

# MULTI-FUNCTION MEDICAL BED LIGHT

# MDB

## LED

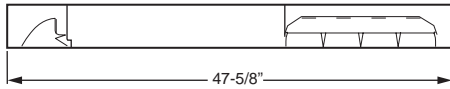
CATALOG #:	TYPE:
PROJECT:	NOTES:

EXAMPLE

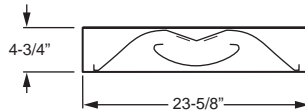
**MDB AER G - HET - L44/840 - A/SAPL15/W - FA - OPTIONS - DRV - UNV**

SERIES    STYLE    CEILING STYLE    AMBIENT STYLE    LUMEN PACKAGE    CRI & CCT    SHIELDING    LENS    OPTIONS    DRIVER    VOLTAGE

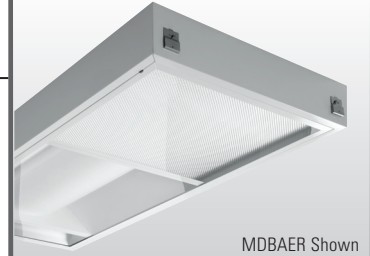
## CROSS SECTIONS



Side View  
Exam and Reading shown



End View  
Ambient (DI shown)



MDBAER Shown

## ORDERING INFORMATION

**SERIES**  
**MDB** Multi-function Medical Bed Light

**STYLE**  
**AE** Ambient and exam  
**AER** Ambient, exam, and reading

**CEILING TYPE**  
**G** NEMA Type "G"  
**S** Surface Mount  
For flange installations use the Drywall Kit (DFK), ordered separately, see [Technical Info](#).

STYLE	CROSS-SECTION	DESCRIPTION
<b>DI</b>		Direct/Indirect
<b>HET</b>		High Efficiency Troffer

**LED PACKAGE**  
Specify for ambient compartment only. See table below for LED packages.

AMBIENT	STYLE	DESCRIPTION
	<b>AD</b>	Acrylic (DI only)
	<b>WPR</b>	White perforated round (DI only)
	<b>A</b>	Frosted, ribbed acrylic (HET only)

SHIELDING	STYLE	DESCRIPTION
	<b>AF12125</b>	Frosted acrylic, pattern #12, .125" thick
	<b>AF19156</b>	Frosted acrylic, pattern #19, .156" thick
	<b>SAPL15<sup>2</sup></b>	Semi-specular aluminum parabolic louver, 1-1/2" deep with matte white acrylic overlay
	<b>WAPL15<sup>2</sup></b>	White aluminum parabolic louver, 1-1/2" deep with matte white acrylic overlay
	<b>READING<sup>1</sup></b>	
	<b>S</b>	Semi-specular
	<b>W</b>	White

**SHIELDING** (continued)

<b>EXAM</b>	<b>AF12125</b>	Frosted acrylic, pattern #12, .125" thick
	<b>AF19156</b>	Frosted acrylic, pattern #19, .156" thick
	<b>SAPL15<sup>2</sup></b>	Semi-specular aluminum parabolic louver, 1-1/2" deep with matte white acrylic overlay
<b>READING<sup>1</sup></b>	<b>WAPL15<sup>2</sup></b>	White aluminum parabolic louver, 1-1/2" deep with matte white acrylic overlay
	<b>S</b>	Semi-specular
	<b>W</b>	White

<sup>1</sup> Specify shielding for Reading only when AER style is specified.  
<sup>2</sup> AE configuration not available with SAPL or WAPL louver shielding.

**LENS**

<b>FA</b>	Flat aluminum door frame, clear, non-prismatic acrylic, .080" thick
<b>FP</b>	Flat aluminum door frame, clear, non-prismatic polycarbonate lens, .080" thick

**OPTIONS**

Low-voltage controller options available, see page 2 for details.

<b>EM/10W</b>	10-watt emergency LED driver, ambient compartment only, nominal 900 lumens module output in EM mode (120V-277V only)
<b>GLR</b>	Fuse, fast blow (specify voltage), one per driver
<b>NL</b>	Nurse light, must specify 120V or 277V (see page 2 for details)
<b>CP</b>	Chicago Plenum (CCEA)

**DRIVER**

<b>DRV</b>	Driver prewired for non-dimming applications
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**VOLTAGE**

<b>120</b>	120V	<b>UNV</b>	120-277V
<b>277</b>	277V	<b>347</b>	347V

## FEATURES

- ▶ Ambient compartment is designed to incorporate Williams' popular DI or HET styles.
- ▶ Exam compartment is available with a variety of lens or louver options.
- ▶ Easy-to-clean transparent lensed door protects against vandals and contaminants.
- ▶ Door frame, diffuser(s) and reflectors are combined in a single swing-down assembly to allow easy lamp and ballast access from room side of fixture.
- ▶ Anti-microbial white finish standard.
- ▶ Fully gasketed door frame minimizes contaminants.
- ▶ Optional low-voltage controller allows for bedside lighting control.
- ▶ Highly reflective matte white paint increases efficiency.
- ▶ This fixture is proudly made in the USA.

## CONFIGURATIONS

STYLE	CONFIGURATION	AMBIENT LUMEN PACKAGE	AMBIENT NOMINAL LUMENS	CRI/CCT	EXAM LUMENS	READING LUMENS	AVERAGE SYSTEM WATTAGE
<b>AE<sup>2</sup></b>		<b>L27</b>	2,700	<b>830</b> = 80 CRI, 3000K <b>835</b> = 80 CRI, 3500K <b>840</b> = 80 CRI, 4000K	7,800	-	119
		<b>L44</b>	4,400	133			
		<b>L27</b>	2,700	148			
<b>AER</b>		<b>L27</b>	2,700	<b>940</b> = 90 CRI, 4000K <b>950</b> = 90 CRI, 5000K	7,800	1,600	148
		<b>L44</b>	4,400	162			



## LED

### SPECIFICATIONS

**Housing** – 20-gauge die-formed C.R.S.  
**Door Frame & Lens** – Transparent acrylic lens, .080" thick, mounted in .050" thick extruded aluminum door frame, flat with mitered corners.  
**Reflector** – Precision die-formed metal with highly reflective, non-glare matte white polyester powder coated finish.  
**Finish** – 92% minimum average reflective white anti-microbial powder coat bonded to phosphate-free, multi-stage pretreated metal. All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.  
**Electrical** – High quality mid-power LED boards. Rated for 50,000 hours at 70% lumen maintenance (L70).  
**Mounting** – NEMA Type "G" standard. Surface mount available. Earthquake clips included. For flange installations use the Drywall Kit (DFK).  
**Labels** – cCSAus certified as luminaire suitable for dry or damp locations. City of Chicago Environmental Air approved when specified with CP option.  
**Warranty** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).

### FOOTCANDLE ESTIMATOR

#### AMBIENT & EXAM ONLY



67	80	66
75	89	73
78	91	76
83	93	80
83	93	81
75	84	73
63	70	61
49	54	48
39	41	38

Footcandle calculations based on standard reflectance of 80/50/20 and a light loss factor of .85. Fixture centered over bed at 9' ceiling height, positioned 4' on center from wall. Values are for bed surface.

### LOW-VOLTAGE CONTROLLER (120V or 277V only)

EXAMPLE: LVC3/R/N

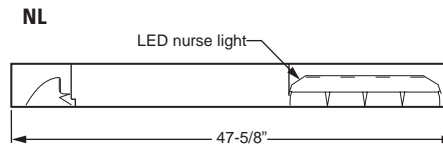
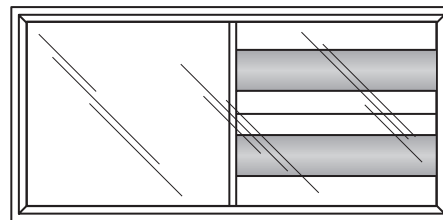
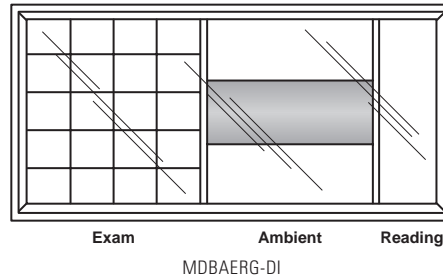
Controller	Load 1	Load 2	Load 3
LVC1 = 1-circuit	A = Ambient N = Nurse R = Reading E = Exam		
LVC2 = 2-circuit	A/ = Ambient R/ = Reading	A = Ambient N = Nurse R = Reading E = Exam	
LVC3 = 3-circuit or dimming control	A/ = Ambient R/ = Reading DIMA/ = Ambient, 0-10 dimming <sup>1</sup> DIMR/ = Reading, 0-10 dimming <sup>1</sup>	A = Ambient N = Nurse R = Reading E = Exam -	N = Nurse E = Exam -
	DIMA/DIMR/ = Ambient and reading, 0-10 dimming <sup>1</sup> SEQAR/ = Ambient and reading, sequential switching <sup>2</sup>		

- Smooth dimming of the load utilizing a single, dry contact, momentary, normally open switch which will dim from 25% up to 100% while holding down the switch.
- Alternating off and on of (2) loads with multiple cycles of one switch

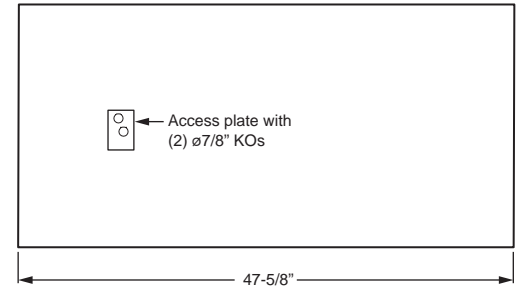
### FIXTURE DETAILS

#### EXAMPLES OF CONFIGURATIONS

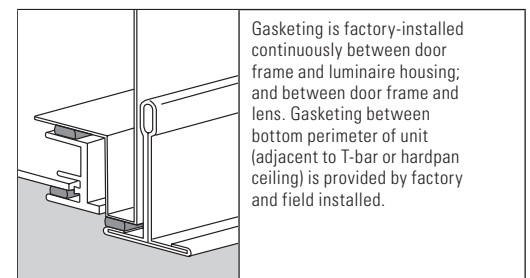
Styles must be specified in order: 1) Ambient 2) Exam 3) Reading.



#### BACK VIEW



#### GASKETING DETAILS



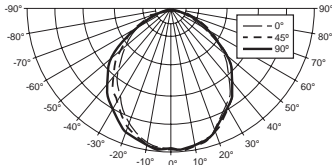
### PHOTOMETRY

Catalog #: **MDBAERG-HET-L44/840-A/AF12125/W-FA-DRV-UNV**

#### HET AMBIENT

##### TEST REPORT INFORMATION

- ▶ Test Report #: 19082.0
- ▶ Date: 09/21/15
- ▶ Lamp Type: LED
- ▶ **Rated Lumens: 4668**
- ▶ **Watts: 46.9**
- ▶ **Lumens Per Watt: 99.6**
- ▶ **CRI: 82.6**
- ▶ **CCT: 4052K**



##### CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	2002.	2002.	2002.	2002.	2002.	2002.
5°	2039.	2023.	2012.	1999.	1983.	1921.
15°	1939.	1944.	1927.	1874.	1839.	541.0
25°	1736.	1758.	1749.	1659.	1593.	790.8
35°	1495.	1541.	1544.	1416.	1319.	927.6
45°	1146.	1225.	1240.	1102.	981.	896.1
55°	761.	853.	831.	747.	631.	703.5
65°	444.	508.	417.	433.	351.	431.6
75°	171.	182.	131.	149.	124.	162.7
85°	24.	25.	21.	20.	16.	23.0
90°	0.	0.	0.	0.	0.	

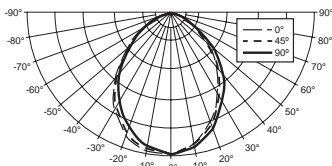
##### LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 30	1524.	32.6
0 - 40	2452.	52.5
0 - 60	4051.	86.8
0 - 90	4668.	100.0
<b>Total Luminaire:</b>		
0 - 180	4668.	100.0

#### AF12125 EXAM

##### TEST REPORT INFORMATION

- ▶ Test Report #: 19079.0
- ▶ Date: 09/17/15
- ▶ Lamp Type: LED
- ▶ **Rated Lumens: 7848**
- ▶ **Watts: 86.8**
- ▶ **Lumens Per Watt: 90.4**
- ▶ **CRI: 83.5**
- ▶ **CCT: 4082K**



##### CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	3888.	3888.	3888.	3888.	3888.	3888.
5°	3768.	3768.	3796.	3829.	3849.	362.7
15°	3425.	3465.	3572.	3691.	3752.	1015.0
25°	3892.	2960.	3120.	3274.	3324.	1440.7
35°	2249.	2335.	2552.	2710.	2756.	1584.2
45°	1617.	1670.	1867.	1968.	2012.	1416.8
55°	1018.	1055.	1205.	1277.	1319.	1052.2
65°	566.	573.	667.	707.	759.	645.8
75°	246.	228.	257.	285.	336.	280.9
85°	44.	37.	44.	46.	55.	49.7
90°	0.	0.	0.	0.	0.	

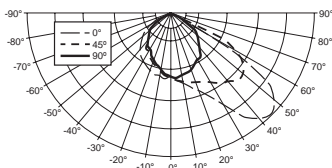
##### LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 30	2818.	35.9
0 - 40	4403.	56.1
0 - 60	6872.	87.6
0 - 90	7848.	100.0
<b>Total Luminaire:</b>		
0 - 180	7848.	100.0

#### READING

##### TEST REPORT INFORMATION

- ▶ Test Report #: 19081.0
- ▶ Date: 09/21/15
- ▶ Lamp Type: LED
- ▶ **Rated Lumens: 1593**
- ▶ **Watts: 26.9**
- ▶ **Lumens Per Watt: 59.3**
- ▶ **CRI: 82.2**
- ▶ **CCT: 4017K**



##### CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	445.	445.	445.	445.	445.	445.
5°	474.	473.	460.	442.	430.	43.6
15°	539.	506.	445.	391.	373.	127.1
25°	642.	537.	408.	340.	323.	204.2
35°	887.	611.	375.	300.	283.	293.1
45°	1012.	677.	295.	229.	224.	348.3
55°	842.	637.	225.	175.	162.	339.3
65°	129.	408.	145.	106.	94.	169.6
75°	13.	38.	60.	43.	40.	60.6
85°	5.	2.	9.	9.	11.	7.4
90°	0.	0.	0.	0.	0.	

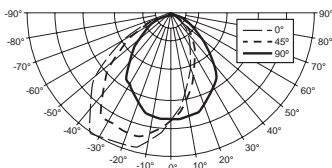
##### LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 30	375.	23.5
0 - 40	668.	41.9
0 - 60	1356.	85.1
0 - 90	1593.	100.0
<b>Total Luminaire:</b>		
0 - 180	1593.	100.0

#### NURSE

##### TEST REPORT INFORMATION

- ▶ Test Report #: 19080.0
- ▶ Date: 09/17/15
- ▶ Lamp Type: LED
- ▶ **Rated Lumens: 626**
- ▶ **Watts: 8.8**
- ▶ **Lumens Per Watt: 71.5**
- ▶ **CRI: 82.0**
- ▶ **CCT: 3963K**



##### CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	260.	260.	260.	260.	260.	260.
5°	235.	244.	261.	284.	294.	25.1
15°	167.	191.	253.	314.	340.	71.4
25°	112.	135.	224.	311.	347.	104.0
35°	82.	104.	197.	307.	355.	129.0
45°	54.	65.	135.	234.	286.	116.9
55°	36.	44.	88.	164.	205.	94.0
65°	22.	28.	52.	92.	119.	59.3
75°	9.	13.	20.	34.	44.	24.3
85°	1.	1.	1.	2.	2.	1.9
90°	0.	0.	0.	0.	0.	

##### LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 30	200.	32.0
0 - 40	329.	52.7
0 - 60	540.	86.3
0 - 90	626.	100.0
<b>Total Luminaire:</b>		
0 - 180	626.	100.0

