

Mining Applications Engineering

HM-1251 Komatsu WA900



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The information presented in this application engineering document seeks to deliver the end user with:

Improved profitability of the mining operation by achieving:

- Greater safety
- Lower Maintenance cost
- Greater productivity
- Predictable service
- Better Value



The applications engineering office outlines areas of great concern and hopes to present a practical solution.

Great emphasis was placed on the lighting levels, increased task lighting and uniform illumination with soft transition from light to dark.

A light loss factor of 0.72 was used for this evaluation.

* Combination of lamp lumen depreciation x luminaire dirt depreciation x non recoverable light loss factors (such as ballast factors, supply voltage variations, optical factors and fixture surface depreciation).

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Product Schedule

The following products have been used in this Application Engineering Report

<i>Type / Symbol</i>	<i>Luminaire (product)</i>	<i>Part Number</i>	<i>Quantity</i>
A	AS 5000LED Close Range	HM1500WB	6 Luminaires
B	AS 5000LED Long Range	HM1500NB	2 Luminaires
C	DuraRAY ³ LED Beacon	HM9500ADIR	1 Luminaire
D	DuraLED Signal Lamps Red	HM060321	2 Luminaires
E	DuraLED Signal Lamps Amber	HM070321	2 Luminaires
F	EuroLED Interior Lamp	2JA959950031	1 Luminaire
G	RetroVOX Reversing Alarm	HMRA917E	1 Piece
H	MotoVOX Forward Horn	HMFH117P	1 Piece



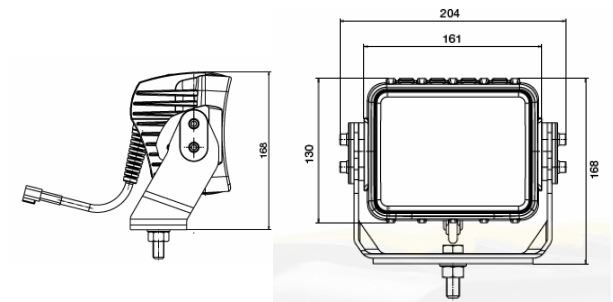
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Product Information

Type	Hella Part Number	Description	Spares
A	HM1500WB	AS 5000LED Worklamp Close Range	None

Diagram



HM1500WB x 6

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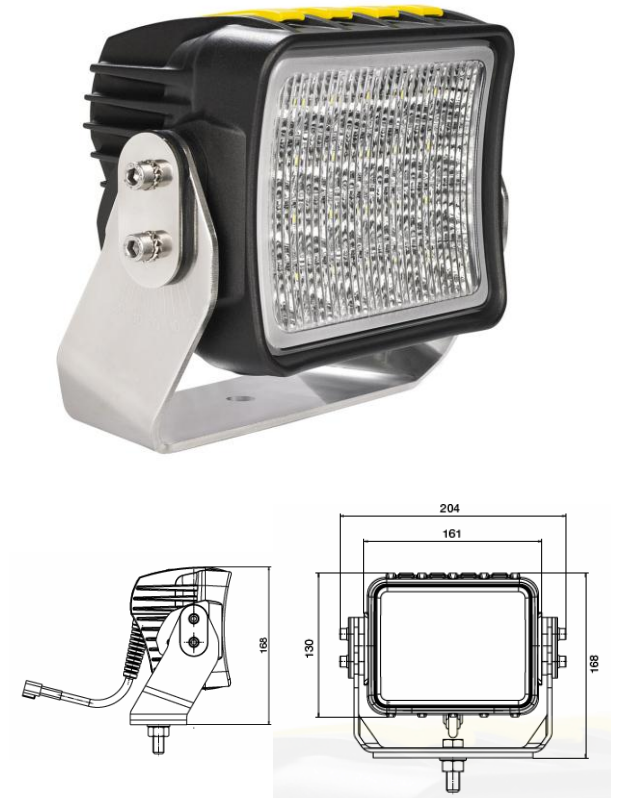
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Product Information

Type	Hella Part Number	Description	Spares
B	HM1500NB	AS 5000LED Worklamp Long Range	None

HM1500NB x 2

Diagram



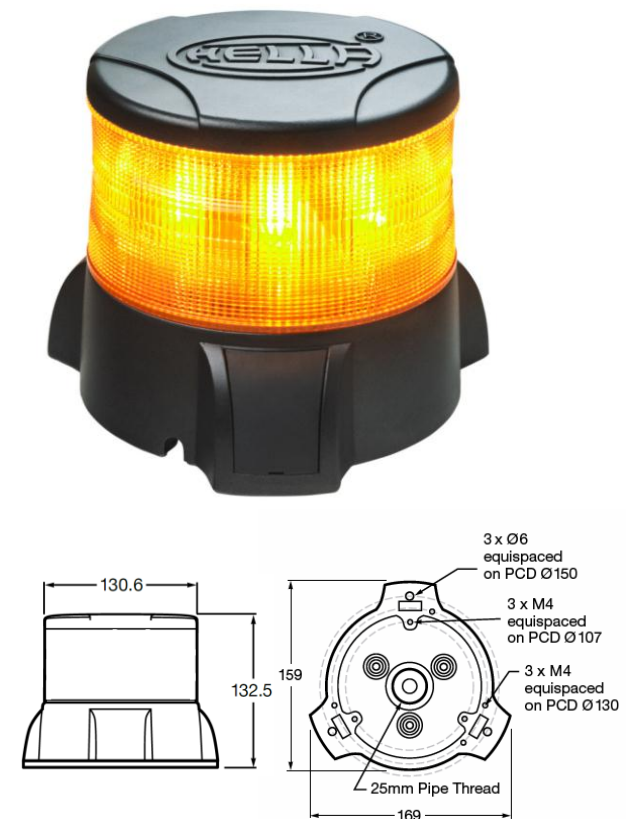
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Product Information

Type	Hella Part Number	Description	Spares
C	HM9500ADIR	DuraRAY ³ High Powered Rotating LED Beacon	9.HM9386.02 - Installation kit

Diagram




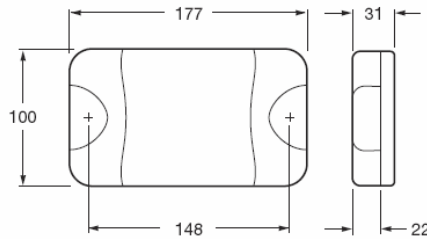
HM9500ADIR x 1



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Product Information

Type	Hella Part Number	Description	Spares	Diagram
D	HM060321	DuraLed® SAE Signal and Marker Lamps		 
HM060321 x 2				

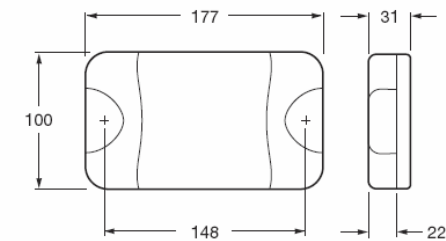
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Product Information

Type	Hella Part Number	Description	Spares
E	HM070321	DuraLed® SAE Signal and Marker Lamps	

Diagram



HM070321 x 2

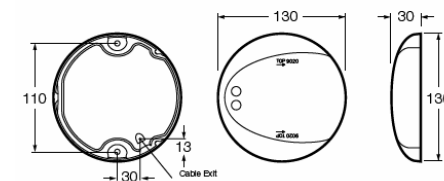
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Product Information

Type	Hella Part Number	Description	Spares
F	2JA959950031	EuroLED® Touch M	EuroLED® Mounting Spacer (8HG959952022)

Diagram



2JA959950031 x 1



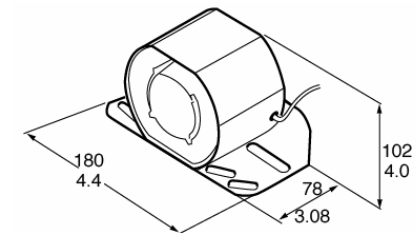
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Product Information

Type	Hella Part Number	Description	Spares
G	HMRA917E	RetroVOX® Reversing Alarms	None

Diagram



HMRA917E x 1



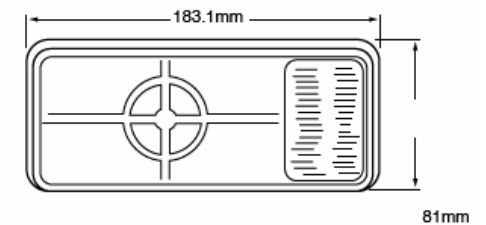
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Product Information

Type	Hella Part Number	Description	Spares
H	HMFH117P	MotoVOX® Horns Forward Horn 117dB	None

Diagram



HMFH117P x 1

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Luminaire Location Summary

Product	Type	Description	Location
1	A	AS 5000LED Close Range	In Front of the Machine (Headlamps)
2	A	AS 5000LED Close Range	In Front of the Machine (Headlamps)
3	A	AS 5000LED Close Range	Top of Cabin Facing Forewards
4	A	AS 5000LED Close Range	Top of Cabin Facing Forewards
5	A	AS 5000LED Close Range	Rear of Machine Facing Backwards
6	A	AS 5000LED Close Range	Rear of Machine Facing Backwards
7	B	AS 5000LED Long Range	In Front of the Machine (Headlamps)
8	B	AS 5000LED Long Range	In Front of the Machine (Headlamps)
9	C	DuraRAY ³ LED Beacon	Top of Cabin
10	D	DuraLED Signal Lamp Red	Rear of the Machine
11	D	DuraLED Signal Lamp Red	Rear of the Machine
12	E	DuraLED Signal Lamp Amber	Rear of the Machine
13	E	DuraLED Signal Lamp Amber	Rear of the Machine
14	F	EuroLED Touch	Inside Cabin
15	G	RetroVox Reversing alarm	User Specific Location
16	H	MotoVox Horn	User Specific Location

Komatsu WA900 LED Lighting Package



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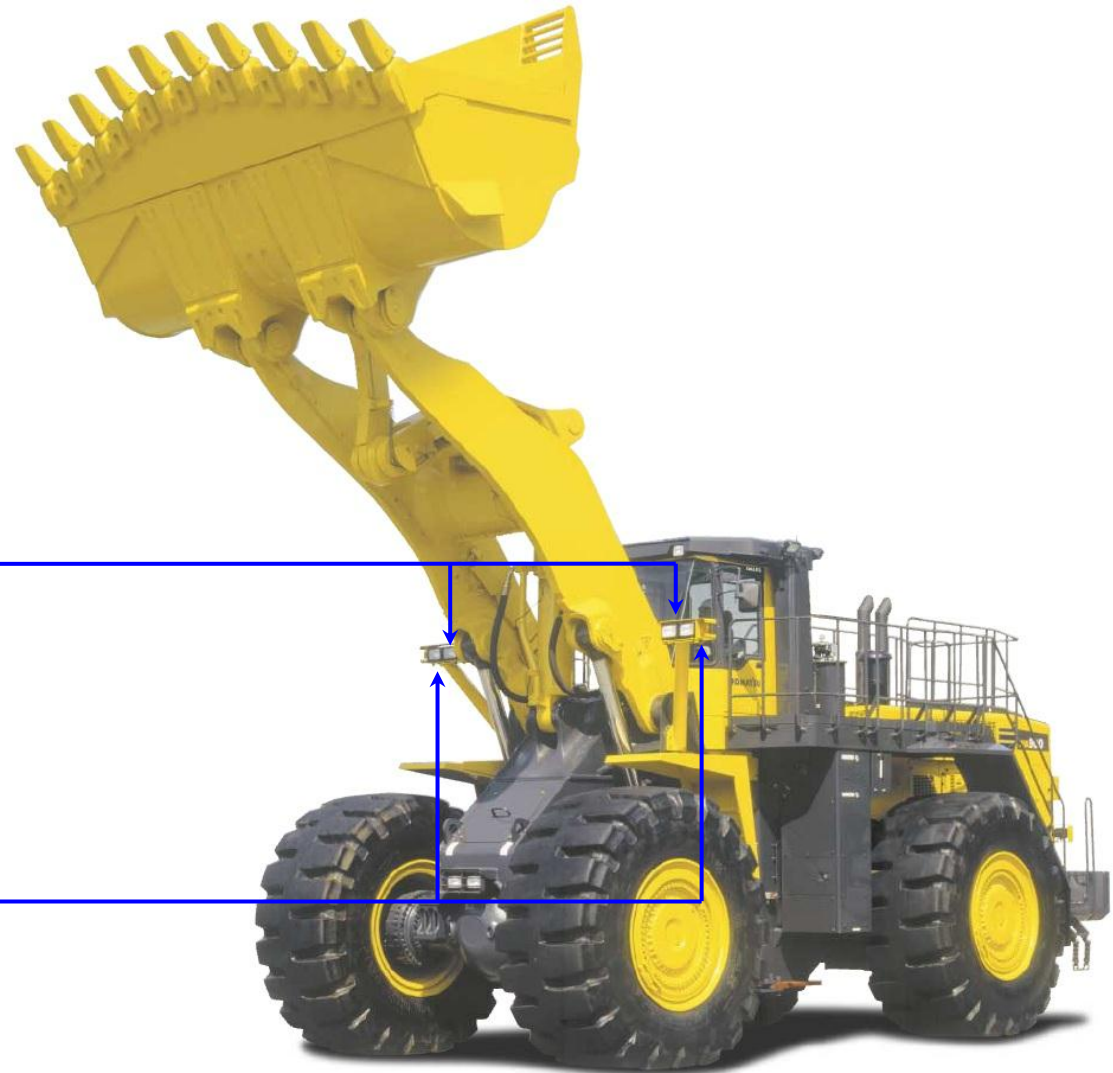
Luminaire Location Summary

(A) AS 5000LED Close Range
Aimed 20 degrees below the horizontal and aimed out 22 degrees (338 degrees) and out from centre in the vertical plane.

MH* Approximately 4.7 meters

(B) AS 5000LED Long Range x 2
Aimed 2 degrees below the horizontal and aimed straight.

MH* Approximately 4.7 meters



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Luminaire Location Summary

(A) AS 5000LED Close Range
Aimed 20 degrees below the horizontal and
aimed out 55 degrees (305 degrees) and out
from centre in the vertical plane.

MH* Approximately 6.8 meters



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Luminaire Location Summary

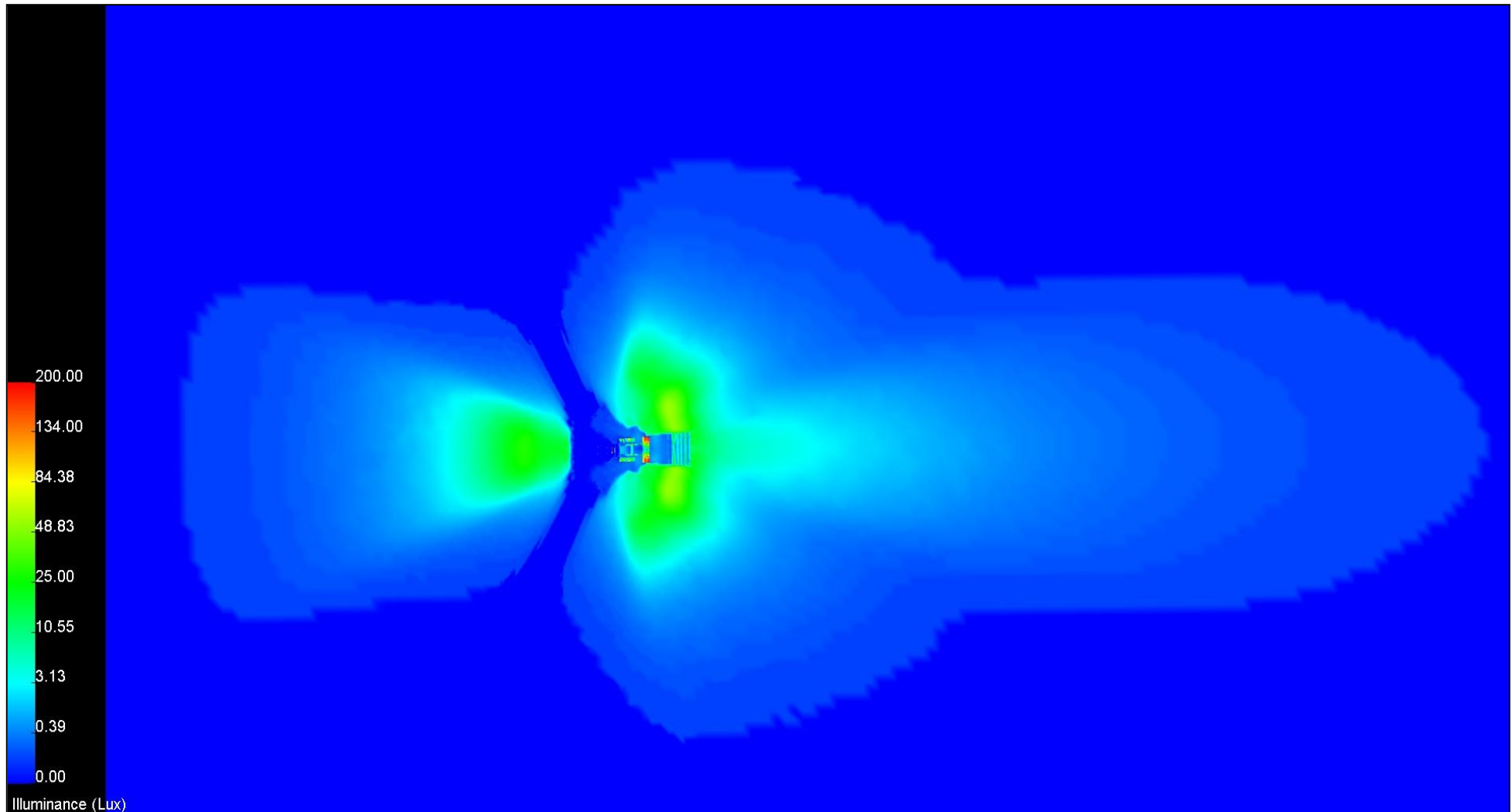
(A) AS 5000LED Close Range Orientated straight and aimed 10 degrees below the horizontal.	
MH*	Approximately 3.7 meters



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Top View – IsoLUX



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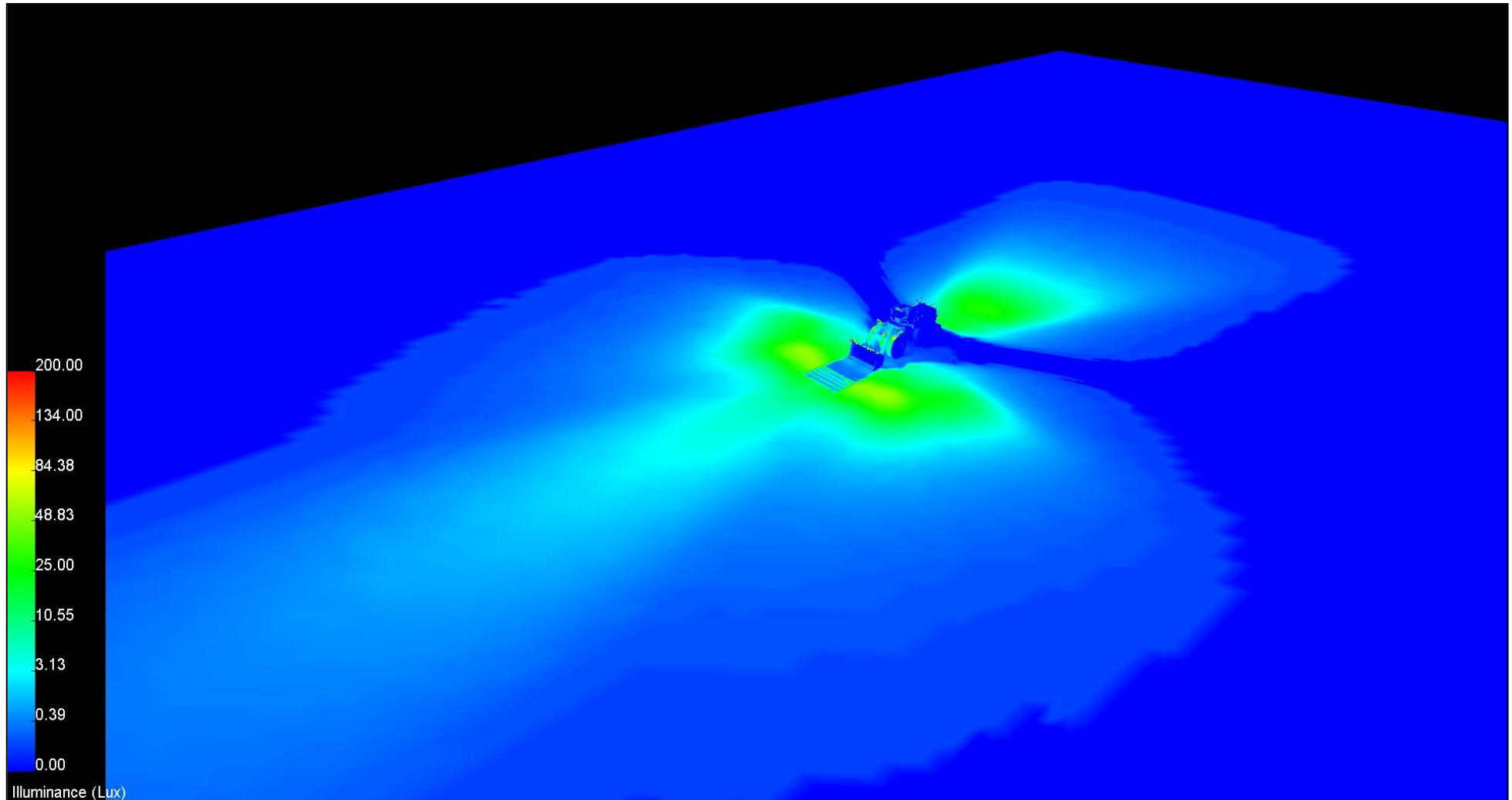
Top View – RGB



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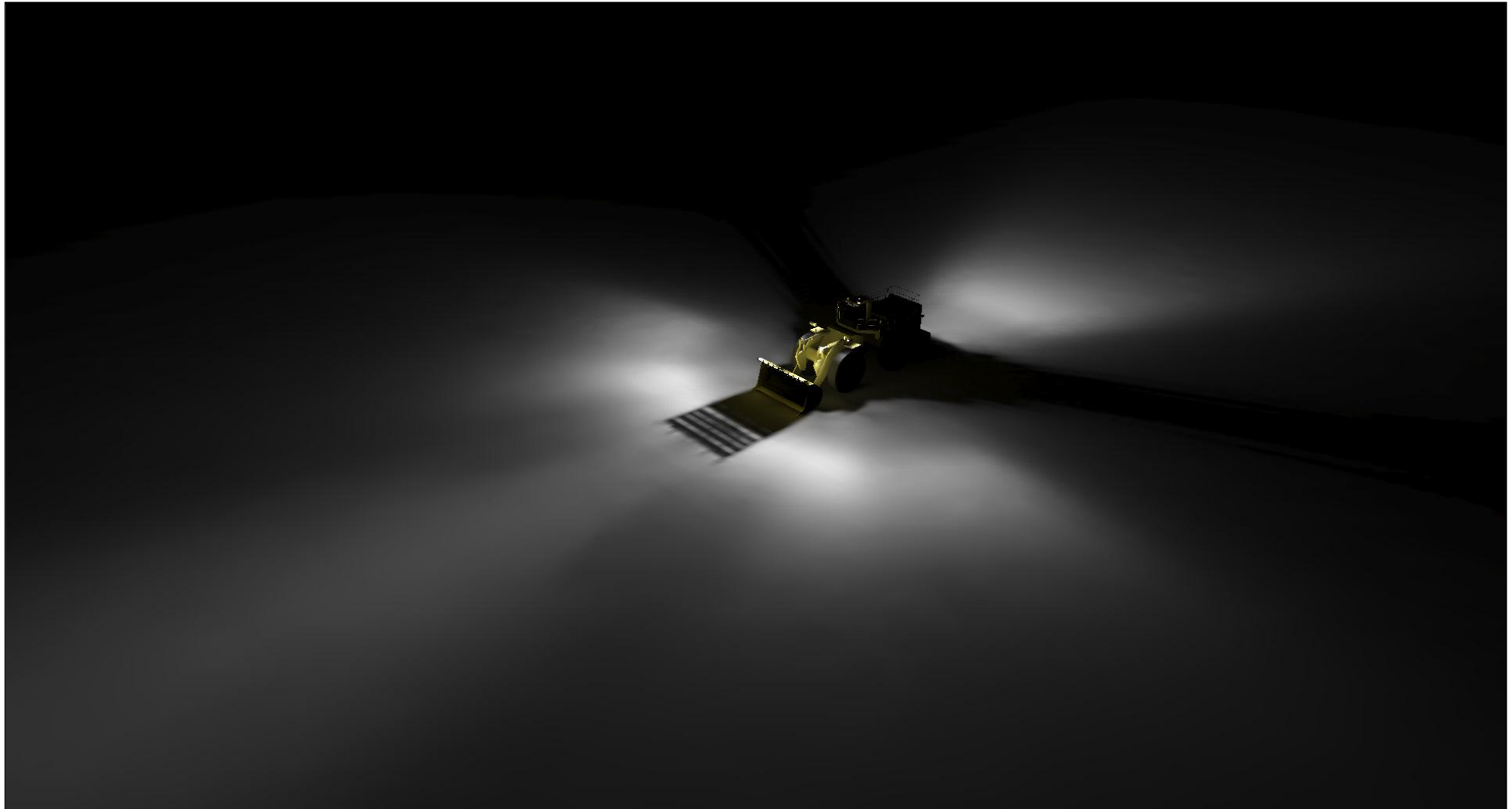
Iso View 1 – IsoLUX



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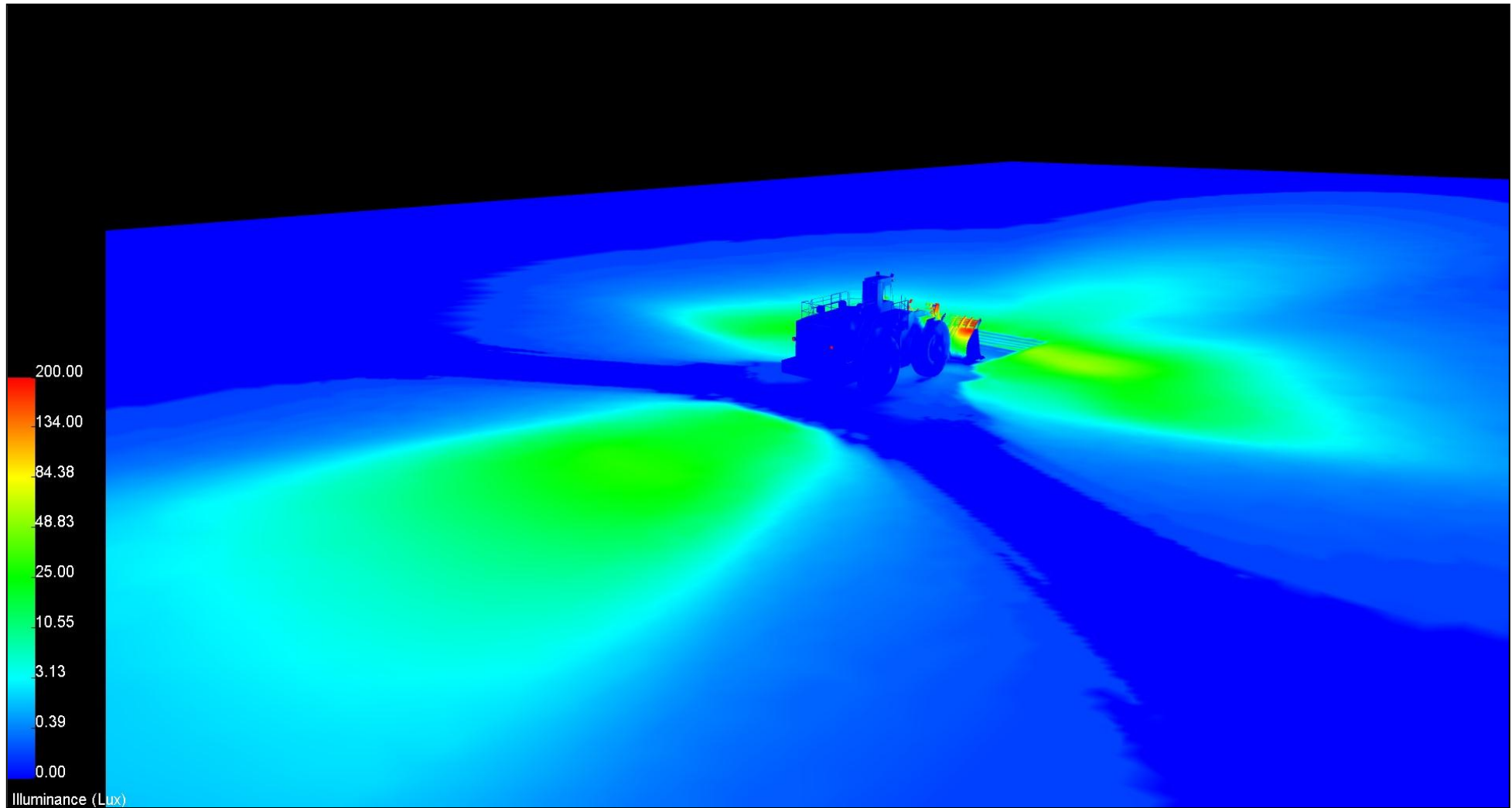
Iso View 1 – RGB



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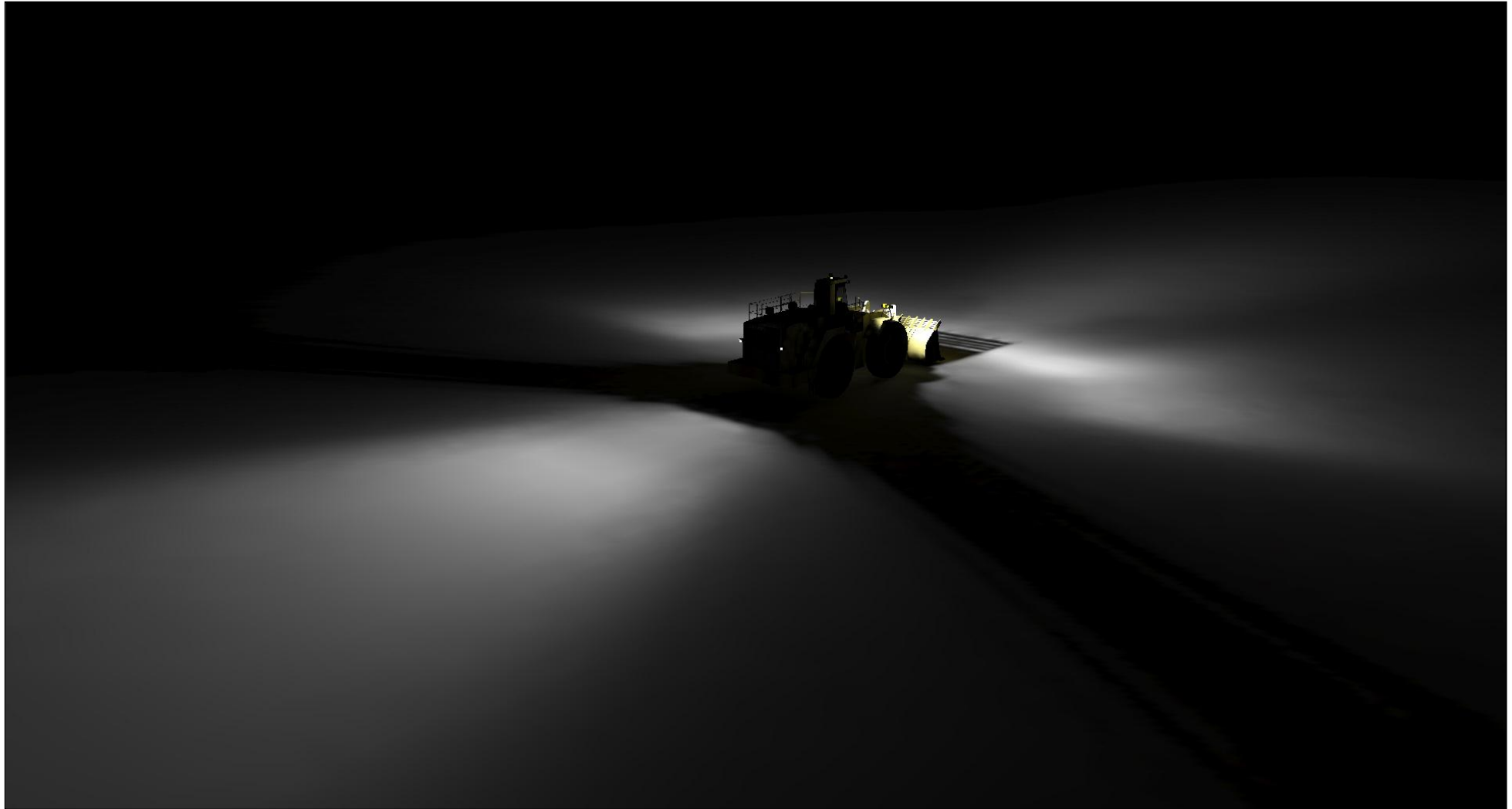
Iso View 2 – IsoLUX



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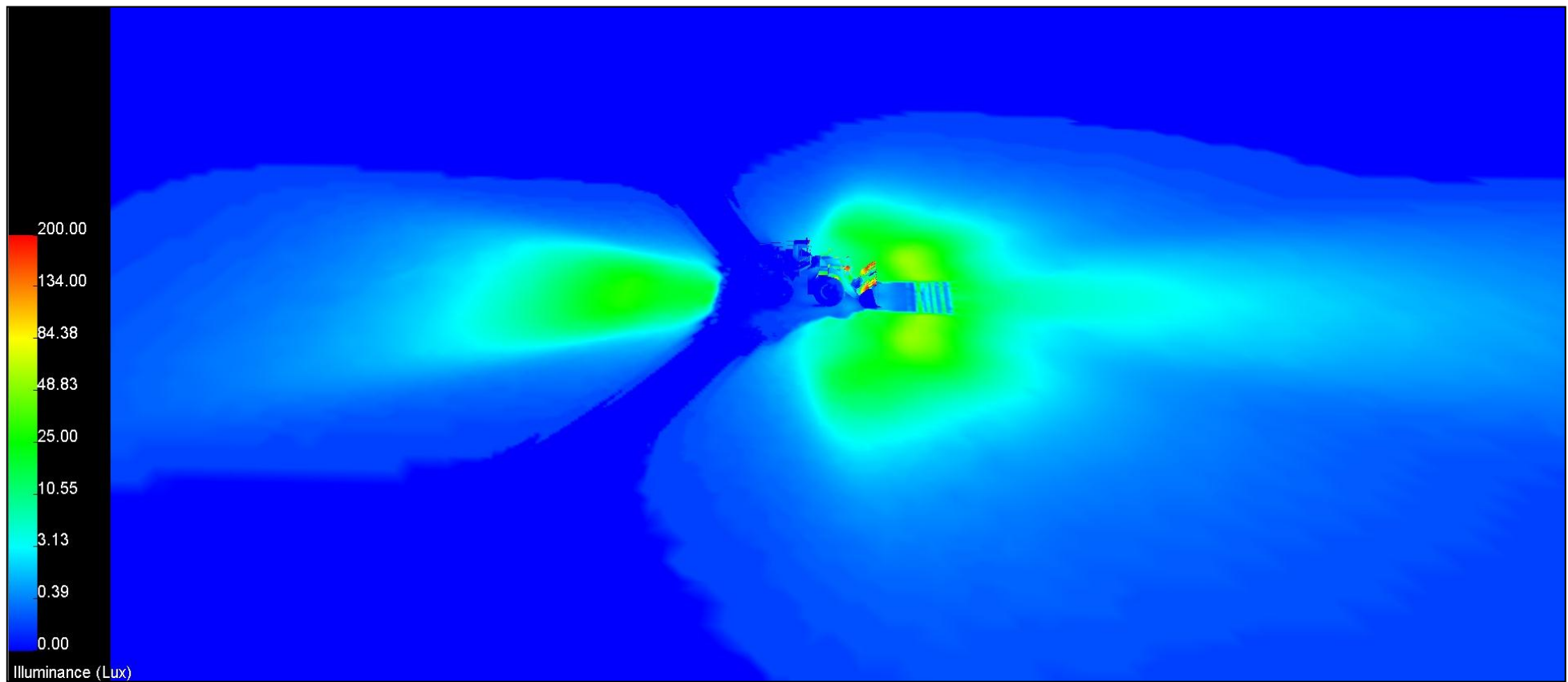
Iso View 2 – RGB



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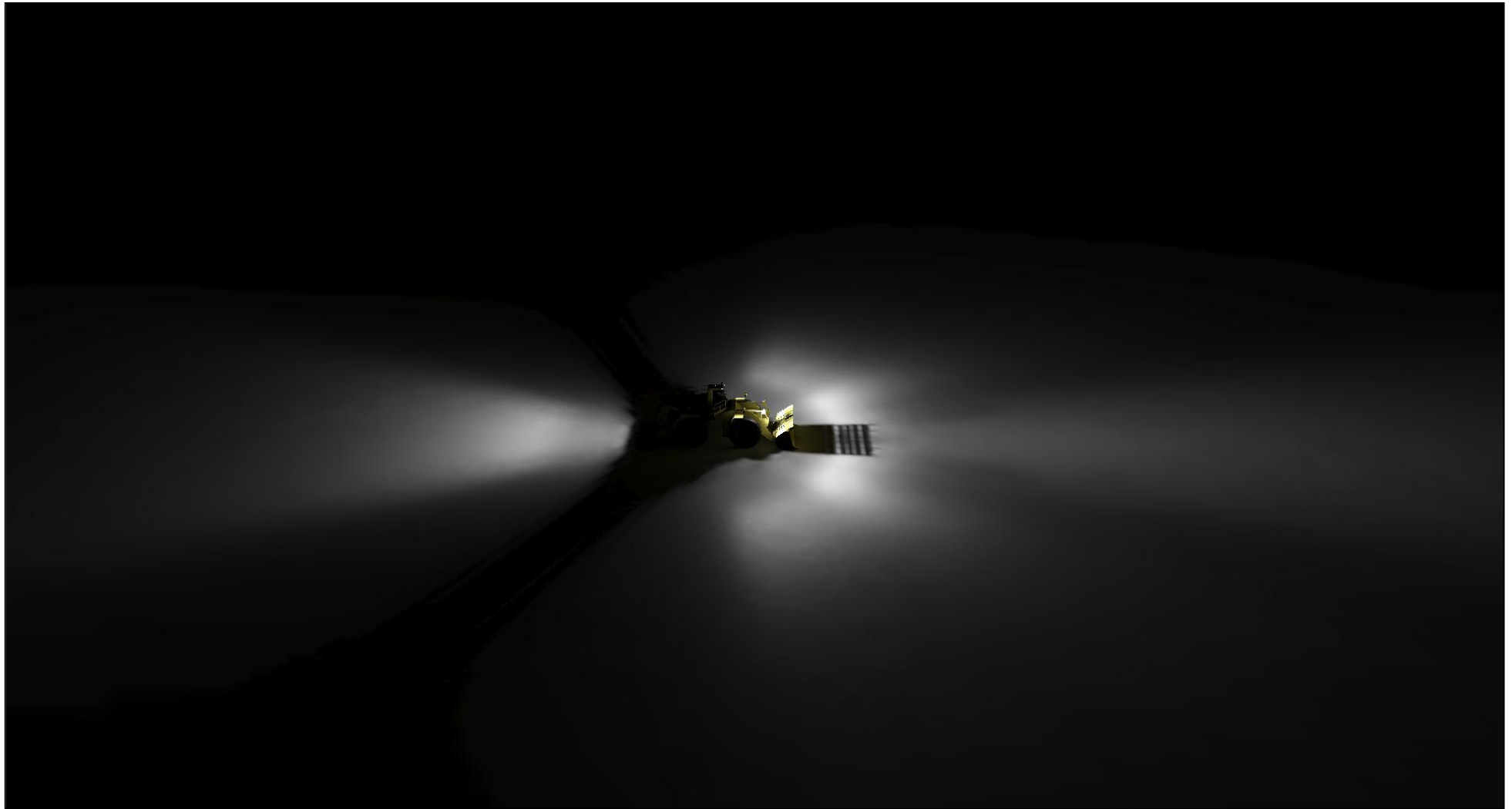
Iso View 3 – IsoLUX



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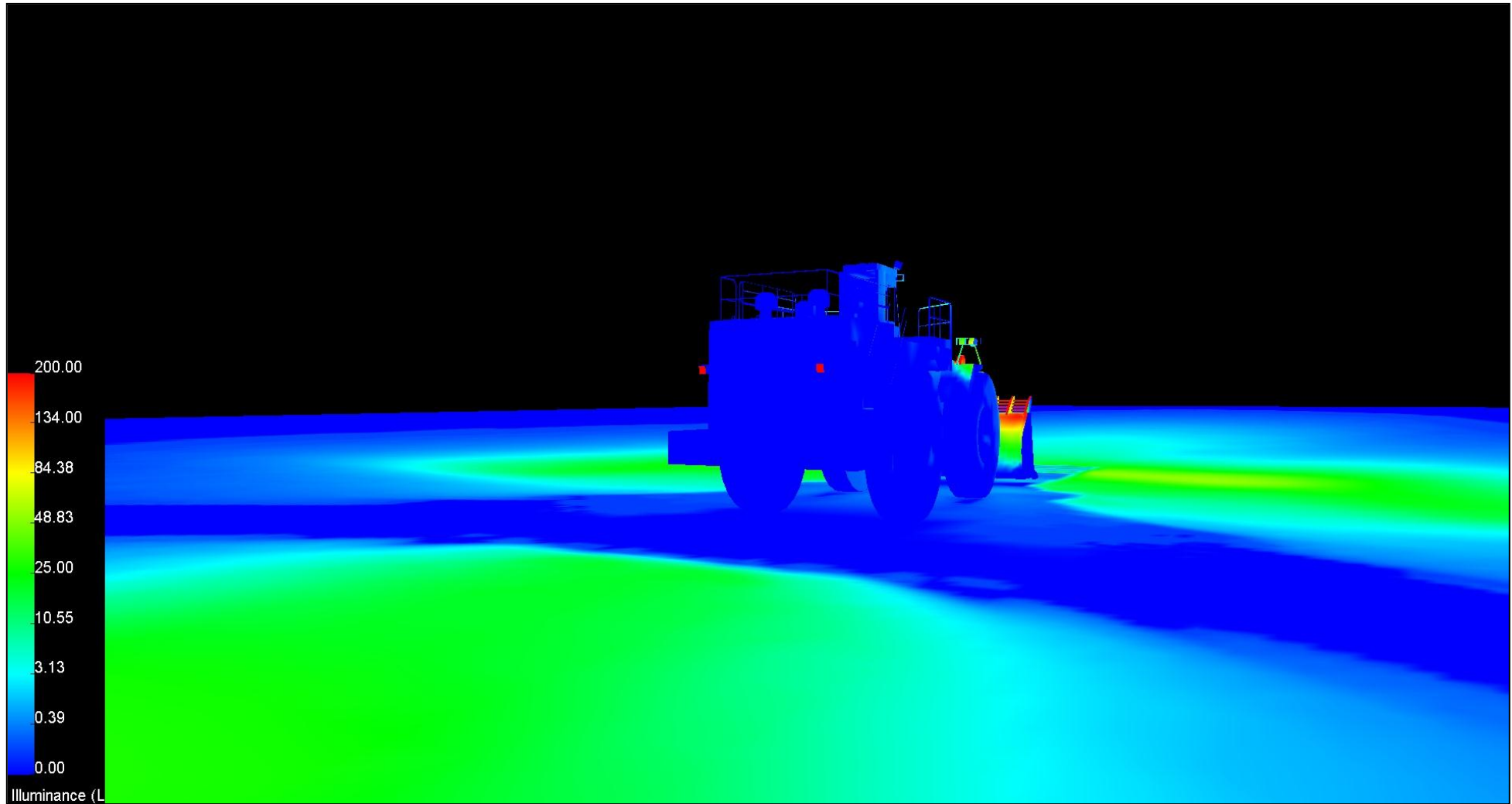
Iso View 3 – RGB



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Iso View 4 – IsoLUX



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Iso View 4 – RGB

