

**Mechanical, Electrical and Public Health  
Engineering Services  
Rathfarnham Care Home**

**Proposed External Lighting Schedule  
Design Me Document Reference 1135 SCH 97 001. Rev.0**



## Contents

- **Luminaires**

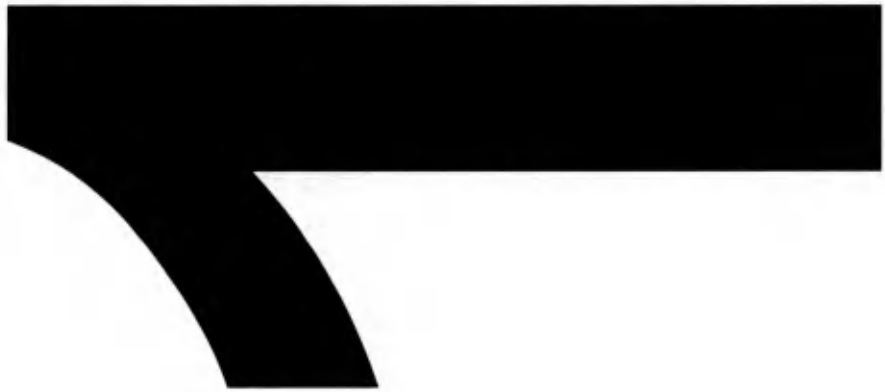
Section 1 – Light Pollution Statement

Section 2 – External Luminaires

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# Light Pollution Statement



### Compliance

External lighting has been calculated and designed in compliance with a class E4 environmental zone with regard to light pollution.

Compliance has been achieved with this zone – please see below for outputs:

- Luminaire intensity (Max 2500 cd for E4 Post Curfew)
  - Column - 895 candela
  - Bollard – 125 candela
- Sky Glow Upward Light Ratio – 3.5% (Max 15% for E4 Post Curfew). Luminaire aims light directly down at ground level via optic.
- Light Intrusion into windows – 3 lx at worst case (Max 5 lux for E4 Post Curfew).

# External Luminaire



# Street Lighting Column



Electrical: Circuit Wattage: 31W  
Optical: Delivered Lumens: 4264lm  
Physical: Diameter: N/A  
Type: Road / Carpark Column  
Specifying Manufacturer: Cartwright Lighting  
Product:

Delivered Light Efficacy: 137m/W  
Colour Temperature: 3000K  
Mounting Height: 5m  
Body Colour: Anthracite Grey  
Product Code: GH5481.EC3T300EN

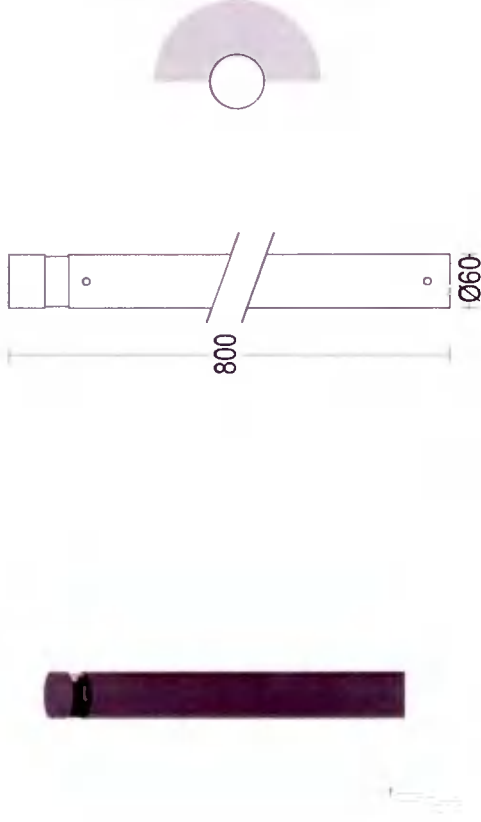
Dimming: Dali  
Light Distribution: Asymmetric  
Warranty: 5Yrs Luminaire  
Diffuser: N/A  
Emergency: N/A  
Longevity: 50,000 Hrs  
Symmetry: Asymmetric  
IP Rating: IP66

**Additional Notes:**

Structural Engineer to Specify Foundations/Base.  
Each Light Fitting to be Complete with Junction Box

Light Fitting Reference EX1

# Path Bollard



**Electrical:** Circuit Wattage: 12W

**Optical:** Delivered Lumens: 1469lm

**Physical:** Diameter: N/A  
Type: Ballard

**Specifying** Manufacturer: Cartwright Lighting

**Product:**

Delivered Light Efficacy: 122m/W

Colour Temperature: 3000K

Height: 800mm

Body Colour: Dark Grey

Product Code: GH1449.BRXT300EN

Dimming: Dali

Light Distribution: Asymmetric

Warranty: 5Yrs Luminaire

Diffuser: N/A

Additional Notes: Structural Engineer to Specify Foundations/Base.  
Each Light Fitting to be Complete with Junction Box

Longevity: 50,000 Hrs

Symmetry: Asymmetric

IP Rating: IP65

Emergency: N/A

Light Fitting Reference EX2

# Wall Mounted Fitting

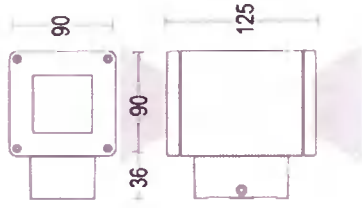


Electrical:	<u>Circuit Wattage:</u> 14W	<u>Delivered Light Efficacy:</u> 122m/W	<u>Dimming:</u> Dali	<u>Longevity:</u> 50,000 Hrs
Optical:	<u>Delivered Lumens:</u> 1700lm	<u>Colour Temperature:</u> 3000K	<u>Light Distribution:</u> Asymmetric	<u>Symmetry:</u> Asymmetric
Physical:	<u>Diameter:</u> 462mm	<u>Depth:</u> 112mm	<u>Warranty:</u> 5Yrs Luminaire	<u>IP Rating:</u> IP65
Specifying	<u>Type:</u> Stairway Recessed	<u>Body Colour:</u> Anthracite Grey	<u>Diffuser:</u> MPS	<u>Emergency:</u> Yes
Product:	<u>Manufacturer:</u> Cartwright Lighting	<u>Product Code:</u> T9EB01700EZBO/EM	<b>Additional Notes:</b> Each Light Fitting to be Complete with Junction Box	

Light Fitting Reference EX3



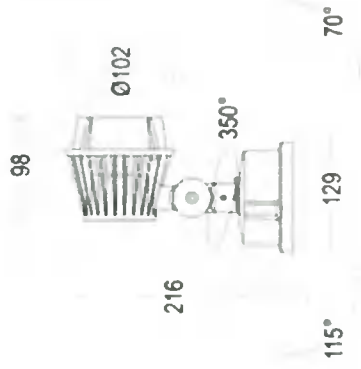
# Wall Light



Electrical:	<b>Circuit Wattage:</b> 2x5W	<b>Delivered Light Efficacy:</b> 54m/W	<b>Dimming:</b> Dali	<b>Longevity:</b> 50,000 Hrs
Optical:	<b>Delivered Lumens:</b> 540lm	<b>Colour Temperature:</b> 3000K	<b>Light Distribution:</b> Asymmetric	<b>Symmetry:</b> Asymmetric
Physical:	<b>Diameter:</b> N/A	<b>Mounting Height:</b> 1.4m	<b>Warranty:</b> 5Yrs Luminaire	<b>IP Rating:</b> IP65
Specifying	<b>Type:</b> Balcony	<b>Body Colour:</b> Dark Grey	<b>Diffuser:</b> N/A	<b>Emergency:</b> N/A
Product:	<b>Manufacturer:</b> Cartwright Lighting	<b>Product Code:</b> GH1961.CAPT300EN	<b>Additional Notes:</b> Fittings can be mounted to Slate Cladding	

Light Fitting Reference EX4

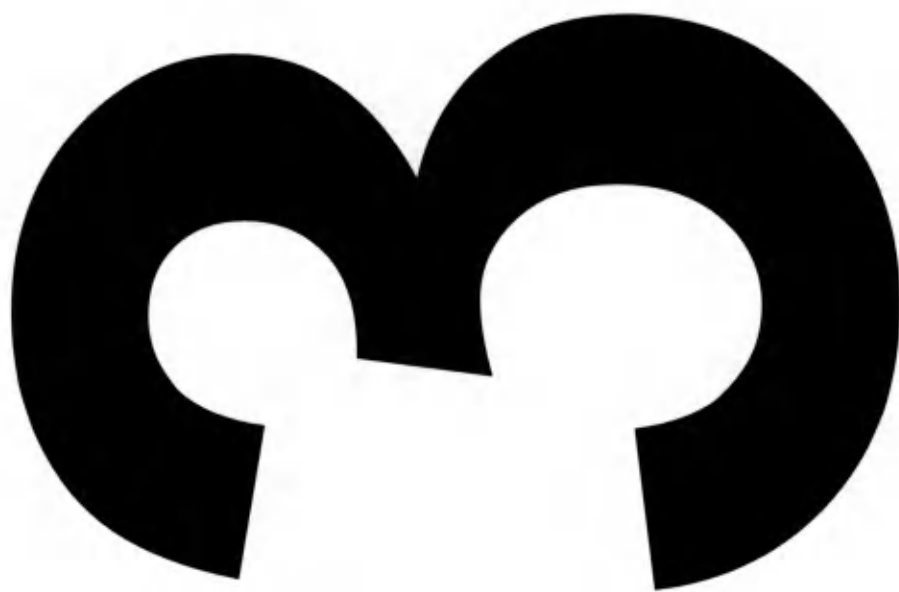
# In-Ground Stake Spot



Electrical:	<b>Circuit Wattage:</b> 6.5W	<b>Delivered Light Efficiency:</b> 138m/W	<b>Dimming:</b> Dali	<b>Longevity:</b> 50,000 Hrs
Optical:	<b>Delivered Lumens:</b> 908lm	<b>Colour Temperature:</b> 3000K	<b>Warranty:</b> 5Yrs Luminaire	<b>IP Rating:</b> IP66
Physical:	<b>Diameter:</b> N/A	<b>Height:</b> N/A	<b>Diffuser:</b> N/A	<b>Emergency:</b> No
Specifying	<b>Type:</b> In-Ground Light	<b>Body Colour:</b> Gray		
Product:	<b>Manufacturer:</b> Cartwright Lighting	<b>Product Code:</b> GH1129.LVFT400EN		

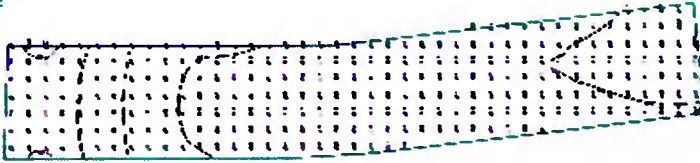
Supplied with In-ground Stake accessory

Light Fitting Reference EX5



# External Lighting Calculations

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Properties

E

E<sub>min</sub>

E<sub>max</sub>

g<sub>1</sub>

g<sub>2</sub>

Index

(Target)

Workplane (Site Entrance)  
Perpendicular illuminance (adaptive)  
Height: 0.000 m, Wall zone: 0.250 m

9.31 lx

3.14 lx

23.0 lx

0.34

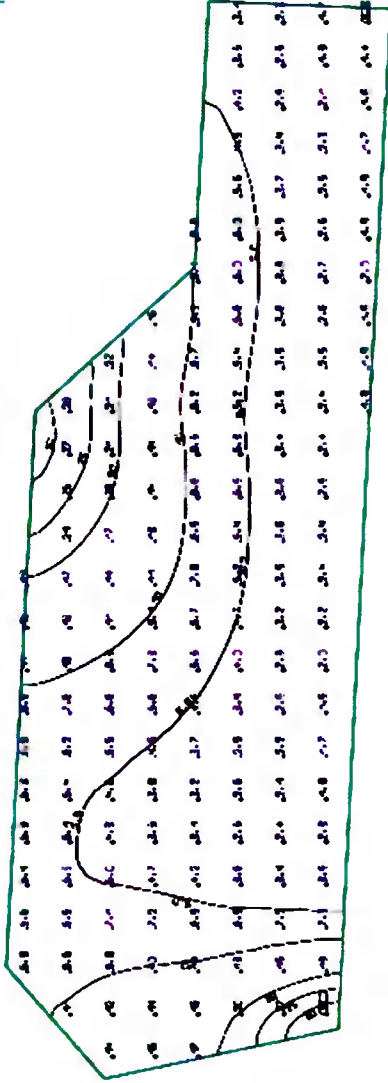
0.14

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(≥ 5.00 lx)



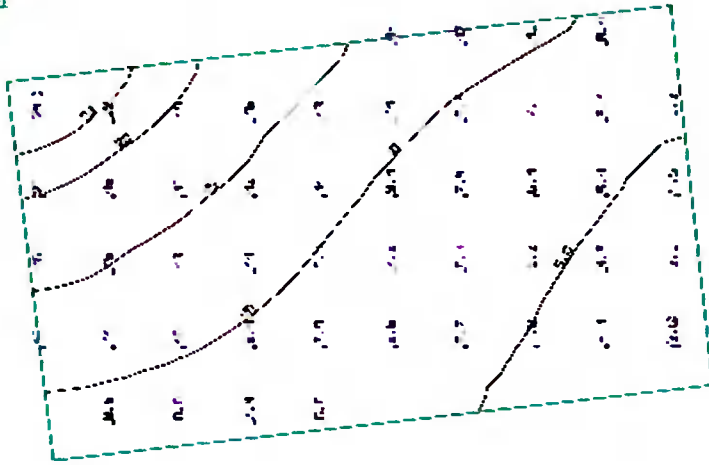
Site Entrance



Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (7 Residential Parking Spaces) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 1.000 m	7.57 lx (≥ 5.00 lx) ✓	1.20 lx	36.7 lx	0.16	0.033	58

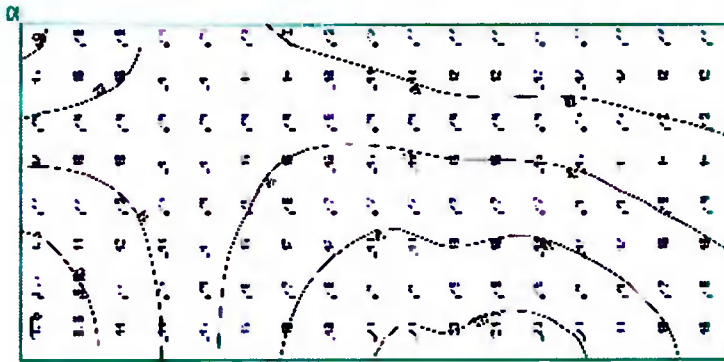
7 Residential Parking Spaces

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Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Disabled Parking)	10.2 lx	3.37 lx	24.9 lx	0.33	0.14	56
Perpendicular illuminance (adaptive)	≥ 5.00 lx					
Height: 0.000 m, Wall zone: 0.000 m	✓					

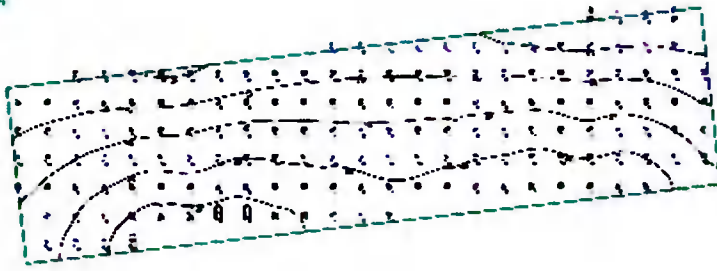
Disabled Parking



Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Parking A)	14.7 lx	8.04 lx	20.7 lx	0.55	0.39	52
Perpendicular illuminance (adaptive)	≥ 5.00 lx					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Parking A

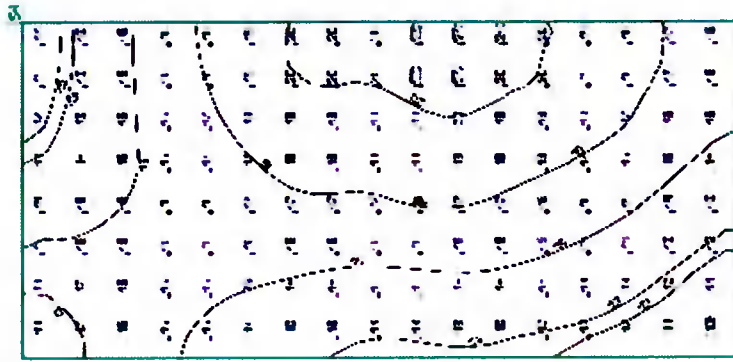
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Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Parking B) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	15.1 lx (≥ 5.00 lx) ✓	7.80 lx	21.4 lx	0.52	0.36	55

Parking B

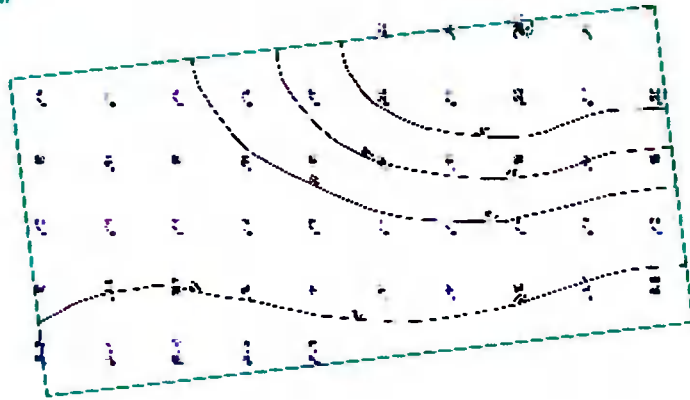




Properties	E	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Parking C)	16.0 lx	10.1 lx	21.2 lx	0.63	0.48	S4
Perpendicular illuminance (adaptive)	≥ 5.00 lx					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Parking C

S3



Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Parking D) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	14.4 lx (≥ 5.00 lx) ✓	7.85 lx	25.0 lx	0.55	0.31	S3

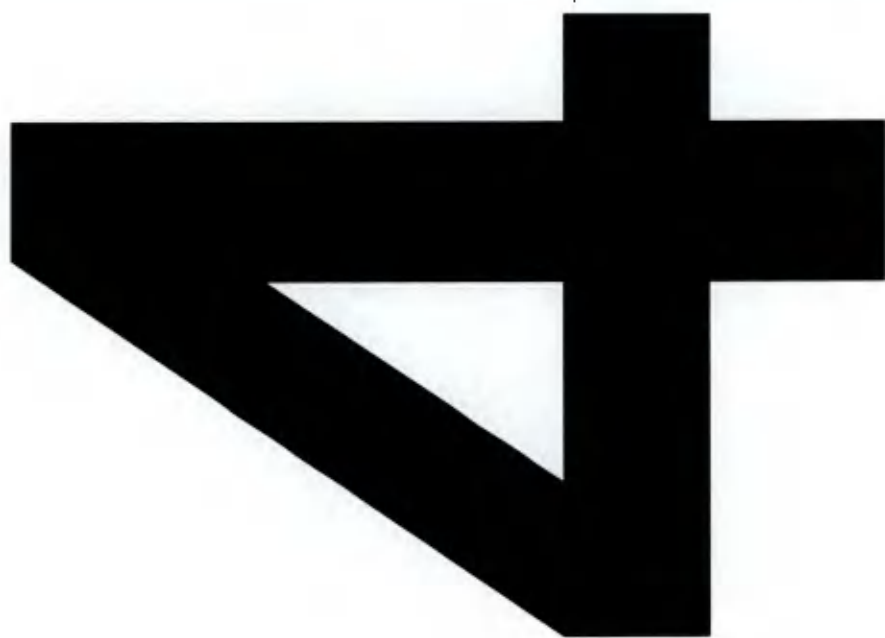
Parking D

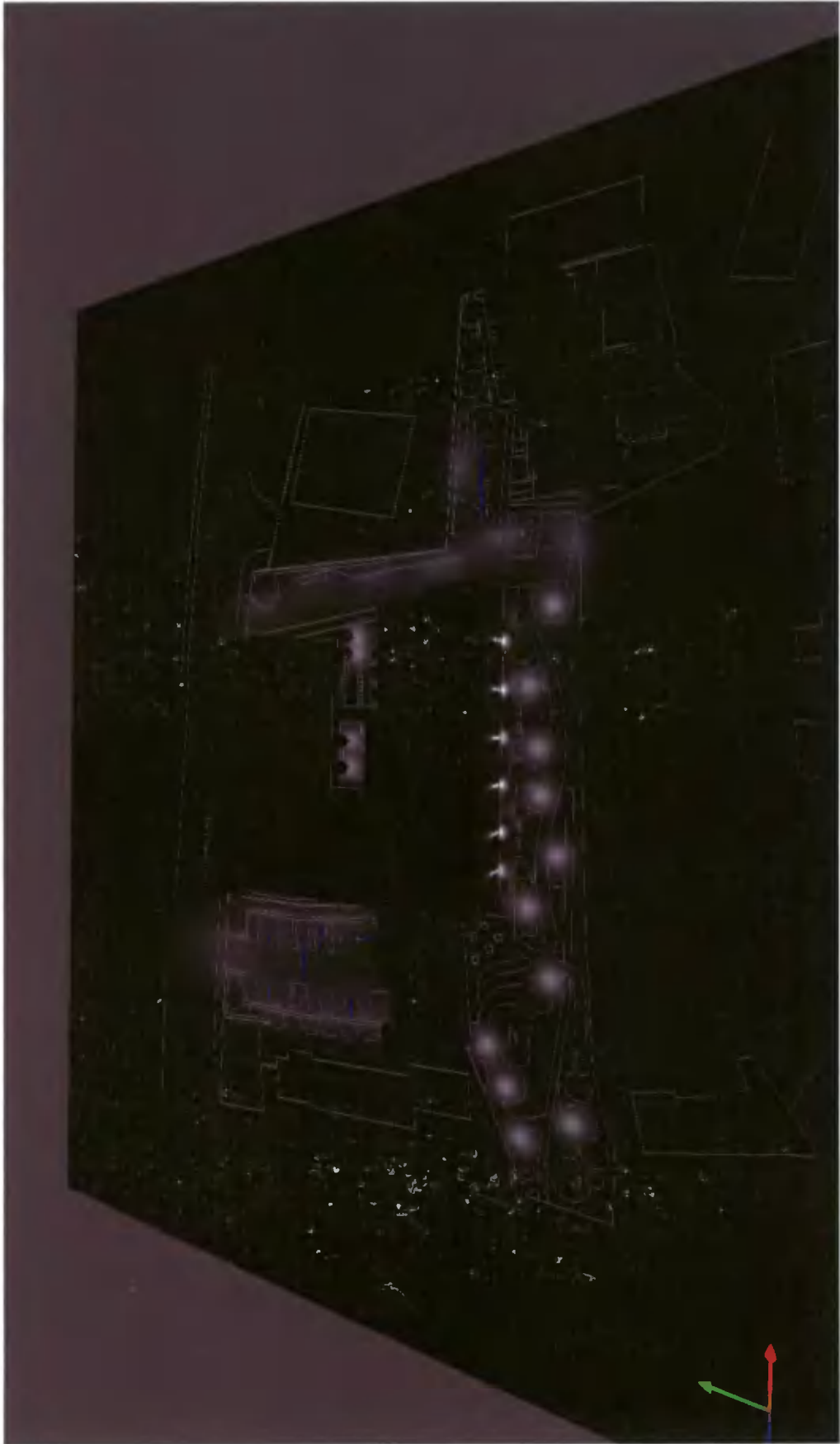


Properties	E (Target)	E <sub>min</sub>	E <sub>max</sub>	g <sub>1</sub>	g <sub>2</sub>	Index
Workplane (Sheard Road) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 1.000 m	12.1 lx (≥ 5.00 lx) ✓	3.42 lx	33.5 lx	0.28	0.10	57

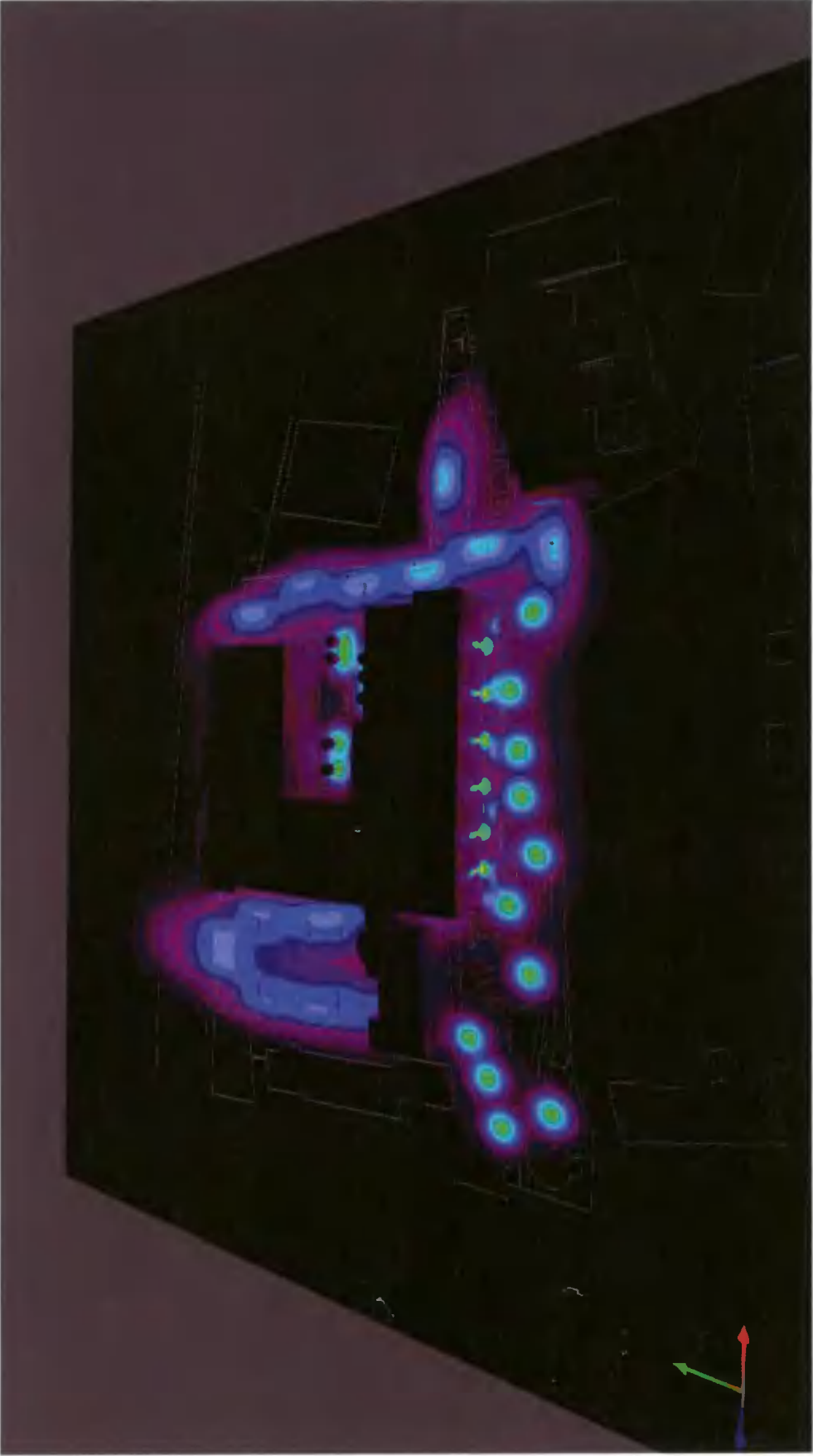
Sheard Road

# External Renders





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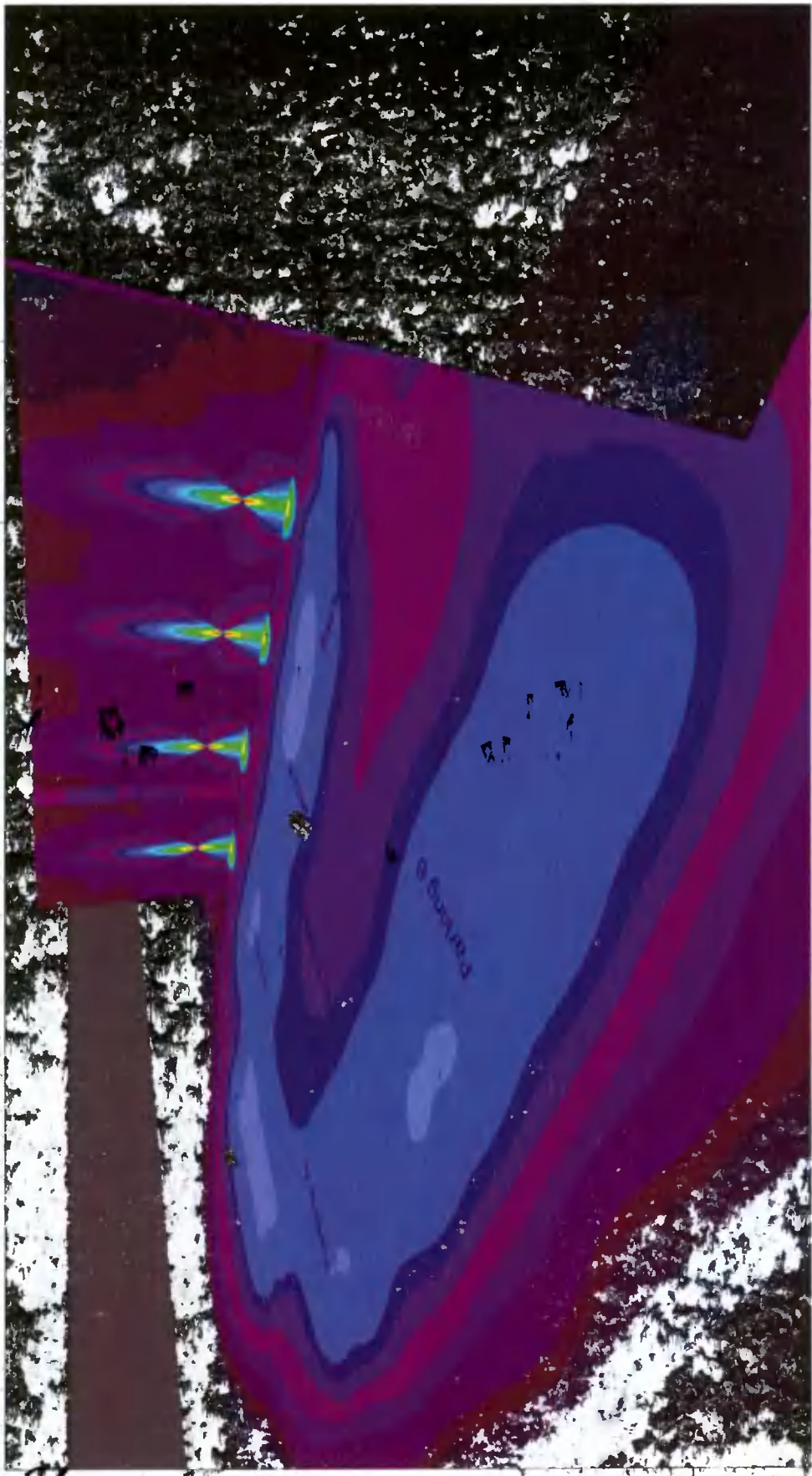


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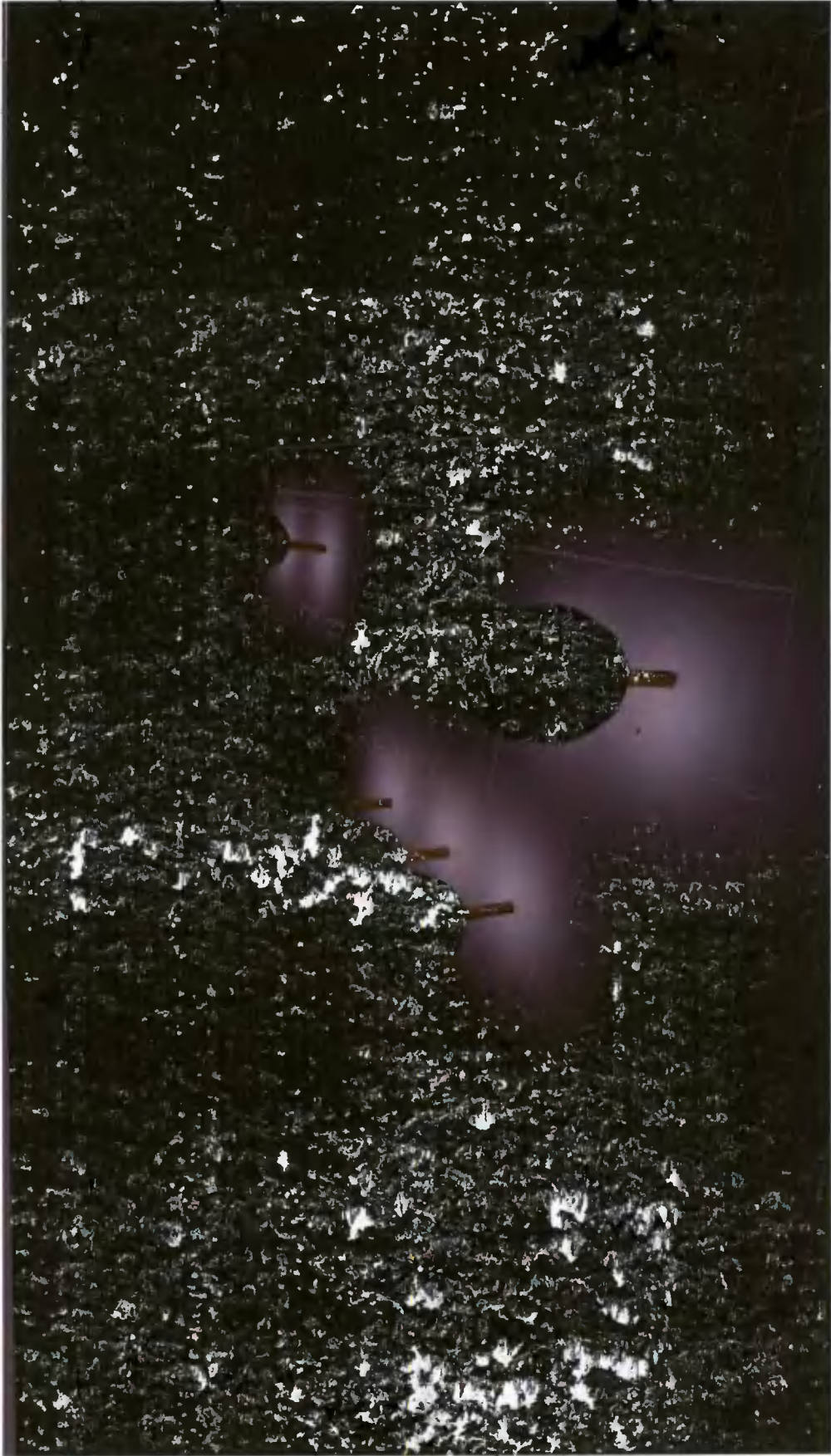
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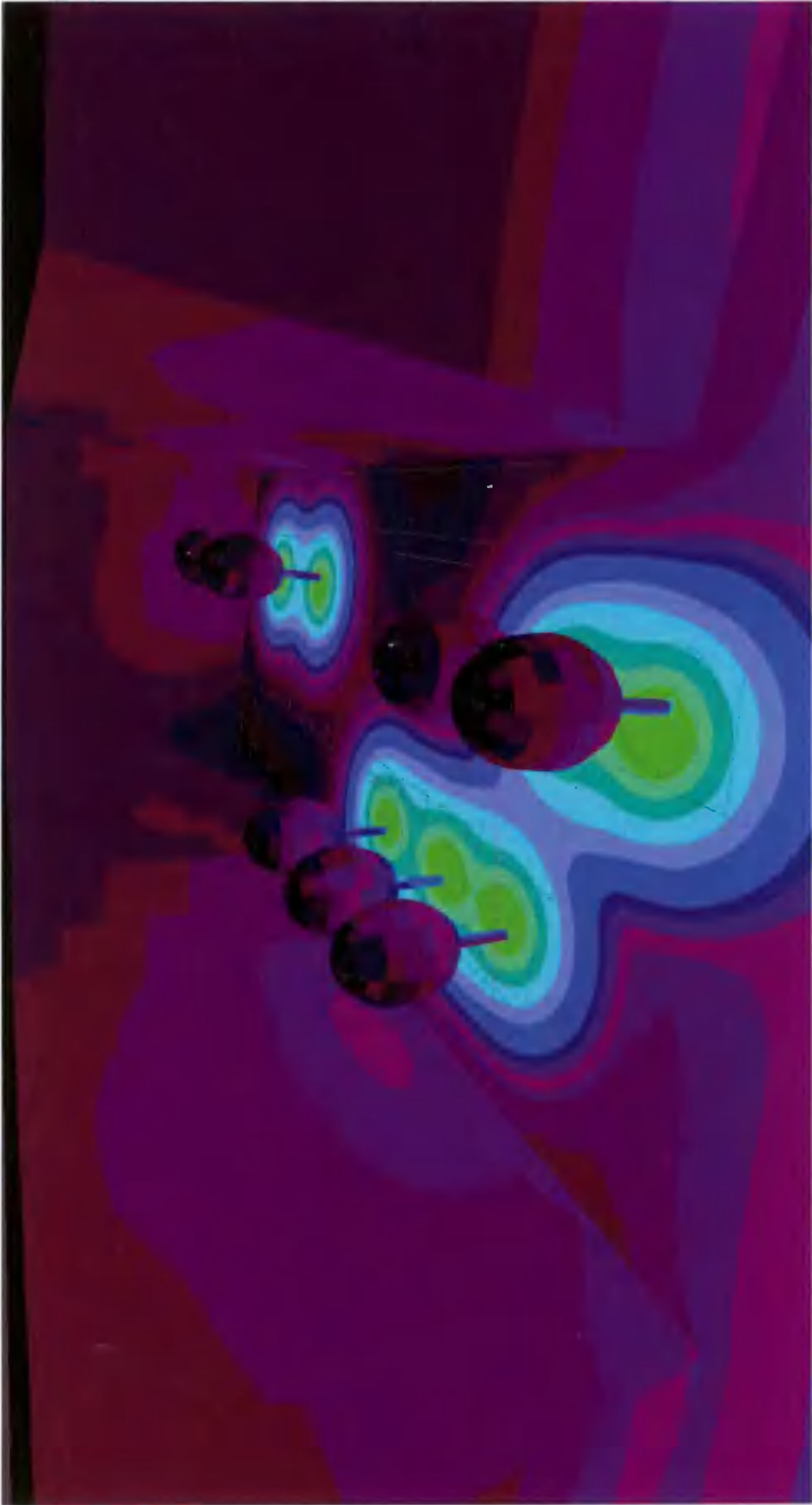


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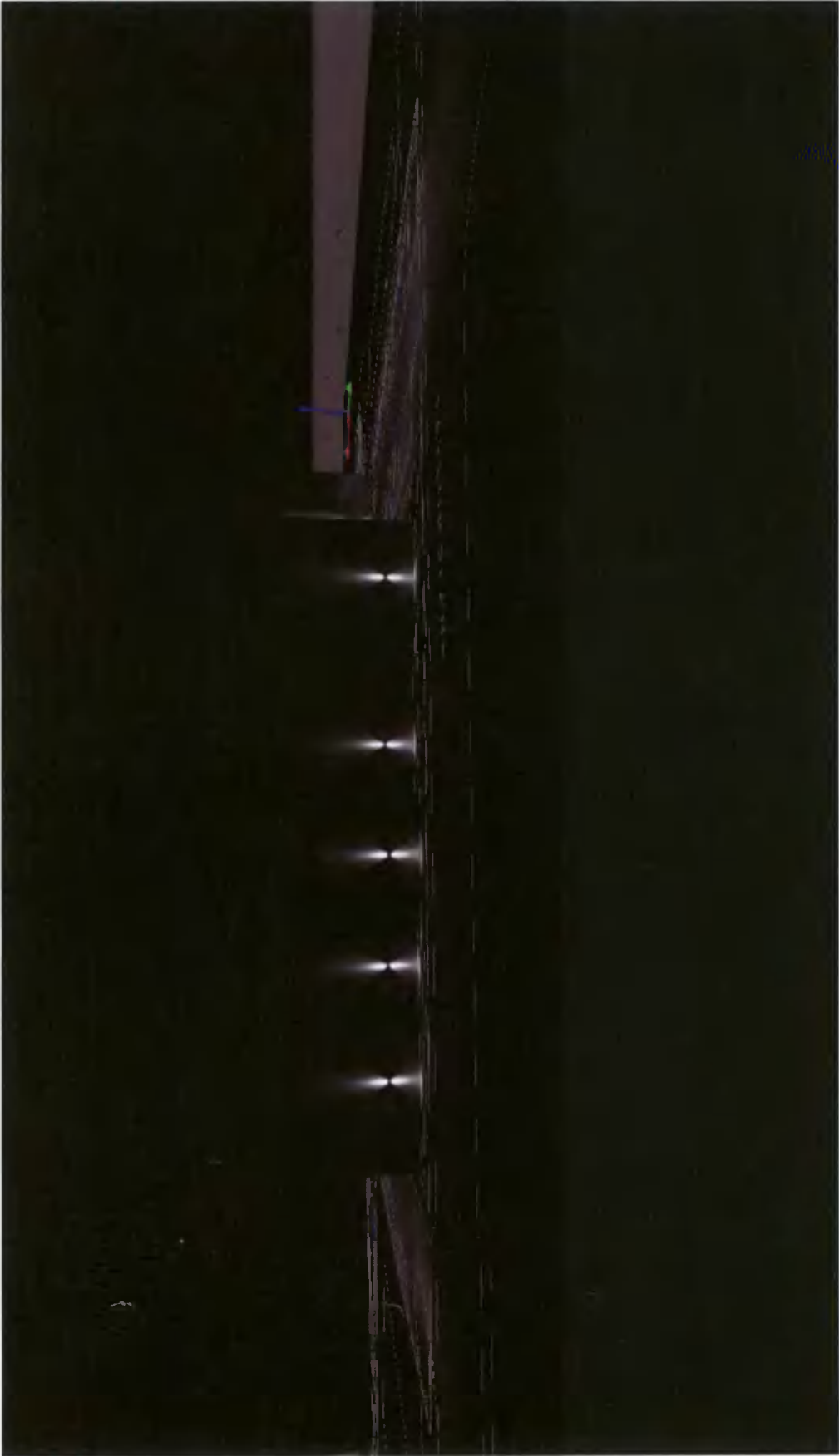




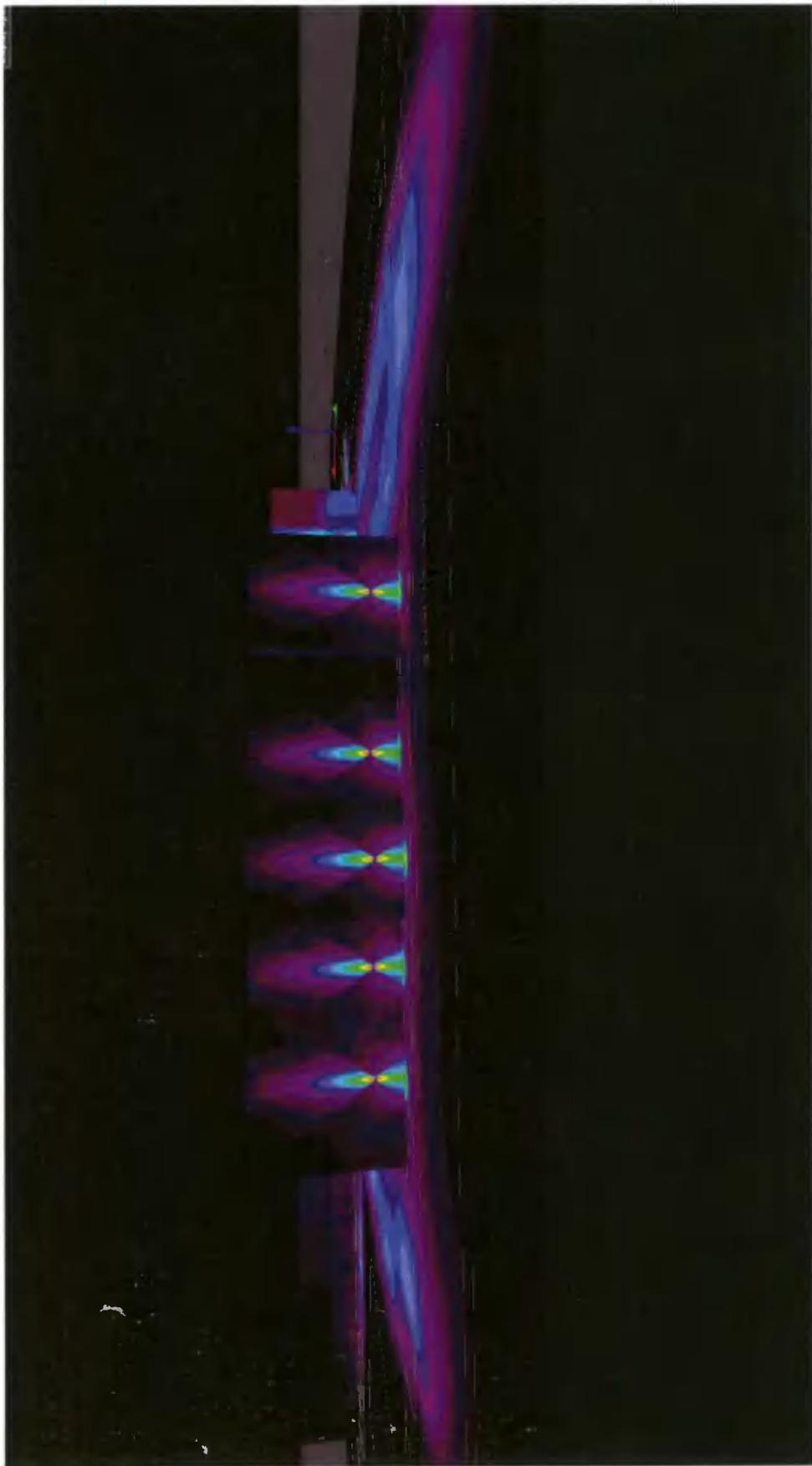
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