Metalux

DESCRIPTION

The HBL series is ideal for high mounting height industrial or retail applications. Advanced optical designs provide maximum performance from either T5 or T8 lamps. Optional uplight component produces excellent ceiling uniformity. HBL's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. 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. Typical HBL applications include retail, shopping malls, light industrial and recreational environments.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Channel and end plates are constructed of die formed steel. The channel provides strength, numerous KOs for easy installation, and excellent thermal dissipation without any special or proprietary components. Stiffening brackets add additional strength and rigidity to channel and reflectors.

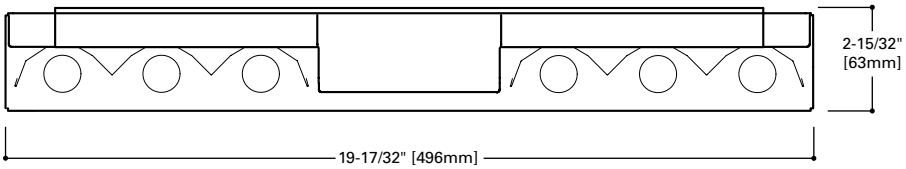
Electrical
The HBL comes with a standard Class "P" electronic ballast and twist-lock lampholders. UL/cUL listed for high ambient environments up to 55°C (131°F) for all lamp and ballast combinations listed. Suitable for damp locations.

Finish
Electrostatically applied baked white enamel finish is preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor.

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 uplight option is offered to permit ceiling uniformity and allow for ample lamp and luminaire heat dissipation.

Warranty
When operated in high ambient conditions, the HBL is supported by a 5 yr/55°C and 3 yr/65°C ballast warranty for T5 and T8 (277V) options when used w/ high temperature ballast in open, uplight configurations. To maximize your warranty, the HBL should be ordered with a high-temperature ballast in ambient environments that typically exceed 40°C (102°F).

Compliance
Options to meet Buy American and other domestic preference requirements.





HBL SERIES

4 OR 6 T8 LAMPS

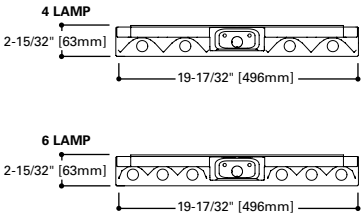
High-Bay Industrial Open Luminaire

F-BAY™ FLUORESCENT HIGH-BAY

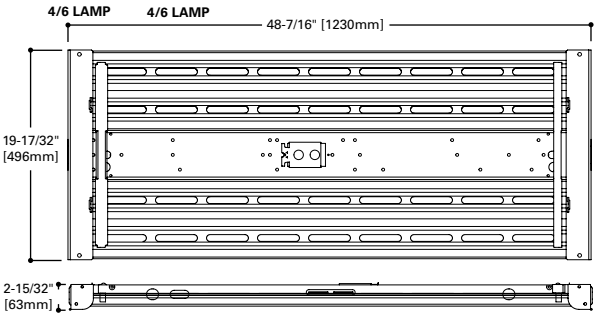
HIGH AMBIENT APPLICATIONS WARRANTY 5/55° F-BAY

BAA

LAMP CONFIGURATIONS



DIMENSION TOP VIEW



ENERGY DATA

Input Watts:
EB Ballast and STD Lamps
432=109
632=167

Luminaire Efficacy Rating
LER = 88 (White)
LER = 90 (Specular Inserts)
Catalog Number: HBL-632-UPL

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $2.67

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

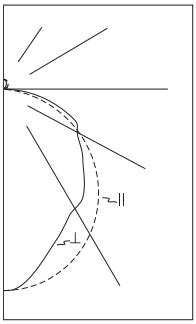
**Consult Pre Sales Technical Support.

LINEAR DISCONNECT
Designed to provide safe and convenient means of disconnecting power

COOPER Lighting Solutions

ISO 9001 SYSTEMS CERTIFIED

PHOTOMETRICS



HBL-632-N-UPL
Narrow Distribution
(2) Electronic Plus Ballasts

(6) F32/T8/TL835 32W T8 lamps, 3100 lumens
Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.0 x mounting height

Efficiency 95.9%

Test Report: HBL632NUPL.IES

LER =90

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $2.67

Candela

Angle	Along II	45°	Across ⊥
0	6445	6445	6445
5	6418	6359	6322
10	6339	6092	5913
15	6200	5715	5455
20	6008	5300	5075
25	5761	4910	4736
30	5464	4549	4478
35	5119	4178	4363
40	4731	3898	4043
45	4302	3674	3636
50	3840	3287	3321
55	3346	2841	2987
60	2827	2482	2737
65	2286	2118	2614
70	1732	1892	2148
75	1179	1543	1622
80	654	1018	1094
85	201	522	592
90	3	117	182

Coefficients of Utilization

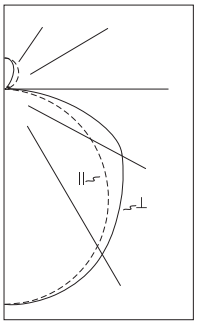
	Effective floor cavity reflectance																		
rc	80%				70%				50%			30%			10%			0%	
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																			
0	113	113	113	113	110	110	110	110	104	104	104	99	99	99	94	94	94	92	
1	103	98	93	89	100	95	91	88	90	87	84	86	83	81	82	80	78	75	
2	93	85	78	72	90	82	76	71	78	73	69	75	70	66	71	68	64	62	
3	85	74	66	60	82	72	65	59	69	62	57	66	60	56	63	58	54	52	
4	77	66	57	50	75	64	56	50	61	54	49	58	52	47	56	51	46	44	
5	71	58	50	43	69	57	49	43	55	47	42	52	46	41	50	45	40	38	
6	66	53	44	38	64	52	43	37	49	42	37	47	41	36	45	40	35	33	
7	61	48	39	33	59	47	39	33	45	38	33	43	37	32	42	36	31	29	
8	57	44	35	30	55	43	35	30	41	34	29	40	33	29	38	33	28	26	
9	53	40	32	27	51	39	32	27	38	31	26	37	30	26	35	30	26	24	
10	50	37	29	24	48	36	29	24	35	28	24	34	28	24	33	27	23	22	

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4562	24.5	25.6
0-40	7330	39.4	41.1
0-60	12827	69.0	71.9
0-90	17094	91.9	95.8
0-180	17837	95.9	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	10283	8782	8691
55	9860	8372	8802
65	9142	8470	10454
75	7699	10076	10592
85	3898	10123	11480



HBL-632-W-UNV-EB82-UPL
Wide Distribution
(2) Electronic Plus Ballasts

(6) F32T8/835 32WT8 lamps, 3100 lumens
Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.3 x mounting height

Efficiency 90.5%

Test Report: HBL632WUPL.IES

LER =88

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $2.73

Candela

Angle	Along II	45°	Across ⊥
0	4685	4685	4685
5	4663	4674	4692
10	4608	4631	4654
15	4512	4555	4594
20	4380	4446	4503
25	4209	4303	4374
30	4000	4121	4203
35	3762	3909	4000
40	3492	3658	3774
45	3195	3377	3562
50	2870	3081	3354
55	2527	2785	3150
60	2165	2500	2962
65	1781	2230	2707
70	1384	1985	2246
75	975	1569	1685
80	569	1025	1107
85	200	500	566
90	3	111	177

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																			
0	106	106	106	106	103	103	103	103	97	97	97	91	91	91	86	86	86	83	
1	96	91	87	83	93	88	84	81	83	80	77	78	76	73	74	72	70	68	
2	86	78	72	66	83	76	70	65	72	67	62	68	63	60	64	60	57	55	
3	78	68	60	54	75	66	59	53	62	56	51	59	54	50	56	52	48	46	
4	71	60	52	45	69	58	51	45	55	49	43	52	47	42	49	45	41	38	
5	65	53	45	39	63	52	44	38	49	42	37	47	41	36	44	39	35	33	
6	60	48	40	34	58	47	39	33	44	37	32	42	36	31	40	35	31	28	
7	56	43	35	29	54	42	34	29	40	33	28	38	32	28	36	31	27	25	
8	52	39	31	26	50	38	31	26	37	30	25	35	29	25	33	28	24	22	
9	48	36	28	23	47	35	28	23	34	27	23	32	26	22	31	25	22	20	
10	45	33	26	21	44	32	26	21	31	25	20	30	24	20	28	23	20	18	

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	3714	20.0	22.1
0-40	6154	33.1	36.6
0-60	11290	60.7	67.1
0-90	15508	83.4	92.1
0-180	16834	90.5	100.0

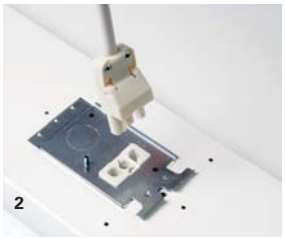
Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	7432	7855	8286
55	7247	7987	9033
65	6932	8679	10536
75	6196	9971	10708
85	3774	9436	10682

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

COOPER Lighting Solutions

Cooper Lighting Solutions
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Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions subject to change without notice.

ORDERING INFORMATION

SAMPLE NUMBER: HBL-632-N-UNV-EB82-UPL-U **Includes V Hangers for rapid installation[6]**

Domestic Preferences [9]
[Blank]=Standard
BAA=Buy American Act
TAA=Trade Agreements Act

Width
Blank=20" wide 4 & 6 Lamp (nominal)

Series
HBL=Linear High Bay

No. of Lamps
4=4 Lamps
6=6 Lamps

Lamp Type
32=32W T8 Lamp (48" Long)

Distribution
N=Narrow Beam (Standard)
M=Medium Beam
W=Wide Beam

Voltage [1]
UNV=Universal 120/277 Voltage
UNC=Universal 347/480 Voltage[7]
120V=120 Volt
277V=277 Volt
347V=347 Volt

Options
GL=Single Element Fuse
GM=Double Element Fuse
EL=Emergency Installed

Ballast Type [4]
T8 Systems
EB8__=T8 Electronic Instant Start. Total Harmonic Distortion < 10%
No. of Ballast 1, 2 or 3
EB8__/PLUS=T8 Electronic Instant Start. [7] High Ballast Factor >1.15. Total Harmonic Distortion < 10%
No. of Ballast 1, 2 or 3
ER8__=T8 Electronic Program Rapid Start.[5] Total Harmonic Distortion < 10%
No. of Ballast 1, 2 or 3
ER8__/PLUS=T8 Electronic Program Start.[5] High Ballast Factor >1.15. Total Harmonic Distortion < 10%
No. of Ballast 1, 2 or 3

Options
UPL=Uplight Apertures on Reflector
MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options) [2], [8]
MWS=Modular Wiring System [3]
MS=360° or 180° Motion Sensor installed (120V through 347V, or 480V)[1]

Packaging
U=Unit Pack
PALC=Palletized In Carton

Accessories (order separately) [10]
HBL-SPM=Single Monopoint Hanger w/Hub
FH-1=Fixture Hook
FL-1=Fixture Loop
Y-TOGGLE-__-2PK=(2) Y-Toggle Cable Kits (Specify 10 or 30 for length in feet)
HBAYC-CHAIN/SET/U=(2) V-Hook Hanger, 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)[2]
MDS6=6' Modular Power Cord with MWS 27DS18/2G06MP Connector[8]
WG/HBL6-4FT-B=4/6 Lamp Wireguard w/Clips

NOTES: [1]Voltage must be specified when ordered with plugs or emergency ballasts. For MS option, indicate UNV (for 120V or 277V), 347V or 480V. [2]Requires use of MC_ or MPC_ cord accessories, specify voltage for plugs. [3]Cannot be combined with Modular Power Receptacle (MP). [4]T8 ballast systems suitable for operation in ambient environments up 131°F (55°C) in uplight configuration. [5]Recommended when using motion sensor options. [6]Can be used in high abuse applications such as gymnasiums. [7]2/3 lamp ballast configuration in EB8/PLUS only for UNC version. [8]For MWS with MP, choose MP in fixture logic and then choose MWS accessory such as MDS6.
[9] Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
[10] Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

QUICK SHIP ORDERING INFORMATION

Quick Ship
Made To Order

Quick Ship Ordering Information

Sample Number: HBL432-MP-UPL-L5 **Includes V Hangers for rapid installation[6]**

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.

Family
HBL

No. of Lamps
4=4 Lamps
6=6 Lamps

Lamp Type
32=32W T8 Lamps (48")

Distribution
Blank=Narrow Beam
W=Wide Beam

Ballast Type
T8 Systems [4]
Blank=(1) or (2) 120/277V T8 Instant Start Electronic, 1.15 BF
PS=(1) or (2) 120/277V T8 Electronic Program Rapid Start, 1.15 BF[7]

Power Receptacle
MP=Modular Power Receptacle[8]

Uplight
Blank=No Uplight
UPL=Uplight

NOTES: [7]Recommended when using motion sensor options. [8]Requires use of Modular cord and plug accessories.

SHIPPING DATA

Catalog No.	Wt.
HBL-432-UNV-UPL	13.5 lbs.
HBL-632-UNV-UPL	15 lbs.

COOPER Lighting Solutions

Cooper Lighting Solutions
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