



Class I, Div. 2, Groups A,B,C,D*
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G,*
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

UL Listed - Files E10514 and E91793 (Marine)

SP Certified - File LR11713

FEATURES-SPECIFICATIONS

CERTILITE®

Applications

CERTILITE® VM fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Features

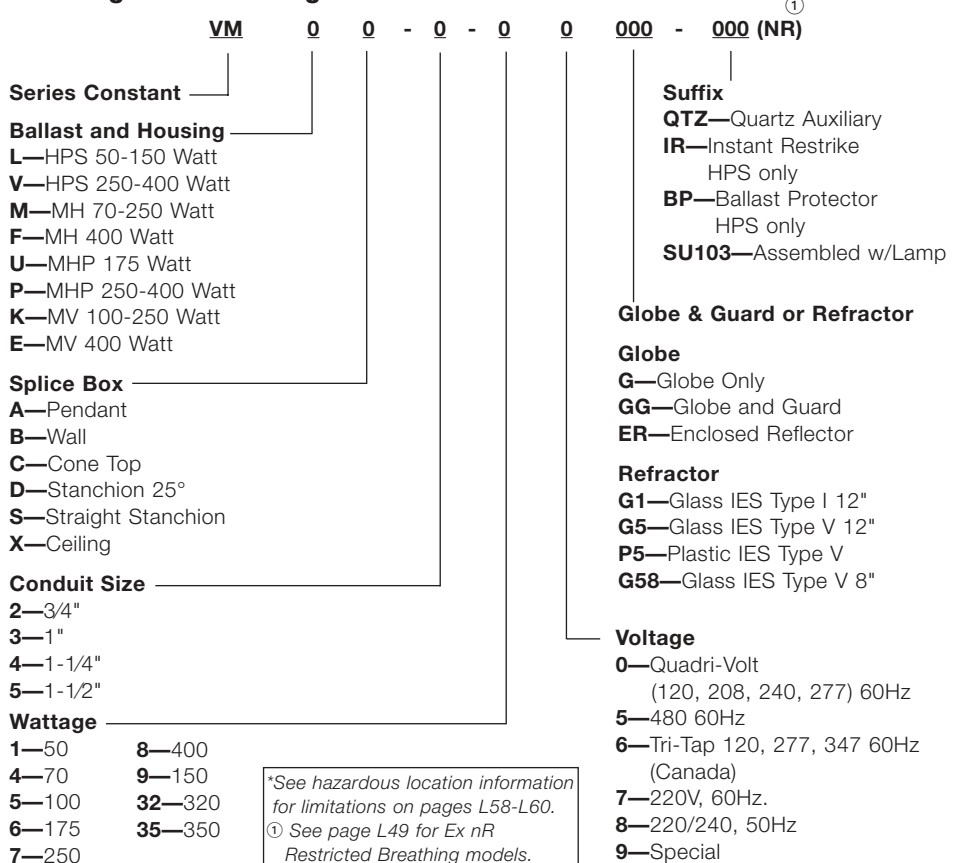
- CERTILITE® VM fixtures are now available with Pulse Start Metal Halide ballasts. Pulse Start systems provide higher and better maintained light output with longer life compared standard Metal Halide systems. Pulse Start and standard Metal Halide lamps and ballasts are *not* interchangeable
- Ballast tank and splice box — corrosion resistant copper-free aluminum alloy
- Baked powder epoxy polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware — stainless steel
- Guard — copper-free aluminum alloy
- Normally shipped as components for quick delivery

- Refractor guard — steel with corrosion resistant finish
- Reflector — lightweight, corrosion resistant polyester reinforced fiberglass
- Five mounting splice box types; pendant, ceiling, bracket, cone top, stanchion
- Quartz and incandescent auxiliary or HPS instant restart
- Minimum starting temperature HPS – 40°C, MV, MH & MHP – 30°C

Compliances

- UL-1572 Standard for HID lighting fixtures
- UL Marine type lighting fixtures
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X

Catalog Number Logic



VM SERIES • LIGHTING
HIGH PRESSURE SODIUM, 50-400W MOGUL BASE HID

L37

Pendant



Ceiling



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713



VM 50-400 WATT HIGH PRESSURE SODIUM PENDANT						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
50	S-68	3/4"	QUAD	VMLA-2-10GG	VMLA-2-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	3/4"	QUAD	VMLA-2-40GG	VMLA-2-40G58	—
			TRI	VMLA-2-46GG	VMLA-2-46G58	
			480	VMLA-2-45GG	VMLA-2-45G58	
100	S-54	3/4"	QUAD	VMLA-2-50GG	VMLA-2-50G58	—
			TRI	VMLA-2-56GG	VMLA-2-56G58	
			480	VMLA-2-55GG	VMLA-2-55G58	
150	S-55	3/4"	QUAD	VMLA-2-90GG	VMLA-2-90G58	—
			TRI	VMLA-2-96GG	VMLA-2-96G58	
			480	VMLA-2-95GG	VMLA-2-95G58	
250	S-50	3/4"	QUAD	VMVA-2-70GG	VMVA-2-70G5	VMVA-2-70ER
			TRI	VMVA-2-76GG	VMVA-2-76G5	VMVA-2-76ER
			480	VMVA-2-75GG	VMVA-2-75G5	VMVA-2-75ER
400	S-51	3/4"	QUAD	VMVA-2-80GG	VMVA-2-80G5	VMVA-2-80ER
			TRI	VMVA-2-86GG	VMVA-2-86G5	VMVA-2-86ER
			480	VMVA-2-85GG	VMVA-2-85G5	VMVA-2-85ER



VM 50-400 WATT HIGH PRESSURE SODIUM CEILING						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
50	S-68	3/4"	QUAD	VMLX-2-10GG	VMLX-2-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	3/4"	QUAD	VMLX-2-40GG	VMLX-2-40G58	—
			TRI	VMLX-2-46GG	VMLX-2-46G58	
			480	VMLX-2-45GG	VMLX-2-45G58	
100	S-54	3/4"	QUAD	VMLX-2-50GG	VMLX-2-50G58	—
			TRI	VMLX-2-56GG	VMLX-2-56G58	
			480	VMLX-2-55GG	VMLX-2-55G58	
150	S-55	3/4"	QUAD	VMLX-2-90GG	VMLX-2-90G58	—
			TRI	VMLX-2-96GG	VMLX-2-96G58	
			480	VMLX-2-95GG	VMLX-2-95G58	
250	S-50	3/4"	QUAD	VMVX-2-70GG	VMVX-2-70G5	VMVX-2-70ER
			TRI	VMVX-2-76GG	VMVX-2-76G5	VMVX-2-76ER
			480	VMVX-2-75GG	VMVX-2-75G5	VMVX-2-75ER
400	S-51	3/4"	QUAD	VMVX-2-80GG	VMVX-2-80G5	VMVX-2-80ER
			TRI	VMVX-2-86GG	VMVX-2-86G5	VMVX-2-86ER
			480	VMVX-2-85GG	VMVX-2-85G5	VMVX-2-85ER

① See hazardous application data on pages L58-L60 for limitations.
 ② Hub size shown is 3/4" NPT, for 1" pendant or ceiling, change "2" to "3" in catalog number; e.g. **VMLA-3-40GG**. For flexible 3/4" pendant mounting, order **VMA-24 SU75** w/ballast tank, optic and guard.
 ③ Omit 2nd "G" for Globe only.
 ④ Order Refractor Guards separately. On Series VML 8" refractors are standard.
 To order 12" refractor, delete "8" from catalog number.
 To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



Class I, Div. 2, Groups A,B,C,D①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713



VM 50-400 WATT HIGH PRESSURE SODIUM WALL						
WATTS	ANSI LAMP	HUB SIZE②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
50	S-68	3/4"	QUAD	VMLB-2-10GG	VMLB-2-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	3/4"	QUAD	VMLB-2-40GG	VMLB-2-40G58	—
			TRI	VMLB-2-46GG	VMLB-2-46G58	
			480	VMLB-2-45GG	VMLB-2-45G58	
100	S-54	3/4"	QUAD	VMLB-2-50GG	VMLB-2-50G58	—
			TRI	VMLB-2-56GG	VMLB-2-56G58	
			480	VMLB-2-55GG	VMLB-2-55G58	
150	S-55	3/4"	QUAD	VMLB-2-90GG	VMLB-2-90G58	—
			TRI	VMLB-2-96GG	VMLB-2-96G58	
			480	VMLB-2-95GG	VMLB-2-95G58	
250	S-50	3/4"	QUAD	VMVB-2-70GG	VMVB-2-70G5	—
			TRI	VMVB-2-76GG	VMVB-2-76G5	
			480	VMVB-2-75GG	VMVB-2-75G5	
400	S-51	3/4"	QUAD	VMVB-2-80GG	VMVB-2-80G5	—
			TRI	VMVB-2-86GG	VMVB-2-86G5	
			480	VMVB-2-85GG	VMVB-2-85G5	



VM 50-400 WATT HIGH PRESSURE SODIUM CONE TOP						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
50	S-68	3/4"	QUAD	VMLC-2-10GG	VMLC-2-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	3/4"	QUAD	VMLC-2-40GG	VMLC-2-40G58	—
			TRI	VMLC-2-46GG	VMLC-2-46G58	
			480	VMLC-2-45GG	VMLC-2-45G58	
100	S-54	3/4"	QUAD	VMLC-2-50GG	VMLC-2-50G58	—
			TRI	VMLC-2-56GG	VMLC-2-56G58	
			480	VMLC-2-55GG	VMLC-2-55G58	
150	S-55	3/4"	QUAD	VMLC-2-90GG	VMLC-2-90G58	—
			TRI	VMLC-2-96GG	VMLC-2-96G58	
			480	VMLC-2-95GG	VMLC-2-95G58	
250	S-50	3/4"	QUAD	VMVC-2-70GG	VMVC-2-70G5	VMVC-2-70ER
			TRI	VMVC-2-76GG	VMVC-2-76G5	VMVC-2-76ER
			480	VMVC-2-75GG	VMVC-2-75G5	VMVC-2-75ER
400	S-51	3/4"	QUAD	VMVC-2-80GG	VMVC-2-80G5	VMVC-2-80ER
			TRI	VMVC-2-86GG	VMVC-2-86G5	VMVC-2-86ER
			480	VMVC-2-85GG	VMVC-2-85G5	VMVC-2-85ER

① See hazardous application data on pages L58-L60 for limitations.

② Hub size shown is 3/4" NPT, for 1" wall bracket, change "2" to "3" in catalog number; e.g. VMLB-3-40GG

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VML 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK®

VM SERIES • LIGHTING
HIGH PRESSURE SODIUM, 50-400W MOGUL BASE HID

**Stanchion
25° Angle**



**Stanchion
Straight**



Class I, Div. 2, Groups A,B,C,D①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

**STANCHION
25° ANGLE**

50-150W

250-400W



VM 50-400 WATT HIGH PRESSURE SODIUM STANCHION 25° ANGLE						
WATTS	ANSI LAMP	HUB SIZE②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
50	S-68	1-1/4"	QUAD	VMLD-4-10GG	VMLD-4-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	1-1/4"	QUAD	VMLD-4-40GG	VMLD-4-40G58	—
			TRI	VMLD-4-46GG	VMLD-4-46G58	
			480	VMLD-4-45GG	VMLD-4-45G58	
100	S-54	1-1/4"	QUAD	VMLD-4-50GG	VMLD-4-50G58	—
			TRI	VMLD-4-56GG	VMLD-4-56G58	
			480	VMLD-4-55GG	VMLD-4-55G58	
150	S-55	1-1/4"	QUAD	VMLD-4-90GG	VMLD-4-90G58	—
			TRI	VMLD-4-96GG	VMLD-4-96G58	
			480	VMLD-4-95GG	VMLD-4-95G58	
250	S-50	1-1/4"	QUAD	VMVD-4-70GG	VMVD-4-70G5	VMVD-4-70ER
			TRI	VMVD-4-76GG	VMVD-4-76G5	VMVD-4-76ER
			480	VMVD-4-75GG	VMVD-4-75G5	VMVD-4-75ER
400	S-51	1-1/4"	QUAD	VMVD-4-80GG	VMVD-4-80G5	VMVD-4-80ER
			TRI	VMVD-4-86GG	VMVD-4-86G5	VMVD-4-86ER
			480	VMVD-4-85GG	VMVD-4-85G5	VMVD-4-85ER

**STANCHION
STRAIGHT**

50-150W

250-400W



VM 50-400 WATT HIGH PRESSURE SODIUM STANCHION STRAIGHT						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
50	S-68	1-1/2"	QUAD	VMLS-5-10GG	VMLS-5-10G58	—
			TRI	—	—	
			480	—	—	
70	S-62	1-1/2"	QUAD	VMLS-5-40GG	VMLS-5-40G58	—
			TRI	VMLS-5-46GG	VMLS-5-46G58	
			480	VMLS-5-45GG	VMLS-5-45G58	
100	S-54	1-1/2"	QUAD	VMLS-5-50GG	VMLS-5-50G58	—
			TRI	VMLS-5-56GG	VMLS-5-56G58	
			480	VMLS-5-55GG	VMLS-5-55G58	
150	S-55	1-1/2"	QUAD	VMLS-5-90GG	VMLS-5-90G58	—
			TRI	VMLS-5-96GG	VMLS-5-96G58	
			480	VMLS-5-95GG	VMLS-5-95G58	
250	S-50	1-1/2"	QUAD	VMVS-5-70GG	VMVS-5-70G5	—
			TRI	VMVS-5-76GG	VMVS-5-76G5	
			480	VMVS-5-75GG	VMVS-5-75G5	
400	S-51	1-1/2"	QUAD	VMVS-5-80GG	VMVS-5-80G5	—
			TRI	VMVS-5-86GG	VMVS-5-86G5	
			480	VMVS-5-85GG	VMVS-5-85G5	

① See hazardous application data on pages L58-L60 for limitations.

② 25° Stanchion hub size shown is 1-1/4" NPT. For 1-1/2" change "4" to "5"; e.g. VMLD-5-40GG.

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VML 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK®

Pendant



Ceiling



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

PENDANT

70-250W

400W



VM 70-400 WATT METAL HALIDE PENDANT						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
70	M-98	3/4"	QUAD	VMMA-2-40GG	VMMA-2-40G58	—
			TRI	VMMA-2-46GG	VMMA-2-46G58	
			480	VMMA-2-45GG	VMMA-2-45G58	
100	M-90	3/4"	QUAD	VMMA-2-50GG	VMMA-2-50G58	—
			TRI	VMMA-2-56GG	VMMA-2-56G58	
			480	VMMA-2-55GG	VMMA-2-55G58	
175	M-57	3/4"	QUAD	VMMA-2-60GG	VMMA-2-60G58	—
			TRI	VMMA-2-66GG	VMMA-2-66G58	
			480	VMMA-2-65GG	VMMA-2-65G58	
250	M-58	3/4"	QUAD	VMMA-2-70GG	VMMA-2-70G58	—
			TRI	VMFA-2-76GG	VMFA-2-76G58	
			480	VMMA-2-75GG	VMMA-2-75G58	
400	M-59	3/4"	QUAD	VMFA-2-80GG	VMFA-2-80G5	VMFA-2-80ER
			TRI	VMFA-2-86GG	VMFA-2-86G5	VMFA-2-86ER
			480	VMFA-2-85GG	VMFA-2-85G5	VMFA-2-85ER

CEILING

70-250W

400W



VM 70-400 WATT METAL HALIDE CEILING						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
70	M-98	3/4"	QUAD	VMMX-2-40GG	VMMX-2-40G58	—
			TRI	VMMX-2-46GG	VMMX-2-46G58	
			480	VMMX-2-45GG	VMMX-2-45G58	
100	M-90	3/4"	QUAD	VMMX-2-50GG	VMMX-2-50G58	—
			TRI	VMMX-2-56GG	VMMX-2-56G58	
			480	VMMX-2-55GG	VMMX-2-55G58	
175	M-57	3/4"	QUAD	VMMX-2-60GG	VMMX-2-60G58	—
			TRI	VMMX-2-66GG	VMMX-2-66G58	
			480	VMMX-2-65GG	VMMX-2-65G58	
250	M-58	3/4"	QUAD	VMMX-2-70GG	VMMX-2-70G58	—
			TRI	VMFX-2-76GG	VMFX-2-76G58	
			480	VMMX-2-75GG	VMMX-2-75G58	
400	M-59	3/4"	QUAD	VMFX-2-80GG	VMFX-2-80G5	VMFX-2-80ER
			TRI	VMFX-2-86GG	VMFX-2-86G5	VMFX-2-86ER
			480	VMFX-2-85GG	VMFX-2-85G5	VMFX-2-85ER

^① See hazardous application data on pages L58-L60 for limitations.

^② Hub size shown is 3/4" NPT, for pendant or ceiling, change "2" to "3" in catalog number; e.g. VMMA-3-40GG. For flexible 3/4" pendant mounting, order VMA-24 SU75 w/ballast tank, optic and guard

^③ Omit 2nd "G" for Globe only.

^④ Order Refractor Guards separately. On Series VMM 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.

Note: 175-400 ballasts will also drive same wattage Mercury Vapor lamps, if desired. 175 watt will also operate 150W M107 Metal Halide lamps.



KILLARK

VM SERIES • LIGHTING
METAL HALIDE, 70-400W MOGUL BASE HID

L41

Wall



Cone Top



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713



VM 70-400 WATT METAL HALIDE WALL						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
70	M-98	3/4"	QUAD	VMMB-2-40GG	VMMB-2-40G58	—
			TRI	VMMB-2-46GG	VMMB-2-46G58	
			480	VMMB-2-45GG	VMMB-2-45G58	
100	M-90	3/4"	QUAD	VMMB-2-50GG	VMMB-2-50G58	—
			TRI	VMMB-2-56GG	VMMB-2-56G58	
			480	VMMB-2-55GG	VMMB-2-55G58	
175	M-57	3/4"	QUAD	VMMB-2-60GG	VMMB-2-60G58	—
			TRI	VMMB-2-66GG	VMMB-2-66G58	
			480	VMMB-2-65GG	VMMB-2-65G58	
250	M-58	3/4"	QUAD	VMMB-2-70GG	VMMB-2-70G58	—
			TRI	VMFB-2-76GG	VMFB-2-76G58	
			480	VMMB-2-75GG	VMMB-2-75G58	
400	M-59	3/4"	QUAD	VMFB-2-80GG	VMFB-2-80G5	—
			TRI	VMFB-2-86GG	VMFB-2-86G5	
			480	VMFB-2-85GG	VMFB-2-85G5	

CONE TOP



VM 70-400 WATT METAL HALIDE CONE TOP						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
70	M-98	3/4"	QUAD	VMMC-2-40GG	VMMC-2-40G58	—
			TRI	VMMC-2-46GG	VMMC-2-46G58	
			480	VMMC-2-45GG	VMMC-2-45G58	
100	M-90	3/4"	QUAD	VMMC-2-50GG	VMMC-2-50G58	—
			TRI	VMMC-2-56GG	VMMC-2-56G58	
			480	VMMC-2-55GG	VMMC-2-55G58	
175	M-57	3/4"	QUAD	VMMC-2-60GG	VMMC-2-60G58	—
			TRI	VMMC-2-66GG	VMMC-2-66G58	
			480	VMMC-2-65GG	VMMC-2-65G58	
250	M-58	3/4"	QUAD	VMMC-2-70GG	VMMC-2-70G58	—
			TRI	VMFC-2-76GG	VMFC-2-76G58	
			480	VMMC-2-75GG	VMMC-2-75G58	
400	M-59	3/4"	QUAD	VMFC-2-80GG	VMFC-2-80G5	VMFC-2-80ER
			TRI	VMFC-2-86GG	VMFC-2-86G5	VMFC-2-86ER
			480	VMFC-2-85GG	VMFC-2-85G5	VMFC-2-85ER

^① See hazardous application data on pages L58-L60 for limitations.
^② Hub size shown is 3/4" NPT, for 1" wall bracket, change "2" to "3" in catalog number; e.g. VMMB-3-40GG.
^③ Omit 2nd "G" for Globe only.
^④ Order Refractor Guards separately. On Series VMM 8" refractors are standard.
 To order 12" refractor, delete "8" from catalog number.
 To order fixture with other refractors, change catalog number as shown in refractor chart page L54.
 Note: 175-400 ballasts will also drive same wattage Mercury Vapor lamps, if desired. 175 watt will also operate 150W M107 Metal Halide lamps.

VM SERIES • LIGHTING METAL HALIDE, 70-400W MOGUL BASE HID

Stanchion
25° Angle



Stanchion
Straight



Class I, Div. 2, Groups A,B,C,D①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

UL Listed - Files E10514 and E91793 (Marine)

SF Certified - File LR11713

STANCHION
25° ANGLE

70-250W

400W



VM 70-400 WATT METAL HALIDE STANCHION 25° ANGLE						
WATTS	ANSI LAMP	HUB SIZE②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
70	M-98	1-1/4"	QUAD	VMMD-4-40GG	VMMD-4-40G58	—
			TRI	VMMD-4-46GG	VMMD-4-46G58	
			480	VMMD-4-45GG	VMMD-4-45G58	
100	M-90	1-1/4"	QUAD	VMMD-4-50GG	VMMD-4-50G58	—
			TRI	VMMD-4-56GG	VMMD-4-56G58	
			480	VMMD-4-55GG	VMMD-4-55G58	
175	M-57	1-1/4"	QUAD	VMMD-4-60GG	VMMD-4-60G58	—
			TRI	VMMD-4-66GG	VMMD-4-66G58	
			480	VMMD-4-65GG	VMMD-4-65G58	
250	M-58	1-1/4"	QUAD	VMMD-4-70GG	VMMD-4-70G58	—
			TRI	VMFD-4-76GG	VMFD-4-76G58	
			480	VMMD-4-75GG	VMMD-4-75G58	
400	M-59	1-1/4"	QUAD	VMFD-4-80GG	VMFD-4-80G5	VMFD-4-80ER
			TRI	VMFD-4-86GG	VMFD-4-86G5	VMFD-4-80ER
			480	VMFD-4-85GG	VMFD-4-85G5	VMFD-4-80ER

STANCHION
STRAIGHT

70-250W

400W



VM 70-400 WATT METAL HALIDE STANCHION STRAIGHT						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD③	REFRACTOR④	ENCLOSED REFLECTOR
70	M-98	1-1/2"	QUAD	VMMS-5-40GG	VMMS-5-40G58	—
			TRI	VMMS-5-46GG	VMMS-5-46G58	
			480	VMMS-5-45GG	VMMS-5-45G58	
100	M-90	1-1/2"	QUAD	VMMS-5-50GG	VMMS-5-50G58	—
			TRI	VMMS-5-56GG	VMMS-5-56G58	
			480	VMMS-5-55GG	VMMS-5-55G58	
175	M-57	1-1/2"	QUAD	VMMS-5-60GG	VMMS-5-60G58	—
			TRI	VMMS-5-66GG	VMMS-5-66G58	
			480	VMMS-5-65GG	VMMS-5-65G58	
250	M-58	1-1/2"	QUAD	VMMS-5-70GG	VMMS-5-70G58	—
			TRI	VMFS-5-76GG	VMFS-5-76G58	
			480	VMMS-5-75GG	VMMS-5-75G58	
400	M-59	1-1/2"	QUAD	VMFS-5-80GG	VMFS-5-80G5	—
			TRI	VMFS-5-86GG	VMFS-5-86G5	
			480	VMFS-5-85GG	VMFS-5-85G5	

① See hazardous application data on pages L58-L60 for limitations.

② 25° Stanchion hub size shown is 1-1/4" NPT. For 1-1/2" change "4" to "5"; e.g. VMMD-5-40GG.

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VMM 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.

Note: 175-400 ballasts will also drive same wattage Mercury Vapor lamps, if desired. 175 watt will also operate 150W M107 Metal Halide lamps.



KILLARK®

VM SERIES • LIGHTING
PULSE START METAL HALIDE, 175-400W MOGUL BASE HID

L43

Pendant



Ceiling



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

PENDANT

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE PENDANT						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	3/4"	QUAD	VMUA-2-60GG	VMUA-2-60G58	—
			TRI	VMUA-2-66GG	VMUA-2-66G58	
			480	VMUA-2-65GG	VMUA-2-65G58	
250	M-138	3/4"	QUAD	VMPA-2-70GG	VMPA-2-70G5	VMPA-2-70ER
			TRI	VMPA-2-76GG	VMPA-2-76G5	VMPA-2-76ER
			480	VMPA-2-75GG	VMPA-2-75G5	VMPA-2-75ER
320	M-132	3/4"	QUAD	VMPA-2-320GG	VMPA-2-320G5	VMPA-2-320ER
			TRI	VMPA-2-326GG	VMPA-2-326G5	VMPA-2-326ER
			480	VMPA-2-325GG	VMPA-2-325G5	VMPA-2-325ER
350	M-131	3/4"	QUAD	VMPA-2-350GG	VMPA-2-350G5	VMPA-2-350ER
			TRI	VMPA-2-356GG	VMPA-2-356G5	VMPA-2-356ER
			480	VMPA-2-355GG	VMPA-2-355G5	VMPA-2-355ER
400	M-135	3/4"	QUAD	VMPA-2-80GG	VMPA-2-80G5	VMPA-2-80ER
			TRI	VMPA-2-86GG	VMPA-2-86G5	VMPA-2-86ER
			480	VMPA-2-85GG	VMPA-2-85G5	VMPA-2-85ER

CEILING

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE CEILING						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	3/4"	QUAD	VMUX-2-60GG	VMUX-2-60G58	—
			TRI	VMUX-2-66GG	VMUX-2-66G58	
			480	VMUX-2-65GG	VMUX-2-65G58	
250	M-138	3/4"	QUAD	VMPX-2-70GG	VMPX-2-70G5	VMPX-2-70ER
			TRI	VMPX-2-76GG	VMPX-2-76G5	VMPX-2-76ER
			480	VMPX-2-75GG	VMPX-2-75G5	VMPX-2-75ER
320	M-132	3/4"	QUAD	VMPX-2-320GG	VMPX-2-320G5	VMPX-2-320ER
			TRI	VMPX-2-326GG	VMPX-2-326G5	VMPX-2-326ER
			480	VMPX-2-325GG	VMPX-2-325G5	VMPX-2-325ER
350	M-131	3/4"	QUAD	VMPX-2-350GG	VMPX-2-350G5	VMPX-2-350ER
			TRI	VMPX-2-356GG	VMPX-2-356G5	VMPX-2-356ER
			480	VMPX-2-355GG	VMPX-2-355G5	VMPX-2-355ER
400	M-135	3/4"	QUAD	VMPX-2-80GG	VMPX-2-80G5	VMPX-2-80ER
			TRI	VMPX-2-86GG	VMPX-2-86G5	VMPX-2-86ER
			480	VMPX-2-85GG	VMPX-2-85G5	VMPX-2-85ER

- ① See hazardous application data on pages L58-L60 for limitations.
- ② Hub size shown is 3/4" NPT, for 1" pendant or ceiling, change "2" to "3" in catalog number; e.g. VMUA-3-60GG. For flexible 3/4" pendant mounting, order VMA-24 SU75 w/ ballast tank, optic and guard.
- ③ Omit 2nd "G" for Globe only.
- ④ Order Refractor Guards separately. On Series VMU 8" refractors are standard. To order 12" refractor, delete "8" from catalog number. To order fixture with other refractors, change catalog number as shown in refractor chart page L54.

VM SERIES • LIGHTING PULSE START METAL HALIDE, 175-400W MOGUL BASE HID

Wall



Cone Top



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

WALL

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE WALL						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	3/4"	QUAD	VMUB-2-60GG	VMUB-2-60G58	—
			TRI	VMUB-2-66GG	VMUB-2-66G58	
			480	VMUB-2-65GG	VMUB-2-65G58	
250	M-138	3/4"	QUAD	VMPB-2-70GG	VMPB-2-70G5	—
			TRI	VMPB-2-76GG	VMPB-2-76G5	
			480	VMPB-2-75GG	VMPB-2-75G5	
320	M-132	3/4"	QUAD	VMPB-2-320GG	VMPB-2-320G5	—
			TRI	VMPB-2-326GG	VMPB-2-326G5	
			480	VMPB-2-325GG	VMPB-2-325G5	
350	M-131	3/4"	QUAD	VMPB-2-350GG	VMPB-2-350G5	—
			TRI	VMPB-2-356GG	VMPB-2-356G5	
			480	VMPB-2-355GG	VMPB-2-355G5	
400	M-135	3/4"	QUAD	VMPB-2-80GG	VMPB-2-80G5	—
			TRI	VMPB-2-86GG	VMPB-2-86G5	
			480	VMPB-2-85GG	VMPB-2-85G5	

CONE TOP

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE CONE TOP						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	3/4"	QUAD	VMUC-2-60GG	VMUC-2-60G58	—
			TRI	VMUC-2-66GG	VMUC-2-66G58	
			480	VMUC-2-65GG	VMUC-2-65G58	
250	M-138	3/4"	QUAD	VMPC-2-70GG	VMPC-2-70G5	VMPC-2-70ER
			TRI	VMPC-2-76GG	VMPC-2-76G5	VMPC-2-76ER
			480	VMPC-2-75GG	VMPC-2-75G5	VMPC-2-75ER
320	M-132	3/4"	QUAD	VMPC-2-320GG	VMPC-2-320G5	VMPC-2-320ER
			TRI	VMPC-2-326GG	VMPC-2-326G5	VMPC-2-326ER
			480	VMPC-2-325GG	VMPC-2-325G5	VMPC-2-325ER
350	M-131	3/4"	QUAD	VMPC-2-350GG	VMPC-2-350G5	VMPC-2-350ER
			TRI	VMPC-2-356GG	VMPC-2-356G5	VMPC-2-356ER
			480	VMPC-2-355GG	VMPC-2-355G5	VMPC-2-355ER
400	M-135	3/4"	QUAD	VMPC-2-80GG	VMPC-2-80G5	VMPC-2-80ER
			TRI	VMPC-2-86GG	VMPC-2-86G5	VMPC-2-86ER
			480	VMPC-2-85GG	VMPC-2-85G5	VMPC-2-85ER

① See hazardous application data on pages L58-L60 for limitations.

② Hub size shown is 3/4" NPT, for 1" wall bracket, change "2" to "3" in catalog number; e.g. VMUB-3-60GG.

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VMU 8" refractors are standard. To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK

VM SERIES • LIGHTING
PULSE START METAL HALIDE, 175-400W MOGUL BASE HID

L45

**Stanchion
25° Angle**



**Stanchion
Straight**



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

 Listed - Files E10514 and E91793 (Marine)

 Certified - File LR11713

**STANCHION
25° ANGLE**

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE STANCHION 25° ANGLE						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	1-1/4"	QUAD	VMUD-4-60GG	VMUD-4-60G58	—
			TRI	VMUD-4-66GG	VMUD-4-66G58	
			480	VMUD-4-65GG	VMUD-4-65G58	
250	M-138	1-1/4"	QUAD	VMPD-4-70GG	VMPD-4-70G5	VMPD-4-70ER
			TRI	VMPD-4-76GG	VMPD-4-76G5	VMPD-4-76ER
			480	VMPD-4-75GG	VMPD-4-75G5	VMPD-4-75ER
320	M-132	1-1/4"	QUAD	VMPD-4-320GG	VMPD-4-320G5	VMPD-4-320ER
			TRI	VMPD-4-326GG	VMPD-4-326G5	VMPD-4-326ER
			480	VMPD-4-325GG	VMPD-4-325G5	VMPD-4-325ER
350	M-131	1-1/4"	QUAD	VMPD-4-350GG	VMPD-4-350G5	VMPD-4-350ER
			TRI	VMPD-4-356GG	VMPD-4-356G5	VMPD-4-356ER
			480	VMPD-4-355GG	VMPD-4-355G5	VMPD-4-355ER
400	M-135	1-1/4"	QUAD	VMPD-4-80GG	VMPD-4-80G5	VMPD-4-80ER
			TRI	VMPD-4-86GG	VMPD-4-86G5	VMPD-4-86ER
			480	VMPD-4-85GG	VMPD-4-85G5	VMPD-4-85ER

**STANCHION
STRAIGHT**

175W

250-400W



VM 175-400 WATT PULSE START METAL HALIDE STANCHION STRAIGHT						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
175	M-137	1-1/2"	QUAD	VMUS-5-60GG	VMUS-5-60G58	—
			TRI	VMUS-5-66GG	VMUS-5-66G58	
			480	VMUS-5-65GG	VMUS-5-65G58	
250	M-138	1-1/2"	QUAD	VMPS-5-70GG	VMPS-5-70G5	—
			TRI	VMPS-5-76GG	VMPS-5-76G5	
			480	VMPS-5-75GG	VMPS-5-75G5	
320	M-132	1-1/2"	QUAD	VMPS-5-320GG	VMPS-5-320G5	—
			TRI	VMPS-5-326GG	VMPS-5-326G5	
			480	VMPS-5-325GG	VMPS-5-325G5	
350	M-131	1-1/2"	QUAD	VMPS-5-350GG	VMPS-5-350G5	—
			TRI	VMPS-5-356GG	VMPS-5-356G5	
			480	VMPS-5-355GG	VMPS-5-355G5	
400	M-135	1-1/2"	QUAD	VMPS-5-80GG	VMPS-5-80G5	—
			TRI	VMPS-5-86GG	VMPS-5-86G5	
			480	VMPS-5-85GG	VMPS-5-85G5	

① See hazardous application data on pages L58-L60 for limitations.

② 25° Stanchion hub size shown is 1-1/4" NPT. For 1-1/2" change "4" to "5"; e.g. VMUD-5-60GG.

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VMU 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK®

VM SERIES • LIGHTING MERCURY VAPOR, 100-400W MOGUL BASE HID

Pendant



Ceiling



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

PENDANT

100-250W

400W



VM 100-400 WATT MERCURY VAPOR PENDANT						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	3/4"	QUAD	VMKA-2-50GG	VMKA-2-50G58	—
			TRI	VMKA-2-56GG	VMKA-2-56G58	
			480	VMKA-2-55GG	VMKA-2-55G58	
175	H-39	3/4"	QUAD	VMKA-2-60GG	VMKA-2-60G58	—
			TRI	VMKA-2-66GG	VMKA-2-66G58	
			480	VMKA-2-65GG	VMKA-2-65G58	
250	H-37	3/4"	QUAD	VMKA-2-70GG	VMKA-2-70G58	—
			TRI	VMKA-2-76GG	VMKA-2-76G58	
			480	VMKA-2-75GG	VMKA-2-75G58	
400	H-33	3/4"	QUAD	VMEA-2-80GG	VMEA-2-80G5	VMEA-2-80ER
			TRI	VMEA-2-86GG	VMEA-2-86G5	VMEA-2-86ER
			480	VMEA-2-85GG	VMEA-2-85G5	VMEA-2-85ER

CEILING

100-250W

400W



VM 100-400 WATT MERCURY VAPOR CEILING						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	3/4"	QUAD	VMKX-2-50GG	VMKX-2-50G58	—
			TRI	VMKX-2-56GG	VMKX-2-56G58	
			480	VMKX-2-55GG	VMKX-2-55G58	
175	H-39	3/4"	QUAD	VMKX-2-60GG	VMKX-2-60G58	—
			TRI	VMKX-2-66GG	VMKX-2-66G58	
			480	VMKX-2-65GG	VMKX-2-65G58	
250	H-37	3/4"	QUAD	VMKX-2-70GG	VMKX-2-70G58	—
			TRI	VMKX-2-76GG	VMKX-2-76G58	
			480	VMKX-2-75GG	VMKX-2-75G58	
400	H-33	3/4"	QUAD	VMEX-2-80GG	VMEX-2-80G5	VMEX-2-80ER
			TRI	VMEX-2-86GG	VMEX-2-86G5	VMEX-2-86ER
			480	VMEX-2-85GG	VMEX-2-85G5	VMEX-2-85ER

^① See hazardous application data on pages L58-L60 for limitations.

^② Hub size shown is 3/4" NPT, for 1" pendant or ceiling, change "2" to "3" in catalog number; e.g. VMKA-3-60GG. For flexible 3/4" pendant mounting, order VMA-24 SU75 w/ ballast tank, optic and guard.

^③ Omit 2nd "G" for Globe only.

^④ Order Refractor Guards separately. On Series VMK 8" refractors are standard.

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK

VM SERIES • LIGHTING
MERCURY VAPOR, 100-400W MOGUL BASE HID

L47

Wall



Cone Top



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

Listed - Files E10514 and E91793 (Marine)

Certified - File LR11713

WALL

100-250W

400W



VM 100-400 WATT MERCURY VAPOR WALL						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	3/4"	QUAD	VMKB-2-50GG	VMKB-2-50G58	—
			TRI	VMKB-2-56GG	VMKB-2-56G58	
			480	VMKB-2-55GG	VMKB-2-55G58	
175	H-39	3/4"	QUAD	VMKB-2-60GG	VMKB-2-60G58	—
			TRI	VMKB-2-66GG	VMKB-2-66G58	
			480	VMKB-2-65GG	VMKB-2-65G58	
250	H-37	3/4"	QUAD	VMKB-2-70GG	VMKB-2-70G58	—
			TRI	VMKB-2-76GG	VMKB-2-76G58	
			480	VMKB-2-75GG	VMKB-2-75G58	
400	H-33	3/4"	QUAD	VMEB-2-80GG	VMEB-2-80G5	—
			TRI	VMEB-2-86GG	VMEB-2-86G5	
			480	VMEB-2-85GG	VMEB-2-85G5	

VM 100-400 WATT MERCURY VAPOR CONE TOP						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	3/4"	QUAD	VMKC-2-50GG	VMKC-2-50G58	—
			TRI	VMKC-2-56GG	VMKC-2-56G58	
			480	VMKC-2-55GG	VMKC-2-55G58	
175	H-39	3/4"	QUAD	VMKC-2-60GG	VMKC-2-60G58	—
			TRI	VMKC-2-66GG	VMKC-2-66G58	
			480	VMKC-2-65GG	VMKC-2-65G58	
250	H-37	3/4"	QUAD	VMKC-2-70GG	VMKC-2-70G58	—
			TRI	VMKC-2-76GG	VMKC-2-76G58	
			480	VMKC-2-75GG	VMKC-2-75G58	
400	H-33	3/4"	QUAD	VMEC-2-80GG	VMEC-2-80G5	VMEC-2-80ER
			TRI	VMEC-2-86GG	VMEC-2-86G5	VMEC-2-86ER
			480	VMEC-2-85GG	VMEC-2-85G5	VMEC-2-85ER

CONE TOP

100-250W

400W



① See hazardous application data on pages L58-L60 for limitations.

② Hub size shown is 3/4" NPT, for 1" wall bracket, change "2" to "3" in catalog number; e.g. VMKB-3-60GG

③ Omit 2nd "G" for Globe only.

④ Order Refractor Guards separately. On Series VMK 8" refractors are standard. To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK

VM SERIES • LIGHTING MERCURY VAPOR, 100-400W MOGUL BASE HID

Stanchion
25° Angle



Stanchion
Straight



Class I, Div. 2, Groups A,B,C,D^①
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

 Listed - Files E10514 and E91793 (Marine)

 Certified - File LR11713

STANCHION
25° ANGLE

100-250W

400W



VM 100-400 WATT MERCURY VAPOR STANCHION 25° ANGLE						
WATTS	ANSI LAMP	HUB SIZE ^②	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	1-1/4"	QUAD	VMKD-4-50GG	VMKD-4-50G58	—
			TRI	VMKD-4-56GG	VMKD-4-56G58	
			480	VMKD-4-55GG	VMKD-4-55G58	
175	H-39	1-1/4"	QUAD	VMKD-4-60GG	VMKD-4-60G58	—
			TRI	VMKD-4-66GG	VMKD-4-66G58	
			480	VMKD-4-65GG	VMKD-4-65G58	
250	H-37	1-1/4"	QUAD	VMKD-4-70GG	VMKD-4-70G58	—
			TRI	VMKD-4-76GG	VMKD-4-76G58	
			480	VMKD-4-75GG	VMKD-4-75G58	
400	H-33	1-1/4"	QUAD	VMED-4-80GG	VMED-4-80G5	VMED-4-80ER
			TRI	VMED-4-86GG	VMED-4-86G5	VMED-4-86ER
			480	VMED-4-85GG	VMED-4-85G5	VMED-4-85ER

STANCHION
STRAIGHT

100-250W

400W



VM 100-400 WATT MERCURY VAPOR STANCHION STRAIGHT						
WATTS	ANSI LAMP	HUB SIZE	VOLTAGE @ 60Hz	CATALOG NUMBER		
				GLOBE AND GUARD ^③	REFRACTOR ^④	ENCLOSED REFLECTOR
100	H-38	1-1/2"	QUAD	VMKS-5-50GG	VMKS-5-50G58	—
			TRI	VMKS-5-56GG	VMKS-5-56G58	
			480	VMKS-5-55GG	VMKS-5-55G58	
175	H-39	1-1/2"	QUAD	VMKS-5-60GG	VMKS-5-60G58	—
			TRI	VMKS-5-66GG	VMKS-5-66G58	
			480	VMKS-5-65GG	VMKS-5-65G58	
250	H-37	1-1/2"	QUAD	VMKS-5-70GG	VMKS-5-70G58	—
			TRI	VMKS-5-76GG	VMKS-5-76G58	
			480	VMKS-5-75GG	VMKS-5-75G58	
400	H-33	1-1/2"	QUAD	VMES-5-80GG	VMES-5-80G5	—
			TRI	VMES-5-86GG	VMES-5-86G5	
			480	VMES-5-85GG	VMES-5-85G5	

^① See hazardous application data on pages L58-L60 for limitations.

^② 25° Stanchion hub size shown is 1-1/4" NPT. For 1-1/2" change "4" to "5"; e.g. VMKD-5-60GG.

^③ Omit 2nd "G" for Globe only.

^④ Order Refractor Guards separately. On Series VMK 8" refractors are standard .

To order 12" refractor, delete "8" from catalog number.

To order fixture with other refractors, change catalog number as shown in refractor chart page L54.



KILLARK



AEx nR/Ex nR*
Class I, Div. 2, Groups A,B,C,D*
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G,*
Class III
Suitable for wet locations
UL Marine
NEMA 3, 4X

 Listed - Files E10514 and E91793 (Marine)

 Certified - File LR11713

FEATURES-SPECIFICATIONS

CERTILITE®

Applications

VM Restricted Breathing option fixtures maintain all the features and compliances listed for standard VM lighting fixtures. An alternate testing and installation method allows much lower Temperature Codes when compared to conventional units. Installation requires sealed entry (conduit or cable). See temperature data charts to determine suitability per applicable construction code. Ex nR Restricted Breathing fixtures are available with globe only, not refractors.

CERTILITE® VM fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-1572 Standard for HID lighting fixtures
- UL Marine type lighting fixtures
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaries for use in hazardous locations
- IEC 60079-15 Electrical apparatus with "n" type protection
- Enclosed and gasketed
- NEMA 3, 4X

Features

- Ballast tank and splice box — corrosion resistant copper-free aluminum alloy
- HID lampholders are E-39 mogul base

- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware — stainless steel
- Guard — copper-free aluminum alloy
- Reflector — lightweight, corrosion resistant polyester reinforced fiberglass

Electrical

Fixtures are available in

- HPS: 50 through 400 watts
- MH: 70 through 400 watts
- MHP: 175 through 400 watts
- MV: 100 through 400 watts

All ballast circuits are high power factor. Consult catalog logic on page L36 for available voltages.

*See hazardous location information page L60 for limitations.

AEx nR / Ex nR^①
 Class I, Zone 2, Groups IIC,IIB,IIA
 Class I, Div. 2, Groups A,B,C,D
 Class II, Div. 1 & 2, Groups E,F,G
 Class III
 Suitable for wet locations

UL Marine
 NEMA 3, 4X

UL Listed - Files E10514 and E91793 (Marine)

SF Certified - File LR11713

PENDANT^⑤



VM standard reflectors may be used. See page L54 for applicable part number.

For Ex nR rated fixtures with enclosed reflectors, add "NR" to catalog number shown on preceding pages e.g. **VMEA-2-80ERNR**.

Restricted Breathing (Ex nR) fixtures are not available with refractors.

- ① See hazardous application data on page L60 for limitations.
- ② Hub size shown is 3/4" NPT, for 1" pendant or ceiling change "2" to "3" in catalog number; e.g. **VMLA-3-40GGNR**.
- For Flexible 3/4" pendant mounting, order **VMA-24 SU75** w/ ballast tank, optic and guard.
- ③ Omit 2nd "G" for Globe only.
- ④ ANSI Lamp and ballast circuit types are the same as for standard VM fixtures.
- ⑤ See non-Ex nR version pages L37-L48 for wattage tank size.

CEILING^⑤



PENDANT 3/4" ② NPT HUB GLOBE & GUARD ③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER ^③			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLA-2-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLA-2-40GGNR	VMMA-2-40GGNR	—	—
	TRI	VMLA-2-46GGNR	VMMA-2-46GGNR	—	—
	480	VMLA-2-45GGNR	VMMA-2-45GGNR	—	—
100	QUAD	VMLA-2-50GGNR	VMMA-2-50GGNR	—	VMKA-2-50GGNR
	TRI	VMLA-2-56GGNR	VMMA-2-56GGNR	—	VMKA-2-56GGNR
	480	VMLA-2-55GGNR	VMMA-2-55GGNR	—	VMKA-2-55GGNR
150	QUAD	VMLA-2-90GGNR	—	—	—
	TRI	VMLA-2-96GGNR	—	—	—
	480	VMLA-2-95GGNR	—	—	—
175	QUAD	—	VMMA-2-60GGNR	VMUA-2-60GGNR	VMKA-2-60GGNR
	TRI	—	VMMA-2-66GGNR	VMUA-2-66GGNR	VMKA-2-66GGNR
	480	—	VMMA-2-65GGNR	VMUA-2-65GGNR	VMKA-2-65GGNR
250	QUAD	VMVA-2-70GGNR	VMMA-2-70GGNR	VMPA-2-70GGNR	VMKA-2-70GGNR
	TRI	VMVA-2-76GGNR	VMFA-2-76GGNR	VMPA-2-76GGNR	VMKA-2-76GGNR
	480	VMVA-2-75GGNR	VMMA-2-75GGNR	VMPA-2-75GGNR	VMKA-2-75GGNR
320	QUAD	—	—	VMPA-2-320GGNR	—
	TRI	—	—	VMPA-2-326GGNR	—
	480	—	—	VMPA-2-325GGNR	—
350	QUAD	—	—	VMPA-2-350GGNR	—
	TRI	—	—	VMPA-2-356GGNR	—
	480	—	—	VMPA-2-355GGNR	—
400	QUAD	VMVA-2-80GGNR	VMFA-2-80GGNR	VMPA-2-80GGNR	VMEA-2-80GGNR
	TRI	VMVA-2-86GGNR	VMFA-2-86GGNR	VMPA-2-86GGNR	VMEA-2-86GGNR
	480	VMVA-2-85GGNR	VMFA-2-85GGNR	VMPA-2-85GGNR	VMEA-2-85GGNR

CEILING 3/4" ② NPT HUB GLOBE & GUARD ③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER ^③			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLX-2-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLX-2-40GGNR	VMMX-2-40GGNR	—	—
	TRI	VMLX-2-46GGNR	VMMX-2-46GGNR	—	—
	480	VMLX-2-45GGNR	VMMX-2-45GGNR	—	—
100	QUAD	VMLX-2-50GGNR	VMMX-2-50GGNR	—	VMKX-2-50GGNR
	TRI	VMLX-2-56GGNR	VMMX-2-56GGNR	—	VMKX-2-56GGNR
	480	VMLX-2-55GGNR	VMMX-2-55GGNR	—	VMKX-2-55GGNR
150	QUAD	VMLX-2-90GGNR	—	—	—
	TRI	VMLX-2-96GGNR	—	—	—
	480	VMLX-2-95GGNR	—	—	—
175	QUAD	—	VMMX-2-60GGNR	VMUX-2-60GGNR	VMKX-2-60GGNR
	TRI	—	VMMX-2-66GGNR	VMUX-2-66GGNR	VMKX-2-66GGNR
	480	—	VMMX-2-65GGNR	VMUX-2-65GGNR	VMKX-2-65GGNR
250	QUAD	VMVX-2-70GGNR	VMMX-2-70GGNR	VMPX-2-70GGNR	VMKX-2-70GGNR
	TRI	VMVX-2-76GGNR	VMFX-2-76GGNR	VMPX-2-76GGNR	VMKX-2-76GGNR
	480	VMVX-2-75GGNR	VMMX-2-75GGNR	VMPX-2-75GGNR	VMKX-2-75GGNR
320	QUAD	—	—	VMPX-2-320GGNR	—
	TRI	—	—	VMPX-2-326GGNR	—
	480	—	—	VMPX-2-325GGNR	—
350	QUAD	—	—	VMPX-2-350GGNR	—
	TRI	—	—	VMPX-2-356GGNR	—
	480	—	—	VMPX-2-355GGNR	—
400	QUAD	VMVX-2-80GGNR	VMFX-2-80GGNR	VMPX-2-80GGNR	VMEX-2-80GGNR
	TRI	VMVX-2-86GGNR	VMFX-2-86GGNR	VMPX-2-86GGNR	VMEX-2-86GGNR
	480	VMVX-2-85GGNR	VMFX-2-85GGNR	VMPX-2-85GGNR	VMEX-2-85GGNR

AEx nR / Ex nR^①
 Class I, Zone 2, Groups IIC, IIB, IIA
 Class I, Div. 2, Groups A, B, C, D
 Class II, Div. 1 & 2, Groups E, F, G
 Class III

UL Marine
 NEMA 3, 4X

UL Listed - Files E10514 and E91793 (Marine)

SF Certified - File LR11713

Suitable for wet locations

WALL^⑤



VM standard reflectors may be used. See page L54 for applicable part number.

For Ex nR rated fixtures with enclosed reflectors, add "NR" to catalog number shown on preceding pages e.g. **VMEC-2-80ERNR**.

Restricted Breathing (Ex nR) fixtures are not available with refractors.

① See hazardous application data on page L60 for limitations.

② Hub size shown is 3/4" NPT, for 1" wall change "2" to "3" in catalog number; e.g. **VMLB-3-40GGNR**.

③ Omit 2nd "G" for Globe only.

④ ANSI Lamp and ballast circuit types are the same as for standard VM fixtures.

⑤ See non-Ex nR version pages L37-L48 for wattage tank size.

CONE TOP^⑤



WALL 3/4" NPT HUB GLOBE & GUARD ^③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLB-2-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLB-2-40GGNR	VMMB-2-40GGNR	—	—
	TRI	VMLB-2-46GGNR	VMMB-2-46GGNR	—	—
	480	VMLB-2-45GGNR	VMMB-2-45GGNR	—	—
100	QUAD	VMLB-2-50GGNR	VMMB-2-50GGNR	—	VMKB-2-50GGNR
	TRI	VMLB-2-56GGNR	VMMB-2-56GGNR	—	VMKB-2-56GGNR
	480	VMLB-2-55GGNR	VMMB-2-55GGNR	—	VMKB-2-55GGNR
150	QUAD	VMLB-2-90GGNR	—	—	—
	TRI	VMLB-2-96GGNR	—	—	—
	480	VMLB-2-95GGNR	—	—	—
175	QUAD	—	VMMB-2-60GGNR	VMUB-2-60GGNR	VMKB-2-60GGNR
	TRI	—	VMMB-2-66GGNR	VMUB-2-66GGNR	VMKB-2-66GGNR
	480	—	VMMB-2-65GGNR	VMUB-2-65GGNR	VMKB-2-65GGNR
250	QUAD	VMVB-2-70GGNR	VMMB-2-70GGNR	VMPB-2-70GGNR	VMKB-2-70GGNR
	TRI	VMVB-2-76GGNR	VMFB-2-76GGNR	VMPB-2-76GGNR	VMKB-2-76GGNR
	480	VMVB-2-75GGNR	VMMB-2-75GGNR	VMPB-2-75GGNR	VMKB-2-75GGNR
320	QUAD	—	—	VMPB-2-320GGNR	—
	TRI	—	—	VMPB-2-326GGNR	—
	480	—	—	VMPB-2-325GGNR	—
350	QUAD	—	—	VMPB-2-350GGNR	—
	TRI	—	—	VMPB-2-356GGNR	—
	480	—	—	VMPB-2-355GGNR	—
400	QUAD	VMVB-2-80GGNR	VMFB-2-80GGNR	VMPB-2-80GGNR	VMEB-2-80GGNR
	TRI	VMVB-2-86GGNR	VMFB-2-86GGNR	VMPB-2-86GGNR	VMEB-2-86GGNR
	480	VMVB-2-85GGNR	VMFB-2-85GGNR	VMPB-2-85GGNR	VMEB-2-85GGNR

CONE TOP 3/4" NPT HUB GLOBE & GUARD ^③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLC-2-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLC-2-40GGNR	VMMC-2-40GGNR	—	—
	TRI	VMLC-2-46GGNR	VMMC-2-46GGNR	—	—
	480	VMLC-2-45GGNR	VMMC-2-45GGNR	—	—
100	QUAD	VMLC-2-50GGNR	VMMC-2-50GGNR	—	VMKC-2-50GGNR
	TRI	VMLC-2-56GGNR	VMMC-2-56GGNR	—	VMKC-2-56GGNR
	480	VMLC-2-55GGNR	VMMC-2-55GGNR	—	VMKC-2-55GGNR
150	QUAD	VMLC-2-90GGNR	—	—	—
	TRI	VMLC-2-96GGNR	—	—	—
	480	VMLC-2-95GGNR	—	—	—
175	QUAD	—	VMMC-2-60GGNR	VMUC-2-60GGNR	VMKC-2-60GGNR
	TRI	—	VMMC-2-66GGNR	VMUC-2-66GGNR	VMKC-2-66GGNR
	480	—	VMMC-2-65GGNR	VMUC-2-65GGNR	VMKC-2-65GGNR
250	QUAD	VMVC-2-70GGNR	VMMC-2-70GGNR	VMPC-2-70GGNR	VMKC-2-70GGNR
	TRI	VMVC-2-76GGNR	VMFC-2-76GGNR	VMPC-2-76GGNR	VMKC-2-76GGNR
	480	VMVC-2-75GGNR	VMMC-2-75GGNR	VMPC-2-75GGNR	VMKC-2-75GGNR
320	QUAD	—	—	VMPC-2-320GGNR	—
	TRI	—	—	VMPC-2-326GGNR	—
	480	—	—	VMPC-2-325GGNR	—
350	QUAD	—	—	VMPC-2-350GGNR	—
	TRI	—	—	VMPC-2-356GGNR	—
	480	—	—	VMPC-2-355GGNR	—
400	QUAD	VMVC-2-80GGNR	VMFC-2-80GGNR	VMPC-2-80GGNR	VMEC-2-80GGNR
	TRI	VMVC-2-86GGNR	VMFC-2-86GGNR	VMPC-2-86GGNR	VMEC-2-86GGNR
	480	VMVC-2-85GGNR	VMFC-2-85GGNR	VMPC-2-85GGNR	VMEC-2-85GGNR

AEx nR / Ex nR^①
 Class I, Zone 2, Groups IIC,IIB,IIA
 Class I, Div. 2, Groups A,B,C,D
 Class II, Div. 1 & 2, Groups E,F,G
 Class III

UL Marine
 NEMA 3, 4X

UL Listed - Files E10514 and E91793 (Marine)

SP Certified - File LR11713

Suitable for wet locations

STANCHION^⑤
 25° ANGLE



VM standard reflectors may be used. See page L54 for applicable part number.

For Ex nR rated fixtures with enclosed reflectors, add "NR" to catalog number shown on preceding pages e.g. VMED-4-80ERNR.

Restricted Breathing (Ex nR) fixtures are not available with refractors.

① See hazardous application data on page L60 for limitations.

② 25° stanchion hub size shown in 1-1/4" NPT. For 1-1/2" change "4" to "5" e.g. VMLD-5-10GGNR.

③ Omit 2nd "G" for Globe only.

④ ANSI Lamp and ballast circuit types are the same as for standard VM fixtures.

⑤ See non-Ex nR version pages L37-L48 for wattage tank size.

STANCHION^⑤
 STRAIGHT



25° STANCHION 1-1/4" ② NPT HUB GLOBE & GUARD ③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLD-4-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLD-4-40GGNR	VMMD-4-40GGNR	—	—
	TRI	VMLD-4-46GGNR	VMMD-4-46GGNR	—	—
	480	VMLD-4-45GGNR	VMMD-4-45GGNR	—	—
100	QUAD	VMLD-4-50GGNR	VMMD-4-50GGNR	—	VMKD-4-50GGNR
	TRI	VMLD-4-56GGNR	VMMD-4-56GGNR	—	VMKD-4-56GGNR
	480	VMLD-4-55GGNR	VMMD-4-55GGNR	—	VMKD-4-55GGNR
150	QUAD	VMLD-4-90GGNR	—	—	—
	TRI	VMLD-4-96GGNR	—	—	—
	480	VMLD-4-95GGNR	—	—	—
175	QUAD	—	VMMD-4-60GGNR	VMUD-4-60GGNR	VMKD-4-60GGNR
	TRI	—	VMMD-4-66GGNR	VMUD-4-66GGNR	VMKD-4-66GGNR
	480	—	VMMD-4-65GGNR	VMUD-4-65GGNR	VMKD-4-65GGNR
250	QUAD	VMVD-4-70GGNR	VMMD-4-70GGNR	VMPD-4-70GGNR	VMKD-4-70GGNR
	TRI	VMVD-4-76GGNR	VMFD-4-76GGNR	VMPD-4-76GGNR	VMKD-4-76GGNR
	480	VMVD-4-75GGNR	VMMD-4-75GGNR	VMPD-4-75GGNR	VMKD-4-75GGNR
320	QUAD	—	—	VMPD-4-320GGNR	—
	TRI	—	—	VMPD-4-326GGNR	—
	480	—	—	VMPD-4-325GGNR	—
350	QUAD	—	—	VMPD-4-350GGNR	—
	TRI	—	—	VMPD-4-356GGNR	—
	480	—	—	VMPD-4-355GGNR	—
400	QUAD	VMVD-4-80GGNR	VMFD-4-80GGNR	VMPD-4-80GGNR	VMED-4-80GGNR
	TRI	VMVD-4-86GGNR	VMFD-4-86GGNR	VMPD-4-86GGNR	VMED-4-86GGNR
	480	VMVD-4-85GGNR	VMFD-4-85GGNR	VMPD-4-85GGNR	VMED-4-85GGNR

STRAIGHT STANCHION 1-1/2" NPT HUB GLOBE & GUARD ③					
WATTS ^④	VOLTAGE @ 60Hz	CATALOG NUMBER			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	QUAD	VMLS-5-10GGNR	—	—	—
	TRI	—	—	—	—
	480	—	—	—	—
70	QUAD	VMLS-5-40GGNR	VMMS-5-40GGNR	—	—
	TRI	VMLS-5-46GGNR	VMMS-5-46GGNR	—	—
	480	VMLS-5-45GGNR	VMMS-5-45GGNR	—	—
100	QUAD	VMLS-5-50GGNR	VMMS-5-50GGNR	—	VMKS-5-50GGNR
	TRI	VMLS-5-56GGNR	VMMS-5-56GGNR	—	VMKS-5-56GGNR
	480	VMLS-5-55GGNR	VMMS-5-55GGNR	—	VMKS-5-55GGNR
150	QUAD	VMLS-5-90GGNR	—	—	—
	TRI	VMLS-5-96GGNR	—	—	—
	480	VMLS-5-95GGNR	—	—	—
175	QUAD	—	VMMS-5-60GGNR	VMUS-5-60GGNR	VMKS-5-60GGNR
	TRI	—	VMMS-5-66GGNR	VMUS-5-66GGNR	VMKS-5-66GGNR
	480	—	VMMS-5-65GGNR	VMUS-5-65GGNR	VMKS-5-65GGNR
250	QUAD	VMVS-5-70GGNR	VMMS-5-70GGNR	VMPD-5-70GGNR	VMKS-5-70GGNR
	TRI	VMVS-5-76GGNR	VMFS-5-76GGNR	VMPD-5-76GGNR	VMKS-5-76GGNR
	480	VMVS-5-75GGNR	VMMS-5-75GGNR	VMPD-5-75GGNR	VMKS-5-75GGNR
320	QUAD	—	—	VMPD-5-320GGNR	—
	TRI	—	—	VMPD-5-326GGNR	—
	480	—	—	VMPD-5-325GGNR	—
350	QUAD	—	—	VMPD-5-350GGNR	—
	TRI	—	—	VMPD-5-356GGNR	—
	480	—	—	VMPD-5-355GGNR	—
400	QUAD	VMVS-5-80GGNR	VMFS-5-80GGNR	VMPD-5-80GGNR	VMES-5-80GGNR
	TRI	VMVS-5-86GGNR	VMFS-5-86GGNR	VMPD-5-86GGNR	VMES-5-86GGNR
	480	VMVS-5-85GGNR	VMFS-5-85GGNR	VMPD-5-85GGNR	VMES-5-85GGNR



Pendant



Ceiling



Wall



Cone Top



25° Stanchion



Straight Stanchion

Auxiliary Lighting

Momentary voltage outages or dips can temporarily extinguish HID lamps which may require up to ten (10) minutes to restrike. To provide illumination during this period, about 10% of the fixtures should be specified with auxiliary lighting.

Quartz Auxiliary

Quartz auxiliary is available for all VM Series fixtures (except those with plastic refractors) by adding the suffix QTZ to the fixture catalog number. Example: VMLA-2-90GG-QTZ.

Series VML, VMK, VMM and VMU fixtures with this option use 100 or 150 watt quartz lamps. Series VMV, VME, VMF and VMP high wattage fixtures can use up to 250 watt quartz lamps. Quartz lamps are not supplied with the fixture. Use quartz lamp type Q100 CL/DC (100W) or Q150 CL/DC (150W) DC Bayonet T-4 Base.

Due to the quartz envelope surface temperature (exceeding 600°C), fixtures with this option are not suitable for Class I, Division 2, Class I, Zone 2, some Class I, Zone 2 Ex nR, Class II and Class III hazardous locations. Contact the factory for specific fixture suitability.

Instant Restart

Available for 50-150 Watt VML Series High Pressure Sodium Fixtures by adding Suffix "IR" to catalog number (Example: VMLA-2-50GG-IR).

Additional instant restart interior circuitry may decrease High Pressure Sodium lamp life. Feature will not affect fixture suitability in hazardous location applications.

Ballast Protection Circuit

Optional factory installed special ballast protector replaces the standard HPS ignitor and applies starting pulse to the lamp for 10 to 15 seconds each time voltage is supplied to the ballast. If the lamp has not ignited by the end of the time period, the starter will cease pulsing. Used to eliminate the continuous high voltage pulsing of the ignitor when end of life, lamp cycling, or missing lamp conditions exist. Available for 70, 100, 150, 250 and 400 watt HPS fixtures. Add suffix "BP" to fixture catalog number.

VM MOUNTING SPLICE BOX							
CATALOG NUMBER							HUB SIZE
PENDANT①	PENDANT②	CEILING	WALL	CONE TOP	25° STANCHION	STRAIGHT STANCHION	
VMA-2	VMA-24	VMX-2	VMB-2	VMC-2	—	—	3/4"
VMA-3	—	VMX-3	VMB-3	—	—	—	1"
—	—	—	—	—	VMD-4	—	1-1/4"
—	—	—	—	—	VMD-5	VMDS-5	1-1/2"

① For use with Series VML, VMK, VMM and VMU fixtures.
 ② For use with Series VMV, VME, VMF and VMP fixtures.
 Flexible pendant mounting-order VMA-24 with suffix SU75.
 Cone top pendant not suitable for flexible mounting.



50-250 Watt



250-400 Watt

50-400W BALLAST TANK ASSEMBLY					
WATTS	VOLTAGE @ 60Hz	CATALOG NUMBER			
		LAMP TYPE			
		HPS	MH	PULSE START MH	MV
50	Quad	VML0-0-100	—	—	—
	Tri	—	—	—	—
	480	—	—	—	—
70	Quad	VML0-0-400	VMM0-0-400	—	—
	Tri	VML0-0-460	VMM0-0-460	—	—
	480	VML0-0-450	VMM0-0-450	—	—
100	Quad	VML0-0-500	VMM0-0-500	—	VMK0-0-500
	Tri	VML0-0-560	VMM0-0-560	—	VMK0-0-560
	480	VML0-0-550	VMM0-0-550	—	VMK0-0-550
150	Quad	VML0-0-900	—	—	—
	Tri	VML0-0-960	—	—	—
	480	VML0-0-950	—	—	—
175	Quad	—	VMM0-0-600	VMU0-0-600	VMK0-0-600
	Tri	—	VMM0-0-660	VMU0-0-660	VMK0-0-660
	480	—	VMM0-0-650	VMU0-0-650	VMK0-0-650
250	Quad	VMV0-0-700	VMM0-0-700	VMPO-0-700	VMK0-0-700
	Tri	VMV0-0-760	VMFO-0-760	VMPO-0-760	VMK0-0-760
	480	VMV0-0-750	VMM0-0-750	VMPO-0-750	VMK0-0-750
320	Quad	—	—	VMPO-0-3200	—
	Tri	—	—	VMPO-0-3260	—
	480	—	—	VMPO-0-3250	—
350	Quad	—	—	VMPO-0-3500	—
	Tri	—	—	VMPO-0-3560	—
	480	—	—	VMPO-0-3550	—
400	Quad	VMV0-0-800	VMFO-0-800	VMPO-0-800	VMEO-0-800
	Tri	VMV0-0-860	VMFO-0-860	VMPO-0-860	VMEO-0-860
	480	VMV0-0-850	VMFO-0-850	VMPO-0-850	VMEO-0-850

Note: For Class I, Zone 2 ExnR Restricted Breathing ballast housings, add "NR" suffix to catalog number; e.g. VML0-0-400NR. "NR" ballast housings are NOT approved for use with refractors.



Notes: BP and IR cannot be used together. QTZ and IR cannot be used together.

Globes



VMG-17 VMGTC-17* VMG-40

Guards



VMAG-17 VMAG-40



VMCHVM adapter for upgrading existing Crouse-Hinds® to Killark, see page L147 for more information.



ENY-2SET

VM SERIES GLOBES & GUARDS					
SERIES	CATALOG NUMBER				DESCRIPTION
	GLOBE	TUFF-SKIN COATED*	TEFLON COATED**	GUARD	
VML, VMM VMU, VMK	VMG-17	VMGT-17	VMGTC-17	VMAG-17	"Small tank" heat and impact resistant glass globe; aluminum guard.
VMV, VMF VMP, VME	VMG-40	—	—	VMAG-40	"Large tank" heat and impact resistant glass globe; plated steel wire guard.

*Registered trademark of Thomas Manufacturing Corp.

**Registered trademark of DuPont, Inc.

Coatings for added resistance to thermal shock, but diminish light output and may hinder heat dissipation.

VM ACCESSORIES	
CATALOG NUMBER	DESCRIPTION
ENY-2SET 3/4"	Pendant seal for Ex nR applications. See p. L146 for more information.
ENY-3SET 1"	See p. L146 for more information.
VMCHVM	Adapter

Refractor Guards



12" VMRWG
8" VMRWG-8



NOTE: Ex nR fixtures and ballast tanks are not rated for use with refractors

LOW WATTAGE REFRACTORS & GUARDS						
I.E.S. TYPE	CATALOG NUMBER					
	8" GLASS	SUFFIX	12" GLASS	SUFFIX	12" POLYCARBONATE	SUFFIX
I	—	—	VZRG-2510	G1	—	—
V	VZRG-1550	G58	VZRG-2550	G5	VZRP-175	P5
Guard	VMRWG-8	—	VMRWG	—	VMRWG	—

To order a fixture with a glass or plastic 12" refractor, change the last 3 numbers from G58 to the appropriate number found on the chart above. For instance, a VMLA-2-40G58 to a 12" Type V Polycarbonate Refractor, becomes a VMLA-2-40P5. To figure the price, subtract the cost of the 8" refractor from the 12" refractor. Add the cost difference to the fixture ending with G58. Low wattage glass refractors are available with Tuffskin coating for added shatter resistance. Add "T" to catalog number e.g. VZRG-1550. Closed bottom glass refractors for use on VMK, VML, VMU and VMM Series up to 250 watts. 12" Closed bottom low wattage plastic refractors for use on VMK, VML, VMU and VMM Series up to 175 watts and are not hazardous location listed.

HIGH WATTAGE REFRACTORS & GUARDS	
I.E.S. TYPE	CATALOG NUMBER
II	VZRG-4020
V	VZRG-4050
Guard	VMRWG

Closed bottom glass refractors for use on VME, VMF, VMP and VMV Series up to 400 watts



Standard Dome^① Angle^① Deep^② Enclosed^③

VM POLYESTER REINFORCED FIBERGLASS REFLECTORS								
SERIES	CATALOG NUMBER							
	STANDARD	DIA.	ANGLE	DIA.	DEEP	DIA.	ENCLOSED	DIA.
VML, VMM VMU, VMK	VMPSD-17	16"	VMPA-17	16"	VMRD-17ALZ ^④	17"	—	—
VMV, VMF VMP, VME	VMPSD-40	16"	VMPA-40	16"	HRD-400 ^②	21"	VMER40 ^③	18.25"

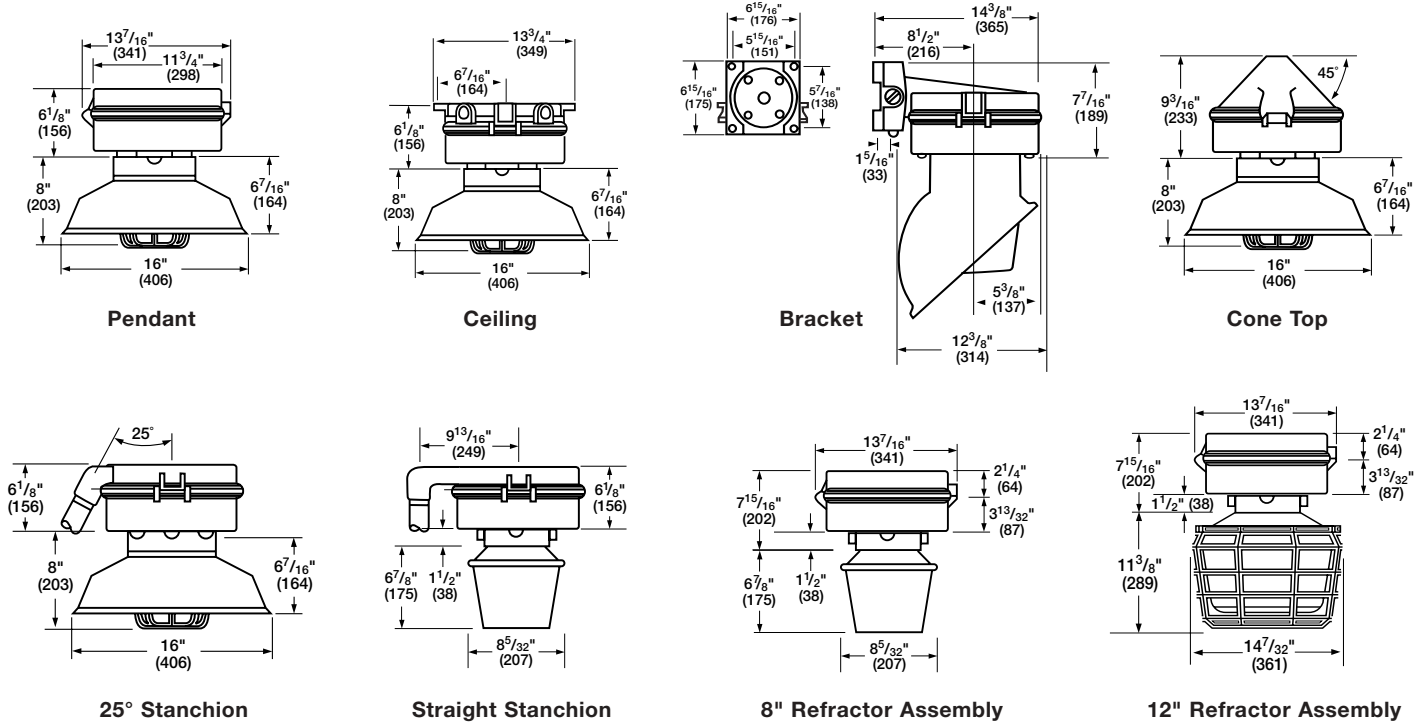
- ① Standard and Angle Reflectors are White Reinforced Fiberglass.
- ② HRD400 Deep Reflectors are aluminum with white baked enamel. Also available with Alzak finish, order catalog number HRD400-ALZ. Will not fit wall or straight stanchion mounts.
- ③ Enclosed Reflectors are Alzak (tm Alcoa) aluminum with heat-tempered lens. Fixtures mounted with VMB wall brackets must have conduit offset if fed from bottom.
- ④ Picture not shown. Alzak only available.

PHOTO CONTROL KITS			
CATALOG NUMBER	VOLTS	WATTS	RATING
KIT 102	120	900W	1800VA
KIT 104	240 (50/60Hz)	900W	1800VA
KIT 105	277	900W	1800VA
KIT 106	480	900W	1800VA

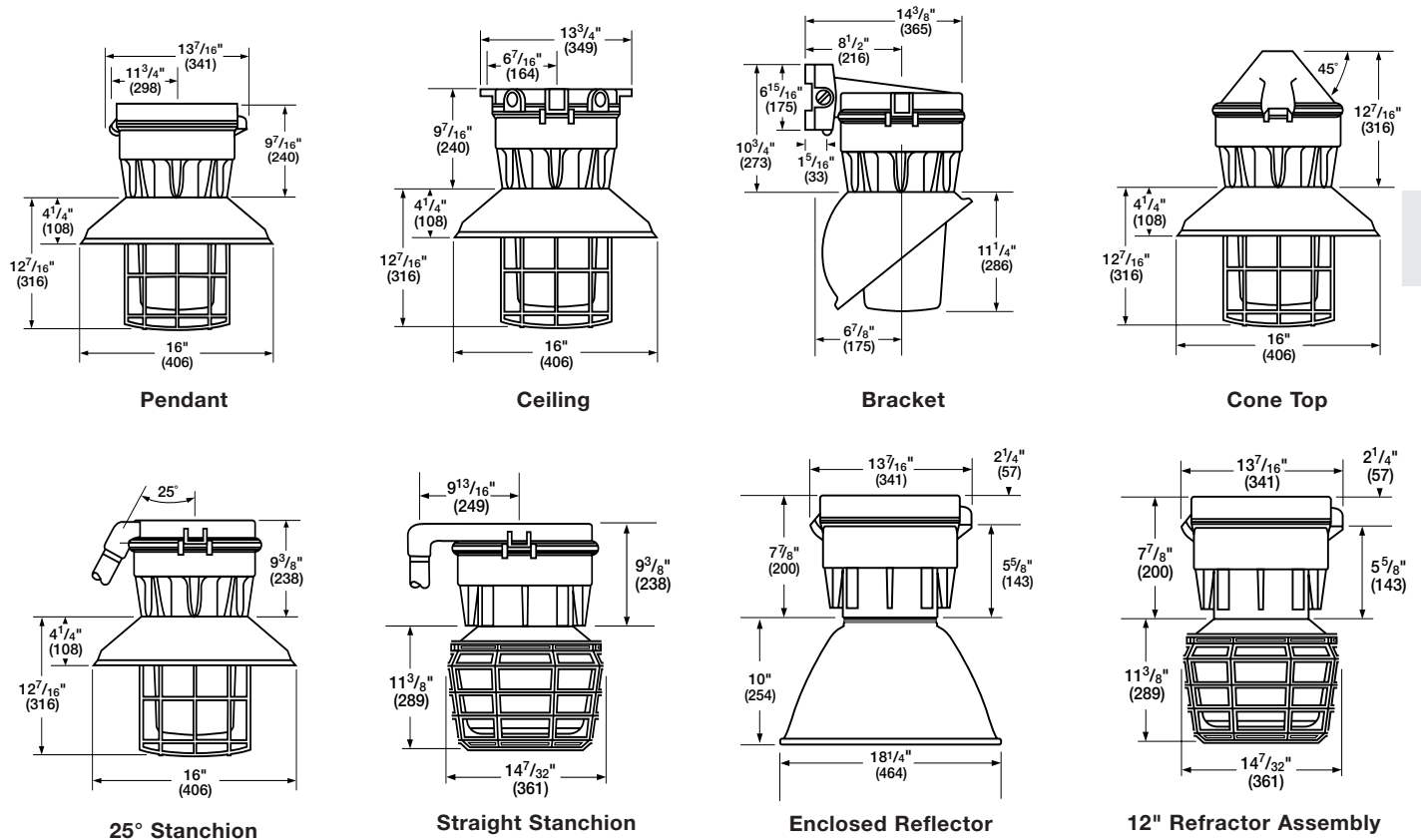
(Not for Hazardous Locations)
Separate photo control kits are designed to turn fixtures on and off at predetermined light levels which may be adjusted. These kits must be installed separately in the electrical system. Suitable for all wattages. Select proper voltage.

VM SOCKET REPLACEMENTS	
CATALOG NUMBER	DESCRIPTION
0735015B	Mogul socket all VM
16255AAAB	Quartz socket VMK, VML, VMM, VMU
0735033B	Quartz socket VME, VMF, VMP, VMV

Dimensions — VMK, VML, VMM, VMU



Dimensions — VME, VMF, VMP, VMV



BALLAST DATA & FUSE KITS ^①											
LAMP SOURCE	LAMP WATTS/TYP	VOLTAGE	CURRENT (AMPS)			INPUT WATTS	BALLAST CIRCUIT ^②	REGULATION	MIN. START	VM FUSE KIT	EZ FUSE KIT
			START	OPERATING	OPEN						
HPS	50 S-68	120	.58	.58	1.24	62	HX/HPF	±5% VOLTAGE* ±12% WATTAGE	-40C -40F	KIT-138 KIT-135 KIT-135 KIT-134	1FK-3 2FK-2 2FK-2 1FK-2
		208	.35	.33	.59						
		240	.30	.29	.50						
		277	.24	.25	.44						
		220-240/50	.56/.51	.67/.62	1.28/1.17						
HPS	70 S-62	120	.75	.81	1.45	93	HX/HPF	±5% VOLTAGE* ±12% WATTAGE	-40C -40F	KIT-136 KIT-135 KIT-135 KIT-134	1FK-5 2FK-3 2FK-2 1FK-2
		208	.45	.47	.85						
		240	.35	.40	.75						
		277	.37	.35	.65						
		480	.21	.21	.36						
		347	.28	.30	0.52						
HPS	100 S-54	120	1.30	1.15	2.20	130	HX/HPF	±5% VOLTAGE* ±12% WATTAGE	-40C -40F	KIT-140 KIT-137 KIT-135 KIT-134	1FK-7 2FK-5 2FK-3 1FK-3
		208	.76	.67	1.27						
		240	.66	.58	1.10						
		277	.60	.50	.85						
		480	0.35	0.29	.55						
		347	.44	.39	.70						
220-240/50	.56/.51	.67/.62	1.28/1.17								
HPS	150 (55 VOLT LAMP) S-55	120	2.00	1.65	2.80	188	HX/HPF	±5% VOLTAGE* ±12% WATTAGE	-40C -40F	KIT-142 KIT-137 KIT-137 KIT-136	1FK-10 2FK-5 2FK-5 1FK-4
		208	1.15	.95	1.60						
		240	1.00	.83	1.40						
		277	.85	.72	1.25						
		480	.50	.42	.70						
		347	.52	.59	.92						
220-240/50	1.27/1.16	.91/.83	1.52/1.40								
HPS	250 S-50	120	1.80	2.75	1.50	295	CWA	±10% VOLTAGE* ±5% WATTAGE	-40C -40F	KIT-142 KIT-137 KIT-137 KIT-134	1FK-7 2FK-4 2FK-4 1FK-3
		208	1.00	1.60	.87						
		240	.90	1.38	.75						
		277	.78	1.20	.65						
		480	.38	.69	.37						
		347	.56	.93	.75						
220-240/50	1.00/.90	.91/.83	.90/.80								
HPS	400 S-51	120	2.82	4.30	1.83	464	CWA	±10% VOLTAGE* ±5% WATTAGE	-40C -40F	KIT-144 KIT-143 KIT-143 KIT-136	1FK-10 2FK-8 2FK-5 1FK-5
		208	1.56	2.48	1.15						
		240	1.36	2.15	.84						
		277	1.18	1.86	.71						
		480	.60	1.00	.75						
		347	1.05	1.40	.75						
220-240/50	1.65/1.50	2.30/2.10	1.20/1.10								
MH	70 M-98	120	.80	.85	1.70	90	HX-HPF	±5% VOLTAGE ±12% WATTAGE	-30C -20F	KIT-136 KIT-137 KIT-137 KIT-135	1FK-4 2FK-3 2FK-2 1FK-2
		208	.50	.50	1.04						
		240	.43	.43	.87						
		277	.39	.39	.78						
		480	0.19	0.23	.50						
		347	.30	.30	.60						
MH	100 M-90	120	1.20	1.15	2.3	129	HX-HPF	±5% VOLTAGE ±12% WATTAGE	-30C -20F	KIT-138 KIT-137 KIT-137 KIT-134	1FK-6 2FK-4 2FK-3 1FK-3
		208	.70	1.50	.60						
		240	.61	1.30	.55						
		277	.55	1.15	.45						
		480	0.30	0.30	0.55						
		347	.40	.90	.40						
220-240/50	.45/.41	.52/.51	.60/.85								
MH	175 M-57	120	.80	1.80	1.80	210	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-136 KIT-135 KIT-135 KIT-134	1FK-5 2FK-3 2FK-3 1FK-2
		208	.42	1.04	1.04						
		240	.42	.90	.90						
		277	.35	.78	.78						
		480	.22	.45	.45						
		347	.42	.62	.62						
220-240/50	.60/.55	.98/.90	.97/.89								
MH	250 M-58	120	1.25	2.60	2.50	294	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-142 KIT-137 KIT-137 KIT-134	1FK-8 2FK-5 2FK-5 1FK-3
		208	.65	1.50	1.58						
		240	.60	1.30	1.25						
		277	.50	1.12	1.10						
		480	.25	.65	.65						
		347	.90	.95	.65						
220-240/50	.94/.86	1.35/1.24	1.20/1.10								
MH	400 M-59	120	1.10	4.00	3.80	458	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-142 KIT-141 KIT-137 KIT-136	1FK-10 2FK-7 2FK-5 1FK-5
		208	.70	2.30	2.20						
		240	.52	2.00	1.90						
		277	.45	1.75	1.65						
		480	.38	1.00	1.00						
		347	1.20	1.40	1.35						
220-240/50	1.30/1.19	2.20/2.00	2.10/1.93								

① Fuse kits, for field installation, must be used within guidelines of governing Electric Codes. Fuses not permitted by CSA C22.2 no. 37 for Canada.

② All ballasts circuits are High Power Factor 90%+.

* Lamp watts: within ANSI trapezoid limitations.

Consult major lamp & ballast manufacturer catalogs if more detailed data is needed.



BALLAST DATA & FUSE KIT ^①											
LAMP SOURCE	LAMP WATTS/TYPE	VOLTAGE	CURRENT (AMPS)			INPUT WATTS	BALLAST CIRCUIT ^②	REGULATION	MIN. START	VM FUSE KIT	EZ FUSE KIT
			START	OPERATING	OPEN						
MHP	175 M-137	120	0.95	1.80	1.80	208	CWA	±10% VOLTAGE ±10% WATTAGE	-30C -20F	KIT-136 KIT-135 KIT-135 KIT-134 KIT-135 KIT-134	1FK-5 2FK-3 2FK-3 1FK-2 2FK-2 1FK-8
		208	0.55	1.05	1.05						
		240	0.45	0.90	0.90						
		277	0.40	0.80	0.80						
		480	0.25	0.50	0.45						
347	0.4	0.70	0.60								
MHP	250 M-138	120	2.30	2.50	1.40	288	CWA	±10% VOLTAGE ±10% WATTAGE	-30C -20F	KIT-142 KIT-137 KIT-137 KIT-134 KIT-135 KIT-134	1FK-8 2FK-5 2FK-5 1FK-3 2FK-2 1FK-3
		208	1.30	1.45	0.80						
		240	1.15	1.25	0.70						
		277	1.00	1.10	0.60						
		480	0.21	0.57	0.48						
347	0.45	0.95	0.75								
MHP	320 M-132	120	1.80	3.25	2.30	365	CWA	±10% VOLTAGE ±10% WATTAGE	-30C -20F	KIT-142 KIT-139 KIT-137 KIT-134 KIT-135 KIT-134	1FK-8 2FK-6 2FK-5 1FK-3 2FK-5 1FK-5
		208	1.05	1.90	1.35						
		240	0.30	1.65	1.15						
		277	0.80	1.40	1.00						
		480	0.45	0.80	0.60						
347	0.70	1.10	0.80								
MHP	350 M-131	120	2.20	3.40	2.20	400	CWA	±10% VOLTAGE ±10% WATTAGE	-30C -20F	KIT-142 KIT-141 KIT-137 KIT-136 KIT-135 KIT-134	1FK-10 2FK-7 2FK-5 1FK-5 2FK-3 1FK-3
		208	1.30	2.00	1.30						
		240	1.10	1.70	1.10						
		277	1.00	1.50	1.00						
		480	0.60	0.85	0.60						
347	0.85	1.20	0.80								
MHP	400 M-135	120	2.85	3.80	2.20	452	CWA	±10% VOLTAGE ±10% WATTAGE	-30C -20F	KIT-142 KIT-141 KIT-137 KIT-136 KIT-137 KIT-136	1FK-10 2FK-7 2FK-5 1FK-5 2FK-3 1FK-3
		208	1.65	2.20	1.50						
		240	1.45	1.90	1.10						
		277	1.25	1.65	0.95						
		480	0.75	1.00	0.60						
347	1.10	1.35	0.75								
MV	100 H-38	120	1.00	1.05	0.64	125	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-134 KIT-135 KIT-135 KIT-134 KIT-135 KIT-134 KIT-135	1FK-3 2FK-2 2FK-2 1FK-2 2FK-1 1FK-1 2FK-2
		208	0.58	0.60	0.37						
		240	0.50	0.52	0.32						
		277	0.43	0.45	0.28						
		480	0.25	0.26	0.16						
347	0.35	0.40	0.20								
220-240/50	.56/.51	.59/.54	.25/.23								
MV	175 H-39	120	1.70	1.75	0.86	205	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-136 KIT-135 KIT-135 KIT-134 KIT-135 KIT-134 KIT-135	1FK-5 2FK-3 2FK-3 1FK-2 2FK-2 1FK-2 2FK-2
		208	0.98	1.00	0.50						
		240	0.85	0.88	0.43						
		277	0.74	0.76	0.37						
		480	0.41	0.44	0.20						
347	0.60	0.60	0.21								
220-240/50	.83/.76	.97/.89	.62/.57								
MV	250 H-37	120	2.40	2.50	0.60	285	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-142 KIT-137 KIT-137 KIT-134 KIT-135 KIT-134 KIT-137	1FK-8 2FK-5 2FK-5 1FK-3 2FK-2 1FK-3 2FK-5
		208	1.40	1.45	0.35						
		240	1.20	1.25	0.30						
		277	1.00	1.10	0.29						
		480	0.60	0.62	0.20						
347	0.80	0.85	0.50								
220-240/50	1.40/1.28	1.40/1.28	.38/.35								
MV	400 H-33	120	2.90	3.90	1.30	454	CWA	±10% VOLTAGE ±5% WATTAGE	-30C -20F	KIT-142 KIT-143 KIT-137 KIT-136 KIT-137 KIT-136 KIT-137	1FK-10 2FK-8 2FK-5 1FK-5 2FK-5 1FK-4 2FK-5
		208	1.67	2.20	0.75						
		240	1.45	1.95	0.65						
		277	1.25	1.70	0.56						
		480	0.95	0.98	0.24						
347	1.00	1.30	0.45								
220-240/50	1.75/1.61	2.20/2.00	.42/.39								

① Fuse kits, for field installation, must be used within guidelines of governing Electric Codes. Fuses not permitted by CSA C22.2 no.137 for Canada.

② All ballasts circuits are High Power Factor 90%+.

* Lamp watts: within ANSI trapezoid limitations .

Consult major lamp & ballast manufacturer catalogs if more detailed data is needed.

VM HAZARDOUS LOCATION APPLICATION DATA ^① —CLASS I, DIVISION 2, GROUPS A, B, C, D & CLASS I, ZONE 2, GROUPS IIC,IIB,IIA								
LAMP			RATED AMBIENT °C	TEMPERATURE °C				
SERIES	TYPE	WATTAGE		WITHOUT REFLECTOR	WITH REFLECTOR	WITH 8" REFRACTOR	WITH 12" REFRACTOR	SUPPLY WIRE SUITABLE FOR °C
VML	HPS	50	40	200 (T3)	200 (T3)	200 (T3)	180 (T3A)	75
			55	200 (T3)	200 (T3)	200 (T3)	180 (T3A)	90
			65	215 (T2D)	215 (T2D)	215 (T2D)	200 (T3)	90
VML	HPS	70	40	200 (T3)	200 (T3)	200 (T3)	180 (T3A)	75
			55	200 (T3)	200 (T3)	200 (T3)	180 (T3A)	90
			65	215 (T2D)	215 (T2D)	215 (T2D)	200 (T3)	90
VML	HPS	100	40	230 (T2C)	230 (T2C)	230 (T2C)	200 (T3)	90
			55	230 (T2C)	230 (T2C)	230 (T2C)	215 (T2D)	110
			65	—	—	—	215 (T2D)	90
VML	HPS	150	40	260 (T2B)	280 (T2A)	260 (T2B)	260 (T2B)	90
			55	280 (T2A)	280 (T2A)	280 (T2A)	260 (T2B)	110
			65	—	—	—	260 (T2B)	110
VMV	HPS	250	40	325	325	NA	325	90
			55	—	—	—	—	—
			65	—	—	—	—	—
VMV	HPS	400	40	280 (T2A)	280 (T2A)	NA	260 (T2B)	110
			55	—	—	—	—	—
			65	—	—	—	—	—
VMM	MH	70	40	180 (T3A)	180 (T3A)	180 (T3A)	160 (T3C)	75
			55	180 (T3A)	180 (T3A)	180 (T3A)	160 (T3C)	90
			65	200 (T3)	200 (T3)	200 (T3)	165 (T3B)	90
VMM	MH	100	40	215 (T2D)	230 (T2C)	215 (T2D)	200 (T3)	90
			55	230 (T2D)	230 (T2C)	230 (T2C)	200 (T3)	90
			65	230 (T2C)	230 (T2C)	230 (T2C)	215 (T2D)	90
VMM	MH	175	40	300 (T2)	300 (T2)	280 (T2A)	280 (T2A)	110
			55	300 (T2)	300 (T2)	280 (T2A)	280 (T2A)	110
			65	—	—	—	280 (T2A)	110
VMM	MH	250	40	325	325	300 (T2)	300 (T2)	110
			55	—	—	—	300 (T2)	90
			65	—	—	—	—	—
VMF	MH	400	40	325	325	NA	300 (T2)	125
			55	—	—	—	—	—
			65	—	—	—	—	—
VMU	MHP	175	40	300 (T2)	300 (T2)	280 (T2A)	280 (T2A)	110
			55	300 (T2)	300 (T2)	280 (T2A)	280 (T2A)	110
			65	—	—	—	280 (T2A)	110
VMP	MHP	250	40	325	325	NA	300 (T2)	90
			55	—	—	—	300 (T2)	90
			65	—	—	—	—	—
VMP	MHP	320	40	325	325	NA	300 (T2)	125
			55	—	—	—	—	—
			65	—	—	—	—	—
VMP	MHP	350	40	325	325	NA	300 (T2)	125
			55	—	—	—	—	—
			65	—	—	—	—	—
VMP	MHP	400	40	325	325	NA	300 (T2)	125
			55	—	—	—	—	—
			65	—	—	—	—	—
VMK	MV	100	40	260 (T2B)	260 (T2B)	280 (T2B)	260 (T2B)	90
			55	280 (T2A)	280 (T2A)	280 (T2A)	260 (T2B)	90
			65	280 (T2A)	280 (T2A)	280 (T2A)	260 (T2B)	110
VMK	MV	175	40	300 (T2)	300 (T2)	280 (T2A)	280 (T2A)	90
			55	300 (T2)	325 (T2)	300 (T2)	280 (T2A)	110
			65	—	—	—	280 (T2A)	110
VMK	MV	250	40	300 (T2)	325	325	300 (T2)	110
			55	—	—	—	325	110
			65	—	—	—	—	—
VME	MV	400	40	350	350	NA	325	125
			55	—	—	—	—	—
			65	—	—	—	—	—

^① This data does not apply to luminaires with auxiliary quartz lighting. Contact factory with specific requirements and suitability. The suitability of these fixtures for Class I, Division 2 locations must be determined for each application based on Article 501-9(b) (2) of the NEC.

See separate tables page L60 for "Enclosed Reflector" or Ex nR Restricted Breathing temperature data.



VM HAZARDOUS LOCATION APPLICATION DATA ^① —CLASS II, DIVISION 1 & 2, AND CLASS III ^②										
LAMP			RATED AMBIENT ^③ °C	GROUPS*	TEMPERATURE °C				CLASS III	SUPPLY WIRE SUITABLE FOR °C
SERIES	TYPE	WATTAGE			WITHOUT REFLECTOR	WITH REFLECTOR	WITH 8" REFRACTOR	WITH 12" REFRACTOR		
VML	HPS	50	40	EFG	120 (T4A)	120 (T4A)	120 (T4A)	120 (T4A)	Y	75
			55	EFG	120 (T4A)	120 (T4A)	120 (T4A)	120 (T4A)	Y	90
			65	EFG	135 (T4)	135 (T4)	135 (T4)	135 (T4)	Y	90
VML	HPS	70	40	EFG	135 (T4)	135 (T4)	135 (T4)	135 (T4)	Y	75
			55	EFG	160 (T3C)	160 (T3C)	160 (T3C)	160 (T3C)	Y	90
			65	EFG	160 (T3C)	160 (T3C)	160 (T3C)	160 (T3C)	Y	90
VML	HPS	100	40	EFG*	—	—	160 (T3C)	160 (T3C)	Y*	75
			55	EF	—	—	180 (T3A)	180 (T3A)	N	90
			65	EF	—	—	—	200 (T3)	N	90
VML	HPS	150	40	EFG*	—	—	160 (T3C)	160 (T3C)	Y*	90
			55	EF	—	—	180 (T3A)	180 (T3A)	N	110
			65	—	—	—	—	—	—	—
VMV	HPS	250	40	EFG*	180 (T3A)	180 (T3A)	NA	160 (T3C)	Y*	90
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMV	HPS	400	40	EFG*	200 (T3)	200 (T3)	NA	160 (T3C)	Y*	110
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMM	MH	70	40	EFG*	—	—	160 (T3C)	160 (T3C)	Y*	75
			55	EF	—	—	180 (T3A)	180 (T3A)	N	90
			65	EF	—	—	200 (T3)	200 (T3)	N	90
VMM	MH	100	40	EFG*	—	—	160 (T3C)	160 (T3C)	Y*	75
			55	EF	—	—	180 (T3A)	180 (T3A)	N	90
			65	EF	—	—	200 (T3)	200 (T3)	N	90
VMM	MH	175	40	EFG*	—	—	180 (T3A)	160 (T3C)	Y*	90
			55	EF	—	—	—	200 (T3)	N	110
			65	—	—	—	—	—	—	—
VMM	MH	250	40	EFG*	—	—	—	160 (T3C)	Y*	110
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMF	MH	400	40	EFG*	—	—	NA	160 (T3C)	Y*	125
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMU	MHP	175	40	EFG*	—	—	180 (T3A)	160 (T3C)	Y*	90
			55	EF	—	—	—	200 (T3)	N	110
			65	—	—	—	—	—	—	110
VMP	MHP	250	40	EFG*	—	—	NA	160 (T3C)	Y*	90
			55	—	—	—	NA	—	—	90
			65	—	—	—	—	—	—	—
VMP	MHP	320	40	EFG*	—	—	NA	160 (T3C)	Y*	125
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMP	MHP	350	40	EFG*	—	—	NA	160 (T3C)	Y*	125
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMP	MHP	400	40	EFG*	—	—	NA	160 (T3C)	Y*	125
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VMK	MV	100	40	EFG*	—	—	160 (T3C)	160 (T3C)	Y*	75
			55	EF	—	—	180 (T3A)	180 (T3A)	N	90
			65	EF	—	—	200 (T3)	200 (T3)	N	110
VMK	MV	175	40	EFG*	—	—	180 (T3A)	160 (T3C)	Y*	90
			55	EF	—	—	180 (T3A)	180 (T3A)	N	110
			65	—	—	—	—	—	N	110
VMK	MV	250	40	EFG*	—	—	—	160 (T3C)	Y*	110
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—
VME	MV	400	40	EFG*	—	—	NA	160 (T3C)	Y*	125
			55	—	—	—	—	—	—	—
			65	—	—	—	—	—	—	—

① This data does not apply to luminaires with auxiliary quartz lighting. Contact factory with specific requirements and suitability.

② Guard required for Class II, Div. 1 and Class III application.

* Fixture configurations with T-CODE A165°C are suitable for Class II Group G & Class III.



VM ENCLOSED REFLECTOR HAZARDOUS LOCATION APPLICATION DATA						
LAMP TYPE	WATTAGE	RATED AMBIENT °C	CLASS I DIV. 2 CLASS I ZONE 2	CLASS II DIV. 1	CLASS III SUITABILITY	SUPPLY WIRE TEMPERATURE °C
HPS	150	40	260°C (T2B)	100°C (T5)	Y	75
	250	40	260°C (T2B)	100°C (T5)		
	400	40	260°C (T2B)	160°C (T3C)		
MH	400	40	280°C (T2A)	135°C (T4)	Y	75
MHP	250	40	280°C (T2A)	135°C (T4)	Y	75
	320	40	280°C (T2A)	135°C (T4)		
	350	40	280°C (T2A)	135°C (T4)		
	400	40	280°C (T2A)	135°C (T4)		
MV	400	40	450°C (T1)	160°C (T3C)	Y	75

VM RESTRICTED BREATHING Ex nR HAZARDOUS LOCATION APPLICATION DATA ^① – CLASS I, ZONE 2 Ex nR IIC, IIB, IIA						
LAMP			RATED AMBIENT °C	GLOBE OR GLOBE WITH REFLECTOR		ENCLOSED REFLECTOR ^② UL/CSA
SERIES	TYPE	WATTAGE		UL/CSA	SUPPLY WIRE SUITABLE FOR °C	
VML	HPS	50	40	100°C (T5)	75	—
VML	HPS	70	40	100°C (T5)	75	—
VML	HPS	100	40	135°C (T4)	75	—
VML	HPS	150	40	135°C (T4)	90	100°C (T5)
VMV	HPS	250	40	135°C (T4)	90	100°C (T5)
VMV	HPS	400	40	200°C (T3)	10	160°C (T3C)
VMM	MH	70	40	100°C (T4)	75	—
VMM	MH	100	40	200°C (T3)	75	—
VMM	MH	175	40	200°C (T3)	90	—
VMM	MH	250	40	200°C (T3)	90	—
VMF	MH	400	40	200°C (T3)	125	135°C (T4)
VMU	MHP	175	40	200°C (T3)	90	—
VMP	MHP	250	40	200°C (T3)	90	135°C (T4)
VMP	MHP	320	40	200°C (T3)	125	135°C (T4)
VMP	MHP	350	40	200°C (T3)	125	135°C (T4)
VMP	MHP	400	40	200°C (T3)	125	135°C (T4)
VMK	MV	100	40	135°C (T4)	75	—
VMK	MV	175	40	200°C (T3)	90	—
VMK	MV	250	40	200°C (T3)	110	—
VME	MV	400	40	200°C (T3)	125	160°C (T3C)

^① This data does not apply to luminaires with auxiliary quartz lighting. Contact factory with specific requirements and suitability.

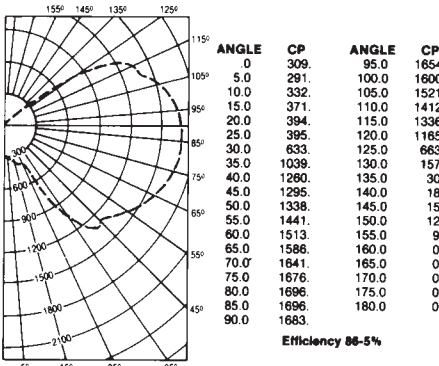
^② Supply wire temperature for all VM with enclosed reflector is 75°C.



HIGH PRESSURE SODIUM
With Globe Only
50 – 150 Watt Mogul Base

CANDLEPOWER – 150 WATT
E-23½ Clear Lamp
16000 Lumens

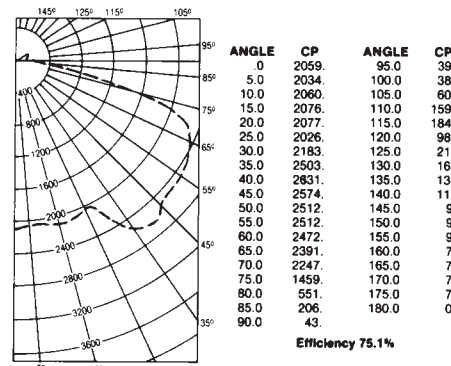
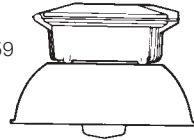
For 100 Watt multiply by .59
For 70 Watt multiply by .36
For 50 Watt multiply by .25



HIGH PRESSURE SODIUM
With Globe and Standard Dome Reflector
50 – 150 Watt Mogul Base

CANDLEPOWER – 150 WATT
E-23½ Clear Lamp
16000 Lumens

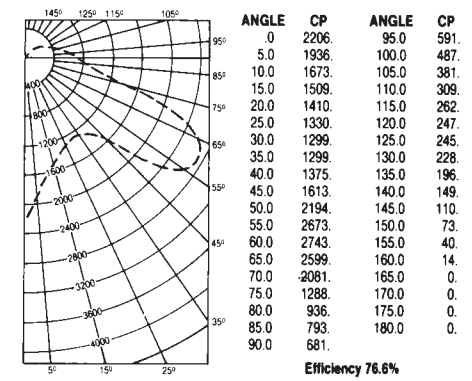
For 100 Watt multiply by .59
For 70 Watt multiply by .36
For 50 Watt multiply by .25



HIGH PRESSURE SODIUM
With 8" Glass Refractor IES Type V
50 – 150 Watt Mogul Base

CANDLEPOWER – 150 WATT
E-23½ Clear Lamp
16000 Lumens

For 100 Watt multiply by .59
For 70 Watt multiply by .36
For 50 Watt multiply by .25



COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance												
	80	70	50	30	10	0	80	70	50	30	10	0	
100	50	30	10	50	30	10	50	30	10	50	30	10	0
90	50	30	10	50	30	10	50	30	10	50	30	10	0
80	50	30	10	50	30	10	50	30	10	50	30	10	0
70	50	30	10	50	30	10	50	30	10	50	30	10	0
60	50	30	10	50	30	10	50	30	10	50	30	10	0
50	50	30	10	50	30	10	50	30	10	50	30	10	0
40	50	30	10	50	30	10	50	30	10	50	30	10	0
30	50	30	10	50	30	10	50	30	10	50	30	10	0
20	50	30	10	50	30	10	50	30	10	50	30	10	0
10	50	30	10	50	30	10	50	30	10	50	30	10	0

SPACING TO MOUNTING HEIGHT RATIO — S/MH 3.8

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance												
	80	70	50	30	10	0	80	70	50	30	10	0	
100	50	30	10	50	30	10	50	30	10	50	30	10	0
90	50	30	10	50	30	10	50	30	10	50	30	10	0
80	50	30	10	50	30	10	50	30	10	50	30	10	0
70	50	30	10	50	30	10	50	30	10	50	30	10	0
60	50	30	10	50	30	10	50	30	10	50	30	10	0
50	50	30	10	50	30	10	50	30	10	50	30	10	0
40	50	30	10	50	30	10	50	30	10	50	30	10	0
30	50	30	10	50	30	10	50	30	10	50	30	10	0
20	50	30	10	50	30	10	50	30	10	50	30	10	0
10	50	30	10	50	30	10	50	30	10	50	30	10	0

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.8

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance												
	80	70	50	30	10	0	80	70	50	30	10	0	
100	70	50	30	10	70	50	30	10	70	50	30	10	0
90	70	50	30	10	70	50	30	10	70	50	30	10	0
80	70	50	30	10	70	50	30	10	70	50	30	10	0
70	70	50	30	10	70	50	30	10	70	50	30	10	0
60	70	50	30	10	70	50	30	10	70	50	30	10	0
50	70	50	30	10	70	50	30	10	70	50	30	10	0
40	70	50	30	10	70	50	30	10	70	50	30	10	0
30	70	50	30	10	70	50	30	10	70	50	30	10	0
20	70	50	30	10	70	50	30	10	70	50	30	10	0
10	70	50	30	10	70	50	30	10	70	50	30	10	0

SPACING TO MOUNTING HEIGHT RATIO — S/MH .8

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 150 WATT H.P.S.
(See top for other wattage multipliers)
HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	HORIZONTAL DISTANCE FROM SOURCE IN FEET										
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
8'	4.82	7.58	5.10	2.51	1.28	.73	.44	.29	.20	.14	.10
10'	3.09	3.49	4.58	2.47	1.38	.83	.52	.35	.23	.17	.13
12'	2.15	2.15	3.97	2.27	1.43	.89	.57	.39	.27	.20	.15
14'	1.58	1.68	2.86	2.11	1.39	.90	.61	.42	.30	.22	.17
16'	1.21	1.29	1.89	1.95	1.26	.90	.62	.44	.32	.24	.18
18'	.95	1.02	1.30	1.76	1.22	.88	.63	.45	.34	.25	.19
20'	.77	.84	.73	1.44	1.14	.82	.62	.46	.35	.26	.20

FC = (Candlepower) (COS θ) / DISTANCE²

Test No. HP-03426

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 150 WATT H.P.S.
(See top for other wattage multipliers)
HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	HORIZONTAL DISTANCE FROM SOURCE IN FEET										
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
8'	32.17	20.80	9.57	4.03	1.80	.99	.39	.25	.06	.04	.03
10'	20.59	14.50	9.10	4.28	2.15	1.19	.71	.30	.20	.14	.04
12'	14.29	11.34	8.28	4.25	2.33	1.34	.82	.53	.36	.17	.12
14'	10.51	8.85	6.88	4.17	2.41	1.47	.92	.61	.41	.29	.14
16'	8.04	7.05	5.20	4.00	2.39	1.53	1.01	.67	.46	.33	.22
18'	6.35	5.73	4.50	3.68	2.32	1.54	1.04	.71	.51	.36	.26
20'	5.15	4.74	3.62	3.20	2.28	1.52	1.07	.75	.52	.34	.28

FC = (Candlepower) (COS θ) / DISTANCE²

Test No. HP-03425

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 150 WATT H.P.S.
(See top for other wattage multipliers)
HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	HORIZONTAL DISTANCE FROM SOURCE IN FEET										
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
8'	34.47	12.38	8.36	4.39	1.84	.74	.34	.20	.11	.08	.06
10'	22.06	9.52	5.70	4.58	2.37	1.18	.63	.27	.16	.11	.08
12'	15.32	7.37	4.33	3.71	2.59	1.46	.82	.47	.26	.15	.10
14'	11.26	6.01	3.57	2.99	2.57	1.63	1.00	.60	.38	.26	.14
16'	8.62	4.93	3.09	2.16	2.09	1.65	1.14	.73	.46	.31	.21
18'	6.81	4.17	2.68	1.92	1.81	1.64	1.13	.78	.55	.36	.25
20'	5.52	3.44	2.38	1.70	1.42	1.34	1.14	.84	.59	.42	.29

FC = (Candlepower) (COS θ) / DISTANCE²

Test No. HP-03463

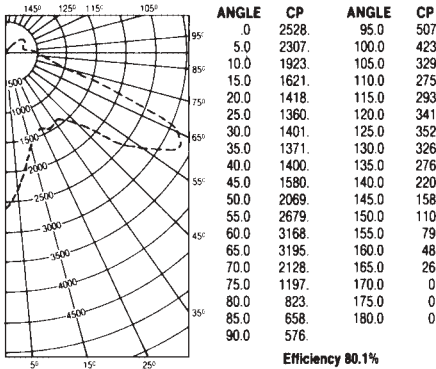
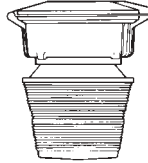
HIGH PRESSURE SODIUM

With 12" Glass Refractor IES Type V
50 – 150 Watt Mogul Base

CANDLEPOWER – 150 WATT

E-23½ Clear Lamp
16000 Lumens

For 100 Watt multiply by .59
For 70 Watt multiply by .36
For 50 Watt multiply by .25



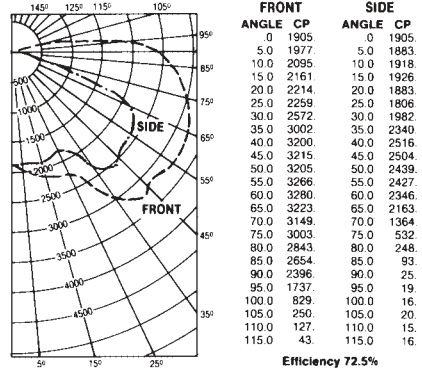
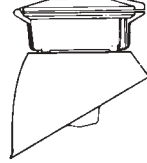
HIGH PRESSURE SODIUM

With Globe and Angle Reflector
50 – 150 Watt Mogul Base

CANDLEPOWER – 150 WATT

E-23½ Clear Lamp
16000 Lumens

For 100 watt multiply by .59
For 70 watt multiply by .36
For 50 watt multiply by .25



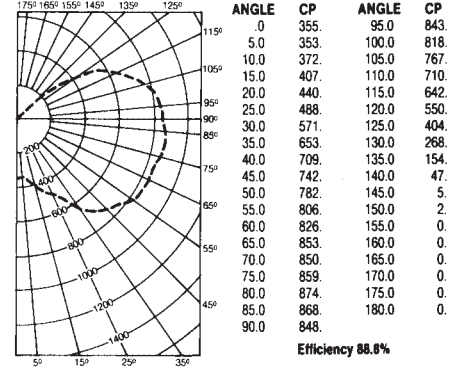
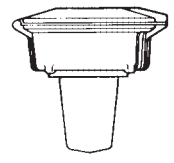
MERCURY VAPOR

With Globe Only
100 – 250 Watt Mogul Base

CANDLEPOWER – 175 WATT

E-28 deluxe white coated lamp
8600 Lumens

For 100 watt multiply by .48
For 250 watt multiply by 1.41



COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE fcc	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
0	93	93	93	93	89	89	89	89	89	89	83	83	83	77	77	77	71	71	71	68										
1	82	77	73	69	79	74	70	67	69	65	63	63	61	59	59	57	55	55	52											
2	73	65	58	53	70	62	56	51	58	53	48	53	49	45	49	46	43	40												
3	65	55	47	41	62	53	45	40	48	42	38	45	40	35	41	37	33	31												
4	58	47	38	33	55	45	38	32	42	35	30	38	33	28	35	30	27	24												
5	52	40	32	26	49	39	31	25	35	29	24	32	27	22	30	25	21	19												
6	47	35	27	21	45	33	26	20	31	24	19	28	22	18	26	21	17	15												
7	43	31	23	17	41	29	22	17	27	20	16	25	19	15	23	18	14	12												
8	40	28	20	15	38	26	19	14	24	18	13	22	17	13	21	16	12	10												
9	37	25	18	13	35	24	17	12	22	16	12	20	15	11	19	14	10	08												
10	34	23	16	11	33	22	15	11	20	14	10	19	13	10	17	12	09	07												

SPACING TO MOUNTING HEIGHT RATIO — S/MH .7

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE fcc	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
1	71	66	63	68	65	61	64	61	58	60	58	56	57	55	53	51														
2	60	54	49	58	53	48	55	50	46	52	48	45	49	46	43	41														
3	52	46	40	51	44	39	48	42	38	45	41	37	42	39	35	34														
4	45	38	33	44	37	32	41	36	31	39	34	30	37	33	29	27														
5	40	33	27	39	32	27	36	31	26	34	29	25	33	28	24	23														
6	35	28	23	34	28	23	32	26	22	31	25	21	29	24	21	19														
7	31	24	19	30	24	19	29	23	19	27	22	18	26	21	18	16														
8	28	21	16	27	21	16	26	20	16	24	19	15	23	18	15	13														
9	25	18	14	24	18	14	23	17	13	22	17	13	21	16	13	11														
10	22	15	11	21	15	11	20	15	11	19	14	10	18	13	10	09														

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.9

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE fcc	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
0	98	98	98	98	92	92	92	92	80	80	80	70	70	70	60	60	60	56												
1	85	78	73	68	79	73	68	64	63	59	56	54	51	48	46	43	41	37												
2	75	65	57	51	69	61	54	48	52	46	42	44	40	36	37	33	30	26												
3	67	56	47	40	62	52	44	38	44	38	33	37	32	28	31	27	24	20												
4	60	48	39	33	56	45	37	31	38	32	27	32	27	23	27	23	19	16												
5	55	42	33	26	50	39	31	25	33	27	21	28	22	18	23	19	15	12												
6	50	37	28	22	46	34	26	21	29	23	18	25	19	15	20	16	12	10												
7	46	33	24	19	42	30	23	17	26	20	15	22	17	13	18	14	10	08												
8	42	29	21	16	39	27	20	15	23	17	13	19	14	11	16	12	08	06												
9	39	26	19	14	36	24	17	13	21	15	11	17	12	09	14	10	07	05												
10	36	24	17	12	33	22	16	11	19	13	09	16	11	08	13	09	06	04												

SPACING TO MOUNTING HEIGHT RATIO — S/MH 2.6

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 150 WATT H.P.S.

(See top for other wattage multipliers)

HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	DISTANCE										
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
8'	39.50	13.23	8.27	5.16	2.04	77	32	19	12	02	05
10'	25.28	9.80	5.99	4.61	2.84	1.31	55	25	17	10	06
12'	17.56	7.61	4.41	3.56	2.93	1.80	90	49	27	14	09
14'	12.90	6.04	3.77	2.88	2.58	1.88	1.23	66	39	23	13
16'	9.88	5.23	3.31	2.29	2.08	1.76	1.29	89	51	31	19
18'	7.80	4.47	2.89	1.96	1.66	1.60	1.30	93	68	40	25
20'	6.32	3.84	2.46	1.76	1.40	1.34	1.15	97	71	48	33

FC = (Candlepower) / (COS θ)²

Test No. HP-03464

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 150 WATT H.P.S.

(See top for other wattage multipliers)

HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	DISTANCE									
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'
8'	29.77	26.14	12.22	5.31	2.60					

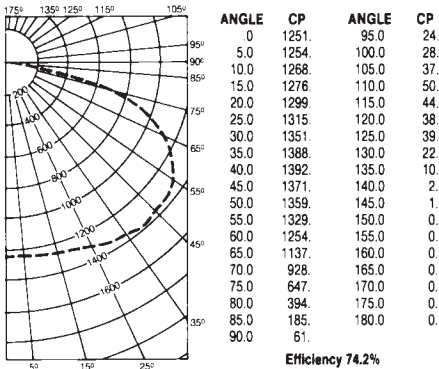
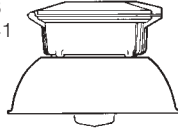
MERCURY VAPOR

With Globe and Standard Dome Reflector
100 – 250 Watt Mogul Base

CANDLEPOWER – 175 WATT

E-28 deluxe white coated lamp
8600 Lumens

For 100 Watt multiply by .48
For 250 Watt multiply by 1.41



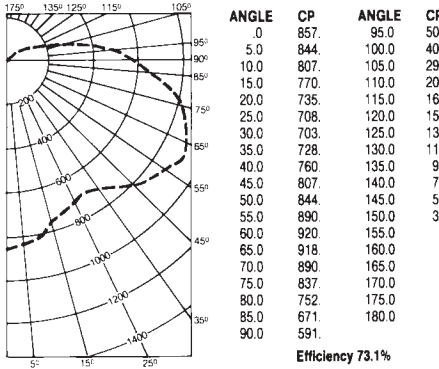
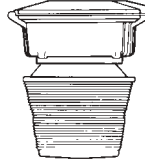
MERCURY VAPOR

With 8" Glass Refractor IES Type V
100 – 250 Watt Mogul Base

CANDLEPOWER – 175 WATT

E-28 deluxe white coated lamp
8600 Lumens

For 100 Watt multiply by .48
For 250 Watt multiply by 1.41



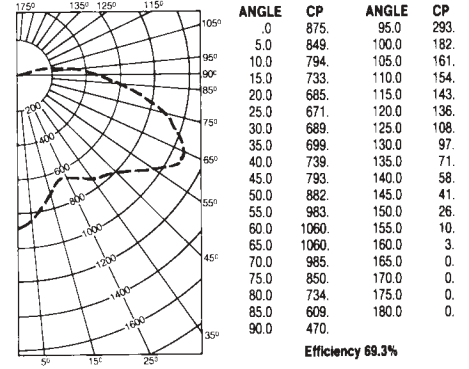
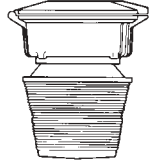
MERCURY VAPOR

With 12" Glass Refractor IES Type V
100 – 250 Watt Mogul Base

CANDLEPOWER – 175 WATT

E-28 deluxe white coated lamp
8600 Lumens

For 100 Watt multiply by .48
For 250 Watt multiply by 1.41



COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance																	
	80	70	50	30	10	0	80	70	50	30	10	0						
0	.88	.88	.88	.86	.86	.86	.81	.81	.81	.78	.78	.74	.74	.72				
1	.80	.76	.72	.69	.77	.74	.71	.68	.70	.68	.65	.67	.65	.63	.64	.62	.61	.59
2	.72	.65	.59	.54	.69	.63	.58	.54	.60	.56	.52	.57	.54	.51	.55	.52	.49	.47
3	.65	.56	.50	.44	.63	.55	.49	.44	.52	.47	.43	.50	.46	.42	.48	.44	.41	.39
4	.59	.49	.42	.36	.57	.48	.41	.36	.46	.40	.35	.44	.39	.35	.42	.37	.34	.32
5	.53	.42	.35	.30	.51	.41	.34	.29	.39	.33	.29	.38	.32	.28	.36	.31	.28	.26
6	.48	.37	.30	.25	.46	.36	.29	.24	.35	.29	.24	.33	.28	.24	.32	.27	.23	.22
7	.44	.33	.26	.21	.42	.32	.25	.21	.31	.25	.20	.30	.24	.20	.28	.23	.20	.18
8	.40	.29	.22	.18	.39	.29	.22	.17	.27	.21	.17	.26	.21	.17	.25	.20	.17	.15
9	.37	.26	.19	.15	.36	.25	.19	.15	.24	.19	.15	.23	.18	.14	.22	.18	.14	.13
10	.34	.23	.17	.13	.33	.23	.17	.13	.22	.16	.13	.21	.16	.12	.20	.16	.12	.11

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.7

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance																	
	80	70	50	30	10	0	80	70	50	30	10	0						
0	.84	.84	.84	.80	.80	.80	.73	.73	.73	.67	.67	.61	.61	.51	.59			
1	.73	.68	.63	.59	.69	.65	.61	.57	.59	.55	.52	.53	.51	.48	.46	.44	.41	
2	.64	.56	.50	.44	.61	.54	.48	.43	.49	.44	.39	.44	.40	.36	.39	.36	.33	.31
3	.58	.48	.41	.35	.54	.46	.39	.34	.42	.36	.31	.37	.33	.29	.34	.30	.27	.24
4	.52	.42	.34	.29	.49	.40	.33	.27	.36	.30	.26	.32	.28	.24	.29	.25	.22	.19
5	.47	.36	.29	.23	.44	.34	.27	.22	.31	.25	.21	.28	.23	.19	.25	.21	.17	.15
6	.43	.32	.24	.19	.40	.30	.23	.19	.27	.22	.17	.25	.20	.16	.22	.18	.15	.13
7	.39	.28	.21	.16	.37	.27	.20	.16	.24	.19	.15	.22	.17	.13	.20	.16	.12	.10
8	.36	.25	.19	.14	.34	.24	.18	.13	.22	.16	.12	.20	.15	.11	.18	.14	.10	.09
9	.33	.23	.16	.12	.32	.22	.16	.11	.20	.14	.11	.18	.13	.10	.16	.12	.09	.07
10	.31	.21	.15	.10	.29	.20	.14	.10	.18	.13	.09	.16	.12	.08	.15	.11	.08	.06

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.3

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	20% Effective Floor Cavity Reflectance																	
	80	70	50	30	10	0	80	70	50	30	10	0						
0	.80	.80	.80	.80	.77	.77	.77	.72	.72	.72	.67	.67	.67	.62	.62	.62	.60	
1	.70	.65	.61	.57	.67	.63	.59	.55	.58	.55	.52	.53	.51	.48	.49	.47	.45	.43
2	.62	.54	.48	.42	.59	.52	.46	.41	.48	.43	.39	.44	.40	.36	.40	.37	.34	.32
3	.55	.46	.39	.33	.52	.44	.38	.32	.40	.35	.30	.37	.33	.29	.34	.30	.27	.25
4	.50	.40	.32	.27	.47	.38	.31	.26	.35	.29	.25	.32	.27	.23	.29	.25	.22	.20
5	.44	.34	.27	.21	.42	.33	.26	.21	.30	.24	.19	.27	.22	.18	.25	.21	.17	.15
6	.40	.30	.23	.17	.38	.29	.22	.17	.26	.20	.16	.24	.19	.15	.22	.18	.14	.12
7	.37	.26	.20	.15	.35	.25	.19	.14	.23	.18	.13	.21	.16	.13	.20	.15	.12	.10
8	.34	.24	.17	.12	.32	.22	.16	.12	.21	.15	.11	.19	.14	.11	.18	.13	.10	.08
9	.31	.21	.15	.11	.30	.20	.14	.10	.19	.13	.10	.17	.12	.09	.16	.12	.08	.07
10	.29	.19	.13	.09	.28	.18	.13	.09	.17	.12	.08	.16	.11	.08	.14	.10	.07	.06

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.2

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 175 WATT MV
(See top for other wattage multipliers)

HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
	8'	19.54	13.00	5.15	1.96	.81	.36	.17	.09	.05	.03
10'	12.51	9.45	4.84	2.24	1.05	.51	.27	.14	.09	.05	.03
12'	8.68	7.12	4.38	2.29	1.20	.65	.36	.20	.12	.07	.05
14'	6.38	5.58	3.81	2.21	1.27	.74	.43	.26	.17	.10	.07
16'	4.88	4.36	3.25	2.09	1.28	.79	.49	.31	.20	.13	.09
18'	3.86	3.52	2.78	1.94	1.26	.82	.53	.35	.24	.16	.11
20'	3.12	2.90	2.36	1.77	1.21	.82	.56	.38	.26	.18	.12

FC = (Candlepower) (COS θ)
DISTANCE²

Test No. 5467.0

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 175 WATT MV
(See top for other wattage multipliers)

HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
	8'	13.39	6.79	3.24	1.49	.72	.38	.22	.13	.09	.06
10'	8.57	5.05	2.85	1.52	.82	.46	.27	.17	.11	.08	.05
12'	5.95	3.95	2.39	1.44	.86	.51	.30	.20	.14	.09	.07
14'	4.37	3.04	2.00	1.33	.85	.54	.35	.23	.16	.11	.08
16'	3.34	2.56	1.69	1.19	.81	.55	.37	.25	.18	.13	.09
18'	2.64	2.12	1.45	1.06	.76	.54	.38	.27	.19	.14	.10
20'	2.14	1.77	1.26	.92	.71	.51	.38	.28	.20	.15	.11

FC = (Candlepower) (COS θ)
DISTANCE²

Test No. 5469.0

ILLUMINATION ON HORIZONTAL SURFACE

FOOTCANDLE CHART (Initial) 175 WATT MV
(See top for other wattage multipliers)

HORIZONTAL DISTANCE FROM SOURCE IN FEET

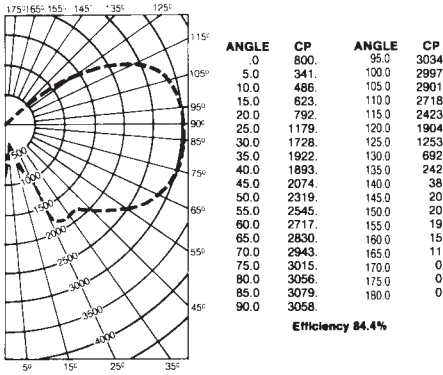
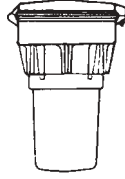
MOUNTING HEIGHT IN FEET	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
	8'	13.67	6.80	3.43	1.72	.82	.41	.22	.13	.09	.06
10'	8.75	4.82	2.80	1.70	.94	.51	.30	.18	.12	.08	.05
12'	6.07	3.71	2.32	1.52	.98	.59	.36	.22	.14	.10	.07
14'	4.46	2.96	1.92	1.34	.94	.63	.40	.26	.18	.12	.08
16'	3.41	2.42	1.65	1.16	.85	.61	.43	.29	.20	.14	.10
18'	2.70	2.02	1.41	1.03	.78	.59	.43	.31	.22	.16	.11
20'	2.18	1.70	1.20	.88	.70	.54	.42	.32	.23	.17	.13

FC = (Candlepower) (COS θ)
DISTANCE²

Test No. 5470.0

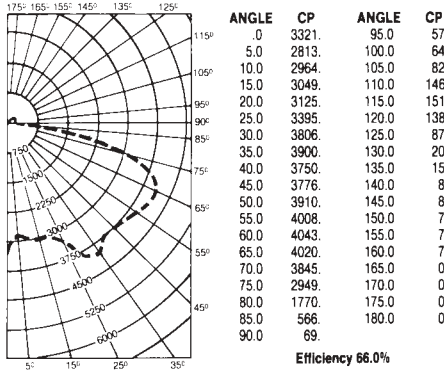
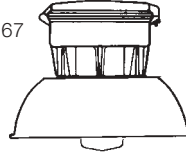
HIGH PRESSURE SODIUM
With Globe Only
250 – 400 Watt Mogul Base

CANDLEPOWER – 250 WATT
E-18 Clear Lamp
30000 Lumens
For 400 Watt multiply by 1.67



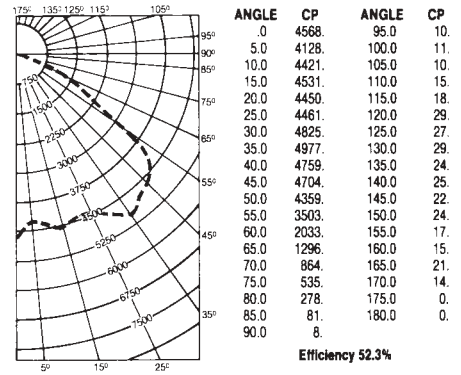
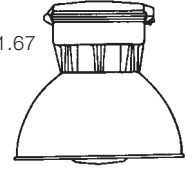
HIGH PRESSURE SODIUM
With Globe and Standard Dome Reflector
250 – 400 Watt Mogul Base

CANDLEPOWER – 250 WATT
E-18 Clear Lamp
30000 Lumens
For 400 Watt multiply by 1.67



HIGH PRESSURE SODIUM
With Globe and Deep Reflector (HRD-400)
250 – 400 Watt Mogul Base

CANDLEPOWER – 250 WATT
E-18 Clear Lamp
30000 Lumens
For 400 Watt multiply by 1.67



COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE f_{cc}	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
20% Effective Floor Cavity Reflectance																														
0	92	92	92	92	86	86	86	86	86	75	75	75	65	65	65	55	55	55	55	55	44	44	44	39	37	32				
1	79	74	68	63	73	68	63	59	56	55	51	49	46	44	41	39	37	32	29	26	22	19	16	13	10					
2	70	61	53	47	64	56	48	44	48	42	37	40	35	32	32	29	26	22	19	16	13	10	7	5	3					
3	62	52	43	37	57	48	40	34	40	34	29	33	28	25	27	23	20	16	13	10	7	5	3	2	1					
4	56	45	36	29	52	41	33	27	35	28	23	29	24	20	23	19	16	13	10	7	5	3	2	1	0					
5	51	39	30	24	46	36	28	22	30	23	19	25	19	15	20	15	12	9	9	9	9	9	9	9	9					
6	46	34	26	20	42	31	24	18	26	20	15	22	16	13	17	13	10	7	7	7	7	7	7	7	7					
7	42	30	22	17	39	28	20	15	23	17	13	19	14	10	15	11	8	6	6	6	6	6	6	6	6					
8	38	27	19	14	36	25	18	13	21	15	11	17	12	9	14	10	7	4	4	4	4	4	4	4	4					
9	36	24	17	12	33	22	16	11	19	13	9	15	11	7	12	8	5	3	3	3	3	3	3	3	3					
10	34	22	15	10	31	20	14	10	17	12	8	14	9	6	11	7	4	2	2	2	2	2	2	2	2					

SPACING TO MOUNTING HEIGHT RATIO — S/MH .2

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE f_{cc}	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
20% Effective Floor Cavity Reflectance																														
0	78	78	78	78	76	76	76	76	73	73	73	69	69	69	66	66	66	66	66	66	66	66	66	66	66					
1	70	66	63	60	68	65	62	59	62	59	57	59	57	55	56	55	53	51	48	45	42	40	37	32	27					
2	62	56	50	46	60	54	49	45	52	48	44	49	46	43	47	44	42	40	37	35	32	29	26	22	19					
3	56	48	41	36	54	47	41	36	44	39	35	42	38	34	40	37	33	32	29	27	24	21	18	15	12					
4	50	41	34	29	49	40	34	29	38	33	28	36	32	28	35	31	27	26	23	21	18	15	12	9	7					
5	45	35	28	23	43	34	28	23	33	27	23	31	27	22	30	25	22	20	18	16	14	12	10	8	6					
6	41	31	24	19	39	30	24	19	29	23	19	27	22	18	26	22	18	17	15	13	11	9	7	5	4					
7	37	27	21	16	36	27	20	16	25	20	16	24	19	15	23	19	15	14	12	10	8	6	4	3	2					
8	34	24	18	13	33	24	18	13	23	17	13	22	17	13	21	16	13	11	9	7	5	3	2	1	0					
9	31	21	15	11	30	21	15	11	20	15	11	19	14	11	18	14	11	9	7	5	3	2	1	0	0					
10	29	19	14	10	28	19	13	10	18	13	9	17	13	9	17	12	9	8	6	4	3	2	1	0	0					

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.7

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY

% EFFECTIVE CEILING CAVITY REFLECTANCE f_{cc}	80					70					50					30					10					0				
	70	50	30	10	0	70	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0	50	30	10	0				
20% Effective Floor Cavity Reflectance																														
0	62	62	62	62	61	61	61	61	58	58	58	55	55	55	53	53	53	53	53	53	53	53	53	53	52					
1	58	56	54	52	56	54	53	51	52	51	49	50	49	48	48	47	46	45	44	43	42	40	39	37	32					
2	53	49	46	44	52	48	46	43	47	44	42	45	43	41	43	42	40	39	37	35	34	32	30	27	22					
3	49	44	40	37	48	43	40	37	42	39	36	40	36	35	38	37	35	34	32	30	29	27	25	22	19					
4	45	39	35	32	44	38	34	31	37	34	31	36	33	30	35	32	30	29	27	25	24	22	20	18	15					
5	41	34	30	27	40	34	30	27	33	29	26	32	28	26	31	28	26	24	22	20	19	17	15	13	10					
6	37	31	26	23	36	30	26	23	29	25	22	28	25	22	27	24	22	21	19	17	16	14	12	10	7					
7	34	27	23	19	33	27	22	19	26	22	19	25	22	19	24	21	19	18	16	14	13	11	9	7	5					
8	31	24	20	16	30	24	19	16	23	19	16	22	19	16	22	18	16	15	13	11	10	8	6	4	3					
9	28	21	17	14	28	21	17	14	20	16	14	20	16	14	19	16	14	13	11	9	8	6	4	3	2					
10	26	19	15	12	26	19	15	12	18	14	12	18	14	12	17	14	12	11	9	7	6	4	3	2	1					

SPACING TO MOUNTING HEIGHT RATIO — S/MH 1.6

ILLUMINATION ON HORIZONTAL SURFACE
FOOTCANDLE CHART (Initial) 250 WATT H.P.S.
(See top for other wattage multipliers)
HORIZONTAL DISTANCE FROM SOURCE IN FEET

MOUNTING HEIGHT IN FEET	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
10'	8.00	9.21	7.33	4.40	2.49	1.48	93	62	43	30	22
15'	3.55	2.74	4.72	3.25	2.33	1.62	1.10	78	56	41	31
20'	2.00	1.35	2.30	2.45	1.83	1.44	1.10	82	62	47	37
25'	1.28	55	1.11	1.74	1.45	1.17	97	78	63	49	39
30'	88	48	68	1.02	1.18	95	81	69	58	48	40
35'	65	33	45	64	92	84	67	59	51	45	39

FC = (Candlepower) (COS θ)
DISTANCE²

Test No. 5482.0

ILLUMINATION ON HORIZONTAL SURFACE
FOOTCANDLE CHART (Initial) 250 WATT H.P.S.
(See top for other wattage multipliers)
HORIZONTAL DISTANCE FROM SOURCE IN FEET

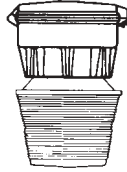
MOUNTING HEIGHT IN FEET	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
10'	33.21	24.87	13.35	6.85	3.60	2.00	1.15	64	42	25	16
15'	14.76	12.47	9.88	5.93	3.80	2.44	1.60	1.08	74	51	34
20'	8.30	6.92	6.21	4.95	3.33	2.39	1.71	1.23	90	66	50
25'	5.31	4.49	4.0								

HIGH PRESSURE SODIUM

With 12" Glass Refractor IES Type V
 250 – 400 Watt Mogul Base

CANDLEPOWER – 250 WATT

E-18 Clear Lamp
 30000 Lumens
 For 400 Watt multiply by 1.67

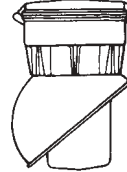


HIGH PRESSURE SODIUM

With Globe and Angle Reflector
 250 – 400 Watt Mogul Base

CANDLEPOWER – 250 WATT

E-18 Clear Lamp
 30000 Lumens
 For 400 Watt multiply by 1.67

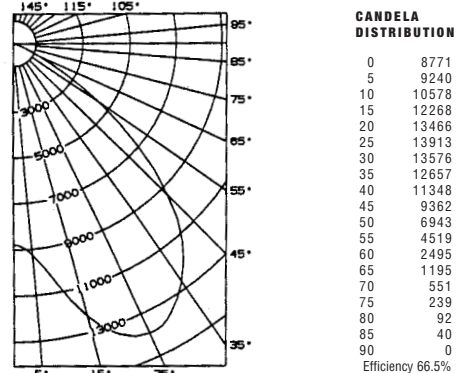
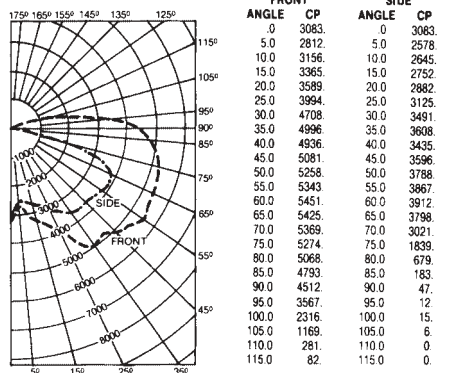
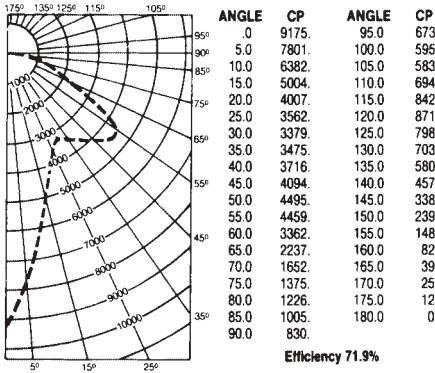
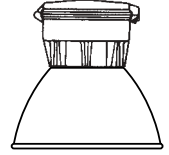


HIGH PRESSURE SODIUM

With Enclosed Reflector (VMER40)
 150-400 Watt Mogul Base

CANDLEPOWER – 400 WATT HPS

E-37 Coated Lamp
 47500 Lumens
 For 150W multiply by .34
 For 250W multiply by .60



COEFFICIENTS OF UTILIZATION—ZONAL CAVITY METHOD

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	80						70						50						30						10						0							
	70	50	30	10	0	0	70	50	30	10	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0		
0	83	83	83	83	79	79	79	79	73	73	73	73	67	67	67	62	62	62	60	83	83	83	83	79	79	79	79	73	73	73	73	67	67	67	62	62	62	60
1	75	71	68	65	72	68	65	62	63	61	58	58	56	54	54	52	51	48		75	71	68	65	72	68	65	62	63	61	58	58	56	54	54	52	51	48	
2	68	62	57	52	65	59	55	51	55	51	48	51	47	45	47	44	42	40		68	62	57	52	65	59	55	51	55	51	48	51	47	45	47	44	42	40	
3	62	54	48	43	59	52	47	42	48	44	40	45	41	38	41	38	36	34		62	54	48	43	59	52	47	42	48	44	40	45	41	38	41	38	36	34	
4	56	48	41	36	54	46	40	35	42	38	34	39	35	32	36	33	30	28		56	48	41	36	54	46	40	35	42	38	34	39	35	32	36	33	30	28	
5	51	42	35	30	49	40	34	30	37	32	28	35	30	27	32	28	25	23		51	42	35	30	49	40	34	30	37	32	28	35	30	27	32	28	25	23	
6	47	37	30	26	45	36	30	25	33	28	24	31	26	23	28	25	22	20		47	37	30	26	45	36	30	25	33	28	24	31	26	23	28	25	22	20	
7	43	33	27	22	41	32	26	22	30	24	21	27	23	20	25	22	19	17		43	33	27	22	41	32	26	22	30	24	21	27	23	20	25	22	19	17	
8	39	29	23	19	38	28	23	18	26	21	18	25	20	17	23	19	16	14		39	29	23	19	38	28	23	18	26	21	18	25	20	17	23	19	16	14	
9	36	26	20	16	35	25	20	16	24	19	15	22	18	14	20	17	14	12		36	26	20	16	35	25	20	16	24	19	15	22	18	14	20	17	14	12	
10	34	24	18	14	32	23	18	14	22	17	13	20	16	13	19	15	12	11		34	24	18	14	32	23	18	14	22	17	13	20	16	13	19	15	12	11	

SPACING TO MOUNTING HEIGHT RATIO – S/MH .5

COEFFICIENTS OF UTILIZATION—ZONAL CAVITY METHOD

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	80						70						50						30						10						0							
	70	50	30	10	0	0	70	50	30	10	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0		
0	75	75	75	75	72	72	72	72	68	68	68	64	64	64	61	61	59		75	75	75	75	72	72	72	68	68	68	64	64	64	61	61	59				
1	66	62	58	55	63	60	56	53	56	53	51	53	51	49	50	48	46	45		66	62	58	55	63	60	56	53	56	53	51	53	51	49	50	48	46	45	
2	59	52	47	42	56	50	46	41	47	43	40	45	41	38	42	39	37	35		59	52	47	42	56	50	46	41	47	43	40	45	41	38	42	39	37	35	
3	53	45	39	34	51	44	38	33	41	36	32	39	34	31	36	33	30	28		53	45	39	34	51	44	38	33	41	36	32	39	34	31	36	33	30	28	
4	48	39	33	28	46	38	32	27	36	31	27	34	29	26	32	28	25	23		48	39	33	28	46	38	32	27	36	31	27	34	29	26	32	28	25	23	
5	43	34	27	23	41	33	27	22	31	26	22	29	25	21	27	23	20	19		43	34	27	23	41	33	27	22	31	26	22	29	25	21	27	23	20	19	
6	39	30	23	19	38	29	23	19	27	22	18	26	21	18	24	20	17	15		39	30	23	19	38	29	23	19	27	22	18	26	21	18	24	20	17	15	
7	36	26	20	16	35	26	20	16	24	19	15	23	18	15	22	17	14	13		36	26	20	16	35	26	20	16	24	19	15	23	18	15	22	17	14	13	
8	33	23	17	13	32	23	17	13	21	16	13	20	16	12	19	15	12	11		33	23	17	13	32	23	17	13	21	16	13	20	16	12	19	15	12	11	
9	30	21	15	11	29	20	15	11	19	14	11	18	14	10	17	13	10	9		30	21	15	11	29	20	15	11	19	14	11	18	14	10	17	13	10	9	
10	28	19	13	10	27	18	13	10	17	13	9	16	12	9	15	11	9	8		28	19	13	10	27	18	13	10	17	13	9	16	12	9	15	11	9	8	

COEFFICIENTS OF UTILIZATION—ZONAL CAVITY METHOD

% EFFECTIVE CEILING CAVITY REFLECTANCE ρ_{cc}	80						70						50						30						10						0							
	70	50	30	10	0	0	70	50	30	10	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0	50	30	10	0	0	0		
0	79	79	79	79	77	77	77	77	74	74	74	71	71	71	68	68	66		79	79	79	79	77	77	77	74	74	74	71	71	71	68	68	66				
*1	74	72	70	68	73	71	69	67	68	66	65	65	64	63	63	62	61	60		74	72	70	68	73	71	69	67	68	66	65	65	64	63	63	62	61	60	
*2	70	66	63	60	68	65	62	59	63	60	58	61	59	57	59	57	56	54		70	66	63	60	68	65	62	59	63	60	58	61	59	57	59	57	56	54	
*3	66	60	57	53	64	60	56	53	58	55	52	56	53	51	54	52	50	49		66	60	57	53	64	60	56	53	58	55	52	56	53	51	54	52	50	49	
R4	61	55	50	47	60	54	50	47	53	49	46	51	48	46	50	47	45	44		61	55	50	47	60	54	50	47	53	49	46	51	48	46					

