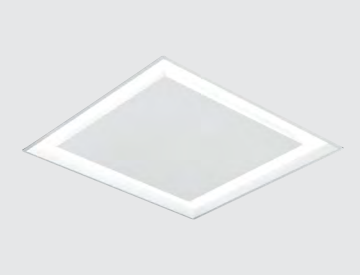
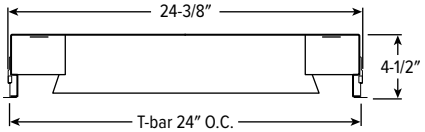
FRM LED
Recessed Architectural Frame





CATALOG #:

Type:

PROJECT:

BAA & BABA COMPLIANT | Low UGR | CCEA Approved | TW

FEATURES

- Developed for workplaces, learning centers and healthcare campuses
- Square shape and regressed design complement the MX2 continuous series
- Ceiling material center option creates clean architectural continuity
- Cloud graphic shielding option simulates natural daylight for a relaxing atmosphere
- Diffuse lens provides enhanced visual comfort
- Low UGR meets LEED and WELL requirements
- Support human-centric design with adaptive, individualized lighting using tunable white light
- Fully room-side accessible with hinged center panel to simplify maintenance
- Wireless in-fixture control solutions available
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – Precision die-formed 22-gauge C.R.S.
- SHIELDING – Diffuse acrylic lens
- FINISH – 95% reflective white polyester 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. L70 >60,000 hours per IES TM-21. 50/60 Hz constant current driver. Tunable White products use LEDs of multiple shades of white from single-CCT products at the same CCT. All CCTs are within 3 MacAdam ellipses.
- MOUNTING – NEMA Type “G” 15/16″ or 1″ grid standard. For NEMA Type “NFG” and “SG” 9/16″ grid installations, specify EQCLIPS option. Drywall kit accessories available, shipped separately, see options.
- LISTINGS –
  - cCSAus certified as luminaire suitable for dry or damp locations.
  - IC-rated for direct contact with insulation.
  - City of Chicago Environmental Air approved when specified with CP option.
  - Build America, Buy America (BABA) and Buy American Act (BAA) compliant. Request certification at hew.com/buy-american
- WARRANTY – 5-year limited fixture warranty, see hew.com/warranty

ORDERING EXAMPLE: FRM - 22 - L25/835 - DMA - OPTIONS - CONTROL/DIM - UNV

ORDERING INFO

SERIES	WIDTH	LENGTH	LUMENS [1]	CRI	CCT	SHIELDING
FRM	**2** 2′	**2** 2′	**2x2**	**8** 80	**27** 2700K	**DMA** Diffuse matte acrylic lens, .080″ thick
		4 4′	**L25** 2,500lm	**9** 90	**30** 3000K	**SKY** Cloud graphic diffuse matte acrylic lens, .080″ thick [2]
			L50 5,000lm		**35** 3500K	
			2x4		**40** 4000K	
			L25 2,500lm		**50** 5000K	
			L50 5,000lm		**TW** Tunable white (3000K–5000K)	
			L78 7,800lm		**TW2** Tunable white (2700K-6500K)	

OPTIONS

*See page 3 for **FLEXIBLE WHIP OPTIONS**.*

*See page 3 for **DRYWALL KIT (DFK) DETAILS**.*

EM/10W	10-watt emergency battery
EM/10W/ST	10-watt self-diagnostic emergency battery
CM	Ceiling material center [3]
EQCLIPS	Earthquake clips [4]
(L__)	Additional lower lumen packages available [5] Example: 6,000 nominal lumens = FRM-24-L80/835-DMA-**(L60)**
DFK-2424W	Drywall kit, 24″ x 24″, white
DFK-2448W	Drywall kit, 24″ x 48″, white
CP	Chicago Plenum (CCEA)

CONTROL

*Click **HERE** for control and sensor options.*

– None

DRIVER

*See page 3 for **ADDITIONAL DRIVER OPTIONS**.*

DIM	Driver with external 0-10V dimming wires [7]
DIM1	1% Driver with external 0-10V dimming wires [8]
DRV	Driver without external dimming wires [9]

VOLTAGE

120	120V
277	277V
UNV	120-277V
347	347V [6]

NOTES

1 Lumens based on DMA Shielding, 80 CRI, 3500K for static white and 4000K for tunable white. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA. Additional lumen packages available, see Options.
2 Decreases lumen output by 31%.
3 Ceiling material by others.
4 4 per fixture. Optional for 1″ grid installations. Required for 9/16″ grid mounting.
5 Specify in increments of 100 nominal lumens. Option must be specified with next higher lumen package.
6 Not available with Tunable White or EM batteries.
7 0.1% Driver with tunable white.
8 Not available with tunable white.
9 Not available with tunable white.

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FIXTURE PERFORMANCE DATA

	LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	UNIFIED GLARE RATING (UGR) [1] CROSSWISE	UNIFIED GLARE RATING (UGR) [1] ENDWISE
2x2	L25	2467	25.4	97	17.6	17.6
	L50	5047	53.9	94	20.1	20.1
2x4	L25	2453	25.3	97	15.6	14.7
	L50	5022	52.8	95	18.1	17.2
	L78	7866	85.6	92	19.7	18.8

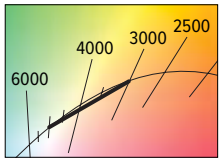
[1] UGR reference values based on 4H x 8H room size with 70%, 50%, and 20% reflectance. Actual values vary based on luminaire options and application specifications.

- Photometrics tested in accordance with IESNA LM-79. Results based on DMA, 80 CRI, 3500K for single CCT and 4000K for tunable white, average wattage for 120V through 277V input, and 25°C ambient temperature. Actual performance may vary +/-5%.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier tables to calculate additional options.

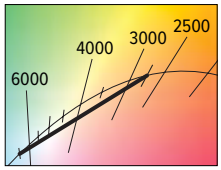
MULTIPLIER TABLE

	COLOR TEMPERATURE CCT	STANDARD	TW	TW2
80 CRI	2700K	0.97	–	0.93
	3000K	0.99	0.95	0.95
	3500K	1.00	0.98	0.98
	4000K	1.03	1.00	1.00
	5000K	1.06	0.96	1.02
	6500K	–	–	1.01
90 CRI	2700K	0.80	–	0.93
	3000K	0.82	0.91	0.95
	3500K	0.83	0.96	0.98
	4000K	0.86	1.00	1.00
	5000K	0.89	1.03	1.03
	6500K	–	–	1.02

TW

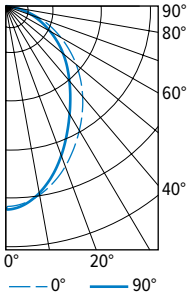


TW2



PHOTOMETRY

FRM-24-L78/835-DMA Total Luminaire Output: 7866 lumens; 85.6 Watts | Efficacy: 91.9 lm/W | 80 CRI; 3500K CCT



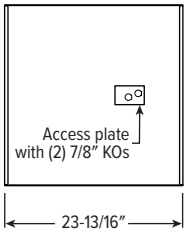
CANDLEPOWER DISTRIBUTION VERTICAL ANGLE	HORIZONTAL ANGLE 0°	45°	90°	ZONAL LUMENS
0	4215	4215	4215	
5	4113	4155	4147	289
15	3744	3664	3601	576
25	3188	2919	2850	705
35	2604	2172	2191	709
45	2029	1566	1665	634
55	1460	1100	1188	501
65	929	695	753	332
75	460	353	384	160
85	114	85	101	29
90	0	0	0	

LUMEN SUMMARY ZONE	LUMENS	% FIXTURE
0 - 40	4209	54
0 - 60	6598	84
0 - 90	7866	100
0 - 180	7866	100

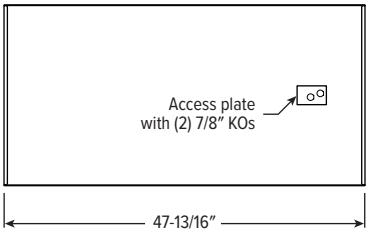
FIXTURE DETAILS

BACK VIEW

2x2

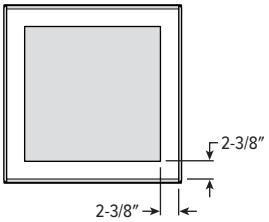


2x4

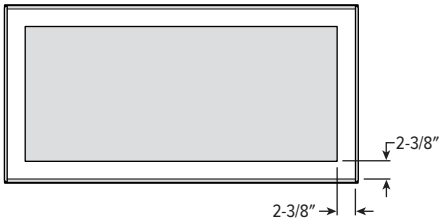


BOTTOM VIEW

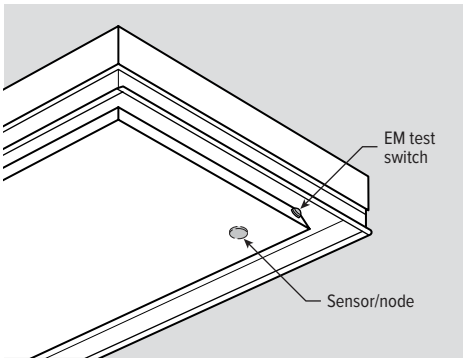
2x2



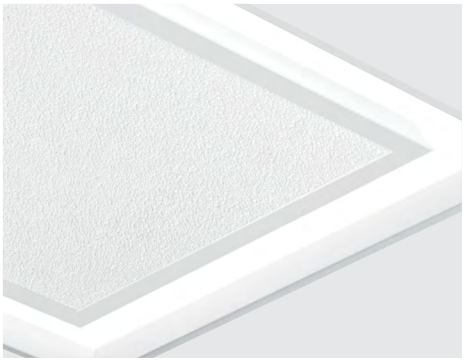
2x4



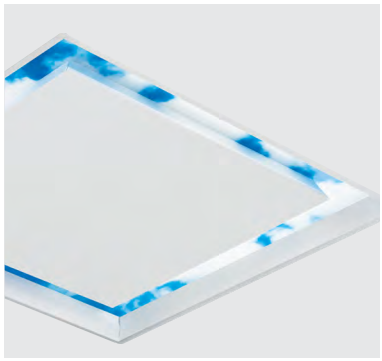
OPTIONS PLACEMENT



CM OPTION



SKY LENS



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FLEXIBLE WHIP OPTIONS

All Williams recessed troffers are available with a flexible metallic wiring harness, factory-attached and hard-wired to the luminaire.

Straight connectors are a snap-in type. Consult factory for wiring harness utilizing connectors secured by lock nuts, optional flex size, lengths, and other wire sizes or circuitry. Three-wire flex utilizes black, white, and green wire. Four-wire flex utilizes black, white, red, and green wire. Adding an emergency option requires an additional wire.

Williams fixtures are UL listed to provide factory-installation of several manufacturers' modular wiring devices, consult factory for availability and ordering information.

DESIGNATION	DESCRIPTION	DRIVER
F338B	6′ of 3/8″ flex, (3) No. 18 AWG wires with (2) straight connectors	DRV, LTE LINE
F348D	6′ of 3/8″ flex, (4) No. 18 AWG wires with (2) straight connectors	DRV + EM, SD40
F334B	6′ of 3/8″ flex, (3) No. 14 AWG wires with (2) straight connectors	DRV, LTE LINE
F344D	6′ of 3/8″ flex, (4) No. 14 AWG wires with (2) straight connectors	SD40
F354AB	6′ of 3/8″ flex, (5) No. 14 AWG wires with (2) straight connectors	DIM, DALI
F358AB	6′ of 3/8″ flex, (5) No. 18 AWG wires with (2) straight connectors	DIM, DALI
F368Y	6′ of 3/8″ flex, (6) No. 18 AWG wires with (2) straight connectors	DIM, DIM + EM, DALI

DRYWALL KIT (DFK) DETAILS

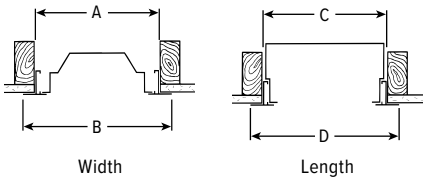
ORDERING INFO

EXAMPLE: DFK - 24 48 W			
SERIES	**WIDTH**	**LENGTH**	**FINISH**
DFK Drywall kit	**24** 2′	**24** 2′	**W** White **AMW** Anti-microbial white
	24 2′	**48** 4′	

INSTALLATION DIMENSIONS

NOMINAL SIZE	ROUGH-IN		FINISH TRIM SIZE	
	WIDTH (A)	LENGTH (C)	WIDTH (B)	LENGTH (D)
2′ x 2′	24-3/8″	24-3/8″	25-5/16″	25-5/16″
2′ x 4′	24-3/8″	48-3/8″	25-5/16″	49-5/16″

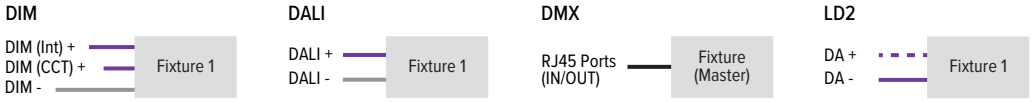
TYPICAL INSTALLATION



ADDITIONAL DRIVER OPTIONS

4,800 lumens max when specified with DMX driver.
Note: Restrictions may apply, consult product builder at hew.com/product-builder

CATALOG NUMBER	DESCRIPTION
DRV [1]	Driver without external dimming wires prewired for non-dimming applications
DIM	Driver with external dimming wires prewired for 0-10V low voltage applications (tunable white: (1) 0-10V signal controls 0.1% dimming and (1) 0-10V signal controls CCT)
DIM1 [1]	1% driver with external dimming wires prewired for 0-10V low voltage applications
DIM LINE [1]	Line voltage dimming driver (TRIAC and ELV compatible, 120V only)
DIM TRC [1]	Line voltage dimming driver (TRIAC compatible, 120V only)
DA	Driver with 12V auxiliary power, without external dimming wires (not available with 347V)
DSR	DALI-2 sensor-ready driver without external dimming wires (Not available with 347V. Static CCTs use D4i DALI-2 driver)
DALI	DALI dimming driver
DMX	Driver prewired for DMX applications
SD40 [1]	40% step-dimming driver
SD50 [1]	50% step-dimming driver
LDE1 [1]	Lutron Hi-lume 1% EcoSystem dimming driver
LD2	Lutron DALI-2 digital driver, 1%
DCC	Remote UL Class 2 DC constant current supply, UL- or CSA-listed, by others

[1] Single CCT only.

TUNABLE WHITE DRIVER DETAILS