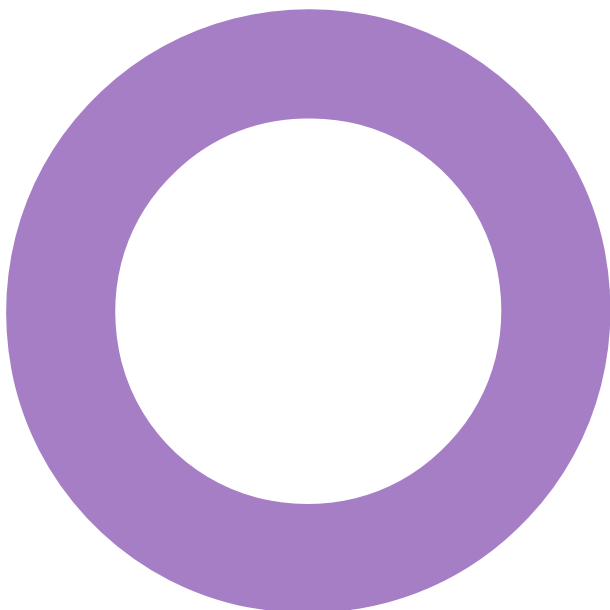


**The Edge.
Cumbria.**
**Whitehaven Harbour
Commissioners.**

MEP ENGINEERING
EXTERNAL LIGHTING
SUBMITTED FOR PLANNING
REVISION 1 – 03.02.2021



Contents.

Audit sheet.	2
Executive summary	4
Product Information	5
Product Information	6

Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
1	03.02.2021	Information Issue	PT	SM	PT

This document has been prepared for approval by the planning authority only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

Project number: 03/08104

Document reference: The Edge External Lighting Information Feb 21.docx

Executive summary

This document is provided to accompany the external lighting drawing to indicate the proposed products (or similar) to provide lighting to pedestrian circulation areas, car park and for feature lighting for the building.

Illumination of the pedestrian areas and car park will comprise of 6m column mounted LED luminaires suffixed LP1 on the drawing and within this document. Light spill will be minimised by careful selection of the product indicated.

In addition there will be a number of wall mounted LED luminaires positioned above external doors on the main building and within the car park/compound area suffixed JE on the plan.

The building is also to be feature lit making use of LED colour changing projector lamps which will be column mounted at each end of the building identified LP2 on the plan.

See below products identified.

Circulation lighting will be controlled by photocell and timeclock

Feature lighting will be manually controlled and with timeclock arrangement

Product Information

Ref JE Wall Mounted LED Bulkhead Luminaire as per Thorlux Mercian range – see data sheet overleaf

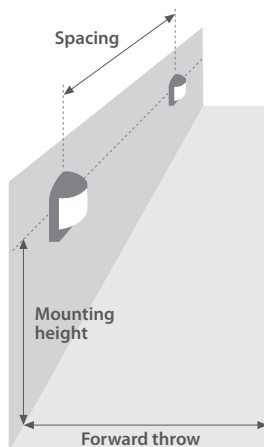


PERFORMANCE GUIDE

Photometric Performance - 26W LED

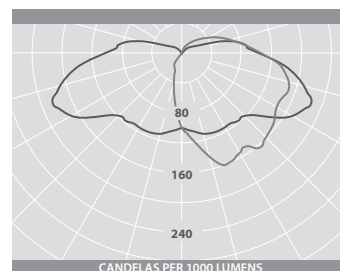
SPACING	AVERAGE ILLUMINANCE	UNIFORMITY (min/av)
3m mounting height - 5m forward throw		
12m ctrs	22 lux	0.46
15m ctrs	15 lux	0.28
18m ctrs	15 lux	0.19
4m mounting height - 6m forward throw		
12m ctrs	20 lux	0.35
16m ctrs	13 lux	0.50
20m ctrs	10 lux	0.37
24m ctrs	9 lux	0.27
5m mounting height - 7m forward throw		
15m ctrs	11 lux	0.51
20m ctrs	8 lux	0.51
25m ctrs	7 lux	0.36
30m ctrs	6 lux	0.26

FIGURES ARE BASED ON INITIAL LUMENS



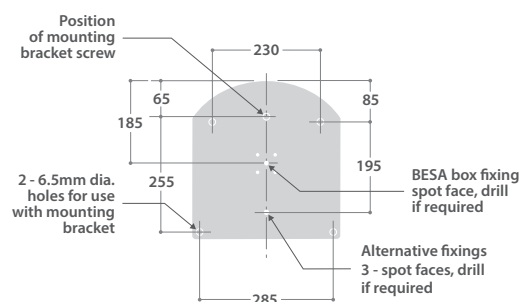
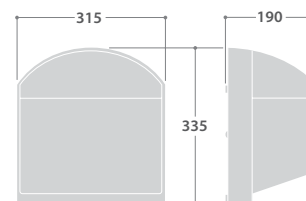
e.g. At 3m mounting height and 12m centres: 22 lux average horizontal illuminance at ground level over an area of 12m (centres) x 5m (forward throw)

PHOTOMETRIC GUIDE



Luminaire Lumen Output:
26W = 3330lm

DIMENSIONS





Smart External version

HIGH PERFORMANCE WALL MOUNTED LUMINAIRES



SPECIFICATION

- Strong pressure die-cast LM2 aluminium body prevents distortion when fixing and preserves IP rating. Textured black full polyester powder finish
- Impact-resistant, flame-retardant prismatic polycarbonate cover
- Spacings up to six times mounting height
- Optional photocell control
- Tamper-resistant cover screws available
- Simple to fix using external stainless-steel brackets and two lower points, all external to gasket line to preserve IP rating
- Complies with M.O.D. JSP482 Chapter 8 Document for 'Category C' areas
- Smart External versions with intelligent lighting control for use up to 6 metres mounting height
- SmartScan wireless technology removes the need for control cabling. Ideal for retro-fit
- Fitted with 4000K or 5700K LEDs

LED CHARACTERISTICS

CRI	80+
COLOUR TEMPERATURE	4000K/5700K
RATED LIFE (HOURS)	100K - L70/B10
PROTECTION	LUX GUARD
DRIVER EFFICIENCY	>85%
REPLACEABLE	YES
POWER FACTOR	>0.9
LL/CW	111.0

For LED characteristics explanation see www.thorlux.com/led-guide



RANGE

	LED	CAT. No.	APPROX. kg
SMART EXTERNAL	26W - 4000K	MER 19102SS	4.4
	26W - 5700K	MER 19103SS	4.4
MAINS	26W - 4000K	MER 19104L	4.3
	26W - 5700K	MER 19105L	4.3

CIRCUIT TYPE -

SMART EXTERNAL	SS - SmartScan
STANDARD	L - non-dimming (LED)

EMERGENCY VERSION - prefix catalogue number with:

EMR - Emergency
TMR - AutoTest } (Not available when selecting the 'SS' suffix)

WMR - SmartScan (Only available when selecting the 'SS' suffix)
e.g. WMR 19102SS etc.

Add 0.3kg to weights listed

OPTIONS

DESCRIPTION	SUFFIX	EXAMPLE
Photocell	PC	MER 19104LPC
Tamper resistant screws ♦	T	MER 19104LT

- ♦ To fasten tamper resistant screws order special screwdriver **KEY 10008**

SmartScan Configurations



Find out more at www.thorlux.com/smartscan

Product Information

Ref LP1 and LP2 – see information overleaf and night time predictions for colour change feature lighting

WE-EF 139-1924 FLC240 [B] IP66:LED-24/72W/4K 24xLED-24/72W/840 - 4000K

IP66, Class I. IK07. Marine-grade die-cast aluminium alloy. 5CE superior corrosion protection including PCS hardware with Torx drive. Silicone CCG® Controlled Compression Gasket. Integral EC electronic converter, thermally separated with 6/6 kV surge protection. Safety glass lens. PMMA-LED lens array.

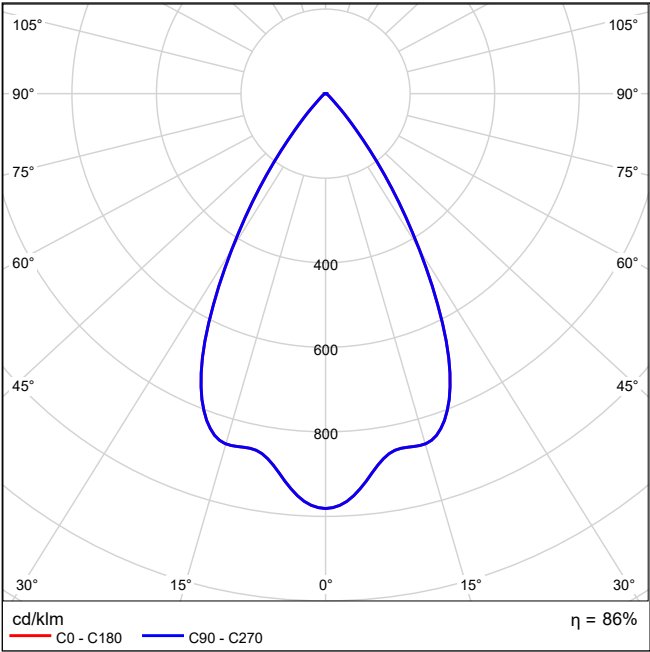


Column mounted colour changing projector at locations LP2 on site plan at each end of building.

Light output ratio: 85.92%
Luminaire luminous flux: 2361 lm
Power: 81.0 W

Colourimetric data
24xLED-24/72W/840 - 4000K: CRI 80

Luminous emittance 1 / Polar LDC



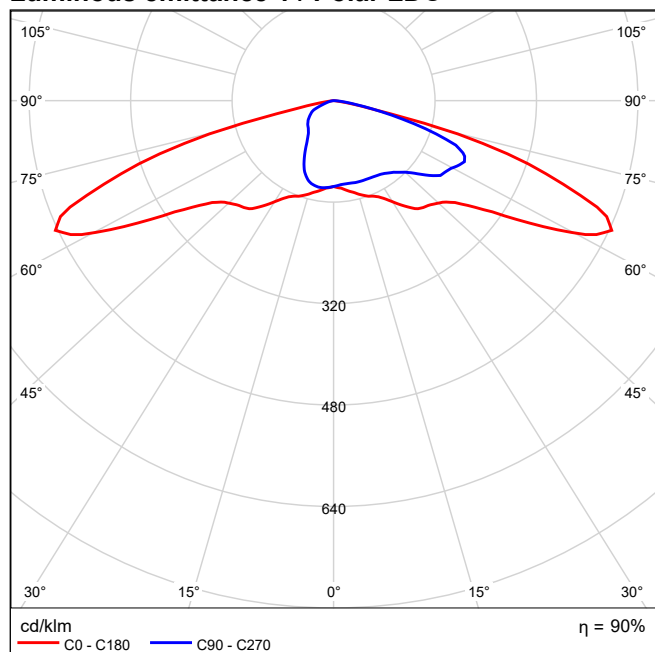
WE-EF 108-1136 VFL530 [R65] IP66:LED-12/12W/4K 12xLED-12/12W/840 - 4000K

IP66, Class I or Class II. IK08. Marine-grade die-cast aluminium alloy. 5CE superior corrosion protection including PCS hardware. Silicone CCG® Controlled Compression Gasket. UV stabilised acrylic panel in RFC® technology. Integrated heat sinks. Easy removal and replacement of LED board. CAD optimised OLC® PMMA lens for superior illumination and glare control. The luminaire is factory- sealed and does not need to be opened during the installation.
 Spigot D: 76 x 80 mm (optional 60 x 80 mm).
 Recommended mounting height 2.5-8.0 m, depending on lamp type selected.

**Column mounted LED luminaire for
 car park/roadway/pedestrian areas
 as shown LP1 on site plan**

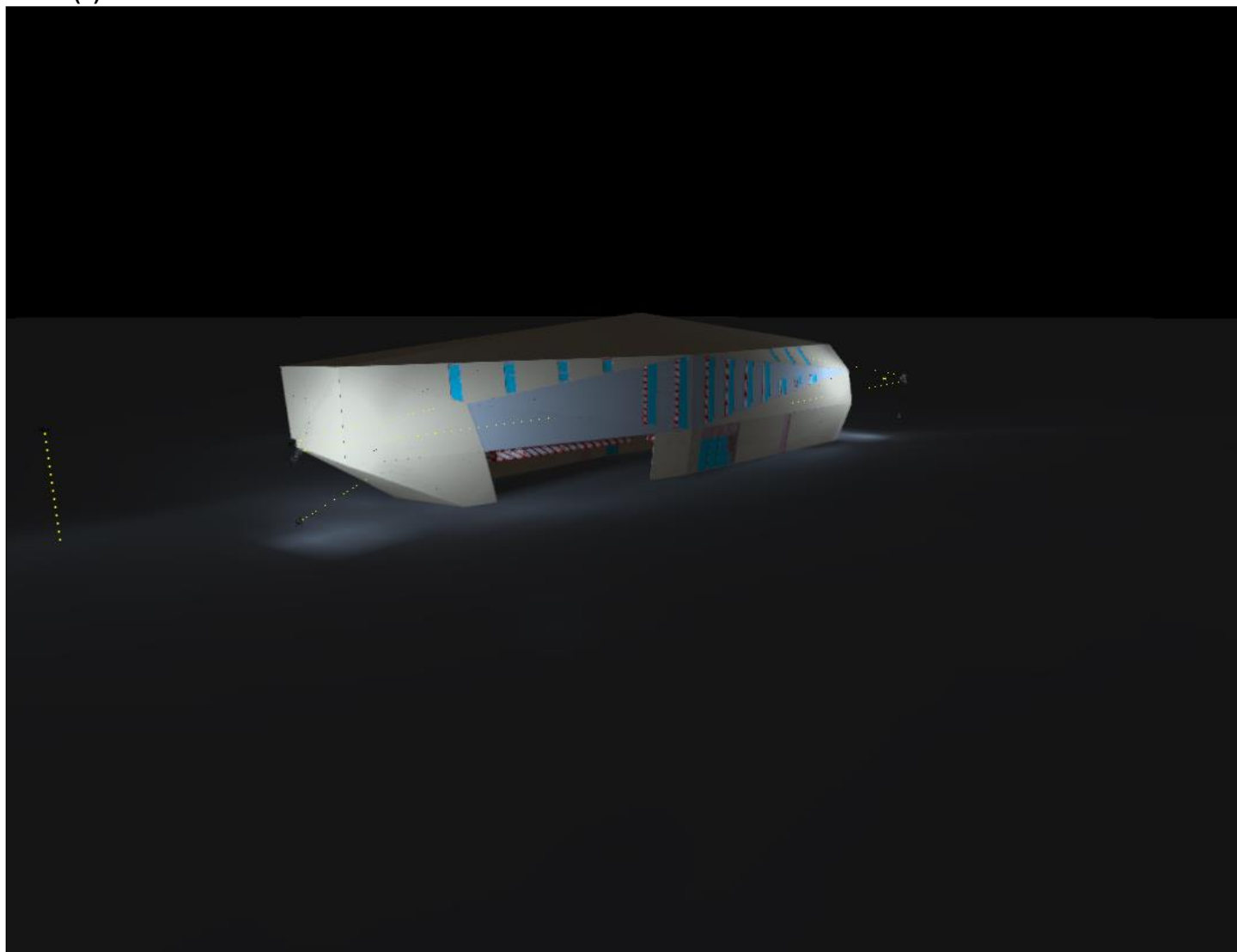
Light output ratio: 89.89%
 Luminaire luminous flux: 1451 lm
 Power: 14.0 W

Colourimetric data
 12xLED-12/12W/840 - 4000K: CRI 80

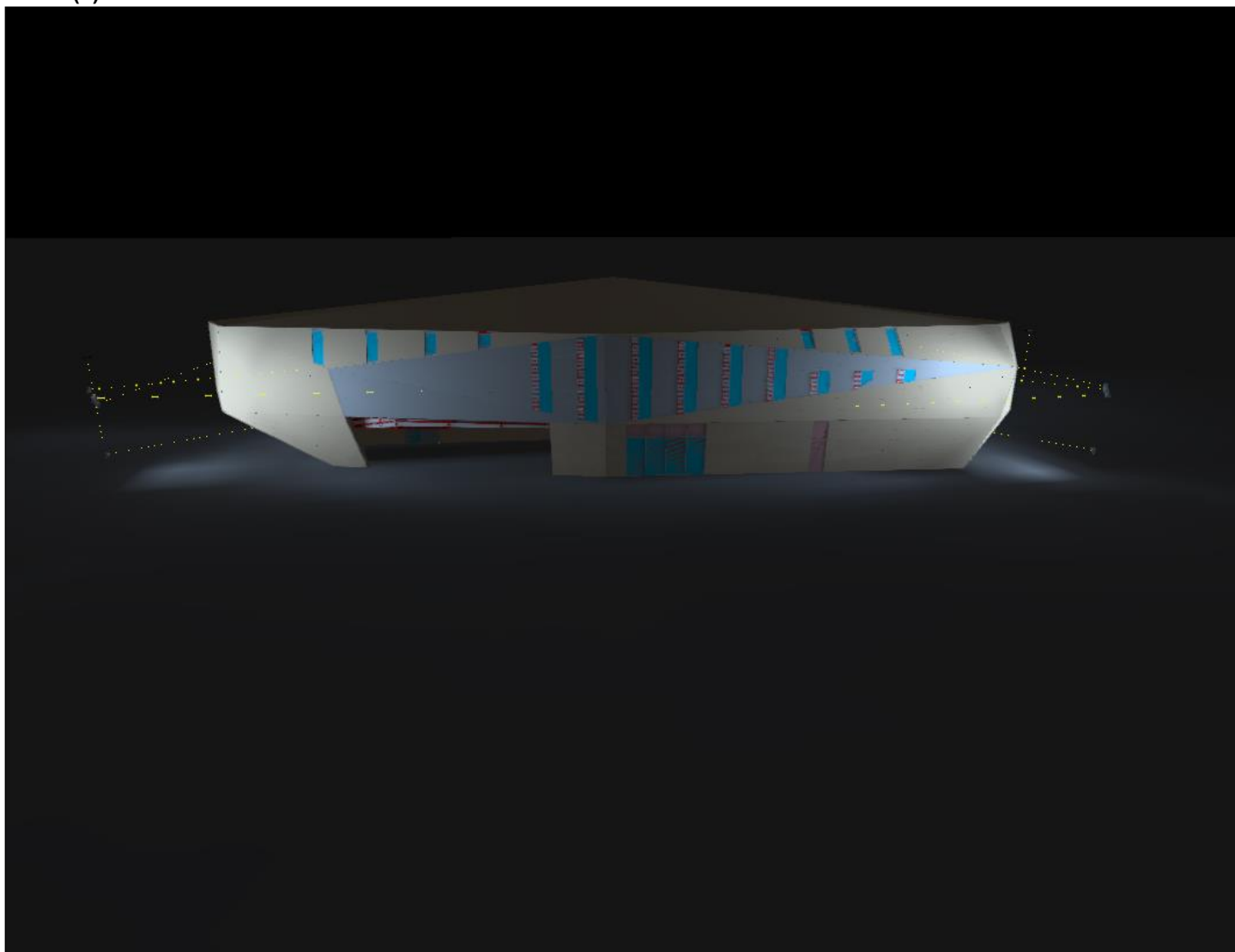
Luminous emittance 1 / Polar LDC

Site 1

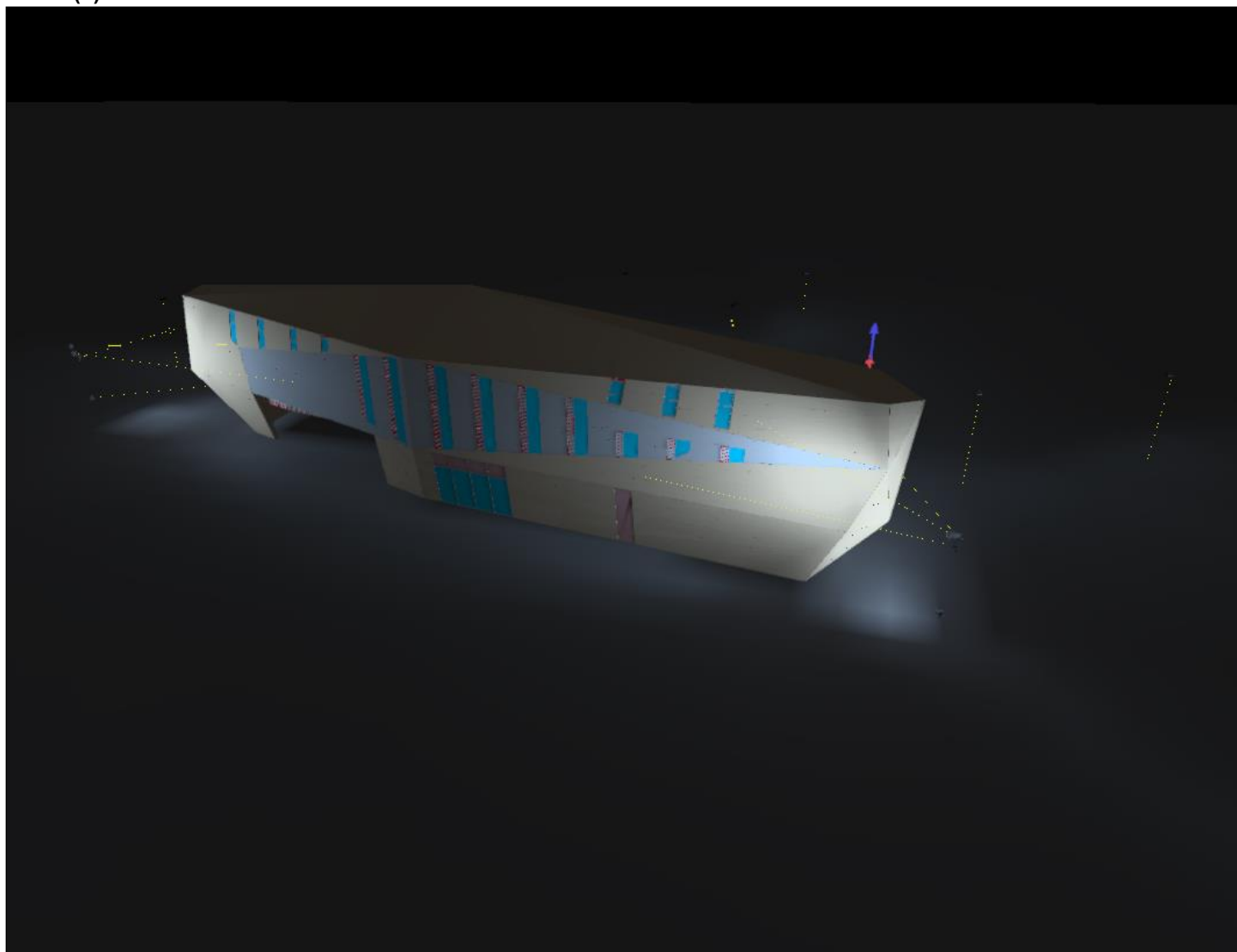
Site 1 (5)



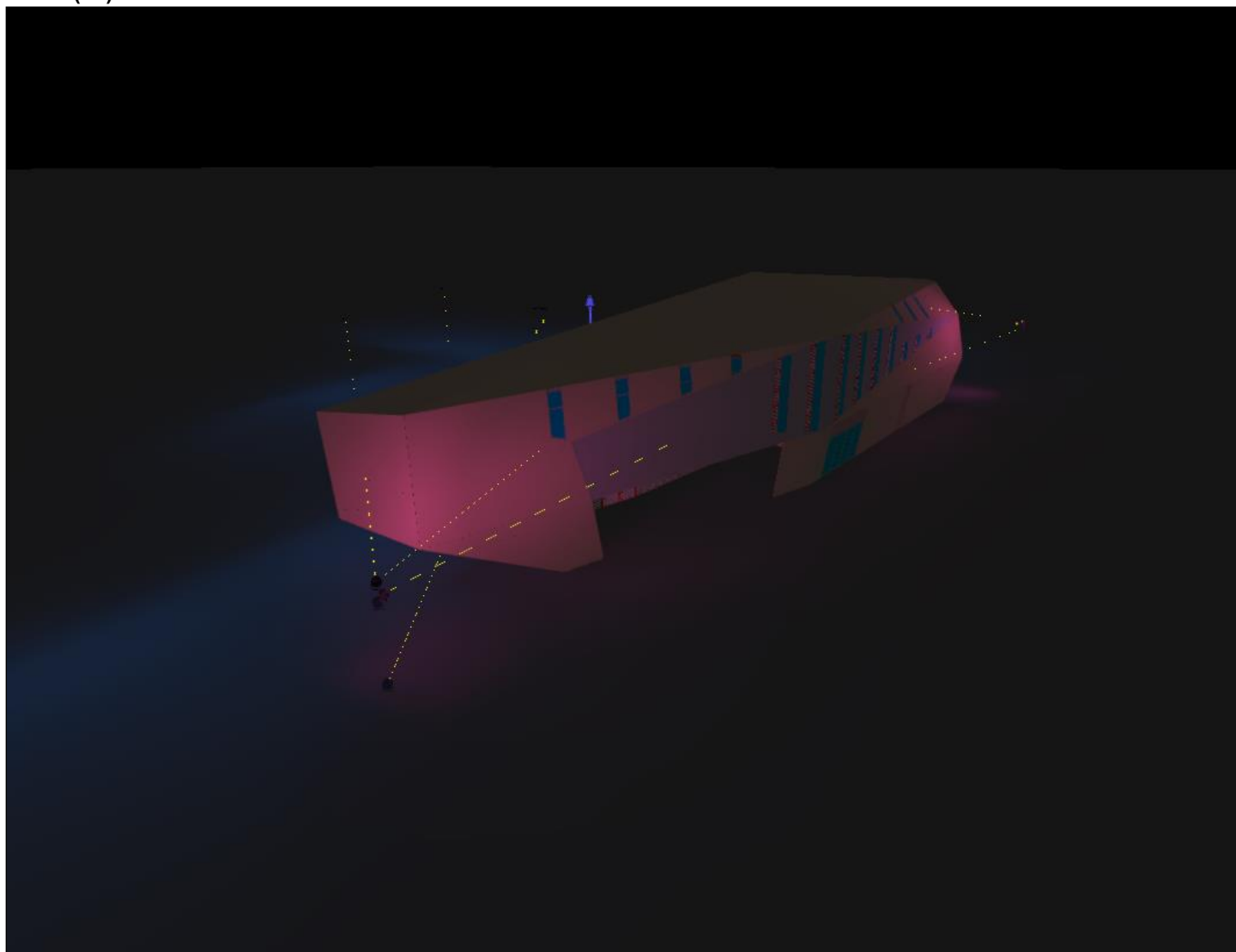
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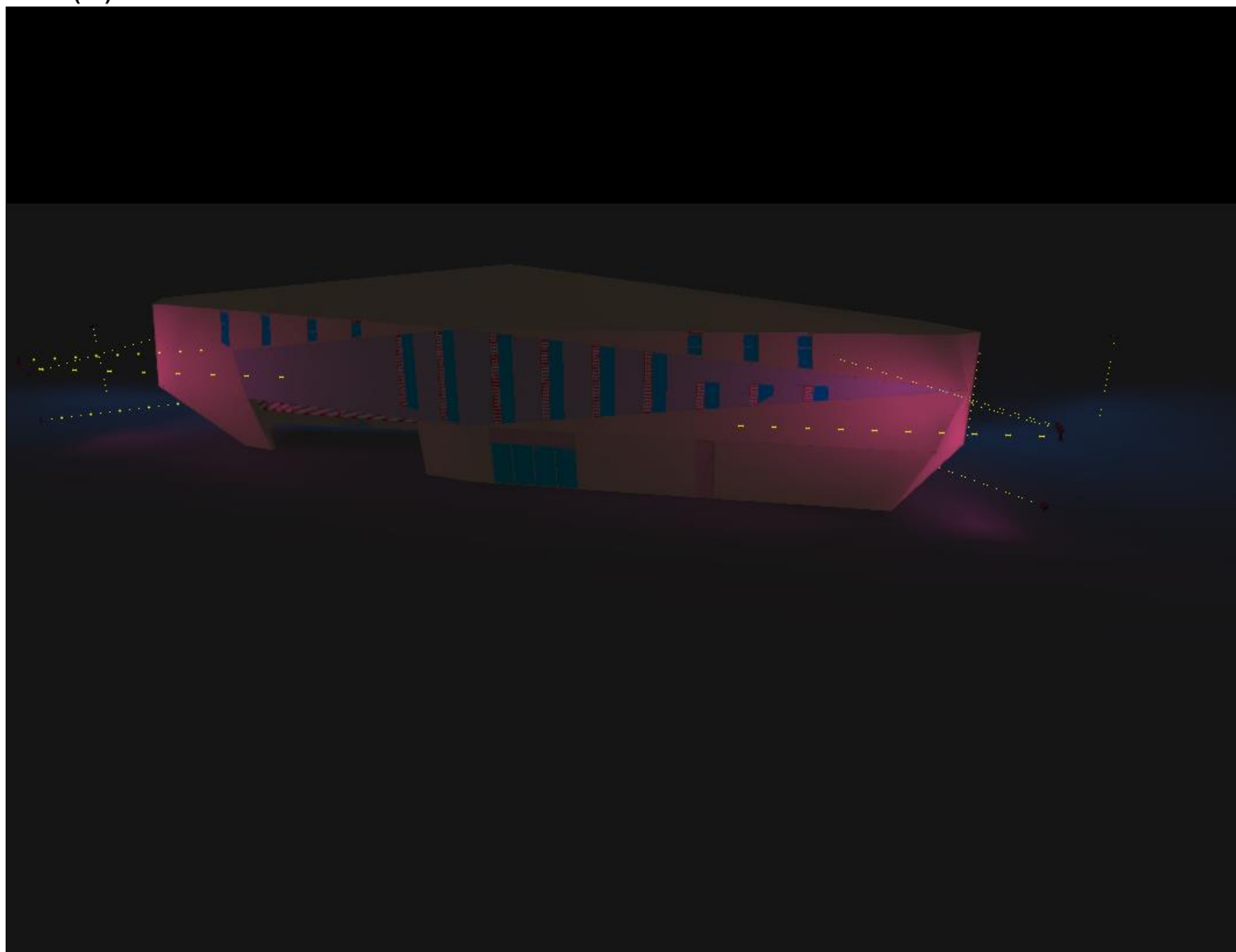
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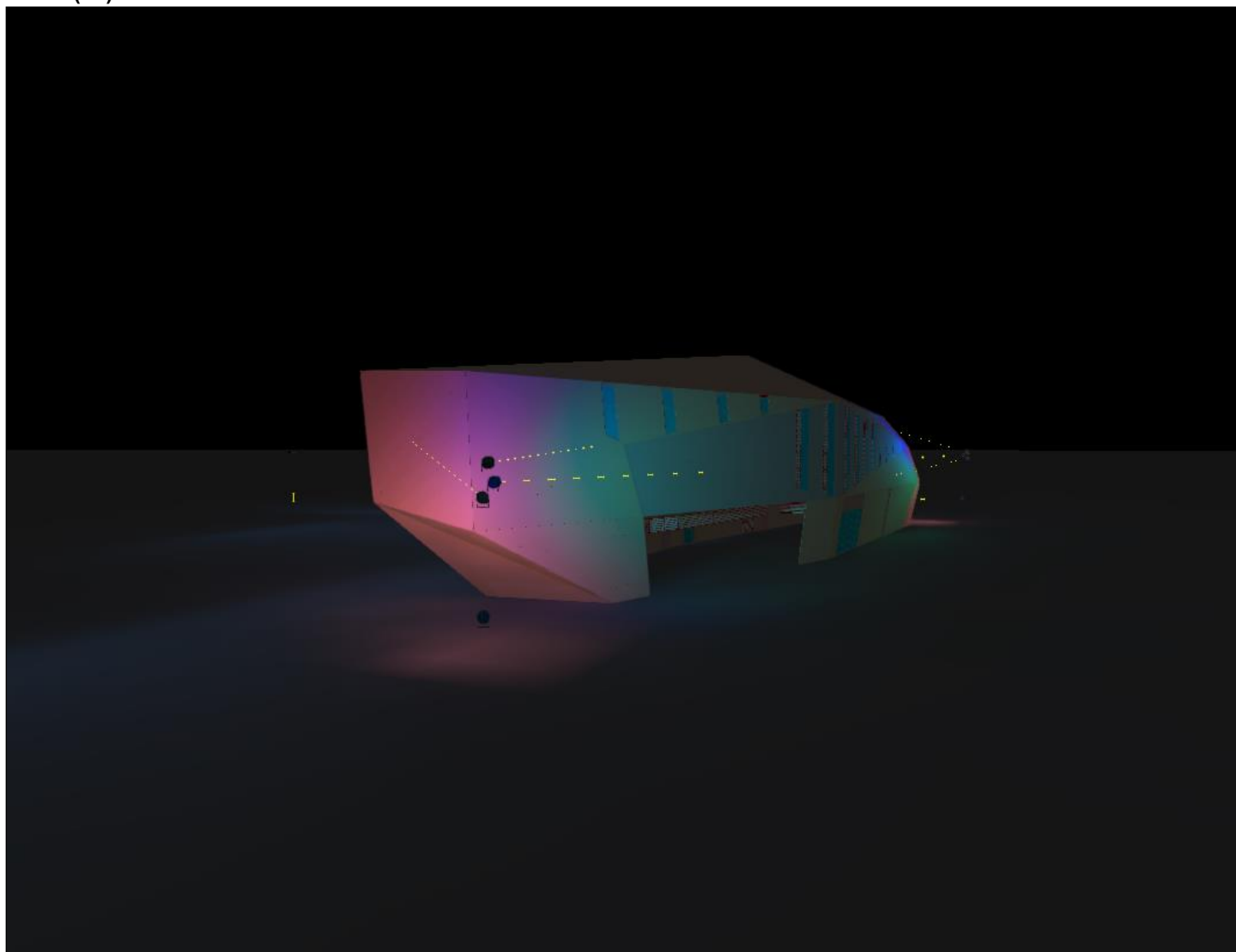
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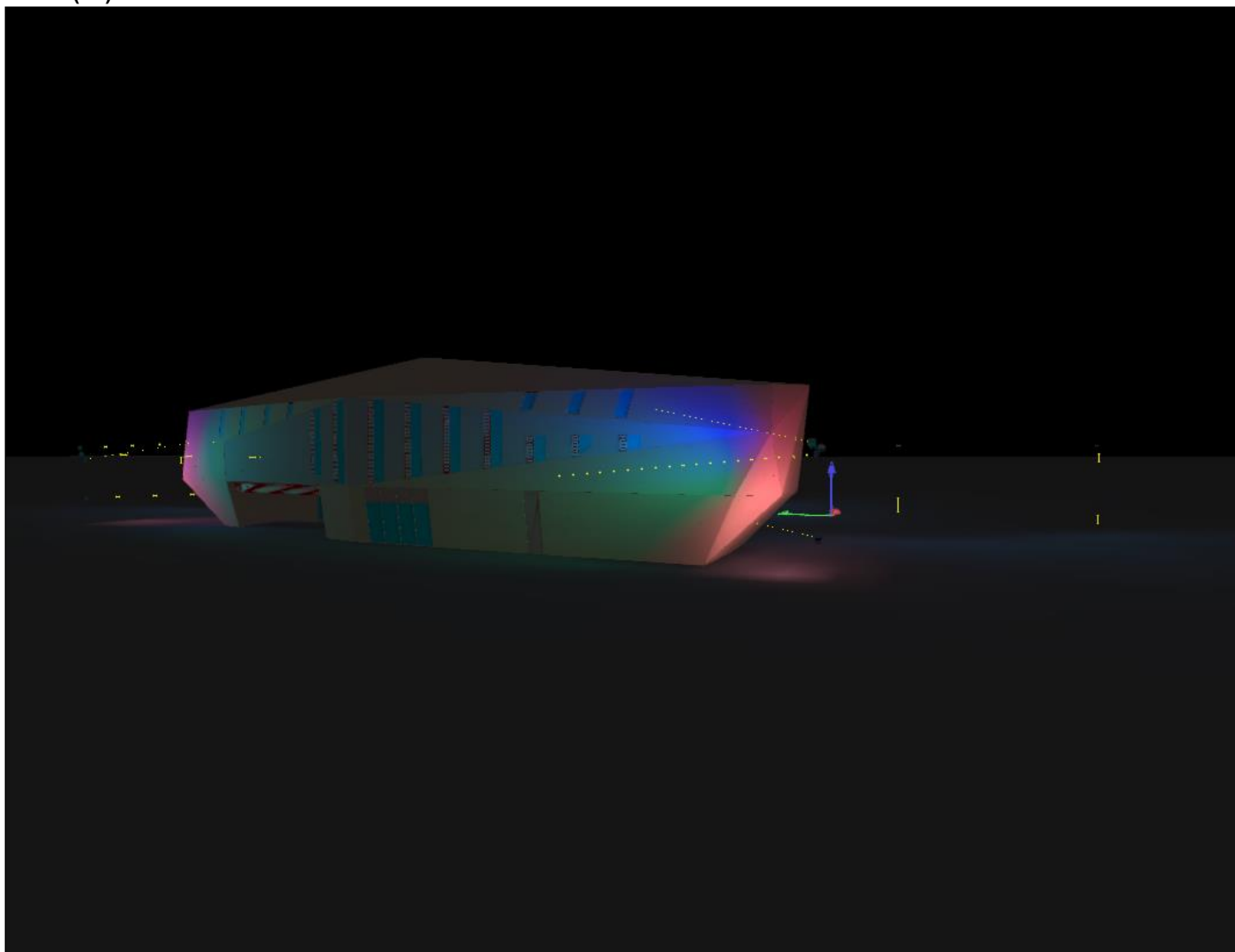
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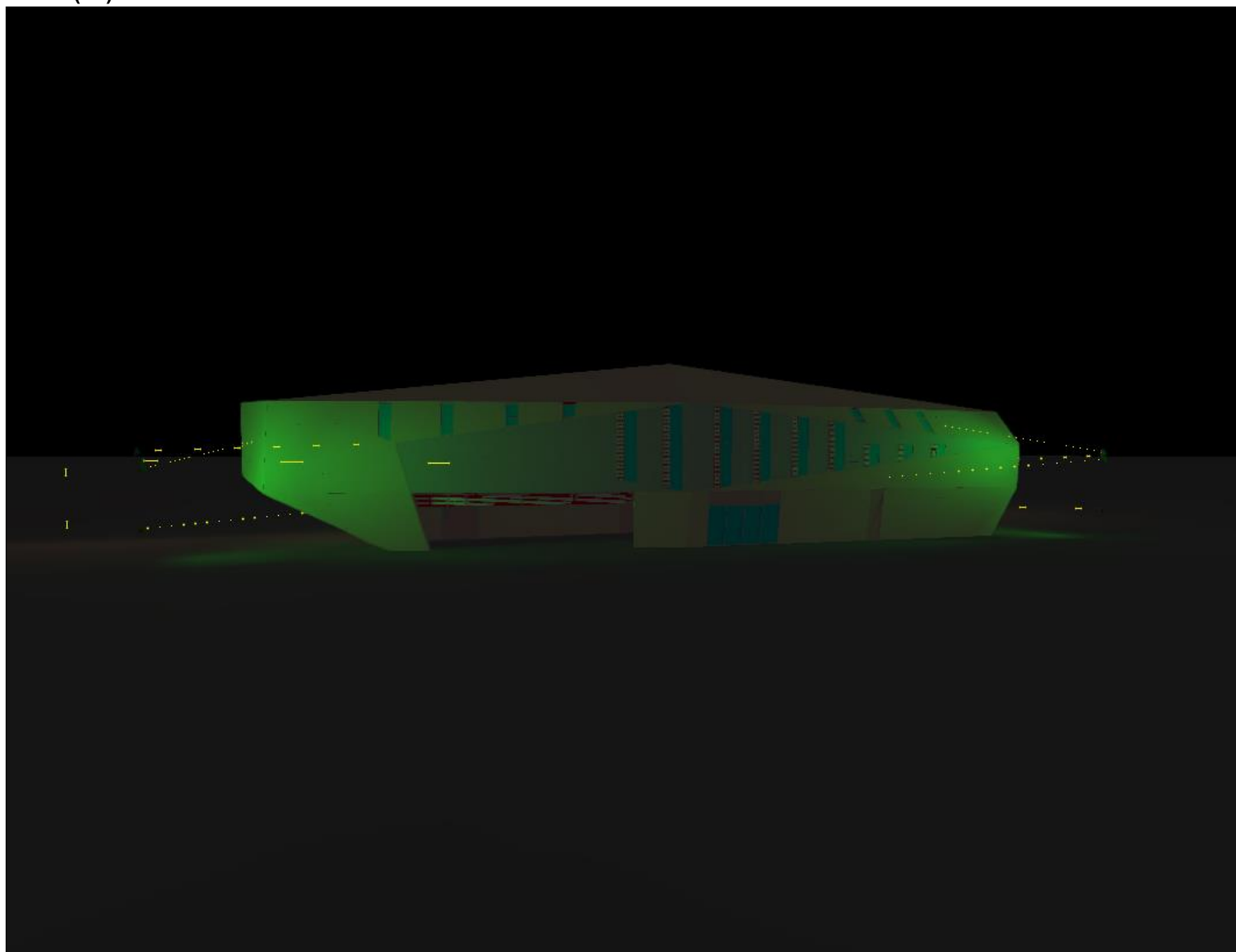
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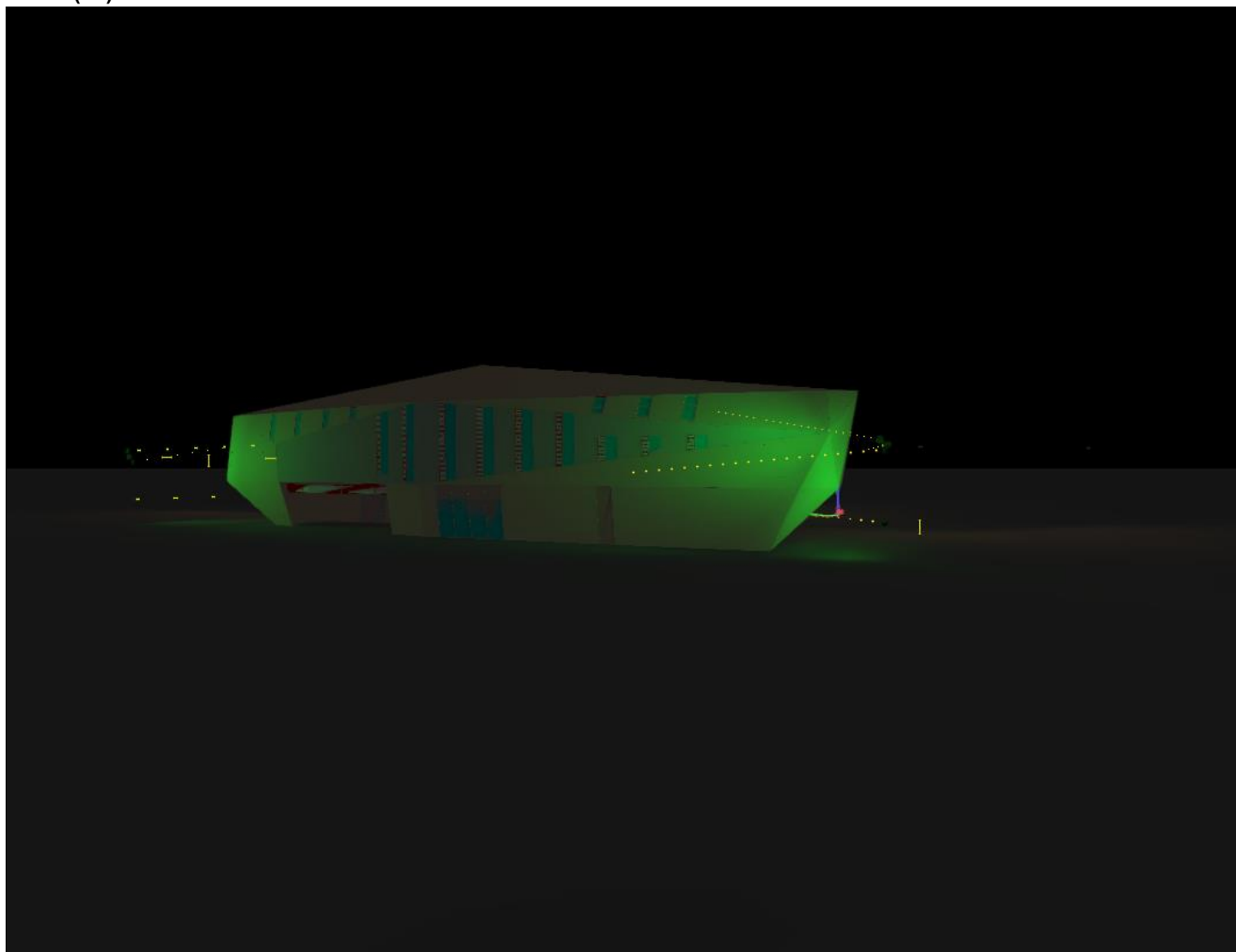
Site 1 (13)



Site 1 (15)



Site 1 (16)





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