Polarization Conversion System (PCS) was designed to improve the output flux out of the miniaturized augmented reality (AR) projector using Liquid Crystal on Silicon (LCoS) based microdisplays. The work presented here provides the design of the ideal PCS and comparison of output flux after the linear polarizer with ideal and real coatings on prism array of PCS and also the comparison of the output flux after the linear polarizer with and without using PCS.

**Ideal PCS**

**Output flux comparison**

<table>
<thead>
<tr>
<th>Ideal coating on prism array</th>
<th>Realistic coating on prism array</th>
<th>Without PCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.73 Lumens</td>
<td>2.7 Lumens</td>
<td>1.2 Lumens</td>
</tr>
</tbody>
</table>

1.2 Lumens out from the Linear polarizer considering 80% transmission without PCS.

**Polarization conversion system**

**Without PCS**

REFERENCES
