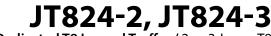
# Columbia



2' × 4' Dedicated T8 Lensed Troffer / 2 or 3-Lamp T8

## **PROJECT INFORMATION**

**Project Name** 

Catalog No.

Туре

Date

# **FEATURES**

- T8 optimized fluorescent lensed troffer
- Shallow design frees up plenum space
- Hemmed fixture edges reduce risk of injury during fixture handling and installation
- Integral T-bar clips quickly secure fixture to the grid
- Corner hinging for easy insertion and removal of shielding frame
- Housing embossments provide extra strength and rigidity
- Housing ends secured by unique corner interlock and screws
- · Snap-in ballast cover requires no tools for wireway access
- Flush steel shielding frame, screw assembled for easy diffuser replacement
- Rotary action cam latches. Smooth operating for secure shielding retention
- Metal to metal light leak protection on all four sides of shielding frame
- Rotary lock lampholders for positive lamp contact
- Heat sink embossments behind ballasts for cooler operation, longer life
- Recessed, surface or cable mount
- UL listed 1598

# **ORDERING INFORMATION**

# CONSTRUCTION

Housing is constructed of heavy gauge steel, die formed for extra rigidity. Four T-bar clips integral to housing. Housing features hemmed edges. Door frame hinges and latches from either side. Wireway accessible from below for upgrades or maintenance.

#### BALLASTS

Energy efficient, thermally protected, automatic resetting, Class "P", high power factor, sound rated A, unless otherwise specified. For a specific vendor and/or ballast, specify as option. 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/ CECcompliant ballast disconnect is standard.

#### FINISH

All metal parts processed with a phase phosphate bonding treatment. Grid units are pre-painted with high gloss baked white enamel, 86% reflective. Polyester powder coat paint after fabrication (PAF) option available, reflectance 90%.

#### SHIELDING

100% virgin acrylic prismatic 12, extruded and roll-embossed, diagonally oriented female prisms standard. Other shielding may be specified. If desired shielding media is not shown in ordering guide, contact your local Hubbell Lighting representative.

#### **CEILING COMPATIBILITY**

Designed for recessed installation in standard inverted tee grid ceilings (G), recessed installation in hard ceilings (G with FK accessory), Surface mount at ceiling plane (SM) or cable mount suspension below ceiling plane (CM). For compatibility with specific ceilings contact your Hubbell Lighting representative.

### 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. UL Sanitation Approved.

# EXAMPLE JT824-232G-FSA12-EU-F0735- C388-GLR

JT8	24 -	32 -			-
	NO. OF LAMPS           2         Two           3         Three           SIZE         4           4         2' × 4'           LAMP TYPE         4', T8: 32, 30, 28 or 25 Wat	o       G       Inverted T-Bar <sup>1</sup> ee       SM       Surface Mount         CM       Cable Mount <sup>2</sup> DOOR STYLE         FS       Flush Steel         FA       Flush Aluminum         En additional door		BALLAST E Electronic T8, Instant Start 3E 3-Lamp Electronic T8, Instant Start 24E (1) 2-Lamp & (1) 4-Lamp Electronic T8, Instant Start (For use with MS9)	OPTIONS F830 30K 78+CRI T8 Lamps Installed F835 35K 78+CRI T8 Lamps Installed F841 41K 78+CRI T8 Lamps Installed F841 41K 78+CRI T8 Lamps Installed GLR Fast Blow Fuse EL Emergency Battery Pack Installed PAF Paint After Fabrication MS9 Master/Satellite w/9' Harness C388 ¾" Flex with 3 No. 18 Wires C384 ¾" Flex with 3 No. 14 Wires C488 ¾" Flex with 4 No. 14 Wires C424 ½" Flex with 4 No. 14 Wires
<sup>2</sup> Order hanger access <sup>3</sup> Provides ends with v	inge kit accessories separately. ories separately. viring access for continuous rov resentative for continuous row	FK24 FKCR CM48Y2SC3F-KIT v mounting.	RIES (ORDER SEPARATELY) 2' × 4' Flange Kit Flange Kit Continuous Row Connector 48" Cable Mount Kit for 2' wide CM ceiling type, 3 Wire Feed Cord	<ul> <li>EP Electronic T8, Programmed Start</li> <li>3EP 3-Lamp Electronic T8, Programmed Start</li> <li>For a specific ballast vendor, show as option.</li> </ul>	M4R       Specular Reflector         G1       Single Gasket (Door to Housing)         G2       Double Gasketing (G1 and Lens to Door)         G3       Triple Gasketing (G2 and Housing to Ceiling)         E0R       End of Row (SM/CM only) <sup>3,4</sup> INT       Intermediate (SM/CM only) <sup>3,4</sup> CP       Chicago Plenum         For a complete set of options, see Options and Accessories.

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LENSED TROFFERS / JT824-2, JT824-3

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## PHOTOMETRIC DATA

#### LUMINAIRE DATA

Luminaire	JT824-332G-FSA12		0.0		22.5	45.0	67.5	
	J Lensed Troffer		0	4289	4289	4289	4289	Γ
	2' x 4' 3-Lamp with	le	30	4196	4277	4409	4495	
	A-12 Pattern Acrylic Prismatic Lens	Angle	40	3635	4032	4230	4421	
	Filsmatic Lens		45	3655	3764	3994	4218	
Ballast	B332I120RH-A	Luminance	50	3299	3469	3761	3940	
Ballast Factor	0.88	ina.	55	2993	3133	3443	3569	
Lamp	F32T8	ΞĘ	60	2706	2694	2903	3078	
			65	2420	2238	2231	2547	
Lumens per Lamp	2900	Average	70	2178	1908	1643	2223	
Watts	84	. je	75	2101	1792	1501	2130	
Shielding	N/A	- ₹	80	2255	1822	1831	2229	
Angle	IN/A		85	2344	2009	2079	2555	
Spacing Criterion	0° = 1.23 90° = 1.36							
		zo	NAI	LUN	1EN S	UMN	<b>ARY</b>	

## AVG.LUMINANCE (Candela/Sq. M.) COEFFICIENTS OF UTILIZATION (%)

ñ

#### RC 80 70 0 50 RW 50 30 10 70 50 30 10 50 30 10 0 70 93 89 85 82 90 87 84 81 83 81 72 1 79 74 2 85 78 73 68 83 77 67 70 66 61 3 78 69 63 58 76 68 62 57 65 60 56 52 62 55 49 70 61 54 49 59 48 4 53 45 5 66 55 48 43 64 54 48 42 53 47 42 39 б 61 50 43 38 59 49 42 37 48 42 37 35 7 57 45 38 33 55 45 38 33 44 37 33 31 42 35 30 51 41 34 30 40 34 29 28 8 53 38 31 27 48 38 31 27 37 9 49 31 25

46 35 29 24 45 35 29 24 34 28 24 23

**JT824-2, JT824-3** 2' × 4' Dedicated T8 Lensed Troffer / 2 or 3-Lamp T8



Test 13120 Test Date 11/07/2003

RCR = Room Cavity Ratio

**RC** = Effective Ceiling Cavity Reflectance **RW** = Wall Reflectance

## **ENERGY DATA**

10

Total Luminaire Efficiency	84.6%
Luminaire Efficacy Rating (LER)	77
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.12 based on 3000 hrs. and \$0.08 per KWH

# Test 13121 Test Date 1/8/03

45.0 ----- 90.0 -

#### JT824-232G-FSA12 Luminaire J Lensed Troffer 2' x 4' 2-Lamp with A-12 Pattern Acrylic Prismatic Lens B232I120RH-A Ballast Ballast Factor 0.88 F32T8 Lamp Lumens per 2900 Lamp Watts 60 Shielding N/A Angle 0° = 1.23 90° = 1.36 Spacing Criterio

**LUMINAIRE DATA** 

#### AVG.LUMINANCE (Candela/Sq.M.) COEFFICIENTS OF UTILIZATION (%) RC 80

	0.0	22.5	45.0	67.5	90.0
0	2967	2967	2967	2967	2967
30	2850	2921	3045	3133	3155
40	2638	2733	2893	3073	3160
45	2430	2537	2719	2912	2986
50	2198	2308	2513	2669	2714
55	1973	2046	2220	2327	2394
60	1757	1754	1806	1923	2036
65	1577	1461	1377	1563	1752
70	1509	1302	1100	1361	1603
75	1596	1329	1169	1377	1650
80	1716	1450	1389	1512	1778
85	1780	1656	1568	1709	1850
	30 40 55 50 55 60 65 70 75 80	0         2967           30         2850           40         2638           45         2430           50         2198           55         1973           60         1757           65         1577           70         1509           75         1596           80         1716	0         2967         2967           30         2850         2921           40         2638         2733           50         2198         2308           55         1973         2046           60         1757         1754           65         1577         1461           70         1509         1302           75         1596         1329           80         1716         1450	0         2967         2967         2967           30         2850         2921         3045           40         2638         2733         2893           45         2430         2537         2719           50         2198         2308         2513           55         1973         2046         2220           60         1757         1754         1806           65         1577         1461         1377           70         1509         1302         1109           75         1596         1329         1169           80         1716         1450         1389	0         2967         2967         2967         2967           30         2850         2921         3045         3133           40         2638         2733         2893         3073           45         2430         2537         2719         2912           50         2198         2308         2513         2669           55         1973         2046         2220         2327           60         1757         1754         1806         1923           65         1577         1461         1377         1563           70         1509         1302         1100         1361           75         1596         1329         1169         1377           80         1716         1450         1389         1512

Lamp

26.6

43.8

73.0

86.3

86.3

Fixt.

30.8

50.7

84.6

100.0

100.0

ZONAL LUMEN SUMMARY

Lumens

1542

2538

4234

5004

5004

Zone

0-30

0-40

0-60

0-90

0-180

0.0 22.5 45.0 67.5 90.0

4421 4515

3078 3161

2223 2326

2583

Fixt.

30.3

499

84.4

100.0

100.0

3764 3994 4218 4355

3469 3761 3940 4047

85 2344 2009 2079 2555 2696

Lamp

423

71.4

846

84.6

25.

Lumens

2232

3678

6216

7364

7364

4289 4289 4289 4289 4289

4196 4277 4409 4495 4518

55 2993 3133 3443 3569 3647

65 2420 2238 2231 2547 2631

75 2101 1792 1501 2130 2368

Zone

0-30

0-40

0-60

0-90

0-180

1 94 91 87 84 92 89 85 83 85 82 8	0 74
2 87 80 74 70 84 78 73 69 75 71 6	7 62
3 79 71 64 59 77 69 63 58 67 62 5	7 54
4 73 63 56 50 71 62 55 50 60 54 4	9 46
<b>EX</b> 5 67 57 49 44 66 56 49 44 54 48 4 6 62 51 44 39 61 50 43 38 49 43 3	3 40
<b>&amp;</b> 6 62 51 44 39 61 50 43 38 49 43 3	8 36
7 58 47 39 34 56 46 39 34 45 38 3	4 32
8 54 43 36 31 53 42 35 31 41 35 3	0 28
9 50 39 32 28 49 39 32 28 38 32 2	7 26
10 47 36 30 25 46 36 29 25 35 29 2	5 23

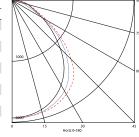
70

RW 70 50 30 10 70 50 30 10 50 30 10 0

0

50

# INDOOR CANDELA PLOT



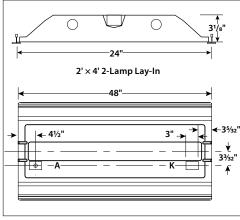
# RCR = Room Cavity Ratio

 $\mathbf{RC} = \text{Effective Ceiling Cavity Reflectance } \mathbf{RW} = \text{Wall Reflectance}$ 

## **ENERGY DATA**

Total Luminaire Efficiency	86.3%
Luminaire Efficacy Rating (LER)	73
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.29 based on 3000 and \$0.08 per KWH

**DIMENSIONAL DATA** 



A: 7/8" Diameter knockout

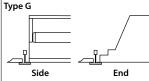
K:  $2" \times 3"$  through hole for access plate.

 NOTE:
 All dimensions are in inches; dimensions and specifications are subject to change without notice.

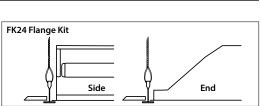
 Please consult factory or check sample for verification.
 Width 24%", Length [48" × (# in row)] + %". Example: (48" × 2) + %"=

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# **CEILING COMPATIBILITY**

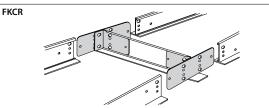


For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



hrs.

For hard ceiling applications order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.



For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24 & FKCR adapters: Width 24%," Length [48" × (# in row)] + 3/8". Example: (48" × 2) + 3/8"= 963/8"

LENSED TROFFERS / JT824-2, JT824-3

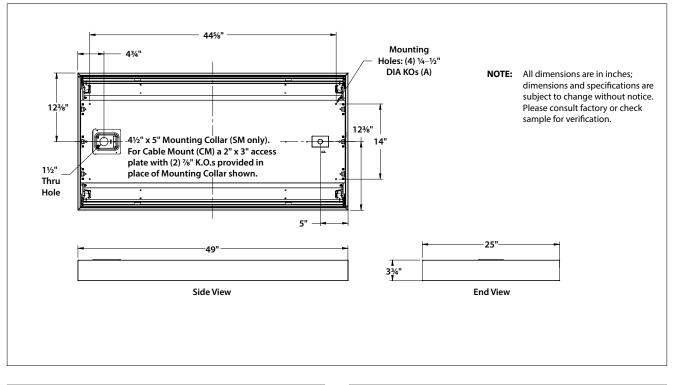
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# Columbia

# **JT824-2, JT824-3** 2' × 4' Dedicated T8 Lensed Troffer / 2 or 3-Lamp T8

### DIMENSIONAL DATA - SURFACE MOUNT (SM) AND CABLE MOUNT (CM)



#### SURFACE MOUNT

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs,  $\frac{1}{2}$  provided as shown, marked "A".

#### **CABLE MOUNT**

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2SC3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell Lighting representative. Mounting knock-outs, ¼" to ½", provided as shown, marked "A".

LENSED TROFFERS / JT824-2, JT824-3