There is an error in de derivation of the specular bound in appendix A. The bound presented in section 4.3.1, the statistics and conclusions are all correct. It is only in the appendix that there is an error.

The derivation:

$$
\begin{aligned}
I &= \sum_{i=1}^{m} I_i \frac{1}{d_i^2} k_s \cos^n(\alpha_i) \\
&= k_s \sum_{i=1}^{m} I_i \frac{\cos^n(\alpha + \Delta\alpha_i)}{(d + \Delta d_i)^2} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\cos^n(\alpha + \Delta\alpha_i)}{(d + \Delta d_{max})^2} && \text{by 7} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, \cos^n(\alpha + \Delta\alpha_i))}{(d + \Delta d_{max})^2} && \text{by 9} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, \cos^n(\alpha + |\Delta\alpha_i|))}{(d + \Delta d_{max})^2} && \text{by 8} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, \cos^n(\alpha + \Delta\alpha_{max}))}{(d + \Delta d_{max})^2} \\
&\leq k_s I_v \frac{\min(1, \cos^n(\alpha + \Delta\alpha_{max}))}{(d + \Delta d_{max})^2} = maxC \;.
\end{aligned}
$$

should be changed to:

$$
\begin{aligned}
I &= \sum_{i=1}^{m} I_i \frac{1}{d_i^2} k_s \cos^n(\alpha_i) \\
&= k_s \sum_{i=1}^{m} I_i \frac{\cos^n(\alpha + \Delta\alpha_i)}{(d + \Delta d_i)^2} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\cos^n(\alpha + \Delta\alpha_i)}{(d - \Delta d_{max})^2} && \text{by 7} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, \cos^n(\alpha + \Delta\alpha_i))}{(d - \Delta d_{max})^2} && \text{by 9} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, (\cos(\alpha) + |\Delta\alpha_i|)^n)}{(d - \Delta d_{max})^2} && \text{by 8} \\
&\leq k_s \sum_{i=1}^{m} I_i \frac{\min(1, (\cos(\alpha) + \Delta\alpha_{max})^n)}{(d - \Delta d_{max})^2} \\
&\leq k_s I_v \frac{\min(1, (\cos(\alpha) + \Delta\alpha_{max})^n)}{(d - \Delta d_{max})^2} = maxC \;.
\end{aligned}
$$

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