

MULTI-FUNCTION MEDICAL BED LIGHT

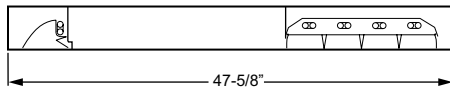
MDB

CATALOG #:	TYPE:	T5 T8
PROJECT:	NOTES:	

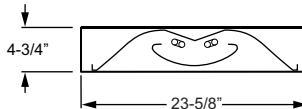
EXAMPLE **MDB AER G - DI - 240TT/440TT/140TT - A/SAPL15/W - FA - OPTIONS - EB2-EB2/2-EB1 - UNV**

SERIES STYLE CEILING TYPE AMBIENT STYLE TOTAL LAMPS/TYPE AMBIENT/EXAM/READING SHIELDING AMBIENT/EXAM/READING LENS OPTIONS BALLAST AMBIENT-EXAM-READING VOLTAGE

MDB SERIES



Side View
Exam and Reading shown



End View
Ambient (DI shown)



AER style shown
with DI and SAPL15

ORDERING INFORMATION

SERIES
MDB Multi-function Medical Bed Light

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

STYLE	CONFIGURATION	DESCRIPTION
AE ²	A E	Ambient and exam
AER ¹	R → A E	Ambient, exam, and reading ¹

CEILING TYPE
G NEMA Type "G"
Flange installation available, shipped separately: see page 4 for DRY WALL KIT (DFK) OPTIONS.

AMBIENT STYLE

STYLE	CROSS-SECTION	DESCRIPTION
DI		Direct/Indirect
HET		High Efficiency Troffer
DSP		Dual Sided Architectural

TOTAL LAMPS & LAMP WATTAGE/TYPE

EXAMPLE: 240TT/440TT/140TT

FUNCTION	# OF LAMPS				LAMP TYPE		
	1	2	3	4	40TT	50TT	55TT
AMBIENT (DI)	•	•			•	•	•
AMBIENT (HET)		•			•	•	•
AMBIENT (DSP)		•			•	•	•
EXAM			•	•	•	•	•
READING ¹	•				•	•	•

SHIELDING

AMBIENT	AD	Acrylic (DI only)
	WPR	White perforated round (DI or DSP only)
	A	Frosted, ribbed acrylic (HET only)
EXAM	A12125	Acrylic, pattern #12, .125" thick
	A19156	Acrylic, pattern #19, .156" thick
	PC1AS	Parabolic louver, silver acrylic, nominal 1/2" cube
	SAPL15 ²	Semi-specular aluminum parabolic louver, 1-1/2" deep
READING ¹	S	Semi-specular
	W	White

LENS
FA Flat aluminum door frame, clear, non-prismatic acrylic, .080" thick
FP Flat aluminum door frame, clear, non-prismatic polycarbonate lens, .080" thick

OPTIONS
For generic EM ballast options (must specify voltage), see [Technical Info](#). Ballast size restrictions apply. Consult factory.

GLR Fuse, fast blow (specify voltage), one per ballast
NL130/EB1* Nurse light, one 13-watt, 4-pin, G24q-1 base CFL lamp (by others) and electronic ballast standard, must specify 120V, 277V, or UNV
LVC1 1-circuit low-voltage controller, specify A (Ambient) or R (Reading), 120V or 277V only, not dimming compatible.
LVC2 2-circuit low-voltage controller, AR (Ambient and Reading, controlled separately), 120V or 277V only, not dimming compatible.
CP Chicago Plenum (CCEA)

BALLAST TYPE

EXAMPLE: EB2-EB2/2-EB1	
CATALOG #	DESCRIPTION
AMBIENT	EB1 1-lamp electronic ballast
	EB2 2-lamp electronic ballast
EXAM	EB3 3-lamp electronic ballast
	EB2/1 (1) 2-lamp & (1) 1-lamp electronic ballast
	EB2/2 (2) 2-lamp electronic ballasts
READING	EB1 1-lamp electronic ballast

VOLTAGE

120	120V	UNV	120-277V
277	277V	347	347V

FEATURES

- ▶ Ambient compartment is designed to incorporate Williams' popular DI, HET, or DSP 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.
- ▶ Fully enclosed spring-loaded cam latches allow years of hassle-free maintenance.
- ▶ T-slot steel hinge ensures positive retention when door is opened.
- ▶ Anti-microbial white finish standard.
- ▶ Highly reflective matte white paint increases efficiency.
- ▶ Made Right Here® in the USA

¹ Specify lamps, shielding, and ballast for Reading only when AER style is specified.
² AE configuration not available with SAPL or WAPL louver shielding.



PHOTOMETRY – AMBIENT ONLY

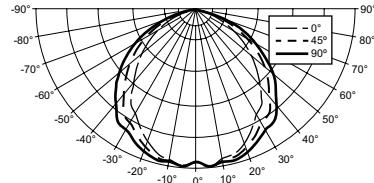
Catalog #: **MDBAERG-DI-240TT/440TT/140TT-AD/SAPL15/W-FA**

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 – Electronic ballast standard, instant start (40TT) or program start (50TT or 55TT), rated Class P.
Mounting – NEMA Type "G" standard. Earthquake clips included. Flange installation available, shipped separately: see page 4 for DRYWALL KIT (DFK) OPTIONS.
Labels –
- UL/CUL listed as recessed fluorescent luminaire suitable for dry or damp locations.
 - UL listed (not UL/CUL) when specified with twin tube lamps or nurse light.
 - City of Chicago Environmental Air approved when specified with CP option.

TEST REPORT INFORMATION

- ▶ Test Report #: 17356.0
- ▶ Date: 05/20/13
- ▶ Lamp Type: FT40W/2G11
- ▶ Lamp Quantity: 2



ZONAL CAVITY COEFFICIENTS

	Ceiling			Wall			Floor			
	.80	.70	.50	.70	.50	.30	.50	.30	.10	
Room Cavity Ratio	0	.87	.87	.87	.85	.85	.85	.81	.81	.81
	1	.81	.78	.75	.79	.76	.74	.73	.71	.69
	2	.74	.69	.65	.73	.68	.64	.65	.62	.59
	3	.69	.62	.57	.67	.61	.56	.59	.54	.51
	4	.63	.55	.49	.62	.54	.49	.53	.48	.44
	5	.58	.49	.43	.56	.48	.42	.47	.42	.38
	6	.53	.44	.38	.52	.43	.38	.42	.37	.33
	7	.49	.40	.34	.48	.39	.33	.38	.33	.29
	8	.45	.36	.30	.44	.35	.29	.34	.29	.25
	9	.42	.32	.26	.41	.32	.26	.31	.25	.22
	10	.39	.29	.23	.38	.29	.23	.28	.23	.19

Effective Floor Cavity Reflectance = .20

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	1813.	1813.	1813.	1813.	1813.	
5°	1840.	1838.	1843.	1850.	1861.	176.1
15°	1746.	1761.	1786.	1786.	1786.	503.2
25°	1524.	1561.	1613.	1586.	1558.	729.0
35°	1306.	1381.	1471.	1409.	1347.	877.4
45°	995.	1109.	1211.	1117.	1017.	859.4
55°	687.	802.	905.	815.	715.	723.3
65°	408.	502.	578.	517.	435.	504.2
75°	160.	191.	201.	205.	178.	205.5
85°	18.	21.	21.	23.	23.	23.2
90°	0.	0.	0.	0.	0.	

LUMEN SUMMARY

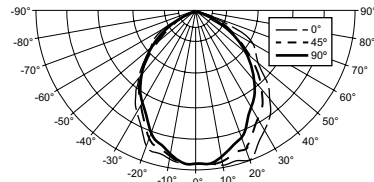
Zone	Lumens	% Lamp	% Fixture
0 - 30	1408.	22.4	30.6
0 - 40	2286.	36.3	49.7
0 - 60	3869.	61.4	84.1
0 - 90	4601.	73.0	100.0
Total Luminaire:			
0 - 180	4601.	73.0	100.0
Total Luminaire Optical Efficiency: 73.0%			

PHOTOMETRY – EXAM ONLY

Catalog #: **MDBAERG-DI-240TT/440TT/140TT-AD/SAPL15/W-FA**

TEST REPORT INFORMATION

- ▶ Test Report #: 17355.0
- ▶ Date: 05/20/13
- ▶ Lamp Type: FT40W/2G11
- ▶ Lamp Quantity: 4



ZONAL CAVITY COEFFICIENTS

	Ceiling			Wall			Floor			
	.80	.70	.50	.70	.50	.30	.50	.30	.10	
Room Cavity Ratio	0	.56	.56	.56	.55	.55	.55	.53	.53	.53
	1	.53	.51	.49	.52	.50	.49	.48	.47	.46
	2	.49	.46	.43	.48	.45	.43	.43	.41	.40
	3	.45	.41	.38	.44	.41	.38	.39	.37	.35
	4	.42	.37	.34	.41	.37	.33	.35	.33	.30
	5	.39	.33	.29	.38	.33	.29	.32	.29	.26
	6	.36	.30	.26	.35	.30	.26	.29	.26	.23
	7	.33	.27	.23	.32	.27	.23	.26	.23	.20
	8	.30	.24	.21	.30	.24	.20	.23	.20	.18
	9	.28	.22	.18	.27	.22	.18	.21	.18	.16
	10	.26	.20	.16	.25	.20	.16	.19	.16	.14

Effective Floor Cavity Reflectance = .20

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	2737.	2737.	2737.	2737.	2737.	
5°	2780.	2747.	2726.	2732.	2750.	261.7
15°	2760.	2615.	2481.	2548.	2641.	732.8
25°	2590.	2364.	2145.	2250.	2379.	1068.1
35°	2282.	2042.	1808.	1864.	1982.	1229.5
45°	1766.	1545.	1393.	1376.	1451.	1142.3
55°	1273.	979.	918.	807.	1018.	850.7
65°	927.	524.	459.	428.	624.	534.0
75°	237.	137.	125.	101.	146.	139.1
85°	23.	19.	16.	16.	19.	18.3
90°	0.	0.	0.	0.	0.	

LUMEN SUMMARY

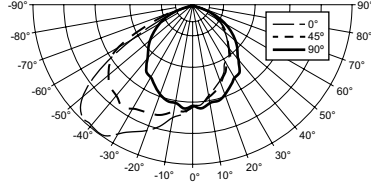
Zone	Lumens	% Lamp	% Fixture
0 - 30	2063.	16.4	34.5
0 - 40	3292.	26.1	55.1
0 - 60	5285.	41.9	88.4
0 - 90	5977.	47.4	100.0
Total Luminaire:			
0 - 180	5977.	47.4	100.0
Total Luminaire Optical Efficiency: 47.4			

PHOTOMETRY – READING ONLY

Catalog #: **MDBAERG-DI-240TT/440TT/140TT-AD/SAPL15/W-FA**

TEST REPORT INFORMATION

- ▶ Test Report #: 17361.0
- ▶ Date: 05/21/13
- ▶ Lamp Type: FT40W/2G11
- ▶ Lamp Quantity: 1



CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	45°	90°	135°	180°	
0°	492.	492.	492.	492.	492.	48.5
5°	488.	492.	507.	522.	531.	48.5
15°	425.	438.	487.	554.	610.	141.1
25°	361.	374.	441.	574.	681.	220.0
35°	311.	323.	400.	609.	776.	292.9
45°	243.	245.	312.	576.	771.	316.2
55°	174.	185.	235.	505.	585.	289.8
65°	103.	110.	149.	319.	236.	181.9
75°	47.	47.	57.	56.	16.	57.1
85°	13.	10.	6.	2.	2.	6.3
90°	0.	0.	0.	0.	0.	0.

ZONAL CAVITY COEFFICIENTS

Room Cavity Ratio	Ceiling .80			.70			.50			
	Wall	.70	.50	.30	.70	.50	.30	.50	.30	.10
0	.59	.59	.59	.57	.57	.57	.55	.55	.55	
1	.54	.52	.51	.53	.51	.50	.49	.48	.47	
2	.50	.47	.44	.49	.46	.43	.44	.42	.40	
3	.46	.41	.38	.45	.41	.37	.39	.36	.34	
4	.42	.37	.33	.41	.36	.32	.35	.32	.29	
5	.38	.32	.28	.37	.32	.28	.31	.27	.25	
6	.35	.29	.25	.34	.28	.24	.27	.24	.21	
7	.32	.26	.21	.31	.25	.21	.25	.21	.18	
8	.30	.23	.19	.29	.23	.19	.22	.18	.16	
9	.27	.20	.16	.26	.20	.16	.20	.16	.13	
10	.25	.19	.15	.25	.18	.14	.18	.14	.12	

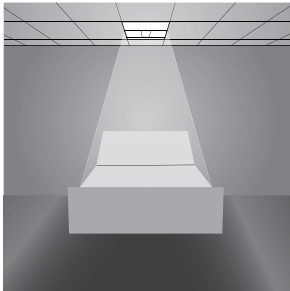
Effective Floor Cavity Reflectance = .20

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0 - 30	410.	13.0	26.4
0 - 40	702.	22.3	45.2
0 - 60	1308.	41.5	84.2
0 - 90	1554.	49.3	100.0
Total Luminaire:			
0 - 180	1554.	49.3	100.0
Total Luminaire Optical Efficiency: 49.3%			

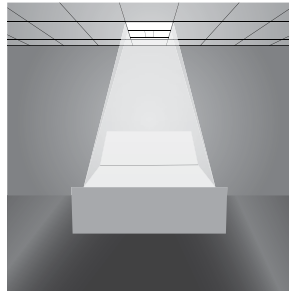
FOOTCANDLE ESTIMATORS

AMBIENT ONLY



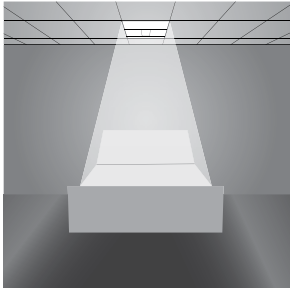
35	43	35
36	45	36
34	41	34
34	39	33
31	36	31
25	29	26
20	23	20
16	17	16
12	13	12

AMBIENT & EXAM ONLY



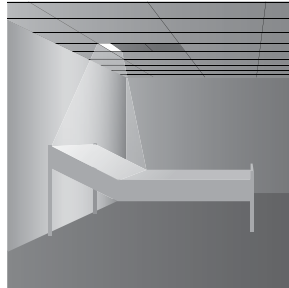
67	80	66
75	89	73
78	91	76
83	93	80
83	93	81
75	84	73
63	70	61
49	54	48
39	41	38

EXAM ONLY



32	37	31
39	44	37
44	50	42
49	54	47
52	58	50
49	55	48
43	47	41
33	37	32
27	29	26

READING ONLY



14	18	14
11	14	12
9	11	9
8	9	8
7	8	7
5	6	5
4	5	4
3	3	3
3	3	2

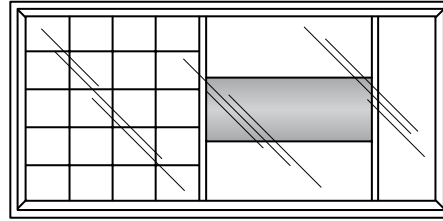
Footcandle calculations based on standard reflectance of 80/50/20 and a light loss factor of .85. Fixture centered over bed at 9' ceiling height, positioned 4' on center from wall. Values are for bed surface.



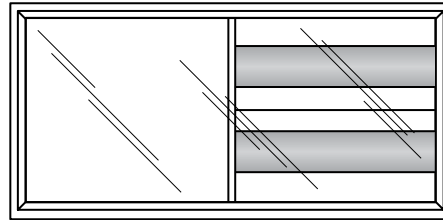
FIXTURE DETAILS

EXAMPLES OF CONFIGURATIONS

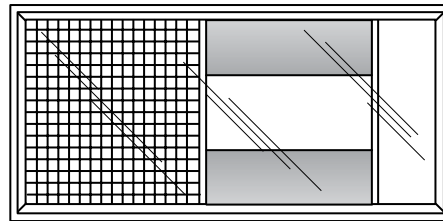
Styles must be specified in order: 1) Ambient 2) Exam 3) Reading.



Exam Ambient Reading
MDBAERG-DI

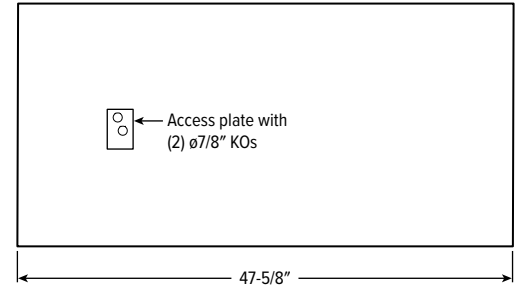


MDBAEG-HET with A (Ambient) and A12125 or A19156 (Exam) shielding, no reading light

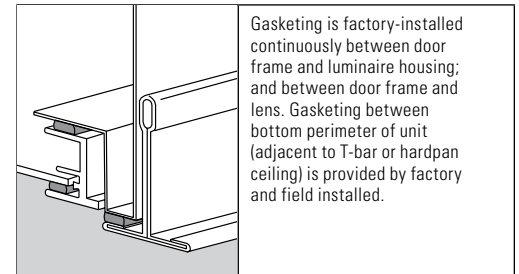


MDBAERG-DSP with WPR (Ambient) and PC1AS (Exam) shielding

BACK VIEW



GASKETING DETAILS



Gasketing is factory-installed continuously between door frame and luminaire housing; and between door frame and lens. Gasketing between bottom perimeter of unit (adjacent to T-bar or hardpan ceiling) is provided by factory and field installed.

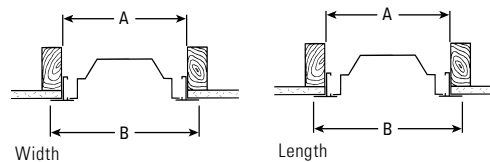
DRYWALL KIT (DFK) OPTIONS

ORDERING EXAMPLE: DFK - 24 48 W

SERIES	WIDTH	LENGTH	FINISH	
DFK Drywall Kit	See table below	See table below	W White	AMW Anti-microbial white

TYPICAL INSTALLATION

Refer to table for dimensions.



SERIES	WIDTH	ROUGH-IN		FINISH TRIM SIZE	
		WIDTH (A)	LENGTH (C)	WIDTH (B)	LENGTH (D)
DFK-2448	2' x 4'	24-3/8"	48-3/8"	25-5/16"	49-5/16"