

Project:		Catalog #:		Type:	
Prepared by:		Notes:		Date:	

E2HBA

LED PRO-CLASSICAL HIGH BAY
50,000 Hour System Lifetime
5-yr Warranty



*shown w/ optional occupancy sensor



OVERVIEW

Energetic Lighting's E2HBA LED Pro-Classical High Bay series is suitable for use in a broad range of commercial and industrial applications. Utilizing today's latest innovative LED solutions and technologies, this series provides the perfect blend of design, performance and reliability at a superior value to the customer.

An extremely versatile product thanks to its traditional round form factor and lumen packages ranging from 11,000 to 35,000 lumens to accommodate multiple mounting heights. Emergency and motion sensing options are also available for even more flexibility.

The E2HBA is well suited for many renovation and new construction applications including warehouse, industrial, manufacturing, retail, gymnasiums, and grocery stores. It delivers uniform illumination and visual comfort with 1-for-1 replacement of 175-400W HID (minimum) while maximizing energy savings.

KEY FEATURES

- Available in 5 lumen packages (11,106 - 34,764 lms @ 4K)
- Efficacy up to 141 lm/W
- LED array is sealed via a glass lens
- Round form factor for simple symmetrical installation
- Light weight design for ease of installation
- Utilizes 0-10V, 50,000 hour rated drivers standard
- 89% lumen maintenance @ 54,000 hours - L89/54,000 (per IES TM21)
- Projected L70 @ 155,000 hours (per IES TM21)
- Available in 4000K @ 82 CRI and 5000K @ 82 CRI
- All configurations are DLC Premium qualified
- Optional integrated emergency battery pack
- Optional occupancy & daylight harvesting sensors

SPECIFICATIONS & FEATURES

Construction

Housing and heatsink is made from diecast aluminum to maximize heat management and the life of the luminaire and electrical components. All painted components are high reflectance white powder coat for improved optical performance and visual aesthetic. Drivers are easily accessed from a separate driver compartment via two screws.

Mounting & Installation

Fixture mounts using a traditional mono-point hook accessory that is included standard. A safety cable is also included. See instruction sheet for details.

Optics

Uniform horizontal and vertical illumination is achieved by the coupling of the LED array with a performance acrylic refractive lens. The optical system creates a soft and uniform visual appearance for superior visual comfort.

Electrical

Efficient long life LED platform is coupled with 50,000 hour rated drivers to help deliver optimal performance and quality illumination for the extended life of the luminaire. 89% LED lumen maintenance at 54,000 hours (L89/54,000) per IES TM21. Projected L70 @ 155,000 hours. Drivers are available for 120-277V applications and are 0-10V dimming compatible standard.

Emergency Battery Pack Option

Optional integral emergency battery pack is available in 16-watts for 120-277V use to meet required life-safety requirements (40° C max ambient). The battery system provides 90-minutes of continuous power to the LED system for code compliance. Test switch and indicator light is located on the battery box. Multiply the lumens per watt of the specified SKU by X-watts of the battery pack for the approximate delivered lumens. (Ex. 137 LPW x 16-watts = 2192 lumens)

Compliance & Certification

All luminaires are built to UL1598 standards with appropriate UL/cUL labels. Suitable for damp location use. Emergency fixtures are labeled UL924 and are suitable for dry and damp location use. Adheres to LM79, LM80 and TM21 industry standards for performance and lifetime calculations. DesignLights Consortium® (DLC) qualified product. Refer to DLC website at www.designlights.org/QPL to confirm which specific product configurations are qualified.

Warranty

The E2HBA series of luminaires have a 5-year standard warranty. (Terms & Conditions apply).

Load Information

Power Factor	0.90
THD	21%
Low Temp Start ¹	-25° C
Max Temp	40° C
Unit Weight ^{2,3} (80-150W)	13.5 lbs
Unit Weight ^{2,3} (200-240W)	16.0 lbs

1. Emergency low temp start is 20° C
2. Add 1.5 lbs for occupancy sensor option.
3. Add 3.5 lbs for emergency battery option.

Shipping Information^{1,2}

Item	Weight	Pallet (48"l x 40"w x 87"h)
80-150W	13.0 lbs	72 per (base unit)
80-150W	14.5 lbs	72 per (w/ occupancy)
80-150W	16.5 lbs	63 per (w/ emergency)
Item	Weight	Pallet (50"l x 40"w x 80"h)
200-240W	16.0 lbs	48 per (base unit)
200-240W	17.5 lbs	48 per (w/ occupancy)
Item	Weight	Pallet (48"l x 40"w x 87"h)
200-240W	19.5 lbs	45 per (w/ emergency)

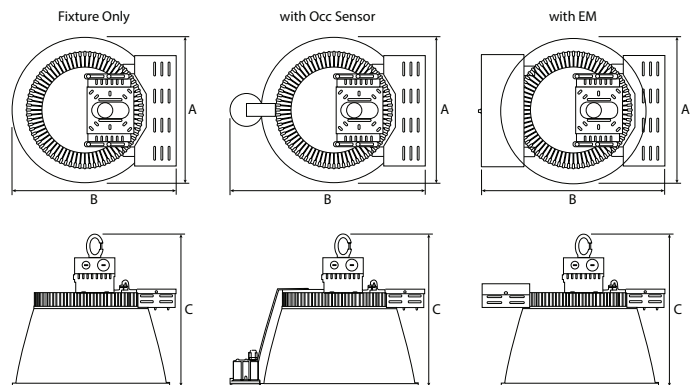
1. Refractors ship separately (max 10/box @ 23.0 lbs/box).
2. 30 refractor boxes per pallet (300 total, 50"l x 40"w x 87"h).

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (54,000 hours)	Theoretical L70 (Hours)
25° C	> 88.7%	155,000

Dimensions

Dimension (in inches)	80W, 100W, and 150W			200W and 240W		
	Fixture Only	with Occ Sensor	with EM	Fixture Only	with Occ Sensor	with EM
A	16.5	16.5	16.5	16.5	16.5	16.5
B	17	24	20	20	27	23
C	15	15	15	15	15	15



STOCK ORDERING INFORMATION (4000K, base fixture only)

Catalog Logic	Order #	Lumens	Wattage	LPW	Color Temp	CRI	Voltage	Dimming	DLC	Pallet Qty ^{2,3}
E2HBA80-840	80035	11106	81	137	4000K	82	120-277	0-10V ¹	Premium	72
E2HBA100-840	80036	13799	101	137	4000K	82	120-277	0-10V ¹	Premium	72
E2HBA150-840	80037	21119	153	138	4000K	82	120-277	0-10V ¹	Premium	72
E2HBA200-840	80038	27173	201	135	4000K	82	120-277	0-10V ¹	Premium	48
E2HBA240-840	80039	34764	246	141	4000K	82	120-277	0-10V ¹	Premium	48

STOCK ORDERING INFORMATION (5000K, base fixture only)

Catalog Logic	Order #	Lumens	Wattage	LPW	Color Temp	CRI	Voltage	Dimming	DLC	Pallet Qty ^{2,3}
E2HBA80-850	80030	11106	81	137	5000K	82	120-277	0-10V ¹	Premium	72
E2HBA100-850	80031	13799	101	137	5000K	82	120-277	0-10V ¹	Premium	72
E2HBA150-850	80032	21119	153	138	5000K	82	120-277	0-10V ¹	Premium	72
E2HBA200-850	80033	27173	201	135	5000K	82	120-277	0-10V ¹	Premium	48
E2HBA240-850	80034	34764	246	141	5000K	82	120-277	0-10V ¹	Premium	48

Notes:

- 0-10V dimming driver standard, leads are capped from the factory, dims to 10%.
- Refractors ship separately (max 10/box @ 23.0 lbs/box).
- 30 refractor boxes per pallet (300 total, 50"l x 40"w x 87"h).

STOCK ORDERING INFORMATION (5000K, w/ occupancy sensor option)

Catalog Logic	Order #	Lumens	Wattage	LPW	Color Temp	CRI	Voltage	Dimming	DLC	Pallet Qty ^{5,6}
E2HBA80M-850 ^{1,2,3,4}	80050	11106	81	137	5000K	82	120-277	Sensor Only	Premium	72
E2HBA100M-850 ^{1,2,3,4}	80051	13799	101	137	5000K	82	120-277	Sensor Only	Premium	72
E2HBA150M-850 ^{1,2,3,4}	80052	21119	153	138	5000K	82	120-277	Sensor Only	Premium	72
E2HBA200M-850 ^{1,2,3,4}	80053	27173	201	135	5000K	82	120-277	Sensor Only	Premium	48
E2HBA240M-850 ^{1,2,3,4}	80054	34764	246	141	5000K	82	120-277	Sensor Only	Premium	48

Notes:

- Occupancy sensor is set to 100% high and 20% low (infinite), with a standby time of 5 minutes and the daylight sensor 'off' as default from the factory.
- Max occupancy sensor height is 50' with a detection radius of 26'.
- Occupancy sensor is not compatible with 0-10V dimming (contact factory for availability if required).
- ZUV700A001 hand-held remote accessory required to change factory occupancy sensor settings (must be ordered separately, see separate remote spec sheet for details).
- Refractors ship separately (max 10/box @ 23.0 lbs/box).
- 30 refractor boxes per pallet (300 total, 50"l x 40"w x 87"h).

STOCK ORDERING INFORMATION (5000K, w/ emergency battery pack option)

Catalog Logic	Order #	Size	Lumens	Wattage	LPW	Color Temp	CRI	Voltage	Dimming	DLC	Pallet Qty ^{4,5}
E2HBA80E-850 ^{1,2}	80040	XX	11106	81	137	5000K	82	120-277	0-10V ³	Premium	63
E2HBA100E-850 ^{1,2}	80041	XX	13799	101	137	5000K	82	120-277	0-10V ³	Premium	63
E2HBA150E-850 ^{1,2}	80042	XX	21119	153	138	5000K	82	120-277	0-10V ³	Premium	63
E2HBA200E-850 ^{1,2}	80043	XX	27173	201	135	5000K	82	120-277	0-10V ³	Premium	45
E2HBA240E-850 ^{1,2}	80044	XX	34764	246	141	5000K	82	120-277	0-10V ³	Premium	45

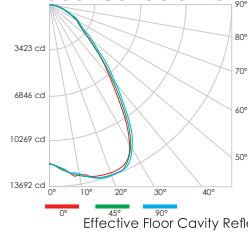
Notes:

- The emergency battery system provides approximately 16-watts of continuous power to the LED system for code compliance (40° C max ambient).
- Approximate delivered lumens in emergency mode: Ex. 16-watts x 137 LPW = 2192 lumens.
- 0-10V dimming driver standard, leads are capped from the factory, dims to 10%.
- Refractors ship separately (max 10/box @ 23.0 lbs/box).
- 30 refractor boxes per pallet (300 total, 50"l x 40"w x 87"h).

4000K PHOTOMETRIC DATA
Luminaire Data

Cat Logic: E2HBA200-840
 Test Report: E2HBA200-840.IES
 CCT: 4000
 Lamp Type: LED
 Lumens: 27173
 Input Watts: 201
 Efficacy: 135
 Spacing: 0° = 1.34 90° = 1.38

Photometric values based on tests performed in compliance with LM-79.

Indoor Candela Plot

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	11106	40.9
0-40	17181	63.2
0-60	23978	88.2
0-90	26585	97.8
0-180	27173	100.0

Candlepower

Angle	0°	90°
0	11999	11999
5	12451	12367
10	12890	12912
15	13348	13483
20	13432	13655
25	13270	13526
30	12038	12465
35	9478	10351
40	7082	7820
45	5164	5819
50	3619	4294
55	2869	3093
60	2370	2548
65	1709	1911
70	1203	1318
75	661	780
80	254	310
85	141	149
90	111	111

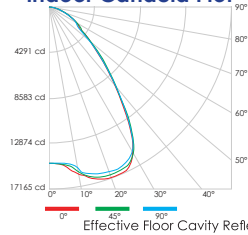
Coefficients of Utilization

rc	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
RCR																								
0	113	113	113	113	110	110	110	110	105	105	105	100	100	100	96	96	96	96	93					
1	106	102	99	96	103	100	97	94	95	93	91	91	89	88	88	86	85	85	83					
2	98	91	86	82	95	89	85	80	86	82	78	83	79	76	80	77	74	72						
3	91	82	76	71	88	81	75	70	78	73	68	75	71	67	72	69	66	64						
4	84	74	67	62	82	73	66	61	71	65	60	68	63	59	66	62	58	56						
5	78	68	60	55	76	67	60	54	64	58	54	62	57	53	61	56	52	50						
6	73	62	54	49	71	61	54	49	59	53	48	57	52	48	56	51	47	45						
7	68	57	49	44	66	56	49	44	54	48	43	53	47	43	51	46	43	41						
8	64	52	45	40	62	52	45	40	50	44	39	49	43	39	48	43	39	37						
9	60	48	41	36	59	48	41	36	47	40	36	45	40	36	44	39	36	34						
10	56	45	38	33	55	44	38	33	43	37	33	42	37	33	41	36	33	31						

4000K PHOTOMETRIC DATA
Luminaire Data

Cat Logic: E2HBA240-840
 Test Report: E2HBA240-840.IES
 CCT: 4000
 Lamp Type: LED
 Lumens: 34764
 Input Watts: 246
 Efficacy: 141
 Spacing: 0° = 1.38 90° = 1.40

Photometric values based on tests performed in compliance with LM-79.

Indoor Candela Plot

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	13840	39.8
0-40	21905	63.0
0-60	30756	88.5
0-90	34216	98.4
0-180	34764	100.0

Candlepower

Angle	0°	90°
0	14694	14694
5	14900	14783
10	15946	15422
15	16758	16281
20	17101	16458
25	17008	16483
30	15713	15613
35	12856	13246
40	9734	9807
45	7056	6942
50	5013	4801
55	3566	3377
60	2987	2906
65	2195	2150
70	1556	1571
75	918	997
80	375	420
85	193	197
90	143	141

Coefficients of Utilization

rc	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
RCR																								
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	98						
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	92	90	89	87						
2	102	96	90	85	100	94	88	84	90	86	82	87	83	80	83	81	78	76						
3	95	86	79	74	92	84	78	73	81	76	71	78	74	70	76	72	69	67						
4	88	78	70	64	86	76	69	64	74	68	63	71	66	62	69	65	61	59						
5	82	71	63	57	80	69	62	57	67	61	56	65	60	55	63	58	54	53						
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	58	53	49	47						
7	71	59	51	46	69	58	51	46	57	50	45	55	49	45	54	48	44	43						
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	39						
9	62	50	43	38	61	50	42	38	48	42	37	47	41	37	46	41	37	35						
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32						