CM6-FV13/18

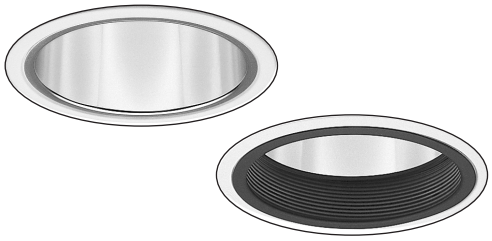
6" Vertical Compact Fluorescent

13 and 18 watt

Catalog Number:_____

Type:_____

Project:_____



Description

Six inch downlight rated for use with a wide variety of lamp wattages and trims.

Optional integral emergency provides a self contained emergency battery which operates one lamp for a minimum of 90 minutes following a power failure.

Features

- Adjustable socket cup.
- Easy, snap fit installation.
- Many wet location trim options.
- Standard electronic ballast with <10% THD.
- c/UL listed for damp locations and through branch circuit wiring.

CATALOG SYSTEM AND OPTIONS

SAMPLE CATALOG NUMBER: CM6-FV13U-V63

Plaster Frame	Electrical System	Ballast Options
CM6	**FV13** CFQ13W/G24q	**U** 120V-277V
CM6R[7]		**S3** 347V[1]
	FV18 CFQ18W/G24q	**DX1** dimming 120V[1]
		DX2 dimming 277V[1]

Options

- **RI** Radio Filter
- **FS2** Fusing[2]
- **ER** Remote Emergency Ballast[4]
- **E** Integral Emergency[5]

Trims (choose one)[6]

- **V63** Gold Reflector
- **V63E** Gold Reflector, Emergency[6]
- **V63SL** Gold Reflector, Self Lipped
- **V64** Black Reflector
- **V64E** Black Reflector, Emergency[6]
- **V64SL** Black Reflector, Self Lipped
- **V65** Low Iridescent
- **V65E** Low Irid. Reflector, Emergency[6]
- **V65SL** Low Iridescent, Self Lipped
- **V66** White Reflector
- **V66E** White Reflector, Emergency[6]
- **V66SL** White Reflector, Self Lipped
- **V67** Wheat Reflector
- **V67E** Wheat Reflector, Emergency[6]
- **V67SL** Wheat Reflector, Self Lipped
- **V65BC** Black Baffle, Clear Lens Insert[3]
- **V65BP** Black Baffle, C73 Prismatic Lens[3]
- **V65B** Low Irid.Reflector, Black Baffle
- **V65BE** Low Irid. Refl. Black Baffle,Emer.[6]
- **V65WB** Low Irid.Reflector, White Baffle
- **V65WBE** Low Irid. Refl. White Baffle,Emer.[6]
- **V65WBC** White Baffle Clear Lens Insert[3]
- **V65WBF** White Baffle Fresnel Lens Insert[3]
- **V65WBP** White Baffle,C73 Prismatic Lens[3]
- **VW63** Gold Reflector, Single Wall Wash
- **VWD63** Gold Reflector, Double Wall Wash
- **VW65** Low Irid.Refl., Single Wall Wash
- **VWD65** Low Irid.Refl.,Double Wall Wash
- **VW67** Wheat Reflector, Single Wall Wash
- **VWD67** Wheat Reflector, Double Wall Wash
- **V65C** Clear Cone, Clear Lens Insert[3]
- **V65F** Clear Cone, Fresnel Lens Insert[3]
- **V65P** Clear Cone, C73 Prismatic Lens[3]
- **V66C** White Splay, Clear Lens Insert[3]
- **V66F** White Splay, Fresnel Lens Insert[3]
- **V66P** White Splay, C73 Prismatic Lens[3]
- **V65SWR** Polycarbonate lens, Wet Location
- **V65XB** Cross Baffle

Footnotes:

1. Dimming not available in 13W.
2. Field Installable.
3. UL Listed Wet location.
4. ER option is available with dry location trims only.
5. For use with Emergency trims only.
6. Reflector must have "E" suffix for emergency options.
7. Integral and Remote Emergency options not available for remodel housing.

General Notes:

Available lamps listed with applicable electricals. DX1 and DX2 are standard Advance Mark X dimming. Optional DL1 and DL2 for Lutron Compact SE dimming available.

FRAME

1. **Frame** - 22 gauge die stamped metal frame with flanged edges to provide a smooth handling surface. CM6 frame can be easily converted in the field to 4'' and 8'' aperture sizes with optional interchangeable aperture rings. Frames can be installed before lamp source or wattage has been determined. Suitable for installation in environmental air-handling ceilings.

2. **Mounting**- Adjustable spring steel butterfly brackets accommodate CH24 or CH48 channel bar hangers, BH3 flat bar hangers, or 1/2" EMT conduit. L-brackets slide into place on any of the four corners to secure emergency option to the frame. Emergency tray rests on bar hangers or EMT for support. Frame can be supported with aircraft cable where required.

ELECTRICAL SYSTEM

1. **Ballast** - All ballasts are electronic High Power Factor and are attached directly to the junction box door at the factory. Available with optional dimming ballast for energy efficiency. Pre-installed quick connectors.

2. **Socket Cup** - The socket cup attaches directly to the trim without the need for tools. All socket cups orient the lamp at optical focal plane of reflector for precise optics and optimum performance. Socket is adjustable.

3. **Junction Box** - Standard thermal protection device inside housing automatically takes the fixture out of service if temperature becomes excessive from overlamping or the wrong lamp /trim combination.

4. **c/UL Listed** - Approved for through branch wiring with up to 8 #12 AWG conductors.

5. **Remote Emergency Module** - A special high temperature nickel cadmium battery charger, and electronic circuitry contained in a compact case. Test switch and charging indicator are mounted outside the reflector. Emergency illumination exceeds NEC, NFPA-LSC and UL 90-minute req.

6. **Integral Emergency Module** -A special high temperature nickel cadmium battery charger, and electronic circuitry contained in a compact case. Test switch and charging indicator are mounted inside the reflector. For use with emergency trims only. Emergency illumination exceeds NEC, NFPA-LSC and UL 90-minute req.

TRIMS

1. Reflector - Precision spun low iridescent .050 aluminum. Separate injection molded, white polycarbonate trim ring.

2. **Baffle** - Precision spun .040 aluminum with deep grooves to reduce aperture glare. Non-reflective matte black or white painted finishes.

3. **Installation** - Capri One trims attach directly to the frame via expandable torsion springs. When used in conjunction with the molded spring tabs on the plaster frame, the torsion springs allow for full rotation and adjustment from below the fixture.

4. **c/UL Listed** - All emergency units are dry location only.

OPTIONS

Dimming Ballast - Dependent upon lamp configuration.
Fuse - Fuse kit field installation. (FS2)
Radio interference filter. (RI)

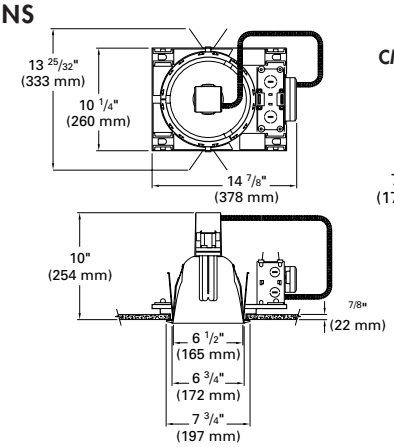
Emergency option - Integral or Remote options available. Note: Integral must be used with emergency trim. Not available with remodel housing.

ACCESSORIES (Order separately)

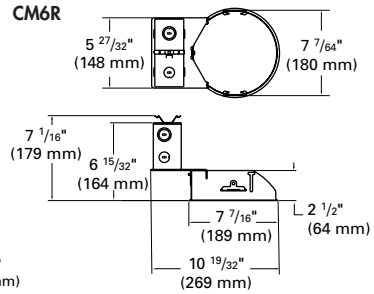
27" Flat Bar Hangers BH3
26" C-Channel Bar Hangers CH24
50" C-Channel Bar Hangers CH48
Emergency Remote Field installable Kit . . . . .ERFK

DIMENSIONS

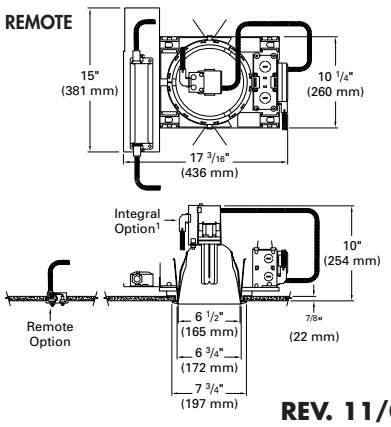
CM6



CM6R



INTEGRAL & REMOTE ER OPTION

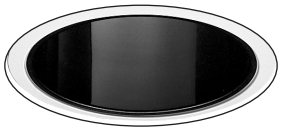


REV. 11/07

6" TRIMS

V65 Clear Reflector
V65E Clear Reflector, Emergency
V65SL Clear Reflector, Self-Flanged**

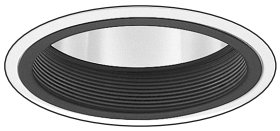
V63 Gold Reflector
V63E Gold Reflector, Emer.
V63SL Gold Reflector, Self- Flanged**



V64 Black Reflector
V64E Black Reflector, Emergency
V64SL Black Reflector, Self-Flanged**

V66 White Reflector
V66E White Reflector, Emer.
V66SL White Reflector, Self-Flanged**

V67 Wheat Reflector
V67E Wheat Reflector Emergency
V67SL Wheat Reflector, Self-Flanged**



V65B Clear Reflector, Black Baffle
V65BE Clear Reflector, Black Baffle, Emergency

V65WB Clear Reflector,White Baffle
V65WBE Clear Reflector,White Baffle, Emergency

White Baffle, Glass Lens Insert
V65WBC Clear Lens*
V65WBF Fresnel Lens*
V65WBP C73 Prismatic Lens*

Black Baffle, Glass Lens Insert
V65BC Clear Lens*
V65BF Fresnel Lens*
V65BP C73 Prismatic Lens*

White Splay, Glass Lens Insert
V66C Clear Lens*
V66F Fresnel Lens*
V66P C73 Prismatic Lens*

Clear Cone, Glass Lens Insert
V65C Clear Lens*
V65F Fresnel Lens*
V65P C73 Prismatic Lens*

VW65 Clear Reflector, Single Wall Wash

VWD65 Clear Reflector, Double Wall Wash

VW63 Gold Reflector, Single Wall Wash

VWD63 Gold Reflector, Double Wall Wash

*cUL Listed Wet Location.

**Self-flanged has same finish as reflector.

PHOTOMETRICS

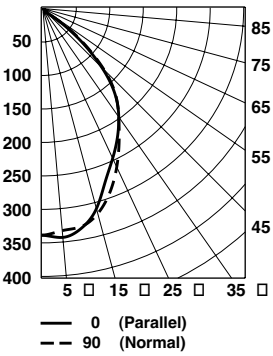
CM6-FV13-V65

Description: 6" Compact Fluorescent Vertical Downlight, Clear Reflector

Lamp: (1) CFQ13W/G24q
IES Spacing Criteria: Nor - 1.1, Par - 1.0
Beam Angle: 96°

Lamp Position: Lamp in number 4 position
Efficiency: 56.6%

Candlepower Curve



Candlepower Summary

Zone Degree	0° Candelas	90° Candelas
90	0	0
85	0	0
80	0	0
75	0	0
70	1	1
65	5	6
60	21	24
55	32	57
50	93	97
45	139	143
40	174	174
35	199	198
30	223	229
25	246	262
20	271	293
15	312	317
10	332	331
5	345	328
0	337	337

Coefficients of Utilization

	Ceiling Cavity Reflectance									
		80			50			10		
	Wall Reflectance									
Room Cavity Ratio	50	30	10	50	30	10	50	30	10	
	CU for Floor Cavity Reflectance = 20%									
58	0	67	67	67	63	63	63	58	58	
1	62	60	59	58	57	56	54	54	53	
2	57	54	52	54	52	50	51	49	48	
3	52	49	46	50	47	45	47	45	44	
4	48	44	41	46	43	41	44	41	40	
5	44	40	37	42	39	36	40	38	36	
6	40	36	33	39	35	33	37	34	32	
7	36	32	30	35	32	29	34	31	29	
8	33	29	26	32	29	26	31	28	26	
9	30	26	23	29	25	23	28	25	23	
10	27	23	21	27	23	21	26	23	20	

These coefficients were computed by the zonal-cavity method, I.E.S. recommended practice, and prepared from the candlepower distribution data in photometric test no. 2275

Conversion Factors

For average footcandle calculations. Multiply footcandles by conversion factor.

Trim Catalog #	Conversion Factor
V63	.90
V64	.75
V66	.88
V67	.87

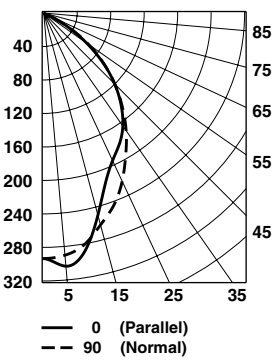
CM6-FV18-V65B

Description: 6" Compact Fluorescent Vertical Downlight, Black Baffle

Lamp: (1) CFQ18W/G24q
IES Spacing Criteria: Nor - 1.0, Par - .9

Beam Angle: 98°
Efficiency: 37.8%

Candlepower Curve



Candlepower Summary

Zone Degree	0° Candelas	90° Candelas
90	0	0
85	0	0
80	0	0
75	1	1
70	5	5
65	19	20
60	42	44
55	68	71
50	97	97
45	123	123
40	146	148
35	167	174
30	182	197
25	194	224
20	215	247
15	252	262
10	298	284
5	312	292
0	295	295

Coefficients of Utilization

	Ceiling Cavity Reflectance									
		80			50			10		
	Wall Reflectance									
Room Cavity Ratio	50	30	10	50	30	10	50	30	10	
	CU for Floor Cavity Reflectance = 20%									
0	45	45	45	42	42	42	38	38	38	
1	41	40	39	38	38	37	36	35	35	
2	37	35	34	35	34	33	33	32	31	
3	34	32	30	32	31	29	30	29	28	
4	31	28	26	29	27	26	28	26	25	
5	28	25	23	27	24	23	25	24	22	
6	25	23	21	24	22	20	23	21	20	
7	23	20	18	22	20	18	21	19	18	
8	21	18	16	20	18	16	19	17	16	
9	19	16	14	18	16	14	17	15	14	
10	17	14	13	17	14	12	16	14	12	

These coefficients were computed by the zonal-cavity method, I.E.S. recommended practice, and prepared from the candlepower distribution data in photometric report 2273

Conversion Factors

For average footcandle calculations. Multiply footcandles by conversion factor.

Trim Catalog #	Conversion Factor
V63	.90
V64	.75
V66	.88
V67	.87

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