

NFPA 1901 13.10.1 Compliance Statement

13.10.1 Ground Lighting.

13.10.1.1^o Rear Work Area.

13.10.1.1.1 The work area immediately behind the vehicle shall be illuminated to an average level of at least 3 fc (30 lx), measured at 25 equally spaced points on a 2.5 ft (750 mm) grid within a 10 ft x 10 ft (3 m x 3 m) square to the rear of the vehicle.

13.10.1.1.2 At least 80 percent of the 25 measurements shall meet or exceed 3 fc (30 lx).

13.10.1.1.3 If the apparatus includes an aerial platform stowed over the rear work area, the measurements shall be made with the aerial raised.

13.10.1.2 The fire apparatus shall be equipped with lighting that is capable of providing illumination at a minimum level of 2 fc (20 lx) on ground areas within 30 in. (800 mm) of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.

13.10.1.3 Lighting designed to provide illumination on areas under the driver and crew riding area exits shall be switchable but activated automatically when the exit doors are opened.

13.10.1.4 All other ground area lighting shall be switchable.



FT-GSMJR

This compliance document was generated using the FT-GSMJR fixture



Project Name: FT-GSMJR NFPA Compliance Statement	Lights Used	Date	Sign
Drawing Specifications: NFPA 1901 13.10	FT-GSMJR	7/30/18	JH

It is important to note:

The NFPA language requires the area behind the apparatus to be illuminated to 3 ft candles (30 lux) [paraphrased; see page 1 for complete text]. This requirement must not be confused with requiring any given light fixture to produce a certain output. The fixture and truck together, along with any other auxiliary or accessory lighting systems must be considered together when determining whether an apparatus package meets the language.

Pages 3 and 4 showcase the FT-GSMJR fixture producing complaint illumination when mounted to a flat wall with no obstructions between the fixture and the ground plane. In this application, the FT-GSMJR does produce the required light levels in all mounting locations from 1' to 10'+

This compliance statement will also showcase one example of a compliant apparatus lighting package using the FT-GSMJR fixture simulated on the back of a truck. It is important to consider things like mounting location and any possible obstructions when deciding whether the apparatus package will meet the requirements as identified in the standard. Final compliance with the standard must be assessed by the apparatus manufacturer.



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FT-GSMJR

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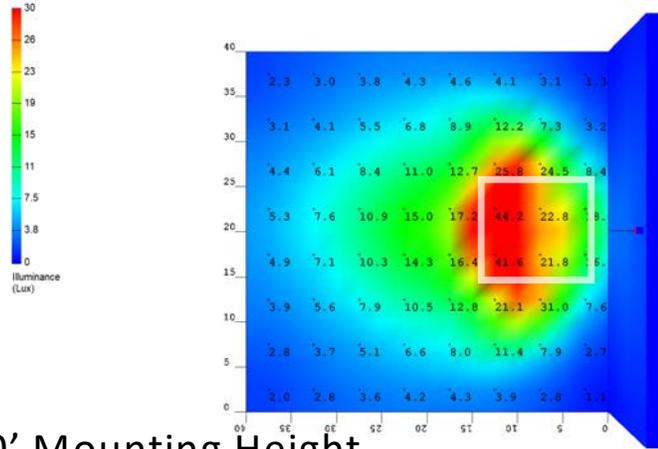
Single FT-GSMJR Fixture
mounted on vertical plane.

This shows light output
without any obstructions, with
fixture mounted at varying
heights from the ground
plane.

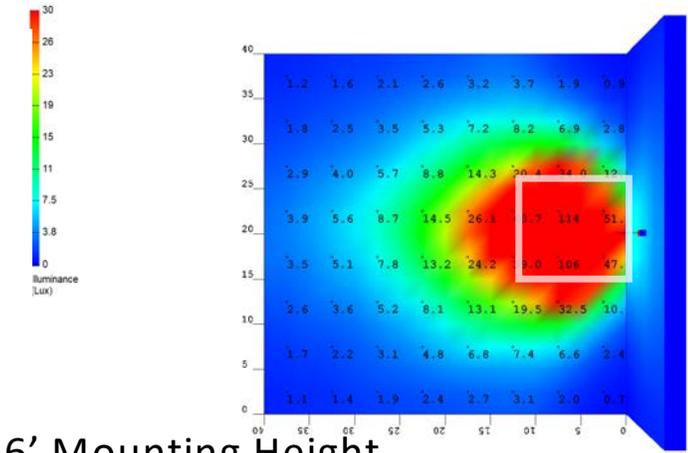
Gris pattern is 5'x5'

Scale is RED = 30 lux

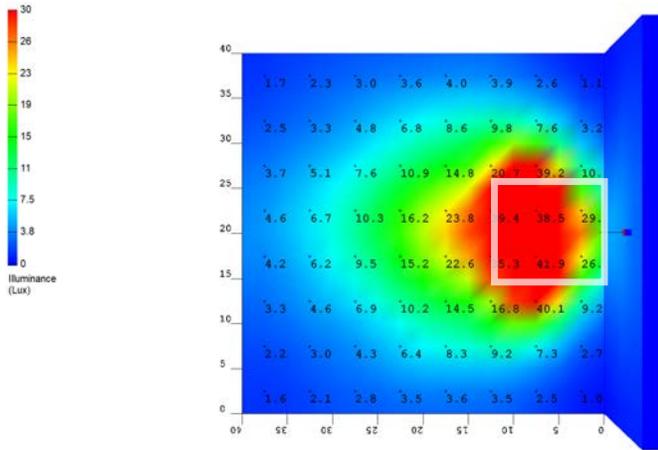
White square shows 10'x10'
area used in determining NFPA
compliance.



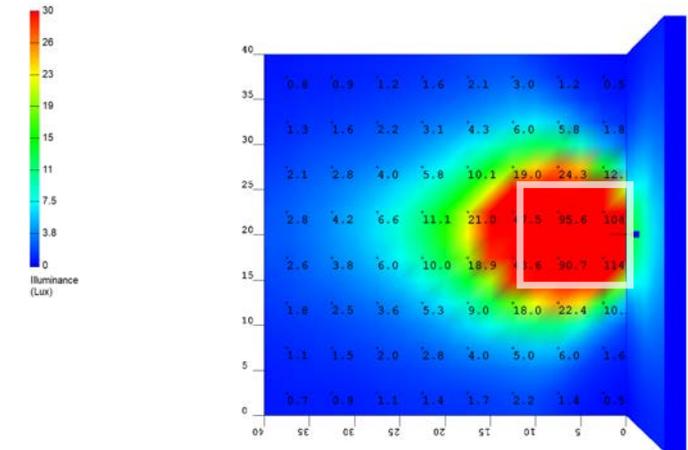
10' Mounting Height



6' Mounting Height



8' Mounting Height



4' Mounting Height



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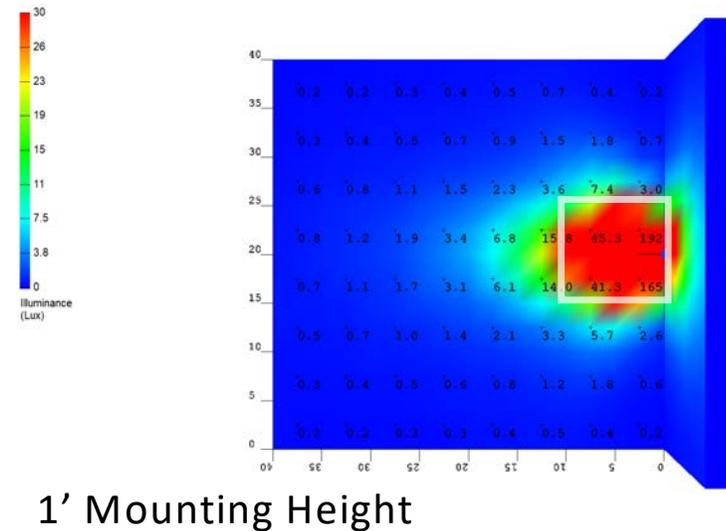
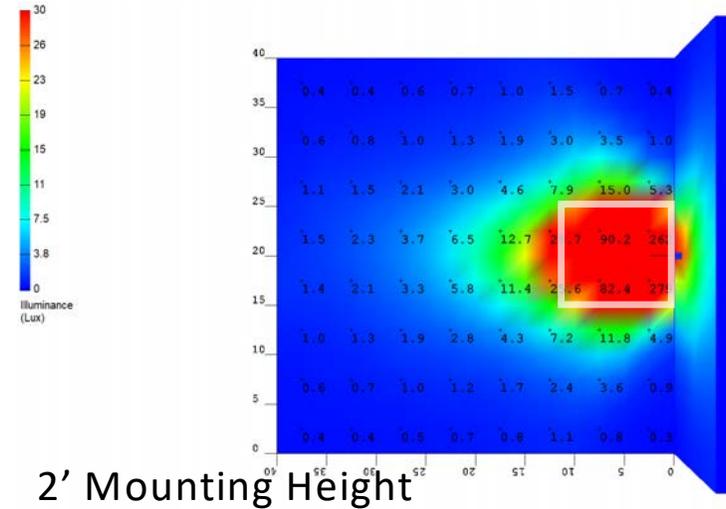
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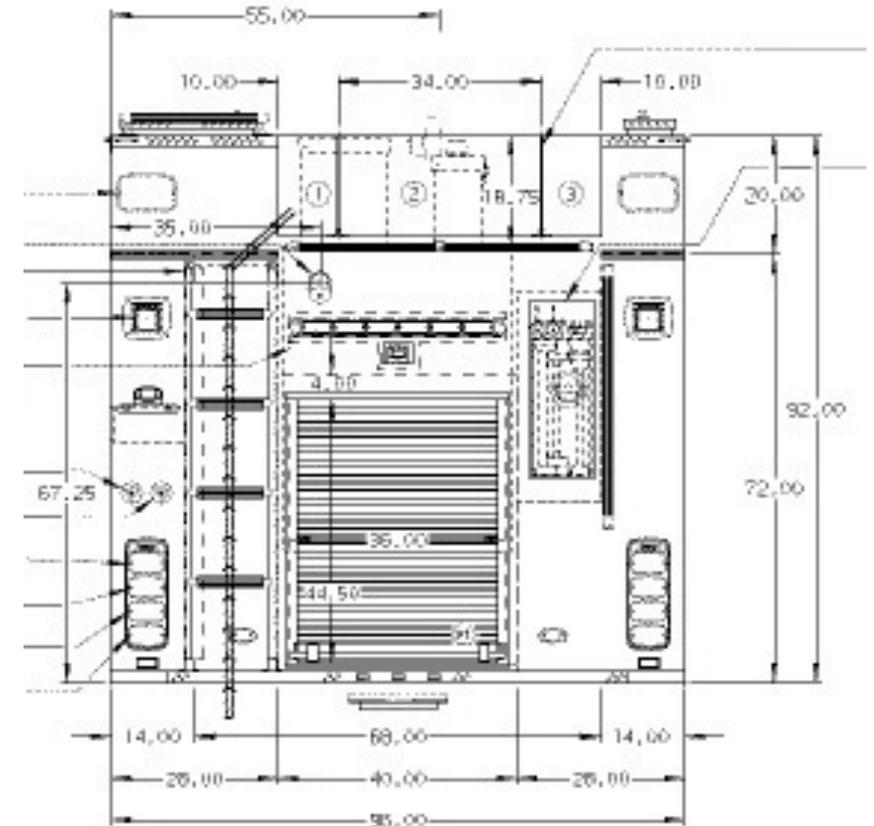
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Drawing on page 6 shows 2 fixtures, drawing on page 7 shows only the right fixture



Compliance Statement Based on body design from truck # 30872AD



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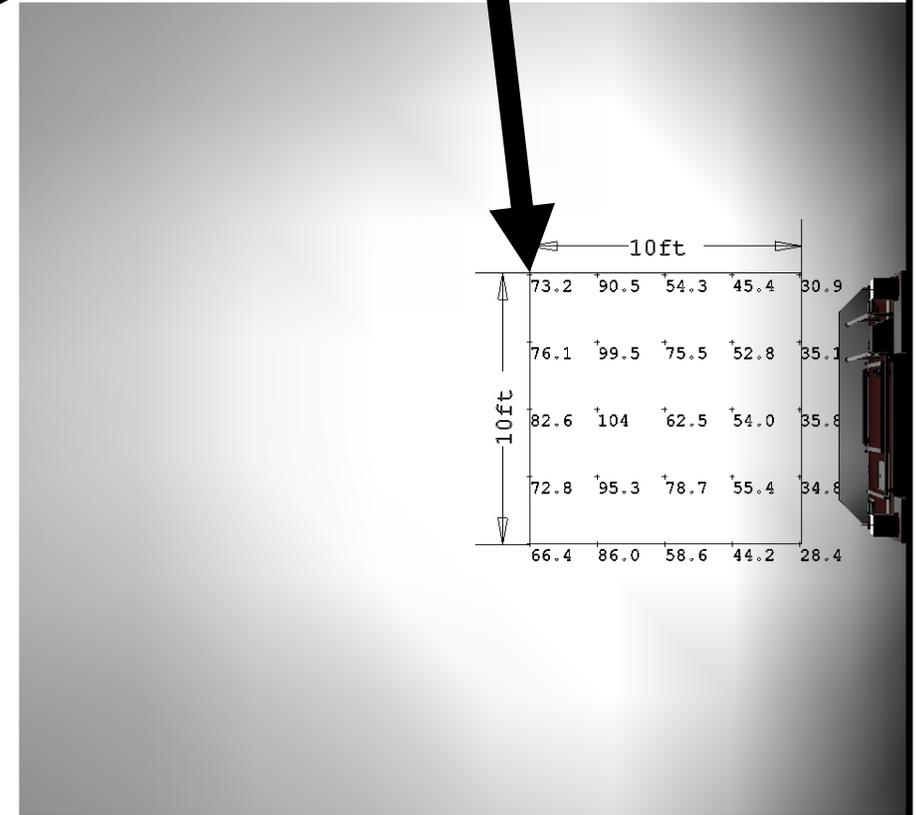
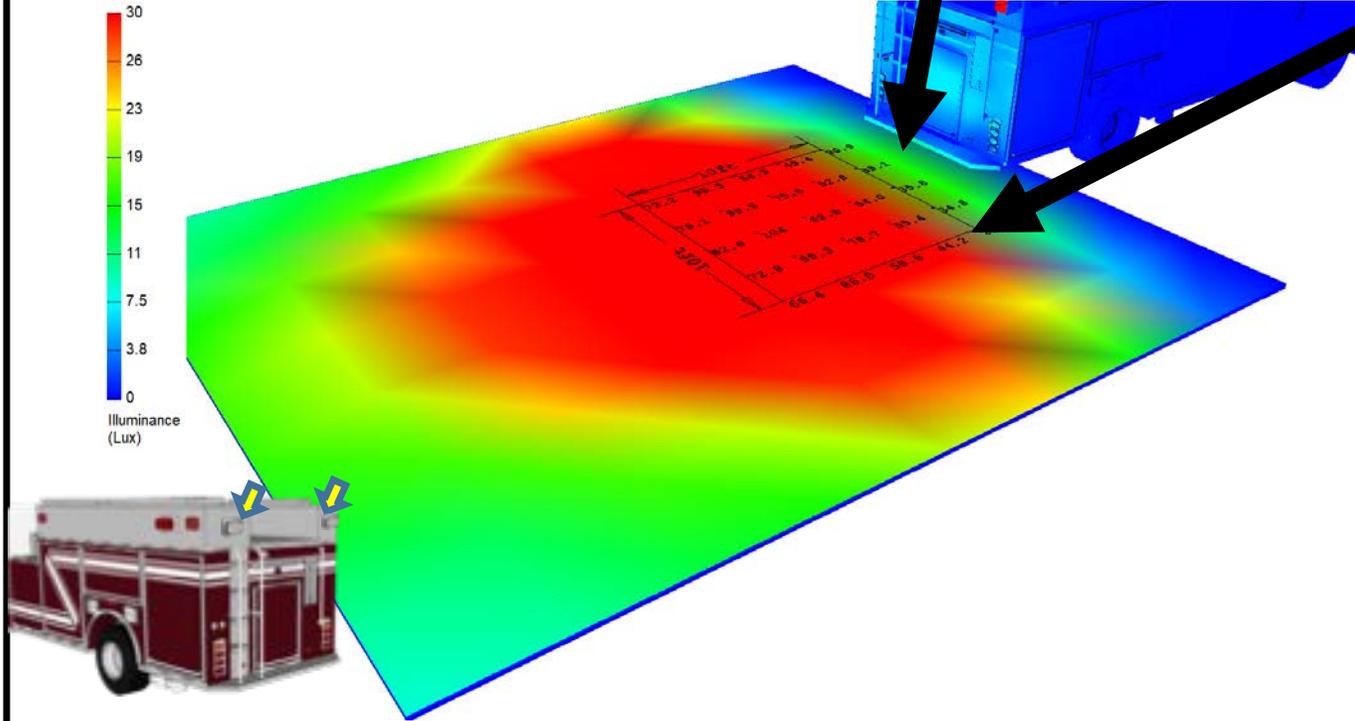
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Notice effect of bumper on light level near apparatus. Keep in mind 13.10.1.2 requires ground illumination in this area which is typically accomplished using undercarriage lights.

10' x 10' area



- All data points > 30 lux
- 25 data points shown, spaces 2.5' x 2.5'
- Average light level 63.82 lux in 10x10 area



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Lights Used

FT-GSMJR 2x FT-GSMJR

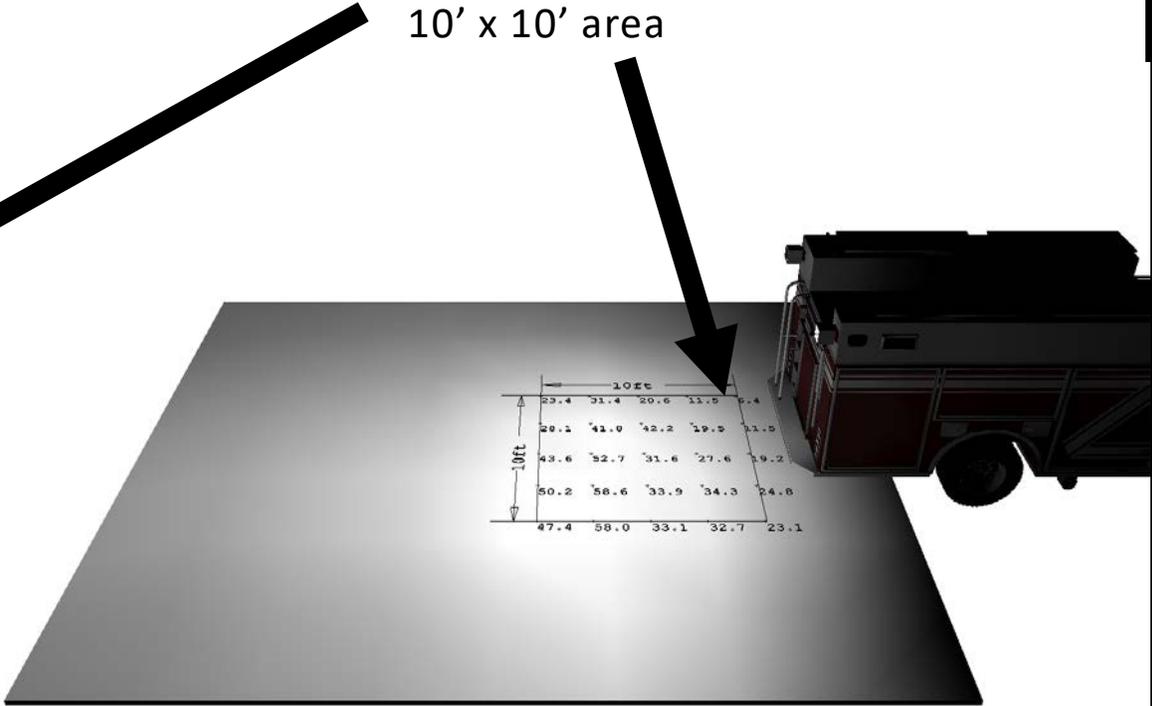
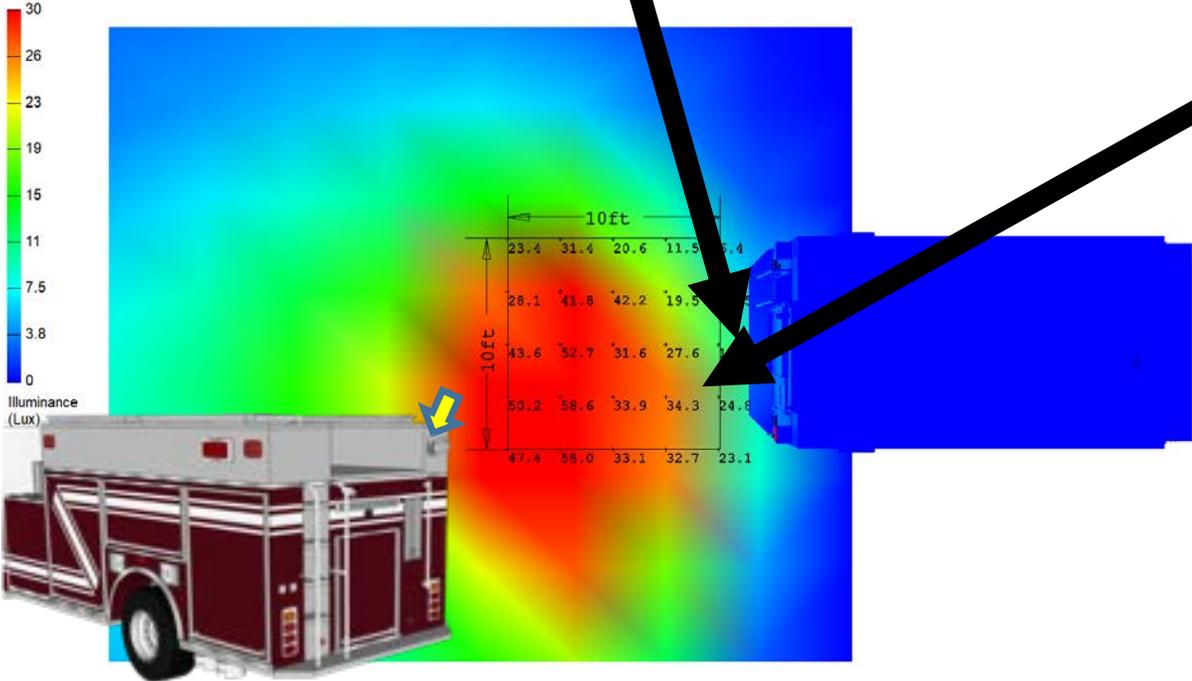
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Notice effect of bumper on light level near apparatus. Keep in mind 13.10.1.2 requires ground illumination in this area which is typically accomplished using undercarriage lights.



- Average Light Level 32.29 lux in 10x10.
 - Illustration shows 1 fixture mounted on right side of apparatus. Central mounting would be required if only 1 fixture were used.
 - Bumper and rear obstructions on apparatus cause light light output with 18" of the apparatus to suffer.
 - NFPA required undercarriage illumination (13.10.1.2), combined with light output from GSMJR, will produce compliant light output



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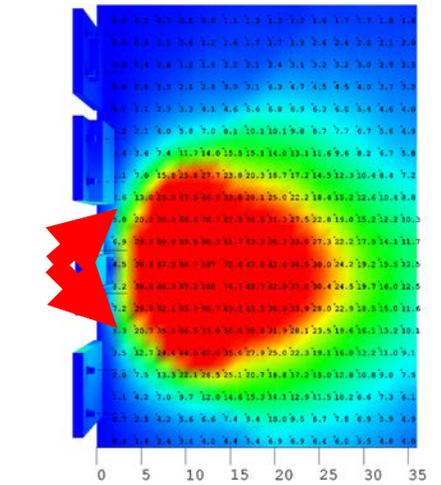
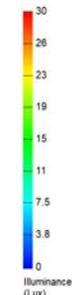
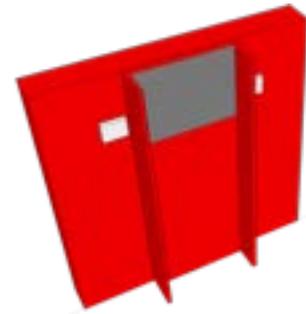
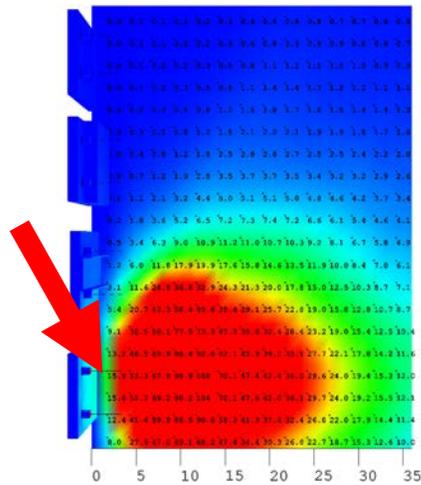
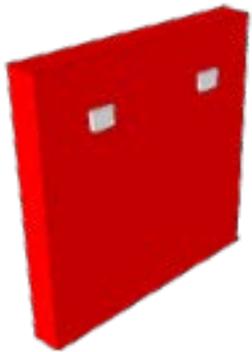
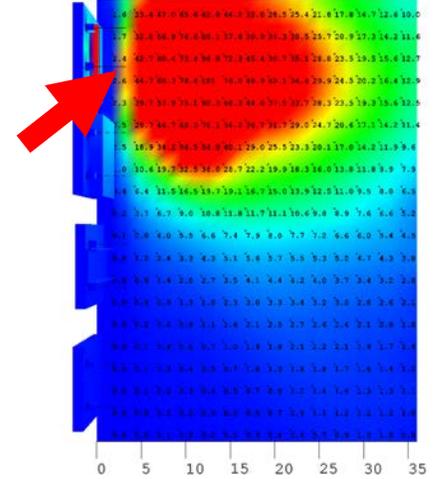
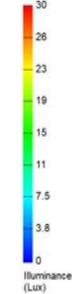
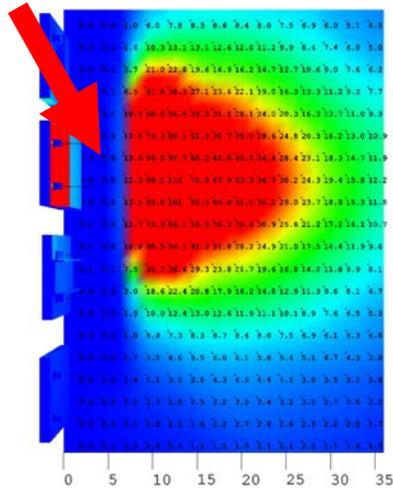
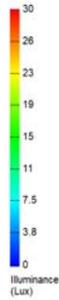
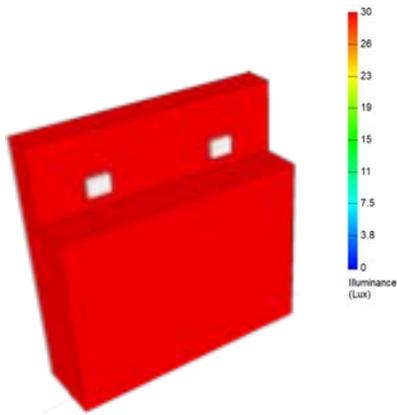
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FT-GSMJR 1x FT-GSMJR

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Effect of placement on light output



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