

# Linear Fluorescent Lighting

*Energy-Saving Lighting Systems*

Saving money and energy is now an important factor for business owners. Howard's Linear Fluorescent Fixtures provide those money and energy saving values over the standard HID system. While fluorescent lighting has been standard for many years in commercial offices, the same offerings is now going to warehouses, parking areas, industrial facilities and retail stores.



**Howard's Linear  
Fluorescent Fixture  
Product Line**



We offer great ways for you and your customers to build a Howard Part number!!!!

**Fixture Spec Sheet HFA3 SERIES 08/07/09**

**ORDERING INFORMATION**

HFA3A632A22HF8000L10B

**Manufacturer:** HFA3A632A22HF8000L10B

**Reflector:** Standard Specular Aluminum (86%)

**Lamp Type/Wattage:** F32T8

**Ballast:** High BF Electronic Instant Start (T8 only)

**Input Volts:** 120-277v Universal

**Factory Installed Options:** Occupancy Sensor

**Part Number:** HFA3A632A22HF8000L10B

Specifications subject to change without notice

**HOWARD** Lighting for life.

Visit us online at [HowardLightingProducts.com](http://HowardLightingProducts.com) or call us at 800.956.3456.

Spec sheets are available online at [www.howardlightingproducts.com](http://www.howardlightingproducts.com)

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**Download Spec Sheet**

**Fixture Type**  
High Bay Fluorescent

**Application**  
Auditorium, Cafeteria, Gymnasium, Manufacturing facility, Retail Store, Warehouse

**Length (in.)**  
48.0

**HFA3 Series**  
HFA3 series high-bay fluorescent fixture is a great energy saving alternative to traditional HID highbay fixtures. This fixture operates six lamps and as a standard feature comes equipped with Howard ballasts.

Your part number based on options selected below:  
**HFA3 A 6 32A HI MV 00A 11 0 B**

Ballast: [Select](#)  
Lamp: [Select](#)  
Accessories: [Select](#)

Select product options to complete your part number.

Option	Value	
Reflector/Lens	Standard Specular Aluminum (86%)	<input checked="" type="checkbox"/>
Lamp Type/Wattage	F32T8	<input checked="" type="checkbox"/>
Ballast	High BF Electronic Instant Start (T8 only)	<input checked="" type="checkbox"/>
Input Volts	120-277v Universal	<input checked="" type="checkbox"/>
Factory Installed Options	<input type="checkbox"/> No Factory installed options <input checked="" type="checkbox"/> Occupancy Sensor <input type="checkbox"/> Emergency Ballast (specify lumen requirement) <input type="checkbox"/> Power wires routed to center KO for easy HF PMK2 installation	<input checked="" type="checkbox"/>
Cordset Options	16/3 no plug; specify length	<input checked="" type="checkbox"/>
Packaging	Bulk/Job 20 Pack	<input checked="" type="checkbox"/>

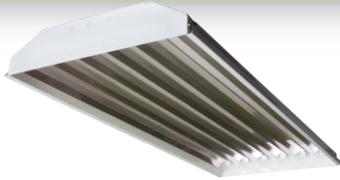
Part number is Complete

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From our home page, click on **Product Configurator** on the top banner.

## 10 steps to creating a Howard Fluorescent fixture model number

1. Choose Fixture Family
2. Choose Reflector
3. Number of Lamps
4. Lamp Type/Wattage
5. Lamp CRI/CCT
6. Ballast Type
7. Ballast Voltage
8. Factory Installed Options
9. Cordset Options
10. Packages



**HFA1**



**HFA2**



**HFA3**



**HFA4**

**High Bay  
Fluorescents**



**Vaporproof  
Fluorescents**

**VHA1**



**VSA4**

**VSA8**





**FSA4**

**FSA8**

**Fluorescent Strips  
and Wraps**



**FW24**

**FW44**





***Choosing the  
correct lighting  
solution for your  
application...***

- Warehouse
  - HFA1, HFA2, HFA3, HFA4
- Manufacturing Facility
  - HFA1, HFA2, HFA3, HFA4
- Retail Store
  - HFA1, HFA2, HFA3, HFA4
- Gymnasium
  - HFA1, HFA2, HFA3, HFA4
- Cafeteria
  - HFA1, HFA2, HFA3, HFA4
- Auditorium
  - HFA1, HFA2, HFA3, HFA4

- Entrance Lighting
  - VHA1, VSA4, VSA8
- Car Washes
  - VHA1, VSA4, VSA8
- Public Areas
  - VHA1, VSA8
- Parking Structures
  - VHA1, VSA4, VSA8
- Beverage Industry
  - VHA1
- Food Processing
  - VHA1, VSA4, VSA8
- Construction Sites
  - VHA1
- Industrial Lighting
  - VHA1, VSA4, VSA8
- Freezer
  - VSA4

***Choosing the  
correct lighting  
solution for your  
application...***





***Choosing the  
correct lighting  
solution for your  
application...***

- Area Lighting
  - FSA4, FSA8
- Display Cases
  - FSA4, FSA8
- Shops/Sheds
  - FSA4, FSA8, FW24, FW44
- Task Lighting
  - FSA4, FSA8
- Storage Area
  - FSA4, FSA8
- Utility Areas
  - FSA4, FSA8, FW24, FW44
- Hallway/Corridor
  - FW24, FW44
- Schools
  - FW24, FW44
- Office
  - FW, 24, FW44

# Lamp Options Available



Lamp Installation  
Available\*

## Sample ordering information

Lamp Type/Wattage		CCR/CCT				
Ordering code	Description	Ordering Code	CRI	CCT	T5	T8
<b>28</b>	F28T8	<b>A</b>	No Lamps Installed			
<b>30</b>	F30T8	<b>B</b>	75	3000	No	No
<b>32</b>	F32T8	<b>C</b>	75	3500	No	No
<b>54</b>	F54T5HO	<b>D</b>	75	4100	No	No
		<b>E</b>	75	5000	No	No
		<b>F</b>	85	3000	Yes	Yes
		<b>G</b>	85	3500	Yes	Yes
		<b>H</b>	85	4100	Yes	Yes
		<b>I</b>	85	5000	Yes	Yes
		<b>J</b>	85	6500	Yes	Yes

\* Consult factory for additional options you might need, but do not see on this example

**T8**

**Instant Start  
Normal Power  
2, 3, 4 lamps**



**T8**

**Instant Start  
Low Power  
2, 3, 4 lamps**



**T8**

**Instant Start  
High Power  
2, 3, 4 lamps**



**T12**

**Instant Start  
Normal Power  
2 lamps**



**T5HO**

**Program Rapid Start  
Normal Power  
2 lamps**



**T8**

**Program Rapid Start  
Normal Power  
2 lamps**



**T12**

**Rapid Start  
Normal Power  
2 lamps**



## Ballast Options available\*

\*Not all ballasts will work in every fixture. Please consult spec sheets available online at [www.howardlightingproducts.com](http://www.howardlightingproducts.com) or consult with the factory.



## Sample ordering information

Lamp Type/Wattage	
Ordering code	Description
<b>HI</b>	High BF electronic Instant Start (T8 only)
<b>LI</b>	Low BF Instant Start (T8 only)
<b>SI</b>	Standard BF Instant Start (T8 only)
<b>PS</b>	Programmed Rapid Start

Input Volts	
Ordering Code	CRI
<b>02</b>	120 Volt
<b>08</b>	277 Volt
<b>09</b>	347 Volt
<b>MV</b>	120-277 Volt Universal
<b>HV</b>	347-480v Universal T5HO only
<b>HX</b>	480-277 Step-down Autotransformer (allows hook- up of standard MV ballast to 480V)

\*Not all ballasts will work in every fixture. Please consult spec sheets available online at

[www.howardlightingproducts.com](http://www.howardlightingproducts.com) or consult with the factory.

Ordering Code	Description
000	No factory installed options
A	Occupancy Sensor
B	Emergency Ballast
C	Door with lens and safety cable
D	Door with lens
G	Wireguard
I	Special wiring instructions
J	J-Box Mounting Plate with power wires routed to center Knock Out
T	Toggle Switch Bi-Level Lighting Control

### Occupancy Sensor –

self contained sensor mounts directly to the luminaire or electrical box to provide local occupancy control for both general area and aisle way pattern detection...

- Passive Infrared technology
- Use in warehouses, manufacturing, and other high ceilings



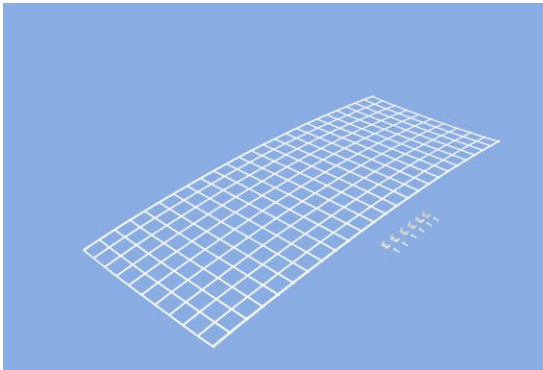
## Emergency Ballast –

The emergency ballast works with an AC ballast to convert new or existing fluorescent fixtures into emergency lighting. When there is a power outage, the emergency ballast takes over. When orderings, Lumen specification is required to ensure you have the proper emergency lighting system.

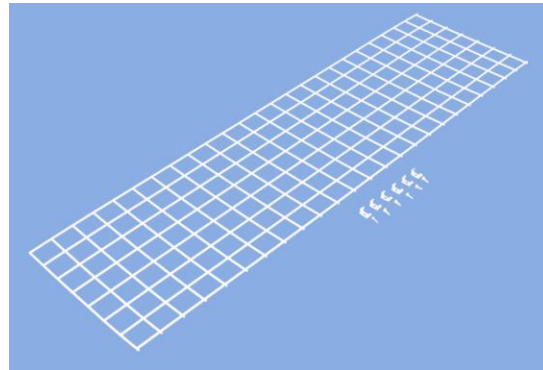


## Wire Guards –

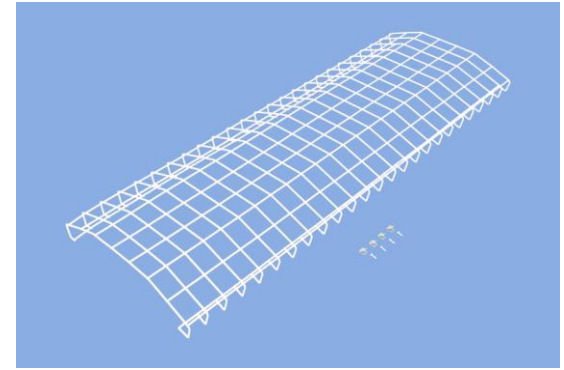
When you need a little extra protection.  
Includes attachment hardware.



HFA1



HFA2



HFA3



## Toggle Switch Bi-Level Lighting Control –

Allows for Separate control of two ballasts through simple “toggling” of a standard wall switch. Recommended use of programmed start ballast with this control.





Ordering Code	Description
00	Standard luminaire power disconnect (No Cord)
01	6' SJT 18/3; no plug
02	10' SJT 18/3; no plug
03	6' SJT 18/3; L5-15 twist lock (120V)
04	10' SJT 18/3; L5-15 twist lock (120V)
05	6' SJT 18/3; 5-15 non twist lock(120V)
06	10' SJT 18/3; 5-15 non twist lock(120V)
07	6' SJT 18/3; L7-15 twist lock (277V)
08	10' SJT 18/3; L7-15 twist lock (277V)
09	6' SJT 18/3; 7-15 non twist lock(277V)
10	10' SJT 18/3; 7-15 non twist lock(277V)
11	16/3 no plug; specify length
12	6' SJT 16/4
16	16' SJT 18/3; 7-15 non twist lock(277V)
17	18/3 no plug; specify length
18	6' SJT 16/3; L8-20 twist lock (480v)
19	10' SJT 16/3; L8-20 twist lock (480v)
20	16' SJT 18/3; L5-15 twist lock (120V)
21	16' SJT 18/3; L7-15 twist lock (277)
53	White 6' SJT 18/3; L5-15 twist lock (120V)

Ordering Code	Description
I	Individual packaging
B	Bulk packaging

There are benefits to switching to Fluorescent Fixtures. The energy savings associated with switching to fluorescent lighting will allow for the fixtures to pay for themselves over the course of a few years.

Other benefits include:

- 25-50% energy savings over metal halide high bays
- Longer lamp life
- Ballasts are sound free
- Segmented optics for better vertical and horizontal illumination
- Improved color rendition

# Simple Energy Cost Estimator

Existing System	New System
400 Watt MH High Bay	HFA3E632AHI High Ballast Factor High Eff Fluorescent Highbay

Hours burned  
per year

4368

Number of fixtures

1

Number of fixtures

1

Cost per kWh \$

0.10

Watts per fixture

458

Watts per fixture

169

## Energy Cost Estimation

Energy used per yr.  
(existing system)

\$200

Energy used per yr.  
(new system)

\$74

Energy savings per yr.  
(entire site)

\$126

Energy savings per year  
(each new system  
fixture)

\$126.24

# Energy Savings Return

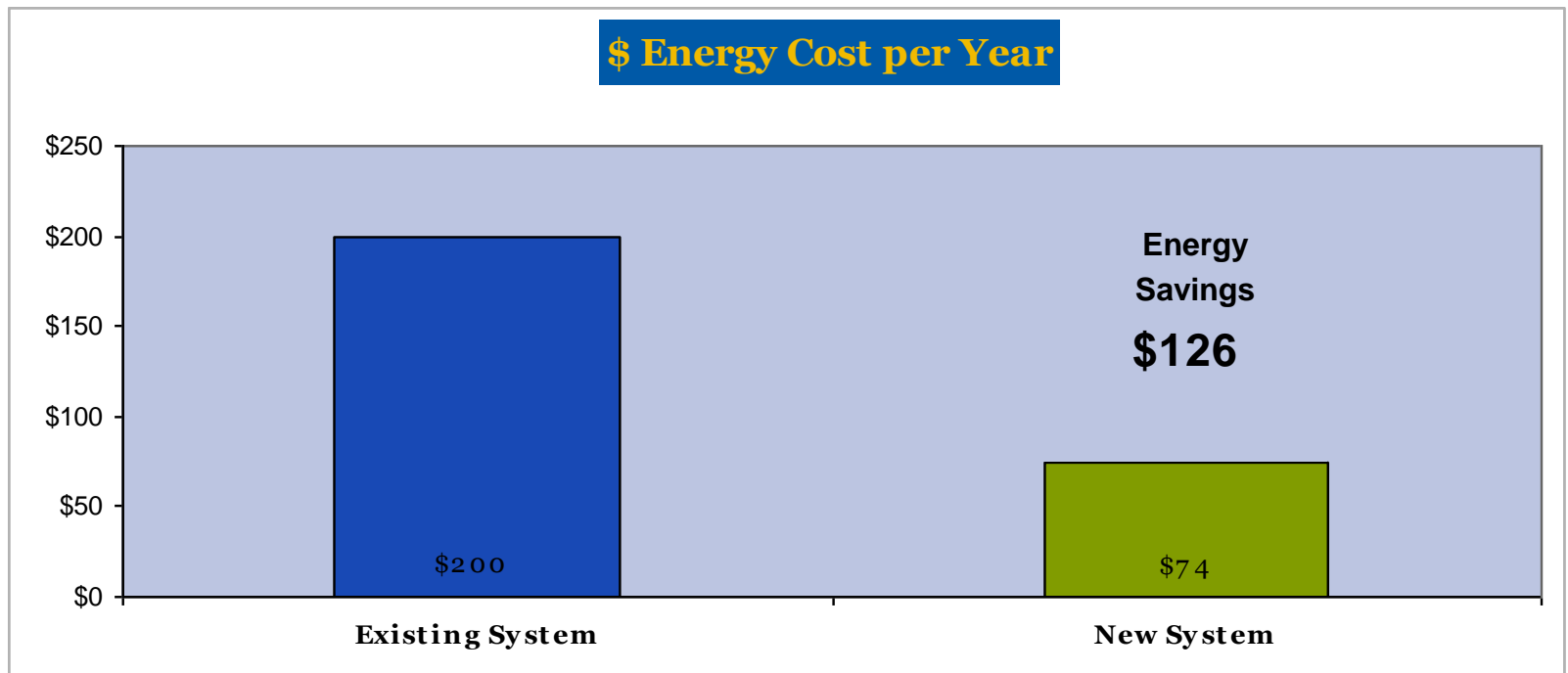
Metal Halide vs. Linear Fluorescent

\$ Investment to upgrade  
(per each new fixture)

\$140.40

Energy savings will recover investment in  
(months)

13



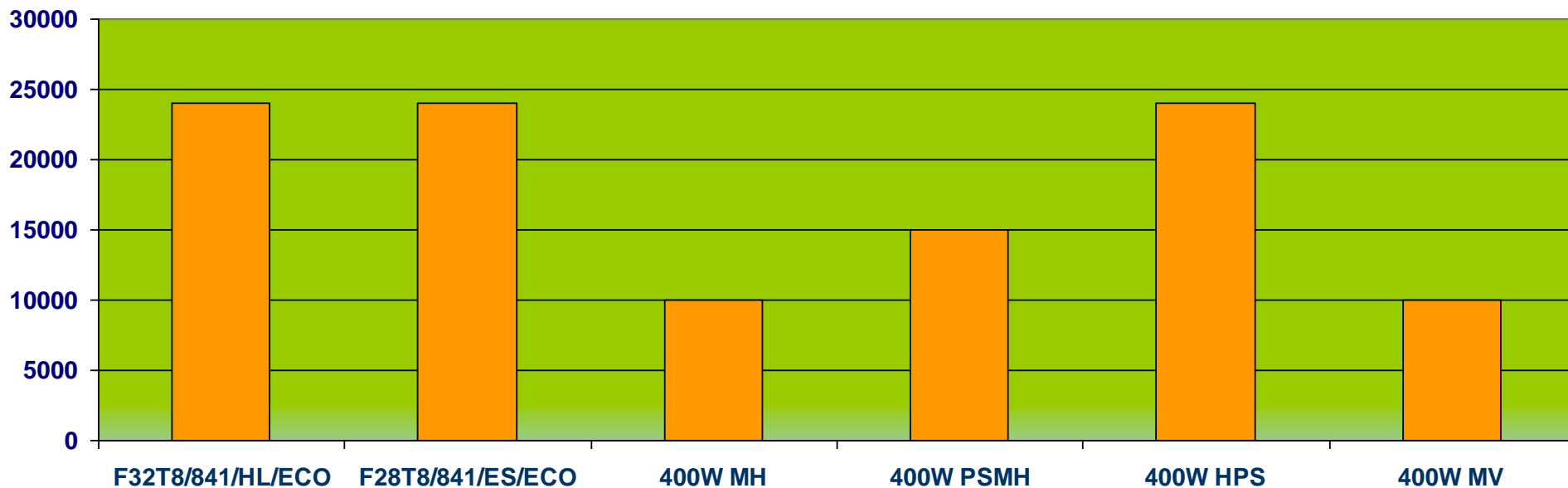
**Potential Yearly Savings:**

**\$126**

*Lighting for life.*

Lamp Type	Avg. Life (hours)	Color Temp. (K)	CRI
F32T8/841/HL/ECO	24000	4100	85
F28T8/841/ES/ECO	24000	4100	85
400W MH	10000	4200	70
400W PSMH	15000	4200	60
400W HPS	24000	2100	22
400W MV	10000	4500	20

**Avg. Life (hours)**





Lamp Type	Color Temp. (K)	CRI
Linear Fluorescent	4100	85
Metal Halide	4200	70
Pulse Start Metal Halide	4200	60
High Pressure Sodium	2100	22
Mercury Vapor	4500	20

**CCT & CRI**

