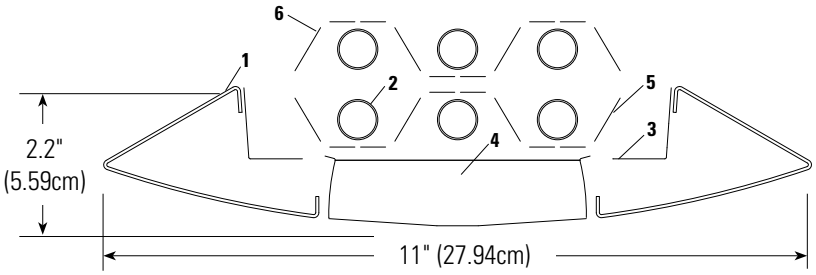
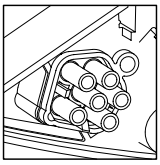
Energos 3-Light T5 per 4' (121.92cm) (Nominal) Louver

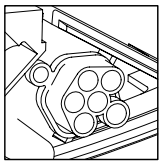


Feature Specifications

Electrical

Connections: Wiring is via 18 gauge wire. All electrical connections for standard configurations are plug-and-play via 6-wire cannon plug connections. Connections are seated in end castings of fixtures, allowing for simultaneous mechanical/ electrical coupling. Connectors are male/female therefore modules must be installed male to female, starting from the power feed end set.


Male


Female

All static ballasts have the following features:

- Electronic
- High Power Factor
- Class A sound rating
- Metal can

Emergency Battery Pack: Emergency Battery packs are designed to operate when normal building power is interrupted. The battery packs operate for a minimum of 90 minutes without any power via a rechargeable battery source. The pack does not utilize the standard static ballast for any of its operation since the pack carries its own pseudo ballast. For this reason, Lightolier does not recommend remote mounting EM Packs because all of the socket wiring would need to carry throughout the power feed end set. The EM batteries, even in their largest, most expensive form, operate the fluorescent lamps at only half the lamp rated output. Emergency battery packs are available in the following outputs:

- 450 Lumens (Standard)
- 635 Lumens
- 1100 Lumens
- 1375 Lumens

Emergency battery packs can be used for emergency egress lighting since all listed packs operate for a minimum of 90 minutes, or can be used as momentary lighting for emergency circuit power transitions. Smaller packs are recommended for this purpose.

Dimming: T8 and T5HO lamps are dimmed with two wire ballasts. T8 lamps can be dimmed down to 5% and T5HO lamps can be dimmed down to 1%. T5 lamps require 5-wire dimming ballasts and can be dimmed down to 1%. A 5-wire power feed will be required for T5 (non-HO) dimming.

Finish

Powder coated, baked enamel, white or aluminum, as specified. Custom colors available, consult factory.

Features

1. **Housing:** 18 gauge steel. 6" (15.24cm) cast aluminum end caps. No exposed fasteners or hardware.
2. **Lamping:** 3 T5 fluorescent lamps per 4' (121.92cm) section. Lamps by Lightolier as an option, see ordering information.
3. **Reflector:** Precision die-formed premium anti-iridescent, highly reflective aluminum.
4. **Louver:** Parabolic louver, low-iridescent semi-specular anodized aluminum, 25 degree shielding lengthwise. Blades are spaced 2.3" (5.84cm) O.C with a radius that matches the housing. 1" (2.54cm) tall louver attaches to housing.
5. **Primarily Indirect Reflector:** Precision die-formed anti-iridescent, highly reflective aluminum. This configuration has 66% of the light reflected up and 33% of the light reflected down.
6. **Primarily Direct Reflector:** Precision die-formed anti-iridescent, highly reflective aluminum. This configuration has 33% of the light reflected up and 66% of the light reflected down.

Mountings

Cable suspension is on 48" (121.92cm) and 96" (243.84cm) centers and consists of a 4 1/2" (11.43cm) diameter canopy finished white enamel. A 1/16" (0.16cm) diameter stainless steel aircraft cable accomplishes suspension and is adjustable from 12" (30.48cm) to 36" (91.44cm). Power feed is 18-gauge SJT white cord. For special circuiting consult factory.

Labels Included

UL, cUL, and IBEW

Ordering Instructions

Individual Fixtures:

1. Order number of MODULES required.
2. Order one POWER FEED END SET per MODULE.

Continuous Rows:

1. Determine run length.
2. Order the appropriate number of MODULES for the complete run.
3. Order one POWER FEED END SET for each run.
4. Order one CABLE ASSEMBLY per MODULE minus one per run.
5. For runs that exceed conductor ampacity ratings order the appropriate number of SINGLE CABLE & CORD SETS.

Job Information	**Type:**
Job Name:	
Cat. No.:	
Lamp(s):	
Notes:	

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Module Ordering Information

Family	Series	Lamping & Distribution	Ballast	Lamp	Shielding	Length	Voltage	Finish	Options (Blank)
EG	1	**7** = 2 Up, 1 Down **8** = 1 Up, 2 Down	See Ballast Chart Below	See Lamp Chart Below	**P** = Parabolic Louver	**4** = 4' (121.92cm) **8** = 8' (243.84cm)	**1** = 120V **2** = 277V	**A** = Aluminum **W** = White	**4**= 4 through wires **5**= 5 through wires **6**= 6 through wires **D**= Dual Switch **T**= Tandem Switch **E**= Emergency Pack

When ordering no lamps provided by Lightolier, use Lamp code "Z"

Module Ordering Specifications

Lamping and Distribution

7 = 3 Lamps, 2 Up, 1 Down
8 = 3 Lamps, 1 Up, 2 Down

Ballast Specifications

Code	Lamp Type	Ballast Factor	Start Type	THD %
F	T5	1.00	Program	<10
G	T5HO	1.00	Program	<10
I	Dim T5	1.00/.01	Program	<10
J	Dim T5HO	1.00/.03	Program	<10

Dimming: Advance Mark-10 standard (no additional wires required) for T8 and T5HO fixtures. 5-wire dimming required for T5 (non-HO) fixtures. Optional dimming systems: Lutron ECO-10 and Hi-Lume (by others) require 4-wire modules and end sets. Mark-7, ULT, DALI and Lightolier HDF require 5-wire power feed end sets. Energos can accept ballasts not to exceed 1.7" (4.32cm) wide by 1.2" (3.05cm) high.

Shielding

P = Parabolic Louver

Length

4 = 4ft (48") (121.92cm)
8 = 8ft (96") (243.84cm)

Voltage

1 = 120VAC
2 = 277VAC

Finish

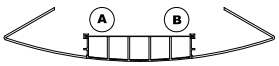
A = Aluminum
W = White

Wiring Options

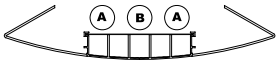
Blank = Leave blank if ordering standard fixture.
4 = 4 through wires
5 = 5 through wires
6 = 6 through wires

Feature Options

D = Dual Switching (AKA A/B switching)

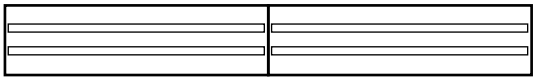


2-Light Option



3-Light Option

T = Tandem Switching (also available in 1-lamp configuration)



A B

Both Dual Switch and Tandem Switch fixtures ship with a 4th wire. Be sure to order the appropriate quantity of wires in the power feed.

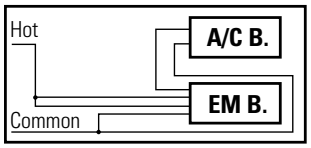
Lamping Specifications

Code	Lamp Type	Wattage	Rated Output (Lumens)	Color (K)
M	T5	28	2600*	830
N	T5	28	2600*	835
O	T5	28	2600*	841
P	T5	54	4450*	830
Q	T5	54	4450*	835
R	T5	54	4450*	841

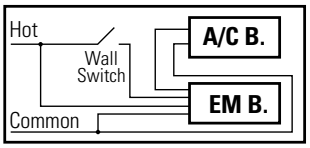
* 25°c Rating

Feature Options (continued)

E = Emergency Battery Pack (E): Battery packs provide 90 minutes of operation. Available lamp outputs: 450 Lumens (standard). Optional: 635, 1100 and 1375 Lumens. Standard Emergency wiring is to have Battery Pack operating a single lamp. All EM fixtures are wired as "switched" and include 4th through wire for the wall switch (see diagrams). All fixtures and power feeds in that run should be ordered to include a dedicated 4th through wire to carry the hot power all the way through the run to the EM pack.



Unswitched



Switched

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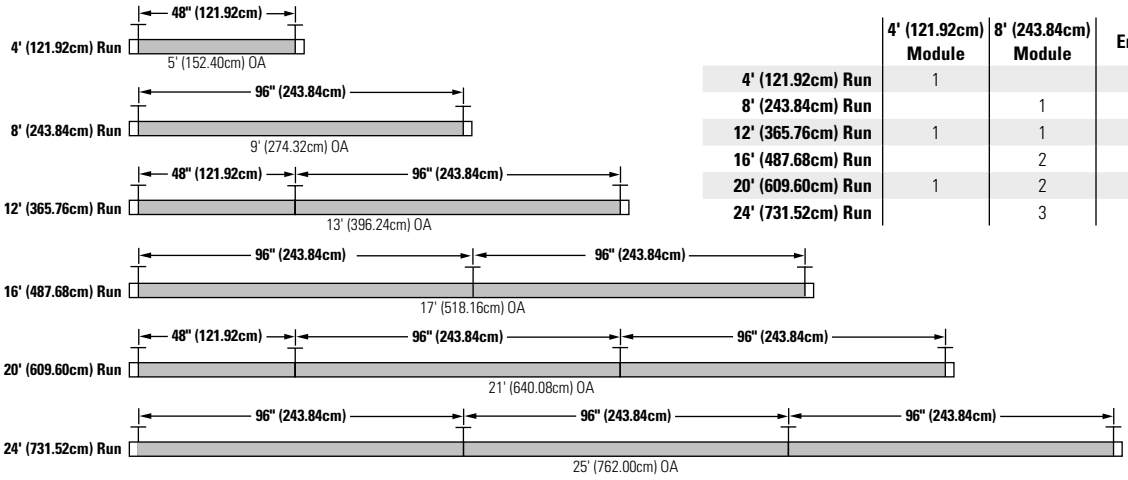
Fixture Lengths & Mounting Locations



	4' (121.92cm) Module	8' (243.84cm) Module	End Set	Cable Joiner
4' (121.92cm) Run	1		1	
8' (243.84cm) Run		1	1	
12' (365.76cm) Run	1	1	1	1
16' (487.68cm) Run		2	1	1
20' (609.60cm) Run	1	2	1	2
24' (731.52cm) Run		3	1	2

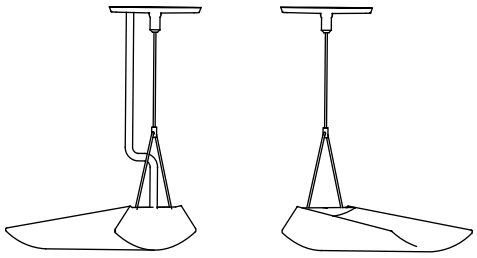
Suspension and End Set Ordering Illustrations

Power Feeds

Consult Lamp and Ballast System data to determine input watt requirements for ballast used on project to determine loading for each run. Multiply the total number of ballasts by the input wattage per ballast, and to determine ampacity divide the total watts by the system voltage. 10 Amps for 3-wire end sets, 7 Amps for 4-wire and 5-wire end sets, maximum.

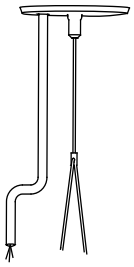
Control

Consult appropriate ECS (Energos Control Systems) specification sheet for ordering product utilizing occupancy controls. ECS specification sheet numbers directly correlate to standard Energos specification sheet numbers.



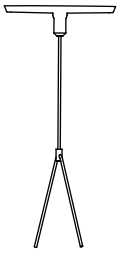
Power Feed End Set

White, 3 Wire Cord:	EG1EC36W
White, 4 Wire Cord:	EG1EC36W4
White, 5 Wire Cord:	EG1EC36W5
Aluminum, 3 Wire Cord:	EG1EC36A
Aluminum, 4 Wire Cord:	EG1EC36A4
Aluminum, 5 Wire Cord:	EG1EC36A5



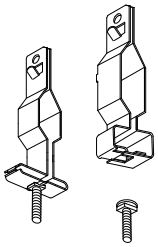
Cable/Cord Assembly

Single Cable & Power Cord:	EGCC36
Single Cable & 4 Wire Power Cord:	EGCC36X4
Single Cable & 5 Wire Power Cord:	EGCC36X5



Cable Assembly

Single Cable: EGC36



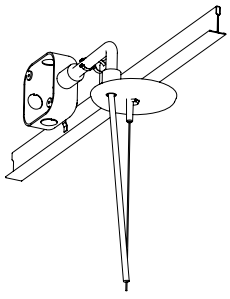
Ceiling Grid Kit: CGK

Because most ceilings are white, all canopies ship as white unless specifically ordered otherwise.

Both CGK and CGKP ship with two types of clips (standard and slot T).

For mounting fixtures directly to the T grid, order one CGK per non-power suspension point and one CGKP per powered suspension point.

The CGKP will include a special canopy with flex coupler, grid clips and additional clips to mount the junction box to the top of the grid nearby. J-Box and flex conduit provided by others.



Ceiling Grid Kit, Power: CGKP

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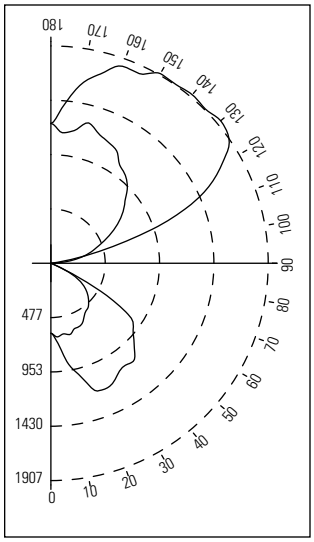
Performance — Three Lamp Fixture, 2 Up, 1 Down

Candlepower Curve



Report No.: EG1-71D-GQ.ies
Lamps: 3-FP54/835/HO
Lumens: 4450
Efficiency: 70
Cat. No.: EG17GQP
25°C Rating

Candlepower

Zone→ Degree ↓	0	22	45	67	90
	Candelas				
180	1202	1202	1202	1202	1202
175	1127	1268	1412	1318	1378
165	1249	1348	1521	1627	1691
155	1155	1408	1718	1825	1799
145	1031	1390	1639	1813	1876
135	930	1287	1566	1760	1877
125	755	1123	1479	1756	1870
115	548	915	1324	1425	1459
105	346	677	785	601	538
95	109	129	37	21	11
90	4	1	1	1	1
85	0	0	1	0	1
75	6	5	4	4	3
65	96	161	147	134	114
55	346	565	707	789	856
45	458	740	826	961	1014
35	514	819	985	1042	1084
25	595	834	1053	1167	1176
15	634	738	887	993	1013
5	636	657	676	729	690
0	602	602	602	602	602

Coefficients Of Utilization
% Effective Ceiling Cavity Reflectance

Room Cavity Ratio	80			70			50		
	% Wall Reflectance								
	50	30	10	50	30	10	50	30	10
0	71	71	71	64	64	64	50	50	50
1	63	60	58	56	54	52	44	43	42
2	55	51	48	49	46	43	39	37	35
3	48	44	40	44	40	36	35	32	30
4	43	38	34	39	34	31	31	28	25
5	38	33	29	34	30	26	27	24	21
6	34	28	25	31	26	23	24	21	19
7	30	25	21	27	23	20	22	19	16
8	27	22	19	25	20	17	20	17	14
9	25	20	16	22	18	15	18	15	12
10	23	18	14	21	16	13	17	13	11

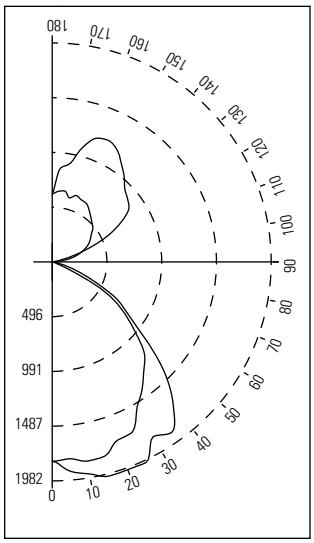
20% Floor Cavity Reflectance

Distribution

Zone	Lumens	% Lamp	% Luminaire
0-90	3074	20	29
90-180	7431	50	71
0-180	10505	70	100

Performance — Three Lamp Fixture, 1 Up, 2 Down

Candlepower Curve



Report No.: EG1-72D-GQ.ies
Lamps: 3-FP54/835/HO
Lumens: 4450
Efficiency: 62.5
Cat. No.: EG18GQP
25°C Rating

Candlepower

Zone→ Degree ↓	0	22	45	67	90
	Candelas				
180	609	609	609	609	609
175	634	616	716	700	841
165	592	723	880	985	1064
155	613	861	1095	1168	1197
145	572	880	1039	1072	1076
135	501	847	911	892	919
125	426	714	719	807	838
115	350	508	577	572	541
105	228	306	253	184	148
95	58	36	5	4	2
90	3	1	2	2	1
85	6	17	6	6	4
75	21	69	127	133	123
65	201	264	354	433	423
55	774	929	899	842	835
45	1167	1326	1411	1386	1437
35	1399	1523	1624	1795	1862
25	1685	1781	1826	1936	1981
15	1800	1821	1902	1959	1982
5	1767	1871	1904	1968	1880
0	1783	1783	1783	1783	1783

Coefficients Of Utilization
% Effective Ceiling Cavity Reflectance

Room Cavity Ratio	80			70			50		
	% Wall Reflectance								
	50	30	10	50	30	10	50	30	10
0	68	68	68	64	64	64	55	55	55
1	60	58	56	57	55	53	49	48	47
2	53	50	47	50	47	44	44	41	39
3	47	43	39	44	41	37	39	36	34
4	42	37	34	40	35	32	35	31	29
5	38	33	29	35	31	28	31	28	25
6	34	29	25	32	27	24	28	25	22
7	31	26	22	29	24	21	26	22	19
8	28	23	20	26	22	19	23	20	17
9	25	21	18	24	20	17	21	18	15
10	23	19	16	22	18	15	20	16	14

20% Floor Cavity Reflectance

Distribution

Zone	Lumens	% Lamp	% Luminaire
0-90	5478	37	58
90-180	3892	26	42
0-180	9370	62	100

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Ballast and Lamp Ordering Combinations

Desgn.	Lamp Type (T8 or T5)	Ballast Factor (BF)	Ballast THD (%)	Lamp Rated Wattage	Lamp Rated Output	Lamp Color (Kelvin)	IES Output (Lumens)	System Input Watts	System Efficiency (lum/watt)	System Lamp Life (Hours)	Start Type
FM	T5	1	<10	28	2600	830	2600	31.0	83.9	20000	Program
FN	T5	1	<10	28	2600	835	2600	31.0	83.9	20000	Program
FO	T5	1	<10	28	2600	841	2600	31.0	83.9	20000	Program
GP	HO	1	<10	54	4450	830	4450	58.5	76.1	20000	Program
GQ	HO	1	<10	54	4450	835	4450	58.5	76.1	20000	Program
GR	HO	1	<10	54	4450	841	4450	58.5	76.1	20000	Program
IM	T5 DIM	1.0 / .01	<10	28	2600	830	2600 /26	33.5 / 8	77.6	NA	Program
IN	T5 DIM	1.0 / .01	<10	28	2600	835	2600 /26	33.5 / 8	77.6	NA	Program
IO	T5 DIM	1.0 / .01	<10	28	2600	841	2600 /26	33.5 / 8	77.6	NA	Program
JP	T5HO DIM	1.0 / .03	<10	54	4450	830	4450 /134	63 /12.5	70.6	NA	Program
JQ	T5HO DIM	1.0 / .03	<10	54	4450	835	4450 /134	63 /12.5	70.6	NA	Program
JR	T5HO DIM	1.0 / .03	<10	54	4450	841	4450 /134	63 /12.5	70.6	NA	Program

Notes:
*25°C Rating
All data is per 1 lamp on a two lamp system at 277 VAC. Data is based on Osram Sylvania Specifications
When ordering no lamps provided by Lightolier, use Lamp code "Z".

The lumen value for the lamp (within a Lighting Design program) will be the IES Output value shown on this table.

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