Supplemental Materials

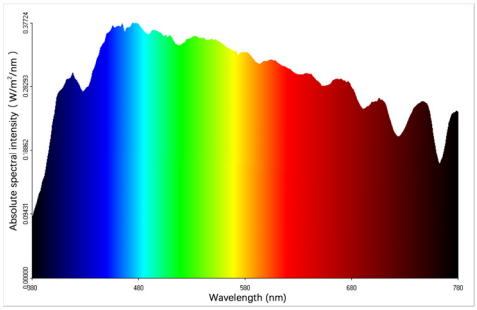
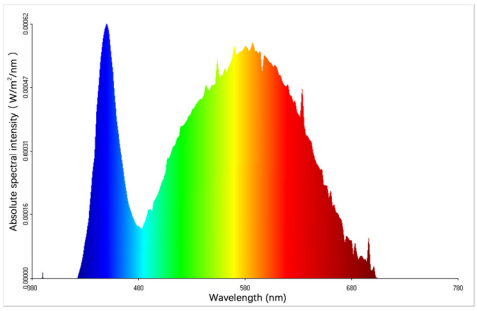


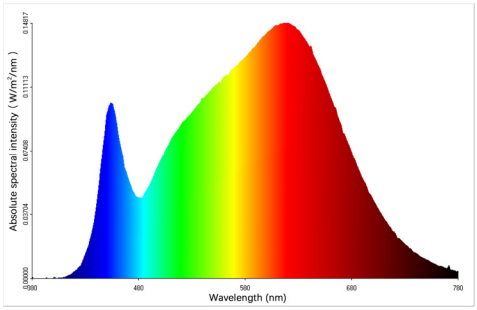
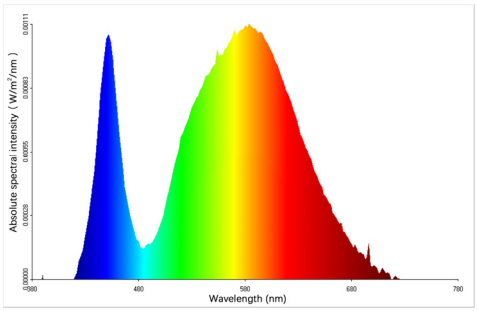
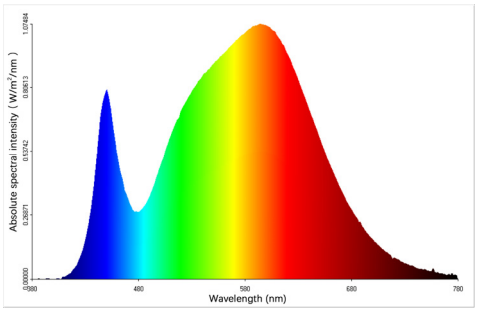
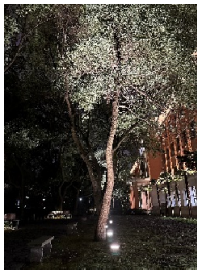
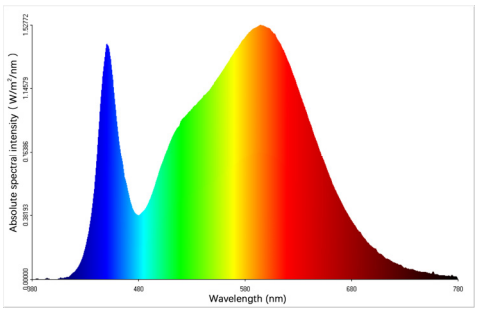
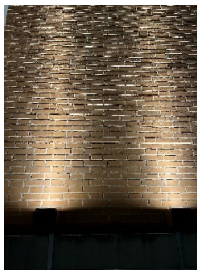
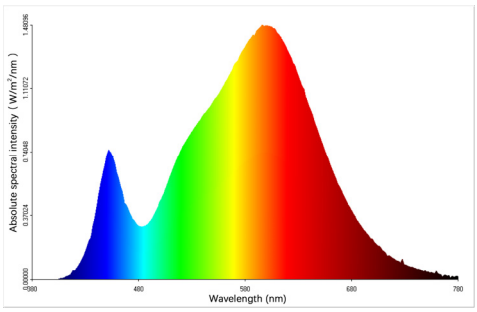
Figure S1 The test points of lighting measurement

Table S1: Illuminance at eye level in the three scenarios

Test point	Illumination value at eye level (lx)		
	Daytime Scene	Nighttime Scene A	Nighttime Scene B
1	5854.04	1.23	0.86
2	5600.44	1.45	0.83
3	3555.21	1.11	0.73
4	2261.71	1.05	1.42
5	3797.13	0.42	0.56
6	6644.43	1.10	0.57
7	9557.33	3.23	1.27
8	3970.17	1.33	1.02
9	5648.67	1.01	1.09
10	2468.50	1.20	1.07
11	2024.71	1.08	1.27
12	4032.44	1.40	1.01
13	2772.83	1.85	1.13
14	3537.81	1.79	0.93
Mean	4408.96	1.38	0.98
SD	1990.73	0.61	0.25

Table S2: Lighting parameters in the three scenarios

No.	Photography	Type	Spectrum	CCT	R_a	Scenario
1		Daylight		5922	99.5	Daytime Scene
2		Roadway luminaire		4078	78.2	Nighttime Scene A, Nighttime Scene B

3		Bollard		3394	92.4	Nighttime Scene A, Nighttime Scene B
4		Pole-top light		3901	69.8	Nighttime Scene A Nighttime Scene B
5		Garden Floodlights (Illuminating shrubs)		3753	80.6	Nighttime Scene A
6		Garden Floodlights (Illuminating high tree)		3770	81.8	Nighttime Scene A
7		Wall wash (Illuminating Academic building)		3210	80.3	Nighttime Scene A

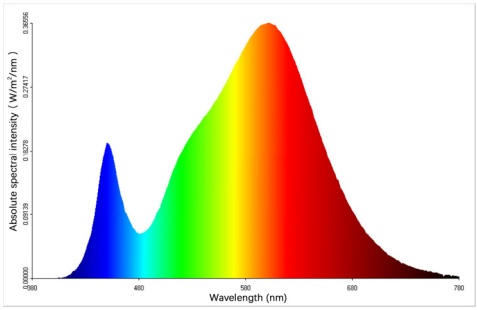
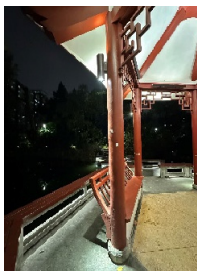
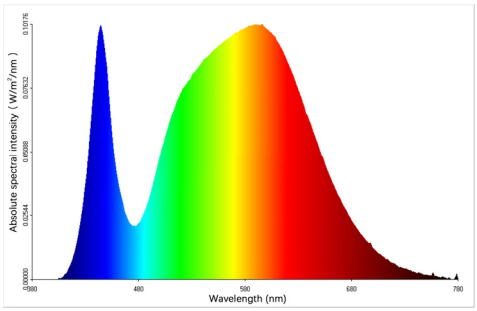
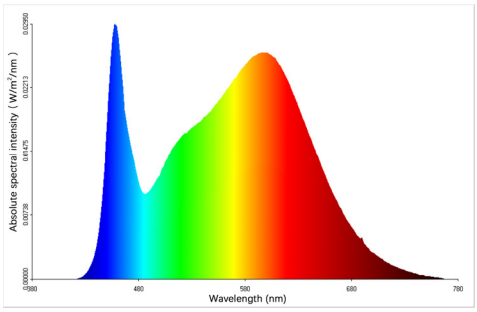
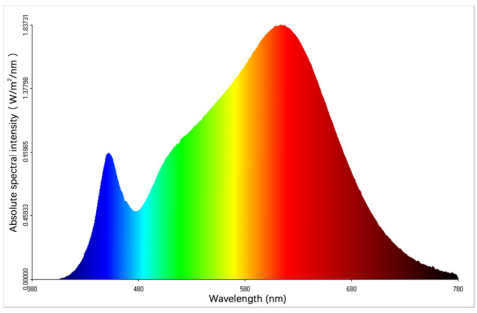
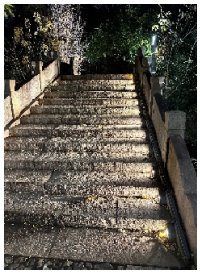
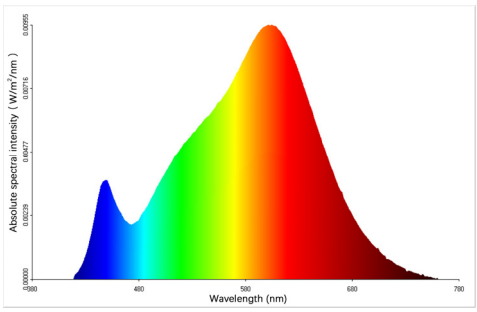
8		Wall wash (Illuminating Commemorative pillar)		3148	79.7	Nighttime Scene A
9		Wall luminaire (Illuminating Pavilion)		4080	78.7	Nighttime Scene A
10		Linear floodlight (Illuminating road)		3887	83.9	Nighttime Scene A
11		Floodlight		3177	90.8	Nighttime Scene A
12		Stairs lighting		3169	83.1	Nighttime Scene A

Table S3-Table S5

In the "Category" column of Table S3 to Table S5, we performed text code encoding. The meanings of the code abbreviations are shown below.

CVP-CLP: Comprehensive Visual Perception Photos-Color & Light Perception

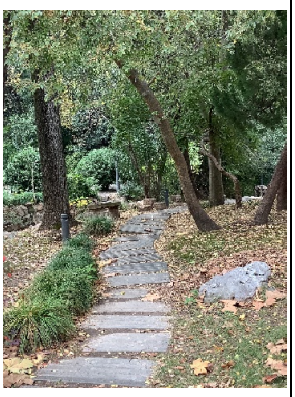
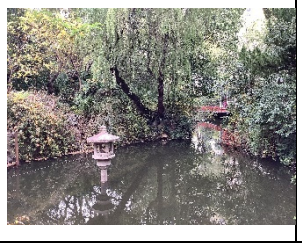
CVP-TEP: Comprehensive Visual Perception Photos-Total Environmental Perception

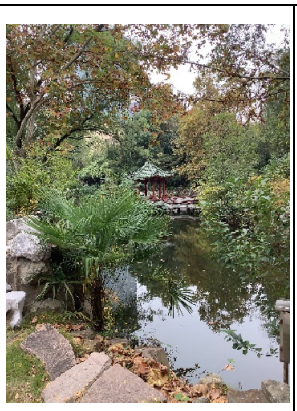
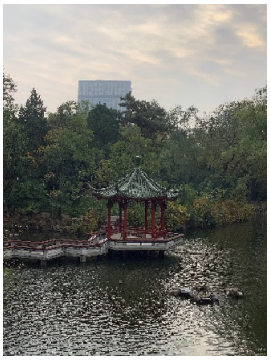
ER: Emotional Response Photos

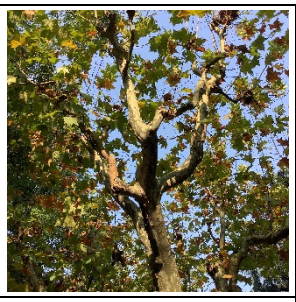
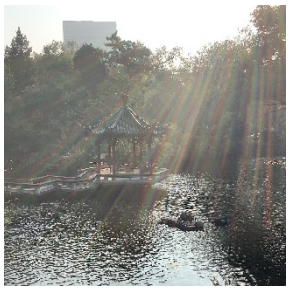
UO: Unique Observational Photos

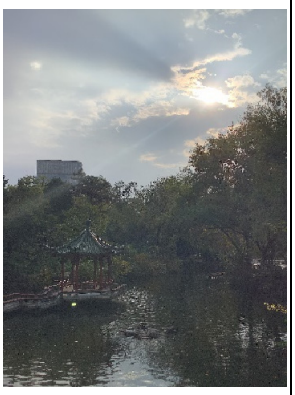
IR: Imaginative and Reflective Photos

Table S3: The text coding results of in-depth interviews (Daytime Scene)

Participant	Photography	Participant statements of photography reasons	Category	Photographic Subject
2		It stands tall, giving me a sense of vitality. Especially this cross-section—it has a certain sharpness that captures my attention.	ER	Plants
2		The main reason I like this one is because its ground is in an earthy tone. This color, amidst many green and orange visual elements, makes me feel a sense of closeness. It instantly calms me down and brings me great comfort.	CVP-CLP	Road,Plants
2		This place has a small path that I find very beautiful. It gives off a sense of detachment from the mundane, which draws me in and makes me want to keep walking forward.	IR	Road
4		The color of the bridge is striking and visually appealing; the reflection in the water is beautiful; the stone pillars add depth, and the plants are arranged at varying heights, creating a visually pleasing effect.	CVP-CLP	Bridge, waterscape, plants

4		The plants are arranged at varying heights, creating a harmonious sense of layering. The pavilion is beautiful and lacks the harshness often felt at night, blending seamlessly with the surrounding environment.	CVP-TEP	Plants, pavilion
4		During the day, it looks much more comfortable. The pavilion doesn't appear as glaring as it does at night, and more details of the plants are visible: the gradient colors of the leaves, the sense of layering. Additionally, the fountain and stones are visible, making the water area feel less empty.	CVP-CLP	Pavilion, plants, waterscape
3		You can see the morning clouds blending harmoniously with the building, along with the flowing water, creating a refreshing and invigorating feeling in the morning. The pavilion, surrounded by greenery, feels very natural and well-integrated with the environment.	CVP-TEP	Sky, pavilion, plants
3		I find the morning clouds and sky reflected on the Zhonghe Building to be truly fascinating, creating a sense of mutual brilliance. In terms of composition, the Zhonghe Building and façade form a subtle resonance. The vertical vines on the exterior walls of the building are a striking red, which is both distinctive and remarkable.	CVP-CLP	Plants, architecture, sky
3		This greenery is quite interesting—round and plump, very cute, and full of vitality, growing upward with a sense of thriving energy.	ER	Plants

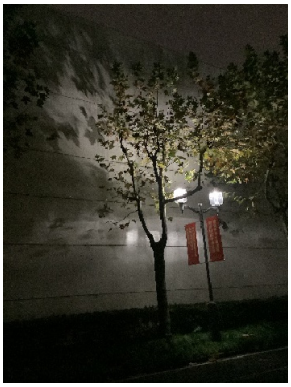
8		The green, yellow, and red hues of the maple leaves intertwine with the blue of the sky, creating a vibrant and colorful display under the sunlight.	CVP-CLP	Plants
8		This billboard is innovative, cute, and quite interesting.	UO	Billboard
8		The sunlight's dispersion has been beautifully captured, and with the pavilion and pond as the background, it evokes a poetic and picturesque ambiance.	IR	Pavilion
5		Its overall tone is bright and fresh, with harmonious colors. The lines of the path are clean and neat. The perspective is very balanced, with various lines, such as those of the trees and the path, all converging toward the focal point of the lens, evoking a sense of calm. The orderly composition of the entire scene is highly captivating to me.	CVP-TEP	Road
5		I find this composition quite complete, with the sky and landscape in a balanced 50-50 relationship. The colors are clean, leaning toward cooler blue tones rather than warm ones. The overcast sky adds a distinctive mood to the scene. However, the only drawback is that the Zhonghe Building in the background disrupts the harmony of the natural landscape.	CVP-TEP	Green plants, sky

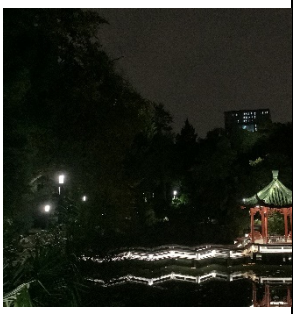
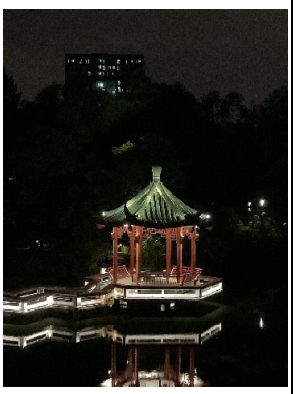
5		The perspective is harmonious and clear, with smooth and distinct lines, reflecting a balance between nature and human elements. The climbing vines on the Huiwen Building are particularly attractive, and the slightly yellow leaves of the sycamore tree in the upper left corner also add a touch of beauty.	CVP-TEP	Green plants, sky
6		The light filtering through the clouds is stunning, and the shimmering reflections above are delightful. The pavilion, outlined by the sunlight along its edges, creates a breathtakingly beautiful effect.	CVP-CLP	Green plants, sky, Pavilion
6		In terms of color contrast, I particularly enjoy the combination of red and green. The trees feel lush and vibrant, and the grass exudes a similar flourishing vitality. What truly draws me is the red leaves—vivid and striking. The brilliance of the red and the freshness of the green blend beautifully, creating a truly marvelous harmony.	CVP-CLP	Green plants
6		Finally, there are animals looking at me! These fearless creatures, unafraid of humans, are truly delightful.	UO	Animal

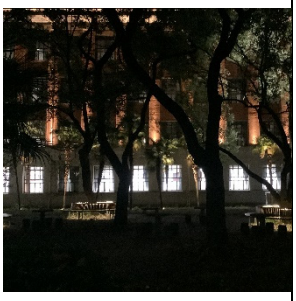
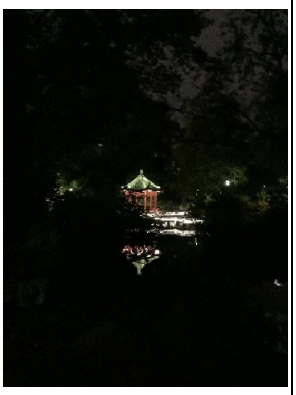
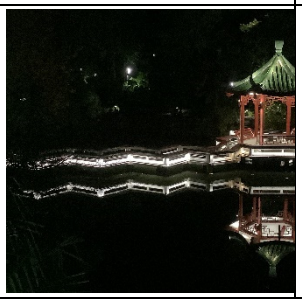
7		One is a dark color, and the other is a bright yellow with high saturation. They are in the water, and their shapes are quite appealing. The contrast between the colors is striking. It's a combination of water lilies and fallen leaves, which I find fascinating and unique.	CVP-CLP	Water feature, plants
7		I really love cats. This one looks so cute, and it's also staring at me. Its expression is indifferent, which makes it quite amusing.	UO	Animal
7		I really like the shape of French sycamore leaves. The yellow leaves sprinkled among the green create a beautiful contrast. The sky isn't overly blue, and I find the overall background tone very appealing.	CVP-CLP	Plants, sky
1		The weather is quite nice today, with sunlight streaming through the leaves and casting patterns on the ground. It exudes a vibrant and uplifting energy. Compared to nighttime, the daytime feels much more dynamic and full of life.	ER	Plants, road
1		Blue skies, white clouds, the pavilion, tall buildings, and plants—there is a rich variety of scenic elements. The pavilion in the foreground and the Zhonghe Building in the background create a blend of tradition and modernity.	CVP-TEP	Pavilion, architecture, plants
1		The presence of animals in a static photo adds a touch of vitality to the image.	ER	Animal

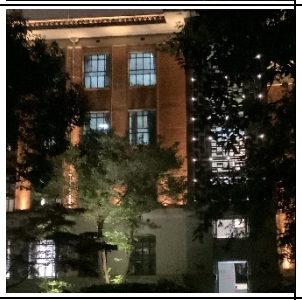
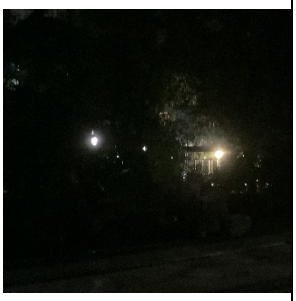
Table S4 : The text coding results of in-depth interviews (Nighttime Scene A)

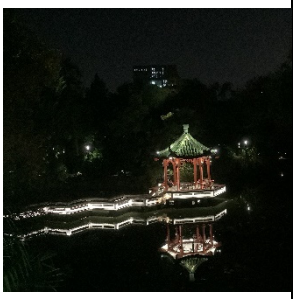
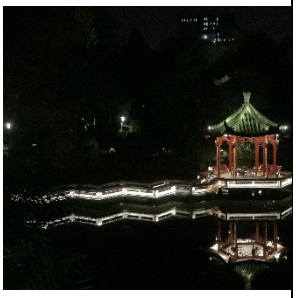
Participant	Photography	Participant statements of photography reasons	Category	Photographic Subject

2		This light gives me a warm and cozy feeling. It's dim, but not gloomy—it's very serene. It reminds me of sitting by a fireplace with family gathered around, evoking a comforting sense of home.	IR	Buildings
2		I feel like the light seems to cascade down, and although there is a tree in the foreground of the photo, I can imagine how the light spreads as it falls. Without this tree, I probably wouldn't like it as much. The presence of the tree makes the light feel mysterious, grand, and imbued with a sense of divinity.	IR	Plants, lighting fixtures
2		Taking a photo with this hazy aesthetic gives me a sense that everything around is dark, with just this one bright spot. Given my current state of confusion, it feels like a beam of light in the dark night of reality, guiding me toward something meaningful.	IR	Plants, lighting fixtures
6		I really like that lamp, but its effect can't quite be captured in the photo. The light on it scatters into tiny, fragmented points, which is fascinating. What's even more intriguing is its shadow—it's rare to see shadows like this. Normally, shadows are cast on the ground by sunlight, but this one, in the nighttime, is projected onto the wall in a radial pattern, making it incredibly playful and unique.	UO	Plants, lighting fixtures

6		When I look at it, it feels like seeing a cemetery—there's a sense of gently extinguishing dreams, as if they're being softly smothered.	ER	Plants, lighting fixtures
6		The lighting effects in the night scene are excellent. I have to say, the lighting across this entire area at night is truly impressive.	CVP-TEP	Pavilion
3		This evokes a sense of contrast—the distant, newer Zhonghe Building juxtaposed with the older pavilion nearby. In terms of lighting, while there's a play of brightness and darkness, the contrast between the elements feels quite striking and well-balanced.	CVP-CLP	Pavilion
3		This photo primarily showcases the integration of the Wenyuan Building with its surrounding plant environment. Although the image isn't very sharp, the overall vibe is quite pleasant. The lighting and shadows are soft, not overly harsh, creating a warm and cozy feeling.	CVP-TEP	Buidlings
3		The light shines on the leaves, making them appear in shades of green and brown. I find this color combination quite appealing.	CVP-CLP	Plants, lighting fixtures

4		The climbing vines are beautiful, clinging to the wall with a vibrant and lively feel. You can see the rustic charm of the Huiwen Building juxtaposed with the modernity of the Zhonghe Building, creating a striking contrast.	CVP-TEP	Plants,buildings
4		The background of this building is relatively bright, in warm tones, which complement the color of the building quite well. However, the most captivating aspect of this photo for me is the interplay of the lights on both sides, creating a sense of balance and correspondence. The circular seating area near the trees feels particularly unique—something I've never seen elsewhere. It's my first time encountering it here at Tongji. Combined with the tall, majestic trees, it creates a picturesque and atmospheric scene that I find especially beautiful.	UO	Buildings,plants
4		From this perspective, the abundant greenery partially obscures the view, making the pavilion appear more mysterious and adding to its aesthetic appeal. The red and green colors of the pavilion also create a visually pleasing contrast.	CVP-CLP	Pavilion, plants
1		The pavilion's structure and its reflection complement each other beautifully, with the colors appearing vibrant and striking at night.	CVP-CLP	Pavilion

1		The lighting on the stairs creates a sense of tranquility and comfort, while the overall scene appears bright and inviting.	CVP-TEP	Bridge
1		The orange-yellow lighting cast on the building creates a wonderful ambiance. It feels quite like the impression given by the Bund's architectural complex.	CVP-CLP	Buildings
7		The teaching building is adorned with twinkling lights embedded among the surrounding trees. The warm orange glow of the lights looks exceptionally beautiful and inviting.	CVP-CLP	Buildings
7		Its reflection is unique and vividly colored, with a sense of the water's flowing motion. The soft glow of the small light strips is perfectly balanced, adding a gentle charm.	CVP-CLP	Water feature, bridge
7		There's a particularly bright light here, and in front of it appears to be a pavilion-like structure. In the foreground, there are banana leaves with uniquely shaped foliage. While walking back, I turned my head and saw this light—it immediately caught my attention. My gaze was naturally drawn to it, and I happened to notice the classical pavilion-like structure, which added a charming touch to the scene.	UO	Pavilion

5		The one-third composition feels very balanced and comfortable. The warm-colored pillars of the pavilion stand out prominently, serving as the focal point and highlight of the image. The scattered points of light in the background are also quite captivating. Additionally, the contrast between the light emanating from the pavilion and the surrounding darkness creates a striking interplay of brightness and shadow.	CVP-CLP	Pavilion
5		The overall composition is very clear, including the crisp and beautiful reflections in the water. The pavilion's light band and the tree lines create a harmonious one-third composition, while also offering a contrast of light and dark against the nighttime setting. The pavilion's color serves as a vivid and prominent focal point, enhancing its visual appeal.	CVP-CLP	Pavilion
5		The three light points extending along the road evoke a strong sense of curiosity and exploration. The diagonal one-third composition is also very clear, with the light points gradually dimming from near to far, adding a touch of mystery to the scene.	CVP-CLP	lighting fixtures,road
8		The pavilion stands out prominently under the lighting, complemented by the calm water, creating a sense of static beauty. The dominant colors of the lights—red, green, and yellow—blend with the deep green and dark blue of the background, making the overall composition harmonious and visually pleasing.	CVP-CLP	Pavilion

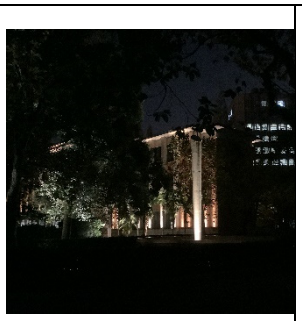
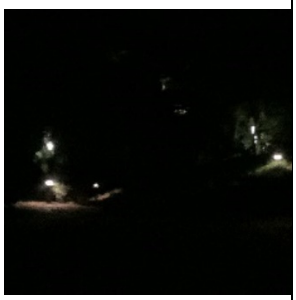
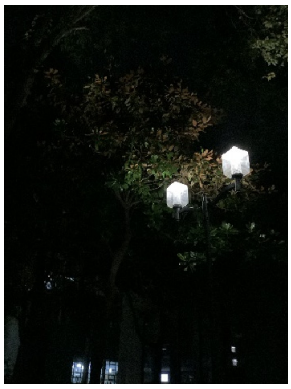
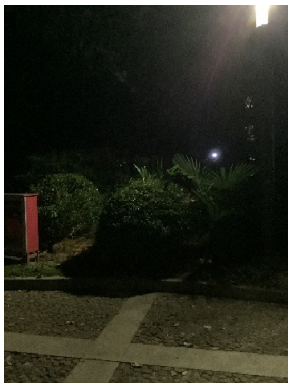
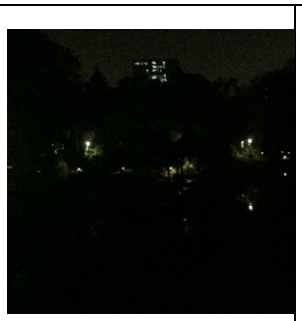
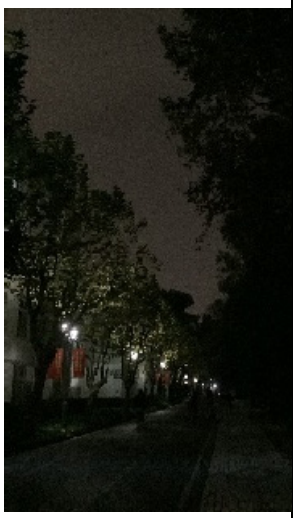
8		The illuminated pillars carry a sense of symbolism and distinctiveness. Additionally, the lighting on the North Building and the library is well-suited to the scene. The interplay of light and shadow is particularly striking, enhancing the overall atmosphere.	CVP-CLP	Column, buildings
8		This signpost stone is quite iconic, and the lighting is also very bright, making it stand out prominently.	CVP-CLP	Road sign

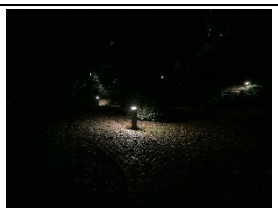
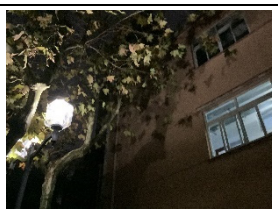
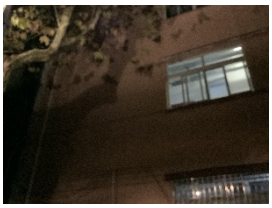
Table S5 : The text coding results of in-depth interviews (Nighttime Scene B)

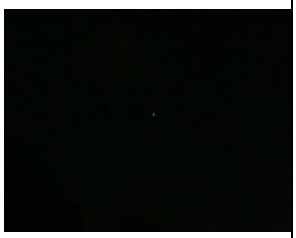
Participant	Photography	Participant statements of photography reasons	Category	Photographic Subject
2		This image carries a lot of my subjective feelings. On one side, there are clouds, and on the other, stars, though perhaps not all of them are captured clearly. She loves astronomy, which makes me enjoy looking at such scenes. When I see stars, I can't help but think of her.	IR	Sky
2		At that moment, it was very dark, and the light was soft and gentle. The lamp was positioned at a certain height above the ground, so its light scattered downward, resembling a starry sky. It was very ordinary, yet looking at it gave a sense of comfort and peace.	CVP-CLP	lighting fixtures

2		This was one of the first photos taken. What I like about it is that the streetlights form a continuous line, creating a sharp contrast with the darkness on the right. It makes the scene stand out vividly and distinctly.	CVP-CLP	Road
6		The faint light highlighting the accent colors of the plants is truly enchanting.	CVP-CLP	Plants, lighting fixtures
6		From this angle, they appear misaligned—a shrub in the foreground with grass behind it, resembling Mr. Potato Head with just a few strands of hair.	UO	Plants
6		I usually wouldn’t pay much attention to the water’s surface, but today it stood out, likely because there were fewer lights on. The water surface was particularly noticeable, and coincidentally, I’ve been working on a painting featuring water recently, which made this scene leave a strong impression on me.	IR	Buildings, Water feature

4		The low, small lights illuminating the pebble path create a fairy-tale atmosphere. Surrounded by darkness, with only the little lights glowing like tiny mushrooms, it feels incredibly cozy and heartwarming.	IR	lighting fixtures
4		Surrounded by darkness, this area stands out with only the streetlights shining, making it feel very unique. The lights illuminate a portion of the leaves, revealing their colors clearly.	CVP-CLP	lighting fixtures
4		The teaching building is lit only from within, making it the brightest spot in the area. The cool-toned lighting highlights many details, making them easy to see.	CVP-CLP	Buildings
5		The composition is relatively clean, with ample negative space, creating a balanced visual effect. There's a noticeable contrast between light and dark on the left and right sides—more streetlights on the left, while the right remains relatively unlit. Similarly, there's a vertical contrast, with the brighter sky above and the darker road below. The image also has a strong sense of depth, with a well-defined vanishing point and perspective. The alignment of the road and trees enhances the perspective, making it visually appealing.	CVP-CLP	Road

5		The three light points form a triangular structure, adding a sense of balance. The perspective is clear, and the interior lighting of the building exudes a sense of order and symmetry, while also being bright and visually appealing.	CVP-CLP	Buildings
5		The plants and the building stand in equal prominence, creating a balanced contrast. The shape of the leaves is well-defined, and the light point in the lower-left corner brightens the image, effectively balancing and adjusting the contrast between light and dark in the composition.	CVP-CLP	Plants, buildings
8		The light is nestled between two layers of leaves, with each layer serving a distinct purpose: the leaves provide both shading and translucency, while also acting as a background. This creates a strong sense of depth and layering. Unlike during the daytime, when the leaves are illuminated by sunlight, here the light is situated between the leaf layers—leaves on top, light in the middle, and leaves below. It offers a completely different visual experience from the daylight setting.	CVP-CLP	Plants, lighting fixtures
8		The overall environment is quite dark, but the lighting from the classrooms in the North Building has just the right intensity to subtly illuminate the stone tables and small paths outside, creating a hazy and dreamy ambiance.	CVP-CLP	Buildings, lighting fixtures

8		The small light fixtures scattered throughout the Sanhao Wu woods create a starry, dotted effect, adding a touch of charm and wonder to the scene.	CVP-CLP	lighting fixtures
3		The Zhonghe Building feels like a glowing giant block, with its interior lights seemingly pulsating. It gives me a sense of strangeness and intrigue. The way the light shines from within adds a layer of mystery to its presence.	CVP-CLP	Buildings
3		The shadow of the tree on the wall forms a dappled pattern, which I find very beautiful and aesthetically pleasing.	CVP-TEP	Plants, lighting fixtures
3		The classrooms in Wenyuan Building are arranged in a tiered structure, and the light shining through from within creates a hazy and ethereal effect. The interplay of light and shadow highlights the architectural structure, making it visually appealing.	CVP-TEP	Buildings
7		The shadow of the tree is very beautiful, and the shape of the trunk is distinctive. It caught my eye at just the right moment, bringing me a sense of joy. The building's color is warm, and the tone of the wall is also very comforting to me.	CVP-TEP	Buildings
7		From the pavilion, I could see the Zhonghe Building, with its bright colors and lights. The way the light sparkled on the treetops was particularly beautiful and captivating.	CVP-CLP	Pavilion, buildings

7		Since I also took photos here during the day, capturing it at night creates a sense of contrast. I find the background tone at night, compared to the daytime blue, more comfortable and harmonious. The French sycamore trees are lush and dense, and their colors appear warm and natural, adding to the scene's charm.	CVP-CLP	plants
1		The plants illuminated by the streetlights look quite nice. The colors in the scene are limited to four: black, white, some brownish or reddish tones, and a hint of green. The balance of colors feels just right—not too many, not too few. My attention was particularly drawn to the lamp.	CVP-CLP	Plants, lighting fixtures
1		The stars might need a better shot to truly capture their beauty, but when I looked at them myself, I thought they were quite nice. Especially here in Shanghai, in the city center, the chance to see stars is rare. Being able to see them on campus feels special. If I put it poetically, it’s like seeing the distant glow of a star from its far-off position in the universe. Looking at the stars brings me a sense of peace and contentment. It reminds me of the vastness of the universe and the smallness of humanity, creating a contrast that feels profoundly different and humbling.	IR	Sky

1		This photo captures a classroom late at night, with the lights still on, suggesting that there might still be students studying. This feeling, set against the nighttime backdrop, evokes a sense of warmth and dedication, making it quite beautiful.	ER	Building

Table S6: Total and dimensional scores of PRS

	Being Away	Fascination	Coherence	Compatibility	Legibility	Total
Daytime (Mean±SD)	3.80±1.84	4.52±1.47	4.63±1.61	3.45±1.55	6.46±0.83	4.40±1.76
Nighttime A (Mean±SD)	4.13±1.65	4.67±1.65	4.17±1.74	4.25±1.55	6.13±1.36	4.59±1.71
Nighttime B (Mean±SD)	4.48±1.83	4.09±1.43	4.08±2.08	3.63±1.67	6.17±1.05	4.33±1.77
$\chi 2$(p-val)	0.581 (.748)	3.161 (.206)	1.357 (.507)	1.750 (.417)	0.667(.717)	2.387(.303)