FAIL-SAFE®

DESCRIPTION

Fail-Safe's MPWA series combines a multi-function, wall mounted luminaire with the architectural styling of today's healthcare environment. Through innovative features, the MPWA accommodates multiple applications throughout the healthcare environment while offering an appealing and highly styled design for all architectural tastes. The MPWA luminaire has been designed with the patient and healthcare professional in mind. The MPWA is separated into two compartments: up light for general ambient room lighting and down light for reading/direct task lighting to accommodate the needs of the patient or healthcare professional.

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

SPECIFICATION FEATURES

Application
The MPWA is designed for use in healthcare environments, specifically for use in patient rooms over beds to facilitate all of the tasks required by the patient and medical staff. Its exceptional aesthetics make it ideal for other applications such as over vanities, examination areas, rest rooms, hallways and offices.

Fasteners
Nickel-plated thumbscrews are standard (requires no tools to remove lens assembly).

Construction
Outer housing is 18 gauge, die-formed, cold rolled steel with seam-welded ends. Back pan housing is 20 gauge, die formed cold-rolled steel. Power tray and reflector are 20 gauge cold rolled steel.

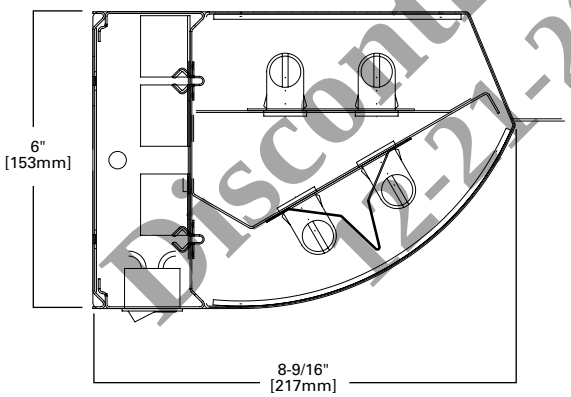
Finish
High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

Lens
Up light: 0.125" thick, prismatic K12 pattern, acrylic lens is standard (prisms on the inside for ease of cleaning). Down light: 0.125" thick, contoured prismatic K12 pattern, acrylic lens is standard (prisms inside).

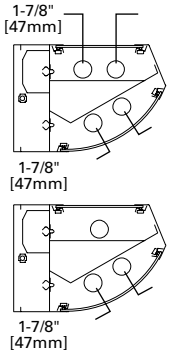
Lamps
T8 Linear Fluorescent
T5 Linear Fluorescent
T5HO Linear Fluorescent

Ballast
Electronic Class P, CBM/ETL ballast.

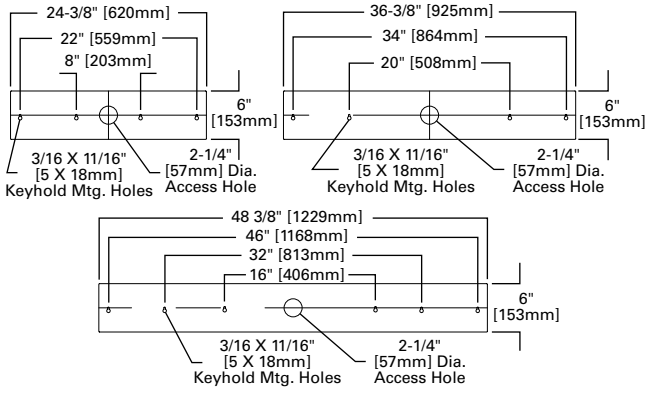
Labels
UL/cUL listed for damp locations.



LAMP CONFIGURATIONS



MOUNTING DIMENSIONS



MPWA

T5
T8
Fluorescent
Healthcare: Patient

WALL
Architectural

Healthcare Solutions

ENERGY DATA

Input Watts:

T5H0 Fluorescent Lamps
Electronic Ballasts*
(3) 24W T5 HO Lamps: 79W
(4) 24W T5 HO Lamps: 104W
(3) 39W T5 HO Lamps: 127W
(4) 39W T5 HO Lamps: 174W
(3) 54W T5 HO Lamps: 182W
(4) 54W T5 HO Lamps: 240W
*Energy Data calculated using 3 ballasts per each lamp configuration. (Programmed start, normal light output, average ballast factor 0.95 to 1.1)

T8 Fluorescent Lamps
Electronic Ballasts*
(3) 17W T8 Lamps: 54W
(4) 17W T8 Lamps: 68W
(3) 25W T8 Lamps: 74W
(4) 25W T8 Lamps: 94W
(3) 32W T8 Lamps: 90W
(4) 32W T8 Lamps: 116W
*Energy Data calculated using 3 ballasts per each lamp configuration. (Instant start, normal light output, average ballast factor 0.9 to 1.0)

FEATURES

Luminaires can be ordered with T8 and the latest T5 High Output (HO) linear fluorescent lamp sources, in multiple lamp configurations to suit the needs of the patient and staff. The MPWA is separated into two compartments: up light for general ambient room lighting and down light for reading/direct task lighting to accommodate the needs of the patient or healthcare professional. Lamp configurations range from 3 lamps (one up and two down) to a maximum of 4 lamps (two up and two down) and can be arranged in multiple configurations depending on the maximum foot-candle requirements in the applicable areas.

ORDERING INFORMATION

SAMPLE NUMBER: MPWA-2/232-120-EB83-EXLL-PS4

Product Family

MPWA

MPWA=Medical/Patient Wall Architectural

Lamp Type

2' Unit

T8 Fluorescent
1/117=(2) 17W Lamps 1 Up, 1 Down
1/217=(3) 17W Lamps 1 Up, 2 Down
2/117=(3) 17W Lamps 2 Up, 1 Down
2/217= (4)17W Lamps 2 Up, 2 Down

T5 Fluorescent
1/114=(2) 14W Lamps 1 Up, 1 Down
1/214=(3) 14W Lamps 1Up, 2 Down
2/114=(3) 14W Lamps 2 Up, 1 Down
2/214=(4) 14W Lamps 2 Up, 2 Down

T5HO Fluorescent
1/124=(2) 24W Lamps 1 Up, 1 Down
1/224=(3) 24W Lamps 1 Up, 2 Down
2/124= (3) 24W Lamps 2 Up, 1 Down
2/224= (4) 24W Lamps 2 Up, 2 Down

3' Unit

T8 Fluorescent
1/125=(2) 25W Lamps 1 Up, 1 Down
1/225=(3) 25W Lamps 1 Up, 2 Down
2/125= (3) 25W Lamps 2 Up, 1 Down
2/225 (4) 25W Lamps 2 Up, 2 Down

T5 Fluorescent
1/121=(2) 21W Lamps 1 Up, 1 Down
1/221=(3) 21W Lamps 1 Up, 2 Down
2/121=(3) 21W Lamps 2 Up, 1 Down
2/221=(4) 21W Lamps 1 Up, 2 Down

T5HO Fluorescent
1/139=(2) 39W Lamps 1 Up, 1 Down
1/239=(3) 39W Lamps 1 Up, 2 Down
2/139= (3) 39W Lamps 2 Up, 1 Down
2/239 (4) 39W Lamps 2 Up, 2 Down

4' Unit

T8 Fluorescent
1/132=(2) 32W Lamps 1 Up, 1 Down
1/232=(3) 32W Lamps 1 Up, 2 Down
2/132=(3) 32W Lamps 2 Up, 1 Down
2/232= (4)32W Lamps 2 Up, 2 Down

T5 Fluorescent
1/128=(2) 28W Lamps 1 Up, 1 Down
1/228=(3) 28W Lamps 1 Up, 2 Down
2/128=(3) 28W Lamps 2 Up, 1 Down
2/228=(4) 28W Lamps 2 Up, 2 Down

T5HO Fluorescent
1/154=(2) 54W Lamps 1 Up, 1 Down
1/254=(3) 54W Lamps 1 Up, 2 Down
2/154=(3) 54W Lamps 2 Up, 1 Down
2/254=(4) 54W Lamps 2 Up, 2 Down

Voltage

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

Optional Exam Light [4]

EXLR=Exam Light, Switch Right Side Mounted Facing Unit
EXLL=Exam Light, Switch Left Side Mounted Facing Unit

Leave blank if exam light not required.

Ballast

EB81=(1) T8 ballast
EB82=(2) T8 ballasts
EB83=(3) T8 ballasts
EB51=(1) T5 ballast
EB52=(2) T5 ballasts
EB53=(3) T5 ballasts

Switching Control Options

PICK ONE BELOW
(or if no switching option is specified, fixture ships with leads left unwired for switch wiring completed in field).

PS4=4 position pull chain [2]
PS1D=2 position pull chain (controls bottom lamp only, upper lamps on separate circuit) [2]
LVCP=Low voltage controller, patient controlled; (Patient controls all lamps.) [1,3]

Options

EL4=EM Pack, T8 [1]
EL5=EM Pack, T5, T5HO [1]
FNL=Fluorescent Night Light, 5, 7 or 9W
GCO=GROUNDED Convenience Outlet, right side mounted facing unit [2]
GCOL=GROUNDED Convenience Outlet, left side mounted facing unit [2]
GLR=Fuse and holder
RIF=Radio Interference Filter [1]
SFP=Machine Screws, Philips-Head Natural Stainless Steel
SF1=Tamperproof TORX®-Head Fasteners
AM=Anti-microbial Finish

Finish Options

(If not specified, fixture ships with standard high gloss white finish)

MF=Metallic Finish
DP=Dark Platinum
IH=Almond Finish

Custom Colors are available. (Specify or supply sample; requires a flat fee, consult Customer Service.)

Accessories (Order separately)

MBC=Momentary button cord switch. May be used with LVCP or LVCF options to control lamps. (See Switching Controls).

VRSD=T20 Center-pin tamperproof TORX®-head bit

Notes:

[1] Due to internal size limitations, some configurations and options are not available with other options. Consult Factory.
[2] 120V only.
[3] Must specify voltage.
[4] EXLR or EXLL always has rocker switch and separate ballast.

Special Claims: When mounting, installer must verify fixture weight in selecting proper anchoring when not anchoring directly to stud. Refer to installation instructions. The depicted luminaire is not rated for hazardous locations or adverse environments. Illustrations and photographs depicted in this literature are representative examples only. Consult the appropriate certified and licensed lighting engineering and installation professionals for site-specific applications of products and codes.

TECHNICAL DATA

Features, Catalog Logic and Options

The MPWA features a reflector system in the lower optical compartment that facilitates two tasks-reading and patient examination.

The MPWA is used for obtaining maximum efficiency while providing cut off and glare control to the remaining of the room's surroundings. With the push of a switch, the upper lamp of the lower compartment can be energized to aid in evaluation of the patient. The reflector works with this lamp by providing maximum output and control of light over the patient's torso for examination or any other tasks that may be necessary. The effectiveness of this lamp/optical system is maximized by its flexibility in utilizing these two lamps in conjunction or separately.

Ballasts

Fixtures are supplied standard with electronic ballasts. Magnetic, energy saving ballasts are available with T8 lamps only (LEOC8). An optional radio interference filter (RIF) is commonly used with magnetic ballasts to reduce radio interference with sensitive equipment.

Circuitry

All individual input circuits will be supplied with a quick disconnect module (QDM) to facilitate ease of maintenance and installation. **GCO** (grounded convenience outlet) and **FNL** (fluorescent night light) options are commonly run on separate circuits. Each will be supplied with a QDM, separate from the primary lamp sources and will require additional switching and wiring by others. All primary lamp sources are wired onto the same circuit unless specified otherwise (See Switching Controls).

Exam Light

EXL Feature-This feature includes a specular reflector that separates the two lower lamps. The upper lamp in the lower compartment is for use as an exam light. The lower lamp in the same compartment is intended for reading and other ordinary tasks. (The upper lamp in the lower compartment is switched independently of the primary lamp system via a rocker switch; add "R" for installation on right side of unit, **EXLR;** add "L" for installation on left side of unit, **EXLL**).

Switching Controls

No switching option specified implies the fixture will ship with input leads left unwired for switch wiring to be completed in field as desired.

PS4-4-position pull chain switching. All primary lamps (except EXL lamp) wired in sequence by following: lower lamps on, upper lamps on, all lamps on, all lamps off. (120V only, brushed nickel finish, installed in center of unit on bottom of power tray).

PS1D-2 position pull chain switch, controls the bottom lamp compartment only (except EXL lamp). (120V only, brushed nickel finish, installed in center of unit on bottom of power tray). Upper lamp compartment is on a separate circuit to be wired and switched at wall or as desired.

LVCP-Low voltage controller, patient controlled. Mounted inside unit for patient control of all primary lamps-upper and lower lamp compartments. Wired in sequence for lower lamp on (except EXL lamp), upper lamps on, all lamps on, all lamps off. Includes 1/4" phone jack type receptacle centered in bottom of wire way for input control by others or may be used with accessory **MBC**-momentary button cord switch (See accessories).

Other Options

EL4, EL5-The emergency battery pack option is a good candidate for facilities that do not have emergency generator systems. Test switch and indicator light will be installed on top of unit in middle of the power tray.

FNL- Fluorescent night-light, 2-pin (G23 Base), 7 or 9w twin tube lamp installed in center of upper compartment of fixture, uses a magnetic ballast. FNL is wired on a separate circuit. (Lamps by others).

GCO-Grounded convenience outlet. White in color on units with white finish; black in color on all other finish options, wired on a separate circuit. (120V only, maximum 10 amps, installed on bottom right side facing unit; add "L" for installation on left side of unit, **GCOL**).

GLR-Fuse and holder, wired to primary lamp circuit only.

RIF-Radio interference filter, for use with magnetic T8 ballast only. (1 per ballast).

SF1-Tamper-proof Torx™-head fasteners

Accessories

MBC-Momentary button cord switch. May be used with LVCP or LVCF options to control lamps. All units are wired at factory as specified per catalog logic (See Switching Controls).

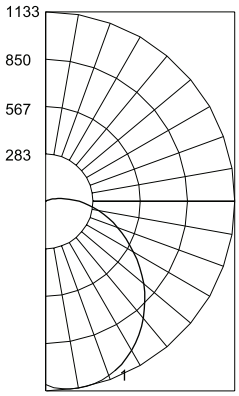
VRSD-Torx™-head tamper-proof screwdriver (for use with SF1 option)

Maintenance

The MPWA is designed to facilitate ease of maintenance. Its three part assembly makes for efficient installation. No tools are required for relamping or substituting electrical power trays on standard fixtures. When maintenance is required, simply loosen the two end thumbscrews and slide the partial clamshell, front lens assembly forward and off. The lamps and power tray will now be accessible and can be removed by quarter-turn fasteners. This assembly hangs suspended on the back pan while it is easily disconnected via a quick disconnect power connector. Spare units can speed the maintenance process by easily substituting the power tray, thus causing less disruption in the room.

PHOTOMETRICS

Candlepower Distribution



Maximum Candela = 1133 Located At Horizontal Angle = 0, Vertical Angle = 7.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

Reading Light Only (Lamp Lower Compartment)

MPWA-2/254-120-EB53-EXLR-L VCP-GCO-NRLL
Lamp=(1) Lumens=4400 each

Spacing Criteria
(0-180)=1.38 (90-270)=1.16
Efficiency=64.1%

Average Luminance

Deg.	0°	45°	90°
45	7264	4727	3545
55	7175	4146	2805
65	7197	3596	2022
75	7932	2983	1138
85	11156	2310	265

Zonal Lumen Summary

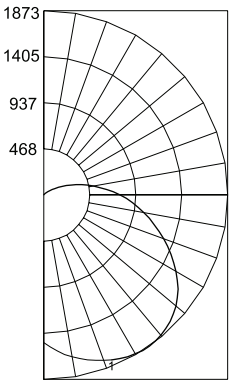
Zone	Lumens	%Lamp	% Luminaire
0-30	813.84	18.5	28.9
0-40	1295.15	29.4	45.9
0-60	2170.59	49.3	77
0-90	2751.73	62.5	97.6
90-180	66.95	1.5	2.4
0-180	2818.67	64.1	100

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	76	76	76	76	74	74	74	70	70	67	67	64	64	63
1	69	66	63	61	64	62	59	61	57	59	55	56	53	52
2	63	58	53	50	56	52	49	54	47	51	46	49	45	43
3	58	51	46	41	50	45	41	48	40	46	39	44	38	37
4	53	45	40	35	44	39	35	42	34	41	34	39	33	32
5	49	41	35	31	40	34	30	38	30	37	29	35	29	28
6	45	37	31	27	36	31	27	35	26	33	26	32	26	24
7	42	33	28	24	33	27	24	37	23	31	23	30	23	22
8	39	30	25	21	30	25	21	29	21	28	21	27	21	19
9	36	28	23	19	28	23	19	27	19	26	19	25	19	18
10	34	26	21	18	25	21	17	25	17	24	17	23	17	16

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio
CU Data Based on 20% Effective Floor Cavity Reflectance.

Candlepower Distribution



Maximum Candela = 1873 Located At Horizontal Angle = 0, Vertical Angle = 32.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

Reading & Exam Light (2 Lamps, Lower Compartment)

MPWA-2/254-120-EB53-EXLR-L VCP-GCO-NRLL
Lamp=(2) Lumens=4400 each

Spacing Criteria
(0-180)=1.82 (90-270)=1.20
Efficiency=57.4%

Average Luminance

Deg.	0°	45°	90°
45	15760	9081	5168
55	17380	8629	4142
65	19368	8183	3019
75	23675	7653	1719
85	38917	7111	431

Zonal Lumen Summary

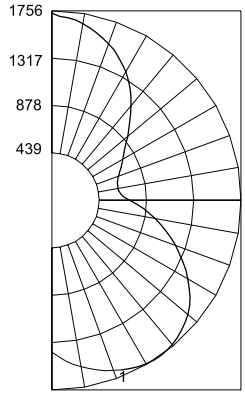
Zone	Lumens	%Lamp	% Luminaire
0-30	1153.82	13.1	22.8
0-40	1882.73	21.4	37.2
0-60	3347.95	38	66.2
0-90	4679.93	53.2	92.6
90-180	374.55	4.3	7.4
0-180	5054.48	57.4	100

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	67	67	67	67	65	65	65	61	61	58	58	55	55	53
1	60	57	54	52	55	53	50	52	48	49	46	46	44	42
2	54	49	45	41	48	44	40	45	39	42	37	40	36	34
3	49	43	38	34	42	37	33	39	32	37	31	35	30	29
4	45	38	33	29	37	32	28	35	27	33	26	31	26	24
5	42	34	28	24	33	28	24	31	23	30	23	28	22	21
6	38	30	25	21	30	25	21	28	20	27	20	25	19	18
7	35	28	22	19	27	22	19	26	18	24	18	23	17	16
8	33	25	20	17	24	20	16	23	16	22	16	21	15	14
9	31	23	18	15	22	18	15	22	15	21	14	20	14	14
10	29	21	17	14	21	16	13	20	13	19	13	18	13	12

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio
CU Data Based on 20% Effective Floor Cavity Reflectance.

Candlepower Distribution



Maximum Candela = 1756 Located At Horizontal Angle = 0, Vertical Angle = 32.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

Exam & General Illumination (All Lamps On)

MPWA-2/254-120-EB53-EXLR-L VCP-GCO-NRLL
Lamp=(4) Lumens=4400
Spacing Criteria
(0-180)=N.A. (90-270)=N.A.
Efficiency=51.7%

Average Luminance

Deg.	0°	45°	90°
45	14763	8498	4835
55	16297	8078	3869
65	18189	7676	2819
75	22255	7187	1600
85	36514	6690	**392**

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1082.65	6.2	11.9
0-40	1766.46	10	19.4
0-60	3142.2	17.9	34.5
0-90	4395.66	25	48.3
90-180	4702.98	26.7	51.7
0-180	9098.65	51.7	100

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	55	55	55	55	51	51	51	43	43	35	35	28	28	25
1	50	47	45	43	43	42	40	36	34	30	28	24	23	20
2	45	41	38	35	38	35	32	32	27	26	23	21	19	16
3	41	36	32	29	33	29	27	28	23	23	19	18	16	13
4	37	32	27	24	29	25	22	24	19	20	16	16	13	11
5	34	28	24	20	26	22	19	22	17	18	14	15	11	10
6	32	25	21	18	23	19	17	20	14	16	12	13	10	9
7	29	23	18	15	21	17	14	18	13	15	11	12	9	8
8	27	21	16	14	19	15	13	16	11	14	10	11	8	7
9	25	19	15	12	17	14	11	15	10	12	9	10	7	6
10	23	17	13	11	16	12	10	14	9	11	8	9	6	5

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio
CU Data Based on 20% Effective Floor Cavity Reflectance.