Appendix B

Photometric

JK Design Group

Lighting for Entertainment and Architecture

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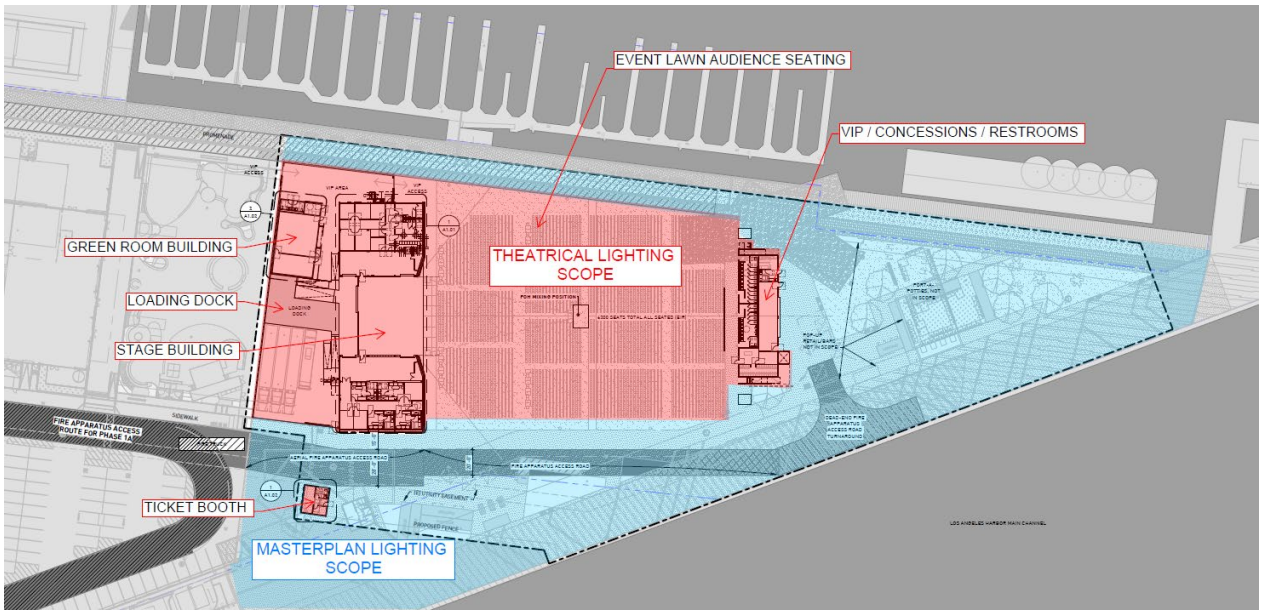
West Harbor Amphitheater Theatrical Lighting Photometric Narrative DRAFT

JK Design Group has been contracted to provide Theatrical Lighting/Systems Design for the West Harbor Amphitheater Project which covers approximately 71,000 SF including the Stage Building with Loading Dock Area, and Event Lawn/Audience Seating Area including the VIP/Concessions/Restrooms, Ticket Booth and Green Room Buildings. The following Narrative includes information that is documented on Drawings PH-01, PH-02 & PH-03 (attached).

The Photometric Calculations that accompany this Narrative cover the combined Scope of both the Theatrical Areas by JK Design Group and the Masterplan Areas by Oculus Light Studio.



Loading Dock Area

This area will be illuminated through various layers of lighting. There will be wall lighting fixtures recessed along the wall adjacent to the Truck and Bus parking spots. There will also be building mounted light fixtures on the back wall of the Stage Building to provide general area lighting. The primary area of lighting concentration will be the Loading Platform area between the Truck Dock and Ramp into the Stage Building. Building mounted lighting continues the illumination between the Stage and Catering Buildings.

Stage Building

The Stage Building itself will be wrapped on three sides with LED Video Screens which are represented in the attached Photometric Studies. The Stage Area will also include permanent work lighting mounted above the primary Lighting Grid. The permanent work lighting will have the ability to be programmed to various static colors for use during community events that will take place at the venue beyond a typical concert event. The Lighting Grid will be used to support the appropriate lighting that will be brought into the venue for each individual touring performance.

Event Lawn/Audience Seating Area

The Event Lawn/Audience Seating Area will be illuminated from a layout of eight, sixty foot tall poles located at the sides of the seating/lawn area, four poles on each side. Each pole will include eight fixtures, at the top of the pole, in two rows of four units to cover the general illumination of the Event Lawn/Audience Seating Area. These fixtures will have the capability of various colors with the intent of white lighting being used for pre-event, intermission and post event lighting, with the option of using a blue hue of lighting during events to enhance audience visibility and security. These poles will also support lighting fixtures mounted lower on the poles to cover pedestrian level lighting at the walkway/perimeter of the Amphitheater Seating Area. The fixtures mounted lower on the poles will direct the lighting more specifically to the pedestrian pathways, limiting the lighting at the adjacent water ways. The Audience Lighting Poles can also support Audio Speakers and WiFi connectivity. The lighting in this area will be controllable and programmable for the specific seasonal events and usage of the space. It is important to understand the various uses of the space, be it the limited concert event season or the community events that can take place in this venue, the lighting will be infinitely controllable to meet the various requirements of the space.

VIP/Concessions/Restroom Building, Ticket Booth and Green Room Building

These various Buildings will have surface mounted lighting fixtures highlighting the architecture and enhancing the texture of the building surfaces. The Ticket Booth and Concession windows will have associated downlighting to highlight the transaction areas.

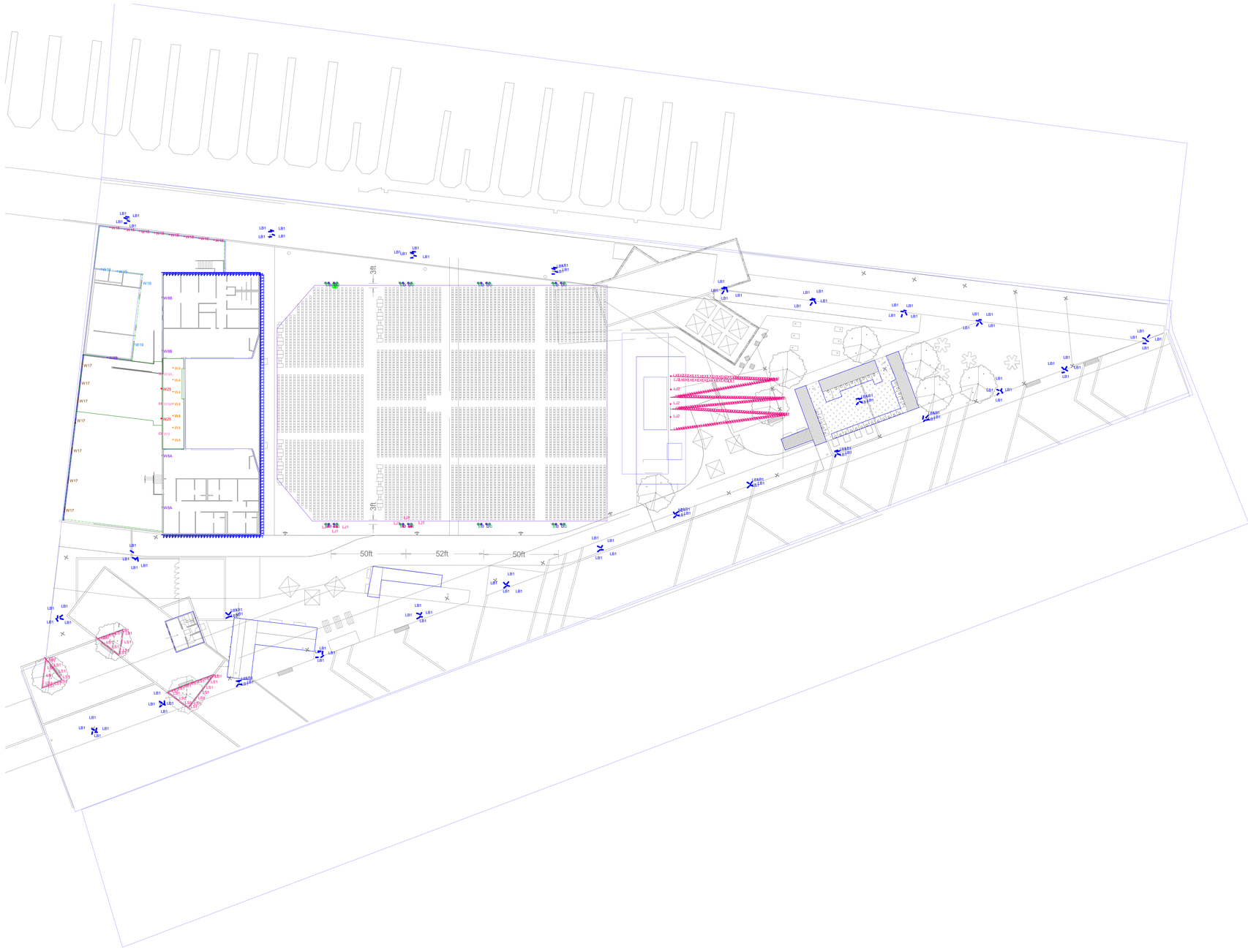
The 2nd Level VIP Area is a trellis covered exterior area with specialty seating opportunities, bar/lounge area and restrooms. Lighting in this area will be layered to create a Lounge environment with pendant and indirect lighting sources.

Drawing Index/Description

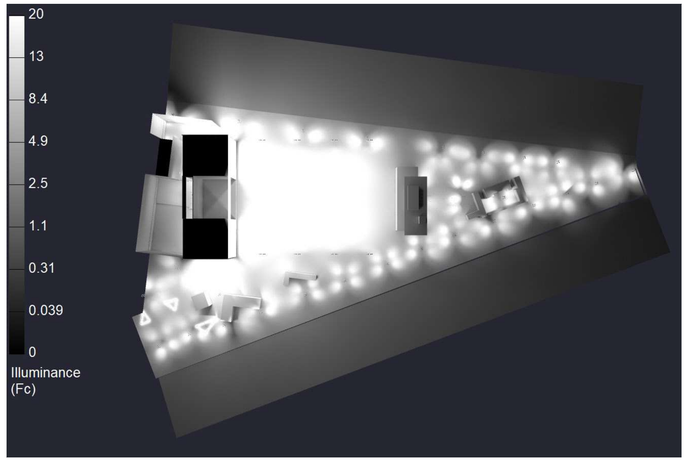
PH-01	Overall Lighting Plan indicating locations of fixtures throughout the combined Theatrical and Masterplan Areas of the Project with associated Study Results
PH-02	Photometric Point to Point Foot Candle Levels calculated at the ground/water plane.
PH-03	Grayscale and Pseudocolor Illuminance Renderings of Lighting Photometric Output

Conclusions

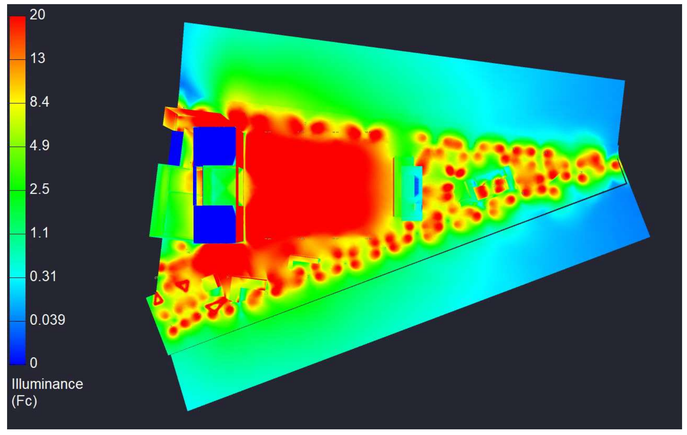
- All Photometric Calculations presented are shown at the ground/water plane, per industry standards.
- All Lighting Fixtures include LED sources. Either white lighting at 3000K (warm white) Color Temperature or Programmable Color Changing.
- Refer to Sheet PH-01 and PH-02 for Photometric Calculation Analysis per individual areas.
- All Fixtures and their associated outputs will be either under Dimmer or DMX Control, so brightness is infinitely adjustable.
- The number of events/concerts will vary on a seasonal basis.
- There is a significant decrease in light levels at the Water Way Areas adjacent to the Amphitheater Site.



LIGHTING PLAN
Scale: 1 inch= 30 Ft.



GRAYSCALE ILLUMINANCE SITE PLAN



PSEUDOCOLOR ILLUMINANCE SITE PLAN

Calculation Summary
Scene:

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
GRID ADJACENT WATER SURFACE	Illuminance	Fc	0.81	7.7	0.0	N.A.	N.A.
GRID AREA OF AMPHITHEATER	Illuminance	Fc	26.34	51.8	8.2	3.21	6.32
Loading Dock - High_Top	Illuminance	Fc	8.89	16	0	N.A.	N.A.
Loading Dock - Low_Area	Illuminance	Fc	5.45	12	0	N.A.	N.A.
OCULUS SITE	Illuminance	Fc	9.32	45.7	0.0	N.A.	N.A.
POLA PROMENADE	Illuminance	Fc	9.89	35.4	0.1	98.90	354.00
Stage Area_Top	Illuminance	Fc	21.28	30	11	1.93	2.73
VIP AREA	Illuminance	Fc	26.58	66	0	N.A.	N.A.
SEATING AREA	Illuminance	Fc	27.14	50.4	9.8	2.77	5.14

Luminaire Schedule
Scene:

Symbol	Qty	Label	Arrangement	LLF	Description	Tag	Luminaire Lumens
	104	LJ2-Iguzzini Maxi Woody I_WMX_3	Single	0.900	I_WMXS-BO-830-FL_I_LW72	LB1	6724
	8	LJ2-Iguzzini Maxi Woody I_WMX3	Single	0.900	I_WMXS-BO-830-FL_I_LW72	LJ2	6724
	39	KBM-F-H-30K-24V_2	Single	0.900	KBM-F-H-30K-24V	LS1	566
	6	Lumenbeam Grande LBG-120-27K-_2	Single	0.900	LBG-120-27K-FL-XX-XX	LJ1	9226
	276	LX1-ML2000-CW-27K-GSFL-3W_2	Single	0.900	ML2000-CW-27K-GSFL-3W	LX1	246
	2	GWM-A14-830-T4M	Single	0.900	Gardco	W8A	10669
	7	PAR38-NARROW-FLOOD-LM79-1	Single	0.900	Clarte	W4	4267
	1236	P1	Single	0.865	0A-2074-8010 _ 0P-2074-0010300 NITS = 1027 LUMENS - PANEL 6.34 FT X 1.94 FT	P1	2376
	3	GWM-A14-830-T2M	Single	0.900	Gardco	W8B	10782
	3	P26-196L-2100-WW-G2-3-UNV	Single	0.900	Gardco	W9A	9905
	7	24108	Single	0.900	Bega	W17	2392
	8	24085	Single	0.900	Bega	W18	768
	4	24502	Single	0.900	Bega	W19	1217
	2	84223	Single	0.900	Bega	W25	6860
	32	B	Single	0.950	LBX RO-277-30K-FL-SI-DMX/RDM-CRC-UL-60FT-BK-LSLA-SI	B	13391
	32	C	Single	0.950	LBX RO-277-30K-M-SI-DMX/RDM-CRC-UL-60FT-BK-LSLA-SI	C	13678
	16	D	Single	0.950	LQL-277-30K-3BLS-CONTROL-MOUNTING-FINISH	D	2961

Filename: PHOTOMETRIC MASTER SITE - WHA_11.3.AGI

SITE PLAN PHOTOMETRIC STUDY

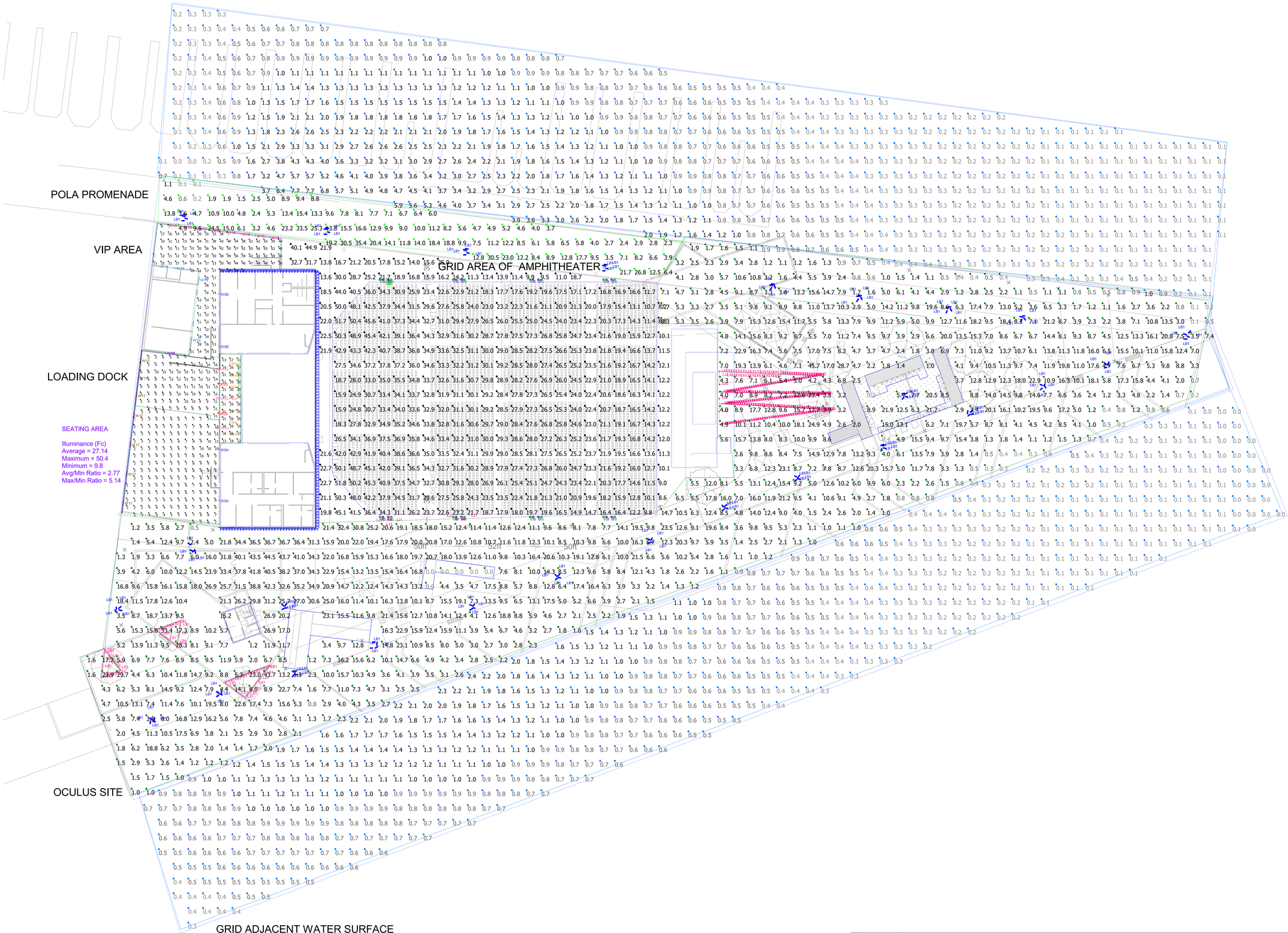
#	Date	Comments

Revisions

Drawn By: CL
Checked By:
Date: 11/3/2023
Scale: 1/4" = 1'-0"

AMPHITHEATER
WEST HARBOR

PH-01
Page 1 of 3



MASTER SITE PHOTOMETRIC PLAN
Scale: 1 inch= 25 Ft.

Calculation Summary							
Scene:							
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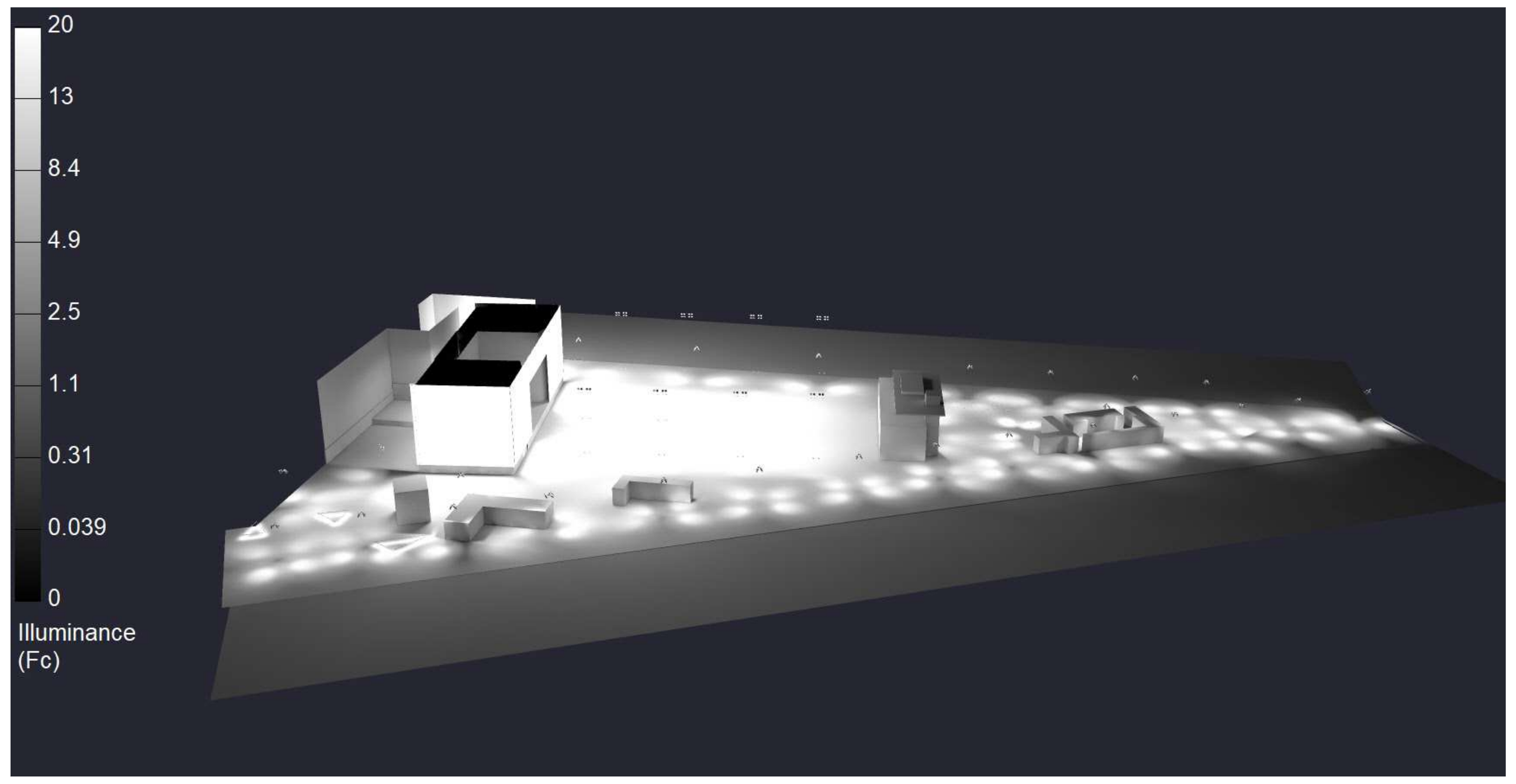
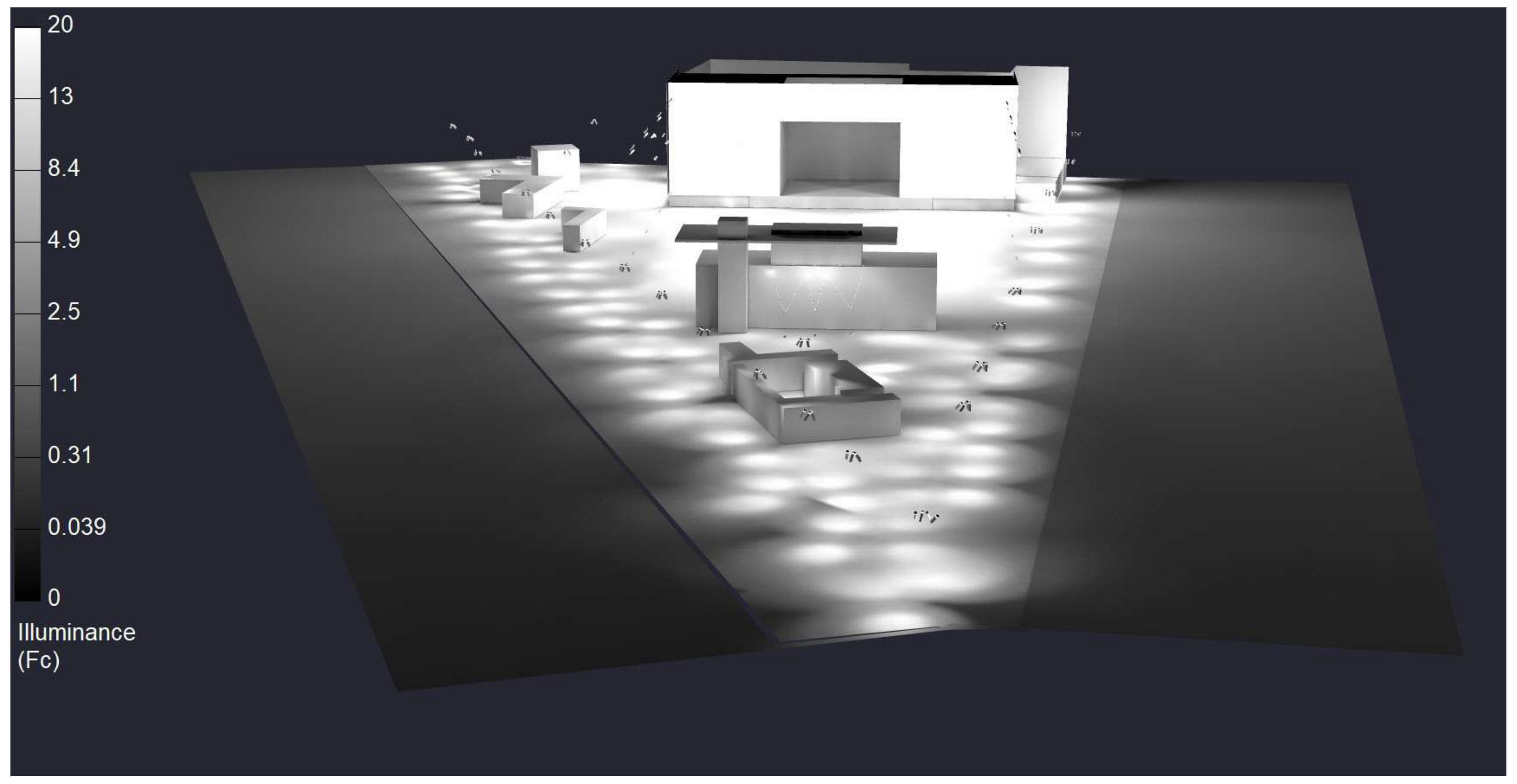
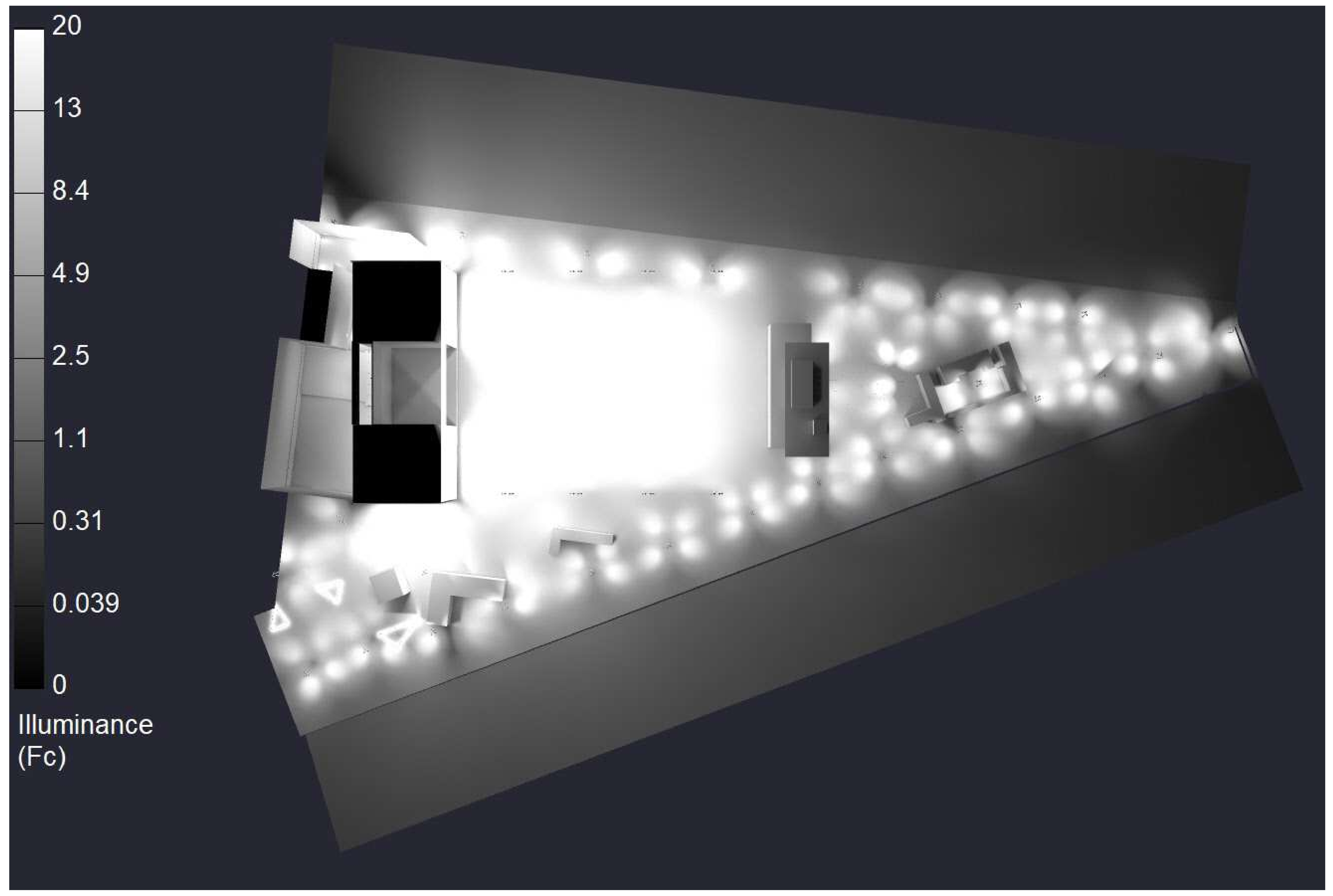
Scale: 1st = 1-0"

AMPHITHEATER
WEST HARBOR

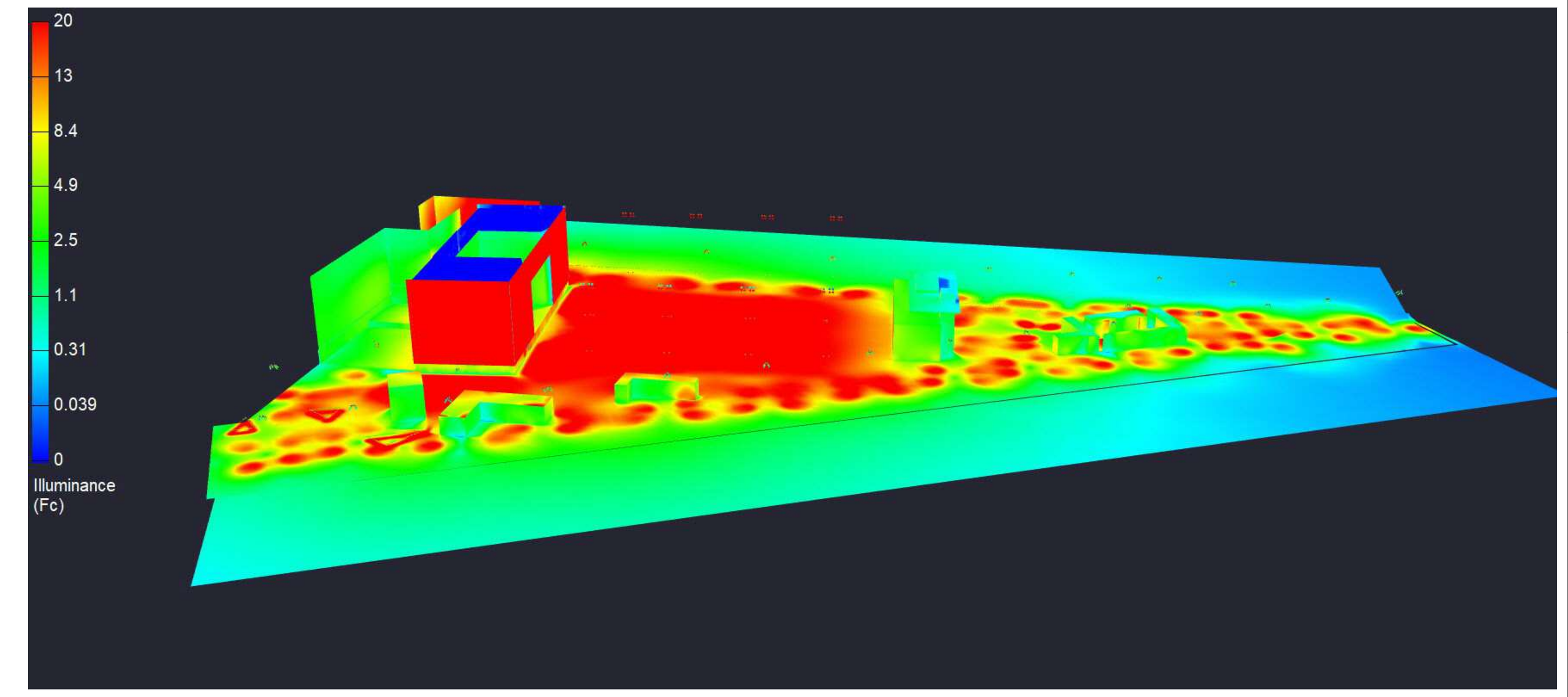
PH-01
Page 2 of 3

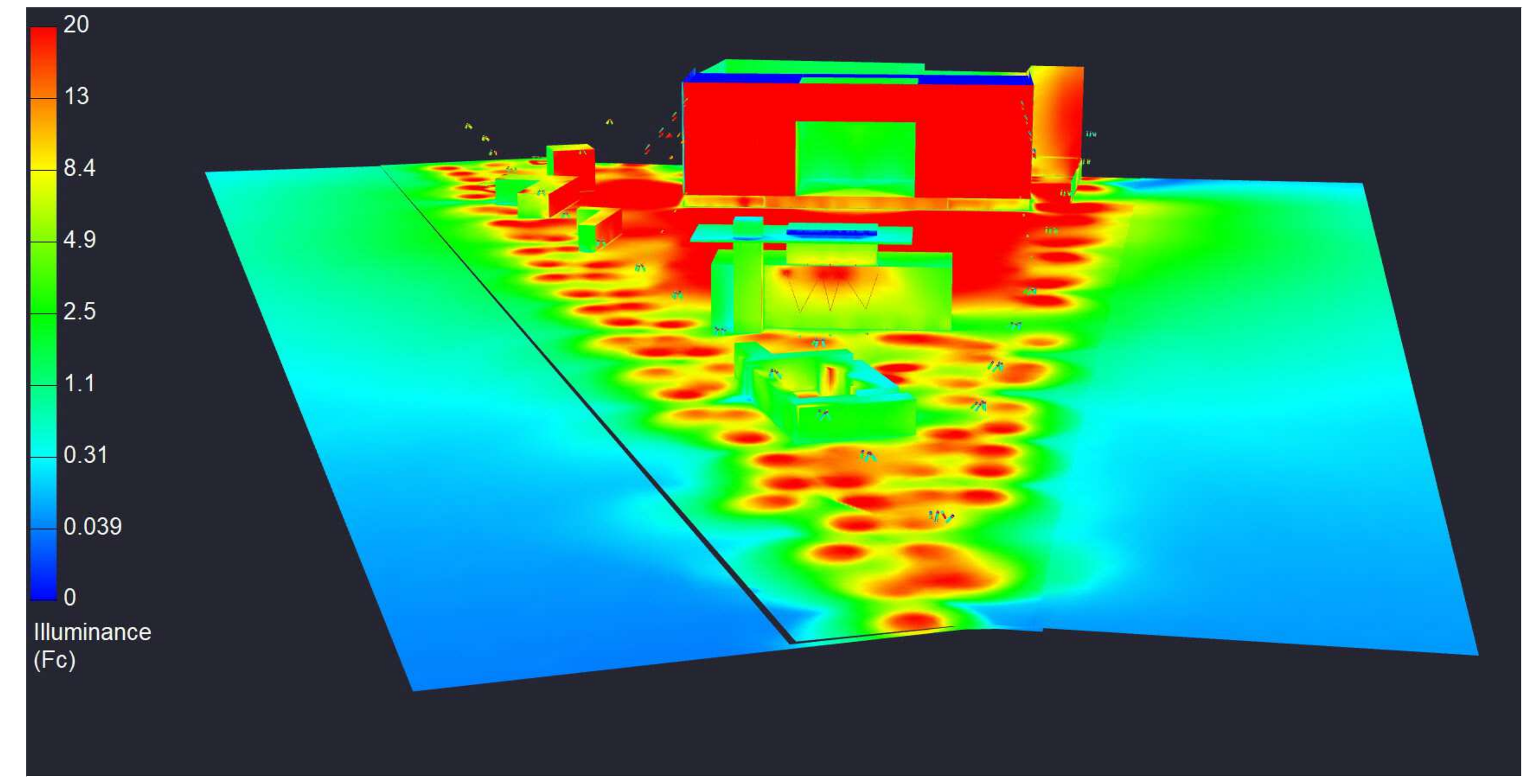


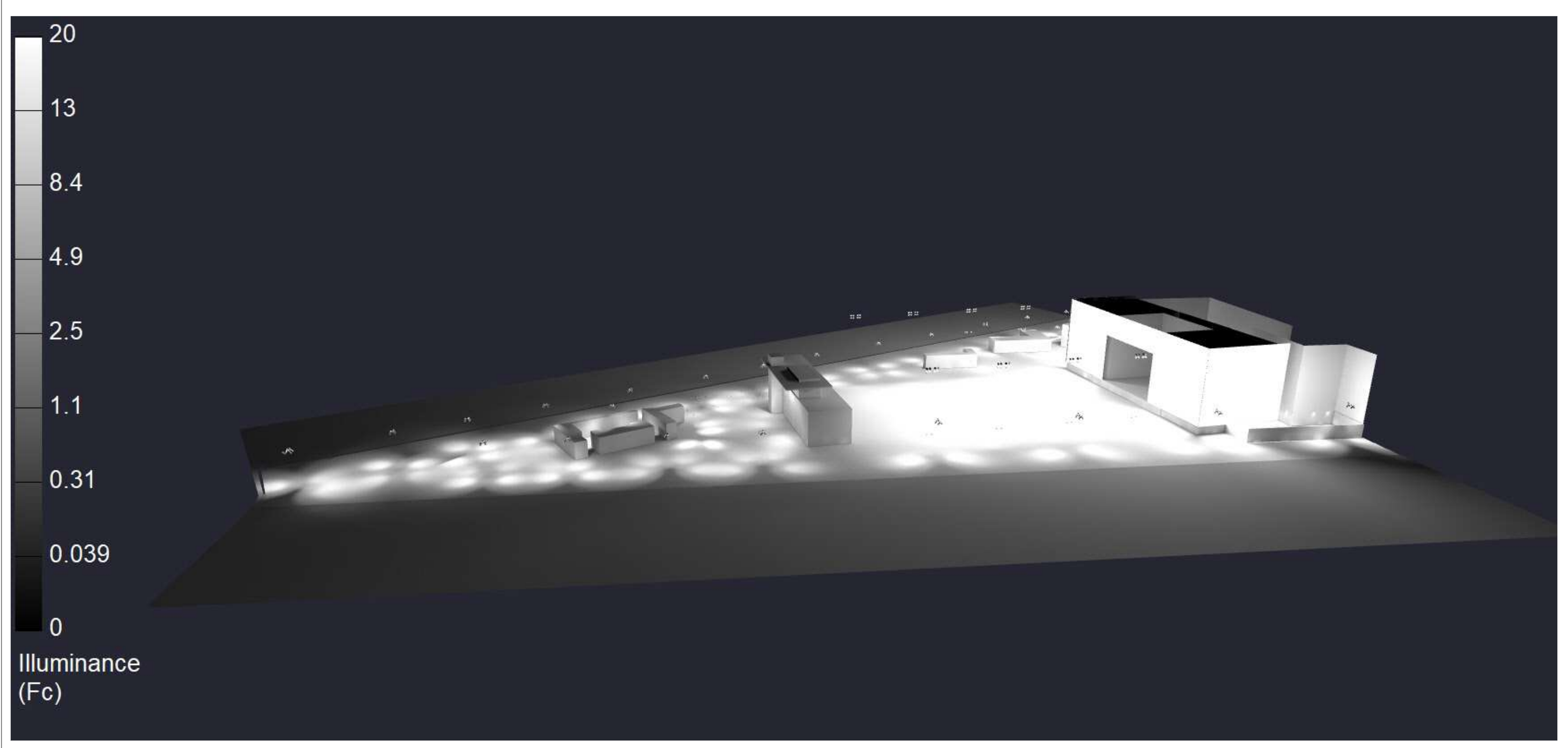


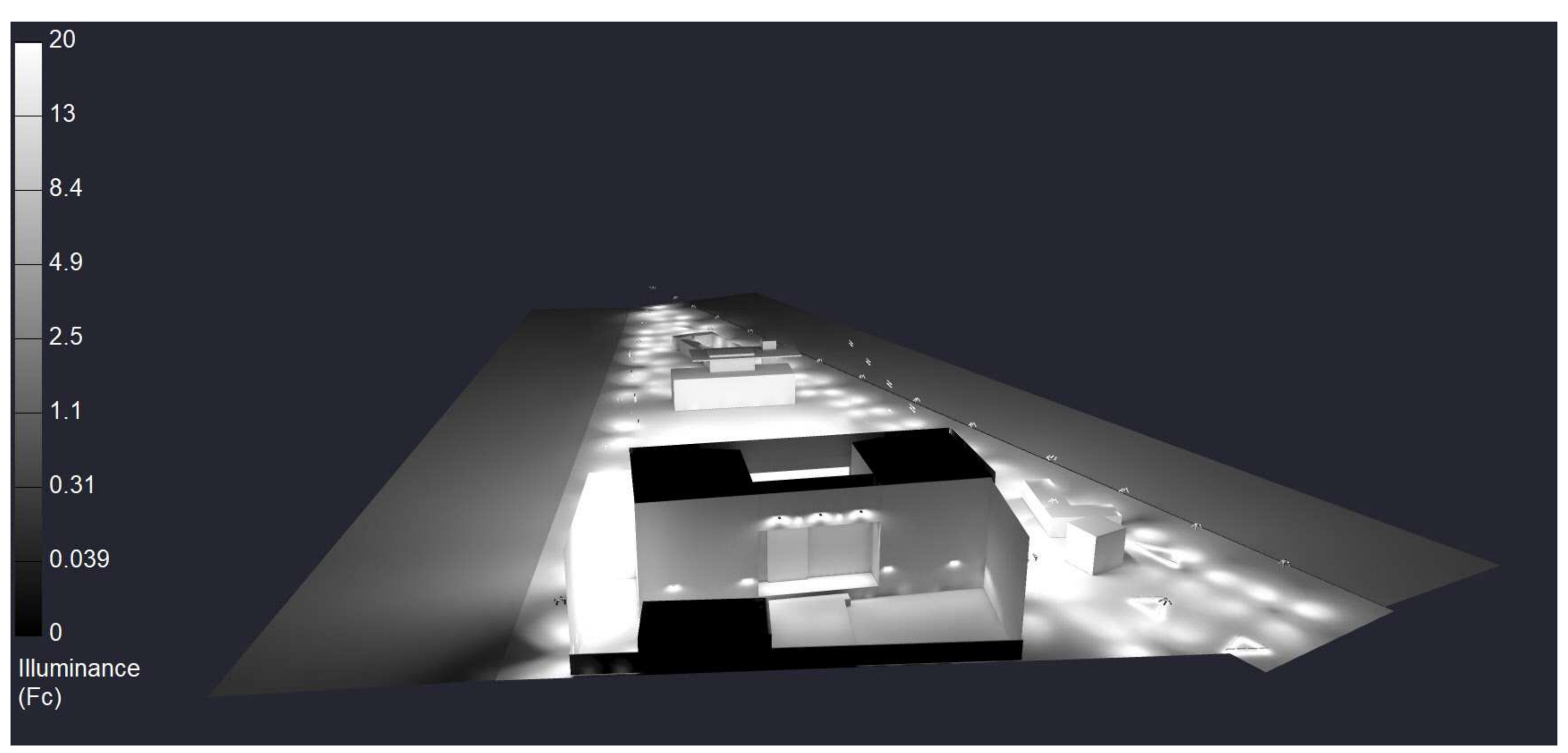


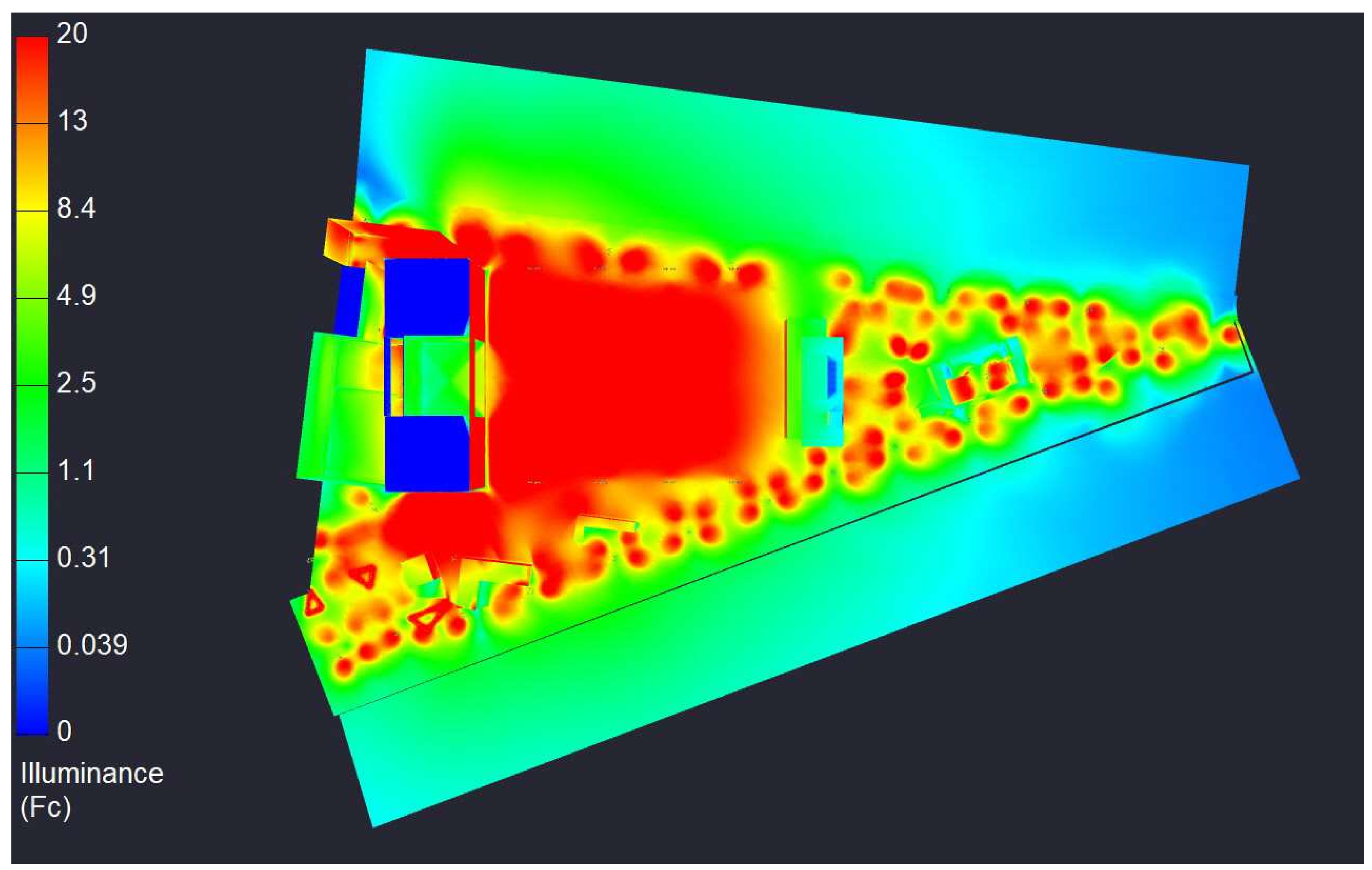
GRAYSCALE ILLUMINANCE SITE PLAN











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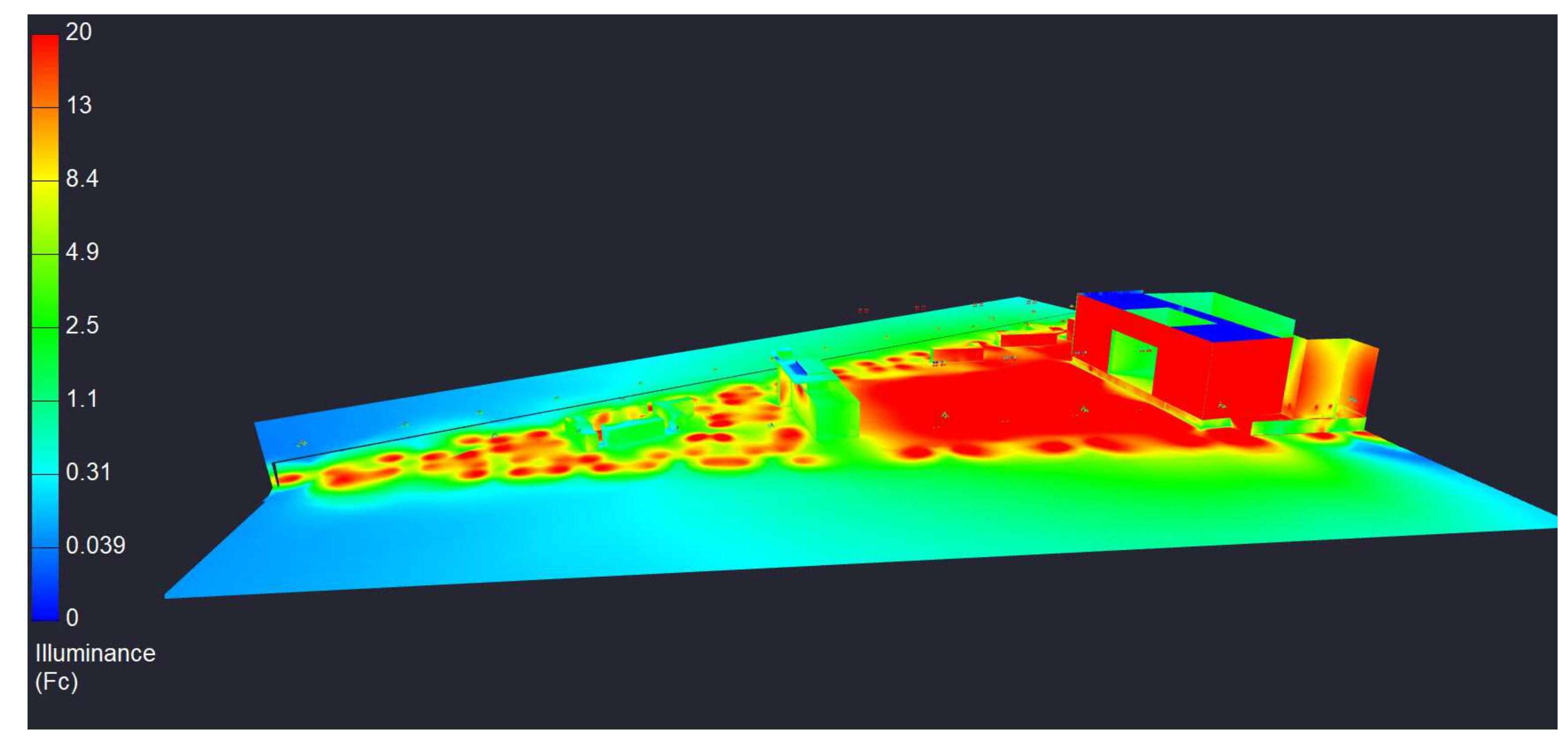

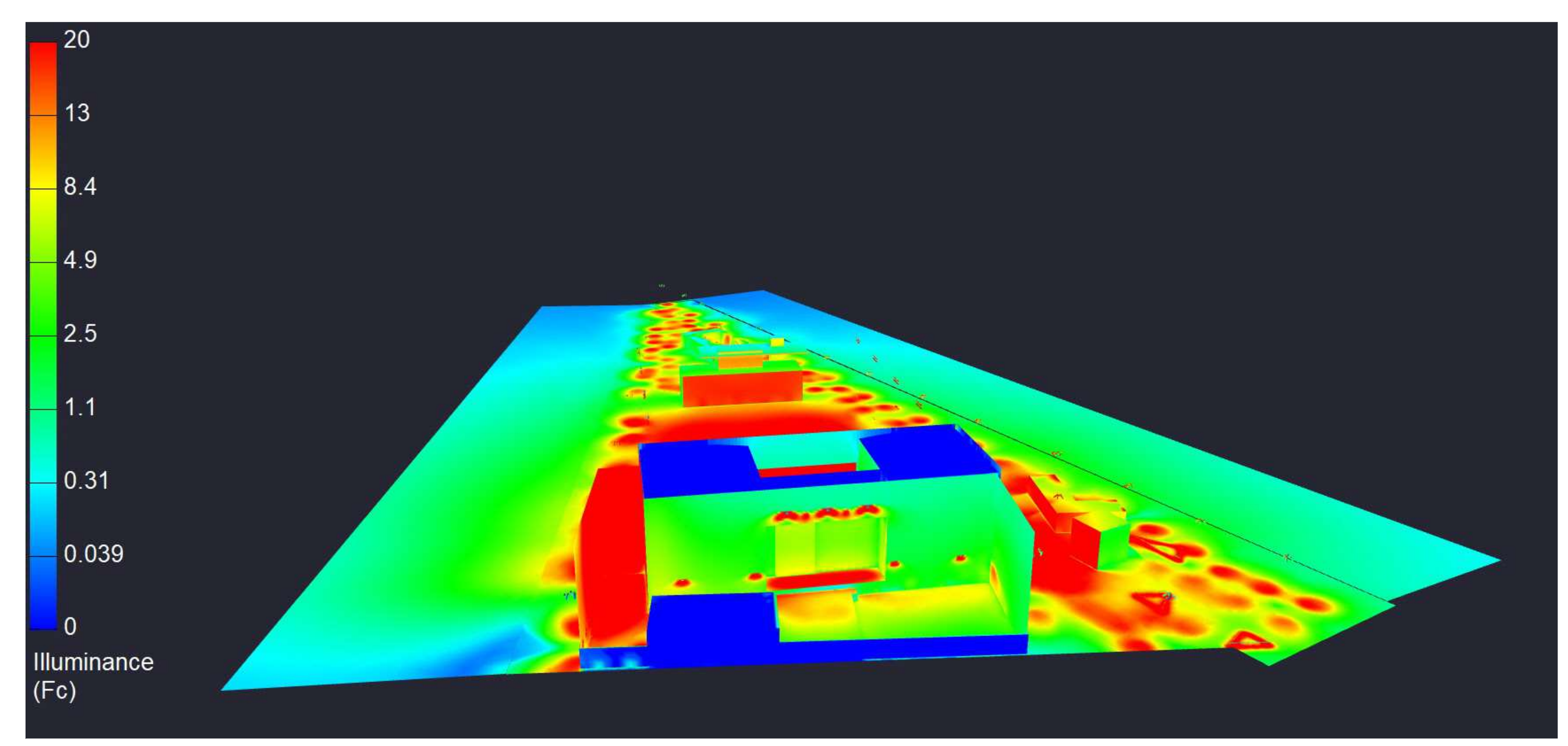

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