



FEATURES

- Wall wash luminaire
- Directs majority of light to vertical surface
- Minimizes "cave effect"
- Versatile and economical
- Presents a clean, uninterrupted reflecting surface
- Contractor-friendly
- Wireway completely accessible from below
- White powder coat finish painted after fabrication

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. Internal reflectors and room side kicker reflector at ceiling plane constructed of low iridescent diffuse silver anodized aluminum provide smooth wall wash distribution.

FINISH

White painted parts are treated with a five stage phosphate bonding process and finished after fabrication with a minimum 90% reflective gloss baked enamel.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access from the plenum. No need to open fixture.

BALLASTS

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, magnetic or electronic ballasts. CEE NEMA Premium compliant.

ELECTRICAL

Standard class "P", thermally protected, autoresetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

CEILING COMPATIBILITY

Luminaire is available to fit most standard ceiling types. NEC-compliant T-bar clips supplied with all grid trim fixtures. See ceiling details on reverse. For hard ceilings order G trim and FK flange accessory. Assemble then support FK accessory at ceiling plane using tie wires (by others). Contact your Columbia representative for compatibility information for specific ceiling types.

CERTIFICATION

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924.

ORDERING INFORMATION

EXAMPLE FW104-232G-MA-EU

FW		-		-		MA		-		U		-	
MODEL		NO. OF LAMPS IN CROSS SECTION		CEILING TYPE		REFLECTOR FINISH		VOLTAGE		OPTIONS			
FW Fluorescent Wall Wash		1 One 2 Two (Straight lamps only)		G Grid SM Surface Mount		MA Matte Anodized Low Iridescent Semi-Specular Aluminum MW Matte White		U 120V-277V		EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse MS9 Master/Satellite Pair w/9' Harness MSEE Master/Satellite End-To-End			
SIZE		LAMP TYPE				BALLAST							
102 10" × 2'		14 2', T5: 14 Watt				E Electronic T8, Instant Start							
104 10" × 4'*		17 2', T8: 17 Watt				EP Electronic T5, Programmed Start ¹							
* Available with straight lamps or tandem-mounted TT lamps.		24 2', T5HO: 24 Watt				EPTT Electronic Twin Tube, Instant Start, (Specify voltage)							
		28 4', T5: 28 Watt				For others available, see Ballast Options.							
		32 4', T8: 32, 30, 28 or 25 Watt											
		54 4', T5HO: 54 or 51 Watt											
		40TT Twin Tube Compact, 2G11 Base: 40 Watt											
		50TT Twin Tube Compact, 2G11 Base: 50 Watt											

PHOTOMETRIC DATA

Test 13443 Test Date 5/30/03

LUMINAIRE DATA

Luminaire	FW104-140TTG-EBTT-PAF FW Parabolic 10" x 48" 2-LAMP WITH MATTE ALUMINUM REFLECTOR
Ballast	REL2TTS40
Ballast Factor	0.85
Lamp	F40BX
Lumens per Lamp	3150
Watts	71
Shielding Angle	N/A
Spacing Criterion	N/A
Luminous Opening in Feet	Length: 3.78 Width: 0.67 Height: 0.00

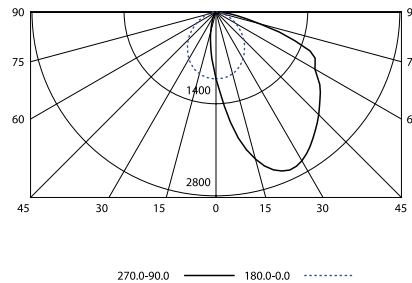
ZONAL LUMENS SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1006	16.0	23.4
0-40	1723	27.3	40.0
0-60	3227	51.2	75.0
0-90	4305	68.3	100.0
0-180	4305	68.3	100.0

ENERGY DATA

Total Luminaire Efficiency	68.3%
Luminaire Efficacy Rating (LER)	52
IESNA RP-1-1993 Compliance	Non-compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$4.62 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELAPLOT



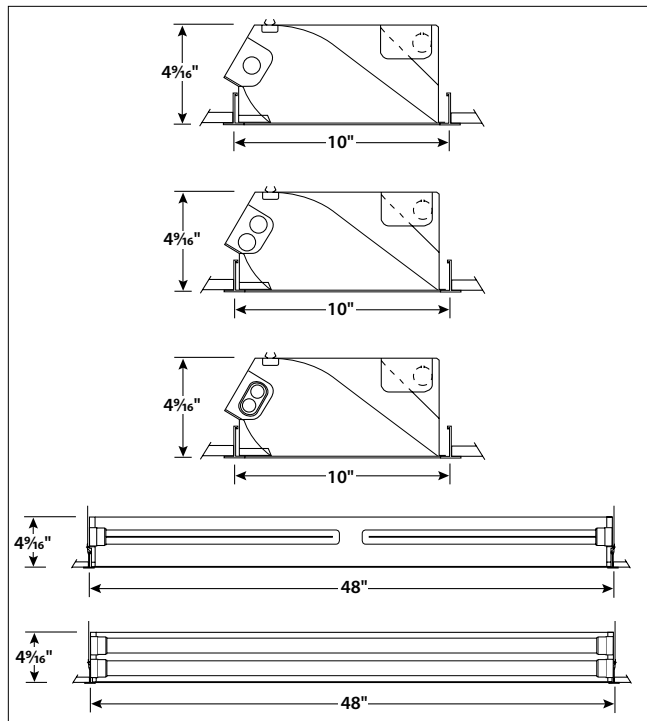
AVG. LUMINANCE (Candela/Sq.M.)

	90.0	135.0	180.0	225.0	270.0
0	4314	4314	4314	4314	4314
30	12829	11901	4029	771	358
40	13049	12561	3756	383	133
45	13295	12616	3582	264	78
50	13647	12695	3379	179	53
55	14279	12960	3157	119	37
60	14774	13303	2916	85	26
65	16734	13828	2685	60	30
70	15856	14788	2473	37	37
75	11150	14632	2283	49	33
80	8077	8469	2154	49	24
85	5169	5218	2243	49	49

CANDELA SUMMARY

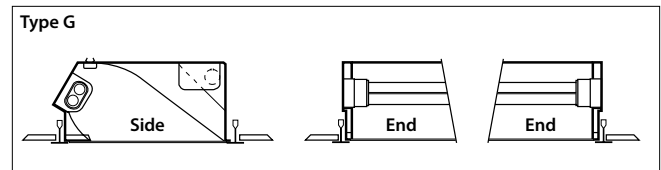
	90.0	135.0	180.0	225.0	270.0
0.0	1015	1015	1015	1015	1015
7.5	1689	1494	1007	699	590
15.0	2318	2004	974	450	310
22.5	2619	2317	910	272	154
30.0	2614	2425	821	157	73
37.5	2424	2333	714	86	32
45.0	2212	2099	596	44	13
52.5	2003	1835	469	21	6
60.0	1738	1565	343	10	3
67.5	1550	1263	232	5	3
75.0	679	891	139	3	2
82.5	216	201	67	2	1
90.0	1	2	2	1	0

DIMENSIONAL DATA



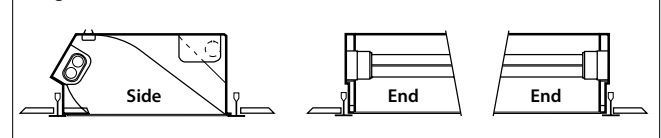
NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.

Flange Kit Trim with Grid Fixture



For hard ceiling applications "G" fixtures are provided with a flange kit that wires directly into the concealed ceiling opening for a clean finished appearance. For flange fixtures in row configurations contact your local Columbia representative.

Flange kit cut out dimensions for single unit only: FWFK4 - 10 3/8" x 48 3/8"