

Also available with 16 cells

FEATURES

- Nominal 3" deep louver
- Black reveal with full air handling capabilities
- Matte anodized low iridescent, semi-specular (MA) louver finish virtually eliminates visibility of fingerprints and construction dust
- Shallow housing height
- Lightweight

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. Louver is formed from DuraLouver® anodized aluminum and secured in open or closed position by die formed steel hinges. Louver hinges from either side. Mechanical light trap prevents light leaks. Latches are finger-tip actuated, positive feed type, fabricated of spring steel, and completely concealed in the black reveal.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access from the plenum. No need to open fixture. Product ships standard with mylar dust cover to eliminate job site contamination.

FINISH

Parts are treated with a five stage phosphate bonding process and finished with a high temperature baked white enamel. For post painted housing, suffix catalog number with PAF. Regressed slots are flat black. Anodized aluminum DuraLouver standard finish is matte anodized low iridescent (MA). Also available in low-iridescent semi-specular natural anodized aluminum (LD) or low-iridescent specular aluminum (LS).

ELECTRICAL

Standard class "P", thermally protected, auto-re-setting HPF ballast, sound rated A. 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 exposed grid ceilings. For hard ceilings order accessory flange kit. Some options may increase fixture depth. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Columbia representative. Four integral T-bar clips are standard. Two or four non-integral T-bar clips are available as an option.

AIR HANDLING

All supply/return and air extract functions are available as a specified option. Directional control vanes and/or extract damper features available. Air extract slots are located out of sight in end caps. See air removal data on reverse.

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 P4D22-317G-MA33-S-3EU

P4D	22	-	3	G	-	-	-	-	-			
MODEL P4D DuraLouver Parabolic	NO. OF LAMPS 3 Three	CEILING TYPE G Inverted T-bar For hard ceilings use flange kit; see accessories.	NO. CELLS CROSSWISE 3 Three 4 Four	NO. CELLS LENGTHWISE 3 Three 4 Four	BALLAST E Electronic T8, Instant Start 3E 3-Lamp Electronic T8, Instant Start EPTT Electronic Twin Tube, Programmed Start (40TT) For a specific ballast vendor show as option.	OPTIONS¹ GLR Fast Blow Fuse GMF Slow Blow Fuse EL Emergency Battery Pack C388 3-Wire Flex C488 4-Wire Flex TB Two Bulk T-bar Clips TB4 Four Bulk T-bar Clips MS9 Master/Satellite w/9' Harness PAF Paint After Fabrication NYC NYC Compliant NYCU NYC Compliant, Union Label	SIZE 22 2' x 2'	LAMP TYPE 31U1 U-Bent, 1 $\frac{1}{8}$ " Leg Spacing T8: 31 Watt 40TT Twin Tube Compact, 2G11 Base: 40 Watt 17 2', T8: 17 Watt	LOUVER FINISH MA Matte Anodized Low Iridescent Semi-Specular Aluminum (std.) LS Low Iridescent Specular Aluminum	AIR FUNCTIONS S Static A Air Handling AV Air Handling w/Supply Vanes C Combination Supply/Extract CV Combination Supply Vanes/Extract CD Combination Supply Extract Dampers CVD Combination Supply Vanes Extract Dampers H Heat Extract HD Heat Extract w/Dampers	VOLTAGE U 120V-277V 347 347V	ACCESSORIES FK22 2' x 2' Single Flange Kit FKCR Flange Kit Row Adapter Brackets

¹ EL or other options may increase fixture depth.

Protected by US Patent 6,582,098.
Specifications subject to change without notice.



PHOTOMETRIC DATA

Test 12463 Test Date 3/21/00

LUMINAIRE DATA

Luminaire	P4D22-331U1-MA33 P4D, Parabolic 2' X 2' 3 LAMP WITH 3X3 CELL SEMI-SPECULAR LOUVER
Ballast	B3321120RH
Ballast Factor	0.88
Lamp	F31U1
Lumens per Lamp	2725
Watts	80
Shielding Angle	0° = 21 90° = 37
Spacing Criterion	0° = 1.20 90° = 1.38

ZONAL LUMEN SUMMARY

Zone	Lumens	Lamp	Fixt.
0-30	1720	21.0	33.7
0-40	2828	34.6	55.4
0-60	4674	57.2	91.6
0-90	5103	62.4	100.0
0-180	5103	62.4	100.0

ENERGY DATA

Total Luminaire Efficiency	62.4%
Luminaire Efficacy Rating (LER)	56
IESNA RP-1-1993 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$4.29 based on 3000 hrs. and \$0.08 per KWH

AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	7711	7711	7711	7711	7711
30	7266	7718	8486	8818	8913
40	6989	7723	8108	8451	8790
45	6778	7612	7678	7778	7572
50	6460	7273	7163	5824	5791
55	6000	6626	5703	5095	5820
60	5383	5475	4309	4793	5212
65	4122	3659	3155	2482	2322
70	1331	1383	1289	582	499
75	495	481	398	343	316
80	287	307	266	246	205
85	204	204	204	163	122

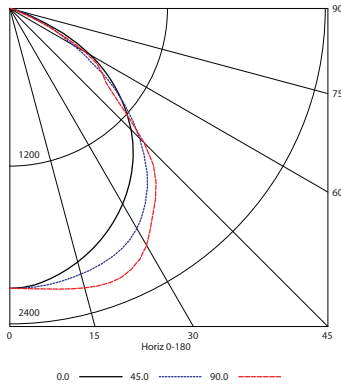
COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80					70					50					0	
		70	50	30	10	70	50	30	10	50	30	10	50	30	10			
1	69	67	65	63	68	66	64	62	63	61	60	55						
2	64	60	56	53	62	59	55	52	56	54	51	48						
3	59	53	49	45	57	52	48	45	50	47	44	41						
4	54	48	43	39	53	47	42	39	45	41	38	36						
5	50	43	38	34	49	42	38	34	41	37	34	32						
6	47	39	34	30	45	38	33	30	37	33	30	28						
7	43	35	30	27	42	35	30	27	34	30	26	25						
8	40	32	27	24	39	32	27	24	31	27	24	22						
9	38	30	25	22	37	29	25	22	29	24	21	20						
10	35	27	23	20	35	27	23	20	27	22	20	18						

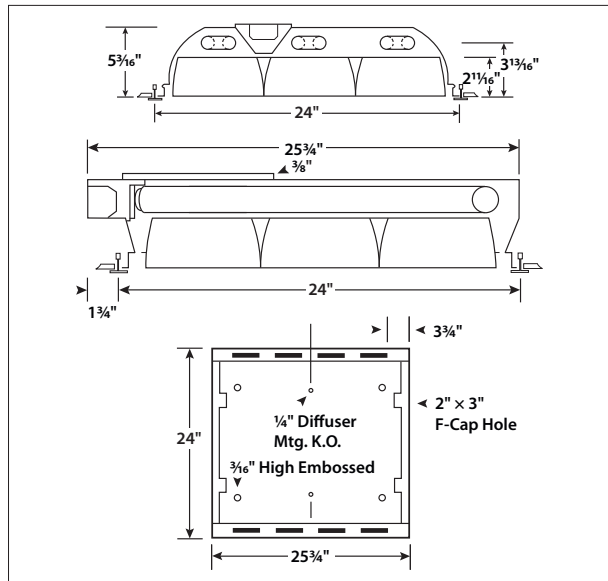
RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT



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

Type G

Side End

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

FK22 Flange Kit

Side End

For hard ceiling applications order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

FKCR

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 & (1) FKCR)

Row cut out dimensions using FK22s & FKCR adapters:
Width 24 3/8", Length [24" x (# in row)] + 3/8". Example: (24" x 2) + 3/8" = 48 3/8"

Flange kit rough in dimensions for single unit only: 24 3/8" x 24 3/8"