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EVFT Illuminator™ Long Twin Tube

Fluorescent Luminaires

Cl. I, Div. 1, Groups B & C (suffix GB), D
Cl. I, Zone 1, Group IIB + H₂ (suffix GB), IIA
Cl. II, Div. 1, Groups E, F, G
Cl. III Simultaneous Presence

Paint Spray
Marine & Wet Locations
3, 3R, 4, 4X; IP66

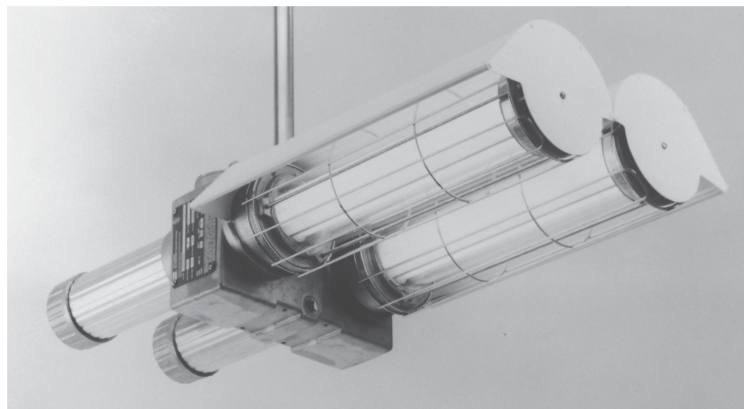
Applications:

Illuminator™ Compact Fluorescent Luminaires are used:

- In areas made hazardous by the presence of flammable gases and vapors, combustible dusts, or easily ignitable fibers and flyings
- In areas where combustible dusts and flammable gases are present simultaneously
- In applications involving low mounting heights, restricted mounting space, or where luminaire weight must be minimized
- In areas where corrosion, vibration, moisture, dirt, and rough usage are a problem
- In refineries, chemical and petrochemical facilities, grain processing, handling and storage facilities, manufacturing plants, wastewater treatment facilities, airline and mass transit maintenance areas, paint spray facilities, breweries, pharmaceutical plants, and other areas where safe, reliable hazardous area lighting is required in a compact, cool operating and efficient light source

Features:

- Efficient fluorescent light source in 78 and 156 watts
- Adjustable right and left asymmetrical reflectors provide excellent light "aimability" – ideal for task oriented lighting
- Compact, lightweight, and low profile design allows easy installation and broad industrial application
- Cast copper-free aluminum with epoxy powder finish (less than 0.4 of 1% copper) provides excellent resistance to corrosion
- Versatile luminaire housing provides choice of pendant, wall, or ceiling mount
- Suitable for paint spray areas; linear light source provides excellent color rendition for paint spray tasks; easy to install, disposable, clear tube wrap helps maintain maximum light output during painting operations
- Threaded construction, factory wiring and sealing help minimize installation time; no external seals are required
- Fixtures are used with two or four long twin tube single-ended fluorescent lamps
- Optional stainless steel guard provides extra protection for lamps and lamp tube
- Optional clear polycarbonate tube provides 360° protection for lamps and lamp tube; ideal for maintenance pit and pharmaceutical applications
- Grounding connection for safety
- Available for 120 or 277 VAC
- Standard electronic ballast



4 lamp with stainless steel wire guard and adjustable reflectors

Certifications and Complies:

- NEC and CEC:
 - Class I, Division 1, Group D
 - Class I, Division 1, Group B, C, D (suffix GB)
 - Class I, Zone 1, Group IIA
 - Class I, Zone 1, Group IIB + H₂ (suffix GB)
 - Class II, Groups E, F, G
 - Class III
 - Simultaneous Presence (Cl. I and Cl. II)
 - Paint Spray

Note: Aiming Limitations

- Cl. II, Cl. III & Simultaneous Presence
 - Aim Down to Horizontal
 - Cannot aim up

UL Standards:

- 844 Hazardous (Classified) Locations
- 1598 Luminaires
- 1598A Marine Locations

- CSA Standards:
 - C22.2 No. 137

Standard Materials:

- Center and ballast housings, end caps – copper-free aluminum
- Lamp tube – heat-resistant glass
- Guards – stainless steel or clear polycarbonate material
- Reflectors – aluminum

Standard Finishes:

- Center and ballast housings, end caps, guards – natural
- Reflectors – white epoxy finish

Temperature Performance Data:

Luminaire Type	Minimum Operating Temp.	Maximum Ambient Temp.	Class I, Division 1 & Zone 1 Class II, Division 1 Simultaneous Presence	Supply Wire
2 and 4 Lamp	10°C (50°F)	40°C (104°F)	T4A	75°C

Options:

Description	Suffix
Fused to protect circuit under abnormal conditions (not available on CSA certified luminaires) (not suitable for marine applications)	S658
Luminaire supplied with lamps.....	S714
Class I, Groups B and C suitability pendant mount only	GB

Electrical Ratings:

- Input voltage – 120 or 277 VAC, 60 Hz
- Wattages – 78 – 2 lamp luminaire
156 – 4 lamp luminaire

Fixture Weights

Illuminator	lbs.
2 lamp with guard	19.5
4 lamp with guards	36.5
RAL1, RAR1 reflectors (each)	3.0
Deduct for luminaire without P51 Guard:	
1 lb. for 2 lamp	
2 lbs. for 4 lamp	

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Cl. I, Zone 1, Groups IIB + H₂
(Suffix B), IIA
Cl. II, Div. 1, Groups E, F, G
Cl. III, Simultaneous Presence

Paint Spray
Marine & Wet Locations
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Ordering Information:

Style	Hub Size (In.)	Luminaire Voltage	Class I Cat. # with Group D Suitability		Class I Cat. # with Group B, C & D Suitability	
			Without Guard	With P51 Guard†	Without Guard	With P51 Guard†
2 Lamp	3/4	120	EVFT22320	EVFT22321	EVFT22320 GB	EVFT22321 GB
	3/4	277	EVFT22370	EVFT22371	EVFT22370 GB	EVFT22371 GB
4 Lamp	3/4	120	EVFT24320	EVFT24321	EVFT24320 GB	EVFT24321 GB
	3/4	277	EVFT24370	EVFT24371	EVFT24370 GB	EVFT24371 GB

†P51 supplied in separate carton.

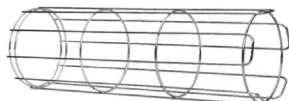
Accessories:

Type	Cat. #
• Stainless steel wire guard.....	P51
• Reflector right hand	RAR1
• Reflector left hand.....	RAL1
• Polycarbonate tube (not used with optional stainless steel wire guard)	PG1
• Disposable clear wrap – 5 pack (for use with optional polycarbonate tube)	PTW1



RAL1 RAR1
Reflectors (as viewed facing front of fixture)

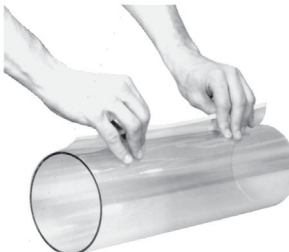
Note: For 4 lamp unit, you must order one of each refractor, if required.



Stainless steel guard



Polycarbonate tube and retaining plate



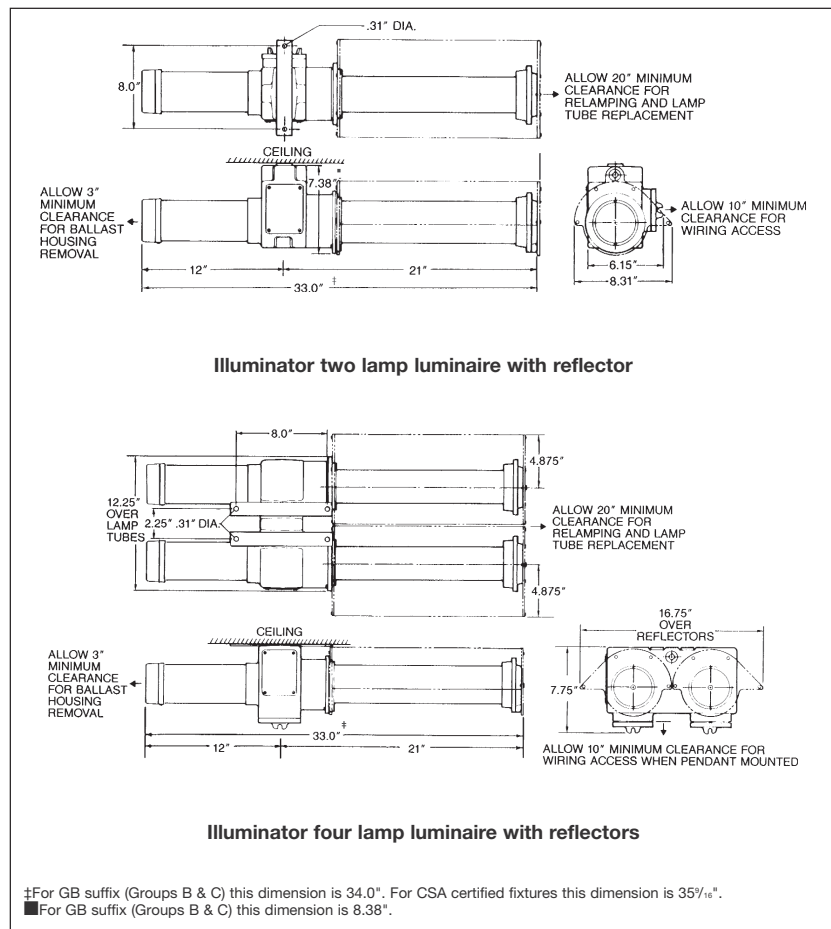
Disposable polyester tube wrap
(used over optional polycarbonate tube)

Aiming Limitations:

In Class II, Class III and Simultaneous Presence locations

- Aim down to horizontal
- To prevent dust from accumulating in reflector, do not aim up
- The Illuminator lighting fixtures are designed for operation with the lamp in a **horizontal to base down position**

Dimensions:



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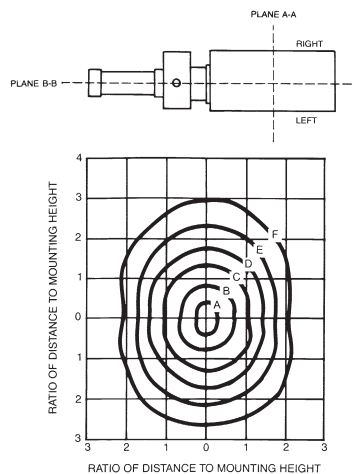
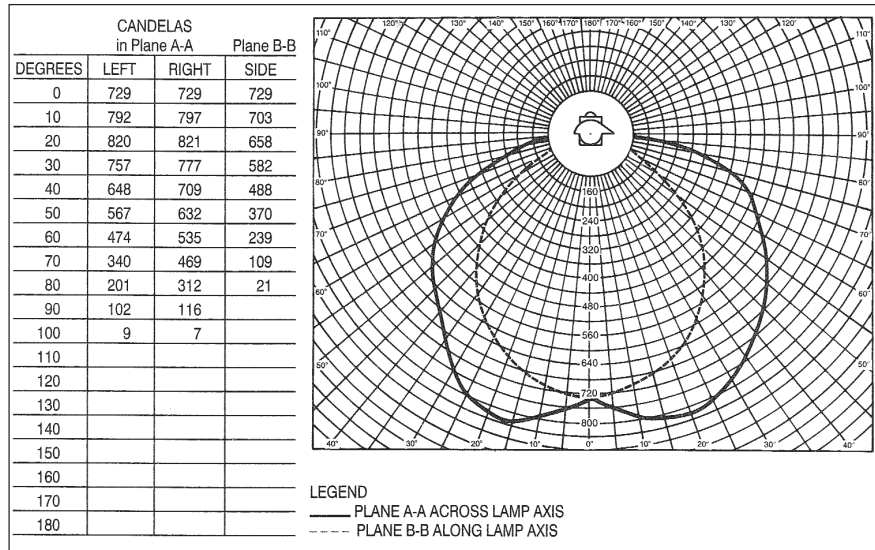
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Photometric Data

Fluorescent Luminaires

Illuminator two lamp luminaire with reflector (without guard)

Lamps: Two 39 watt BIAX* fluorescent

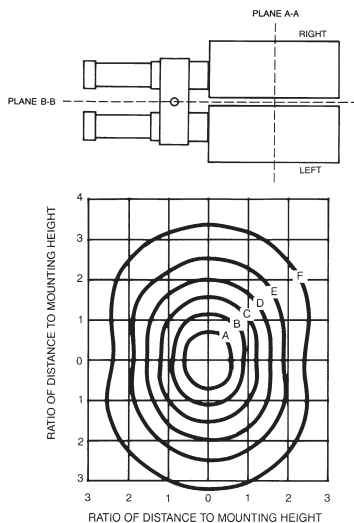
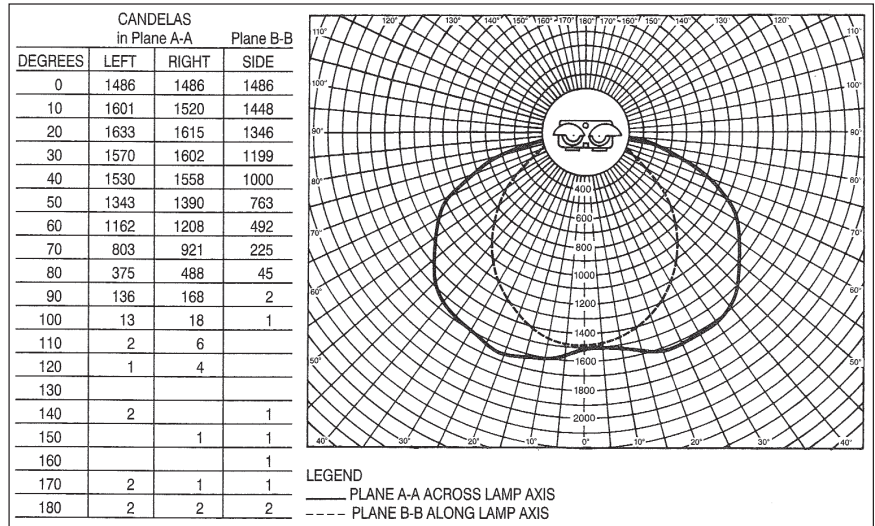


Footcandle Values for Isofootcandle Lines

Mtg. Ht. (ft.)	A	B	C	D	E	F
8	10.0	5.00	2.00	1.00	0.50	0.25
10	6.4	3.20	1.28	0.64	0.32	0.16
12	4.4	2.22	0.89	0.44	0.22	0.11
16	2.5	1.25	0.50	0.25	0.13	0.06

Illuminator four lamp luminaire with reflectors (without guards)

Lamps: Four 39 watt BIAX* fluorescent



Footcandle Values for Isofootcandle Lines

Mtg. Ht. (ft.)	A	B	C	D	E	F
10	8.0	4.00	2.00	1.00	0.50	0.20
12	5.6	2.78	1.39	0.69	0.35	0.14
16	3.1	1.56	0.78	0.39	0.20	0.08
20	2.0	1.00	0.50	0.25	0.13	0.05

*BIAX is a trademark of the General Electric Company.

EVFT Illuminator™ Long Twin Tube

Coefficients of Utilization

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Fluorescent Luminaires

Luminaire: EVFT 22320 with RAR1 Reflector
Lamps: Two F39BX/SPX35/RS
Lumen Rating: 2900 Lumens/Lamp

Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio										
		0	1	2	3	4	5	6	7	8	9	10
80	70	.51	.46	.41	.38	.34	.31	.29	.26	.24	.22	.21
	50	.51	.44	.38	.33	.29	.25	.23	.20	.18	.16	.15
	30	.51	.41	.35	.29	.25	.21	.19	.16	.14	.13	.11
	10	.51	.40	.32	.26	.22	.18	.16	.14	.12	.10	.09
70	70	.49	.45	.40	.37	.33	.30	.28	.26	.24	.22	.20
	50	.49	.43	.37	.32	.28	.25	.22	.20	.18	.16	.14
	30	.49	.41	.34	.29	.25	.21	.18	.16	.14	.12	.11
	10	.49	.39	.31	.26	.22	.18	.16	.14	.12	.10	.09
50	50	.47	.41	.35	.31	.27	.24	.21	.19	.17	.15	.14
	30	.47	.39	.33	.28	.24	.21	.18	.16	.14	.12	.11
	10	.47	.38	.31	.26	.22	.18	.16	.13	.12	.10	.09
30	50	.45	.39	.34	.30	.26	.23	.21	.19	.17	.15	.14
	30	.45	.38	.32	.27	.24	.20	.18	.16	.14	.12	.11
	10	.45	.37	.30	.25	.21	.18	.15	.13	.11	.10	.09
10	50	.43	.37	.33	.29	.25	.22	.20	.18	.16	.14	.13
	30	.43	.36	.31	.27	.23	.20	.17	.15	.13	.12	.10
	10	.43	.35	.29	.25	.21	.18	.15	.13	.11	.10	.08
0	0	.43	.35	.28	.24	.20	.17	.14	.12	.10	.09	.08

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

Luminaire: EVFT 24320 with RAR1 & RAL1 Reflectors
Lamps: Four F39BX/SPX35/RS
Lumen Rating: 2900 Lumens/Lamp

Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio										
		0	1	2	3	4	5	6	7	8	9	10
80	70	.48	.44	.40	.37	.33	.30	.28	.26	.24	.22	.20
	50	.48	.42	.37	.32	.29	.25	.22	.20	.18	.16	.15
	30	.48	.40	.34	.29	.25	.21	.19	.16	.14	.13	.11
	10	.48	.39	.31	.26	.22	.19	.16	.14	.12	.10	.09
70	70	.47	.43	.39	.36	.33	.29	.27	.25	.23	.21	.20
	50	.47	.41	.36	.32	.28	.25	.22	.20	.18	.16	.14
	30	.47	.40	.33	.29	.25	.21	.18	.16	.14	.12	.11
	10	.47	.38	.31	.26	.22	.18	.16	.14	.12	.10	.09
50	50	.45	.39	.34	.30	.27	.24	.21	.19	.17	.15	.14
	30	.45	.38	.32	.28	.24	.21	.18	.16	.14	.12	.11
	10	.45	.37	.30	.26	.22	.18	.16	.14	.12	.10	.09
30	50	.43	.38	.33	.29	.26	.23	.20	.18	.17	.15	.14
	30	.43	.37	.31	.27	.23	.20	.18	.16	.14	.12	.11
	10	.43	.36	.30	.25	.21	.18	.16	.13	.12	.10	.09
10	50	.41	.36	.32	.28	.25	.22	.20	.18	.16	.14	.13
	30	.41	.35	.30	.26	.23	.20	.17	.15	.13	.12	.11
	10	.41	.35	.29	.25	.21	.18	.15	.13	.12	.10	.09
0	0	.41	.34	.28	.24	.20	.17	.15	.13	.11	.09	.08

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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