HOWARD INDUSTRIES, INC.

Howard Industries

METAL HALIDE REGULATED-LAG BALLASTS

Different from the traditional CWA or High Reactance circuit types, the Regulated Lag circuit design was designed for optimum lamp performance under the most demanding of operating conditions. The Reg-Lag circuit differs from more common types by incorporating an electrically "isolated" third coil (other types use one or two coils) onto the magnetic grade steel laminations, increasing electrical efficiencies and voltage regulation. The result is **longer lamp life, increased lumen maintenance and more consistent color rendition.**

POWERED BY HOWARD HI

STANDARD FEATURES:

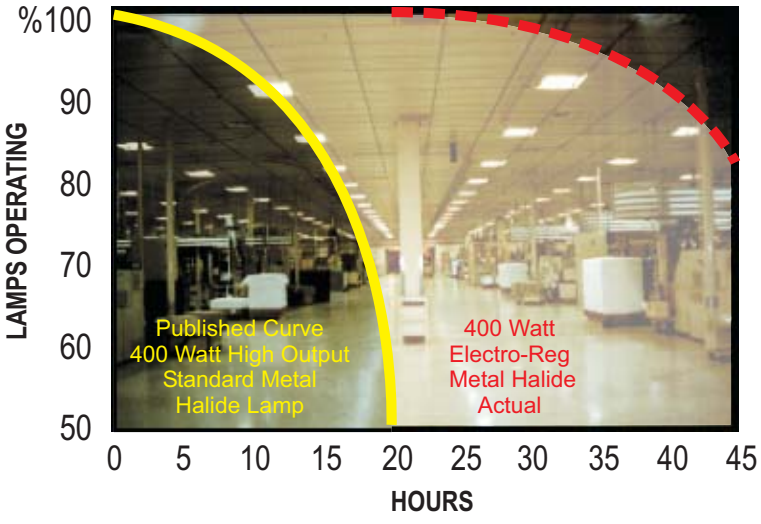
- **World Class, Made in the USA** at the Howard Industries, Ballast Division plant in Mendenhall, Mississippi. Howard has assembled a continuous flow production facility using the most automated ballast production processes available in the industry.
- **All voltage leads are factory installed with voltage identification lead wire.** For multiple input lead ballasts, all voltage input leads other than the primary voltage are pre-insulated with factory installed insulation capping.
- **All core and coil assemblies are vacuum impregnated** with silca filled varnish and oven cured. This process produces quieter, cooler operating ballasts while significantly increasing ballast life.
- **CSA Certified and UL Component recognized.** Tested by ETL in accordance with ANSI C82.4, C78.387.
- **Warranty** – Howard Industries warrants its HID Ballast to be free of defects in material and workmanship for a period of **two years** from the date of manufacture.

METAL HALIDE HID

PULSE START – REGULATED LAG – CORE AND COIL 60Hz

INPUT VOLTAGE	CATALOG NUMBER	CIRCUIT TYPE	INPUT POWER (WATTS)	LAMP POWER		MAXIMUM INPUT CURRENT	NOM. OPEN CIRCUIT VOLTAGE	WIR. DIA.	DIMENSIONS			CAPACITOR		TOTAL WT. (LBS.)	IGNITOR PART NUMBER	U.L. BENCH TOP RISE CODE
				NOM. LAMP WATTS	NOM. BALLAST FACTOR				FIG.	A (IN.)	B (IN.)	DRY	OIL			
175 WATT, ANSI Code M-137, M-152, M-57, METAL HALIDE LAMP																
120	**M0175-02C-411**	REG-LAG	204	175	100%	1.7	272	E	3	1.56	3.52	-	3.40	12.0	ST1001	A
277	**M0175-27C-411**	REG-LAG	204	175	100%	0.75	272	E	3	1.56	3.52	-	3.40	12.0	ST1001	A
120T/480	**M0175-29C-411**	REG-LAG	204	175	100%	0.43	272	E	3	1.56	3.52	-	3.40	12.0	ST1001	A
250 WATT, ANSI Code M-138, M-153, M-58, METAL HALIDE LAMP																
120	**M0250-02C-411**	REG-LAG	287	250	100%	2.5	275	E	3	2.25	4.25	-	4.87	16.0	ST1001	A
120T/277	**M0250-27C-411**	REG-LAG	287	250	100%	1.1	275	E	3	2.25	4.25	-	4.87	16.0	ST1001	A
120T/480	**M0250-29C-411**	REG-LAG	287	250	100%	0.6	275	E	3	2.25	4.25	-	4.87	16.0	ST1001	A
350 WATT, ANSI Code M-131, METAL HALIDE LAMP																
120	**M0350-02C-411**	REG LAG	395	350	100%	3.4	280	E	3	3.0	4.65	-	4.73	20.8	ST1001	A
120T/277	**M0350-27C-411**	REG LAG	395	350	100%	1.45	280	E	3	3.0	4.65	-	4.73	20.8	ST1001	A
120T/480	**M0350-29C-411**	REG LAG	395	350	100%	0.84	280	E	3	3.0	4.65	-	4.73	20.8	ST1001	A
400 WATT, ANSI Code M-128, M-135, M-155, M-59, METAL HALIDE LAMP																
120	**M0400-02C-411**	REG-LAG	450	400	100%	3.8	275	E	3	3.5	5.5	-	4.87	23.2	ST1001	A
120T/277	**M0400-27C-411**	REG-LAG	450	400	100%	1.6	275	E	3	3.5	5.5	-	4.87	23.2	ST1001	A
120T/347	**M0400-28C-411**	REG-LAG	450	400	100%	1.3	275	E	3	3.5	5.5	-	4.87	23.2	ST1001	A
120T/480	**M0400-29C-411**	REG-LAG	450	400	100%	0.9	275	E	3	3.5	5.5	-	4.87	23.2	ST1001	A
120T/208/240	**M0400-62C-411**	REG-LAG	450/450	400	100%	2.2/1.9	277	E	3	3.5	5.5	-	4.87	23.2	ST1001	A/A

Documented Operating Characteristics
Regulated Lag vs. CWA



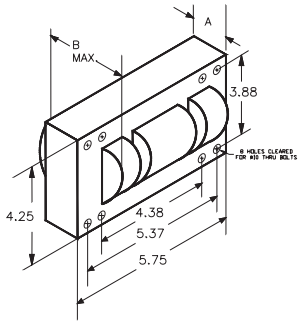
Lamp life on Standard PLA/CWA (50% failed)

0% Failed
at 22,000 hours

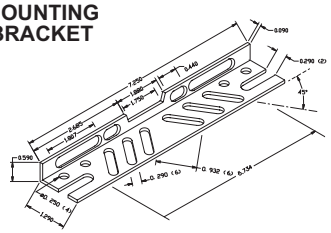
22% Failed
at 47,000 hours
(Group Re-lamp)

LLD: (Measured)
90% at 22,000 hours
70% at 40,000

Dimensions / Specifications



MOUNTING BRACKET



For additional information regarding the Metal Halide Regulated-Lag products, please contact your local Howard Industries' representative or Howard Industries at 1-800-956-3456.

BALLAST PRODUCTS DIVISION
P.O. Box 1590 • Laurel, MS 39441
(601) 422-0033 or 1-800-956-3456
Fax (601) 422-1652
http://www.howard-ballast.com

CIRCUIT DIAGRAM