

TECHNICAL DESCRIPTION

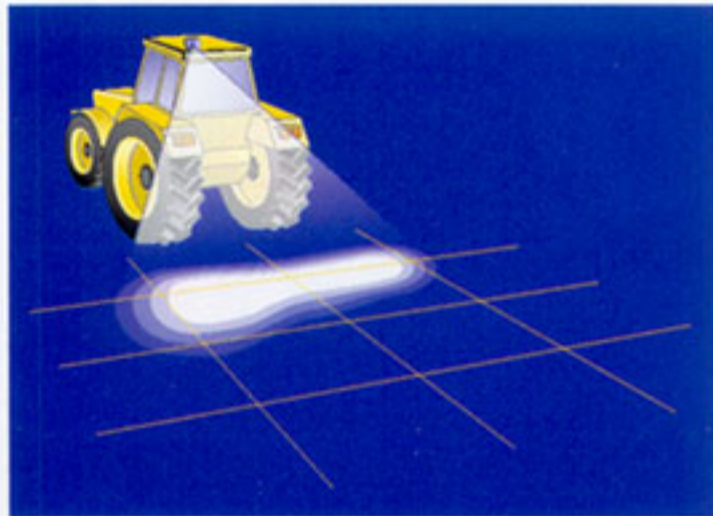
Light sources have evolved over time from the primitive wood fire, the oil lamp, the candle, and the petroleum and gas lamp to our modern electrical light sources, bulbs, and gas discharge bulbs. Diverse types of lamps, which have been developed for this purpose, have thereby been created; the dipped-beam lamp for driving in the dark, main beam and fog lamps for various applications.

The work lamp has been designed especially for working in conditions of low light or in the dark.

The normal mounting height of dipped beam, main beam, and fog lamps parallel to the road surface, guarantees optimum illumination.



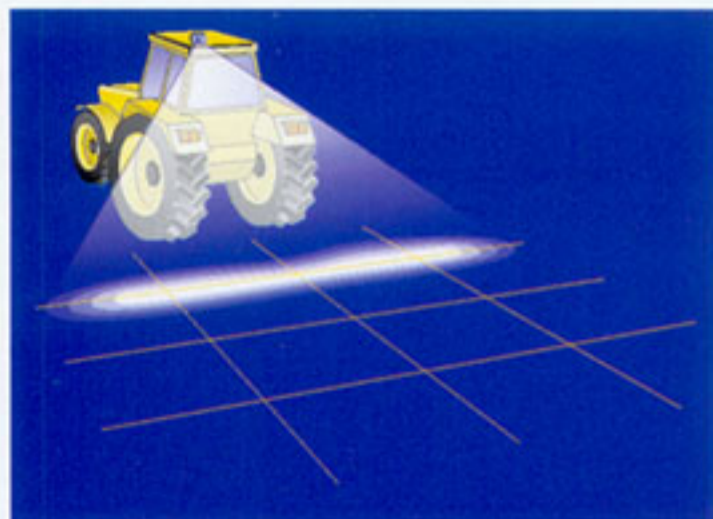
The light distribution of various lamp types in the case of a typical work lamp mounting height 8.2 ft.



Dipped Beam



Main Beam

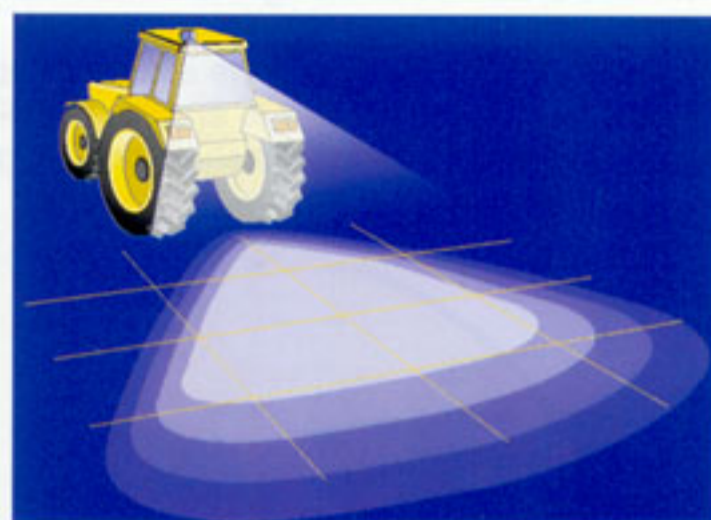


Fog Lamp

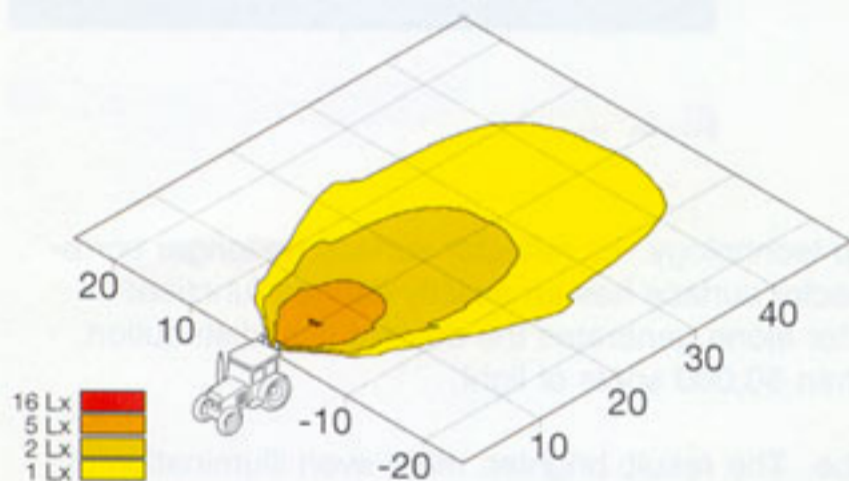


Work Lamp

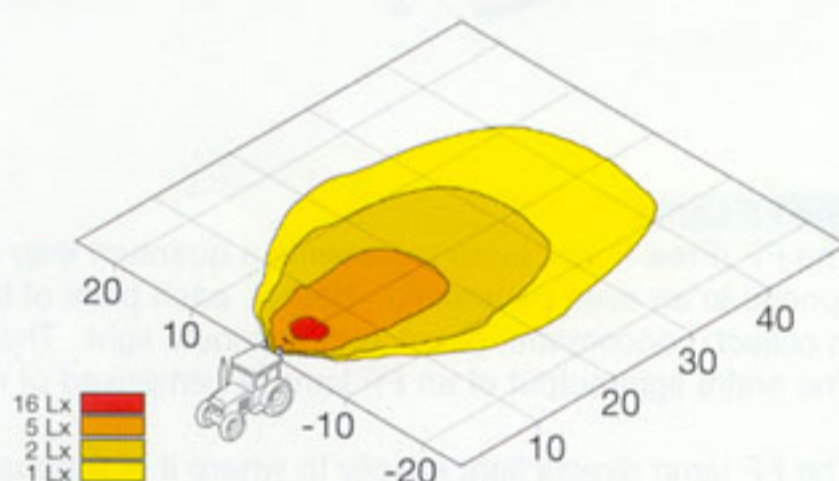
Working during dusk or at night is particularly demanding. The eye only achieves one-twentieth of its normal vision. As a result of increased concentration, the eyes become tired more quickly and see even less. For increased safety and comfort, Hella has developed work lamps which can master any situation. Work lamps cast a beam of light at an angle to the work surface. This means that the mounting height and angle of inclination affect the illumination of the work area.



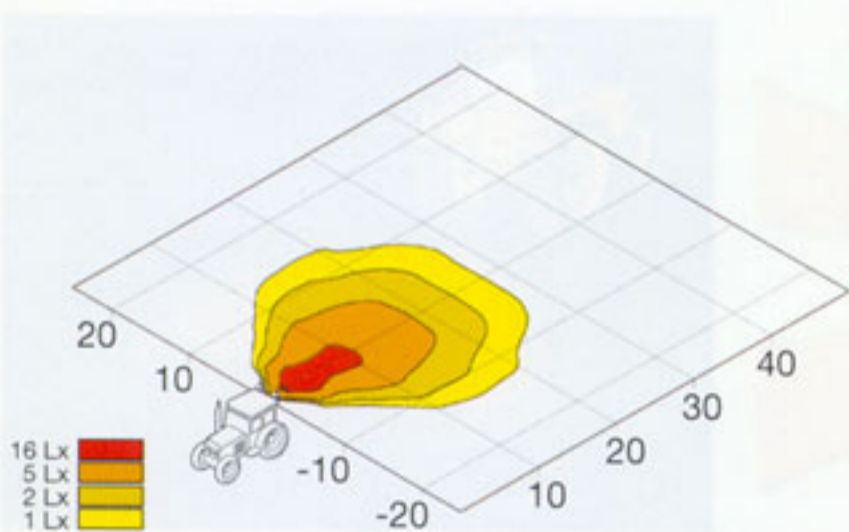
Light distribution with different mounting angles using the Ultra Beam FF as an example: Mounting height 8.2 ft.



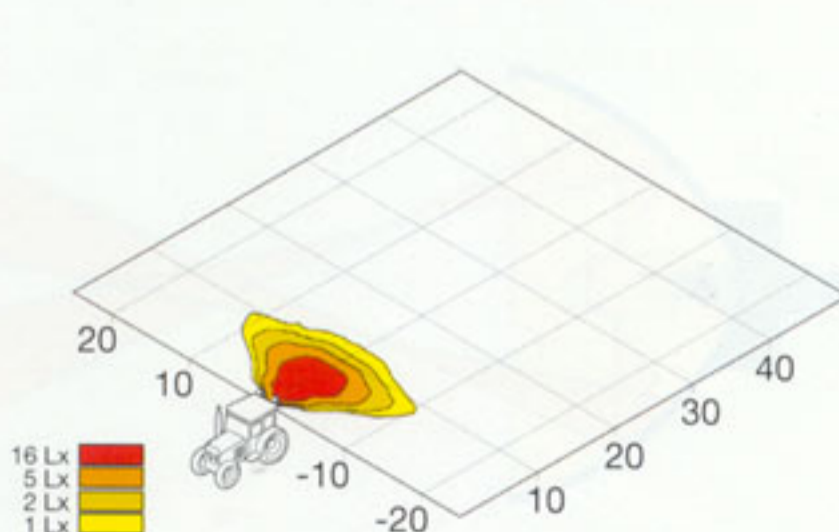
Angle of inclination 5°
Mounting height 8.2 ft.



Angle of inclination 10°
Mounting height 8.2 ft.



Angle of inclination 15°
Mounting height 8.2 ft.



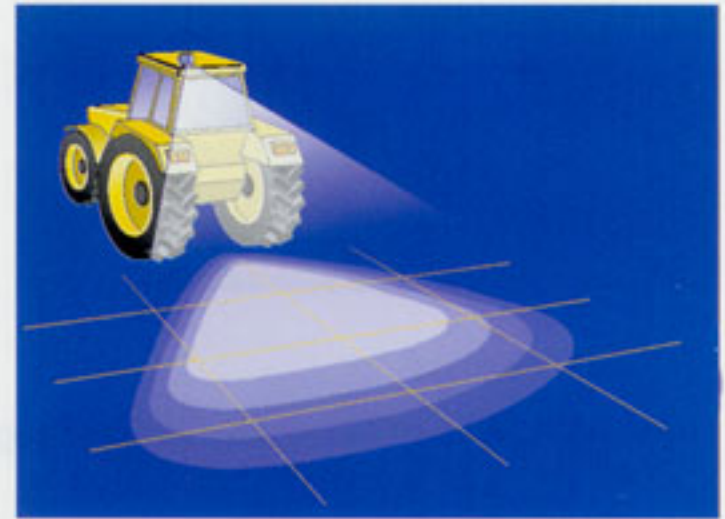
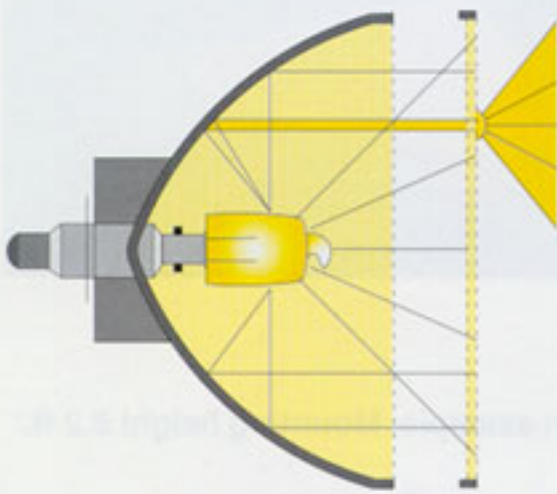
Angle of inclination 25°
Mounting height 8.2 ft.

From the classic paraboloid to the modern xenon technology, there's a Hella work lamp for every requirement.

The Paraboloid Lamp

The paraboloid lamp is the classic among the lamp systems in use today; it uses a parabolic reflector. The light source is located at the focal point of the reflector. The reflector captures the light, bundles it and radiates it. The lens ensures that the light is distributed as required, directing it to pre-specified areas in front of the lamp.

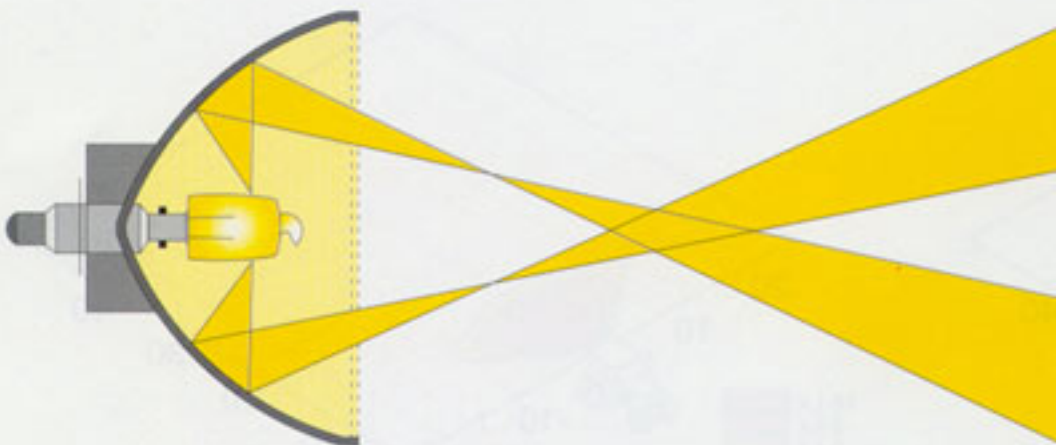
Effective paraboloid lamps have a large reflector in order to capture a great deal of light. The lens must be as vertical as possible in order to ensure good light refraction. Reflectors with long focal lengths provide good long-range illumination; those with short focal lengths collect more light and provide good short-range illumination.



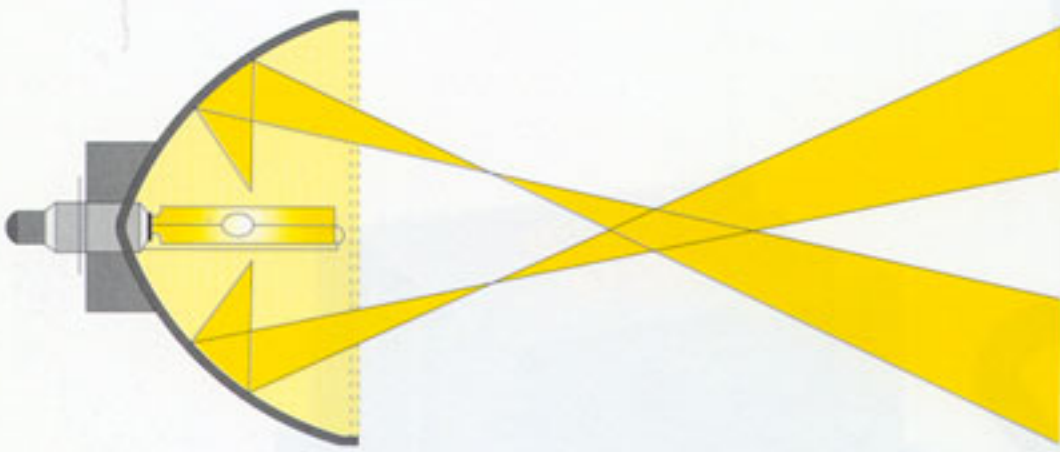
The FF Lamp

The FF (Free-Form) lamp represents a quantum leap in lamp technology. Its reflector surface no longer corresponds to an even paraboloid. Rather, each point of the reflector surface has an exactly defined function: to collect, concentrate, direct, and distribute light. The reflector alone generates the desired light distribution. The entire light output of an FF lamp is comprised of more than 50,000 spots of light.

The FF lamp directs light exactly to where it is supposed to be. The result: brighter, more even illumination of the work area, greater range, hardly any scatter loss or dazzling. In order to calculate the reflector's surface of an FF lamp, extremely powerful electronic computers and high-precision tools and production machines are required. Fractions of a thousandth of a millimeter alter the effectiveness of the entire system.



Xenon technology marks today's pinnacle in lamp system development. The advantage of xenon lamps in comparison with halogen lamps is their light flux, which is 2.5 times higher with 35% lower energy consumption. This leads to very high luminance and therefore brighter and wider illumination of the work area. The color of the light is similar to that of daylight.



What actually is xenon light?

Instead of a coiled filament, a light arc is the light source in xenon lamps. The bulb is filled with xenon gas and metal salts. In order to ignite the xenon bulb, an extremely high voltage of approximately 20,000 volts is required. This is provided by an electronic ballast: 12 or 24 volt direct current is transformed into 20,000 volt alternating current. At temperatures of around 9032°F, a light arc is created. With power consumption of a mere 35 watts, xenon generates 2.5 times the light flux of a halogen bulb with 35W output. The ignition electronics are completely integrated into the control unit. The control unit almost eliminates voltage fluctuations in the vehicle electrical system, as the electronics operate the xenon bulb at constant output.





HALOGEN WORK LAMPS

DOUBLE BEAM FF SERIES



90600



90601 and 90602

Part No.

AS115FF

FF

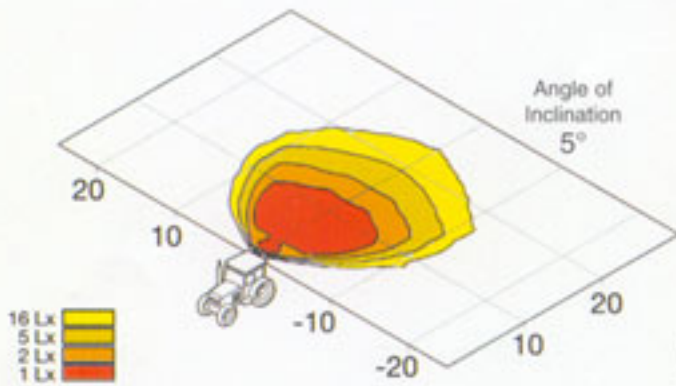
- 90600 Boxed, 12V
- 90600D Display, 12V
- 90600B Bulk, 12V
- 90700 Boxed, 24V

- 90601 Boxed, 12V
- 90601D Display, 12V
- 90601B Bulk, 12V
- 90701 Boxed, 24V

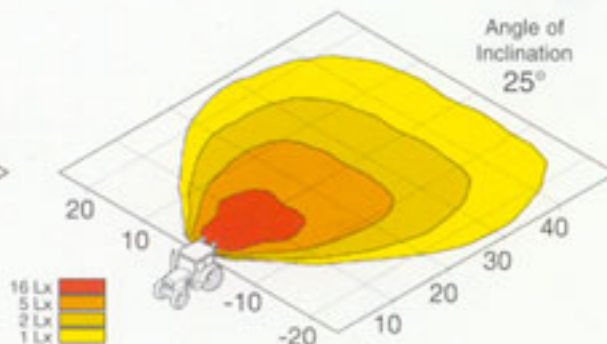
- 90602 Boxed, 12V
- 90602D Display, 12V
- 90602B Bulk, 12V
- 90702 Boxed, 24V

Description: Double reflector made of high-gloss vapor-plated diecast aluminum. Shock-resistant black molded housing. Glass lens. Prewired.

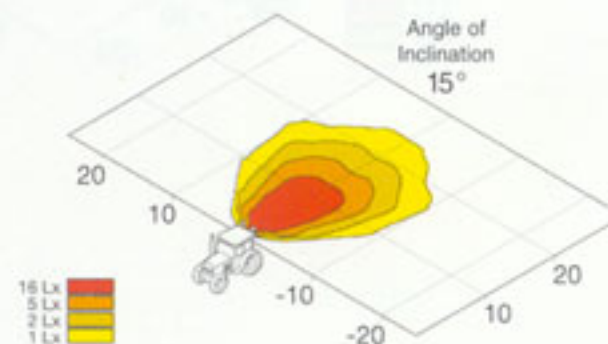
Mounting: Single bolt with tilt adjustment



Part Number 90600



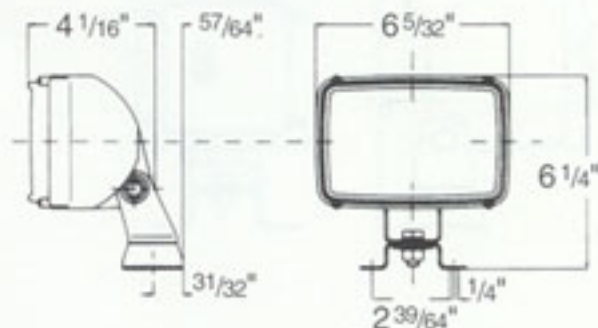
Part Number 90601



Part Number 90602

Spare Parts and Accessories

- | | | |
|----------|-------|----------------------------|
| Part No. | 79600 | Lamp Unit for 90600, 90700 |
| | 79601 | Lamp Unit for 90601, 90701 |
| | 79602 | Lamp Unit for 90602, 90702 |
| | 78135 | Bulb H3, 12V 55W |
| | 78145 | Bulb H3, 24V 70W |





Part No.

Multi Beam FF

FF

- 90665 Boxed with handle LH, 12V
- 90667 Boxed with handle RH, 12V
- 90665B Bulk with handle LH, 12V
- 90667B Bulk with handle RH, 12V

- 90668 Boxed, without handle LH, 12V
- 90669 Boxed, without handle RH, 12V
- 90668B Bulk, without handle LH, 12V
- 90669B Bulk, without handle RH, 12V

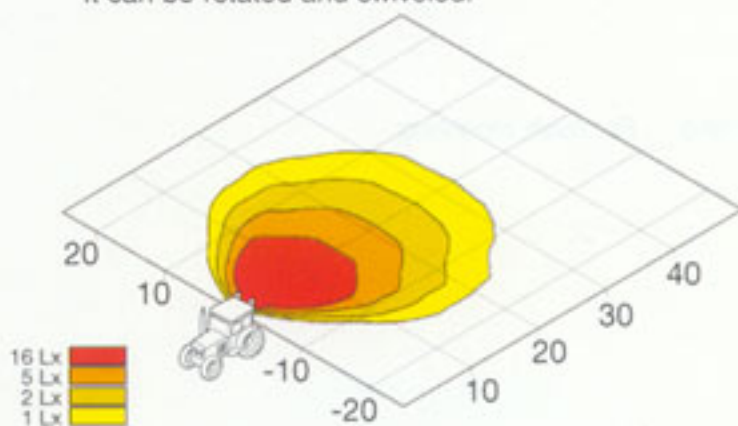
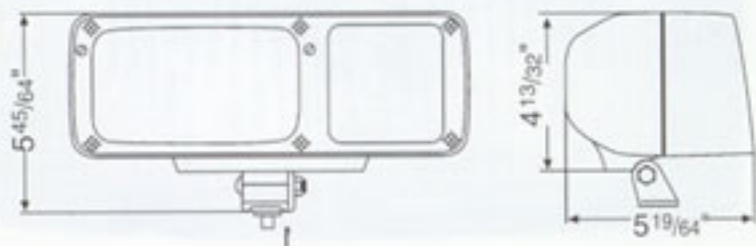


Description: The Multi Beam FF is a combination of two high performance work lamps. It puts the luminous intensity of the Ultra Beam FF on the ground and lights up objects like the Double Beam FF. Shock-proof, black plastic body projects over the edge of the lens providing extra protection.

Mounting: Central bolt and an angled hoop for four-point fastening. It can be rotated and swiveled.

Spare Parts and Accessories

- Part No. 78135 Bulb H3, 12V 55W
- 78145 Bulb H3, 24V 70W



Model Picador

FF

- 90645 Boxed, Rotating Base, 12V
- 90645D Display, Rotating Base, 12V
- 90645B Bulk, Rotating Base, 12V
- 87146 Boxed, Rotating Base, White Housing, 12V

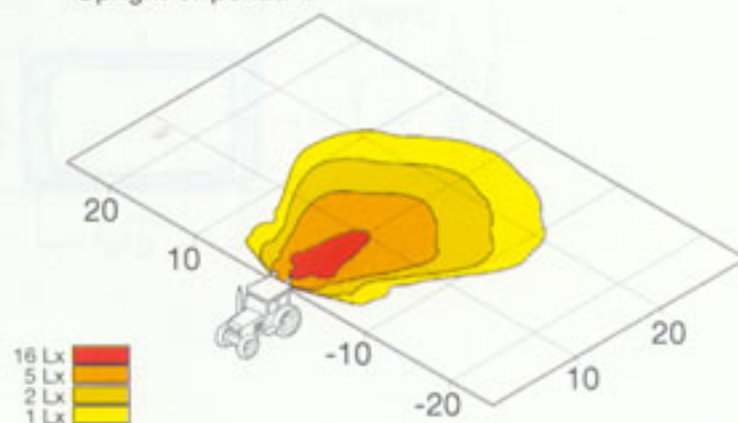
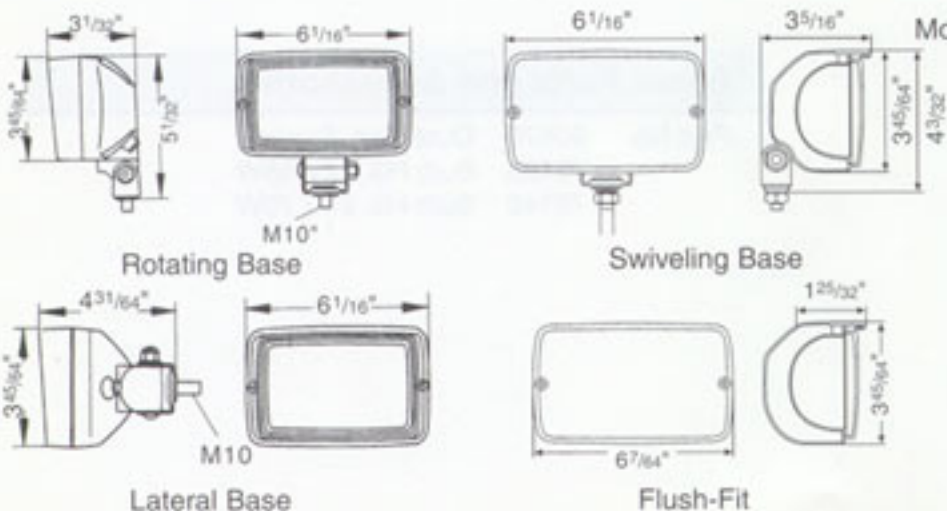
- 90655 Boxed, Swiveling Base, 12V
- 90655D Display, Swiveling Base, 12V
- 90655B Bulk, Swiveling Base, 12V

- 90635B Bulk, Lateral Base RH, 12V
- 90636B Bulk, Lateral Base LH, 12V

- 90637 Boxed, Flush Fit, 12V
- 90637D Display, Flush Fit, 12V
- 90637B Bulk, Flush Fit, 12V

Description: Shock-resistant black molded housing. Glass lens. Prewired.

Mounting: Single bolt with tilt adjustment Upright or pendant



Part No.

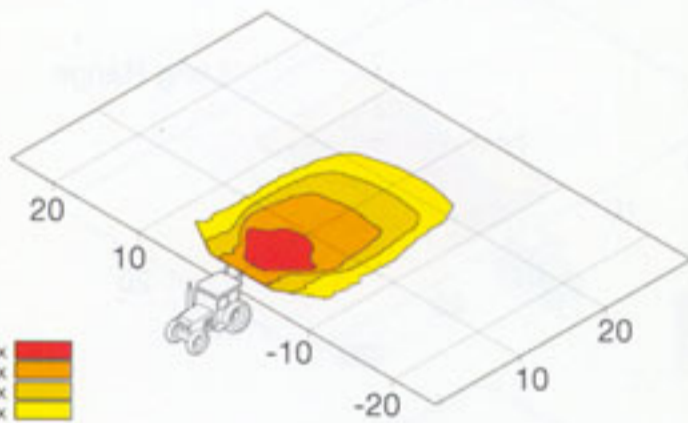
Flush Mount FF

FF

- 87164 Boxed, Black Housing 12V
- 87168 Boxed, White Housing 12V

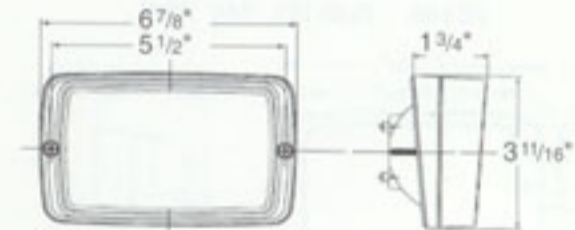
Description: Glass lens, fully grommeted.

Mounting: For flush mounting



Spare Parts and Accessories

- | | | |
|----------|-------|---------------------|
| Part No. | 79561 | Lamp Unit |
| | 90670 | Rubber Boot |
| | 79559 | Lens Retaining Ring |
| | 78135 | Bulb H3, 12V 55W |
| | 78145 | Bulb H3, 24V 70W |



AS200FF

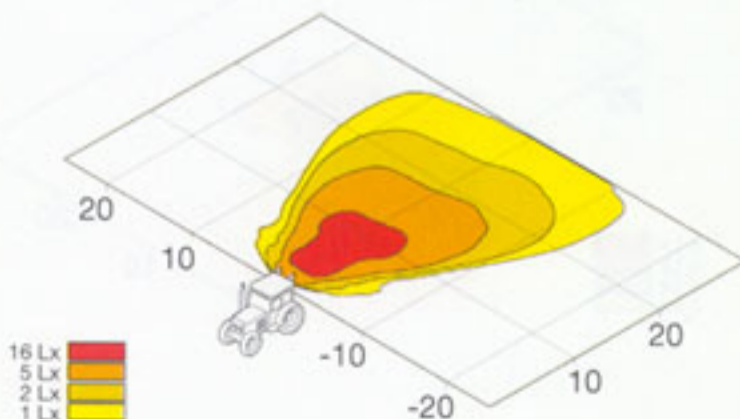
FF

- 90628 Boxed, 12V
- 90628B Bulk, 12V

- 90629 Boxed, HD w/vibration damper
- 90629B Bulk, HD w/vibration damper

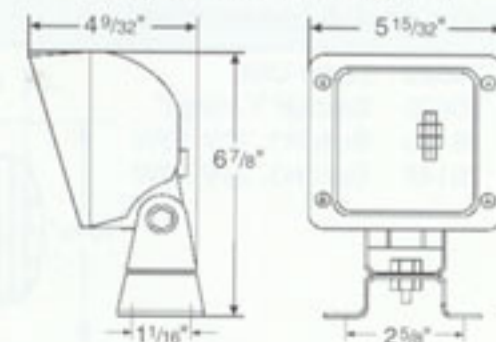
Description: Shock-resistant plastic housing.

Mounting: Upright or pendant mounting



Spare Parts and Accessories

- | | | |
|----------|-------|------------------|
| Part No. | 90699 | Bracket "Omega" |
| | 78135 | Bulb H3, 12V 55W |
| | 78145 | Bulb H3, 24V 70W |





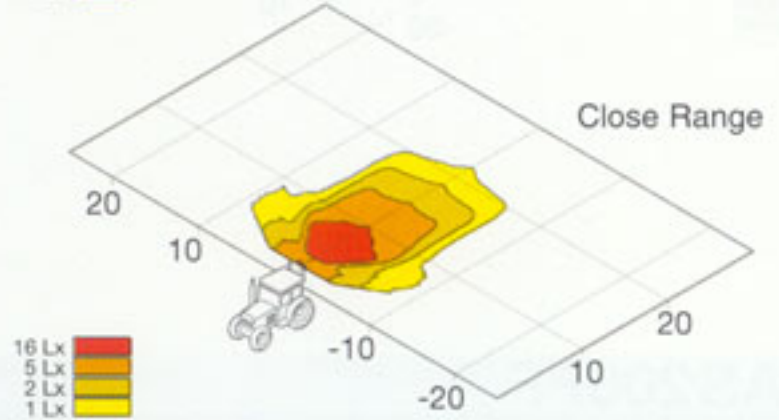
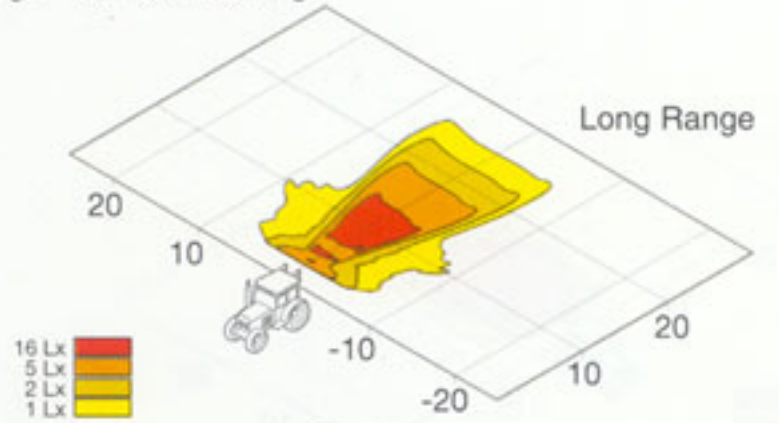
Part No.

Modular

- 87167 Boxed, Flush Mount, 12V
- 87167B Bulk, Flush Mount, 12V

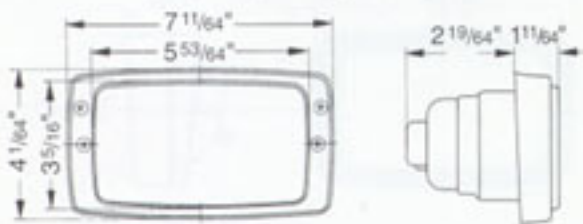
Description: Black, Shock-resistant supporting frame with pan-headed tapping screws for attachment. Glass lens

Mounting: For flush mounting



Spare Parts and Accessories

- Part No. 78135 Bulb H3, 12V 55W
- 78145 Bulb H3, 24V 70W

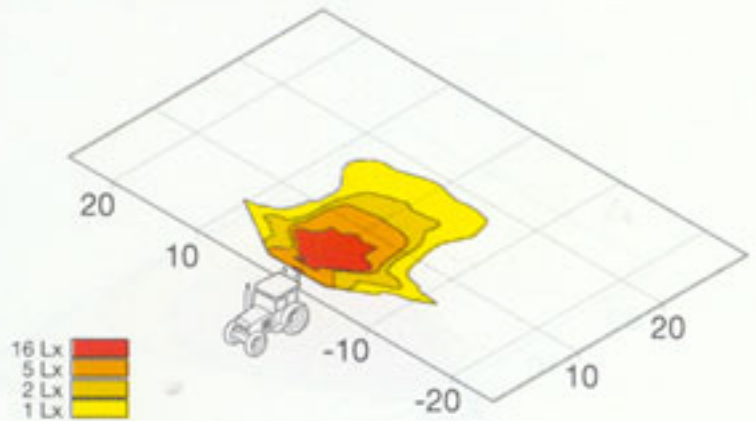


Model Matador

- 87161 Boxed with switch, 12V
- 87163 Boxed with protective grille & switch, 12V
- 87163F Boxed with switch, 24V

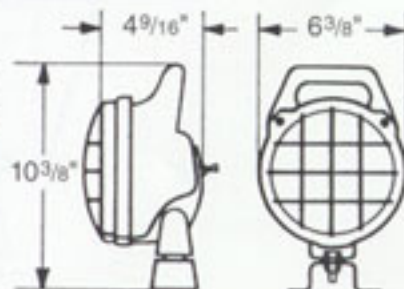
Description: Black molded housing and handle. Glass lens. Prewired. With on/off switch and protective grille.

Mounting: Single bolt with tilt adjustment



Spare Parts and Accessories

- Part No. 79520 Lamp Unit
- 90699 Bracket "Omega"
- 78135 Bulb H3, 12V 55W
- 78145 Bulb H3, 24V 70W



Part No.

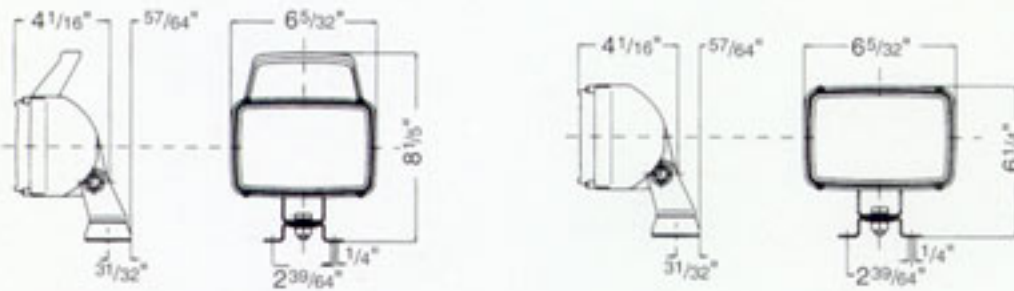
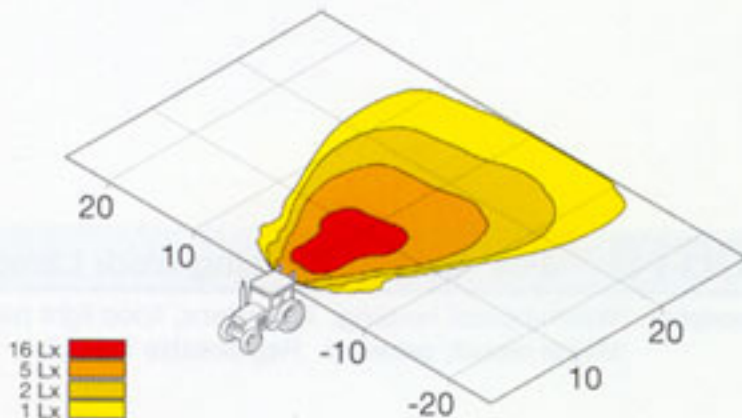
AS115

- 90625 Boxed with handle, 12V
- 90625D Display with handle, 12V
- 90625B Bulk with handle, 12V

- 90626 Boxed without handle, 12V
- 90626D Display without handle, 12V
- 90626B Bulk without handle, 12V

Description: Shock-resistant, black molded housing. Plastic lens. Prewired.

Mounting: For flat or slightly curved surfaces



Spare Parts and Accessories

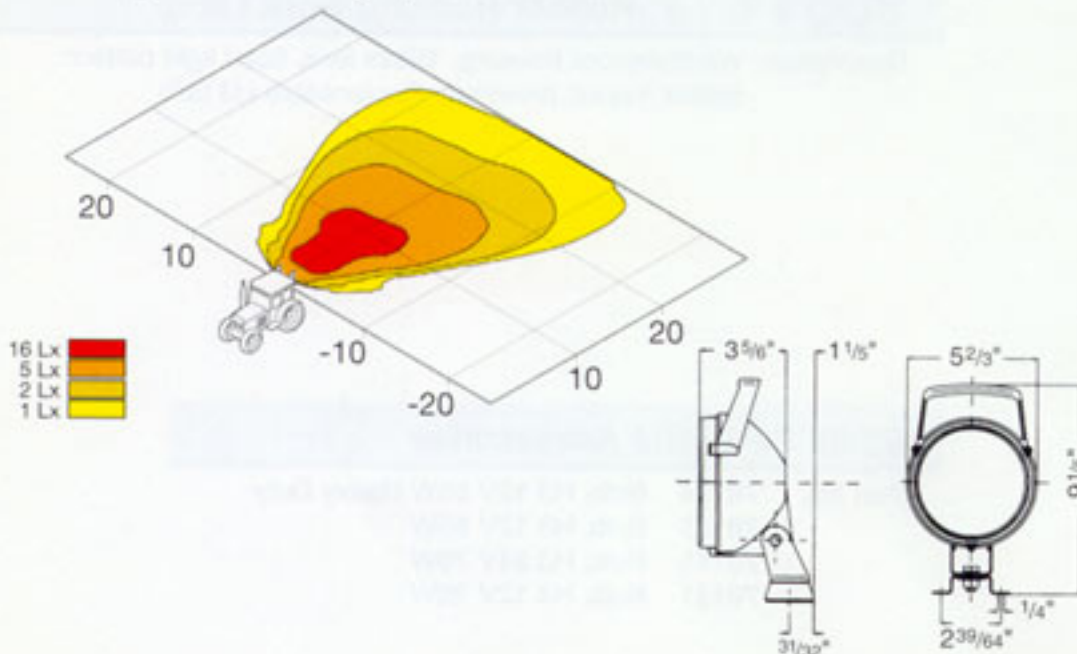
Part No.	79010	Lamp Unit
	80530	Switch
	90699	Bracket "Omega"
	78135	Bulb H3, 12V 55W
	78145	Bulb H3, 24V 70W

AS092

- 90620B Bulk, without grille & switch, 12V
- 90621B Bulk, with grille & switch, 12V

Description: Shock-resistant, black molded housing and handle. Plastic lens. Prewired.

Mounting: For flat or slightly curved surfaces



Spare Parts and Accessories

Part No.	79000	Lamp Unit
	80530	Switch
	90699	Bracket "Omega"
	78135	Bulb H3, 12V 55W



HALOGEN WORK LAMPS

HELLA RUBBER HOUSING WORK LAMPS



4 3/4" Round x 3" Deep

Part No.

90609 4 3/4" Rubber Housing Work Lamp

Description: Recessed housing reduces glare. Weatherproof housing. Glass lens, flood light pattern. Swivel mount, prewired. Replaceable H3 bulb



4 3/4" Round x 2 3/4" Deep

90610 4 3/4" Rubber Housing Work Lamp

Description: Weatherproof housing. Glass lens, flood light pattern. Swivel mount, prewired. Replaceable H3 bulb



6" Round x 4" Deep

90611 6" Rubber Housing Work Lamp

Description: Weatherproof housing. Glass lens, flood light pattern. Swivel mount, prewired. Replaceable H3 bulb

Spare Parts and Accessories

Part No.	78134	Bulb, H3 12V 55W Heavy Duty
	78135	Bulb, H3 12V 55W
	78145	Bulb, H3 24V 70W
	78131	Bulb, H3 12V 35W