Photometric Test Report

Relevant Standards
IES TM-30-2015

Prepared For
ELEMENTAL LED INC, DBA DIODE LED
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Reno, NV 89521
United States

Catalog Number
Volante Canopy-200-T4-30x140 (4000K)
Order Number
12556990
Test Number
12556990.02

Test Date
2018-10-29  -  2018-11-02

Prepared By
William Escobar, Technician

Approved By
Eric Gaudreau, Engineering Leader

The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 3-meter integrating sphere using the $4\pi$ geometry method.
Absorption correction was employed for Sphere measurement
Luminaire Description: Square white metal housing
Lamp: 260 White LEDs with optics attached to each
Mounting: Pendant
Ballast/Driver: INVENTRONICS EUB-240S420DT

Summary of Results

Integrating Sphere
Luminous Flux: 26030 Lumens
Efficacy: 114.8 lm/w
CCT: 4067 K
CRI (Ra): 82.5

Electrical Data at 277 VAC
Test Temperature: 25.9 °C
Voltage: 277.0 VAC
Current: 0.8219 A
Power: 219.5 W
Power Factor: 0.964
Frequency: 60 Hz
Current THD: 7.51 %

In-Situ
LED Temperature: 63.7 °C
Driver Temperature: 67.2 °C
Measured LED Current: 0.1424 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Voltage</th>
<th>Current</th>
<th>Power</th>
<th>Power Factor</th>
<th>Frequency</th>
<th>Current THD</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.2 °C</td>
<td>120.0 VAC</td>
<td>1.898 A</td>
<td>226.8 W</td>
<td>0.996</td>
<td>60 Hz</td>
<td>6.60 %</td>
</tr>
</tbody>
</table>

Summary of Results

- Total Output: 26030 Lumens
- Efficacy: 114.8 lm/w
- CCT: 4067 K
- CRI (Ra): 82.5
- CRI (R9): 6.9
- Peak Wavelength: 454 nm
- Dominant Wavelength: 578 nm
- S/P Ratio: 1.71

Chromaticity (x): 0.3790
Chromaticity (y): 0.3809
Chromaticity (u'): 0.2225
Chromaticity (v'): 0.5032
TM-30 Rf: 81.5
TM-30 Rg: 93.5
Duv: 0.0018

Color Rendering Index Detail

<table>
<thead>
<tr>
<th>Ra (CRI)</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
<th>R7</th>
<th>R8</th>
<th>R9</th>
<th>R10</th>
<th>R11</th>
<th>R12</th>
<th>R13</th>
<th>R14</th>
<th>R15</th>
</tr>
</thead>
<tbody>
<tr>
<td>82.5</td>
<td>80.4</td>
<td>89.2</td>
<td>95.2</td>
<td>80.1</td>
<td>80.0</td>
<td>84.6</td>
<td>86.2</td>
<td>64.0</td>
<td>6.9</td>
<td>73.8</td>
<td>78.2</td>
<td>58.9</td>
<td>82.7</td>
<td>97.5</td>
<td>74.0</td>
</tr>
</tbody>
</table>

Flux vs Wavelength

CIE 1931, 2 Degree

Nominal CCT Quadrangles

Inside Quad 4000 K

Flux vs Wavelength (nm)
In-Situ Test

In-Situ Test Conditions

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<th>Power</th>
<th>Power Factor</th>
<th>Frequency</th>
<th>Current THD</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.0 °C</td>
<td>120.1 VAC</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>60 Hz</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Summary of Results

LED Temperature: 63.7 °C
Driver Temperature: 67.2 °C
Measured LED Current: 0.1424 A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

LED Temperature Location

Thermocouple Reference

Driver Temperature Location