

# ENERGYMAX<sup>®</sup> INTERSECT<sup>™</sup>

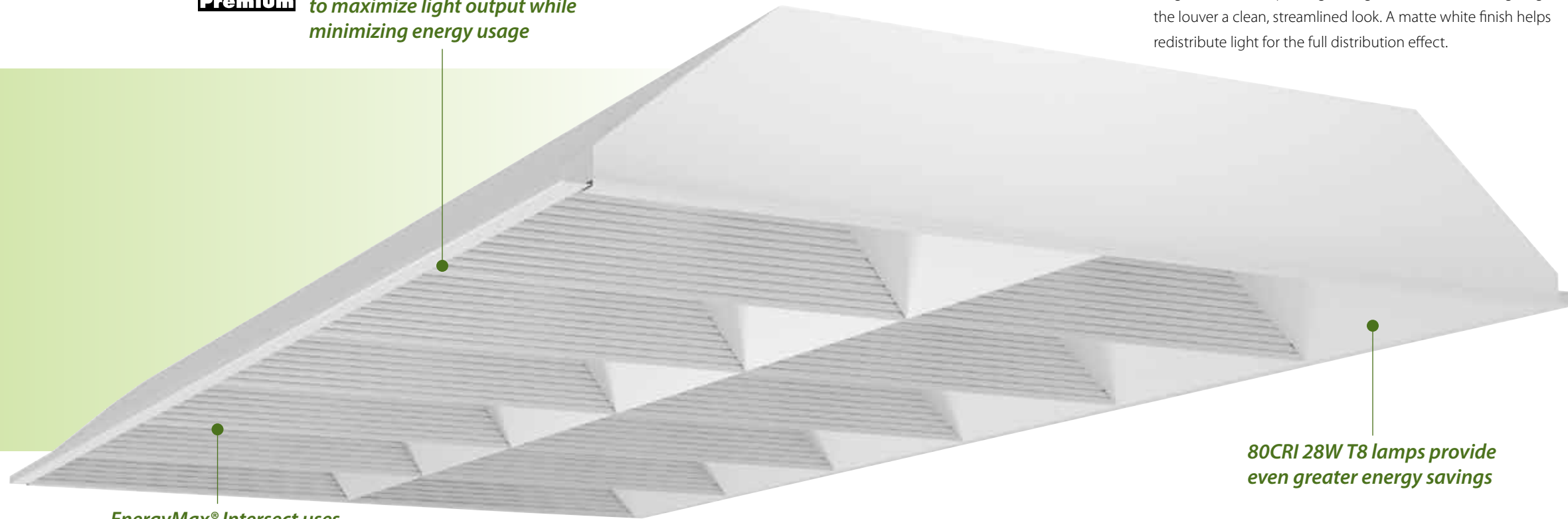
FULL DISTRIBUTION LUMINAIRE

## ENERGYMAX® INTERSECT™ FULL DISTRIBUTION LUMINAIRE

The EnergyMax® Intersect is a 2-lamp, energy-efficient, louvered luminaire designed to provide full distribution and energy savings in a crisp new look. As with other EnergyMax® energy saving products, Intersect's ballast is tuned to provide the perfect balance between light output and energy use. Intersect uses the same tuned system with 28W T8 lamps to provide an even greater energy savings.



**NEMA Premium 1.04 ballast factor tuned ballast is designed to maximize light output while minimizing energy usage**



**EnergyMax® Intersect uses standard 80CRI 32W T8 lamps for light levels equivalent to 3-lamp parabolics**

**80CRI 28W T8 lamps provide even greater energy savings**

### FULL DISTRIBUTION LUMINAIRE

Luminaires that fill the room with controlled light are gaining popularity. Most luminaires in this category use a lens to redistribute some of the light to the walls and soften the light directly below the fixture. Many specifiers want full distribution but also want work surface light levels in the range traditionally provided by parabolics.

Columbia Lighting has solved this problem with the EnergyMax® Intersect™ full distribution louvered luminaire. Intersect is a true louvered system that provides the same footcandles on the work surface as parabolics, while redirecting more light on the walls to greatly reduce the cave effect produced by parabolics.

## FEATURES

### AN ALTERNATIVE TO PARABOLICS

EnergyMax® Intersect with its full distribution and architectural styling provides a refreshing alternative to standard 3-lamp parabolics.

### LOUVER

The EnergyMax® Intersect™ louver is built with a steel frame and cross blades for strength. Baffles have lamp notches to provide maximum lamp shielding in a low profile housing. Integral hinges and latches plus high rising center and side stringers give the louver a clean, streamlined look. A matte white finish helps redistribute light for the full distribution effect.

### EXCEEDS STRICT ENERGY REGULATIONS

More than 60% of U.S. states have energy codes written since 2003. These new codes set strict limits on the Lighting Power Density (LPD, measured in watts per square foot) allowed and require the use of lighting controls. At 0.83W/ft<sup>2</sup> with 32W T8 lamps (or 0.69W/ft<sup>2</sup> with 28W T8 lamps), EnergyMax® Intersect exceeds even the most restrictive code requirements.

### BI-LEVEL SWITCHING

EnergyMax® Intersect is available with an innovative step-dimming ballast to allow switching between 100% and 50% power for energy conservation. Used in conjunction with photocells for daylight harvesting, for peak demand management, or with occupancy sensors, step dimming allows effective control over power consumption without requiring switching off individual lamps as with conventional bi-level switching.

### SAME INITIAL LUMENS AS WITH THREE LAMPS

With EnergyMax® Intersect, you save without sacrificing light levels. The Intersect™ tuned system produces an amazing 88% efficient luminaire that provides the same lumen output as a traditional 3-lamp parabolic while using only two lamps. Provides even greater savings at slightly lower light levels with 28 watt T8 energy saving lamps.

### MAXIMUM EPACT DEDUCTION

The Energy Policy Act (EPAct) of 2005 not only places limits on the energy usage for lighting, but also provides tax deductions for exceeding those limits. Deductions for exceeding the LPD limits can range from \$0.30 to \$0.60 per square foot.

The EnergyMax® Intersect™ system is so conservative in its use of energy that it often qualifies for the maximum EPAct tax deductions.

### MULTIPLE CHOICES

EnergyMax® Intersect uses standard 80CRI 32W T8 lamps. Fifteen additional ballast and lamp combinations are shown on page 6.

### MAXIMUM ENERGY EFFICIENCY

Energy costs are growing; and since lighting makes up a large portion of a building's total cost of energy, there is a real need for lighting fixtures that use less energy.

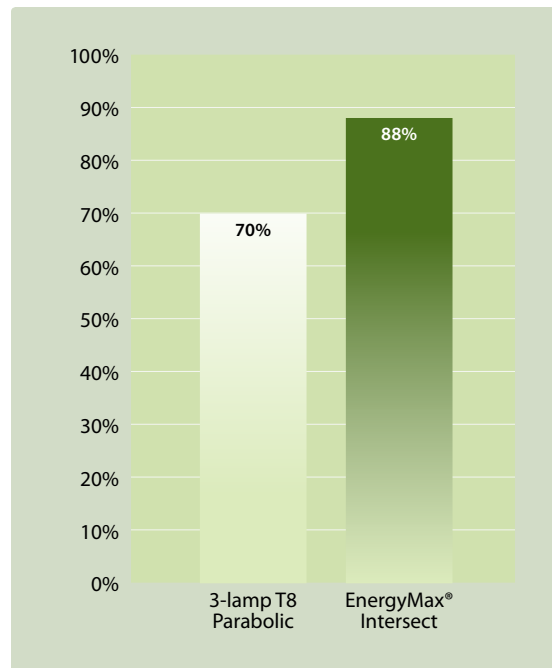
While traditional 3-lamp parabolics use 85 watts, the EnergyMax® Intersect™ tuned system uses only 66 watts, reducing energy usage by 22%. The EnergyMax® Intersect with 28W T8 lamps uses only 55 watts for a 35% reduction in energy use.

## A TUNED SYSTEM FOR OPTIMUM PERFORMANCE

Createchange® energy savings systems are tuned to balance performance and energy savings. Using this approach, Columbia Lighting has shown that performance does not have to suffer to provide substantial energy savings.

EnergyMax® Intersect, with its tuned ballast, incorporates this philosophy to provide a full distribution louvered fixture with up to 35% energy savings over 3-lamp parabolics.

### FIXTURE EFFICIENCY

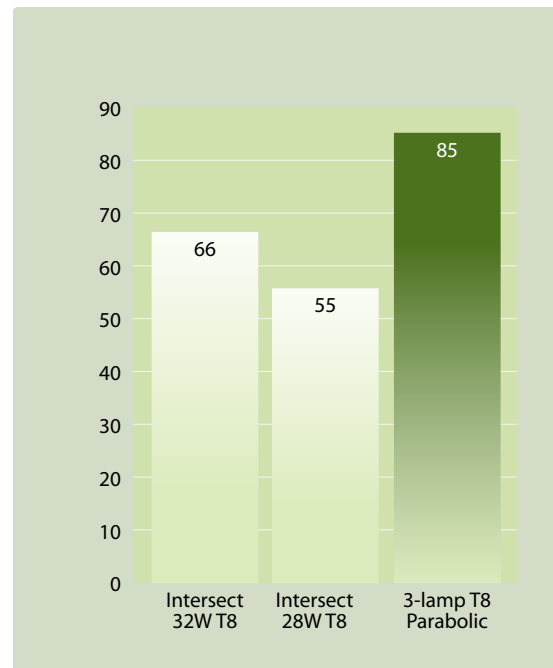


Using standard T8 lamps, a tuned ballast, and high reflective paint, EnergyMax® Intersect boasts incredible efficiencies of 88% and above. That's an increase of more than 25% over standard parabolics.\*

EnergyMax® Intersect's tuned system was designed to provide the same amount of delivered lumens as a standard 3-lamp T8 parabolic.\* If that amount of light is not required, EnergyMax® Intersect with 28W T8 lamps uses even less energy, with only a slight decrease in light output.

\*Calculations use 70% efficiency and 2950 lamp lumens for standard 3-lamp parabolic.

### ENERGY USE



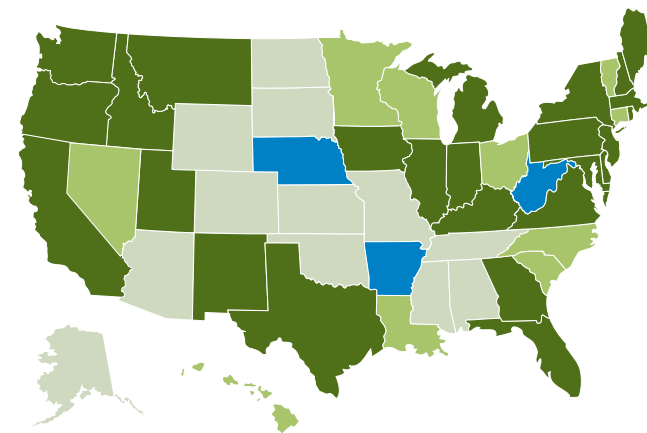
At 66 watts for the 32W T8 configuration and 55 watts for the 28W T8 configuration, EnergyMax® Intersect uses 22-35% less energy than standard 3-lamp parabolics.

## ENERGY REGULATIONS

As of June 1, 2011, more than 70% of U.S. states have energy codes that were written since 1999. These new codes set strict limits on the Lighting Power Density (LPD, measured in watts per square foot) allowed and require the use of lighting controls.

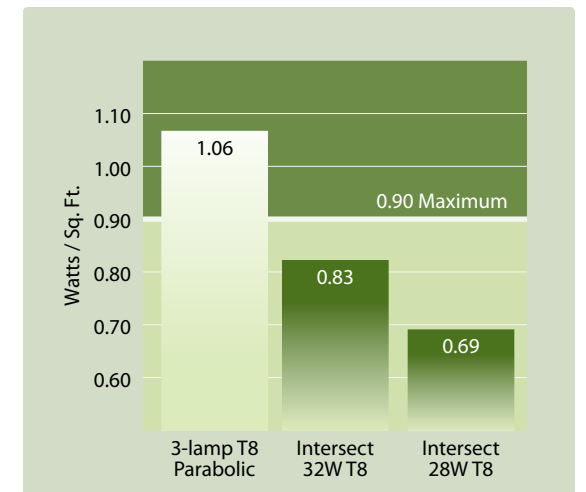
### COMMERCIAL STATE ENERGY CODE STATUS

as of June 2011



- ASHRAE 90.1-2007/2009 IECC, or equivalent
- ASHRAE 90.1-2004/2006 IECC, or equivalent
- Older or less stringent than ASHRAE 90.1-2001/2003 IECC
- No statewide code

### ASHRAE 90.1-2004 OFFICE LPD REQUIREMENT



The most restrictive energy code has a 0.90W/ft<sup>2</sup> requirement for offices. Using a typical installation with fixtures on 8' x 10' centers, EnergyMax® Intersect with 32W T8 lamps uses 0.83W/ft<sup>2</sup> and EnergyMax® Intersect with 28W T8 lamps uses 0.69W/ft<sup>2</sup>. Not only does EnergyMax® Intersect easily satisfy code requirements, it frees up additional watts to use elsewhere in the building.

## TAX DEDUCTIONS AND REBATES

The Energy Policy Act (EPAcT) of 2005 provides tax deductions for energy savings in lighting. By exceeding ASHRAE 90.1-2001 energy standards, you can earn up to \$0.60 per square foot in tax deductions. For EPAcT, the most restrictive requirement is 1.3 W/ft<sup>2</sup> for offices. EnergyMax® Intersect with 32W T8 lamps exceeds the requirement by 36%, providing a tax deduction of \$0.54/ft<sup>2</sup>. EnergyMax® Intersect with 28W T8 lamps exceeds the requirements by an astonishing 47%, providing the maximum tax deduction of \$0.60/ft<sup>2</sup>.

Rebates for energy savings fixtures are also available in several states. These can help to offset the cost of installation even further.

### EPAcT TAX DEDUCTION



## LAMP AND BALLAST

The balance created by EnergyMax® Intersect's tuned ballast provides a great light output to energy usage ratio. There may be times when different results are required, so Columbia Lighting offers Intersect with a variety of lamp and ballast combinations. Use the chart below to see how the different combinations compare.

Test Watts, Delivered Maintained Lumens per Watt, Maintained Footcandles, and Watts per sq. ft.<sup>1</sup>

### T8 LAMPS

BALLAST FACTOR	28W T8* 2750 Lumens 2585 Maintained (FO288xx)		32W T8 2800 Lumens 2660 Maintained (FO7xx)		32W T8 2950 Lumens 2800 Maintained (FO8xx)		32W T8 3100 Lumens 2950 Maintained (FOH8xx)	
	EnergyMax® Tuned System 1.04 BF (E104) <b>NEMA Premium</b>	55W	53.6 fc	65W	54.2 fc	66W	56.7 fc	68W
	87 lpw	0.69W/ft <sup>2</sup>	76 lpw	0.81W/ft <sup>2</sup>	78 lpw	0.83W/ft <sup>2</sup>	79 lpw	0.85W/ft <sup>2</sup>
.77 BF (ELW)	42W	40.0 fc	49W	40.4 fc	50W	42.7 fc	51W	44.3 fc
	85 lpw	0.53W/ft <sup>2</sup>	75 lpw	0.61W/ft <sup>2</sup>	77 lpw	0.63W/ft <sup>2</sup>	79 lpw	0.64W/ft <sup>2</sup>
.88 BF (E)	47W	45.2 fc	56W	46.4 fc	57W	48.4 fc	58W	50.0 fc
	87 lpw	0.59W/ft <sup>2</sup>	75 lpw	0.70W/ft <sup>2</sup>	77 lpw	0.71W/ft <sup>2</sup>	78 lpw	0.73W/ft <sup>2</sup>
1.18 BF (EHL)	64W	62.1 fc	75W	60.6 fc	75W	63.1 fc	78W	65.8 fc
	84 lpw	0.80W/ft <sup>2</sup>	73 lpw	0.94W/ft <sup>2</sup>	76 lpw	0.94W/ft <sup>2</sup>	76 lpw	0.98W/ft <sup>2</sup>

\*28W T8 lamps not available with step or full dimming ballasts.

### STANDARD 3-LAMP PARABOLIC

85W	55.8 fc
60 lpw	1.06W/ft <sup>2</sup>

<sup>1</sup> Footcandle calculations were based on 8' x 10' mounting centers in a 60' x 60' room with 9' ceilings, 2.5' workplane height and 80/50/20 reflectances. LDD = .90 and LLD = .95.

## ORDERING GUIDE

EXAMPLE EMI24-232G-E104U

EMI	NO. OF LAMPS	CEILING TYPE	BALLAST	VOLTAGE	OPTIONS
EMI EnergyMax® Intersect	2 Two	G Grid For hard ceilings use flange kit.	E Electronic T8, 0.88 Ballast Factor, Instant Start	U 120V-277V 347 347V <sup>2</sup>	F0730 30K 70CRI T8 Lamps Installed F0735 35K 70CRI T8 Lamps Installed F0741 41K 70CRI T8 Lamps Installed F0830 30K 80CRI T8 Lamps Installed F0835 35K 80CRI T8 Lamps Installed F0841 41K 80CRI T8 Lamps Installed F028830 30K 80CRI 28W T8 Lamps Installed <sup>4</sup> F028835 35K 80CRI 28W T8 Lamps Installed <sup>4</sup> F028841 41K 80CRI 28W T8 Lamps Installed <sup>4</sup> FOH830 30K High Lumen T8 Lamps Installed FOH835 35K High Lumen T8 Lamps Installed FOH841 41K High Lumen T8 Lamps Installed F5830 30K 80CRI T5 or TSHO Lamps Installed F5835 35K 80CRI T5 or TSHO Lamps Installed F5841 41K 80CRI T5 or TSHO Lamps Installed F5H830 30K High Lumen T5 Lamps Installed F5H835 35K High Lumen T5 Lamps Installed F5H841 41K High Lumen T5 Lamps Installed C388 3-Wire Flex C488 4-Wire Flex GLR Fast Blow Fuse GMF Slow Blow Fuse EL Emergency Battery Pack <sup>4</sup> NYC NYC Compliant NYCU NYC Compliant, Union Label
	SIZE 22 2' x 2' <sup>3</sup> 24 2' x 4'	LAMP TYPE 14 2', T5: 14 Watt 17 2', T8: 17 Watt 24 2', TSHO: 24 Watt 28 4', T5: 28 Watt 31U1 1 5/8" Leg Spacing, T8: 31 Watt 32 4', T8: 32 Watt 40TT 40 Watt Twin Tube Compact, 2G11 base 54 4', TSHO: 54 Watt	ESD Electronic T8, 0.88 Ballast Factor, Step Dimming, Programmed Start <sup>1</sup> ELW Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start EHL Electronic T8, 1.18 Ballast Factor, High Wattage, Instant Start E104 Electronic T8, 1.04 Ballast Factor, Instant Start <sup>2</sup> (N/A 1-Lamp) ESD104 Electronic T8, 1.04 Ballast Factor, Step Dimming, Programmed Start <sup>1,2</sup> EP104 Electronic T8, 1.04 Ballast Factor, Programmed Start <sup>2</sup> EP Electronic T5, TSHO, or T8, Programmed Start EP95 Electronic T5, 0.95 Ballast Factor, Programmed Start (N/A TSHO, 1-Lamp) ESD95 Electronic T5, 0.95 Ballast Factor, Step Dimming, Programmed Start (N/A TSHO, 1-Lamp) EP115 Electronic T5, 1.15 Ballast Factor, Programmed Start (N/A TSHO, 1-Lamp) ESD115 Electronic T5, 1.15 Ballast Factor, Step Dimming, Programmed Start (N/A TSHO, 1-Lamp) ESD80 Electronic TSHO, 0.80 Ballast Factor, Step Dimming, Programmed Start (2-Lamp 54W only) ETT Electronic Twin Tube, Instant Start (specify voltage) EPTT Electronic Twin Tube, Programmed Start		
					ACCESSORIES FK24 2' x 4' Single Flange Kit FK22 2' x 2' Single Flange Kit FKCR Flange Kit Row Adaptor

### LOUVER CONFIGURATION

Size	No. of Lamps	Lamp Type	Louver Configurations
2' x 2'	2	14, 17, 24, 31U1, 40TT	2 x 3 (6)
2' x 4'	2	28, 32, 54	2 x 6 (12)

<sup>1</sup> Not compatible with T8 25, 28, or 30 watt energy savings lamps.

<sup>2</sup> Where available.

<sup>3</sup> 2' x 2' models not suitable for continuous row mount applications.

<sup>4</sup> Not recommended for use with step or full dimming.

- BIL** **Bi-Level Luminaire**  
*3-lamp fixture designed to maximize energy savings in low occupancy areas such as stairwells and storerooms.*
- EMI** **EnergyMax® Intersect™ Full Distribution Luminaire**  
*2-lamp, energy efficient, louvered luminaire designed to provide full distribution and tremendous energy savings.*
- EMSE** **EnergyMax® Stratus™ E-Series Energy Saving Architectural Recessed Indirect Luminaire**  
*2-lamp, energy efficient, recessed indirect luminaire tuned to meet strict Lighting Power Density requirements.*
- EMX** **EnergyMax® Parabolic Energy Saving Parabolic**  
*A system of tuned components designed to provide the perfect balance between light output and energy conservation.*
- EPC** **e-poc® Full Distribution Luminaire**  
*2-lamp, energy efficient, lensed luminaire with contemporary styling, full distribution, and huge energy savings.*
- LHV** **VersaBay® Fluorescent High Bay**  
*The new industry standard for fluorescent high bay lighting with Advanced Thermal Management.*
- MB/MC** **Morph® Fluorescent Exterior Area Lights**  
*T5HO luminaires with unprecedented energy savings and light control.*
- RKT/  
RKS/  
RKSR** **RKT/RKS/RKSR Troffer and Industrial Striplight Retrofit Kits**  
*Retrofit kits to update existing lighting to meet today's lighting needs and lower energy costs*
- TRA** **Transition® High Efficiency Architectural Lensed Luminaire**  
*Transition offers 5 different 2' x 4' configurations with efficiencies from 90 to 100%.*
- XFSW** **XFSW Severe Fiberglass Low/High Bay**  
*A 4- or 6-lamp IP67 Rated, NSF Rated, and 5VA fire rated low/high bay ideal for cold temperatures.*
- XTS** **XTS Enclosed and Gasketed Acrylic Tube, Severe Environment**  
*2-lamp, energy-efficient, enclosed and gasketed lighting suitable for wet locations.*
- ZPT** **Zero Plenum® Troffer High Efficiency Architectural Luminaire**  
*High performance, ultra-low profile luminaire that significantly reduces energy costs.*

## Columbia LIGHTING

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CO1033 8/11

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