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Integrating Sphere Test Report

Relevant Standards
IES LM-79-2019, ANSI C82.77-10-2014, CIE 13.3-1995
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2018

Prepared For
H E Williams Inc

Dean Vandergriff
831 W Fairview Ave
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Carthage
MO 64836-0837

Catalog Number
FT-24-6-8-5000K-AF-DIM-UNC (FT-22-LS-8CS-AF-DIM-UNV)

Order Number
15184934
Test Number
15184934.10

Test Date

2024-02-28

Prepared By

Dennis Kabana, Laboratory Technician

Approved By

Jesse Litchfield, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Recessed 2 x 4 Lumen/Wattage selectable, CCT selectable, LED Troffer w/center frosted acrylic lens.
Lamp: 224 LEDs
Mounting: Recessed
Ballast/Driver: ISTAR ISC-045W-105DDSM-ADJ33

Luminaire



Summary of Results

| | |
|---------------------|------------|
| Radiant Flux: | 21540 mW |
| Luminous Flux: | 6845 lm |
| Luminaire Efficacy: | 143.9 lm/W |
| CCT: | 5035 K |
| CRI (Ra): | 82.9 |
| Chromaticity (x): | 0.3442 |
| Chromaticity (y): | 0.3531 |
| Chromaticity (u): | 0.2102 |
| Chromaticity (v): | 0.3235 |
| Duv: | 0.0004 |

Test Conditions

| | |
|-------------------|-----------|
| Test Temperature: | 25.5 °C |
| Voltage: | 120.0 VAC |
| Current: | 0.3977 A |
| Power: | 47.56 W |
| Power Factor: | 0.996 |
| Frequency: | 60 Hz |
| Current THD: | 5.28 % |

Testing was performed in a 3-meter integrating sphere using the 4 π geometry method.
Absorption correction was employed for this measurement.

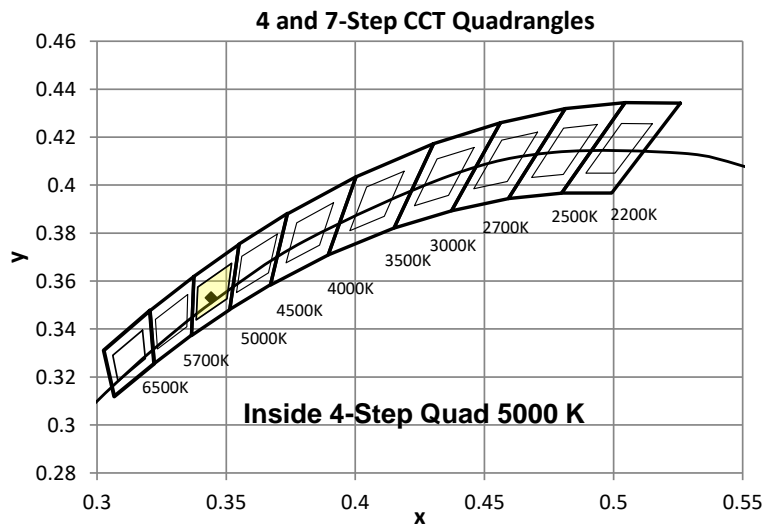
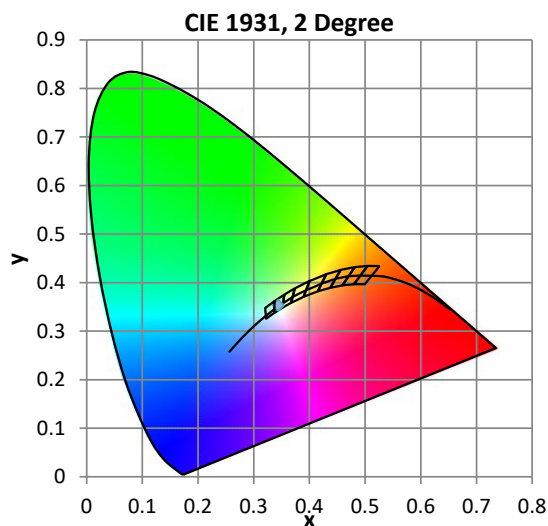
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 25.5 °C | 120.0 VAC | 0.3977 A | 47.56 W | 0.996 | 60 Hz | 5.28 % |

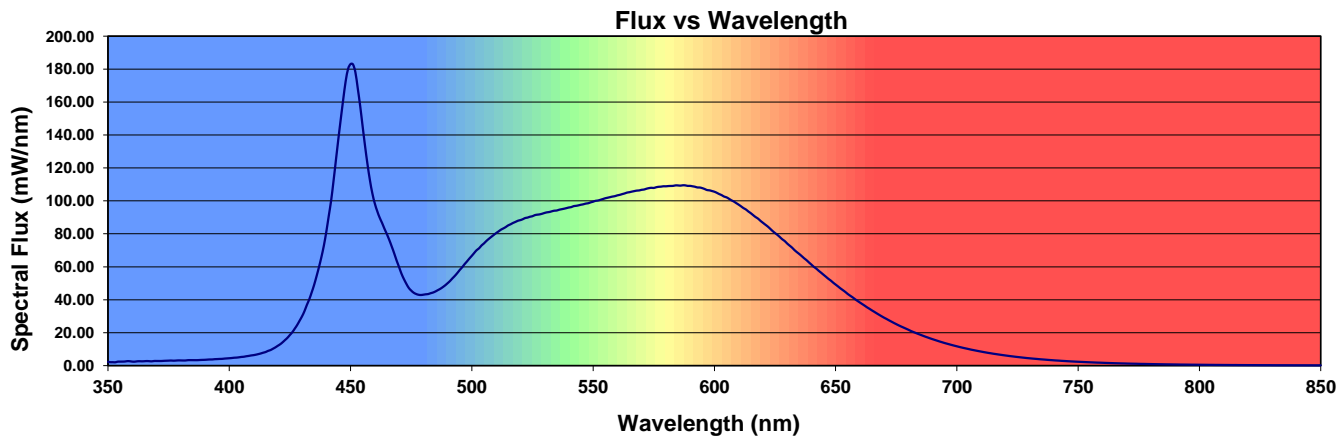
Summary of Results

| | | | |
|-----------------------------|-------------|---------------------------|--------|
| Total Output: | 6845 Lumens | Chromaticity (x): | 0.3442 |
| Efficacy: | 143.9 lm/w | Chromaticity (y): | 0.3531 |
| CCT: | 5035 K | Chromaticity (u'): | 0.2102 |
| CRI (Ra): | 82.9 | Chromaticity (v'): | 0.4853 |
| CRI (R9): | 5.5 | TM-30 Rf: | 84 |
| Peak Wavelength: | 450 nm | TM-30 Rg: | 97 |
| Dominant Wavelength: | 555 nm | TM-30 Rcs,h1: | -12% |
| S/P Ratio: | 1.96 | Duv: | 0.0011 |
| M/P Ratio: | 0.82 | WELL Building Standard v2 | |



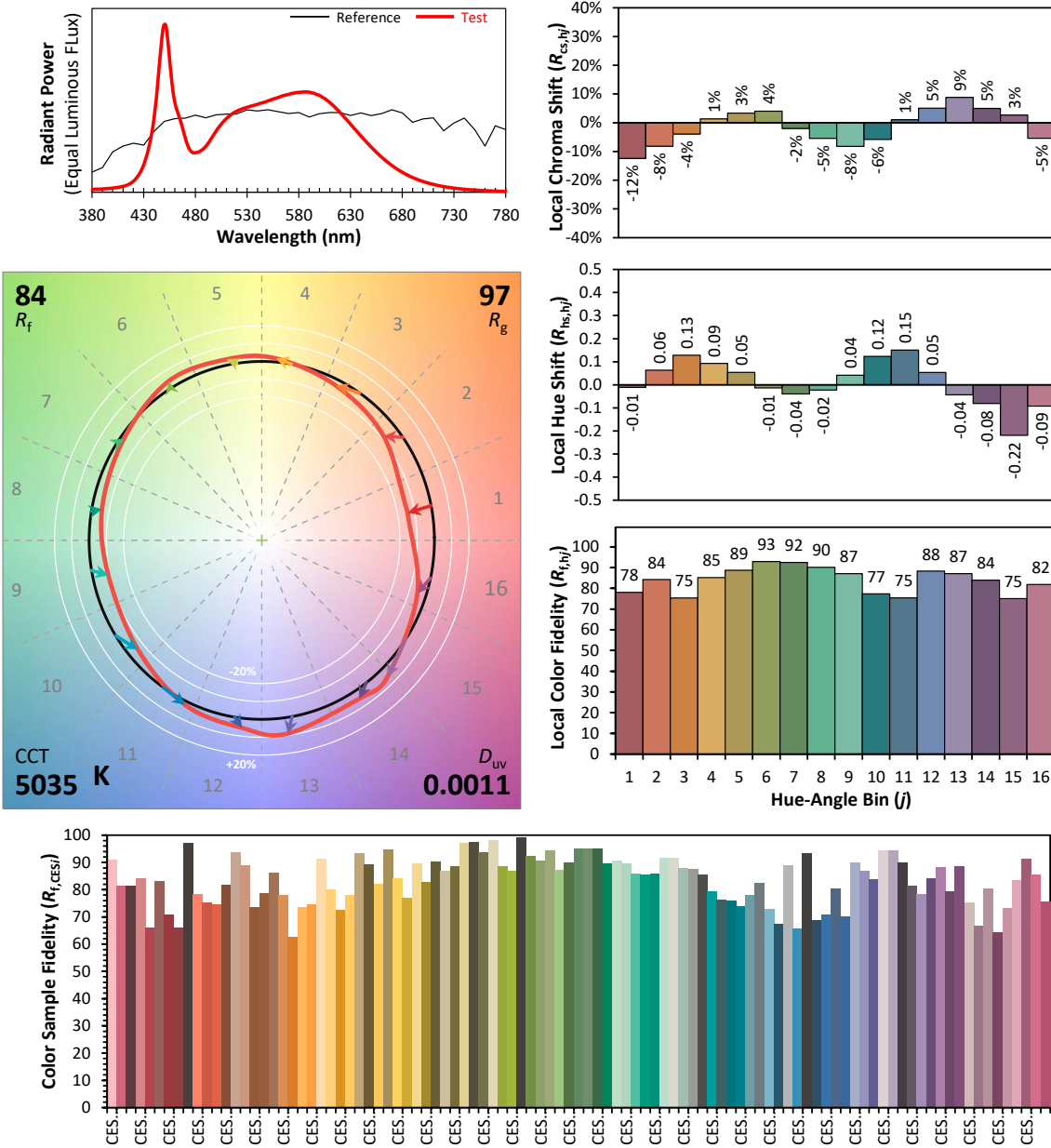
Color Rendering Index Detail

| Ra (CRI) | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|----------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| 82.9 | 81.3 | 88.0 | 92.5 | 83.1 | 82.4 | 83.4 | 86.2 | 66.5 | 5.5 | 71.6 | 82.8 | 64.1 | 83.0 | 96.1 | 75.7 |



ANSI/IES TM-30-18 Color Rendition Report

| | | | |
|--------|------------------------------------------------------|---------------|------------------|
| Date: | 2024-02-28 | Manufacturer: | H E Williams Inc |
| Model: | FT-24-6-8-5000K-AF-DIM-UNC (FT-22-LS-8CS-AF-DIM-UNV) | | |



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3442
y 0.3531
u' 0.2102
v' 0.4853

CIE 13.3-1995
(CRI)

R_a 83
 R_g 6

Colors are for visual orientation purposes only. Created with the IES TM-30-18 Calculator Version 2.00.