FAIL-SAFE®

DESCRIPTION

The VRMC combines a low-profile, surface modular design with the latest in energy-efficient technology. The dihedral recessed top design allows for cooler fixture operation. Other features include a die-formed housing, surface or stem mounting (single or continuous row), full seam-welded corners and a broad selection of attractive door frames. The durable, versatile VRMC is perfect for use in commerical spaces, schools, hospitals, correctional or industrial facilities and high volume public access areas.

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

SPECIFICATION FEATURES

Construction
Housing is die-formed, code-gauge, prime cold-rolled steel. Smooth sides permit flush joint for continuous row mounting. Full seam-welded corners. Dihedral recessed top design ensures cooler ballast operation. Die-formed captive lampholder bracket fully encloses wiring permitting easy lampholder replacement. Ballast covers easily removed without tools.

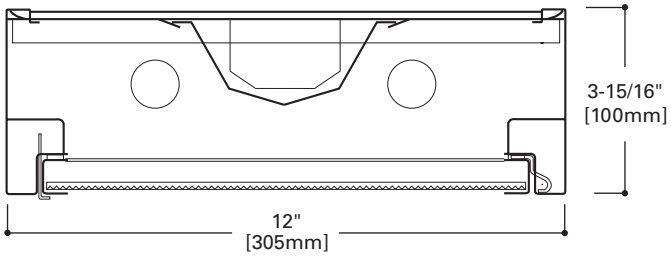
Finish
Painted after fabrication. Electrostatically-applied, baked white polyester powder enamel finish. Multistage cleaning cycle, iron phosphate coating with rust inhibitor. Conveyorized application and baking timing accurately controlled at an elevated temperature.

Hinging/Latching
Positive cam action steel latches with baked white enamel finish. Safety lock T-hinges allow hinging and latching either side.

Frame/Shielding
Die-formed, heavy-gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Positive light seals. Frame and lens are secured to housing with 4 or 6 T20 stainless steel TORX® screws.

Electrical *
Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Pressure lock lampholders.

Labels
UL/cUL listed for damp locations.



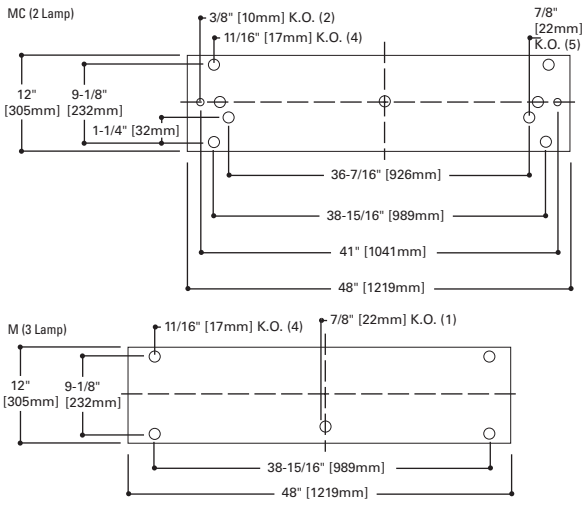
VRMC
VRM

1x4
Fluorescent
Vandal Resistant

SURFACE

Lens Troffer

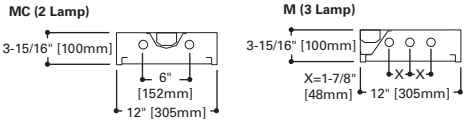
MOUNTING DATA



DOOR FRAME

VRM or VRMC
Flat, White
Steel

LAMP CONFIGURATIONS



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
232 (61)
332 (91)

ES Ballast & STD Lamps
232 (71)
332 (108)

Luminaire Efficacy Rating
LER = FL-55
Catalog Number: MC-232A

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $4.36

* Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

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Cooper Lighting
by EATON

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ORDERING INFORMATION

SAMPLE NUMBER: VRMC-232A

Width	Series	Door Type	No. of Lamps	Wattage (Length)	Lens Type	Voltage	Ballast Type	Options (Add as Suffix)
	VRM							

[Blank]=1'

VRMC=1' Width (2 Lamp)
VRM=1' Width (3 Lamp)

Standard=Flat White Steel Door (Leave Blank)

2 or 3 Lamps (Not included)

32=32W T8 (48")
28T5=28W T5 (48")
54T5=54W T5HO (2 max.)

ACTF140= .140 Thick
ACTF187= .187 Thick
PA375 = .250 polycarbonate with .125 prismatic overlay (standard with 6S option)

120=120V
277=277V
347=347V
UNV=Universal Voltage (120-277V)

EB _ _ = Generic Electronic Ballast
- **No. of Ballasts**: 1 or 2
- **Lamp Size**: **8**=T8, **5**=T5, **T**=T5 Linear

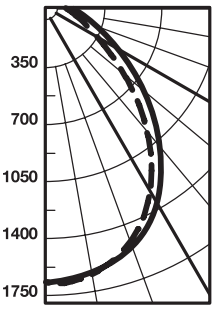
(For specific Electronic Ballast specify Brand and Catalog Number.)

GL= Internal Single Element Fusing
GM= Dual Element Fusing
EL4= Emergency Lighting, self contained
SMB= Side-Mounted Ballast for Stem Applications (Recommended for 4-Point Suspension)
RIF1 = Radio Interference Suppressor
EKO= End Plate with 7/8" KO (Required for Continuous Row Mounting)
RLS= Rotor-Lock Socket (T8 Lamps only)
6S= Six TORX®-head Screws (3 per side)
SC =Safety Chain

For additional options, please consult Cooper Lighting Representative.

PHOTOMETRICS

Candlepower Distribution



Test No. M-1052
VRMC-240ACTF140
Lamp=F40T12/CW
Lumens=3150
Spacing Criteria
⊥=1.2 ∥=1.2
Efficiency=58.3%

Candlepower

Deg.	⊥	∥
0	1691	1691
5	1686	1673
15	1610	1618
25	1452	1492
35	1198	1284
45	849	931
55	508	561
65	257	307
75	136	151
85	55	64
90	0	0

Typical VCP Percentages

Room Size (in Feet)	Height Along ∥ 8'6"	Height Along ∥ 10'0"	Height Across ⊥ 8'6"	Height Across ⊥ 10'0"
20 x 20	64	68	66	70
30 x 30	57	61	58	63
30 x 60	48	51	49	53
60 x 30	59	63	59	64
60 x 60	48	51	49	52

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1297	20.6	35.3
0-40	2071	32.9	56.4
0-60	3218	51.1	87.5
0-90	3672	58.3	100.0
90-180	0	0.0	0.0
0-180	3672	58.3	100.0

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	69	69	69	69	68	68	68	65	65	62	62	59	59	58
1	64	62	60	58	60	58	57	58	55	56	53	54	52	50
2	59	55	51	48	54	51	48	52	47	50	46	48	45	44
3	55	49	45	41	48	44	41	46	40	45	40	43	39	38
4	50	44	39	36	43	39	36	42	35	41	35	39	34	33
5	47	40	35	32	39	35	31	38	31	37	31	36	30	29
6	43	36	31	28	36	31	28	35	28	31	27	33	27	26
7	40	33	28	25	33	28	25	32	25	31	25	30	24	23
8	38	30	26	23	30	26	22	29	22	29	22	28	22	21
9	35	28	23	20	28	23	20	27	20	26	20	26	20	19
10	33	26	22	19	26	21	19	25	19	25	18	24	18	17

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