Impact of outdoor lighting on safety perception

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• outdoor lighting affects preferences towards cycling/walking
• single-bicycle crashes are more likely to occur in the dark and twilight
• cyclists/pedestrians are dissatisfied with the current situation of street lightning
### TRAJECTORY DATA:

<table>
<thead>
<tr>
<th>CITY</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LINKÖPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrians</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Cyclists</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td><strong>LUND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrians</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
<td>Cyclists</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>
RESULTS:

pedestrians

**Linkoping**

*Pedestrians’ travel time, s*

*Pedestrians’ average speed, m/s*

**Lund**

*Pedestrians’ travel time, s*

*Pedestrians’ average speed, m/s*
RESULTS:

pedestrians

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www.ictct.net
RESULTS:

cyclists

Linköping

Lund

Cyclists’ travel time, s

Cyclists’ average speed, m/s

www.ictct.net
RESULTS:
cyclists

Cyclists’ average lateral position, m
(related to middle line (y =0))

Linköping

Lund

Cyclists’ average lateral position, m
(related to middle line (y =0))

www.ictct.net
CONCLUSIONS:

- Pedestrians walking slower during day time
- Cyclists moves faster during day time
- Pedestrians moving further from middle line of the path during dark hours
- Cyclist place themselves on lighted spots at night
FUTURE WORKS:

• compare experiment data to uninterrupted traffic data
• combine questionnaire responses with an analysis of actual movement in the environment
• compare before/after data
Thanks for your attention!

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