

Architectural Lighting Coordination

Part 1: Dialogue

Emma (Architect): Jake, we need to refine the lighting plan for the new office space. Have you reviewed the **daylighting analysis** results?

Jake (Lighting Designer): Yes, I did. The natural light levels are quite high in the morning but drop significantly in the afternoon.

Emma: That makes sense. We'll need to balance natural and artificial lighting. What's the recommended **lumen output** for the workspace?

Jake: For office settings, we should aim for around 500 lumens per square meter. That will ensure proper visibility without causing glare.

Emma: Great. Have you finalized the **fixture specifications** for the recessed lights in the meeting rooms?

Jake: I'm still reviewing options, but I'm considering LED panels with dimmable features to adjust brightness as needed.

Emma: That sounds good. Also, we should conduct a **shadow study** to make sure there aren't any unwanted dark spots.

Jake: Agreed. We need to check how furniture placement affects light distribution and adjust fixture locations accordingly.

Emma: Exactly. Lastly, we should ensure the **ambient lighting** complements the overall design. It should be warm but not overpowering.

Jake: I'll work on the final adjustments and send you the updated lighting plan by tomorrow.

Emma: Perfect! Let's make sure the client gets the best lighting experience possible.

Part 2: Comprehension Questions

1. Why did Emma and Jake review the **daylighting analysis**?
 - (A) To choose the best furniture placement
 - (B) To eliminate the need for artificial lighting
 - (C) To select a specific type of flooring
 - (D) To balance natural and artificial lighting
 2. What **lumen output** did Jake recommend for the office space?
 - (A) 500 lumens per square meter
 - (B) 200 lumens per square meter
 - (C) 1000 lumens per square meter
 - (D) 50 lumens per square meter
 3. Why does Emma suggest conducting a **shadow study**?
 - (A) To determine energy costs
 - (B) To ensure even light distribution
 - (C) To test different light bulb colors
 - (D) To reduce construction costs
 4. What feature did Jake mention for the **fixture specification**?
 - (A) Motion sensors
 - (B) Adjustable color temperature
 - (C) Dimmable LED panels
 - (D) Fluorescent lighting
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Part 3: Vocabulary with Definitions

- **Daylighting analysis (採光分析)** – The study of how natural light interacts with a space to optimize energy efficiency and comfort.
- **Lumen output (ルーメン出力)** – The measurement of brightness emitted by a light source, determining illumination levels.
- **Fixture specification (照明器具仕様)** – The detailed description of lighting fixtures, including type, wattage, and features.

- **Shadow study (影の調査)** – A method used to analyze how objects and structures affect light distribution in a space.
 - **Ambient lighting (間接照明)** – The overall, general lighting in a space that provides a comfortable level of brightness.
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Part 4: Answer Key

1. **Why did Emma and Jake review the daylighting analysis?**
☒ (D) To balance natural and artificial lighting
2. **What lumen output did Jake recommend for the office space?**
☒ (A) 500 lumens per square meter
3. **Why does Emma suggest conducting a shadow study?**
☒ (B) To ensure even light distribution
4. **What feature did Jake mention for the fixture specification?**
☒ (C) Dimmable LED panels