



UL LLC  
1075 W Lambert Rd Suite B  
Brea, CA 92821

## Integrating Sphere Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014, CIE 13.3-1995  
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2018

**Prepared For**  
**B-K Lighting INC**

Daniel Carrejo  
40429 Brickyard Dr.  
Madera, CA 93636  
United States

**Catalog Number**  
**HU-LED-TR-X107-NSP-WHP-9-C-1-INC-120-PROTOTYPE(3500K)**

Order Number  
13318635  
Test Number  
13318635.03

Test Date

2020-05-13

Prepared By

Austin Duff, Technician

Approved By

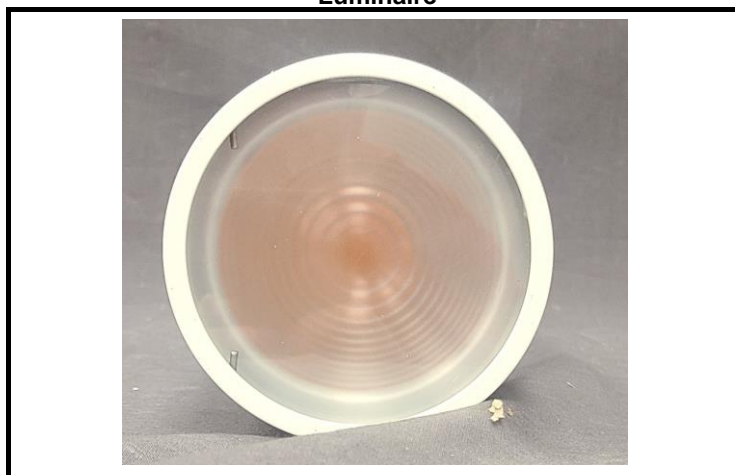
Eric Gaudreau, Engineering Leader

The results contained in this report pertain only to the tested sample.  
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.  
This report must not be used by the client to claim product certification, approval, or endorsement by  
NVLAP, NIST, or any agency of the Federal Government.



**Luminaire Description:** White metal cylindrical housing and clear glass lens  
**Lamp:** One (1) White LED with optic below  
**Mounting:** Pendant  
**Ballast/Driver:** One (1) ERP ESST040W-0900-42

**Luminaire**



**Summary of Results**

|                     |           |
|---------------------|-----------|
| Radiant Flux:       | 4948 mW   |
| Luminous Flux:      | 1648 lm   |
| Luminaire Efficacy: | 46.1 lm/W |
| CCT:                | 3519 K    |
| CRI (Ra):           | 81.5      |
| Chromaticity (x):   | 0.4059    |
| Chromaticity (y):   | 0.3948    |
| Chromaticity (u):   | 0.2344    |
| Chromaticity (v):   | 0.3420    |
| Duv:                | 0.0015    |

**Test Conditions**

|                   |           |
|-------------------|-----------|
| Test Temperature: | 24.7 °C   |
| Voltage:          | 120.1 VAC |
| Current:          | 0.3019 A  |
| Power:            | 35.75 W   |
| Power Factor:     | 0.986     |
| Frequency:        | 60 Hz     |
| Current THD:      | 12.2 %    |

Testing was performed in a 2-meter integrating sphere using the 4 $\pi$  geometry method.  
Absorption correction was employed for this measurement.



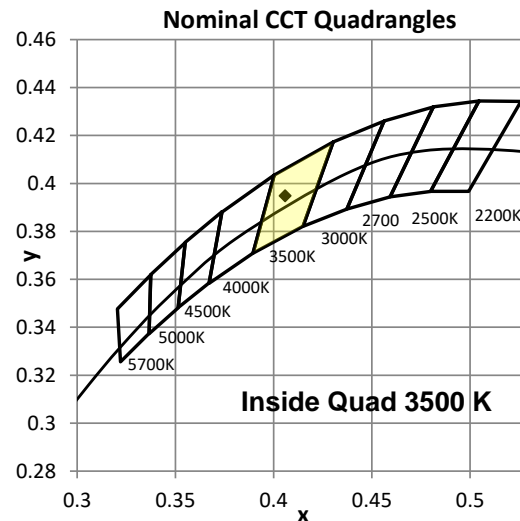
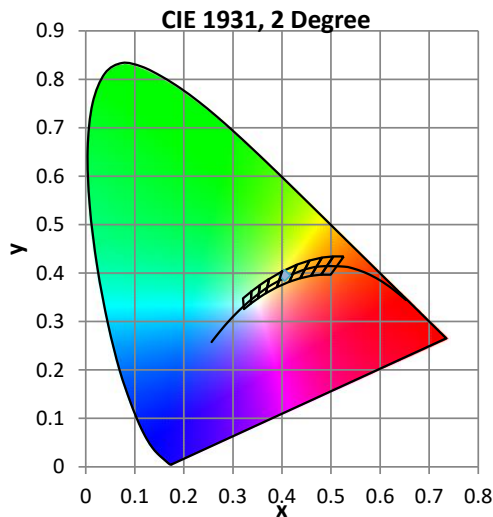
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

| Temperature | Voltage   | Current  | Power   | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 24.7 °C     | 120.1 VAC | 0.3019 A | 35.75 W | 0.986        | 60 Hz     | 12.2 %      |

### Summary of Results

|                             |             |                           |        |
|-----------------------------|-------------|---------------------------|--------|
| <b>Total Output:</b>        | 1648 Lumens | <b>Chromaticity (x):</b>  | 0.4059 |
| <b>Efficacy:</b>            | 46.1 lm/w   | <b>Chromaticity (y):</b>  | 0.3948 |
| <b>CCT:</b>                 | 3519 K      | <b>Chromaticity (u'):</b> | 0.2344 |
| <b>CRI (Ra):</b>            | 81.5        | <b>Chromaticity (v'):</b> | 0.5131 |
| <b>CRI (R9):</b>            | 3.3         | <b>TM-30 Rf:</b>          | 84     |
| <b>Peak Wavelength:</b>     | 598 nm      | <b>TM-30 Rg:</b>          | 95.1   |
| <b>Dominant Wavelength:</b> | 580 nm      | <b>Duv:</b>               | 0.0015 |
| <b>S/P Ratio:</b>           | 1.51        |                           |        |



### Color Rendering Index Detail

| Ra (CRI) | R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9  | R10  | R11  | R12  | R13  | R14  | R15  |
|----------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| 81.5     | 79.2 | 88.3 | 95.6 | 79.9 | 79.2 | 84.3 | 84.9 | 60.9 | 3.3 | 72.6 | 78.1 | 63.8 | 81.2 | 97.6 | 72.3 |

