

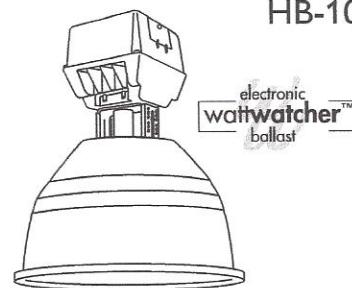
JOB NAME _____

TYPE _____

HBO OPEN HIGH BAY ALUMINUM REFLECTORS

150-400 watt Metal Halide
150-400 watt High Pressure Sodium
150-450 watt Pulse Start Metal Halide

The HBO400 Open High Bay Luminaire features open, spun aluminum reflectors for maximum efficiency in general purpose retail, educational and industrial applications.



HB-10050

electronic
waitwatcher™
ballast

ORDERING MATRIX

SAMPLE CATALOG NUMBER: HBO400PMT-PSC

HBO			
<u>BALLAST ASSEMBLY</u> HBO		<u>LAMP SOURCE</u> M - Metal Halide S - High Pressure Sodium P - Pulse Start Metal Halide (Ballast option must also be specified)	
	<u>WATTAGE</u> 150 - 150 175 - 175 ¹ 200 - 200 ² 250 - 250 320 - 320 ³ 340 - 340 ³ 350 - 350 ³ 400 - 400 440 - 440 ³ 450 - 450 ³	<u>VOLTAGE</u> 12 - 120 20 - 208 24 - 240 27 - 277 34 - 347 48 - 480 2T - 208/277 MT - 120/208 240/277 TT - 120/277 347	

ACCESSORIES (ORDER SEPARATELY)

- 16/17BE - Flat Tempered 16" Glass Bottom Enclosure
- CH - Cover Half for Power Hook (use with PB)
- PB - Power Box for Power Hook (use with CH)
- HP12 - Hook-Cord-Plug Assembly 120V
- HP25 - Hook-Cord-Plug Assembly 208-240V
- HP27 - Hook-Cord-Plug Assembly 277V
- HP48 - Hook-Cord-Plug Assembly 480V
- HMR - Suspension Hook Male
- LMR - Suspension Loop Male
- SCB3 - Ballast Retainer Chain 3'
- WGN16/17 - Wire Guard

(Refer to Section 18000 for additional accessories.)

A17

- OPTIONS (add as suffix)
- CUL - UL Listing to meet CSA standards
 - WEB - Pulse Start Electronic Ballast (150, 200, 250, 340, 350, 400, 440, 450 watt only)
Consult factory for available voltages and ambient temperature rating
 - EP - Encased and Potted core and coil ballast for quiet operation¹⁶
 - HR - Hot Restrike (150W HPS only)
 - MR - Magnetic Regulated Ballast¹⁵
 - OR - Open Rated Socket
 - PSC - Pulse Start CWA Ballast
 - PSM - Pulse Start Magnetic Regulated Ballast (175, 200, 250 & 400 watt only)
 - PSR - Pulse Start Reactor Ballast (150, 200, 250, 320, 350, 400, 450 watt, 277 volt only.)
 - Q - Quartz Standby
 - QEM - Quartz Emergency¹⁰
 - QTD - Quartz Time Delay
 - WDF - Wired Double Fuse¹⁵
 - WSF - Wired Single Fuse¹⁴
 - HL - HI/LO Ballast¹⁵
 - 65 - 65°C Ambient¹⁸
 - NFZ - Non Food Zone

Footnotes:

- ¹Not available in High Pressure Sodium
- ²Pulse Start Metal Halide Only.
- ³Not available in standard Metal Halide.
- ¹⁵Available 150 - 400W High Pressure Sodium.
- ¹⁶Requires 120 volt secondary power supply.
- ¹⁴Use with 208, 240, and 480 volt.
- ¹⁸Use with 120, 277, and 347 volt.
- ¹⁹May require deep ballast housing.
- ¹⁴Must specify voltage.

General Notes:

- All accessories are field installed.
- Mogul base lamp only.
- All options factory installed.

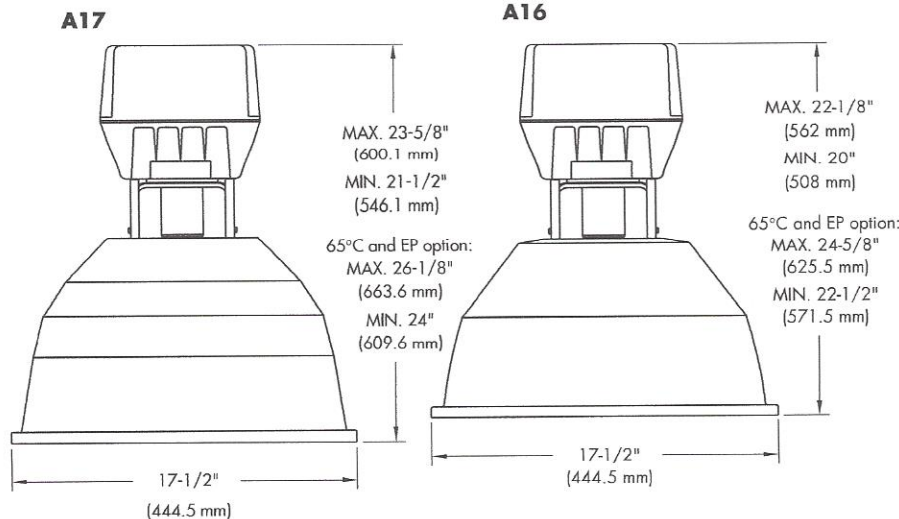
Warning: Many Metal Halide lamps are rated for enclosed fixtures only. Some lamps are specifically rated for open fixtures and require an open rated socket (option code-"OR"). Refer to and follow the lamp manufacturer's warnings and instructions.

- OPTICAL
- A16 - Open 16" Aluminum Reflector
 - A17 - Open 17" Aluminum Reflector

OPTICAL OPTIONS

- WT - Reflector finished inside and out with White Polyester Powder Coating
- SIL - Day-Sil™ Silicone finish on reflector (Not available with "WT" option)

DIMENSIONS



ENERGY DATA

HIGH PRESSURE SODIUM

HX BALLAST INPUT WATTS	
150 watt	188 watts
CWA BALLAST INPUT WATTS	
200 watt	240 watts
250 watt	295 watts
310 watt	365 watts
400 watt	464 watts

METAL HALIDE

HX BALLAST INPUT WATTS		
150 watt	185 watts	
BALLAST INPUT WATTS		
CWA	WEB	
150 watt	189 watts	163 watts
175 watt	210 watts	-
200 watt	232 watts	213 watts
250 watt	295 watts	263 watts
320 watt	368 watts	-
350 watt	400 watts	363 watts
400 watt	458 watts	413 watts
450 watt	508 watts	465 watts

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HBO 400W MH A16/POSITION 3																				
MEDIUM SPREAD S/MH = 1.4				TEST NO. 18587																
DISTRIBUTION CURVE			COEFFICIENTS OF UTILIZATION				AVERAGE BRIGHTNESS				ZONAL SUMMARY		CANDLEPOWER							
	EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)																			
	CEIL	80	70	50	30	10	ZONE	END	45	CROSS	Degrees	Lumens	% Lamp	% Fixture	Angle	Avg Candela	Angle	Avg Candela		
	WALL	70	50	30	10	70	50	30	10	50	30	10	50	30	10	45	11141	95	11	
	RCR	0	96	96	96	94	94	94	89	89	89	85	85	85	82	82	82	82	82	
	1	90	87	84	81	87	85	82	80	81	79	77	78	76	75	73	72	75	73	72
	2	83	77	72	69	81	76	71	68	73	69	66	70	67	64	67	65	63	65	63
	3	76	69	63	58	74	67	62	58	65	60	57	63	59	55	60	57	54	57	54
	4	70	61	55	50	68	60	54	50	58	53	49	56	52	48	54	51	47	47	47
	5	65	55	48	43	63	54	48	43	52	47	43	51	46	42	49	45	41	41	41
	6	60	50	43	38	58	49	42	38	47	42	37	46	41	37	44	40	37	37	37
	7	55	45	38	34	54	44	38	33	43	37	33	42	37	33	40	36	32	32	32
8	51	41	34	30	50	40	34	30	39	34	29	38	33	29	37	32	29	29	29	
9	48	37	31	27	47	37	31	27	36	30	26	35	30	26	34	29	26	26	26	
10	45	34	28	24	44	34	28	24	33	28	24	32	27	24	32	27	24	24	24	
ZONE END 45 CROSS 45 79873 82262 77461 55 63647 63965 62422 65 16180 14403 12106 75 6051 5512 4124 85 3015 2031 2154												(0-30) 10059 25.1 31.0 (0-40) 16316 40.8 50.3 (0-60) 30158 75.4 93.0 (0-90) 31918 79.8 98.4 (90-180) 523 1.3 1.6 (0-180) 32442 81.1 100.0		45 10530 145 369 55 6775 155 471 65 1121 165 25 75 252 175 26 85 39						
COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.38 BASED ON 3000 HRS. AND \$.08 PER KW-H. LER=71																				
These photometric results were obtained in the Philips Day-Brite Lighting Laboratory which is NVLAP accredited by the National Institute of Standards and Technology.																				

ADDITIONAL TEST NUMBERS

A16 400 WATT		METAL HALIDE	
SOCKET	S/MH	TEST NUMBER	
POSITION 1	1.0	18589	
POSITION 2	1.2	18588	
POSITION 3	1.3	18587	
POSITION 4	1.7	18586	
POSITION 5	1.7	18585	

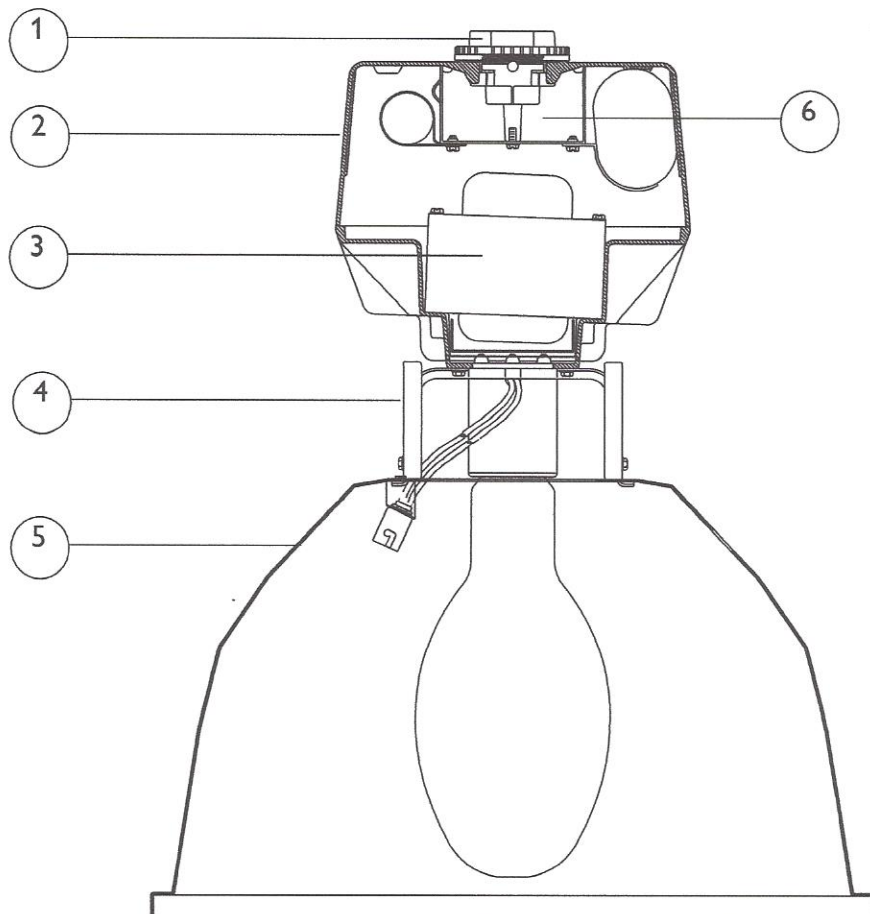
A17 400 WATT		HPS	
SOCKET	S/MH	TEST NUMBER	
POSITION 1	0.8	18492	
POSITION 2	1.2	18491	
POSITION 3	1.5	18490	
POSITION 4	2.4	18489	
POSITION 5	2.7	18488	
POSITION 6	3.0	18487	

A17 400 WATT		METAL HALIDE	
SOCKET	S/MH	TEST NUMBER	
POSITION 1	1.0	18486	
POSITION 2	1.3	18485	
POSITION 3	1.6	18484	
POSITION 4	2.2	18483	
POSITION 5	2.4	18482	
POSITION 6	2.5	18481	

PRODUCT FEATURES

UL 1598 Listed suitable for damp location and 55°C ambient for all lamp wattages listed with magnetic ballast. Consult factory for ambient temperature rating for electronic ballast (WEB option).

1. 3/4" threaded cast aluminum nut and hub for easy, positive mounting.
2. Heavy wall, two piece die cast aluminum housing with white polyester powder finish.
3. Day-Brite "Slant 2" ballast mounting for cooler operation. Ballast has high temperature class H insulation and a minimum starting temperature of -40°C (-40°F) for HPS and Pulse Start MH or -30°C (-20°F) for MH.
4. Heavy gauge yoke provides positive mounting of reflector to ballast assembly and field adjustable light distribution patterns.
5. Precision spun heavy gauge aluminum reflector with clear anodized finish.
6. Large wiring access with captive retainer screw.



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