

VMV High Wattage Series 200-400W For Medium and High Mounting Heights

Cl. I, Div. 2, Groups A, B, C, D
Restricted Breathing Cl. I,
Div. 2 & Zone 2 (Suffix S826)
Certified for IEC Zone 2
(Suffix S826TB)

Cl. II, Groups E, F, G; Cl. III &
Simultaneous Presence
(with Glass Refractor)
Marine (with Globe or Glass
Refractor) & Wet Locations
3, 3R, 4, 4X; IP66

3L

Champ® H.I.D. Luminaires

Applications:

VMV high wattage series *Champ* luminaires are used:

- In manufacturing plants, refineries, chemical, petrochemical, and other industrial process facilities, waste or sewage treatment facilities, and other heavy industrial applications
- In applications involving medium and high mounting heights
- In applications where energy-efficient, high lumen output is required
- In areas in which ignitable concentrations of flammable gases or vapors will be present only due to abnormal, unusual, or accidental conditions
- In marine applications where water spray and corrosive atmospheres are considerations
- In elevated ambient temperatures often found in industrial applications
- In installations where moisture, dirt, dust, vibration, corrosion and rough usage are problems
- Wherever the damaging effects of water, wind, snow, sleet, hot sun, or any combination of these elements, are problems

Features:

- Cast copper-free aluminum construction (less than 0.4 of 1% copper) and epoxy powder finish provide excellent resistance to corrosion
- Six mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket, angle stanchion, straight stanchion and quad-mount
- Wide range of light sources and wattages to meet specifiers' needs: 200, 250, 400 watt high pressure sodium (HPS); 250 and 400 watt metal halide (MH) and pulse start metal halide
- Hinged ballast housing for ease of installation and maintenance
- Wide choice of photometric distributions. Glass globes, glass refractors, and reflector/lens are available
- All luminaires designed to perform in a 40°C ambient temperature. Selected luminaires are suitable for ambient temperatures up to 65°C
- Superior gasketing seals between the mounting module, housing, and optical assembly for optimum performance in wet and corrosive environments
- Hubs with integral conduit stop and bushing to help prevent damage to field wiring during installation
- Low ambient capability to (-40°C)
- Dome and 30° angle reflectors made of bright white *Krydon*® material and etched Alzak® high bay reflectors provide superior reflectivity
- Grounding wire for safety
- High power factor ballasts (Min. P. F. 90%) are available in a variety of voltages to meet local area requirements
- Mogul base lamp socket

Certifications and Compliances:

- NEC/CEC:
 - Class I, Division 2, Groups A, B, C, D
 - With Glass Refractor - Class II, Class III & Simultaneous Presence (Class I, Division 2 and Class II)
 - Class I, Zone 2
- IEC:
 - Zone 2 Ex nR IIC
- UL Standards:
 - 844 Hazardous (Classified) Locations
 - 1598 Luminaires
 - 1598A Marine Locations
- CSA Standards:
 - C22.2 No. 137
- IEC Standards:
 - 60079-15

Standard Materials:

- Ballast housings and mountings – copper-free aluminum (less than 0.4 of 1%)
- Exterior hardware and guards – stainless steel
- Reflectors (dome and angle) – *Krydon* fiberglass-reinforced polyester material
- Globes – heat and impact resistant internally fluted glass
- Refractors – glass
- Reflector lens – spun Alzak aluminum, tempered glass, stainless steel door frame



Standard Finishes:

- Copper-free aluminum – epoxy powder coat
- Alzak aluminum – natural
- Stainless steel – natural
- *Krydon* material – high reflectance white

Options:

The following special options are available from the factory by adding suffix to luminaire Cat. No.:

Description	Suffix
• Restricted Breathing Construction..... Class I, Division 2 & Zone 2 Suitability Cooler Operating Temperatures (T-Numbers)	S826†
• Certified for IEC Zone 2..... Furnished with terminal block crimp terminals and dedicated voltage ballasts (no MT, DT, or TT)	S826TB†
• Fused – to protect ballast and capacitors against abnormal line conditions (Not available with /MT ballast) (Not suitable for marine applications).....	S658†*
• Quick-Clip - Holds weight of housing when closed. No need to support luminaire while screwing the housing to the cover.....	S890
• Quartz auxiliary lighting – comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. For <i>non-hazardous</i> locations only.....	QTZ
• Ballast-Gard™ starter cutout switch – prevents starter pulsing when lamp is cycling or inoperative; prolongs ballast and ignitor life. Available for use with 200-400W HPS only.....	BG
• Factory assembled with H.I.D. lamps installed for additional labor savings.....	FA
• Top hat with stainless steel threaded insert to attach ballast housing.....	S806

Note: (Quartz lamp not included use 100W single ended lamp – Q100DC, Q100CL/DC, or 100Q/CL/DC). Consult factory for top-hat limitations.

Electrical Ratings:

- 120 to 600 volts and multi-tap
- 200, 250, 400W HPS and MH

Accessories:

- See pages 1022-1023 for complete listing.

Alzak is a registered trademark of ALCOA.

*When ordering fuses for luminaires, option S658, you must specify the operating voltage. S658 cannot be ordered with /MT in the catalog number.
†Not for use in Canada.
‡Suffix S826 and S826TB cannot be used with GRD4 Reflector/Lens.

3L VMV High Wattage Series 200-400W High Pressure Sodium

For Medium and High Mounting Heights
Champ® H.I.D. Luminaires

Cl. I, Div. 2, Groups A, B, C, D
Restricted Breathing Cl. I,
Div. 2 & Zone 2 (Suffix S826)
Certified for IEC Zone 2
(Suffix S826TB)

Cl. II, Groups E, F, G; Cl. III &
Simultaneous Presence
(with Glass Refractor)
Marine (with Globe or Glass
Refractor) & Wet Locations
3, 3R, 4, 4X; IP56 to IP66

To complete the catalog #, include information in notes 1 and 2 below. For guards and other optics see VMV High Wattage Series - Ordering By Components page.

Mounting Style	Hub Size	Lamp Watts	BASIC CATALOG NUMBER		
			With G303 Globe and P33 Guard	With GR305 Glass Refractor *	With GRD4 Reflector/Lens
	3/4	200	VMVS2A200GP	VMVS2A200GR305	VMVS2A200GRD4
		1	VMVS3A200GP	VMVS3A200GR305	VMVS3A200GRD4
	3/4	250	VMVS2A250GP	VMVS2A250GR305	VMVS2A250GRD4
		1	VMVS3A250GP	VMVS3A250GR305	VMVS3A250GRD4
	3/4	400	VMVS2A400GP	VMVS2A400GR305	VMVS2A400GRD4
		1	VMVS3A400GP	VMVS3A400GR305	VMVS3A400GRD4
	3/4	200	VMVS2C200GP	VMVS2C200GR305	VMVS2C200GRD4
		1	VMVS3C200GP	VMVS3C200GR305	VMVS3C200GRD4
	3/4	250	VMVS2C250GP	VMVS2C250GR305	VMVS2C250GRD4
		1	VMVS3C250GP	VMVS3C250GR305	VMVS3C250GRD4
	3/4	400	VMVS2C400GP	VMVS2C400GR305	VMVS2C400GRD4
		1	VMVS3C400GP	VMVS3C400GR305	VMVS3C400GRD4
	3/4	200	VMVS2TW200GP	VMVS2TW200GR305	VMVS2TW200GRD4
		1	VMVS3TW200GP	VMVS3TW200GR305	VMVS3TW200GRD4
	3/4	250	VMVS2TW250GP	VMVS2TW250GR305	VMVS2TW250GRD4
		1	VMVS3TW250GP	VMVS3TW250GR305	VMVS3TW250GRD4
	3/4	400	VMVS2TW400GP	VMVS2TW400GR305	VMVS2TW400GRD4
		1	VMVS3TW400GP	VMVS3TW400GR305	VMVS3TW400GRD4
	3/4	200	VMVS25Q200GP	VMVS25Q200GR305	VMVS25Q200GRD4
	3/4	250	VMVS25Q250GP	VMVS25Q250GR305	VMVS25Q250GRD4
	3/4	400	VMVS25Q400GP	VMVS25Q400GR305	VMVS25Q400GRD4
	1 1/2	200	VMVSJ200GP	VMVSJ200GR305	VMVSJ200GRD4
		250	VMVSJ250GP	VMVSJ250GR305	VMVSJ250GRD4
		400	VMVSJ400GP	VMVSJ400GR305	VMVSJ400GRD4
	1 1/2	200	VMVSP200GP	VMVSP200GR305	VMVSP200GRD4
		250	VMVSP250GP	VMVSP250GR305	VMVSP250GRD4
		400	VMVSP400GP	VMVSP400GR305	VMVSP400GRD4

* For GR302 Type II Refractor, change "GR305" at end of catalog number to "GR302". Ex. VMVS2A200GR302
For GR303 Type III Refractor, change "GR305" at end of catalog number to "GR303". Ex. VMVS2A200GR303

1. Add voltage suffix to end of catalog number

Standard Voltage Ballasts - 60Hz

Voltage Suffix	NEC/UL		CEC/CSA (cUL)	
	Multi Tap /MT	120V /120 480V /480	Tri Tap /TT	120V /120

Optional Voltage Ballasts - 50 or 60Hz

Voltage Suffix	CEC/CSA (cUL) - CWI Isolated Ballasts				EXPORT			
	208V CWI /208CWI	240V CWI /240CWI	480V CWI /480CWI	600V CWI /600CWI	220V 60Hz /220	220V 50Hz /220 50	230V 50Hz /230 50	240V 50Hz /240 50

2. Options - Add the required option suffixes, see page 989, in alpha-numeric order.

VMV High Wattage Series 250-400W Pulse Start Metal Halide

For Medium and High Mounting Heights
Champ® H.I.D. Luminaires

Cl. I, Div. 2, Groups A, B, C, D
 Restricted Breathing Cl. I,
 Div. 2 & Zone 2 (Suffix S826)
 Certified for IEC Zone 2
 (Suffix S826TB)

Cl. II, Groups E, F, G; Cl. III &
 Simultaneous Presence
 (with Glass Refractor)
 Marine (with Globe or Glass
 Refractor) & Wet Locations
 3, 3R, 4, 4X; IP56 to IP66

3L

To complete the catalog #, include information in notes 1 and 2 below. For guards and other optics see VMV High Wattage Series - Ordering By Components page.

	Mounting Style	Hub Size	Lamp Watts	BASIC CATALOG NUMBER		
				With G303 Globe and P33 Guard	With GR305 Glass Refractor *	With GRD4 Reflector/Lens
	Pendant Mount (Rigid or Flexible)	3/4	250	VMVM2A250GP S828	VMVM2A250GR305 S828	VMVM2A250GRD4 S828
		1		VMVM3A250GP S828	VMVM3A250GR305 S828	VMVM3A250GRD4 S828
		3/4	320	VMVM2A320GP S828	VMVM2A320GR305 S828	VMVM2A320GRD4 S828
		1		VMVM3A320GP S828	VMVM3A320GR305 S828	VMVM3A320GRD4 S828
		3/4	400**	VMVM2A400GP S828	VMVM2A400GR305 S828	VMVM2A400GRD4 S828
	1		VMVM3A400GP S828	VMVM3A400GR305 S828	VMVM3A400GRD4 S828	
	Ceiling Mount Thru-Feed	3/4	250	VMVM2C250GP S828	VMVM2C250GR305 S828	VMVM2C250GRD4 S828
		1		VMVM3C250GP S828	VMVM3C250GR305 S828	VMVM3C250GRD4 S828
		3/4	320	VMVM2C320GP S828	VMVM2C320GR305 S828	VMVM2C320GRD4 S828
		1		VMVM3C320GP S828	VMVM3C320GR305 S828	VMVM3C320GRD4 S828
		3/4	400**	VMVM2C400GP S828	VMVM2C400GR305 S828	VMVM2C400GRD4 S828
	1		VMVM3C400GP S828	VMVM3C400GR305 S828	VMVM3C400GRD4 S828	
	Wall Mount Thru-Feed	3/4	250	VMVM2TW250GP S828	VMVM2TW250GR305 S828	
		1		VMVM3TW250GP S828	VMVM3TW250GR305 S828	
		3/4	320	VMVM2TW320GP S828	VMVM2TW320GR305 S828	
		1		VMVM3TW320GP S828	VMVM3TW320GR305 S828	
		3/4	400**	VMVM2TW400GP S828	VMVM2TW400GR305 S828	
	1		VMVM3TW400GP S828	VMVM3TW400GR305 S828		
	Quad-Mount Pendant, Adjustable Thru-Feed, 25° Angle, 12 1/2° Angle	3/4	250	VMVM25Q250GP S828	VMVM25Q250GR305 S828	VMVM25Q250GRD4 S828
		3/4	320	VMVM25Q320GP S828	VMVM25Q320GR305 S828	VMVM25Q320GRD4 S828
		3/4	400**	VMVM25Q400GP S828	VMVM25Q400GR305 S828	VMVM25Q400GRD4 S828
	Stanchion Mount 25° Angle	1 1/2	250	VMVMJ250GP S828	VMVMJ250GR305 S828	VMVMJ250GRD4 S828
		1 1/2	320	VMVMJ320GP S828	VMVMJ320GR305 S828	VMVMJ320GRD4 S828
		1 1/2	400**	VMVMJ400GP S828	VMVMJ400GR305 S828	VMVMJ400GRD4 S828
	Stanchion Mount Straight	1 1/2	250	VMVMP250GP S828	VMVMP250GR305 S828	
		1 1/2	320	VMVMP320GP S828	VMVMP320GR305 S828	
		1 1/2	400**	VMVMP400GP S828	VMVMP400GR305 S828	

* For GR302 Type II Refractor, change "GR305" at end of catalog number to "GR302". Ex. VMVM2A250GR302-S828
 For GR303 Type III Refractor, change "GR305" at end of catalog number to "GR303". Ex. VMVM2A250GR303-S828
 ** To be used with ED28 (bulb shaped lamp).

1. Add voltage suffix to end of catalog number
 Standard Voltage Ballasts - 60Hz

NEC/UL		CEC/CSA (cUL)	
Voltage Suffix	Multi Tap /MT	120V /120	480V /480
		Tri Tap /TT	120V /120

Optional Voltage Ballasts - 50 or 60Hz

EXPORT			
Voltage Suffix	220V 60Hz /220	220V 50Hz /220 50	230V 50Hz /230 50
			240V 50Hz /240 50

2. Options - Add the required option suffixes, see page 989, in alpha-numeric order.

Lamp Selection Table:

Fixture	Lamp Type	Bulb	Venture	Phillips	Sylvania
			MP 320W/BU/ED28/UVS/PS/EM/950	MS320/U/PS	MS320/PS/BU-HOR
VMVM320GP	320W PS MH	ED28, BT28	MP 320W/BU/ED28/UVS/PS/740	MS320/C/BU/PS	-
			MP 320W/C/BU/ED28/EVS/PS/737	-	-
VMVM400GP	400W PS MH	ED28, BT28	MP 400W/BU/ED28/UVS/PS/EM/950	N/A	M400/PS/U/BT28

3L VMV High Wattage Series 250-400W Metal Halide

For Medium and High Mounting Heights
Champ® H.I.D. Luminaires

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Restricted Breathing Cl. I,
Div. 2 & Zone 2 (Suffix S826)
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Cl. II, Groups E, F, G; Cl. III &
Simultaneous Presence
(with Glass Refractor)
Marine (with Globe or Glass
Refractor) & Wet Locations
3, 3R, 4, 4X; IP56 to IP66

To complete the catalog #, include information in notes 1 and 2 below. For guards and other optics see VMV High Wattage Series - Ordering By Components page.

Mounting Style	Hub Size	Lamp Watts	BASIC CATALOG NUMBER		
			With G303 Globe and P33 Guard	With GR305 Glass Refractor *	With GRD4 Reflector/Lens
	3/4	250	VMVM2A250GP	VMVM2A250GR305	VMVM2A250GRD4
		400	VMVM3A250GP	VMVM3A250GR305	VMVM3A250GRD4
	1	250	N/A	VMVM2A400GR305	VMVM2A400GRD4
		400	N/A	VMVM3A400GR305	VMVM3A400GRD4
	3/4	250	VMVM2C250GP	VMVM2C250GR305	VMVM2C250GRD4
		400	VMVM3C250GP	VMVM3C250GR305	VMVM3C250GRD4
	1	250	N/A	VMVM2C400GR305	VMVM2C400GRD4
		400	N/A	VMVM3C400GR305	VMVM3C400GRD4
	3/4	250	VMVM2TW250GP	VMVM2TW250GR305	
		400	VMVM3TW250GP	VMVM3TW250GR305	
	1	250	N/A	VMVM2TW400GR305	
		400	N/A	VMVM3TW400GR305	
	3/4	250	VMVM25Q250GP	VMVM25Q250GR305	VMVM25Q250GRD4
	3/4	400	N/A	VMVM25Q400GR305	VMVM25Q400GRD4
	1 1/2	250	VMVMJ250GP	VMVMJ250GR305	VMVMJ250GRD4
	1 1/2	400	N/A	VMVMJ400GR305	VMVMJ400GRD4
	1 1/2	250	VMVMP250GP	VMVMP250GR305	
	1 1/2	400	N/A	VMVMP400GR305	

* For GR302 Type II Refractor, change "GR305" at end of catalog number to "GR302". Ex. VMVM2A250GR302
For GR303 Type III Refractor, change "GR305" at end of catalog number to "GR303". Ex. VMVM2A250GR303

1. Add voltage suffix to end of catalog number

Standard Voltage Ballasts - 60Hz

Voltage Suffix	NEC/UL		CEC/CSA (cUL)	
	Multi Tap /MT	120V /120 480V /480	Tri Tap /TT	120V /120

Optional Voltage Ballasts - 50 or 60Hz

Voltage Suffix	CEC/CSA (cUL) - CWI Isolated Ballasts			EXPORT			
	208V CWI /208CWI	240V CWI /240CWI	600V CWI /600CWI	220V 60Hz /220	220V 50Hz /220 50	230V 50Hz /230 50	240V 50Hz /240 50

2. Options - Add the required option suffixes, see page 989, in alpha-numeric order.

VMV High Wattage Series – Ordering by Components

VMV High Wattage Luminaires are available in components.

A complete luminaire consists of:

- I. Champ Cover (Mounting Module)
- II. VMV Ballast Housing – Include voltage and required option(s)
- III. Optical & Guard Components – Globe, Reflector, Refractor, Guard

I. Champ Cover (Mounting Module):

Type	Conduit	Cat. #
Pendant	3/4"	APM2
	1"	APM3
Ceiling	3/4"	CM2
	1"	CM3
Wall	3/4"	TWM2
	1"	TWM3
Stanchion – 25 Degree Angle	1 1/2"	JM5
Stanchion – Straight	1 1/2"	PM5
Quad-Mount	3/4"	QM25

II. Ballast Housings:

Complete catalog number must have the **voltage suffix** (MT shown) and any **options suffixes**.

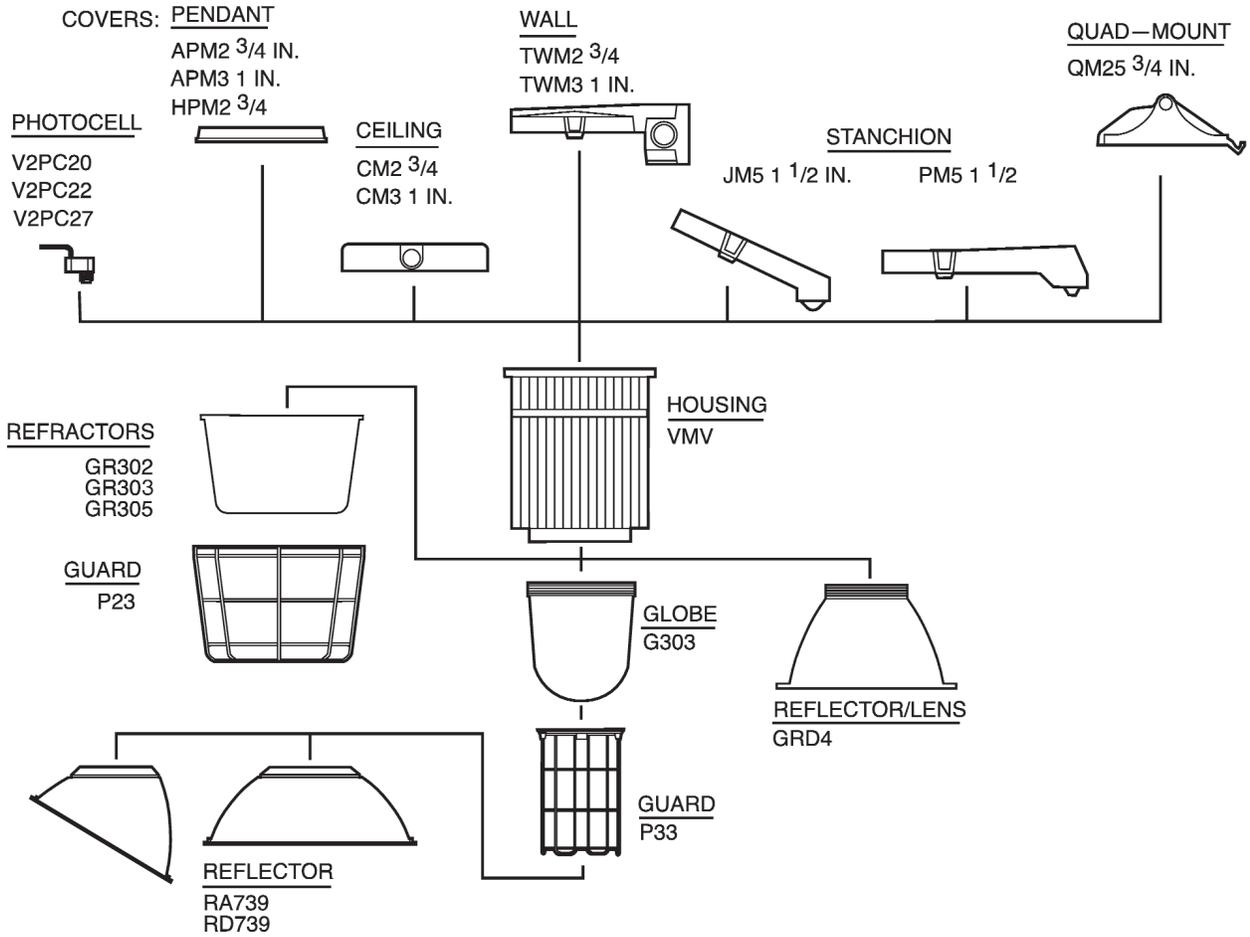
Lamp Type	Lamp Watts	Cat. #
High Pressure Sodium	200	VMVS200/MT
	250	VMVS250/MT
	400	VMVS400/MT
Metal Halide	250	VMVM250/MT
	400	VMVM400/MT

III. Globe, Reflectors, Refractors, Guards:

Type	Cat. #
Globe	G303
Globe Guard	P33
Reflector – Dome	RD739
Reflector – Angle	RA739
Refractor – Type 2	GR302
Refractor – Type 3	GR303
Refractor – Type 5	GR305
Refractor Guard	P23
High Bay Reflector/Lens	GRD4



Champ® H.I.D. Luminaires



3L

Champ® H.I.D. Luminaires

Lamp Watts	Ambient Temp C	Optics	Class I (Gas/Vapors)		Class II (Dust) and Class III	Simultaneous Presence Gas and Dust Present in the Same Area		Supply Wire Temp C
			Non Restricted Breathing	Restricted Breathing		Non Restricted Breathing	Restricted Breathing	
				Ex nR			Ex nR	
			Standard Product	Option S826(TB)	Standard Product	Standard Product	Option S826	
			Division 2	Zone 2 or Division 2	Standard Product	Class I, Division 2 and Class II	Class I, Zone 2 or Division 2 and Class II	
		G303	X - -	X -	-	-	-	
		GR305	- X -	- X	X	X	X	
		GRD4	- - X	- -	-	-	-	

High Pressure Sodium

200	40	325 C 350 C	T2 T3 T4	T3C	T1/T3C	T3C	75
	55	325 C 350 C	T2 T3 T4	-	-	-	75
	65	325 C 350 C	T2 T3	-	-	-	85
250	40	350 C 350 C 325 C	T3 T4	T3C	T1/T3C	T3C	75
	55	350 C 350 C 350 C	T3 T4	-	-	-	85
	65	350 C 350 C	- T3	-	-	-	-
400	40	350 C 350 C	T1 T3 T4	T3C	T1/T3C	T3C	85
	55	350 C 350 C	T1 T3 T4	-	-	-	90

Metal Halide

200	40	350 C 325 C 350 C	T3 T4	T3B	350 C/T3B	T3B	85
	55	350 C 350 C 350 C	T3 T4	-	-	-	90
250	40	350 C 325 C 350 C	T3 T4	T3B	350 C/T3B	T3B	85
	55	350 C 350 C 350 C	T3 T4	-	-	-	90
400	40	- 325 C	T1 - T4	T3B	350 C/T3B	T3B	85
	55	- 350 C	T1 - -	-	-	-	-

Pulse Start Metal Halide (S828)

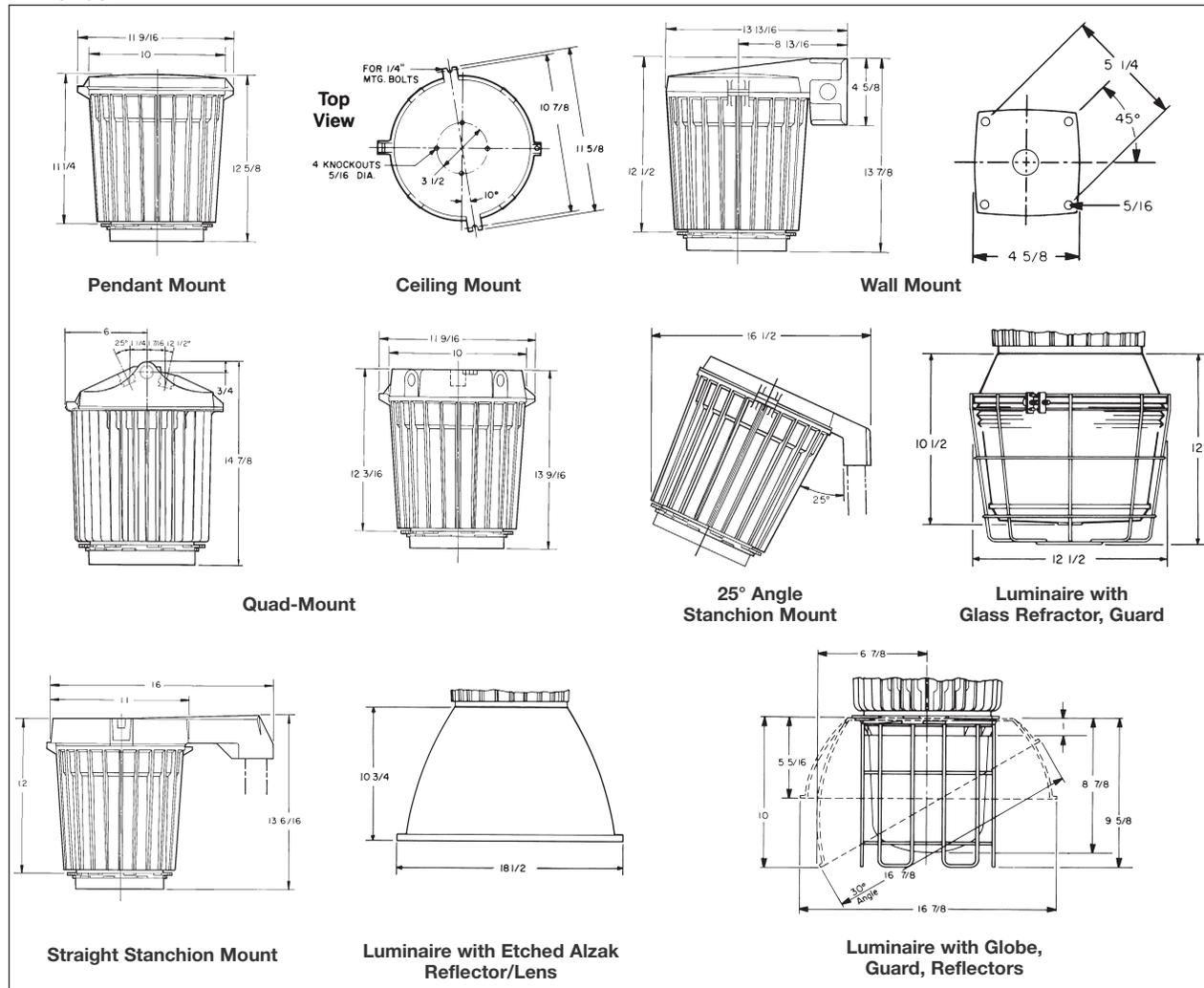
250	40	350 C 350 C 325 C	T3 T4	T3B	350 C/T3B	T3B	85
	55	350 C 350 C 350 C	T3 T4	-	-	-	90
320	40	T1 325 C T2A	T3 -	-	-	-	90
400	40	T1 T1 T1	T3 T4	-	-	-	90

3L

Champ® H.I.D. Luminaires

Dimensions

In Inches:



Net Luminaire Weights (lbs.):

Luminaire Series	Lamp Watts	Luminaire with:		
		Globe, Guard (lbs.)	Reflector/Lens	Glass Refractor (lbs.)
VMVS	200	29 1/2	30	32 1/2
	250	29 1/2	30	32 1/2
	400	38 1/2	39	41 1/2
VMVM	250	32 1/2	33	35 1/4
	400		34	35 1/2

Type	Lbs.	Type	Lbs.
------	------	------	------

Add for mounting modules:

Pendant	1 1/4	Quad-Mount	3 1/2
Ceiling	2 3/4	Angle Stanchion	3 1/2
Wall	4 1/2	Straight Stanchion	4 1/2

Add for reflectors:

Dome	1 1/2	30° Angle	1 1/2
High Bay	1 3/4		

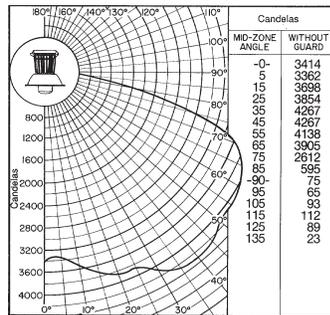
Deduct: 1 1/2 lb. for luminaire without P33 Guard

Champ® H.I.D. Luminaires

Lamp: 250W/E-18 high pressure sodium (HPS)
 Total bare lamp lumens: 27500

Note: All data provided is for high pressure sodium luminaires with 250W/E-18 clear lamps. Use conversion factors (multipliers) shown below for other clear lamp types and wattages. Consult Eaton's Crouse-Hinds for additional photometric data on any Champ series luminaire.

Luminaire with Globe and Dome Reflector



Multipliers (for use with candela curve only).

Luminaire Series	Lamp Watts	Conversion Factor
VMVS	200	0.80
	400	1.82

Luminaire spacing ratio: 2.0

Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		1	2	3	4	5
80	50	.750	.640	.550	.476	.416
	30	.711	.582	.482	.402	.341
	10	.677	.532	.429	.346	.285
70	50	.732	.625	.538	.465	.405
	30	.696	.570	.474	.397	.335
	10	.664	.526	.424	.343	.282
50	50	.695	.594	.513	.443	.388
	30	.666	.549	.458	.384	.326
	10	.641	.509	.414	.336	.279
30	50	.663	.567	.490	.423	.371
	30	.640	.530	.443	.372	.316
	10	.618	.496	.405	.330	.273
10	50	.635	.542	.469	.405	.355
	30	.615	.510	.429	.360	.307
	10	.597	.483	.395	.323	.268
0	0	.580	.464	.377	.305	.251
% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		6	7	8	9	10
80	50	.369	.327	.290	.263	.229
	30	.295	.255	.222	.196	.163
	10	.243	.208	.173	.150	.121
70	50	.360	.320	.285	.258	.224
	30	.291	.251	.219	.193	.163
	10	.239	.204	.172	.149	.121
50	50	.344	.306	.272	.247	.216
	30	.283	.243	.213	.189	.159
	10	.236	.200	.170	.147	.119
30	50	.330	.292	.262	.238	.207
	30	.275	.238	.207	.183	.154
	10	.233	.196	.167	.145	.116
10	50	.317	.282	.251	.229	.200
	30	.267	.233	.202	.179	.150
	10	.229	.194	.165	.142	.114
0	0	.212	.178	.149	.128	.101

