

2/22/2015

# 8' Fluorescent Strip Channel Retrofit Kit

Fluorescent Retrofit

Reflector and lamps sold separately!



## Applications

Multiple configurations allow you to select a lamp type and number to meet your criteria, whether they be:

Improved Light Energy Savings

Utility Rebates Improved reliability



Project:	
Catalog#:	
Approved by:	

## Description

FSR8 series fluorescent strip channel retrofit kit is a simple and cost-effective solution to upgrading existing 8' strip fixtures into newer and more efficient electronic T8 or T5 strips.

## Features

### Construction

- Designed for trouble free installation.
- Uses two (2) 4' gear trays that install independently for easy installation.
- Lampholder cutouts guarantee correct lampholder spacing and that lampholder will not fall out during install.
- Optional reflectors available
- Code gauge steel
- High gloss, baked enamel finish
- High quality lamp holders
- NEC compliant luminaire power disconnect standard
- Contents: 2 geartrays with fully wired ballast and lampholders; 12 tek screws; 4 geartray tethers

### Ballast

- Electronic, Inherent Thermal Protection, Class P, Sound rated A
- UL Listed

Fixture Listing: UL Listed

### Quality Assurance

- System Tested, Designed, Approved, and Manufactured in Mendenhall, Mississippi.



Lamp Type	Existing Fixture 2x 75W T12 Base Case	4x 32W T8 Low Ballast Factor High Lumen Lamps	4x 32W T8 Standard Ballast Factor High Lumen Lamps	4x 32W T8 High Ballast Factor High Lumen Lamps	2 x 54W T5HO	Existing Fixture 2x 110W T12HO Base Case	4x 32W T8 High Ballast Factor High Lumen Lamps
Watts	156	96	108	148	120	218	148
Raw lamp lumens	11812	11800	11800	11800	9400	13932	11800
Ballast factor	80%	77%	87%	114%	100%	95%	114%
Effective Lamp Lu-mens (BF * raw lumens)	9450	9086	10266	13452	9400	13235	13452
Lumens per Watt	61	95	95	91	78	61	91
Lumens rela-tive to base case (%)	NA	96%	109%	142%	99%	NA	102%
Energy Savings	NA	38%	31%	5%	23%	NA	32%

Specifications subject to change without notice.

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## Ordering Information

Model Family	Fixture Length	Width	No. of Lamps	Lamp Type/Wattage <sup>(1)</sup>	Ballast (see Table 1)	Input Volts	Factory Installed Options	Cordset Options	T B A	Pack.
FSR	8	4	4	32A	HE	MV	000	00	0	I
FSR	8: Eight Foot	4: 4.25" 5: 5" O: Other (Specify Width)	2 4	32A: F32T8 28A: F28T5 54A: F54T5HO	SE: SBF High Eff <sup>(2)</sup> HE: HBF High Eff <sup>(2)</sup> LE: LBF High Eff <sup>(2)</sup>  PS: PRS T5 P8: PRS T8 <sup>(2)</sup>	MV: 120-277v HV: 347-480v (T5HO) AX: 480-277v <sup>(3)</sup>	000: No FIOs	00: Standard Disconnect		I: Single

Table1:

SE	Standard Ballast Factor High Efficiency Instant Start T8 Ballast
HE	High Ballast Factor High Efficiency Instant Start T8 Ballast
LE	Low Ballast Factor High Efficiency Instant Start T8 Ballast
PS	Program Rapid Start T5 Ballast
P8	Program Rapid Start High Efficiency T8 Ballast

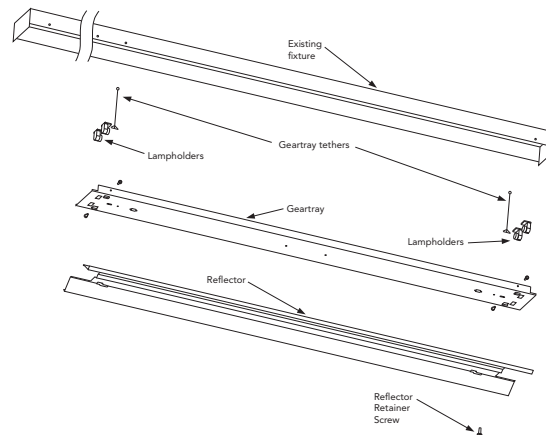
(1) Lamps not included. Please use "PS" Ballast Ordering Options for T5 lamp type.  
 (2) High Efficiency ballasts are CEE Listed.  
 (3) Step-down autotransformer. Allows hook-up of standard MV ballast to 480v.

### Sample Ordering Number:

**FSR 8 4 2 32A HE MV 000 00 0 I**  
 FSR8 Fluorescent Strip Retrofit Kit  
 8-foot 4.25" Wide Cover  
 4-lamps (none installed)  
 F32T8 High Ballast Factor High Efficiency Ballast  
 Multi-volt (120-277v)  
 No Factory Installed Options  
 No Cordset  
 Single Packaging

## Installation in Seven Simple Steps

1. Power off
2. Remove existing front cover, lampholders, and socket bars.
3. Screw geartray tethers into existing fixture to hang geartray.
4. Insert lampholders into labeled geartray cutouts.
5. Insert incoming power leads into ballast disconnect plug.
6. Close cover and screw it to fixture body.
7. Insert lamps.



### RAPID SHIP MODELS AVAILABLE FOR NEXT DAY SHIPMENT

- FSR84232ASEMV000000I
- FSR84432ASEMV000000I
- FSR84432AHEMV000000I
- FSR84432ALEMV000000I
- FSR84432ASEMV000000I
- FSR84454APSMV000000I
- FSR85432ASEMV000000I



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**Field Installed Options Ordering**

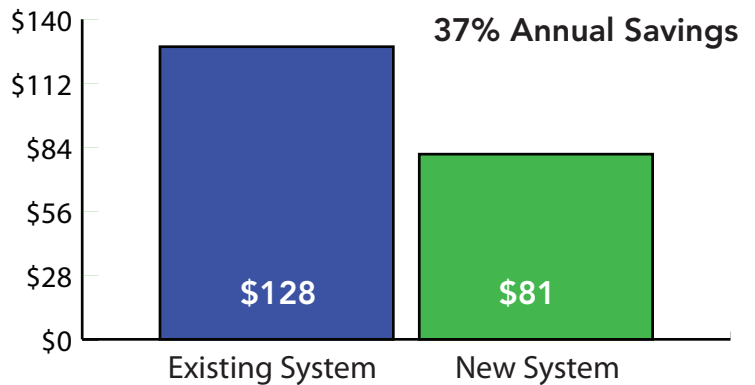


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- FSR8-E Enhanced Specular Aluminum Reflector (95% reflectance)
- FSR8-A Specular Aluminum Reflector (86% reflectance)
- FSR8-W White Aluminum Reflector (91% reflectance)

Fluorescent Retrofit

Energy Cost Estimator					
		Existing System		New System	
		2x 110W T12HO		FSR84432AHE High Ballast Factor Fluorescent Strip Retrofit	
Hours burned per year	4368	Number of Fixtures	1	Number of Fixtures	1
Cost per kWh\$	0.12	Watts per Fixture (existing system)	244	Watts per Fixture (new system)	154
Energy Cost Estimation		Energy used per year (existing system)	\$128	Energy used per year (new system)	\$81
		Energy saving per year (per fixture)		<b>\$47.00</b>	



Howard Industries provides this tool to examine the potential impact of lighting decisions. This tool provides an ESTIMATE only. The analysis of this tool does not warrant or guarantee the actual costs or savings that will be realized as the analysis suggested. You can find the full version of this cost saving tool at the Howard Lighting Website—[www.howardlightingproducts.com](http://www.howardlightingproducts.com). Click "Cost of Ownership Calculator".  
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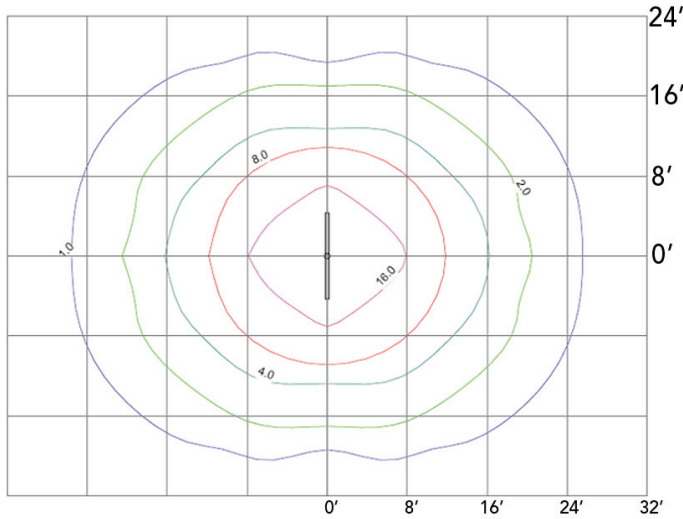
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Fluorescent Retrofit

**Photometric Data - 4 Lamp T8 (FSR84432ASE)**

**Iso-Footcandle Plot**



8' Mounting Height, 4-lamp Multi-volt ballast  
Lamps: Four 32w T8; no reflector

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fix
0-30	1046	18.0	16.0
0-40	1780	30.0	27.0
0-60	3493	59.0	53.0
0-90	5496	93.0	84.0
90-120	1033	18.0	16.0
90-150	1064	18.0	16.0
90-180	1064	18.0	16.0
0-180	6560	111.0	100.0

**Coefficients of Utilization - Zonal Cavity Method**

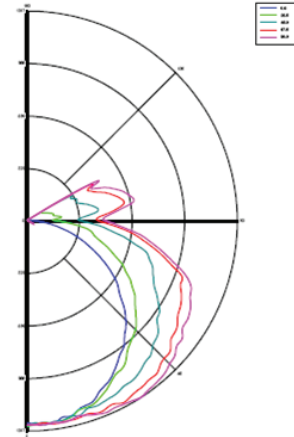
Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	128	128	128	128	123	123	123	123	114	114	114	105	105	105	97	97	97	91
1	113	106	100	95	108	102	97	92	94	90	85	87	83	80	73	73	73	74
2	101	90	81	74	96	87	79	72	80	73	67	73	68	63	57	57	57	61
3	91	78	68	60	87	75	65	58	69	61	55	63	57	51	46	46	46	51
4	83	68	57	49	79	65	56	48	60	52	45	56	49	43	38	38	38	44
5	76	60	49	42	72	58	48	40	54	45	38	49	42	36	32	32	32	38
6	70	54	43	36	66	52	42	35	48	39	33	44	37	31	28	28	28	34
7	64	48	38	31	61	47	37	30	43	35	29	40	33	27	24	24	24	30
8	60	44	34	27	57	42	33	27	39	31	25	37	29	24	21	21	21	27
9	56	40	31	24	53	39	30	24	36	28	23	34	27	22	19	19	19	24
10	52	37	28	22	50	36	27	21	33	26	20	31	24	19	17	17	17	22

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**Candela Plot**

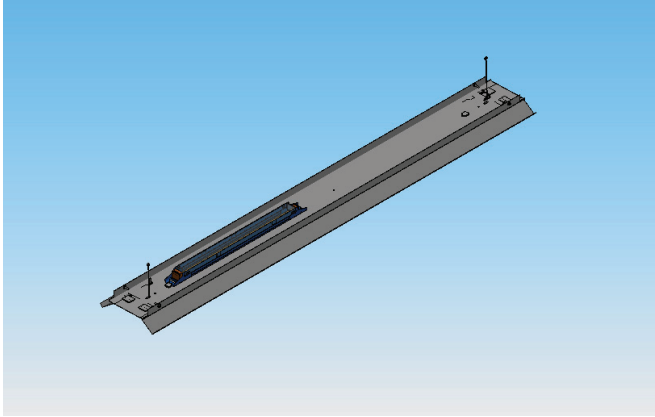


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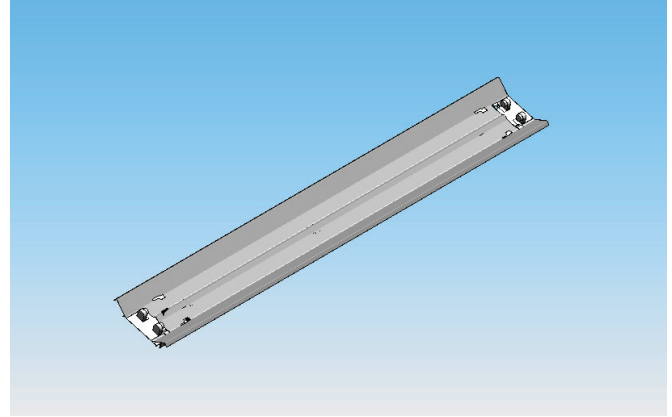
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**Retrofit Details**

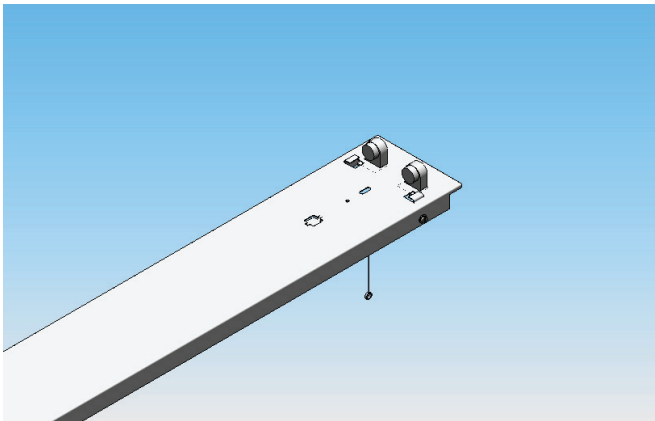
Fluorescent Retrofit



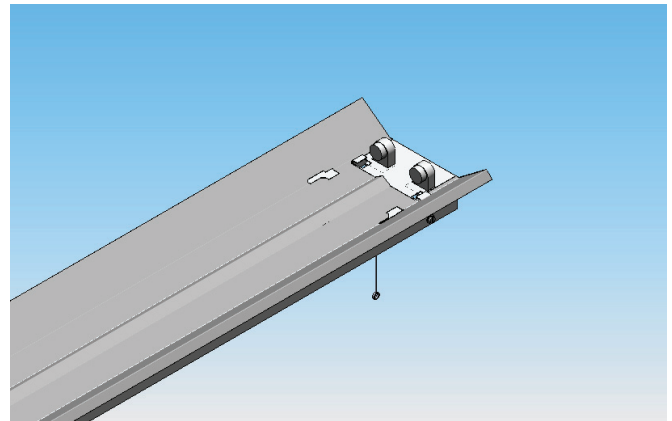
Back View



Front View



No reflector



With Optional Reflector

Note: The representational drawings show only one (1) four (4) foot section of the FSR8 series. The FSR8 will have two (2) four foot sections that are shipped together. The two four foot (and optional reflectors) will need to be field assembled.

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