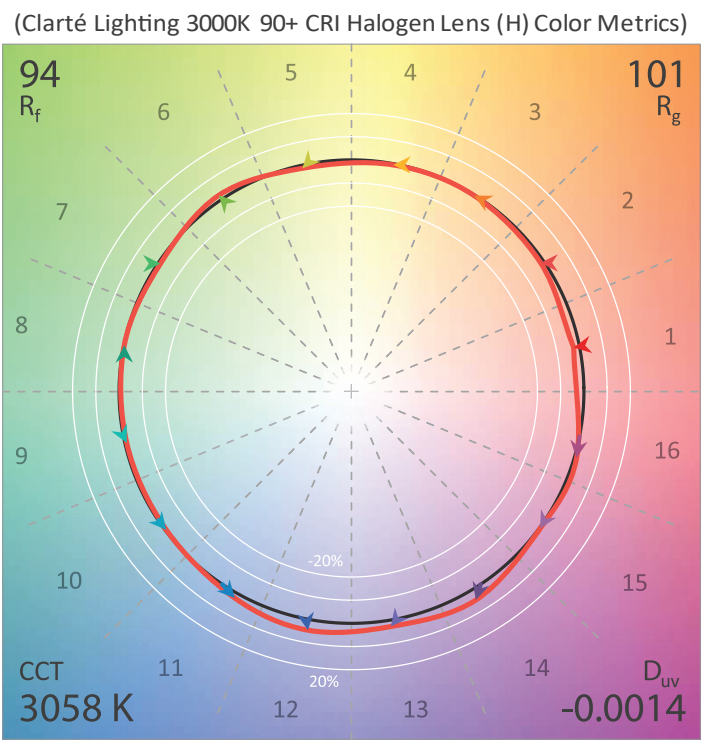


TM-30-18 Color Metrics

TM-30-18 is the new IES standard for reviewing and selecting color for LED light fixtures.

The new TM-30-18 creates a test color sample from 99 different colors and reports the 99 results categorized into hue bins that are shown in a 16 section Color Vector Graphic.



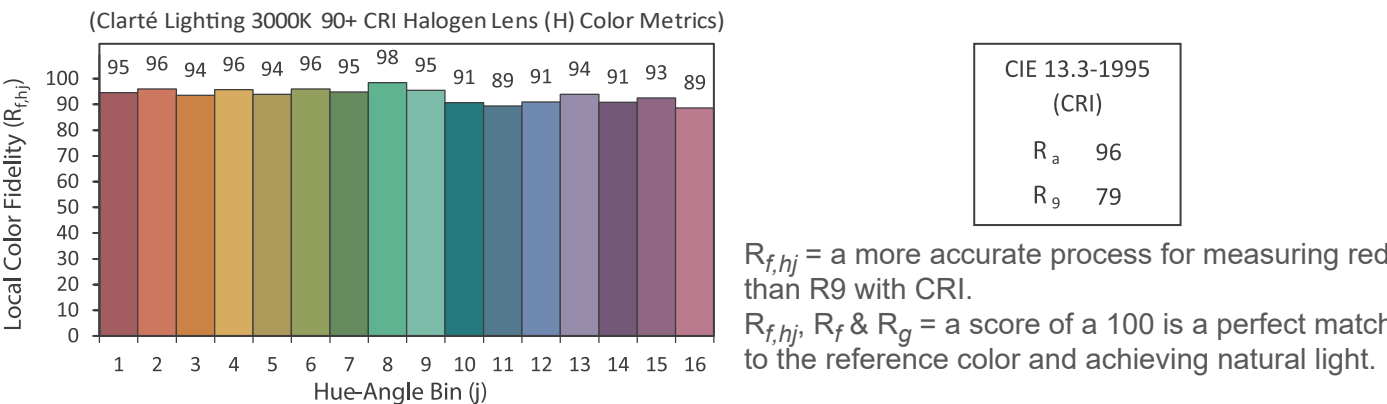
The TM-30-18 report creates scores from the 99 colors called Fidelity (R_f) and Gamut (R_g). Unlike CRI referencing the sun from 9 color reference points, Fidelity (R_f) references a perfect reference color with a score of 100, being an exact match to the reference color.

The Gamut (R_g) score references color saturation and allows for scores to exceed 100 reflecting an increased saturation of color when a Gamut (R_g) score exceeds 100. Gamut (R_g) scores can range from 80 to 100 to reflect under or over saturation of colors.

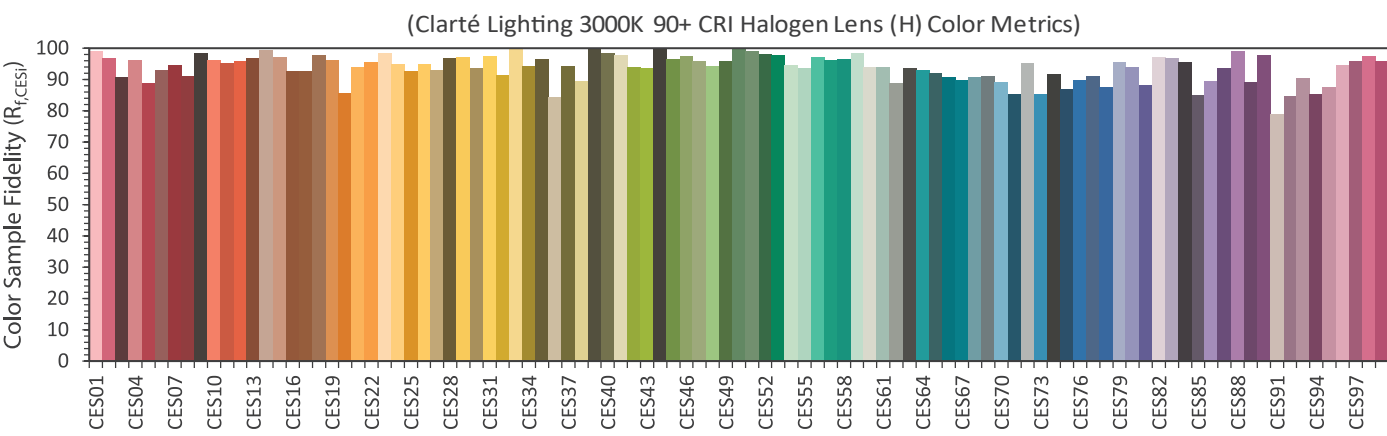
The Fidelity (R_f) score is in the upper left corner, the Gamut (R_g) score in the upper right corner, the kelvin temperature in the lower left corner and the Distance (D_{uv}) above or below the Black Body Locus in the lower right corner of the TM-30-18 Color Vector Graphic completed for a specific LED fixture.

TM-30-18 reports also provide a graphic with an average per the 16 local color bins ($R_{f,hj}$) and a Fidelity (R_f) score for each of the 99 color samples ($R_{f,CESi}$).

Average by Hue-Angle Bin – 16 Color Bins



Fidelity (Rf) for Each of the 99 CES



Clarté Lighting has completed TM-30-18 reports for 3K 84 CRI, 3K 94 CRI, 3K 94 CRI with halogen lens (-150 K lower color shift), and 3K 94 CRI with dimmed halogen lens (-300 lower color shift).

The results of these tests can be viewed in the TM-30-18 section of each catalog PDF.

ANSI/ASHRAE/ICC/USGBC/IES Standard for Green Building 189.1-2017
(Updated with Minimum TM-30-18 Requirements 8/18/2020)

| | ANSI/ASHRAE/ICC USGBC/IES Standard | Clarté Lighting 3K 90 CRI H |
|---|---------------------------------------|--------------------------------|
| Fidelity (R_f) | ≥85 | 95 |
| 1st Bin Local Color Fidelity - RED ($R_{f,h1}$) | ≥85 | 94 |
| Gamut (R_g) | ≥92 | 101 |
| Black Body ($R_{cs,h1}$) | Between -7% and +19% | .0014% |

Click to see TM-30-18 results

- 3K 80+ CRI
- 3K 90+ CRI
- 3K 90+ CRI H
- 3K 90+ CRI DH