

# GE Consumer & Industrial Lighting

**CRISP WHITE LIGHT  
FITS EXISTING HPS SOCKETS**

## **GE *ChromaFit*™** **MULTI-VAPOR® LAMPS**

A direct replacement for High Pressure Sodium (HPS) lamps, GE ChromaFit™ Multi-Vapor® lamps provide improved crisp white color without expensive ballast or fixture change.

### **The advantages of metal halide lighting for HPS users.**

ChromaFit™ lamps provide the benefits of metal halide lighting - cool crisp light, improved color-using existing HPS ballasts and fixtures. GE ChromaFit™ Multi-Vapor® lamps are designed to operate on ANSI standard S50 and S51 ballasts. Available in 250-watt and 400-watt versions.

### **Cool white light.**

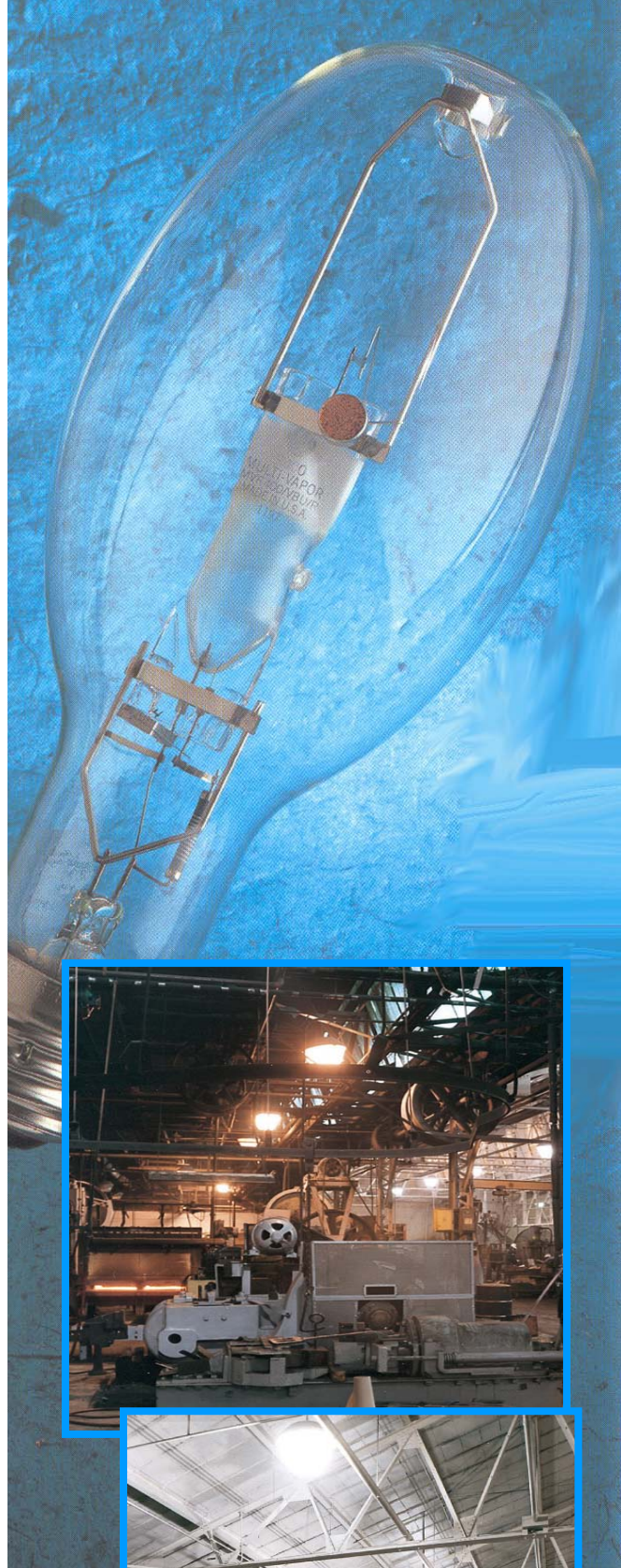
ChromaFit™ lamps provide the crisp white light typical of metal halide lamps, adding sparkle and comfort to any setting.

### **Improved color.**

With a color rendering index of 65 for the clear lamp and 70 for the coated version, ChromaFit™ is an excellent choice to upgrade HPS systems for improved color without costly fixture changes.

### **Metal halide efficiency.**

ChromaFit™ lamps are highly efficient, providing up to 100 lumens per watt of quality light.



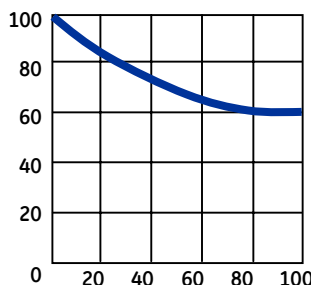
**imagination at work**

# GE ChromaFit™ Multi-Vapor® Lamps

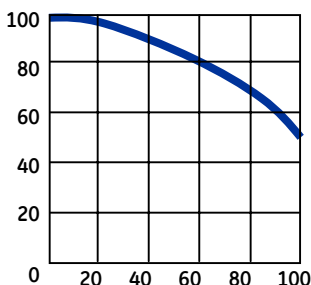
Performance Data

Product Information	Clear 250-watt	Coated 250-watt	Clear 400-watt	Coated 400-watt	Clear 400-watt
Product Code	12762	12769	12770	12772	26851
Refer to ANSI Code	S50	S50	S51	S51	S51
Description	MVR250/VBU/R	MVR250/C/VBU/R	MVR400/VBU/R	MVR400/C/VBU/R	MVR400/U/ED28/R
<b>Physical Characteristics</b>					
Burning Position	Vert. Base Up $\pm 15^\circ$	Vert. Base Up $\pm 15^\circ$	Vert. Base Up $\pm 15^\circ$	Vert. Base Up $\pm 15^\circ$	Universal
Bulb Designation	ED28	ED28	ED37	ED37	ED28
Bulb Material	Heat-Resistant Glass	Heat-Resistant Glass	Heat-Resistant Glass	Heat-Resistant Glass	Heat-Resistant Glass
Base Type (Material)	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass
Bulb Nominal Diameter, mm (inches)	88.9(3.5")	88.9(3.5")	117.5 (4.625)	117.5 (4.625)	88.9 (3.5")
Light Center Length, mm (inches)	146.0 (5.75")	146.0 (5.75")	146.0 (5.75)	146.0 (5.75)	127.0 (5")
Maximum Overall Length, mm (inches)	209.5 (8.25")	209.5 (8.25")	292.1 (11.5)	292.1 (11.5)	211.1(8.187")
Effective Arc Length, mm (inches)	27 (1.062)	27 (1.062)	41 (1.625)	41 (1.625)	35.4 (1.375)
Maximum Bulb Temperature $^\circ\text{C}$	400 $^\circ\text{C}$	400 $^\circ\text{C}$	400 $^\circ\text{C}$	400 $^\circ\text{C}$	450 $^\circ\text{C}$
Maximum Base Temperature $^\circ\text{C}$	210 $^\circ\text{C}$	210 $^\circ\text{C}$	210 $^\circ\text{C}$	210 $^\circ\text{C}$	230 $^\circ\text{C}$
Eccentricity: Bulb to Base	3 $^\circ$	3 $^\circ$	3 $^\circ$	3 $^\circ$	3 $^\circ$
Eccentricity: Bulb to Arc Axis	3 $^\circ$	3 $^\circ$	3 $^\circ$	3 $^\circ$	3 $^\circ$
<b>Luminaire Characteristics</b>	Enclosed	Enclosed	Open	Open	Enclosed
<b>Electrical Characteristics</b>					
Nominal Lamp Watts	250	250	400	400	400
Nominal Lamp Volts	95	95	110	110	107
Nominal Lamp Amps-Starting	4.4	4.4	5.9	5.9	5.0
Nominal Lamp Amps-Operating	2.9	2.9	3.9	3.9	4.2
Maximum Current Crest Factor	1.8	1.8	1.8	1.8	1.8
<b>Photometric Characteristics</b>					
Reference <sup>1</sup> -Initial Lumens	18,500	18,000	40,000	36,500	36,000V/33,100H
Ref. <sup>1</sup> -Mean Lumens (40% Rated Life) Vert. $\pm 15^\circ$	13,900	13,000	30,000	26,280	22,000V/20,200H
Design Factor	1.0	1.0	1.0	1.0	1.0
Average Rated Life (Hours) 10 Hrs./Start	10,000	10,000	20,000	20,000	20,000V/15,000H
Color Rendering Index (Ra) CRI @ K <sup>2</sup>	65 @ 4500K	70 @ 4000K	65 @ 4500K	70 @ 4000K	65 @ 4000K
Warm-up Time (Minutes) to 90%	2 to 4	2 to 4	2 to 4	2 to 4	3 to 5
Hot Restart Time (Minutes) to 90%	5 to 10	5 to 10	5 to 10	5 to 10	3 to 5
Chromaticity Coordinates: X-	.365	.380	.365	.380	.385
Chromaticity Coordinates: Y-	.395	.380	.395	.380	.390

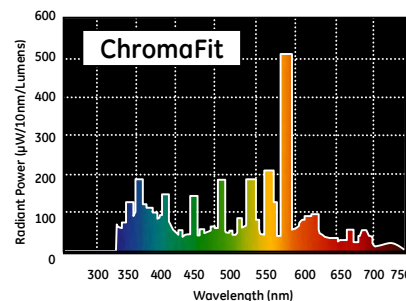
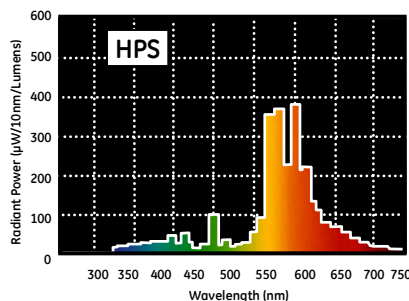
## Nominal Metal Halide Lumen Maintenance



## Standard Lamp Mortality



## Spectral Distribution - HPS vs. ChromaFit



**1 Reference Lumens**-Rated average lamp lumens obtained under controlled laboratory conditions in a prescribed burning position. Initial Reference Lumens refer to the lamp lumen output after 100-hours burning. Mean Reference Lumens refer to the lamp lumen output at the mean lumen point during lamp life. The mean lumen point occurs at 40% rated life for metal halide lamps. Lamp performance on typical systems under typical service conditions will vary from the reference lumen rating.

**2** Metal halide lamps are multi-component lamps and will have wider color variations than the single-component mercury lamp. These will be increased by the lighting fixtures' electrical, thermal and physical characteristics. Arc tube darkening occurring throughout life will also change lamp-to-lamp color.

\* Metal halide lamps are constructed of an outer bulb with an internal arc tube made of quartz. The arc tube operates under high pressure at very high temperatures - as high as approximately 1100C. The arc tube and outer bulb may unexpectedly rupture due to internal causes or external factors such as a system failure or misapplication.

\* **Relamp Fixtures At or Before the End of Rated Life** - Beyond rated life, light output diminishes, while energy consumption and risk of rupture increases.

\* Lamp must only be operated in the types of fixtures prescribed in this specification bulletin. When used, fixture lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 100C). If in doubt, contact your fixture manufacturer.

\* In continuous operating systems (24 hour/day, 7 days/week), turn lamps off once per week for at least 15 minutes. Failure to comply increases the risk of rupture.

**3** Lumen Maintenance is measured under specified test conditions at rated lamp watts, for lamps that have been operated 10 or more burning hours per start. **The date on Lumen Maintenance represents nominal values for Metal Halide Lamps. Lamp performance on actual systems may vary due to lamp orientation, ambient temperatures, ballast variations, and other reasons. Mean lumens are measured at 40% of rated life, at rated lamp watts.**

**CAUTION:** The following operating instructions must be complied with to help avoid possible shattering and early failure of the lamp.

**Important Notice:** In accordance with Federal Standard 21CFR 1040.3, the following notice applies to the Multi-Vapor lamps described above.

**Warning:** This lamp can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured, and the arc tube continues to operate. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain types of lamps that will automatically be extinguished when the outer envelope is broken or punctured are commercially available from General Electric Company. These are self-extinguishing SAF- T-GARD® Mercury and Multi-Vapor lamps.

For additional product and application information,  
please consult GE's Website: [www.gelighting.com](http://www.gelighting.com)