Lumark

DESCRIPTION

The Steeler combines computerized design, durable cold-rolled steel and a field-adjustable reflector to provide a degree of versatility unmatched in other industrials. U.L. listed and labeled for damp location. CSA Certified. The Steeler is perfect for warehouses, gymnasiums, assembly areas, hangars, manufacturing and automotive service areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
HOUSING: Heavy-duty, formed steel housing with an open air ballast for cooler operation is finished in a white polyester powder coat. UNIVERSAL BRACKETS: Universal ladder brackets allow for the flexibility to change out with other reflectors available in acrylic or glass.

Electrical
BALLAST: High power factor ballast with class H insulation. Minimum starting temperature is -40°C (-40°F) for HPS and -30°C (-20°F) for MH, MP and ML. SOCKET: Mogul-base socket standard for HPS. For Metal Halide, protected socket standard, for use with "O" rated protected Metal Halide lamps only.

Optical
REFLECTOR: Computer-designed, field-adjustable reflector mounts easily and allows multiple distribution patterns for precise control.

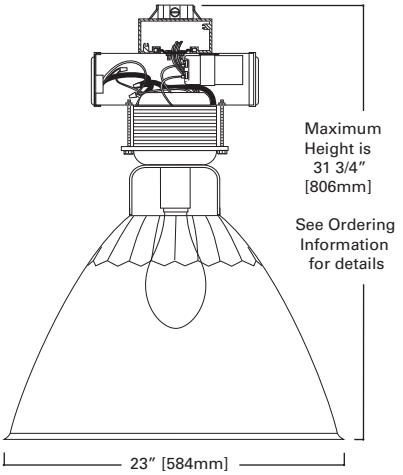
Mounting
Easy slide-on die-cast aluminum mounting box with tapped opening for 3/4" conduit.

SS
23" STEELER

High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

ALUMINUM HIGH-BAY

DIMENSIONS



TECHNICAL DATA

EISA Compliant Ⓔ
65° Ambient Environment.
90° Supply Wire Rating.

ENERGY DATA

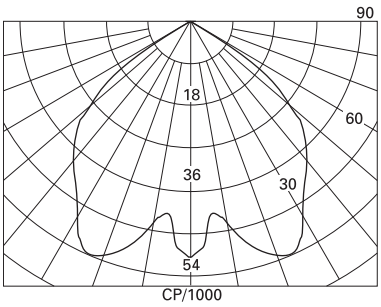
CWI Ballast Input Watts
250W HPS HPF (300 Watts)
250W MH HPF (300 Watts)
400W HPS HPF (465 Watts)
400W MH HPF (475 Watts)

CWA Ballast Input Watts
175W MP HPF (198 Watts) Ⓔ
200W MP HPF (227 Watts) Ⓔ
250W MP HPF (283 Watts) Ⓔ
320W MP HPF (365 Watts) Ⓔ
350W MP HPF (400 Watts) Ⓔ
400W MP HPF (452 Watts) Ⓔ
400W HPS HPF (465 Watts)
450W MP HPF (508 Watts) Ⓔ

Shipping Data
Approximate Net Weight:
30 lbs. (13 kgs.)

Powering Business Worldwide

PHOTOMETRICS



HPSS-SA23-M-1000-MT-Q
1000-Watt HPS, Medium Distribution
140,000-Lumen Clear Lamp

Coefficients Of Utilization

	Effective floor cavity reflectance																			
rc	**80%**				**70%**				**50%**			**30%**			**10%**			**0%**		
rw	**70**	**50**	**30**	**10**	**70**	**50**	**30**	**10**	**50**	**30**	**10**	**50**	**30**	**10**	**50**	**30**	**10**	**0**		
RCR																				
1	96	93	90	88	93	91	89	86	87	85	83	83	82	80	80	78	77	76		
2	90	85	81	77	88	83	79	76	80	77	74	77	74	72	74	72	70	68\		
3	84	77	72	68	82	76	71	67	73	69	65	70	67	64	68	65	63	61		
4	78	70	64	60	76	69	64	59	67	62	58	65	61	57	62	59	56	55		
5	73	64	58	53	71	63	57	53	61	56	52	59	55	51	57	53	50	49		
6	67	58	51	47	66	57	51	46	55	50	46	54	49	45	52	48	45	43		
7	62	52	46	41	61	51	45	41	50	44	40	48	44	40	47	43	39	38		
8	58	47	41	36	56	47	40	36	45	40	36	44	39	35	43	38	35	34		
9	53	43	36	32	52	42	36	32	41	36	32	40	35	31	39	34	31	30		
10	50	39	33	28	48	38	32	28	37	32	28	37	31	28	36	31	23	26		

Spacing Criterion 1.7

Zone	%Lamp	Zone	%Lamp
0-30	30.50	0-90	83.30
0-40	49.40	90-180	2.90
0-60	79.50	Total	86.20

Candlepower

Degree	CP
0	50570
5	42509
15	49630
25	53375
35	42164
45	34154
55	18089
65	4840
75	157
85	6
90	0
95	24
105	29
115	43
125	436
135	1216
145	1892
155	2246
165	1191
175	67
180	57

ORDERING INFORMATION

Sample Number: HPSS-SA23-M-1000-MT-Q

Lamp Type
MP=Pulse Start Metal Halide[1]
MH=Metal Halide[1, 2]
HP=High Pressure Sodium

Series
SS: Steeler

Reflector Type
SA=Anodized Spun Aluminum

Reflector Diameter
23: 23" Diameter

Distribution [3]
C: Concentrated
M: Medium
W: Wide

Lamp Wattage
MP
320=320W
350=350W
400=400W
450: 450W
750: 750W
1000: 1000W
MH [2]
400: 400W
1000: 1000W
HP
400: 400W
600: 600W
1000: 1000W

Voltage [4]
120V=120V
208V=208V
240V=240V
277V=277V
347V: 347V
480V: 480V
MT: Multi-Tap, wired 277V [5]
TT: Triple-Tap, wired 347V [6]
5T: 5-Tap[7]

Socket
OR: Open Rated Socket for Metal Halide Lamps [8]
__: Non Applicable (HPS or Not compatible with OR Socket)

Options
C3=3' Cord with no plug (Specify Voltage)[9]
PC3=3' Cord with NEMA Plug (120V-L5-15P, 208V-L6-15P, 347V-L37-20P, AND 480V-L8-20P) Other cord lengths are available by specifying length (PC6 for 6' Cord) Requires FH-1 or FL-1, or SHK. Example: PC3-120V Use with TPPH-NEMA. Specify Voltage. [9]
PHC: Power Cord and Plug (18" Power Cord and Non-NEMA plug configuration. Must be used with FL-1 and TPPH (Thru-Way Pendant Power Hook). Must specify single voltage.
PHC-NEMA: Power Cord and NEMA Plug (18" Power Cord and 20 AMP NEMA plug configuration). Must be used with FL-1 and TPPH-NEMA (Thru-Way Pendant Power Hook).
PS: Protective Starter (Available in 1000W HPS only. For other wattages consult factory).
P: Pre-set Socket Position from the factory
FH-1: Die-cast Aluminum Fixture Hook (with 3/4" threads for easy installation)
FL-1=Malleable Iron Plated Fixture Loop (with 3/4" threads for easy installation)
SHK=Die-cast Aluminum Fixture Hook (with safety screw and 3/4" threads for easy installation)
HSW=Integral LumaWatt Sensor and Control w/ Wide Distribution [10]
F1=Single Fuse (120, 277 or 347V only)
F2=Double Fuse (208, 240 or 480V only)
SCF=3' Aircraft Safety Cable secures Housing to Ceiling (Alternative lengths available. Example: SCF6 = 6' Cable)
Q=Quartz Restrike (Hot Strike Only)
EM=Quartz Restrike with "Delay Relay" (Quartz lamp strikes at both hot and cold starts)
EM/SC=Emergency Separate Circuit[11]
L/TCB=Less Top Connector Box (Housing shipped less top connector box. (Specify when using TWMBS accessory)
LL=Lamp Included[12]
SCR=Aircraft Safety Cable-Housing to Reflector
W/MWS=MWS Industrial components attached to the fixture at the factory. (Standard cord length is 3 ft. 6 ft. and 11 ft. also available. Please refer to MWS Modular Wiring System section for additional information.
HC=LumaWatt Fixture Control Module (Low voltage leads pulled out of top connection box for areas requiring all wiring to be installed in conduit) [10, 13]
HL=LumaWatt Fixture Control Module (Allows low voltage control wire to be daisy-chained between fixtures outside AC conduit run similar to low voltage intercom's, fire alarms and phone systems) [10]
QLL=Quartz Lamp Included (Lamp is Cooper designated product based on luminaire requirements. Lamp is shipped separate from luminaire unless otherewise noted)

Accessories [14]
C3=3' Cord-No Plug - Requires FH-1, FL-1, or SHK [9]
PC3=3' Cord with NEMA Plug - (120V-L5, 208V-L6-15P, 347V-L37-20P and 480V-L8-20P) Other cord lengths are available by specifying length (PC6 for 6' cord). Requires FH-1 or FL-1, or SHK. Use with TPPH-NEMA. Specify Voltage. [9]
PHC: Power Hook Cord and Non-NEMA plug configuration. Must be used with FL-1 and TPPH (Thru-Way Pendant Power Hook)
PHC-NEMA: Power Cord and NEMA plug - 18" Power Cord and 20 Amp NEMA plug configuration. Must be used with FL-1 and TPPH-NEMA (Thru-Way Pendant Power Hook)
SGB23: Safety Glass Bottom
WG23: Wire Guard
WG23/GLC: Gym Wireguard w/ Safety Glass
MBT: Twin Mount Bracket (Fixtures must be same voltage and without hooks, loops or plugs.)
TPPH: Thru-Way Pendant Power Hook. Requires FL-1 and PHC. Specify Voltage.
TPPH-F: Thru-Way Pendant Power Hook Single Fuse, 120, 277 or 347 Volt. Requires FL-1 and PHC. Specify Voltage.
TPPH-F2: Thru-Way Pendant Power Hook - Double Fused, 208, 240, or 480 Volt. Requires FL-1 and PHC. Specify Voltage.
TPPH-F-QD=Thru-Way Pendant Power Hook Single Fuse, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage (120, 277, or 347V)
TPPH-F2-QD=Thru-Way Pendant Power Hook Double Fuse, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage (208, 240, or 480V)
TPPH-NEMA=Thru-Way Pendant Power Hook. Requires FL-1 and PHC-XXXV-NEMA. (Specify
FH-1=Fixture Hook
FL-1=Fixture Loop
SHK=Hook with Safety Screw
TWMBS=Thru-Way Mounting Box[15]

Notes:
1. Open Rated up to and including 750W Pulse Start Metal Halide. For 1000W pulse start standard socket/lamp and glass bottom lens required. For 1000W probe start Metal Halide with open bottom, use open rated lamp, or 1000W standard lamp with glass bottom lens.
2. MH available in non-U.S. markets only.
3. Factory set for concentrated, medium or wide distributions only if P (factory pre-set) is in the nomenclature of the fixture. Otherwise fixture is shipped in medium setting.
4. Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availabiltiy and ordering information. 88% Efficient EISA Compliant MP Fixtures not available in 347V and TT Voltages.
5. Multi-Tap ballast 120/208/240/277V wired 277V.
6. Triple-Tap ballast 120/277/347V wired 347V.
7. 5-Tap ballast 120/208/240/277/480V wired 277V. 400W Metal Halide only. 88% efficient EISA Compliant MP fixtures not available in 5-Tap Voltages.
8. Not applicable for HPS.
9. Requires FH-1or FL-1or SHK.
10. 30 second time delay when switching from bright to dim. Consult individual lamp manufacturers recommendations for compatible lamps. For use with CWA ballast only.
11. Not available with HL or HC options.
12. Lamp is shipped separately.
13. Not available with PC3, C3, PHC or MWS. Not available with single circuit MWS special order.
14. Order separately.
15. Specify L/TCB when using thru-way mounting box (TWMBS) accessory.

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	320, 350, 400, 450, 750, 1000W
Metal Halide	400, 1000W
High Pressure Sodium	400, 600, 750W

VOLTAGE CHART	
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Triple-Tap	120/277/347 (wired 347V)
5T=5-Tap [8]	120/208/240/277/480 (wired 277V)

Lumark

DESCRIPTION

The Steeler combines computerized design, durable cold-rolled steel and a field-adjustable reflector to provide a degree of versatility unmatched in other industrials. U.L. listed and labeled for damp location. CSA Certified. The Steeler is perfect for warehouses, gymnasiums, assembly areas, hangars, manufacturing and automotive service areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
HOUSING: Heavy-duty, formed steel housing with an open air ballast for cooler operation is finished in a white polyester powder coat. UNIVERSAL BRACKETS: Universal ladder brackets allow for the flexibility to change out with other reflectors available in acrylic or glass.

Electrical
BALLAST: High power factor ballast with class H insulation. Minimum starting temperature is -40°C (-40°F) for HPS and -30°C (-20°F) for MH, MP and ML. SOCKET: Mogul-base socket standard for HPS. For Metal Halide, protected socket standard, for use with "O" rated protected Metal Halide lamps only.

Optical
REFLECTOR: Computer-designed, field-adjustable reflector mounts easily and allows multiple distribution patterns for precise control.

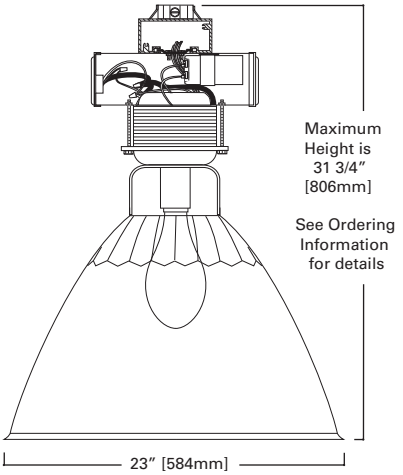
Mounting
Easy slide-on die-cast aluminum mounting box with tapped opening for 3/4" conduit.

SS
23" STEELER

High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

ALUMINUM HIGH-BAY

DIMENSIONS



TECHNICAL DATA

EISA Compliant Ⓔ
65° Ambient Environment.
90° Supply Wire Rating.

ENERGY DATA

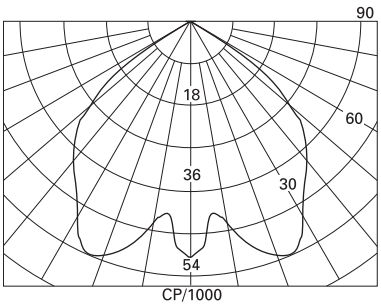
CWI Ballast Input Watts
250W HPS HPF (300 Watts)
250W MH HPF (300 Watts)
400W HPS HPF (465 Watts)
400W MH HPF (475 Watts)

CWA Ballast Input Watts
175W MP HPF (198 Watts) Ⓔ
200W MP HPF (227 Watts) Ⓔ
250W MP HPF (283 Watts) Ⓔ
320W MP HPF (365 Watts) Ⓔ
350W MP HPF (400 Watts) Ⓔ
400W MP HPF (452 Watts) Ⓔ
400W HPS HPF (465 Watts)
450W MP HPF (508 Watts) Ⓔ

Shipping Data
Approximate Net Weight:
30 lbs. (13 kgs.)

Powering Business Worldwide

PHOTOMETRICS



HPSS-SA23-M-1000-MT-Q
1000-Watt HPS, Medium Distribution
140,000-Lumen Clear Lamp

Coefficients Of Utilization

	Effective floor cavity reflectance																			
rc	**80%**				**70%**				**50%**			**30%**			**10%**			**0%**		
rw	**70**	**50**	**30**	**10**	**70**	**50**	**30**	**10**	**50**	**30**	**10**	**50**	**30**	**10**	**50**	**30**	**10**	**0**		
RCR																				
1	96	93	90	88	93	91	89	86	87	85	83	83	82	80	80	78	77	76		
2	90	85	81	77	88	83	79	76	80	77	74	77	74	72	74	72	70	68\		
3	84	77	72	68	82	76	71	67	73	69	65	70	67	64	68	65	63	61		
4	78	70	64	60	76	69	64	59	67	62	58	65	61	57	62	59	56	55		
5	73	64	58	53	71	63	57	53	61	56	52	59	55	51	57	53	50	49		
6	67	58	51	47	66	57	51	46	55	50	46	54	49	45	52	48	45	43		
7	62	52	46	41	61	51	45	41	50	44	40	48	44	40	47	43	39	38		
8	58	47	41	36	56	47	40	36	45	40	36	44	39	35	43	38	35	34		
9	53	43	36	32	52	42	36	32	41	36	32	40	35	31	39	34	31	30		
10	50	39	33	28	48	38	32	28	37	32	28	37	31	28	36	31	23	26		

Spacing Criterion 1.7

Zone	%Lamp	Zone	%Lamp
0-30	30.50	0-90	83.30
0-40	49.40	90-180	2.90
0-60	79.50	Total	86.20

Candlepower

Degree	CP
0	50570
5	42509
15	49630
25	53375
35	42164
45	34154
55	18089
65	4840
75	157
85	6
90	0
95	24
105	29
115	43
125	436
135	1216
145	1892
155	2246
165	1191
175	67
180	57

ORDERING INFORMATION

Sample Number: HPSS-SA23-M-1000-MT-Q

Lamp Type
MP=Pulse Start Metal Halide[1]
MH=Metal Halide[1, 2]
HP=High Pressure Sodium

Series
SS: Steeler

Reflector Type
SA=Anodized Spun Aluminum

Reflector Diameter
23: 23" Diameter

Distribution [3]
C: Concentrated
M: Medium
W: Wide

Lamp Wattage
MP
320=320W
350=350W
400=400W
450: 450W
750: 750W
1000: 1000W
MH [2]
400: 400W
1000: 1000W
HP
400: 400W
600: 600W
1000: 1000W

Voltage [4]
120V=120V
208V=208V
240V=240V
277V=277V
347V: 347V
480V: 480V
MT: Multi-Tap, wired 277V [5]
TT: Triple-Tap, wired 347V [6]
5T: 5-Tap[7]

Socket
OR: Open Rated Socket for Metal Halide Lamps [8]
__: Non Applicable (HPS or Not compatible with OR Socket)

Options
C3=3' Cord with no plug (Specify Voltage)[9]
PC3=3' Cord with NEMA Plug (120V-L5-15P, 208V-L6-15P, 347V-L37-20P, AND 480V-L8-20P) Other cord lengths are available by specifying length (PC6 for 6' Cord) Requires FH-1 or FL-1, or SHK. Example: PC3-120V Use with TPPH-NEMA. Specify Voltage. [9]
PHC: Power Cord and Plug (18" Power Cord and Non-NEMA plug configuration. Must be used with FL-1 and TPPH (Thru-Way Pendant Power Hook). Must specify single voltage.
PHC-NEMA: Power Cord and NEMA Plug (18" Power Cord and 20 AMP NEMA plug configuration). Must be used with FL-1 and TPPH-NEMA (Thru-Way Pendant Power Hook).
PS: Protective Starter (Available in 1000W HPS only. For other wattages consult factory).
P: Pre-set Socket Position from the factory
FH-1: Die-cast Aluminum Fixture Hook (with 3/4" threads for easy installation)
FL-1=Malleable Iron Plated Fixture Loop (with 3/4" threads for easy installation)
SHK=Die-cast Aluminum Fixture Hook (with safety screw and 3/4" threads for easy installation)
HSW=Integral LumaWatt Sensor and Control w/ Wide Distribution [10]
F1=Single Fuse (120, 277 or 347V only)
F2=Double Fuse (208, 240 or 480V only)
SCF=3' Aircraft Safety Cable secures Housing to Ceiling (Alternative lengths available. Example: SCF6 = 6' Cable)
Q=Quartz Restrike (Hot Strike Only)
EM=Quartz Restrike with "Delay Relay" (Quartz lamp strikes at both hot and cold starts)
EM/SC=Emergency Separate Circuit[11]
L/TCB=Less Top Connector Box (Housing shipped less top connector box. (Specify when using TWMBS accessory)
LL=Lamp Included[12]
SCR=Aircraft Safety Cable-Housing to Reflector
W/MWS=MWS Industrial components attached to the fixture at the factory. (Standard cord length is 3 ft. 6 ft. and 11 ft. also available. Please refer to MWS Modular Wiring System section for additional information.
HC=LumaWatt Fixture Control Module (Low voltage leads pulled out of top connection box for areas requiring all wiring to be installed in conduit) [10, 13]
HL=LumaWatt Fixture Control Module (Allows low voltage control wire to be daisy-chained between fixtures outside AC conduit run similar to low voltage intercom's, fire alarms and phone systems) [10]
QLL=Quartz Lamp Included (Lamp is Cooper designated product based on luminaire requirements. Lamp is shipped separate from luminaire unless otherewise noted)

Accessories [14]
C3=3' Cord-No Plug - Requires FH-1, FL-1, or SHK [9]
PC3=3' Cord with NEMA Plug - (120V-L5, 208V-L6-15P, 347V-L37-20P and 480V-L8-20P) Other cord lengths are available by specifying length (PC6 for 6' cord). Requires FH-1 or FL-1, or SHK. Use with TPPH-NEMA. Specify Voltage. [9]
PHC: Power Hook Cord and Non-NEMA plug configuration. Must be used with FL-1 and TPPH (Thru-Way Pendant Power Hook)
PHC-NEMA: Power Cord and NEMA plug - 18" Power Cord and 20 Amp NEMA plug configuration. Must be used with FL-1 and TPPH-NEMA (Thru-Way Pendant Power Hook)
SGB23: Safety Glass Bottom
WG23: Wire Guard
WG23/GLC: Gym Wireguard w/ Safety Glass
MBT: Twin Mount Bracket (Fixtures must be same voltage and without hooks, loops or plugs.)
TPPH: Thru-Way Pendant Power Hook. Requires FL-1 and PHC. Specify Voltage.
TPPH-F: Thru-Way Pendant Power Hook Single Fuse, 120, 277 or 347 Volt. Requires FL-1 and PHC. Specify Voltage.
TPPH-F2: Thru-Way Pendant Power Hook - Double Fused, 208, 240, or 480 Volt. Requires FL-1 and PHC. Specify Voltage.
TPPH-F-QD=Thru-Way Pendant Power Hook Single Fuse, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage (120, 277, or 347V)
TPPH-F2-QD=Thru-Way Pendant Power Hook Double Fuse, Quick Disconnect. Requires FL-1 and PHC. Specify Voltage (208, 240, or 480V)
TPPH-NEMA=Thru-Way Pendant Power Hook. Requires FL-1 and PHC-XXXV-NEMA. (Specify
FH-1=Fixture Hook
FL-1=Fixture Loop
SHK=Hook with Safety Screw
TWMBS=Thru-Way Mounting Box[15]

Notes:
1. Open Rated up to and including 750W Pulse Start Metal Halide. For 1000W pulse start standard socket/lamp and glass bottom lens required. For 1000W probe start Metal Halide with open bottom, use open rated lamp, or 1000W standard lamp with glass bottom lens.
2. MH available in non-U.S. markets only.
3. Factory set for concentrated, medium or wide distributions only if P (factory pre-set) is in the nomenclature of the fixture. Otherwise fixture is shipped in medium setting.
4. Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availabiltiy and ordering information. 88% Efficient EISA Compliant MP Fixtures not available in 347V and TT Voltages.
5. Multi-Tap ballast 120/208/240/277V wired 277V.
6. Triple-Tap ballast 120/277/347V wired 347V.
7. 5-Tap ballast 120/208/240/277/480V wired 277V. 400W Metal Halide only. 88% efficient EISA Compliant MP fixtures not available in 5-Tap Voltages.
8. Not applicable for HPS.
9. Requires FH-1or FL-1or SHK.
10. 30 second time delay when switching from bright to dim. Consult individual lamp manufacturers recommendations for compatible lamps. For use with CWA ballast only.
11. Not available with HL or HC options.
12. Lamp is shipped separately.
13. Not available with PC3, C3, PHC or MWS. Not available with single circuit MWS special order.
14. Order separately.
15. Specify L/TCB when using thru-way mounting box (TWMBS) accessory.

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	320, 350, 400, 450, 750, 1000W
Metal Halide	400, 1000W
High Pressure Sodium	400, 600, 750W

VOLTAGE CHART	
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Triple-Tap	120/277/347 (wired 347V)
5T=5-Tap [8]	120/208/240/277/480 (wired 277V)