

**2' X 2'**  
**1, 2 or 3-Lamp**  
**T12 "U", T8 "U" or BIAx**  
 ■ Recessed Troffer for clean room applications

## CONSTRUCTION/FINISH

- Meets federal standard No. 209D for class 100,000, 10,000, 1,000, 100 and 10
- Tested by independent laboratory to 209D standard
- Designed for use with 1 1/2" face width inverted "T" Bars, 1 1/2" max height
- Completely sealed housing eliminates passage of particle matter through the fixture
- Hinge and latch extruded aluminum door allows relamping and servicing from below the ceiling
- Standard lens is DB-21, 1/8" nominal thickness prismatic acrylic
- Installing contractor is responsible for sealing fixture to "T" Bar with clear silicone sealant

## ELECTRICAL

- U.L. listed for wet location for covered ceiling use only
- C.S.A. certified optional
- Class P, HPF, CBM certified ballasts comply with ⓔ Federal Ballast Law (Public Law 100-357, 1988)

## SIDE MOUNTED BALLASTS

- Reduce ballast operating temperatures (two surface contact, away from lamps)
- Increase average ballast life
- Increase fixture efficiency
- All lamps on the same plane for uniform lens illumination

CATALOG NUMBERS	SIZE	NO. OF LAMPS	LAMP TYPE	LENS
2DCLG140U6-FA21	2' X 2'	1	F40 "U" 6"	21
2DCLG240U6-FA21	2' X 2'	2	F40 "U" 6"	21
2DCLG340U3-FA21	2' X 2'	3	F40 "U" 3 5/8"	21
17			17 – 17WT8 (24")	
20			20 – 20WT12 (24")	
31U1			31U1 – 31WT8 1 5/8" (24")	
31U6 –2 Lamp Only			31U6 – 31WT8 6" (24")	
CF40			CF40 – 40WTT5 (24")	
CF50			CF50 – 50WTT5 (24")	
CF55			CF55 – 55WTT5 (24")	

**NOTE: TO ORDER ABOVE:**

- ALWAYS SUFFIX CATALOG NO. WITH VOLTAGE. –120=120V; –277= 277V

- With Generic Electronic Ballasts (Brand selected by Thomas Industries)

Suffix Catalog # with – Ballast Quantity – / – EB Lamps Per Ballast

Example: –1/2-EB = One 2 Lamp Electronic Ballast

Example: –1/3-EB = One 3 Lamp Electronic Ballast

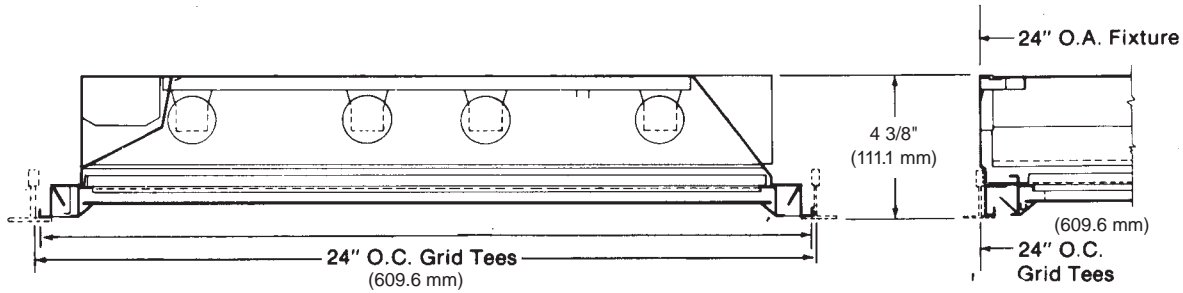
- To Order C.S.A. Certified Fixtures Add C to the Catalog No. in Position Shown. Example: 2DCLCG240U6

## JOB INFORMATION

**SA 2302**

Spec Sheet #

## DIMENSIONS



**PHOTOMETRIC DATA** CATALOG # 2DCLG240U6-FA21 LAMPS = F40 "U" 6" WM INPUT WATTS = 74 LER = FL-38  
 TEST #15987 S/MH=1.3 BALLAST = ESB BALLAST FACTOR = .88

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$6.32** BASED ON 3000 HRS. AND \$.08 PER KWH.

### CANDLEPOWER

Angle	End	45	Cross
0	1405	1405	1405
5	1399	1401	1402
10	1373	1384	1395
15	1335	1355	1379
20	1280	1315	1356
25	1209	1263	1318
30	1117	1195	1253
35	1005	1100	1158
40	879	965	1034
45	728	788	877
50	583	613	691
55	449	454	529
60	353	320	402
65	266	205	292
70	184	137	190
75	129	104	135
80	81	81	87
85	46	50	48

### MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture\*

■ 80-50-20 Reflectances (Ceiling-Wall-Floor)  
 ■ LLF = 0.73 2550 Lumens/Lamp very clean  
 ■ Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2' X 2'	5	-	83	50	36	-
2 Lamp	2	-	59	35	-	-
	1	132	44	-	-	-

### COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20		70		50	
	70	50	30	70	50	30
0	76	76	76	73	73	69
1	69	67	65	68	66	63
2	64	59	56	63	57	55
3	58	53	47	57	52	47
4	55	47	42	53	46	41
5	50	42	38	48	41	36
6	46	39	34	46	38	33
7	44	35	29	42	34	29
8	40	33	27	40	32	27
9	38	29	25	36	29	25
10	35	28	23	34	27	23

\*Observe Fixture S/MH Requirements for Specific Applications

### AVERAGE LUMINANCE CD/SQ.M WITH 2550 LUMEN LAMPS

ANGLE	END	45°	CROSS
45	3797	4110	4575
55	2887	2919	3402
65	2322	1789	2548
75	1838	1482	1924
85	1947	2116	2031

### TYPICAL V.C.P.'s Mounting Height Lengthwise Crosswise

Room Size	8.5		10	
	8.5	10	8.5	10
30x30	58	62	57	61
40x40	55	58	54	57
60x30	61	64	60	63
60x60	51	54	51	53
100x100	49	50	49	50

### LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1098	21.5	33.9
0-40	1777	34.8	54.9
0-60	2823	55.3	87.2
0-90	3236	63.4	100.0

LLF = .73 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
 LLD = 0.88 @ 40% RATED LAMP LIFE BF = 0.88 ESB BALLAST & 34W LAMP (RELAMP AT 70% LAMP LIFE)

**PHOTOMETRIC DATA** CATALOG # 2DCLG231U1-FA21-1/2-EB LAMPS = F80 31 INPUT WATTS = 55 LER = FL-65  
 TEST #15951 S/MH=1.4 BALLAST = ELECTRONIC BALLAST FACTOR = .92

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$3.69** BASED ON 3000 HRS. AND \$.08 PER KWH.

### CANDLEPOWER

Angle	End	45	Cross
0	1650	1650	1650
5	1642	1642	1649
10	1617	1627	1642
15	1570	1597	1632
20	1506	1553	1614
25	1419	1499	1587
30	1310	1427	1534
35	1173	1328	1439
40	1021	1161	1303
45	851	946	1092
50	676	746	846
55	523	552	651
60	409	383	491
65	314	247	346
70	218	161	232
75	156	124	163
80	97	96	107
85	54	62	61

### MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture\*

■ 80-50-20 Reflectances (Ceiling-Wall-Floor)  
 ■ LLF = 0.76 2800 Lumens/Lamp very clean  
 ■ Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2' X 2'	5	-	104	62	45	31
2 Lamp	2	-	74	44	32	-
	1	-	55	33	-	-

### COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20		70		50	
	70	50	30	70	50	30
0	81	81	81	80	80	77
1	76	72	70	73	71	68
2	69	65	60	68	64	60
3	64	57	53	63	56	55
4	58	52	46	57	51	46
5	55	46	40	54	46	40
6	51	41	36	50	41	35
7	46	39	33	46	38	33
8	44	34	29	42	34	28
9	40	33	27	40	32	27
10	39	29	25	38	29	25

\*Observe Fixture S/MH Requirements for Specific Applications

### AVERAGE LUMINANCE CD/SQ.M WITH 2800 LUMEN LAMPS

ANGLE	END	45°	CROSS
45	4439	4935	5696
55	3363	3550	4186
65	2740	2156	3020
75	2223	1767	2323
85	2285	2624	2582

### TYPICAL V.C.P.'s Mounting Height Lengthwise Crosswise

Room Size	8.5		10	
	8.5	10	8.5	10
30x30	54	58	52	56
40x40	51	54	49	52
60x30	56	50	55	59
60x60	47	50	45	48
100x100	45	46	43	45

### LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1299	23.2	33.5
0-40	2119	37.8	54.7
0-60	3379	60.3	87.2
0-90	3874	69.2	100.0

LLF = .76 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
 LLD = 0.88 @ 40% RATED LAMP LIFE BF = 0.92 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)