

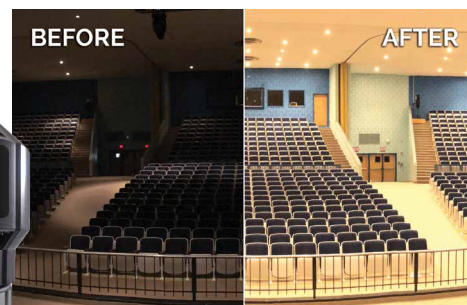
RETRO-Fusion™ 2.0 500

500W Incandescent Replacement LED Engine
120V • 230V • 240VAC

Energy efficient LED Light Engine

Designed to retrofit directly into existing fixtures.

The RETRO-Fusion 2.0 is a TUV listed, Energy Star 2.0 retrofit kit that rapidly transforms existing inefficient incandescent fixtures into energy efficient LED fixtures. Our patented technology allows the fixture to smoothly dim from 0-100% utilizing existing dimming technology. Retrofit kits are available with a variety of options for both recessed and pendant style fixtures. Installation is as easy as changing a light bulb. Our LED technology creates even fields and delivers consistent color. The RETRO-Fusion 2.0 500 delivers more light than most 500 watt incandescent bulbs it replaces with only a 49 watt load.



Fairfax High School, Fairfax, Virginia
105 RETRO 500s at 3000K
Installed by Artistic Concepts Group

What the Fusion 2.0 IS

- More cost effective than fixture replacement
- Large lumen output for this section of the market
- Listed for screw in replacement
- Field swappable bases
- Removable safety cable
- Energy Star certified 2.0
- Dims on existing dimming systems with no additional installation of control system
- 0-100% dimming without flicker, pulse, or stepping
- 80+ High CRI

Electrical Data

- 49 Watts (49.07)
- Power Factor (PF) .9955
- Lumens: 5676 @ 2700K
- Lumens per watt: 115.67
- LM 70: >50,000 Hours
- CRI@2700K: 82,R9+4.9
- 1 lb 12.9 oz - 15.1 w/Reflector (.820-.905 kg)

Applications

- 9 feet to 50 feet high ceilings (2.75 - 15.25 meter high ceilings)
- Where dimming is a key concern
- Where there is no desire or budget to replace existing fixtures
- Where access is limited
- Where Energy Star is required
- Where a custom solution is required
- Where the ceiling cannot be disturbed

Typical Installations

- Auditoriums
- Houses of worship
- Arenas
- Lobbies
- Museums
- Educational facilities
- Convention centers

Base Types

| |
|-----------------------|
| E26 - Edison |
| E11 - Mini Candelabra |
| E39 - Mogul * |
| BA15D * |
| Par Ring/Bare Wire |
| Bi-Pin |
| Custom Options |

CCT Lumen Output

| |
|--------------------|
| 2700K: 5676 Lumens |
| 3000K: 6024 Lumens |
| 3500K: 6239 Lumens |
| 4000K: 6309 Lumens |
| 5000K: 6372 Lumens |

Fixture Lenses

| |
|------------------|
| Tall 15 Degrees |
| Tall 23 Degrees |
| Tall 46 Degrees |
| Short 26 Degree |
| Short 40 Degree |
| Short 59 Degrees |
| Short 70 Degrees |
| None 120 Degrees |

Color Temp

| |
|------------------|
| 2700K - |
| 3000K - Standard |
| 3500K - |
| 4000K - |
| 5000K - |

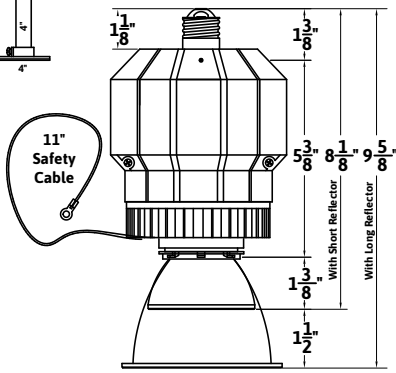
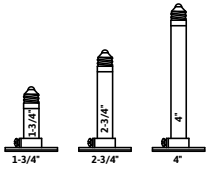
*E39 and BA15D require an E26 base with adaptors used to make this unit compatible with these base types.

* Chips with a CRI greater than 80 are an additional 6 weeks beyond standard delivery

RETRO-Fusion™ 2.0 500

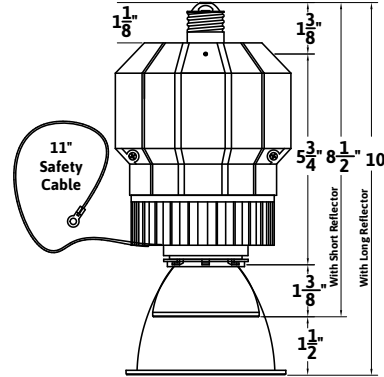
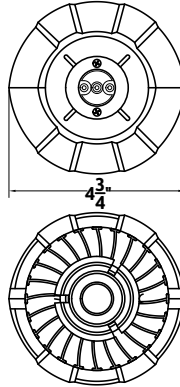
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Fixture Drawing



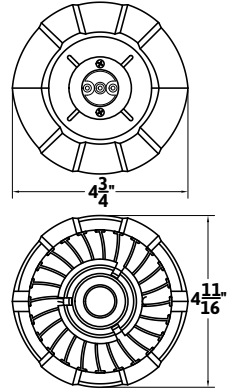
Short

**Weight: 1lb 12.9oz w/Reflector
.820 kg w/Reflector**



Tall

**Weight: 1lb 15.1oz w/Reflector
.905 kg w/Reflector**



Photometrics (R500) 3,000K

Multiplication Factor for Color Temperature

- to convert to 2,700 Kelvin - fc X .9488
- to convert to 3,500 Kelvin - fc X 1.0196
- to convert to 4,000 Kelvin - fc X 1.0439
- to convert to 5,000 Kelvin - fc X 1.0617

To Solve Footcandles
Over A Distance

$$\text{Peak Output} \div (\text{Distance} \times \text{Distance})$$

To Solve Area Over A
Distance

$$\text{Distance} \times \text{Mult. Factor}$$

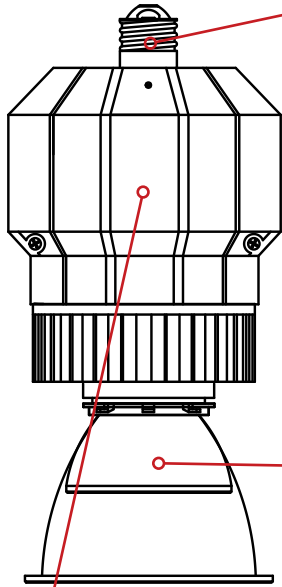
| Mult. Factor 0.4617 | 26° Diameter | Peak Output 10,817fc | Mult. Factor 0.7279 | 40° Diameter | Peak Output 7,086fc | Mult. Factor 1.1315 | 59° Diameter | Peak Output 4,386c | Mult. Factor 1.4004 | 70° Diameter | Peak Output 2,568c |
|------------------------|-----------------|-------------------------|------------------------|-----------------|-------------------------|------------------------|-----------------|------------------------|------------------------|------------------|------------------------|
| Distance | | Foot Candles | Distance | | Foot Candles | Distance | | Foot Candles | Distance | | Foot Candles |
| 8' | 4' | 172 | 8' | 6' | 109 | 8' | 9' | 69 | 8' | 11' | 43 |
| 10' | 5' | 109 | 10' | 7' | 70 | 10' | 11' | 44 | 10' | 14' | 25 |
| 20' | 9' | 26 | 20' | 15' | 17 | 20' | 23' | 10 | 20' | 28' | 7 |
| 30' | 14' | 12 | 30' | 22' | 8 | 30' | 34' | 5 | 30' | 42' | 3 |
| 40' | 18' | 7 | 40' | 29' | 5 | 40' | 45' | 3 | 40' | 56' | 1 |
| Mult. Factor 0.2633 | 15° Diameter | Peak Output 20,965fc | Mult. Factor 0.4069 | 23° Diameter | Peak Output 11,313fc | Mult. Factor .8489 | 46° Diameter | Peak Output 5,115fc | Mult. Factor 3.4641 | 120° Diameter | Peak Output 1,637fc |
| Distance | | Foot Candles | Distance | | Foot Candles | Distance | | Foot Candles | Distance | | Foot Candles |
| 8' | 2' | 328 | 8' | 3' | 262 | 8' | 7' | 80 | 8' | 28' | 26 |
| 10' | 3' | 210 | 10' | 4' | 168 | 10' | 8' | 51 | 9' | 31' | 20 |
| 20' | 5' | 52 | 20' | 8' | 42 | 20' | 17' | 13 | 10' | 35' | 16 |
| 30' | 8' | 23 | 30' | 12' | 19 | 30' | 25' | 6 | 12' | 42' | 11 |
| 40' | 11' | 13 | 40' | 16' | 10 | 40' | 34' | 3 | 15' | 52' | 7 |
| | | | | | | | | | 20' | 69' | 4 |

Contact your local representative or dealer for IES files.



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TOPS

| TOP | TYPE | LENGTH |
|---------|----------------|---|
| TOP _ _ | E26 | 1.35" min, 1.5" + increase in 1/4" increments |
| TOP _ _ | E11 | 1.75", 2.75" or 4" |
| TOP _ _ | BW (Bare Wire) | 12" min, increase in 6" increments |
| TOP _ _ | PP (Par Plug) | 10" standard unless specified |
| TOP _ _ | JB (JBox) | 0.00" (Flush mount) |

____ + _ + _____ + _ + _____
TOP TYPE LENGTH

PART NUMBER EXAMPLE: **TOP_E26_4.25** OR **TOP_PP_10**

REFLECTORS

| REFLECTOR | DEGREE | REFLECTOR HEIGHT S = SHORT OR T = TALL |
|-----------|--------|---|
| REF _ _ | 15 | T |
| REF _ _ | 23 | T |
| REF _ _ | 26 | S |
| REF _ _ | 40 | S |
| REF _ _ | 46 | T |
| REF _ _ | 59 | S |
| REF _ _ | 70 | S |
| REF _ _ | WW | S |

____ + _ + _____ + _ + _____
REFLECTOR DEGREE REFLECTOR HEIGHT

PART NUMBER EXAMPLE: **REF_15_T** OR **REF_59_S**

RETRO

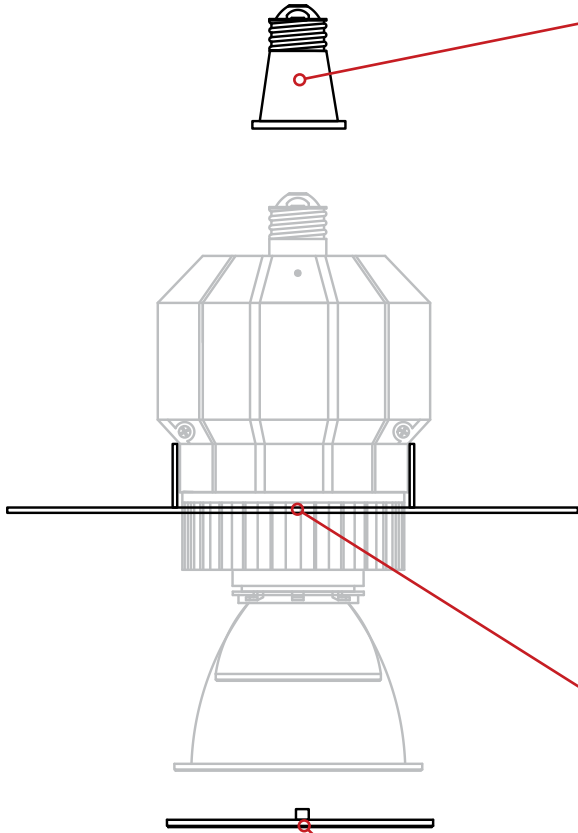
| LIGHT | VOLTAGE | DRIVER WATTAGE | SINK SIZE | COLOR TEMP | CRI |
|--------|---------|----------------|--------------|------------|-----|
| F2 _ _ | 120 | 500 | X (Standard) | 2.7K | 80 |
| _ _ | 230 | _ | _ | 3.0K | 90 |
| _ _ | _ | _ | _ | 3.5K | 97 |
| _ _ | _ | _ | _ | 4.0K | _ |
| _ _ | _ | _ | _ | 5.0K | _ |

____ + _ + _____ + _ + _____ + _ + _____ + _ + _____ + _ + _____
LIGHT VOLTAGE DRIVER WATTAGE SINK SIZE COLOR TEMP CRI

PART NUMBER EXAMPLE: **F2_110_1000X_2.7K_80** OR **F2_230_1000X_4.0K_90**

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ADAPTER & EXTENDER OPTIONS

| ADAPTER OR EXTENSION | TYPE | DESCRIPTION |
|----------------------|---------|-------------------------------|
| ADP | BAYONET | Adapter BA15D Double Bayonet |
| ADP | MOGUL | Adapter E39 To E26 Mogul |
| EXT | 1.25 | Extender 1.25 Inch E26 To E26 |
| EXT | 2.5 | Extender 2.50 Inch E26 To E26 |

_____ + _____ + _____
ADP or EXT TYPE

PART NUMBER EXAMPLE: **ADP_BAYONET** OR **EXT_1.25**

PAR RING OPTIONS

| RING SIZE | F2 TYPE | FIXED OR ADJUSTABLE | KIT |
|-----------|---------|---------------------|-----|
| PAR46 | 3571 | FIXED | KIT |
| PAR56 | 3571 | ADJUST | KIT |
| PAR64 | 3571 | ADJUST | KIT |
| PAR46 | 150T | FIXED | KIT |
| PAR56 | 150T | ADJUST | KIT |
| PAR64 | 150T | ADJUST | KIT |

_____ + _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____
RING SIZE F2 TYPE FIXED OR ADJUSTABLE KIT

PART NUMBER EXAMPLE: **PAR56_3571_ADJUST_KIT** OR **PAR46_150T_FIXED_KIT**

DIFFUSERS

| DIFFUSER | SIZE/TYPE | KIT (IF APPLICABLE) |
|----------|-----------|---------------------|
| DIF | SMALL | |
| DIF | LARGE | |
| DIF | ZORYA | |
| DIF | SMALL | KIT |
| DIF | LARGE | KIT |

_____ + _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____
DIFFUSER SIZE/TYPE KIT (IF APPLICABLE)

PART NUMBER EXAMPLE: **DIF_ZORYA** OR **DIF_LARGE_KIT**

