

COOPER LIGHTING - METALUX®

DESCRIPTION

The HB series is an outstanding solution for high mounting height industrial or retail applications. The HB optic has been optimized to provide maximum performance from either the T5 or T8 lamps. Optional uplight component is provided to enable excellent ceiling uniformity. HB'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 "big box" retail, shopping malls, light industrial, gymnasiums, etc.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A...Construction

Full bodied steel housing utilizes captive fasteners to protect optical assembly and assure structural integrity. The housing features an integral ballast channel that adds strength and provides numerous KO's for easy installation. Center access plate location allows for easy access to ballast leads on all new and retrofit projects regardless of mounting type.

B...Electrical

Class "P" ballasts are positively secured by mounting bolts. Roto-lock lampholders. 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. Thermally optimized for environments up to 149°F (65°C) when used with high temperature ballasts in open uplight configurations. UL/CUL listed. Suitable for damp locations.

C...Finish

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

D...Downlight/Uplight Optics

Die formed reflectors are faceted with two optical distributions – medium and wide. Medium beam optical modules utilize 95% specular aluminum while the wide distribution utilizes a high performance 95% reflective polyester powder coated finish. Gasketed door frame & lens assembly is optional for more demanding environments. Uplight option provided to enable ceiling uniformity.

Mounting

The HB series is suited for surface, suspension mounting with optional wire hook and chain set or cable mounting.

Options

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



F-BAY HB SERIES

15" x 4' High-Bay
4 Lamp

HIGH-BAY INDUSTRIAL
LUMINAIRE



ENERGY DATA

Input Watts:

EB Ballast
432 (109)

EB/Plus Ballast
432 (147)

ER Ballast
432 (112)
454 (229)

ER/Plus Ballast
432 (144)

Luminaire Efficacy Rating

LER = 66 (White)

LER = 70 (Specular)

Catalog Number: HB-454T5-UPL

Yearly Cost of 1000 Lumens,
3000 hrs. at .08 KWH = \$3.42

* 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**

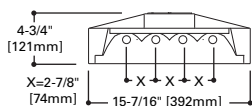
LINEAR DISCONNECT

Safe and convenient means of
disconnecting power.

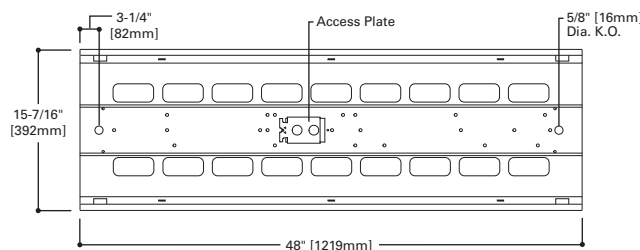


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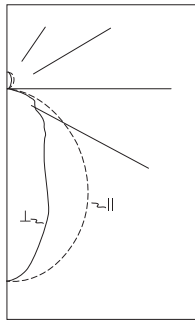
LAMP CONFIGURATIONS



DIMENSION TOP VIEW

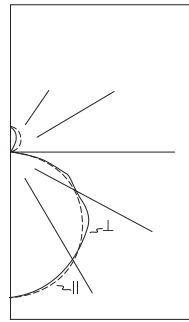


PHOTOMETRICS



HB-454T5-UPL
 Electronic Ballasts
 (4) F54T5/835 HO lamps
 4400 lumens
 Spacing criterion:
 (II) 1.2 x mounting height, (⊥) 0.8 x mounting height
 Efficiency 93.6%
 Test Report:
 HB454T5UPL.IES
 LER =70
 Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.42

Candela				
Angle	Along II	45°	Across ⊥	
0	8806	8806	8806	
5	8815	8634	8438	
10	8678	8130	7623	
15	8445	7394	6829	
20	8137	6688	6147	
25	7767	5901	5459	
30	7315	4716	4623	
35	6774	3747	3851	
40	6199	3096	3184	
45	5548	2637	2603	
50	4849	2332	2411	
55	4096	2014	1918	
60	3315	1760	1541	
65	2555	1264	1034	
70	1788	1062	8205	
75	1110	842	671	
80	514	295	55	
85	96	41	41	
90	0	14	14	



HB-454T5-G-UPL
 Electronic Ballasts
 (4) F54T5/830 HO lamps
 4400 lumens
 Spacing criterion:
 (II) 1.3 x mounting height, (⊥) 1.3 x mounting height
 Efficiency 82.1%
 Test Report:
 HB454T5GUPL.IES
 LER =66
 Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.64

Candela				
Angle	Along II	45°	Across ⊥	
0	4435	4435	4435	
5	4413	4411	4411	
10	4364	4338	4321	
15	4282	4227	4203	
20	4164	4088	4068	
25	4015	3919	3924	
30	3835	3735	3777	
35	3625	3537	3636	
40	3391	3323	3479	
45	3131	3105	3303	
50	2843	2870	3112	
55	2528	2616	2697	
60	2183	2342	2275	
65	1802	1876	2051	
70	1387	1516	1644	
75	949	1170	1066	
80	516	574	377	
85	134	118	113	
90	2	11	10	

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	110	110	110	110	107	107	107	107	101	101	101	95	95	95	90	90	90	88						
1	102	98	94	91	99	95	92	89	90	88	85	86	83	82	81	80	78	76						
2	93	86	81	76	90	84	79	75	80	76	72	76	73	70	73	70	67	65						
3	86	77	70	65	83	75	69	64	72	66	62	68	64	60	65	61	58	56						
4	79	69	61	56	77	67	60	55	64	58	54	62	57	52	59	55	51	49						
5	73	62	55	49	71	61	54	48	58	52	47	56	51	46	54	49	45	43						
6	68	57	49	43	66	55	48	43	53	47	42	51	46	41	49	44	41	39						
7	64	52	44	39	62	51	44	39	49	43	38	47	41	37	45	40	37	35						
8	59	48	40	35	58	47	40	35	45	39	34	44	38	34	42	37	33	32						
9	56	44	37	32	54	43	36	32	42	36	31	40	35	31	39	34	30	29						
10	52	41	34	29	51	40	34	29	39	33	29	38	32	28	37	32	28	26						

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	97	97	97	97	94	94	94	94	88	88	88	84	84	84	79	79	79	77						
1	89	85	82	79	86	83	80	77	78	76	74	74	72	70	70	69	67	65						
2	81	74	69	64	78	72	67	63	69	65	61	65	62	59	62	59	57	55						
3	74	65	59	54	71	64	58	53	61	56	51	58	53	50	55	51	48	47						
4	67	58	51	45	65	56	50	45	54	48	44	51	46	43	49	45	42	40						
5	61	51	44	38	59	50	43	38	47	41	37	45	40	36	43	39	35	33						
6	56	45	38	33	54	44	37	32	42	36	32	40	35	31	39	34	30	29						
7	52	41	33	28	50	40	33	28	38	32	28	36	31	27	35	30	26	25						
8	48	36	29	24	46	36	29	24	34	28	24	33	27	23	31	26	23	21						
9	44	33	26	21	42	32	25	21	31	25	20	29	24	20	28	23	20	18						
10	41	30	23	18	39	29	23	18	28	22	18	27	21	18	26	21	17	16						

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	5656	32.1	34.3
0-40	8411	47.8	51.0
0-60	13046	74.1	79.2
0-90	15460	87.8	93.8
0-180	16480	93.6	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	30	35	31	38
30 x 30	27	28	30	29
30 x 60	25	25	35	31
60 x 30	32	32	34	32
60 x 60	30	27	38	34

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	3436	19.5	23.8
0-40	5677	32.3	39.3
0-60	10418	59.2	72.1
0-90	13546	77.0	93.7
0-180	14453	82.1	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	25	31	22	28
30 x 30	21	23	21	21
30 x 60	19	20	22	21
60 x 30	25	26	24	24
60 x 60	22	21	26	23

Modular F-Bay Power Supply

Cooper Lighting's F-Bay Modular Power Supply option 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 fixtures 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.

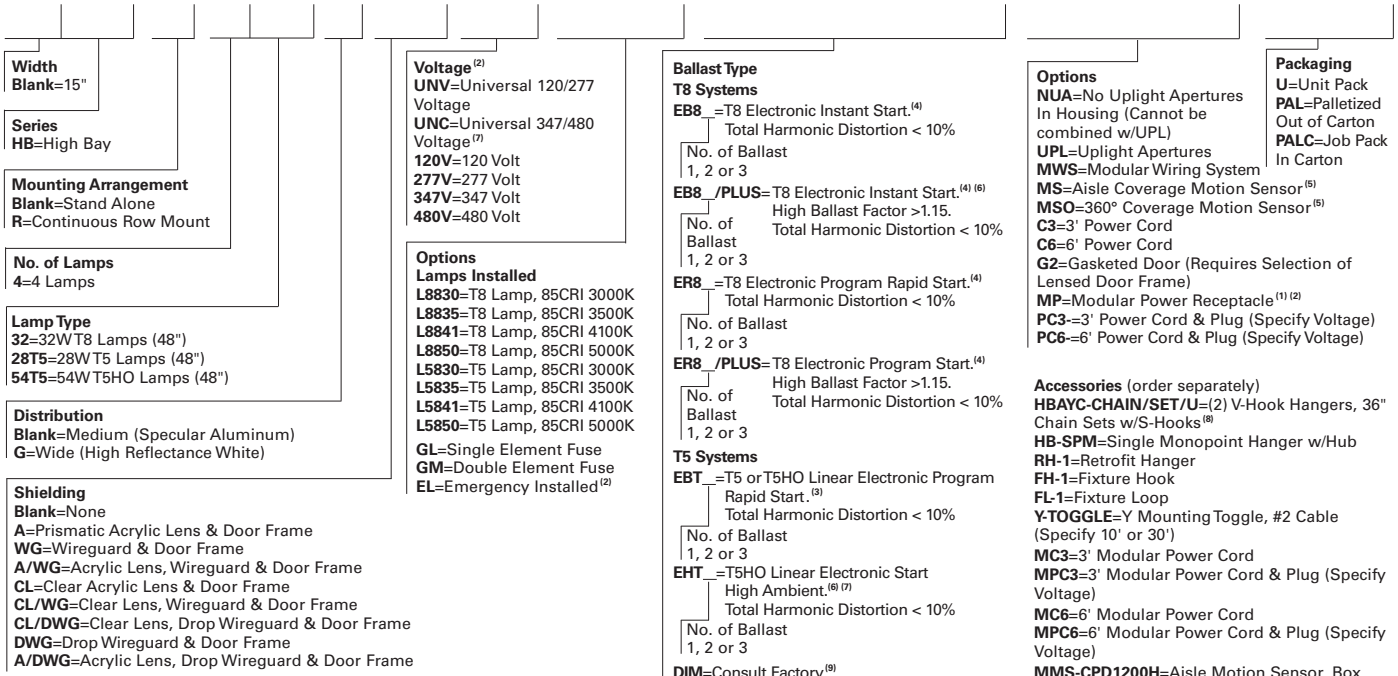
Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle.

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 dustcap

ORDERING INFORMATION

SAMPLE NUMBER: HB-432-A-UNV-EB81-UPL-U

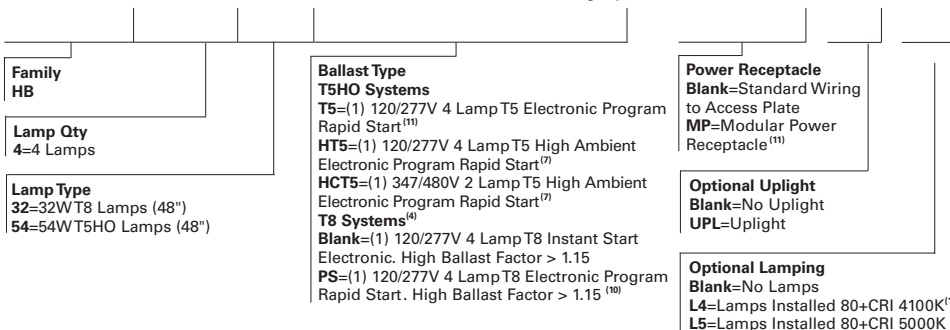


NOTES: ⁽¹⁾Requires use of MC_ or MPC_cord accessories, specify voltage for plugs. ⁽²⁾Voltage must be specified when ordered with plugs, motion sensor or emergency ballasts. ⁽³⁾EBT ballast systems suitable for operation in ambient environments up to 104°F (40°C) in open upright configuration. ⁽⁴⁾ER8 and EB8 ballast systems suitable for operation in ambient environments up to 122°F (50°C) in open upright configuration. ⁽⁵⁾Specify voltage. ⁽⁶⁾2 lamp ballast configurations only for T5 UNC versions. 2/3 lamp ballast configurations in EB8/PLUS only for T8 UNC versions. ⁽⁷⁾EHT/HT5/HCT5 ballast systems suitable for ambient environments not to exceed 149°F (65°C) in open upright configurations and less lens option. ⁽⁸⁾Use in high abuse applications such as gymnasiums. ⁽⁹⁾Dimming ballast must be specified at time of order.

Door Frames (for Field Installation)
HB-FRM/LENS=Prismatic Acrylic Lens & Frame (HB)
HB-FRM/CL PK=Clear Acrylic Lens & Frame (HB)
HB-FRM/WG PK=Wireguard & Frame (HB)
HB-FRM/LENS/WG PK=Prismatic Acrylic Lens, Frame and Wireguard (HB)
HB-FRM/DROPWG PK=Frame and Drop Wireguard for HB



Quick Ship Ordering Information Sample Number: HB454T5-MP-UPL-L5 Includes V Hangers for rapid installation
Quick Ship orders ship in 5 days in order quantities not to exceed 200 pieces.
NOTE: Orders received after noon are entered on the following day.



NOTES: ⁽¹⁰⁾Recommended when utilizing Motion Sensor option. ⁽¹¹⁾Requires use of Modular cord and plug accessories. ⁽¹²⁾High lumen (3100 initial) T8 lamps supplied.

SHIPPING INFORMATION

Catalog No.	Wt.
HB-432-G-UPL	19 lbs.
HB-432-UPL	19 lbs.