

COOPER LIGHTING - METALUX®

DESCRIPTION

The HBI series is an outstanding solution for high mounting height industrial or retail applications. The HBI optic has been optimized to provide maximum performance from T8 lamps. Optional upright component is provided to enable excellent ceiling uniformity. HBI's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. The primary benefits include exceptional color rendering, high system efficacy, 95% lumen maintenance, long lamp life, instant on/instant re-strike, economical dimming, and uniform brightness control. Primary applications include retail, shopping malls, light industrial, gymnasiums and recreational environments.

SPECIFICATION FEATURES

Construction

Full bodied steel housing with integral ballast channel adds strength, rigidity and structural protection for optical assembly.

Electrical

The HBI comes with a standard Class P electronic ballast and twistlock lampholders. UL/cUL listed for high ambient environments up to 55°C (131°F) for all lamps and ballast combinations when used in open upright configurations. Suitable for damp locations. Optional modular power receptacle meets UL2459 and NEC 410.73 and is UL/cUL rated for make and break under load from outside the luminaire to speed maintenance.

Finish

White enamel finish preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor to protect against contaminants and oxidation.

Downlight/Uplight Optics

Die formed, segmented optical design optimizes performance across three distributions. Optical choices include a narrow distribution for aisles, medium distribution for assembly and loading areas, or wide distribution for general, open area lighting. An upright option is offered to permit ceiling uniformity and allow for ample lamp and luminaire heat dissipation. Gasketed door frame & lens assembly is optional for more demanding environments.

Catalog #		Type
Project		
Comments		Date
Prepared by		

Options

Integral Occupancy Sensor available and provides from 600 sq. ft. (MS) up to 1250 sq. ft. (MSO) of coverage in a maximum mounting height of 40' using interchangeable lens caps provided.

Mounting

The HBI series is suited for suspension mounting with optional wire hook and chain set or cable mounting. Single monopoint mounting is available with SPM Tong Hanger.

Warranty

When operated in high ambient conditions, the HBI is supported by a 5 yr/55°C and 3 yr/65°C ballast warranty when used with a high power factor ballast in open, upright configurations. To maximize your warranty, the HBI should be ordered with a high power factor ballast in ambient environments that typically exceed 40°C (102°F).



HBI SERIES

6 T8 LAMPS

High-Bay Industrial Fluorescent Luminaire



ENERGY DATA

Input Watts:

EB Ballast
632=169W

EB/Plus Ballast
632=218W

ER Ballast
632=169W

ER/Plus Ballast
632=218W

Luminaire Efficacy Rating

LER = FL-84 (Narrow Beam)

Catalog Number: HBI-632-N-UPL

**Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$2.85**

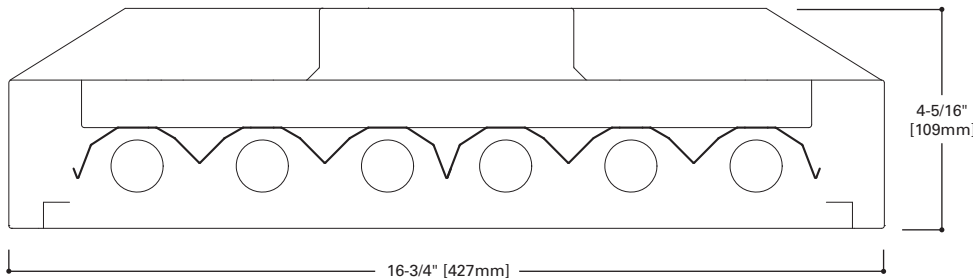
*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

**Consult Pre Sales Technical Support.

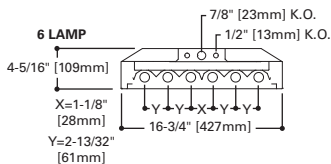
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT

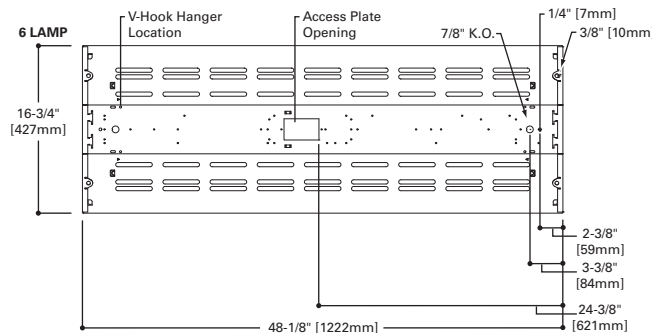
Safe and convenient means of disconnecting power.



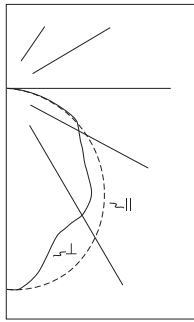
LAMP CONFIGURATIONS



DIMENSION TOP VIEW



PHOTOMETRICS



HBI-632-N-UNV-EB82
 Electronic Ballasts
 (6) 32W T8 Lamps
 2850 lumens
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.1 x
 mounting height
 Efficiency 91.3%
 Test Report:
 HBI632.IES
 LER =FL81
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$2.95

Candela			
Angle	Along II	45°	Across ⊥
0	5981	5981	5981
5	6000	5958	5900
10	5959	5716	5516
15	5861	5330	4953
20	5702	4832	4572
25	5468	4418	4452
30	5189	4191	4398
35	4862	3996	4222
40	4491	3834	3894
45	4085	3663	3314
50	3649	3169	2953
55	3186	2598	2657
60	2699	2220	2469
65	2193	1914	2291
70	1668	1693	1766
75	1144	1291	1226
80	635	760	703
85	194	274	227
90	10	14	14

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30
RCR	0	109	109	109	106	106	106	106	101	101	101	97	97	97	93	93	93	91
1	99	94	90	87	96	92	89	85	89	85	83	85	82	80	82	80	78	76
2	90	82	76	70	87	80	74	69	77	72	68	74	70	66	71	68	65	63
3	82	72	64	58	79	70	63	58	68	62	57	65	60	56	63	58	55	53
4	75	64	55	49	73	62	55	49	60	53	48	58	52	48	56	51	47	45
5	69	57	49	42	67	56	48	42	54	47	42	52	46	41	50	45	41	39
6	64	51	43	37	62	50	43	37	49	42	36	47	41	36	46	40	36	34
7	59	46	38	33	57	46	38	33	44	37	32	43	37	32	42	36	32	30
8	55	42	35	29	53	42	34	29	41	34	29	39	33	29	38	33	29	27
9	51	39	31	26	50	38	31	26	37	31	26	36	30	26	35	30	26	24
10	48	36	29	24	47	36	29	24	35	28	24	34	28	24	33	27	24	22

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4244	24.8	27.2
0-40	6874	40.2	44.0
0-60	12002	70.2	76.9
0-90	15606	91.3	100.0
0-180	15606	91.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	12912	11262	10475
55	12415	10124	10353
65	11598	10122	12116
75	9879	11148	10587
85	4975	7027	5821

Modular F-Bay Power Supply Option

Cooper Lighting's F-Bay Modular Power Supply option is available for use with all F-Bay products. The modular power supply allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with F-Bay Modular Power Supply. Access to the individual fixture's power supply allows servicing without turning off all the fixtures, disrupting occupants. F-Bay Modular Power Supply is a time-saver in installation – **simply plug & power.**



1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply

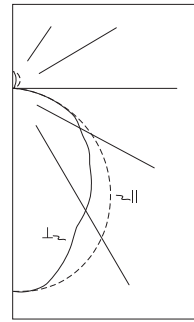
No internal fixture access required for installation or disconnecting power

Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle

Code Compliance

- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating/dust cap

PHOTOMETRICS



HBI-632-N-UNV-EBT2-UPL
 Electronic Ballasts
 (6) 32W T8 Lamps
 2850 lumens
 Spacing criterion:
 (II) 1.0 x mounting
 height, (⊥) 1.1 x
 mounting height
 Efficiency 94.5%
 Test Report:
 HBI632-UPL.IES
 LER =FL84
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$2.85

Candela			
Angle	Along II	45°	Across ⊥
0	6096	6096	6096
5	6103	6109	6097
10	6057	6018	5933
15	5952	5772	5528
20	5776	5383	5054
25	5542	4954	4556
30	5252	4442	4306
35	4916	4027	4025
40	4529	3719	3653
45	4117	3379	3251
50	3665	2969	2984
55	3186	2542	2597
60	2686	2231	2288
65	2169	1823	2045
70	1634	1539	1588
75	1105	1147	1089
80	602	660	616
85	174	218	158
90	5	6	7

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30
RCR	0	112	112	112	109	109	109	109	103	103	103	98	98	98	93	93	93	91
1	102	98	94	90	99	95	91	88	90	87	85	86	84	82	82	80	78	76
2	93	85	79	73	90	83	77	72	79	74	70	75	71	68	72	69	66	64
3	85	75	67	61	82	73	66	60	70	64	59	67	62	57	64	60	56	54
4	78	66	58	52	75	65	57	51	62	55	50	59	54	49	57	52	48	46
5	71	59	51	45	69	58	50	44	56	49	44	54	47	43	51	46	42	40
6	66	54	45	39	64	52	45	39	50	43	38	49	42	38	47	41	37	35
7	61	49	40	35	59	48	40	34	46	39	34	44	38	33	43	37	33	31
8	57	44	37	31	55	44	36	31	42	35	30	41	35	30	39	34	30	28
9	53	41	33	28	52	40	33	28	39	32	28	38	32	27	36	31	27	25
10	50	38	30	25	49	37	30	25	36	30	25	35	29	25	34	28	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4812	26.4	27.9
0-40	7183	42.0	44.5
0-60	12252	71.7	75.8
0-90	15556	91.0	96.3
0-180	16155	94.5	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	13013	10680	10276
55	12415	9905	10120
65	11471	9641	10815
75	9542	9905	9404
85	4462	5590	4052

ORDERING INFORMATION

SAMPLE NUMBER: HBI-632-N-UNV-EB82/PLUS-MP-UPL-U **Includes V Hangers for rapid installation⁽⁶⁾**

<p>Series HBI=High Bay Industrial</p>	<p>Voltage⁽²⁾ UNV=Universal 120/277 Voltage UNC=Universal 347/480 Voltage⁽⁵⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt 480V=480 Volt</p>	<p>Ballast Type⁽³⁾ EB8 =T8 Electronic Instant Start. Total Harmonic Distortion < 10% No. of Ballast 2 or 3 EB8 /PLUS= T8 Electronic Instant Start. High Ballast Factor >1.15. Total Harmonic Distortion < 10% No. of Ballast 1, 2 or 3 ER8 =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% No. of Ballast 2 or 3 ER8 /PLUS= T8 Electronic Program Start. High Ballast Factor >1.15. Total Harmonic Distortion < 10% No. of Ballast 2 or 3 DIM=Consult Factory⁽⁷⁾</p>	<p>Options MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options)^{(1), (10)} NUA=No upright apertures in housing. (Cannot be combined w/UPL) UPL=Uplight Apertures MWS=Modular Wiring System⁽⁹⁾ MS=360° or 180° Motion Sensor, 120 through 347, or 480V⁽⁴⁾ G2=Gasketed Door (Requires Selection of Lensed Doorframe) SDF=Slotted Doorframe (Requires Selection of Lensed Doorframe)</p>	<p>Packaging U=Unit Pack PALC=Palletized In Carton PAL=Job Pack Out of Carton</p>
<p>No. of Lamps 6=6 Lamps</p>	<p>Options Installed L8830=T8 Lamp, 85CRI 3000K L8835=T8 Lamp, 85CRI 3500K L8841=T8 Lamp, 85CRI 4100K L8850=T8 Lamp, 85CRI 5000K HL=Add HL at end of lamp for high lumen lamps, T8 only GL=Single Element Fuse GM=Double Element Fuse EL=Emergency Installed⁽²⁾</p>		<p>Accessories (order separately) HB-SPM=Single Monopoint Hanger w/Hub RH-1=Retrofit Hanger FH-1=Fixture Hook FL-1=Fixture Loop Y-TOGGLE= Y Mounting Toggle, #2 Cable⁽⁸⁾ (Specify 10' or 30', requires 2 per fixture) HBAYC-CHAIN/SET/U=(2) V-Hook Hangers, 36" Chain Sets w/S-Hooks MC3=3' Modular Power Cord MPC3=3' Modular Power Cord & Plug (Specify Voltage) MC6=6' Modular Power Cord MPC6=6' Modular Power Cord & Plug (Specify Voltage) MMS=360° or 180° Aisle Motion Sensor with Modular Power Receptacle (120-277V)⁽¹¹⁾ MDS6=6' Modular Power Cord with MWS 27DS18/2G06MP Connector⁽¹⁰⁾ SWG=Heavy Duty Wireguard for Field Installation</p>	
<p>Lamp Type 32=32WT8 Lamps (48")</p>				
<p>Distribution N=Narrow Beam (Standard) M=Medium Beam W=Wide Beam</p>				
<p>Shielding Blank=None A=Prismatic Acrylic Lens & Doorframe WG=Wireguard & Doorframe A/WG=Acrylic Lens, Wireguard & Doorframe CL=Clear Acrylic Lens & Doorframe CL/WG=Clear Lens, Wireguard & Doorframe</p>				

NOTES: ⁽¹⁾Requires use of MC_ or MPC_cord accessories, specify voltage for plugs. ⁽²⁾Voltage must be specified when ordered with plugs or emergency ballasts. ⁽³⁾ER8 and EB8 ballast systems suitable for operation in ambient environments up to 122°F (50°C) in open upright configuration. ⁽⁴⁾When ordering MS option, specify UNV (for 120 or 277V), 347 or 480V. ⁽⁵⁾2/3 lamp ballast configurations in EB8/PLUS only for T8 UNC versions. ⁽⁶⁾Can be used in high abuse applications such as gymnasiums. ⁽⁷⁾Dimming ballast must be specified at time of order. ⁽⁸⁾Two required. ⁽⁹⁾Cannot be combined with Modular Power Receptacle (MP). ⁽¹⁰⁾For MWS with MP, choose MP in fixture logic and then choose MWS accessory such as MDS6.

SHIPPING DATA

Catalog No.	Wt.
HBI-632-UPL	16 lbs.



Quick Ship Ordering Information Sample Number: HBI632-MP-UPL-L5

Quick Ship orders ship in 5 days in order quantities not to exceed 200 pieces. **Includes V Hangers for rapid installation⁽⁶⁾**
NOTE: Orders received after noon are entered on the following day.

<p>Family HBI</p>	<p>Distribution Blank=Narrow Beam W=Wide Beam</p>	<p>Ballast Type Blank=(2) 120/277V 4L and 2L High Ballast Factor > 1.15 T8 Instant Start Electronic PS=(2) 120/277V 4L and 2L High Ballast Factor > 1.15 T8 Electronic Program Rapid Start⁽⁹⁾</p>	<p>Power Receptacle Blank=Standard Wiring to Access Plate MP=Modular Power Receptacle⁽¹⁰⁾</p>	<p>Uplight Blank=No Uplight UPL=Uplight</p>
<p>Lamp Qty 6=6 Lamps</p>				<p>Lamping Blank=No Lamps L4=Lamps Installed 85+CRI 4100K⁽¹¹⁾ L5=Lamps Installed 85+CRI 5000K L5HL=Lamps Installed 85+CRI 5000K, High Lumen</p>
<p>Lamp Type 32=32WT8 Lamps (48")</p>				

NOTES: ⁽⁹⁾Recommended when utilizing Motion Sensor option. ⁽¹⁰⁾Requires use of Modular cord and plug accessories. ⁽¹¹⁾High lumen (3100 initial) lamps supplied for 4100K.