

EVI Series Explosionproof Incandescent Luminaires

Factory Sealed 100–500W Medium and Mogul Base

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 & 2, Group IIB
Cl. II, Groups E, F, G (Max
150W–Med. base)

Cl. III & Simultaneous Presence
(Max 150W–Med. base)
Marine and Wet Locations
Type 4X; IP66

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Applications:

EVI series incandescent luminaires are used:

- For Type 4X, marine, wet location and hose down environments.
- Where a consistent light level relatively unaffected by extremes in ambient temperature (–40°C to +65°C) is required.
- In areas that require lamps to reach full illumination immediately.
- In areas that require lamps to be frequently turned on and off.
- Indoors and outdoors in locations which are hazardous due to the presence of flammable vapors or gases, ignitable dusts, or ignitable fibers and flyings.
- Where a luminaire is required for tough environmental conditions involving corrosives, water, dust and extreme temperatures.
- Manufacturing plants, heavy industrial facilities, industrial process facilities such as refineries, chemical, petrochemical, pharmaceutical and platforms.
- For lighting of loading docks, tunnels, stairways, storage closets and task lighting.

Features:

- Ambient suitability to 65°C.
- Standard 90°C rated building wire for 150W max 40°C ambient application – represents more than 75% of all applications.
- Type 4X, marine outdoor locations.
- Factory sealed – no external seals required.
- Quick connect – fixture threads onto the mounting module for easy installation.
- One size luminaire for all medium base incandescent lamps through 300W.
- One size luminaire for all mogul base incandescent lamps through 500W.
- Small compact size – ceiling mount is 13¾" long.
- Shock absorbing receptacle.
- Easy to assemble and relamp.
- Silicone gaskets seal out dirt and moisture.
- Epoxy powder coat for corrosion resistance.
- Same mounting modules as used with the EVM and EVLP series.

Certifications and Complies:

- NEC & CEC:
 - Class I, Division 1, Groups C, D
 - Class I, Zone 1, Group IIB
 - Class II, Groups E, F, G
 - Marine Locations, Wet Locations, Enclosure Type 4X, IP66
- UL Listed
- cUL Listed (Certified by UL to CSA Standards)
- NEC:
 - Class III; Simultaneous Presence
- UL Standards:
 - 844 Electric Fixture Hangers for Hazardous Locations
 - 1598 Luminaires
 - 1598A Luminaires for Installation on Marine Vessels
- CSA Standards:
 - C22.2 No. 137

Standard Materials:

- Body, mounting modules and guard – copper-free aluminum
- Globe – heat and impact-resistant glass
- Gaskets – silicone
- External hardware – stainless steel
- Reflectors – Krydon® fiberglass-reinforced polyester

Standard Finishes:

- Copper-free aluminum – Corro-free™ epoxy powder coat
- Stainless steel – Natural
- Krydon® reflectors – High reflectance white

Electrical Ratings:

Sources/Wattages

- Medium Base – Maximum 300W (PS25)
- Mogul Base – Maximum 500W (PS40)

Voltages

- Medium Base 120V (250V with suffix /250)
- Mogul Base 277V

Hub Size

- ¾" or 1" NPT pendant, ceiling, wall mount
- ¾" NPT bulkhead mount

Options:

Description	Suffix
• 250V luminaire for export applications (medium base only)	/250

Accessories:

- Reflectors – For Ordering by Components see page 883.









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**Factory Sealed
100–500W Medium and Mogul Base**

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 & 2, Group IIB
Cl. II, Groups E, F, G (Max 150W–Med. base)

Cl. III & Simultaneous Presence
(Max 150W–Med. base)
Marine and Wet Locations
Type 4X; IP66

Mounting Style	Hub Size	EVI301 Series Medium Base with EV505 Guard (Max. 300W PS25)	EVI501 Series Mogul Base with EV503 Guard (Max. 500W PS40)
	3/4"	EVIA2301	EVIA2501
	1"	EVIA3301	EVIA3501
	3/4"	EVICX2301	EVICX2501
	1"	EVICX3301	EVICX3501
	3/4"	EVIBX2301	EVIBX2501
	1"	EVIBX3301	EVIBX3501
	3/4"	EVIBH2301	—
	1"	—	—
	1 1/4"	EVIJ4301	EVIJ4501
		EVI301	EVI501

Note: Medium base luminaires (EVI301 Series) – For A19 lamps up to 100W, use Leviton socket extension Leviton catalog number 2005.
Mogul base luminaires (EVI501 Series) – For PS30 medium base lamps, use Eaton's Wiring Devices socket adapter catalog number 332.

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EVI Series Explosionproof Incandescent Luminaires

Ordering By Components

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Factory Sealed 100–500W Medium and Mogul Base

EVI Luminaires are available in components.

A complete luminaire consists of:

- I. Mounting Module
- II. EVI Luminaire Body and Globe Assembly
- III. Guard, Reflector

I. Mounting Module:

Type	Conduit	Cat. #
Pendant	3/4"	EVMP2
	1"	EVMP3
Ceiling and Wall Box	3/4"	EV22
	1"	EV33
Wall Bracket Arm	3/4"	EV22 & EV87
	1"	EV33 & EV87
Stanchion	1 1/4"	EVMJ4
Bulk Head	3/4"	EVIJ2

II. Luminaire Body and Globe Assembly with Guard:

Type	Cat. #
Medium Base	EVI301
Mogul Base	EVI501

III. Guards and Reflectors:

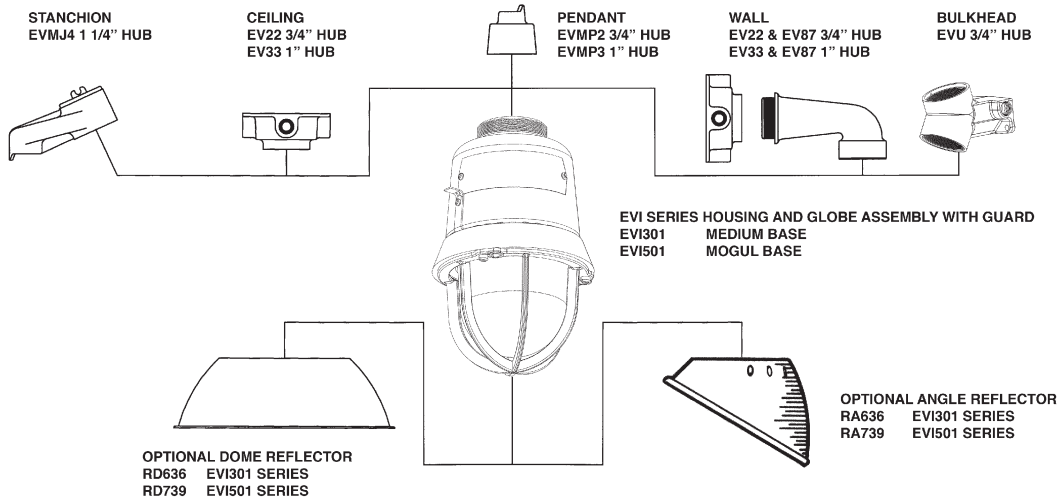
Type	Cat. #
Guard – Fits EVI301 Series (medium base)	EV505
Guard – Fits EVI501 Series (mogul base)	EV503
Dome Reflector – Fits EVI301 Series (medium base)	RD636
Angle Reflector – Fits EVI301 Series (medium base)	RA636
Dome Reflector – Fits EVI501 Series (mogul base)	RD739
Angle Reflector – Fits EVI501 Series (mogul base)	RA739

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EVI Series Explosionproof Incandescent Luminaires

Family Tree
Temperature Performance Data

Factory Sealed 100–500W Medium and Mogul Base



Temperature Performance Data:

Type	Watts/Lamp	Class I, Div. 1 (Class I, Zone 1)			Class II Ambient	Simultaneous Presence Ambient	Supply Wire Temp (°C)		
		Ambient					Ambient		
EVI301 Medium Base	100W/A21 or A19	40°C	55°C	65°C	40°C	40°C	40°C	55°C	65°C
	150W/A21	T4	T3C	T3C	T3C	T3C	90°C	105°C	125°C
	200W/A23 or A25	T4	T3C	T3C	T3C	T3C	90°C	105°C	125°C
	300W/PS25	T3	T2D	T2C	—	—	105°C	125°C	125°C
EVI501 Mogul Base	200W/PS30	T3	T2D	T2C	—	—	105°C	125°C	125°C
	300W/PS35	T4A	T4	T4	T3A	T3A	90°C	90°C	105°C
	500W/PS40	T4	T3C	T3C	—	—	90°C	90°C	105°C
		T3A	T3	T3	—	—	105°C	125°C	125°C

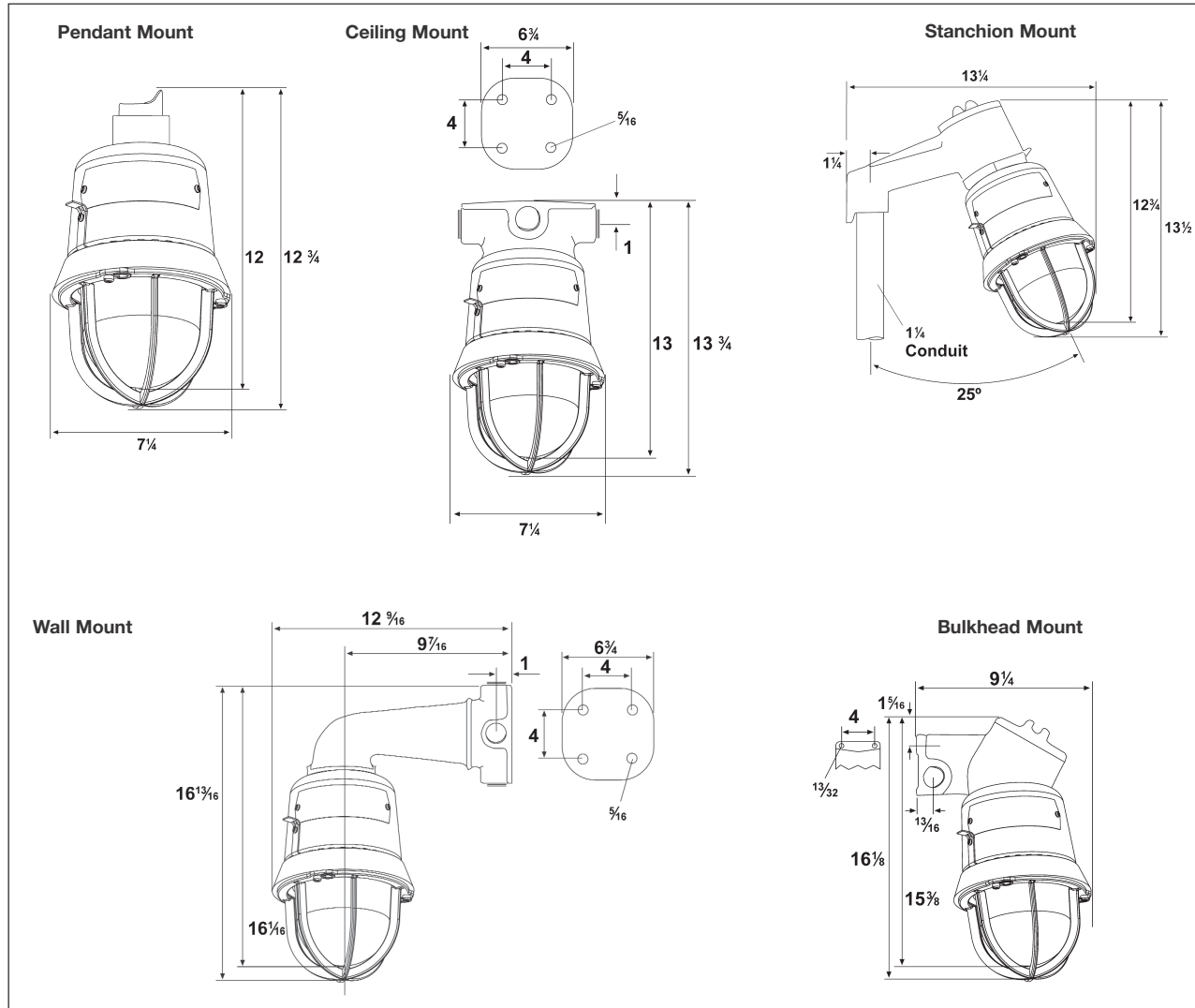
EVI Series Explosionproof Incandescent Luminaires

Medium Base Dimensions and Weights

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Factory Sealed
100–500W Medium and Mogul Base

Medium Base EVI Luminaire
Dimensions In Inches:



Medium Base Net Luminaire Weights (lbs.):

EVI301 with guard

11 lbs.

Add mounting modules:

Pendant	1.0 lbs.
Ceiling	2.0 lbs.
Wall	4.5 lbs.
Bulkhead	2.2 lbs.
Stanchion	2.5 lbs.

Add for reflectors:

RD636 (Dome Reflector, Small)	1.5 lbs.
RA636 (Angle Reflector, Small)	1.0 lbs.
RD739 (Dome Reflector, Small)	2.0 lbs.
RA739 (Angle Reflector, Small)	1.4 lbs.

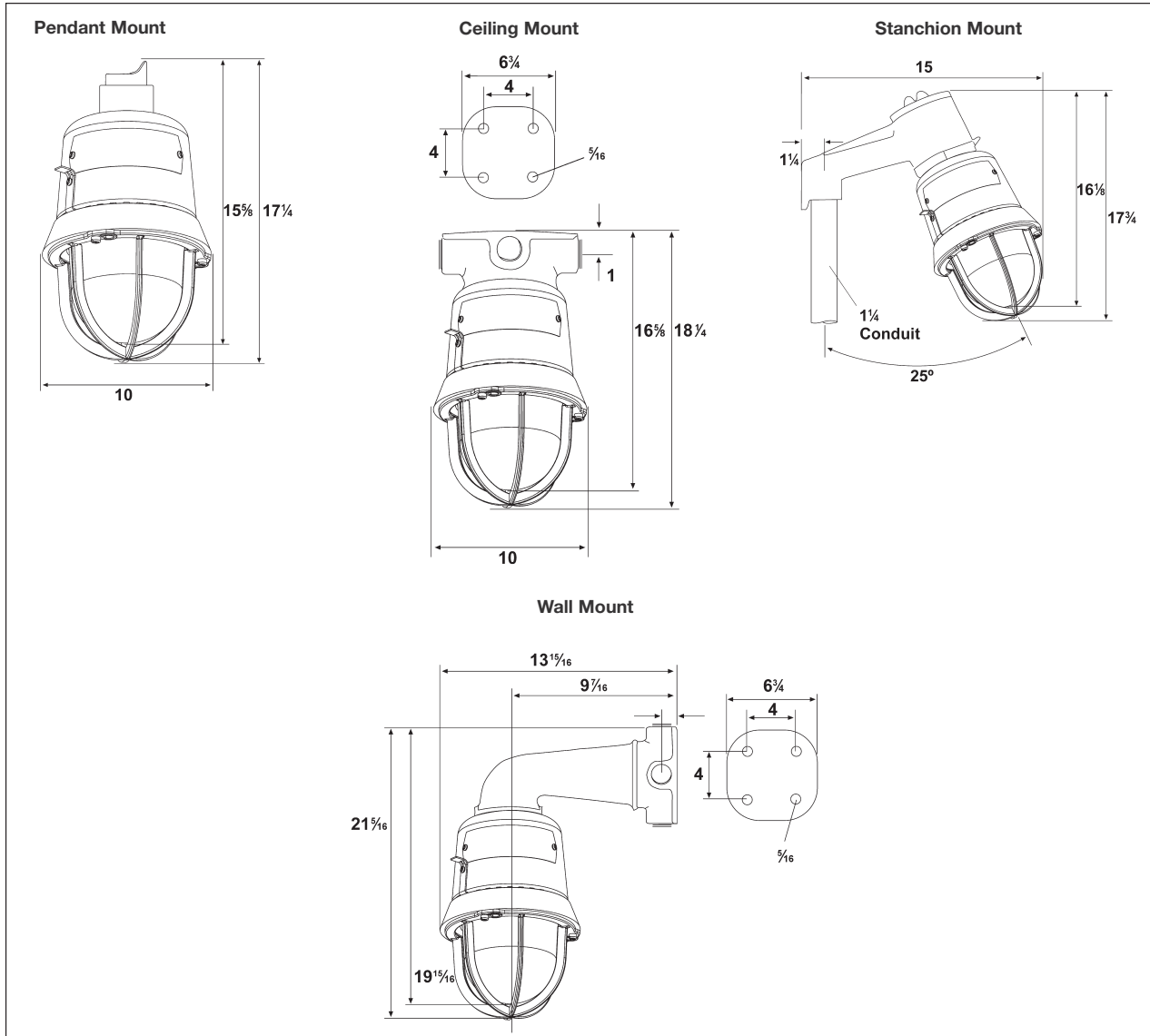


1L EVI Series Explosionproof Incandescent Luminaires

Mogul Base Dimensions and Weights

Factory Sealed
100–500W Medium and Mogul Base

Mogul Base EVI Luminaire Dimensions In Inches:



Mogul Base Net Luminaire Weights (lbs.):

EVI501 with guard 24 lbs.

Add mounting modules:

Pendant 1.0 lbs.
Ceiling 2.0 lbs.
Wall 4.5 lbs.
Bulkhead 2.2 lbs.
Stanchion 2.5 lbs.

Add for reflectors:

RD636 (Dome Reflector, Small) 1.5 lbs.
RA636 (Angle Reflector, Small) 1.0 lbs.
RD739 (Dome Reflector, Small) 2.0 lbs.
RA739 (Angle Reflector, Small) 1.4 lbs.

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EVI Series Explosionproof Incandescent Luminaires

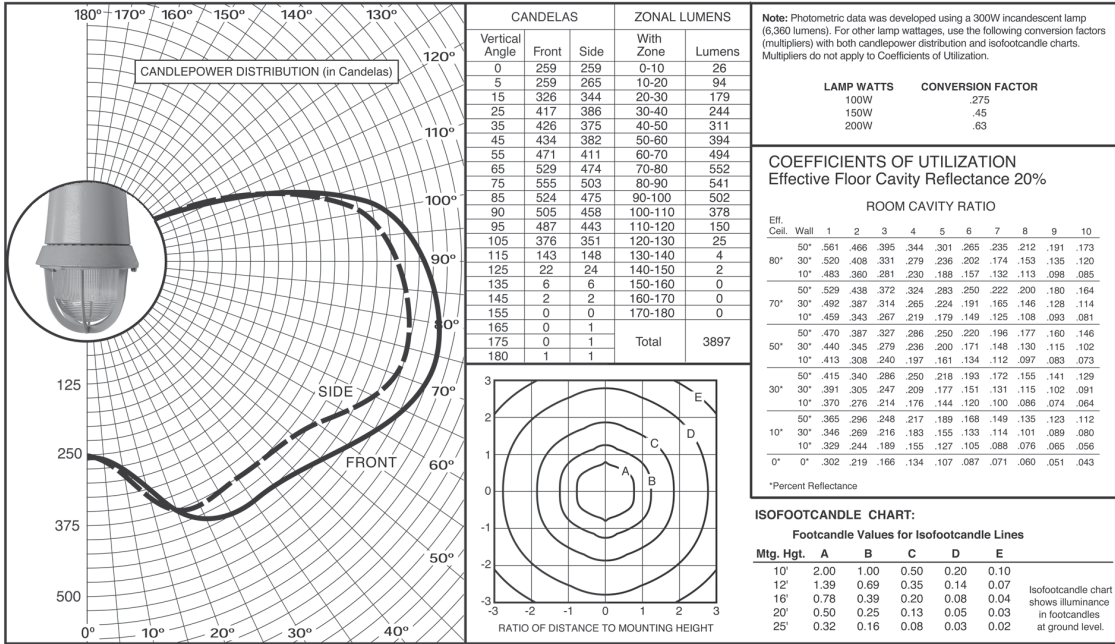
Photometric Data

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Factory Sealed
100-500W Medium and Mogul Base

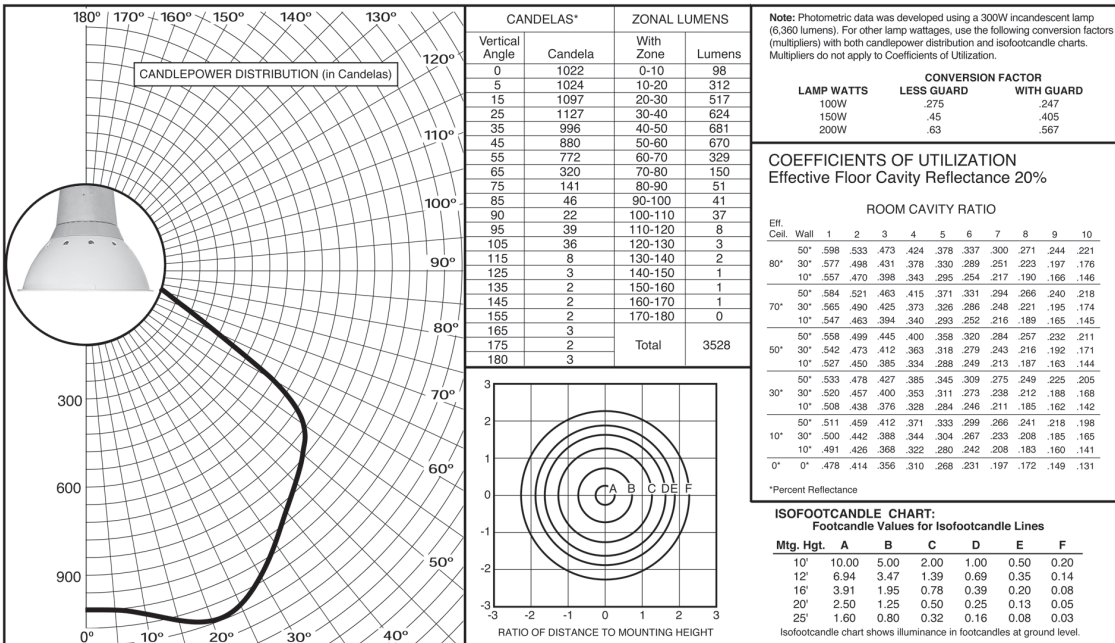
Medium Base

Luminaire with Globe and Guard
EVICX2301 Lamp: 300W/PS25 Incandescent



Medium Base

Luminaire with Globe and Dome Reflector (Less Guard)
EVICX2300 Lamp: 300W/PS25 Incandescent



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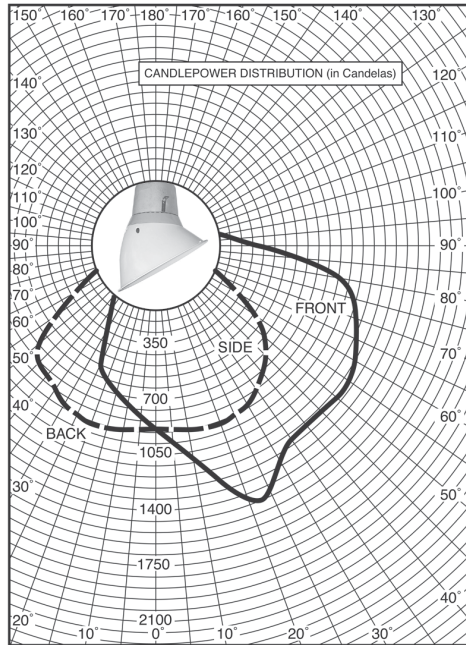
EVI Series Explosionproof Incandescent Luminaires

Photometric Data

Factory Sealed
100-500W Medium and Mogul Base

Medium Base

Luminaire with Globe and 30° Angle Reflector (Less Guard)
EVICX2300 Lamp: 300W/PS25 Incandescent

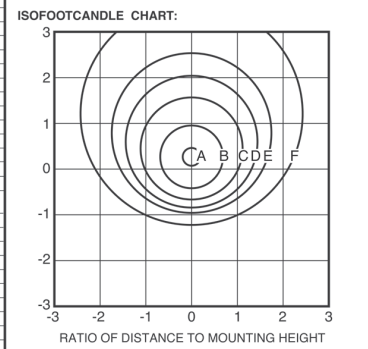


CANDELAS*			
Degrees	Front	Side	Back
0	891	891	891
5	977	895	812
15	1264	927	700
25	1434	907	573
35	1227	835	256
45	1207	758	124
55	1226	432	33
65	1129	197	4
75	1040	96	7
85	673	29	15
90	365	8	32
95	221	8	59
105	96	8	83
115	22	7	24
125	0	6	5
135	0	5	5
145	0	4	2
155	3	6	3
165	2	5	2
175	2	5	3
180	5	5	5

ZONAL LUMENS	
Zone	Lumens
0-10	86
10-20	268
20-30	435
30-40	501
40-50	520
50-60	499
60-70	432
70-80	331
80-90	175
90-100	86
100-110	46
110-120	12
120-130	4
130-140	3
140-150	2
150-160	2
160-170	1
170-180	0
Total	3403

Note: Photometric data was developed using a 300W incandescent lamp (6,360 lumens). For other lamp wattages, use the following conversion factors (multipliers) with both candlepower distribution and isofootcandle charts.

LAMP WATTS	CONVERSION FACTOR	
	LESS GUARD	WITH GUARD
100W	.275	.247
150W	.45	.405
200W	.63	.567



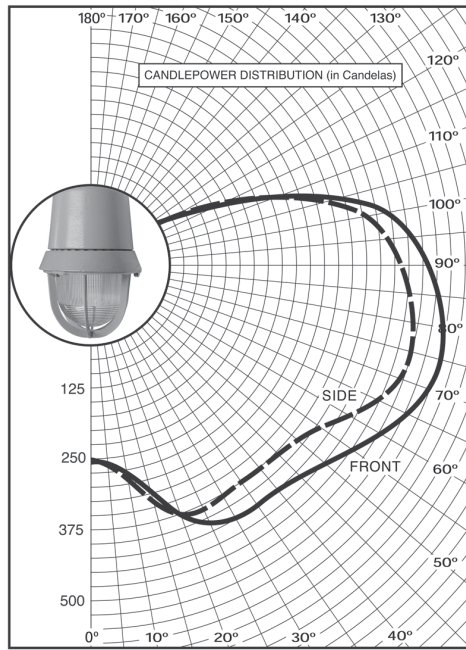
Footcandle Values for Isofootcandle Lines

Mtg. Hgt.	A	B	C	D	E	F
10'	10.00	5.00	2.00	1.00	0.50	0.20
12'	6.94	3.47	1.39	0.69	0.35	0.14
16'	3.91	1.95	0.78	0.39	0.20	0.08
20'	2.50	1.25	0.50	0.25	0.13	0.05
25'	1.60	0.80	0.32	0.16	0.08	0.03

Isofootcandle chart shows illuminance in footcandles at ground level.

Mogul Base

Luminaire with Globe and Guard
EVIA2501 Lamp: 500W/PS40 Incandescent



CANDELAS				ZONAL LUMENS	
Vertical Angle	Front	Side	With Zone	Lumens	
0	259	259	0-10	26	
5	259	265	10-20	94	
15	326	344	20-30	179	
25	417	386	30-40	244	
35	426	375	40-50	311	
45	434	382	50-60	394	
55	471	411	60-70	494	
65	529	474	70-80	552	
75	555	503	80-90	541	
85	524	475	90-100	502	
90	505	458	100-110	378	
95	487	443	110-120	150	
105	376	351	120-130	25	
115	143	148	130-140	4	
125	22	24	140-150	2	
135	6	6	150-160	0	
145	2	2	160-170	0	
155	0	0	170-180	0	
165	0	1			
175	0	1			
180	1	1	Total	3897	

Note: Photometric data was developed using a 300W incandescent lamp (6,360 lumens). For other lamp wattages, use the following conversion factors (multipliers) with both candlepower distribution and isofootcandle charts. Multipliers do not apply to Coefficients of Utilization.

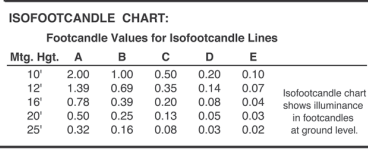
LAMP WATTS	CONVERSION FACTOR	
	LESS GUARD	WITH GUARD
100W	.275	.247
150W	.45	.405
200W	.63	.567

COEFFICIENTS OF UTILIZATION
Effective Floor Cavity Reflectance 20%

ROOM CAVITY RATIO

Eff. Ceff.	Wall	1	2	3	4	5	6	7	8	9	10
50°	50°	.561	.466	.395	.344	.301	.265	.235	.212	.191	.173
80°	30°	.520	.408	.331	.279	.236	.202	.174	.153	.135	.120
10°	.483	.360	.281	.230	.188	.157	.132	.113	.098	.085	.080
50°	50°	.629	.438	.372	.324	.283	.250	.222	.200	.180	.164
70°	30°	.492	.387	.314	.265	.224	.191	.165	.146	.128	.114
10°	.459	.343	.267	.219	.179	.149	.125	.108	.093	.081	.081
50°	50°	.470	.387	.327	.286	.250	.220	.196	.177	.160	.146
30°	.440	.345	.279	.236	.200	.171	.148	.130	.115	.102	.102
10°	.413	.308	.240	.197	.161	.134	.112	.097	.083	.073	.073
50°	50°	.415	.340	.286	.250	.219	.193	.172	.155	.141	.129
30°	30°	.391	.305	.247	.209	.177	.151	.131	.115	.102	.091
10°	.370	.276	.214	.176	.144	.120	.100	.086	.074	.064	.064
50°	50°	.365	.296	.248	.217	.189	.168	.149	.135	.123	.112
10°	30°	.346	.269	.216	.183	.155	.133	.114	.101	.089	.080
10°	.329	.244	.189	.155	.127	.105	.088	.076	.065	.056	.056
0°	0°	.302	.219	.166	.134	.107	.087	.071	.060	.051	.043

*Percent Reflectance



Footcandle Values for Isofootcandle Lines

Mtg. Hgt.	A	B	C	D	E
10'	2.00	1.00	0.50	0.20	0.10
12'	1.39	0.69	0.35	0.14	0.07
16'	0.78	0.39	0.20	0.08	0.04
20'	0.50	0.25	0.13	0.05	0.03
25'	0.32	0.16	0.08	0.03	0.02

Isofootcandle chart shows illuminance in footcandles at ground level.

EVI Series Explosionproof Incandescent Luminaires

Photometric Data

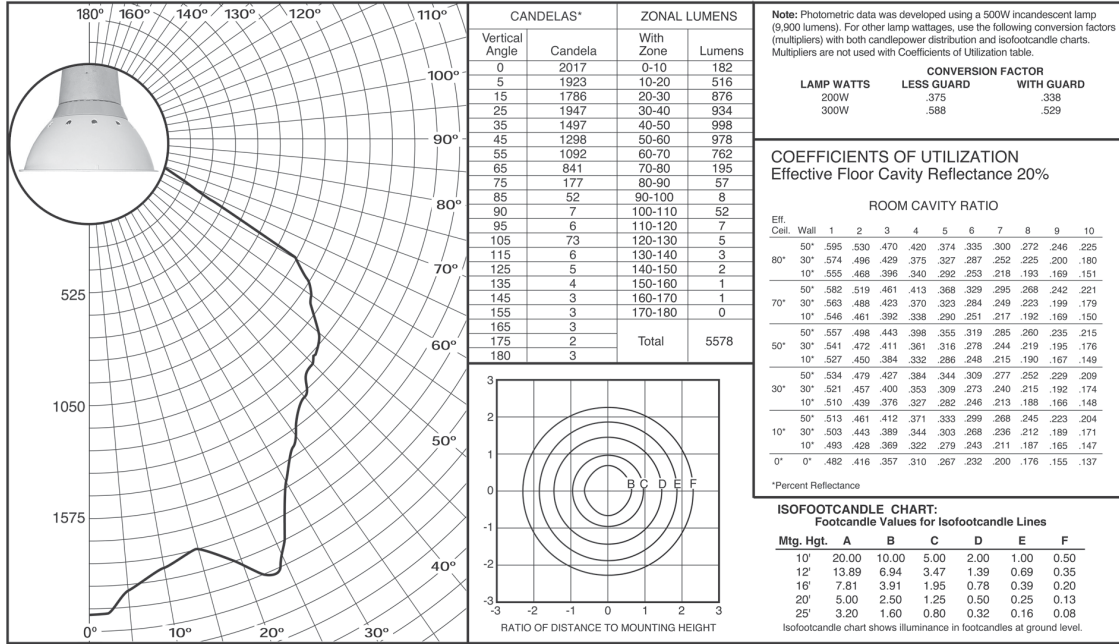
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**Factory Sealed
100-500W Medium and Mogul Base**

Mogul Base

Luminaire with Globe and Dome Reflector (Less Guard)

EVI A2500 Lamp: 500W/PS40 Incandescent



Mogul Base

Luminaire with Globe and Angle Reflector (Less Guard)

EVI A2500 Lamp: 500W/PS40 Incandescent

