TECHNICAL BULLETIN
METAL HALIDE LAMP

Metal Halide Retrofit from HPS
EYE Multi Metal Ace™
MF400X/U/LU

ANSI Code:

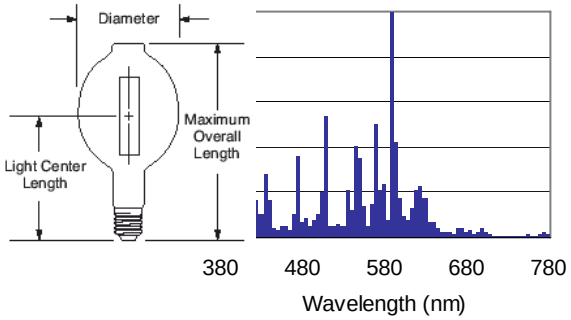
Product Code: 51984

Features:
- Works in all HPS lighting systems with an ignitor
- Improves color rendering index from 20 CRI to 60 CRI
- Excellent lamp to lamp color consistency
- Nickel-plated base
- Applications-Parking lots, manufacturing, warehouse

PERFORMANCE DATA

Initial lumens at rated watts after 100 hours operation	34800V 31800H	lm
Mean lumens at 10 hours/start	25900V 23200H	lm
Average life	20000V 15000H	h
Warm up time, maximum	4	min
Correlated color temperature	4000	K
CIE chromaticity	0.382, 0.392	X, Y
Color rendering index (Ra)	70	
Operating Position	Base up-Horizontal	
Time to hot re-start, max.	15	min

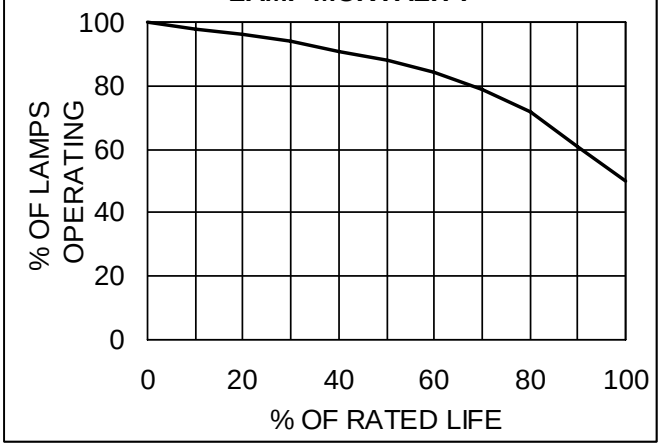
SPECTRAL DISTRIBUTION



ELECTRICAL CHARACTERISTICS

Nominal lamp wattage	400	W
Nominal lamp voltage	100	V
Nominal lamp current	4.6	A_{rms}
Maximum current crest factor	1.8	-
Maximum starting current	7.5	A_{rms}
Minimum starting current	4.6	A_{rms}
Ballast requirements	Use with ballast rated for ANSI S51 lamp	
Open circuit voltage (CWA) -30°C (-22°F)	198	V_{rms}
	280	V_{peak}
Lampholder voltage rating	4	kV
IGNITOR REQUIREMENTS		
Min. Pulse Height	2500	V
Max. Pulse Height	4000	V
Min. Pulse Width	1.0@2250	µsec@V
Min. Pulse repetition	1	half cycle
Pulse Positions	60-90 240-270	degrees

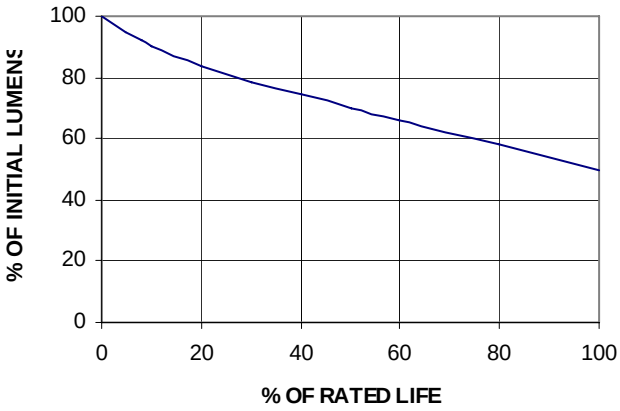
LAMP MORTALITY



PHYSICAL DESCRIPTION

Maximum overall length	291 (11.45)	mm (in)
Light center length	146 (5.75)	mm (in)
Bulb diameter	117 (4.63)	mm (in)
Base to bulb eccentricity	3	deg
Maximum base temperature	210 (410)	°C (°F)
Maximum bulb temperature	400 (752)	°C (°F)
Bulb designation	BT37	
Bulb material	Borosilicate (Hard Glass)	
Arc tube material	Quartz	
Effective arc length	42 (1.65)	mm (in)
Bulb finish	Phosphor coated	
Base designation	E39 Mogul	

LUMEN MAINTENANCE



FIXTURE REQUIREMENT

E Rated-Enclosed, universal burning position
S Rated-Open fixture, base up or base down +/- 15º

ISO 9001:2008 Certified **ISO 14001:2004 Certified** **OSHAS 18001:2007 Certified** **ISO 17025:2005 Accredited**

EYE LIGHTING INTERNATIONAL OF NORTH AMERICA, INC.
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⚠ WARNING

This lamp can cause serious skin burn and eye inflammation from short-wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

RISK OF ELECTRIC SHOCK
•Turn power off before inspection, installation or removal •Protect lamp from direct contact with liquids to avoid breakage from thermal shock

RISK OF FIRE
•Keep combustible materials away from lamp during operation

UNEXPECTED LAMP RUPTURE MAY CAUSE INJURY, FIRE, OR PROPERTY DAMAGE
•Do not exceed rated ballast voltage •Do not use lamp if outer glass is scratched or broken.
•Do not use beyond rated life •Do not turn on lamp until fully installed •Use only with a fixture and ballast rated for this product •Turn lamp off at least once a week for 15 minutes
•Electrically insulate any metal to glass support in fixture

⚠CAUTION

RISK OF BURN
•Allow lamp to cool before handling.

LAMP MAY SHATTER AND CAUSE INJURY
•Do not use excessive force when installing lamp •Dispose of lamp in a closed container

LAMP OPERATING INSTRUCTIONS

This is a discharge lamp and requires some time to restart and come up to full brightness after a power interruption. If power supply dips or is interrupted, lamps may extinguish and not restart. Turn off power supply for 10-15 minutes and allow lamp to fully cool. Lamp will restart when power is restored.

R	Conforms to: USA: 21CFR1040.30 Canada: ANSI 136.1-2000

Hg-LAMP CONTAINS MERCURY
Manage in Accord with Disposal Laws
See: www.lamprecycle.org or 1-888-665-2677

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