PRECISION PARAGON
EFFICIENCY, ECONOMY, SUSTAINABILITY.

www.P-2.com

(714) 386-5550 CA
(715) 381-2971 WI
(352) 692-5900 FL

HBN – Economy 12" Partial Cutoff Hi-Bay

Economy

- The HBN with its rugged design and compact body is one of the most cost effective ways to get a Hi-bay lumen package into the air
- Partial cutoff (the lamps partially exposed when viewed from the side) allows some lateral light and helps where "cave effect" is a concern.

Controls Options

- Accepts end mount occupancy sensor.

Lens Options

- Please see HBL, HRM, HRW, or HRS series.

The Usual

- Fast deliveries, custom configurations, expert application support.

Our Experience

- We've been focused on nothing but supporting energy efficient re-lighting projects since 1992. Hit a dead end? Give our application support team a try.

HBN Partial Cutoff Hi-Bay

Application

- A versatile Hi-bay or Lo-bay for general commercial, industrial, and distribution applications.
- Can be factory equipped with occupancy sensor.
- Available in 3 or 4 lamp, T5 or T8.
- Enhanced aluminum reflector ideal for Hi-bays.
- Hi-ref white aluminum reflector ideal for Lo-bays.

HBN – 1x4 – 3L – T8 – UL1 – HP – PS – UE – EA – CD – C8 – SH3

HBN	1x4	3L	T8	UL1	HP	PS	UE	EA	CD	C8	SH3	
Model	Fixt Size	Lamp Qty	Lamp Type	Voltage	Ballast Factor	Ballast Starting	Ballast Grade	Reflector Material	Body Material	Cord Plug	Occ Sensor	Other

Fixture Model
HBN

Fixture Size
1x4 = 1x4 Nominal

Lamp Qty
xL = x Indicates quantity of lamps

Lamp Type
T5HO = Linear T5HO Lamps
T8 = Linear T8 Lamps

Voltage (1)
UHx = Universal 347-480
ULx = Universal 120-277

Ballast Factor (2)
MN = Neutral Power (.97 - 1.04)
HP = High Power (1.15 - 1.20)

Ballast Starting
IS = Instant Start
ISD = Instant Start Step Dimming
PS = Programmed Start
PSD = Program Start Step Dimming
PSH = Program Start Hi-Lo

Ballast Grade
ST = Standard Grade
UE = Ultra Efficient T8

Reflector Material
EA = Enhanced Aluminum 93-94%
MM = Micro Matte 91-93%
WA = White Aluminum Reflector 90-91%

Body Material
CR = 22 Gauge Cold Rolled Steel Body
CD = 20 Gauge Cold Rolled Steel Body
HA = Heavy Duty Aluminum Body
VA = Heavy Duty Vented Aluminum Body

Cord & Plug
C8 = 8' Cord, No Plug
C8/L715 = 8' Cord & Plug (L7-15P)
PQC15 = 15' Cord/Quick Connect

Occupancy Sensor(3)
SHx = Standard 360 View Hi-Bay
RHx = Rectangular Aisle View Hi-Bay
SLx = Standard 360 View Lo-Bay
RLx = Rectangular Aisle View Lo-Bay

Other (Sensor)
DO = Daylight Over Occupancy Sensor
LB = Sensor Leveling Box (Not required for HBN)
PF = Partial/Full Switch

Other
LF = Factory Lamps (Lamp spec elsewhere)
WG = Wireguard

Numeric Footnotes
(1) Numeral indicates number of ballasts per fixture.
(2) Ballast factors outside ranges shown to be called out numerically.
(3) Numeral indicates number of lamps controlled.

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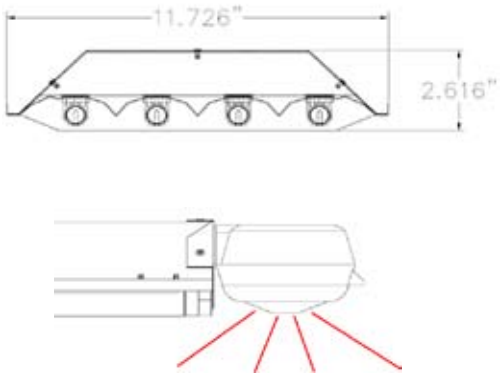
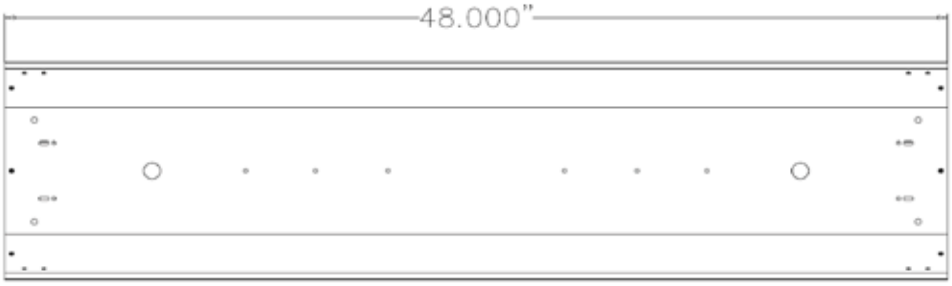
Fixture Construction

- Choice of code gauge (20g) steel body, (22g) steel body (standard), or heavy duty (.032) vented aluminum body.
- End mount sensor does not require leveling box.
- Steel endplates for maximum rigidity.
- Environmentally friendly and labor saving bulk project packaging.
- Dottie slot mounting points and V-hangers included.
- Made in the USA: Hudson WI, Gainesville FL, Orange County CA.



End Mount Sensor



Existing System

Existing Hi-Bay System	Lamp Qty & Type		Initial Lamp Lumens	Lumen Maintenance	EOL(1) Lumens All Lamps	Total Fixture Lumens	Ballast Factor	Fixture Efficiency	EOL(1) Lumens Per Fixt	S/P (2) Ratio	Net (3) EOL Lumens	Fixt Input Watts
MH250	1	Std MH250	20,500	58%	11,890	11,890	1.00	0.75	8,918	1.49	12,171	295
MH320PS	1	PS MH320	31,700	62%	19,654	19,654	1.00	0.75	14,741	1.49	20,119	368
MH400	1	Std MH400	38,000	58%	22,040	22,040	1.00	0.75	16,530	1.49	22,561	458
HPS400	1	Std HPS400	50,000	70%	35,000	35,000	1.00	0.75	26,250	0.62	18,080	464

Re-Lighting Options

Proposed Hi-Bay System	Lamp Qty & Type		Initial Lamp Lumens	Lumen Maintenance	EOL(1) Lumens All Lamps	Total Fixture Lumens	Ballast Factor	Fixture Efficiency	EOL(1) Lumens Per Fixt	S/P (2) Ratio	Net (3) EOL Lumens	Fixt Input Watts
3L-T5HO	3	FP54T5HO	5,000	93%	4,650	13,950	1.00	0.92	12,834	1.62	18,698	176
3L-T8 Plus	3	F32T8/841	2,950	90%	2,655	7,965	1.15	0.90	8,244	1.62	12,010	109
4L-T5HO	4	FP54T5HO	5,000	93%	4,650	18,600	1.00	0.92	17,112	1.62	24,930	234
4L-T8 Plus	4	F32T8/841	2,950	90%	2,655	10,620	1.14	0.90	10,896	1.62	15,874	147

(1) EOL = End of Life (2) S/P Ratio = Scotopic to Photopic Lumens (3) Net EOL Lumens = EOL Lumens Per Fixture x (S/P).78 [.78 exponent]

General Notes

- Lamp/ballast system values shown are a general reference intended to supply a quick comparison of several common lamp/ballast systems, the associated energy consumption, and net lumen output.
- Values shown are based on normal operating temperatures (25c T8 and 35c T5) and at 277 volts.
- Fixture efficiency percentages are generally representative of each system type, actual values will vary.
- There are many operating variables that affect system output, in addition to rating variances from brand to brand.
- All T8 electronic ballast values shown are based on Ultra Efficient (aka 3rd Generation) T8 ballasts.
- All T5 and T8 lamp values shown are for basic grade lamps. Extended life and higher lumen lamps types are available.
- In addition to those shown there are a wide variety of systems to choose from, each with distinct features and cost points.
- Please consult the lamp/ballast manufacturer's catalogs for the detailed information required to model your system.