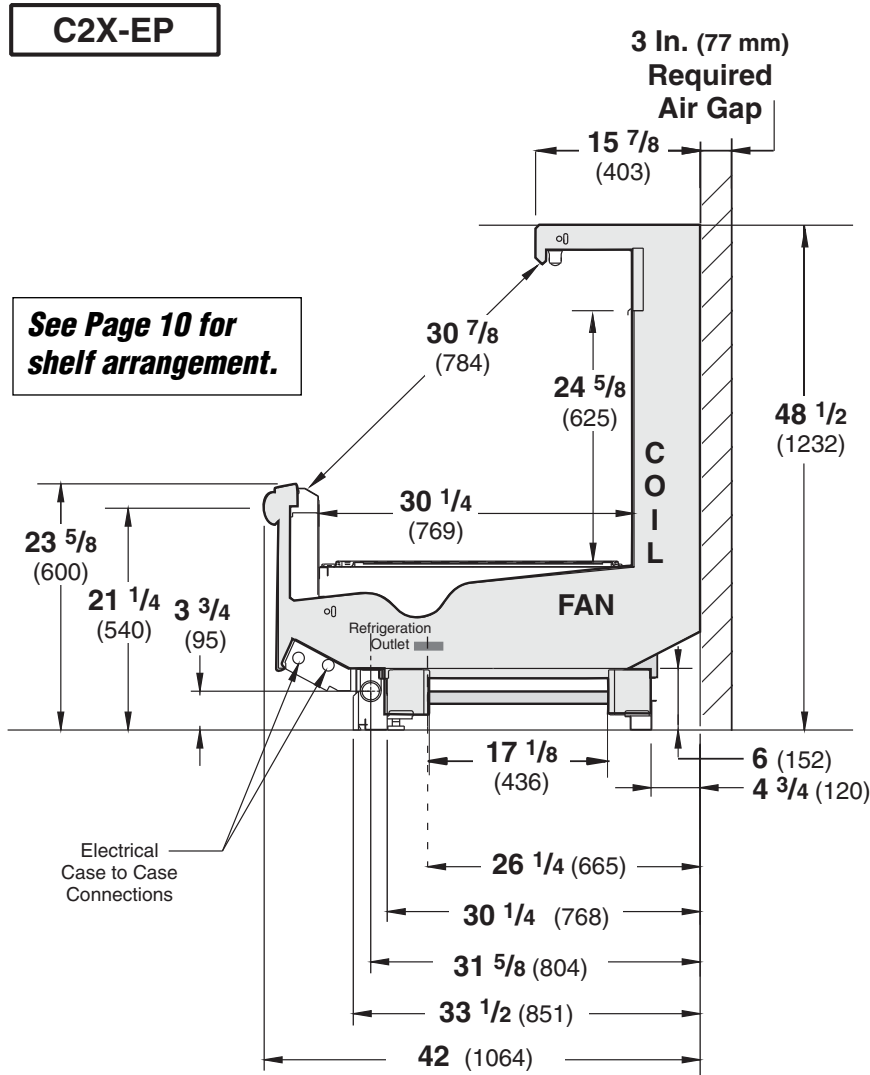
**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

**FRONT**

	8 ft	12 ft
<b>General</b>		
<b>(A) Case Length (without ends or partitions)</b> (Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.) Maximum O/S dimension of case back to front (includes bumper)	96 3/8 (2448)	144 1/2 (3670)
Back of case to front of splashguard	42 (1064)	42 (1064)
Back of case to O/S edge of front leg	33 1/2 (851)	33 1/2 (851)
Distance between edges of external legs and center legs	30 1/4 (768)	30 1/4 (768)
Distance between edges of center legs	41 1/2 (1054)	41 1/2 (1054)
Distance between front legs and splashguard	NA	43 7/8 (1114)
	2 3/4 (70)	2 3/4 (70)
<b>Electrical Service</b>  (Electrical Field Wiring connection point)		
<b>(B) RH End of case to center of stub up area</b>	84 1/4 (2140)	132 3/8 (3363)
Back of case to center of stub up area	24 (612)	24 (612)
Length of electrical wireway 	26 1/2 (673)	26 1/2 (673)
<b>(C) RH End of case to LH end of wireway</b>	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets (One each end)</b> 		
<b>(D) RH End of case to the center of LH waste outlet</b>	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)
Back O/S of case to center of waste outlets	31 5/8 (804)	31 5/8 (804)
Schedule 40 PVC drip pipe	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)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)

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

Dimensions shown as inches and (mm).



**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
<b>Discharge Air °F</b>	33	31	30	28
<b>Evaporator °F</b>	28	26	25	23
<b>Unit Sizing °F</b>	26	24	23	21

*Btu/hr/ft* ‡ — *Unlit Shelves* ‡‡

C2X-EP	Dairy/Deli/Produce		Meat
<b>PARALLEL</b>	590		620
<b>CONVENTIONAL</b>	615		645

‡ Optional energy efficient motors reduce the refrigeration load by 21 Btu/hr/ft.  
 ‡‡ 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
<b>Frequency (hr)</b>	12
<b>Defrost Water (lb/ft/day)</b>	6
<i>(±15% based on case configuration and product loading.)</i>	

OFFTIME	C2X-EP
<b>Time (minutes)</b>	30

*ELECTRIC OR GAS* Not Recommended

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control**

C2X-EP	Dairy/Deli/Produce	Meat
<b>CI/CO*</b>	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.

Estimated Charge **	C2X-EP		
<b>8 ft</b>	2.7 lb	43 oz	1.2 kg
<b>12 ft</b>	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.

**NSF Certification**

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

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

**Electrical Data**

			<b>8 ft</b>	<b>12 ft</b>		
<b>Number of Fans—7W</b>			<b>2</b>	<b>3</b>		
			<b>Amperes</b>		<b>Watts</b>	
			<b>8 ft</b>	<b>12 ft</b>	<b>8 ft</b>	<b>12 ft</b>
<b>Evaporator Fan</b>						
120V	60Hz	Standard	1.00	1.50	78	117
120V	50Hz	Standard	1.10	1.65	84	126
230V	60Hz	Export	0.50	0.75	78	117
230V	50Hz	Export	0.56	0.84	84	126
120V	60Hz	Energy Efficient	0.38	0.57	28	42
230V	60Hz	Energy Efficient	0.20	0.30	28	42
<b>Minimum Circuit Ampacity †</b>						
120V	60Hz	Standard	1.20	1.70		
120V	50Hz	Standard	1.30	1.85		
230V	60Hz	Export	0.70	0.95		
230V	50Hz	Export	0.76	1.04		
120V	60Hz	Energy Efficient	0.58	0.77		
230V	60Hz	Energy Efficient	0.40	0.50		
<b>Maximum Over Current Protection 120V</b>			<b>20</b>	<b>20</b>		
<b>Maximum Over Current Protection 230V</b>			<b>15</b>	<b>15</b>		
<b>Anti-sweat Heaters</b>						
120V	50/60Hz	Standard	0.20	0.30	24	36
<b>Standard Lighting (T-8 Fluorescent)</b>						
1 Row Canopy			0.51	0.77	59	85
<b>Optional Lighting (T-8 Fluorescent)</b>						
Additional 1 Row Canopy			0.51	0.77	59	85
1 Row Rail Light			0.51	0.77	59	85
2 Rows of Shelves			1.02	1.54	118	170
<b>Optional EcoShine LED Lighting — CRI</b>						
2 Row Canopy			0.55	0.82	66	98
2 Row of Shelves			0.39	0.58	47	70
<b>Optional EcoShine LED Lighting — High CRI</b>						
2 Row Canopy			0.63	0.93	75	112
2 Row of Shelves			0.47	0.70	56	84
<b>Optional Always*Bright LED Lighting</b>						
2 Row Canopy			0.71	1.08	85	130
2 Row of Shelves			0.47	0.67	56	80

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

**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)	2.93 ft <sup>2</sup> /ft (0.89 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>	<b>8 ft</b>		<b>Solid End</b>
	<b>12 ft</b>		<b>(each)</b>
<b>lb (kg)</b>	1000 (454)	1200 (544)	75 (34)

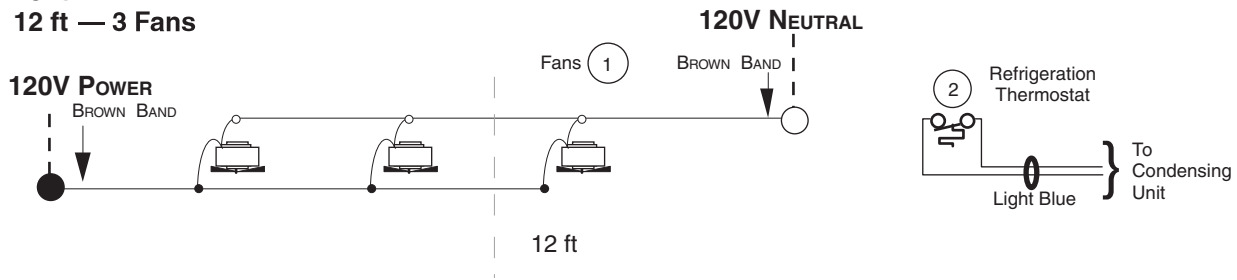
<sup>4</sup> Actual weights will vary according to optional kits included.

<b>PARTS LIST (Continued from Page 1)</b>					
<b>Item</b>	<b>Part #</b>	<b>Description</b>	<b>Item</b>	<b>Part #</b>	<b>Description</b>
<b>LED FIXTURES AND POWER SUPPLY</b>					
F.	0501213	Power Supply (EP.4481861) (6)	H.	<b>EcoShine LED Shelf Fixture (8)</b>	
G.	<b>EcoShine LED Canopy Fixture (7)</b>		4441590	48-inch	<b>2900K</b> HCRI
	4441720	Front 48-inch	4441591	48-inch	<b>3500K</b> HCRI
	4441722	Front 48-inch	4441592	48-inch	<b>3500K</b>
	4441724	Front 48-inch	4441593	48-inch	<b>4100K</b>
	4441726	Front 48-inch			
	4441721	Rear 48-inch			
	4441723	Rear 48-inch			
	4441725	Rear 48-inch			
	4441727	Rear 48-inch			

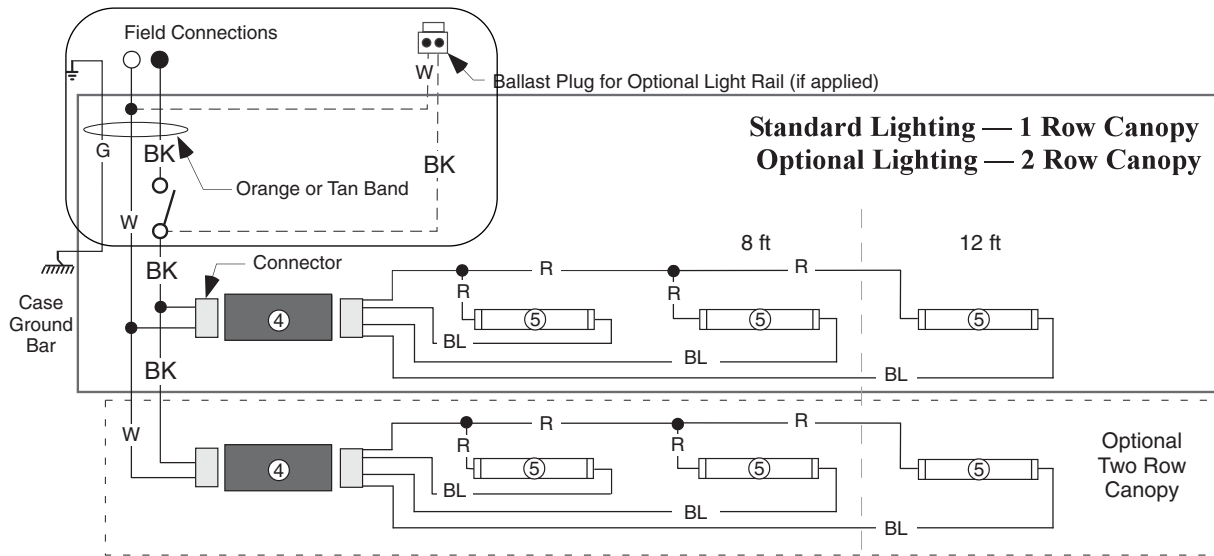
Note: Always\*Bright lamps will be replaced with the latest generation of EcoShine lamps.

# Fan Wiring Offtime Defrost

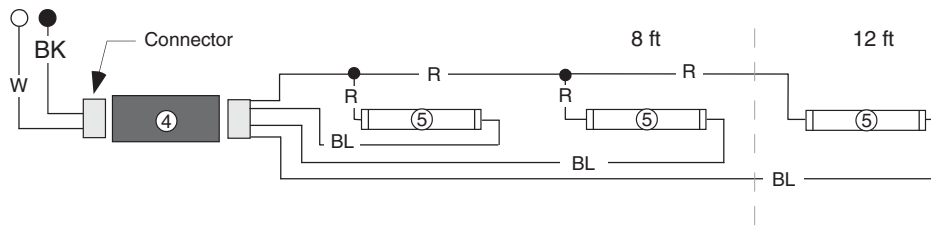
8 ft — 2 Fans  
12 ft — 3 Fans



# Light Circuits



## Optional Lighting — 1 Row Rail



## WARNING

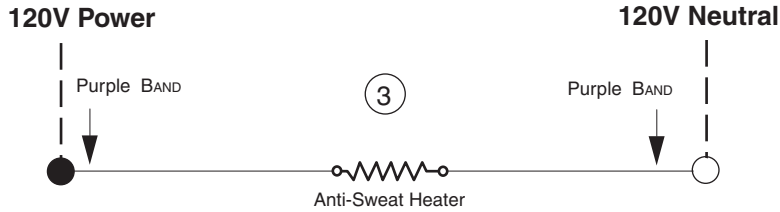
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

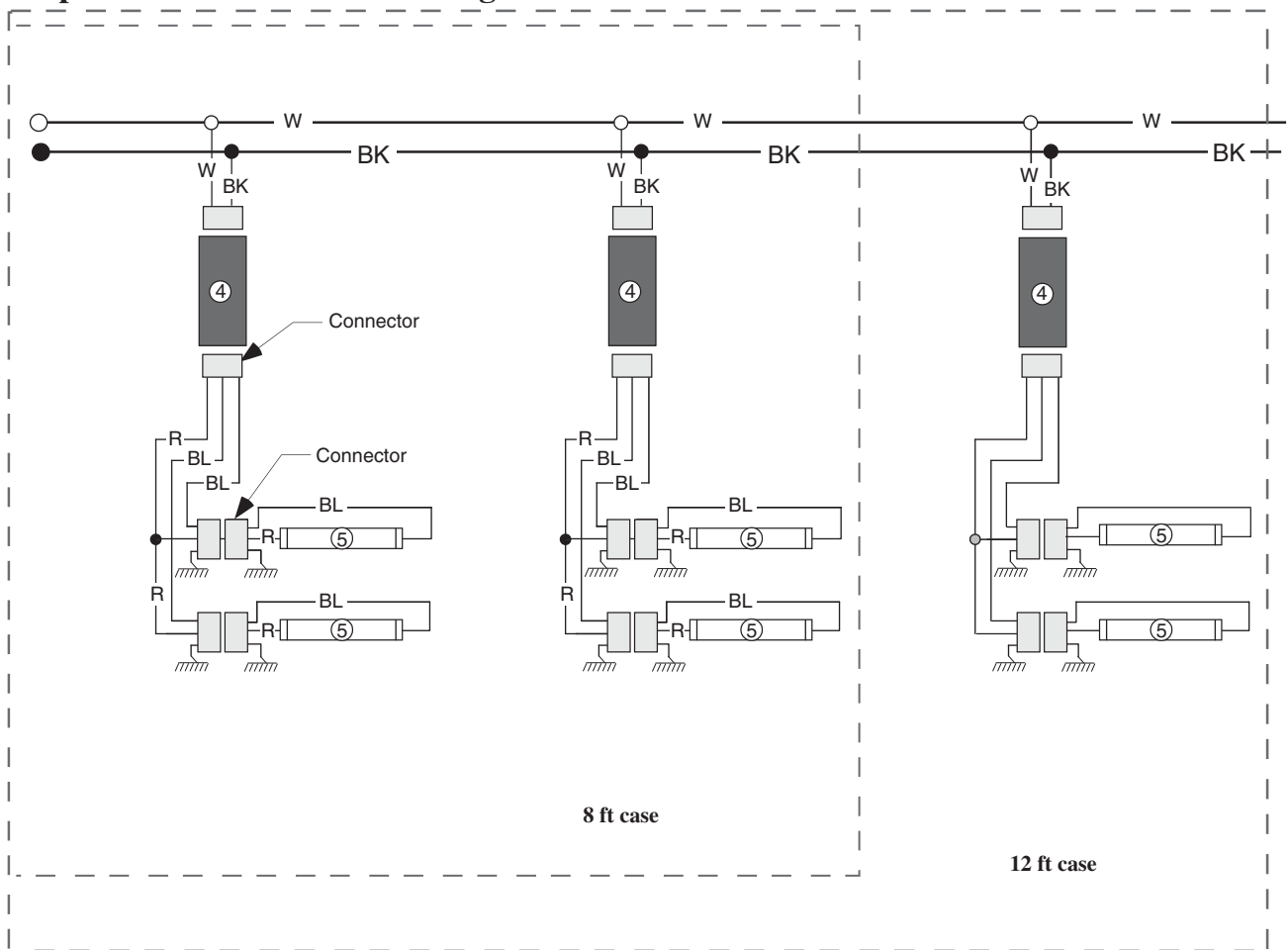
● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND ⏏ = CASE GROUND

# 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.

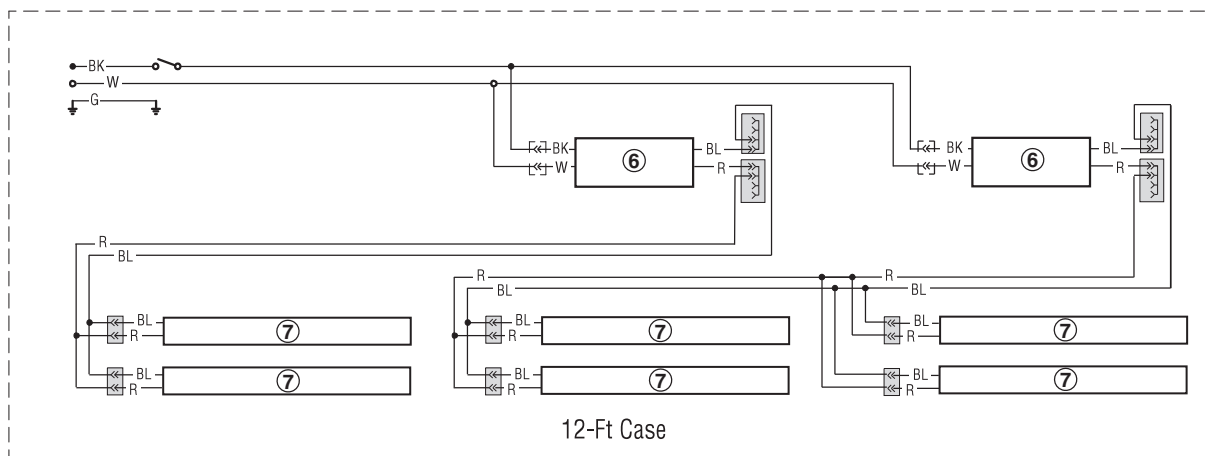
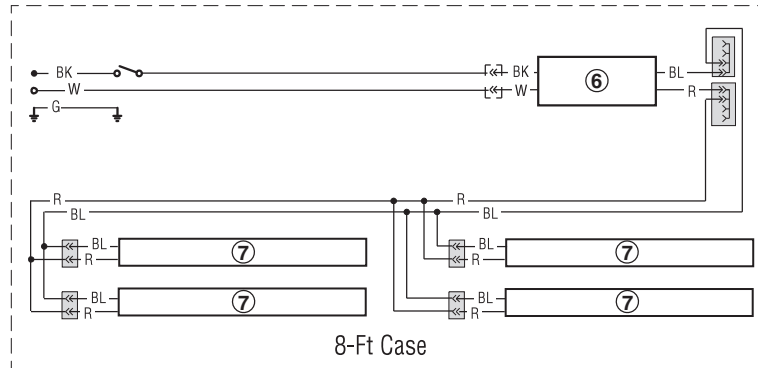
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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● = 120V POWER ○ = 120V NEUTRAL  $\perp$  = FIELD GROUND  $\text{||||}$  = CASE GROUND

# Optional Canopy Lighting LED Fixtures

## LED Canopy Lighting — 2 Row Canopy



### WARNING

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

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

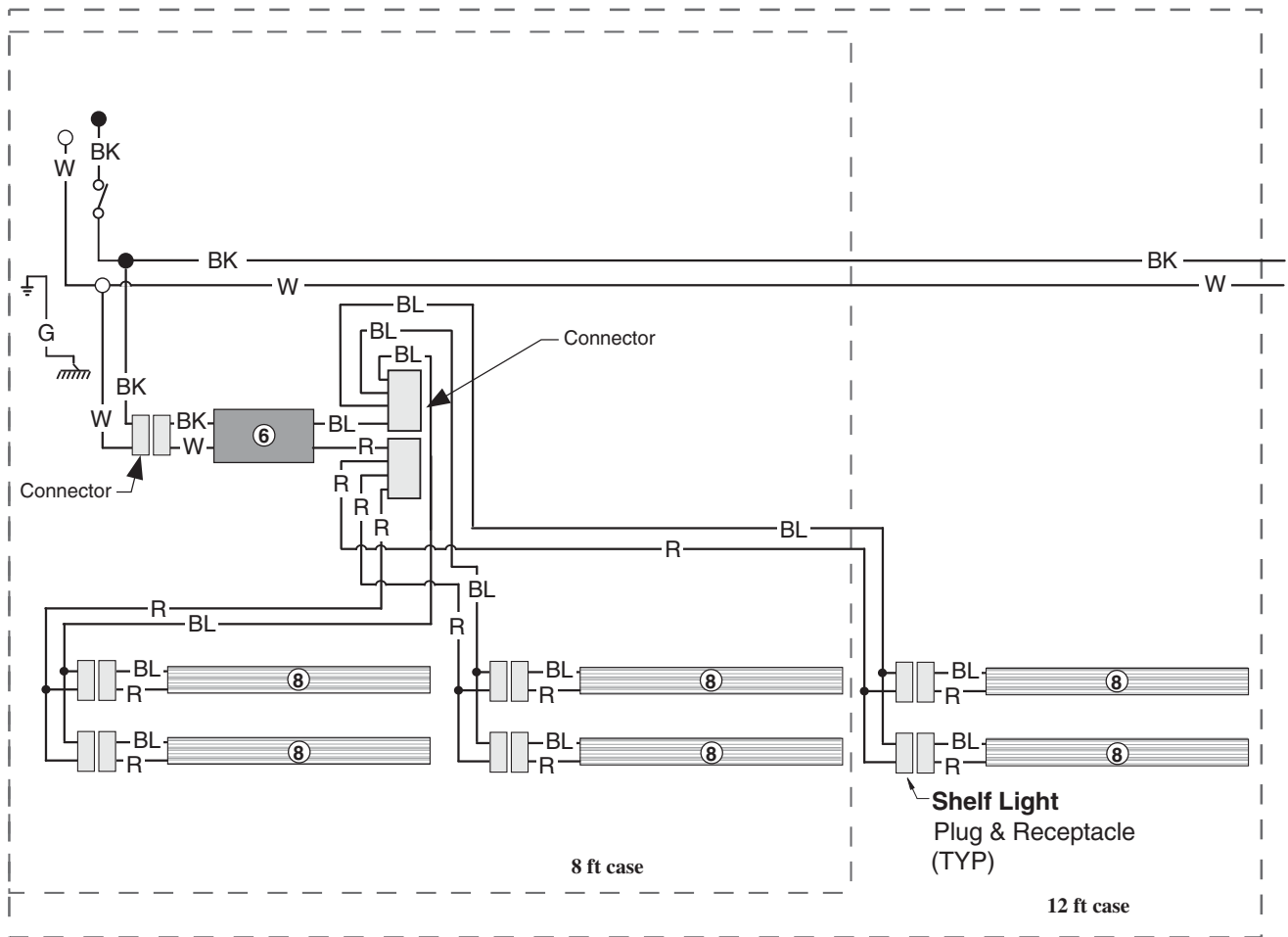
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

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



# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED 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      G = Green      BL = Blue      BK = Black      W = White

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

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

**SHELF CONFIGURATION**

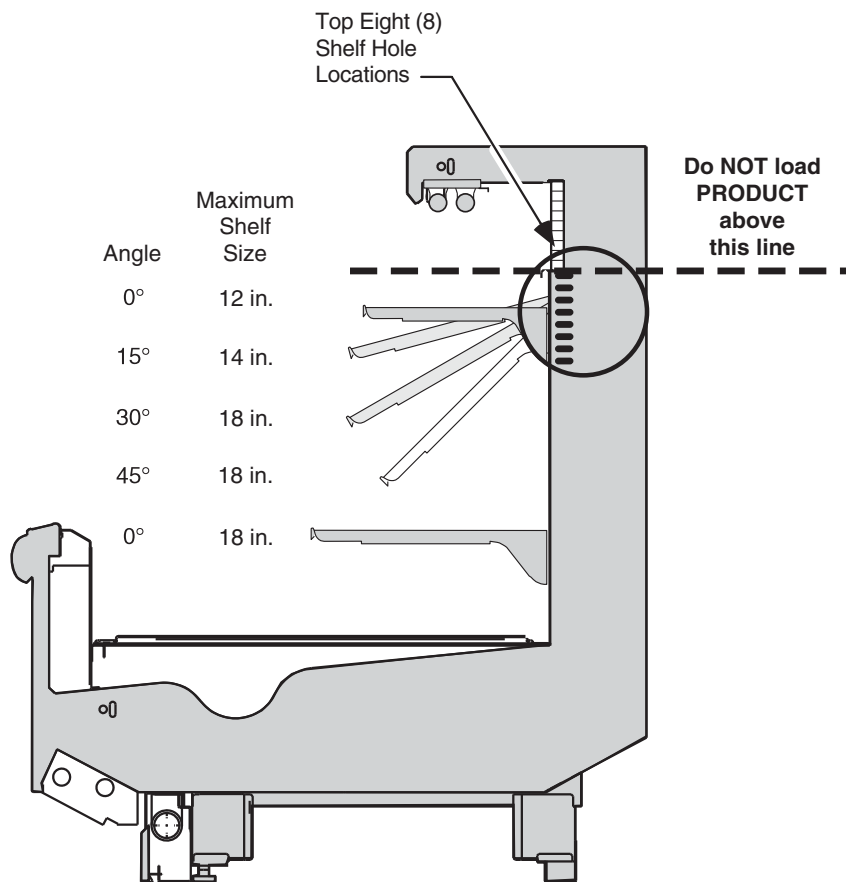
This merchandiser is designed for one or two shelves.

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.

<b>Shelf Angle</b>	<b>Maximum Shelf Depth</b>
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.



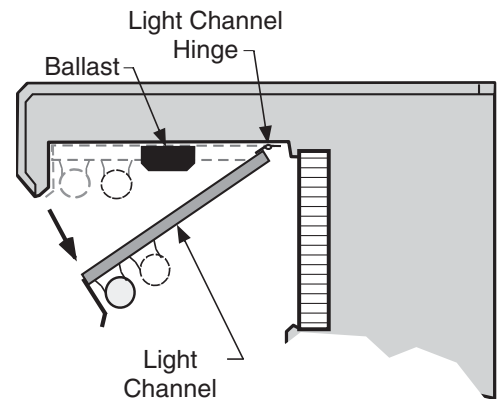
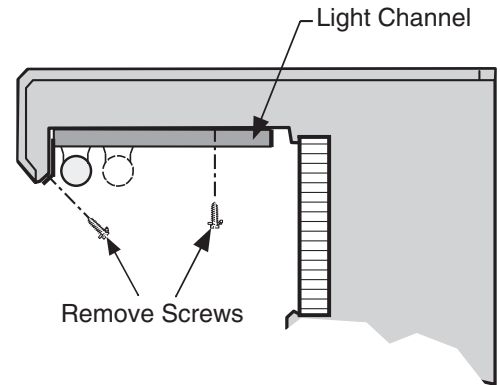
**Impact Excel C2X-EP**  
**Dairy/Delicatessen**  
**Precut & Packaged Produce**

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.

