LM-79 Test Report

Relevant Standards

IES LM-79-2008
IES TM-30-2015
CIE 13.3-1995

Product SKU

INFINILINE® X 120V LED Light DI-120V-INFX27

Test Conditions

Test Temperature: 26.5 °C
Luminaire Sample Length: 12 in.
Power Supply: Chroma Programmable AC Source M#61601
Voltage: 120 VAC
Current: .045 A
Power Consumption: 5.4 W

Test Date

05/16/2018

Prepared By
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Approved By
Andrew McAleavey, Director of Engineering

The results contained in this report pertain only to the tested sample.
Photometric & Colorimetry data measured in accordance to IES LM-79-2008 standards, at the Elemental LED, Inc. Innovation Lab.
### Summary of Results

<table>
<thead>
<tr>
<th>Metric</th>
<th>Test</th>
<th>Reference</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_f$</td>
<td>91</td>
<td>100</td>
<td>IES TM-30-15 Fidelity Index</td>
</tr>
<tr>
<td>$R_g$</td>
<td>97</td>
<td>100</td>
<td>IES TM-30-15 Gamut Index</td>
</tr>
<tr>
<td>$R_g$ (CRI)</td>
<td>92</td>
<td>100</td>
<td>CIE Test Color Method General Index</td>
</tr>
<tr>
<td>$R_g$</td>
<td>55</td>
<td>100</td>
<td>CIE Test Color Method Sample Nine Score</td>
</tr>
<tr>
<td>LER</td>
<td>283</td>
<td>145</td>
<td>Luminous Efficacy of Radiation</td>
</tr>
<tr>
<td>Lumens</td>
<td>471</td>
<td>1852</td>
<td>Luminous Flux</td>
</tr>
<tr>
<td>$R_{skin}$</td>
<td>94</td>
<td>100</td>
<td>Average of CES15 and CES18 (skin)</td>
</tr>
</tbody>
</table>

### General Color Rendition

This chart displays the spectral power distributions for the test and reference source. Each SPD has been normalized so that the maximum values is 100%.

This plot shows the $R_f$ and $R_g$ values relative to possible values.

This plot shows the shift in chromaticity for each individual CES.

This chart plots the chromaticity of the test and reference sources in the CIE 1931 chromaticity.

This chart displays the average chromaticity shift for the samples within each of 16 hue bins. The values are normalized so that the reference is a circle.
COLOR SAMPLE COMPARISON (APPROXIMATION)

<table>
<thead>
<tr>
<th></th>
<th>Ref</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elemental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: CES stands for "Color Evaluation Sample", these 99 samples are used in place of the 16 R values. The colors shown are approximate and depend on proper monitor calibration. Some colors may be outside of the gamut of the monitor, and will not be displayed accurately. For each sample, the color on the left represents the reference source, and the color on the right represents the test source.

Sample Type:
A - Nature
B - Skin
C - Textiles
D - Paints
E - Plastic
This chart displays the average Fidelity Index for all samples within the hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only.

This chart displays the change in chroma for the average sample within each hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only.

This chart displays the Fidelity Index for each of the 99 CES. The CES are arranged by their hue angle under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on proper monitor calibration. Some colors may be outside of the gamut of the monitor, and will not be displayed accurately.
**Goniophotometer Test**

**SUMMARY OF RESULTS**

Luminaire: INFINILINE® X 120V LED Light  
SKU: DI-120V-INFX27  
Luminous Flux: 470 Lumens  
Power Consumption: 5.40 Watts  
Efficacy: 87.04 Lumens/Watt  
Spacing Criterion (0-180): 1.30  
Spacing Criterion (90-270): 1.28

*Graphs below are for reference, full IES files are available on Diode LED website*

**DISTRIBUTION CHARTS AND TABLES**

The table provides zonal lumen data for different zones. The polar candelas distribution chart shows the luminous intensity distribution at various angles. The illuminance at a distance chart indicates the center beam fc and beam width. The graph and table together provide a comprehensive overview of the luminaire's performance and light distribution characteristics.