Toward Evaluating the Usefulness of Global Illumination for Novices in Lighting Design Tasks

Supplemental material: per-subject results

This document contains the target images each subject receives for each trial, and the final images he or she produces. Additionally, graphs showing the image error plotted over time for all matching trials (Experiments 1 to 3) are given. The image error is computed as the average per-pixel difference (euclidean distance in the perceptually uniform CIELAB color space) between the subject’s solution at the particular time and the target image.
Subject 1  
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

- GI off
- GI on

Graph showing CIELAB error in time against time points.
Experiment 3

Cartoon scene

Architecture scene
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on

Subject’s result - Cartoon scene
Target image - Cartoon scene

Subject’s result - Architecture scene
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene
Subject’s result - Office scene
Subject 2  
Experiment 1

Cartoon scene

Subject's result - GI off  
Target image - GI off  
CIELAB error in time

Subject's result - GI on  
Target image - GI on

Architecture scene

Subject's result - GI off  
Target image - GI off  
CIELAB error in time

Subject's result - GI on  
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result

Target image

CIELAB error in time

Architecture scene

Subject’s result

Target image

CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Lighting model 1: small key lights, GI off
Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 3
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 2

Cartoon scene

Subject's result - GI off
Target image - GI off

Subject's result - GI on
Target image - GI on

Architecture scene

Subject's result - GI off
Target image - GI off

Subject's result - GI on
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result  Target image  CIELAB error in time

Architecture scene

Subject’s result  Target image  CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 4
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 5
Experiment 1

Cartoon scene

Subject's result - GI off

Target image - GI off

CIELAB error in time

Subject's result - GI on

Target image - GI on

Architecture scene

Subject's result - GI off

Target image - GI off

CIELAB error in time

Subject's result - GI on

Target image - GI on
Experiment 2

**Cartoon scene**

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

**CIELAB error in time**

0 10 20 30 40 50

GI off

GI on

**Architecture scene**

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

**CIELAB error in time**

0 10 20 30 40 50

GI off

GI on
Experiment 3

**Cartoon scene**

Subject’s result | Target image | CIELAB error in time
---|---|---

**Architecture scene**

Subject’s result | Target image | CIELAB error in time
---|---|---
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on

Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 6
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 7
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

<table>
<thead>
<tr>
<th>Subject’s result</th>
<th>Target image</th>
<th>CIELAB error in time</th>
</tr>
</thead>
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Architecture scene

<table>
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<th>Subject’s result</th>
<th>Target image</th>
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<td><img src="image3" alt="CIELAB error" /></td>
</tr>
</tbody>
</table>
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on

Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 8
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Experiment 5
Subject 9
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

0 100 200 300 400
0 10 20 30 40 50
GI off
GI on

Subject’s result - GI on Target image - GI on

42
Experiment 2

Cartoon scene

Subject’s result - GI off  
Target image - GI off

CIELAB error in time

Subject’s result - GI on  
Target image - GI on

Architecture scene

Subject’s result - GI off  
Target image - GI off

CIELAB error in time

Subject’s result - GI on  
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result  Target image  CIELAB error in time

Architecture scene

Subject’s result  Target image  CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 10
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 2

**Cartoon scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

**Architecture scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result | Target image | CIELAB error in time

Architecture scene

Subject’s result | Target image | CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene
Target image - Cartoon scene

Subject’s result - Architecture scene
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene
Target image - Cartoon scene

Subject’s result - Architecture scene
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 11
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

**Cartoon scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

CIELAB error in time

**Architecture scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result

Target image

CIELAB error in time

Architecture scene

Subject’s result

Target image

CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene   Target image - Cartoon scene

Subject’s result - Architecture scene   Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene   Subject’s result - Office scene
Subject 12
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 3

**Cartoon scene**

<table>
<thead>
<tr>
<th>Subject’s result</th>
<th>Target image</th>
<th>CIELAB error in time</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Subject’s result" /></td>
<td><img src="image2" alt="Target image" /></td>
<td><img src="chart1" alt="CIELAB error in time chart" /></td>
</tr>
</tbody>
</table>

**Architecture scene**

<table>
<thead>
<tr>
<th>Subject’s result</th>
<th>Target image</th>
<th>CIELAB error in time</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Subject’s result" /></td>
<td><img src="image4" alt="Target image" /></td>
<td><img src="chart2" alt="CIELAB error in time chart" /></td>
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</tbody>
</table>
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 13
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result  Target image  CIELAB error in time

Architecture scene

Subject’s result  Target image  CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene
Target image - Cartoon scene

Subject’s result - Architecture scene
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene
Subject’s result - Office scene
Subject 14
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 3

Cartoon scene

Subject’s result | Target image | CIELAB error in time

Architecture scene

Subject’s result | Target image | CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 15
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

0 100 200 300 400
0 10 20 30 40
GI off
GI on

0 100 200 300 400
0 10 20 30 40
GI off
GI on

72
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene       Target image - Cartoon scene

Subject’s result - Architecture scene
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene
Subject’s result - Office scene
Subject 16
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 2

**Cartoon scene**

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

**Architecture scene**

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on

Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 17
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

**Cartoon scene**

Subject’s result  
Target image  
CIELAB error in time

![Subject’s result](image1)  ![Target image](image2)  ![CIELAB error in time](chart1)

**Architecture scene**

Subject’s result  
Target image  
CIELAB error in time

![Subject’s result](image3)  ![Target image](image4)  ![CIELAB error in time](chart2)
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 18
Experiment 1

Cartoon scene

Subject's result - GI off
Target image - GI off
CIELAB error in time

Subject's result - GI on
Target image - GI on

Architecture scene

Subject's result - GI off
Target image - GI off
CIELAB error in time

Subject's result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject's result - GI off  
Target image - GI off

Subject's result - GI on  
Target image - GI on

Architecture scene

Subject's result - GI off  
Target image - GI off

Subject's result - GI on  
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result  Target image  CIELAB error in time

Architecture scene

Subject’s result  Target image  CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject's result - Cartoon scene  Target image - Cartoon scene
Subject's result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject's result - Cartoon scene  Target image - Cartoon scene
Subject's result - Architecture scene  Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 19
Experiment 1

Cartoon scene
Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene
Subject’s result - GI off
Target image - GI off

CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result | Target image | CIELAB error in time

Architecture scene

Subject’s result | Target image | CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 20
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

0 100 200 300 400
0 10 20 30 40 50
GI off
GI on

CIELAB error in time

0 100 200 300 400
0 10 20 30 40 50
GI off
GI on

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Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

**Cartoon scene**

<table>
<thead>
<tr>
<th>Subject’s result</th>
<th>Target image</th>
<th>CIELAB error in time</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Cartoon scene" /></td>
<td><img src="image2" alt="Cartoon scene" /></td>
<td><img src="graph1" alt="CIELAB error graph" /></td>
</tr>
</tbody>
</table>

**Architecture scene**

<table>
<thead>
<tr>
<th>Subject’s result</th>
<th>Target image</th>
<th>CIELAB error in time</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Architecture scene" /></td>
<td><img src="image4" alt="Architecture scene" /></td>
<td><img src="graph2" alt="CIELAB error graph" /></td>
</tr>
</tbody>
</table>
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Experiment 5

Subject’s result - Still life scene

Subject’s result - Office scene
Subject 21
Experiment 1

Cartoon scene

Subject's result - GI off
Target image - GI off
CIELAB error in time

Subject's result - GI on
Target image - GI on

Architecture scene

Subject's result - GI off
Target image - GI off
CIELAB error in time

Subject's result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Architecture scene
Experiment 4

Lighting model 1: small key lights, GI off
Subject's result - Cartoon scene  
Target image - Cartoon scene

Subject's result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject's result - Cartoon scene  
Target image - Cartoon scene

Subject's result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on

Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  Subject’s result - Office scene
Subject 22
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on

Subject’s result - GI on Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 3

Cartoon scene

Subject’s result  Target image  CIELAB error in time

Architecture scene

Subject’s result  Target image  CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

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Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene

Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5

Subject’s result - Still life scene  Subject’s result - Office scene
Subject 23
Experiment 1

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on
Experiment 2

**Cartoon scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

**Architecture scene**

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on
Experiment 3

Cartoon scene

Subject’s result

Target image

CIELAB error in time

Architecture scene

Subject’s result

Target image

CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene
Experiment 5

Subject’s result - Still life scene       Subject’s result - Office scene
Subject 24  
Experiment 1

Cartoon scene

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

Architecture scene

Subject’s result - GI off  
Target image - GI off

Subject’s result - GI on  
Target image - GI on

CIELAB error in time

Subject’s result - GI on Target image - GI on

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Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene
Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene
Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  Target image - Cartoon scene
Subject’s result - Architecture scene  Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  Subject’s result - Office scene
Subject 25
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on

Architecture scene

Subject’s result - GI off
Target image - GI off
CIELAB error in time

Subject’s result - GI on
Target image - GI on
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

Subject’s result - GI on

Target image - GI on

CIELAB error in time
Experiment 3

Cartoon scene

Subject’s result
Target image
CIELAB error in time

Architecture scene

Subject’s result
Target image
CIELAB error in time
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene  
Target image - Cartoon scene

Subject’s result - Architecture scene  
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene  
Subject’s result - Office scene
Subject 26
Experiment 1

Cartoon scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time

Architecture scene

Subject’s result - GI off
Target image - GI off

Subject’s result - GI on
Target image - GI on

CIELAB error in time
Experiment 2

Cartoon scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on

Architecture scene

Subject’s result - GI off

Target image - GI off

CIELAB error in time

Subject’s result - GI on

Target image - GI on
Experiment 3

Cartoon scene

Architecture scene
Experiment 4

Lighting model 1: small key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene
Subject’s result - Architecture scene  
Target image - Architecture scene

Lighting model 2: arbitrary size key lights, GI off
Subject’s result - Cartoon scene  
Target image - Cartoon scene
Subject’s result - Architecture scene  
Target image - Architecture scene
Lighting model 3: arbitrary size key lights, GI on
Subject’s result - Cartoon scene 
Target image - Cartoon scene

Subject’s result - Architecture scene 
Target image - Architecture scene

Experiment 5
Subject’s result - Still life scene
Subject’s result - Office scene