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Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002
UL1598-2008

Prepared For
Eye Lighting International of North America

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Catalog Number
LES-30-730-HWD-XXXX-UNV-XXXXX

Order Number
11165993
Test Number
1209126

Test Date

2016-02-17 - 2016-02-18

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Approved By

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The results contained in this report pertain only to the tested sample.
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Table of Contents

| | |
|---|--------|
| Summary of Results | Page 3 |
| Integrating Sphere Results | Page 4 |
| Distribution Results | Page 5 |
| Test Conditions / Summary of Results / ISOPlot | Page 5 |
| Maximum Plane and Cone Plot / Zonal Lumen Summary | Page 6 |
| IES BUG Rating | Page 7 |
| In-Situ Results | Page 8 |

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 4π geometry method.
Absorption correction was employed for Sphere measurement

Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees
Test distance exceeds five times the greatest luminous opening of luminaire



Luminaire Description: LED retrofit kit installed in a LexaLite 424 Type V reference housing
Lamp: 126 white LEDs, three boards with 42 LEDs
Mounting: Post Top
Ballast/Driver: One Philips XI036C100V048DNMX



Luminaire Characteristics

Luminous Diameter: 16.00 in.
Luminous Height: 12.50 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3297 Lumens
Efficacy: 110.8 lm/w
CCT: 3071 K
CRI (Ra): 74.9

Distribution

Roadway Classification: Type II, Short
Cutoff Classification: Noncutoff
BUG Rating: B2 U3 G3

Electrical Data at 277 VAC

Test Temperature: 24.7 °C
Voltage: 277.0 VAC
Current: 0.1142 A
Power: 30.16 W
Power Factor: 0.953
Frequency: 60 Hz
Current THD: 10.1 %

In-Situ

LED Temperature: 60.3 °C
Driver Temperature: 51.5 °C
Measured LED Current: 0.03410 A

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



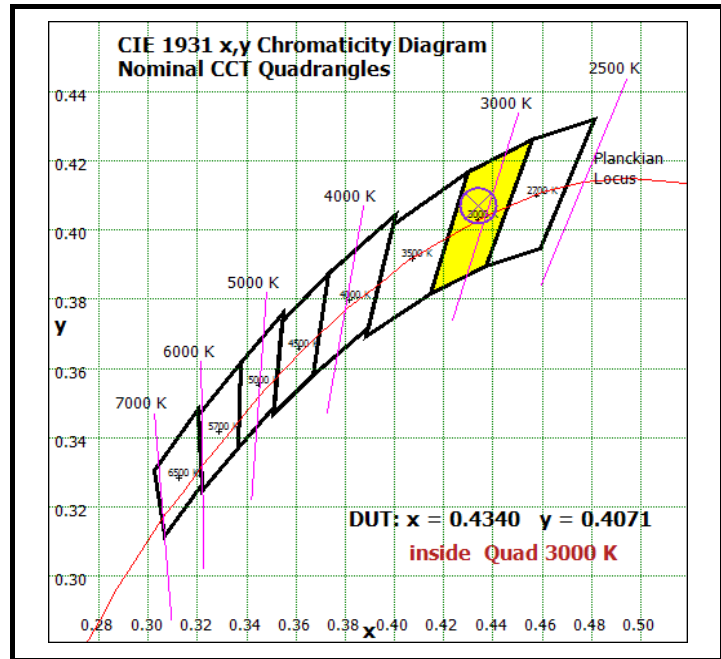
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 24.9 °C | 120.0 VAC | 0.2490 A | 29.76 W | 0.996 | 60 Hz | 6.92 % |

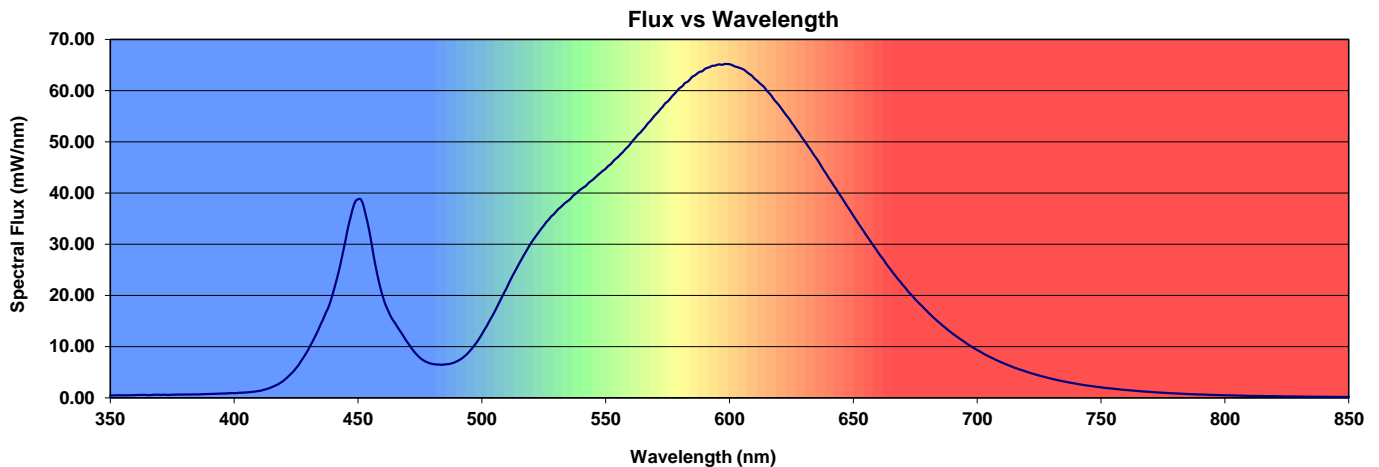
Summary of Results

| | |
|----------------------|-------------|
| Total Output: | 3297 Lumens |
| Efficacy: | 110.8 lm/w |
| CCT: | 3071 K |
| CRI (Ra): | 74.9 |
| CRI (R9): | -14.4 |
| Chromaticity (x): | 0.4340 |
| Chromaticity (y): | 0.4071 |
| Chromaticity (u): | 0.2474 |
| Chromaticity (v): | 0.3481 |
| Chromaticity (u'): | 0.2474 |
| Chromaticity (v'): | 0.5221 |
| Duv: | 0.0016 |



Color Rendering Index Detail

| Ra (CRI) | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 |
|----------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|
| 74.9 | 72.3 | 82.4 | 91.0 | 72.9 | 70.7 | 75.1 | 81.8 | 52.7 | -14.4 | 58.4 | 68.4 | 48.5 | 73.9 | 94.5 |





Distribution - Goniophotometer

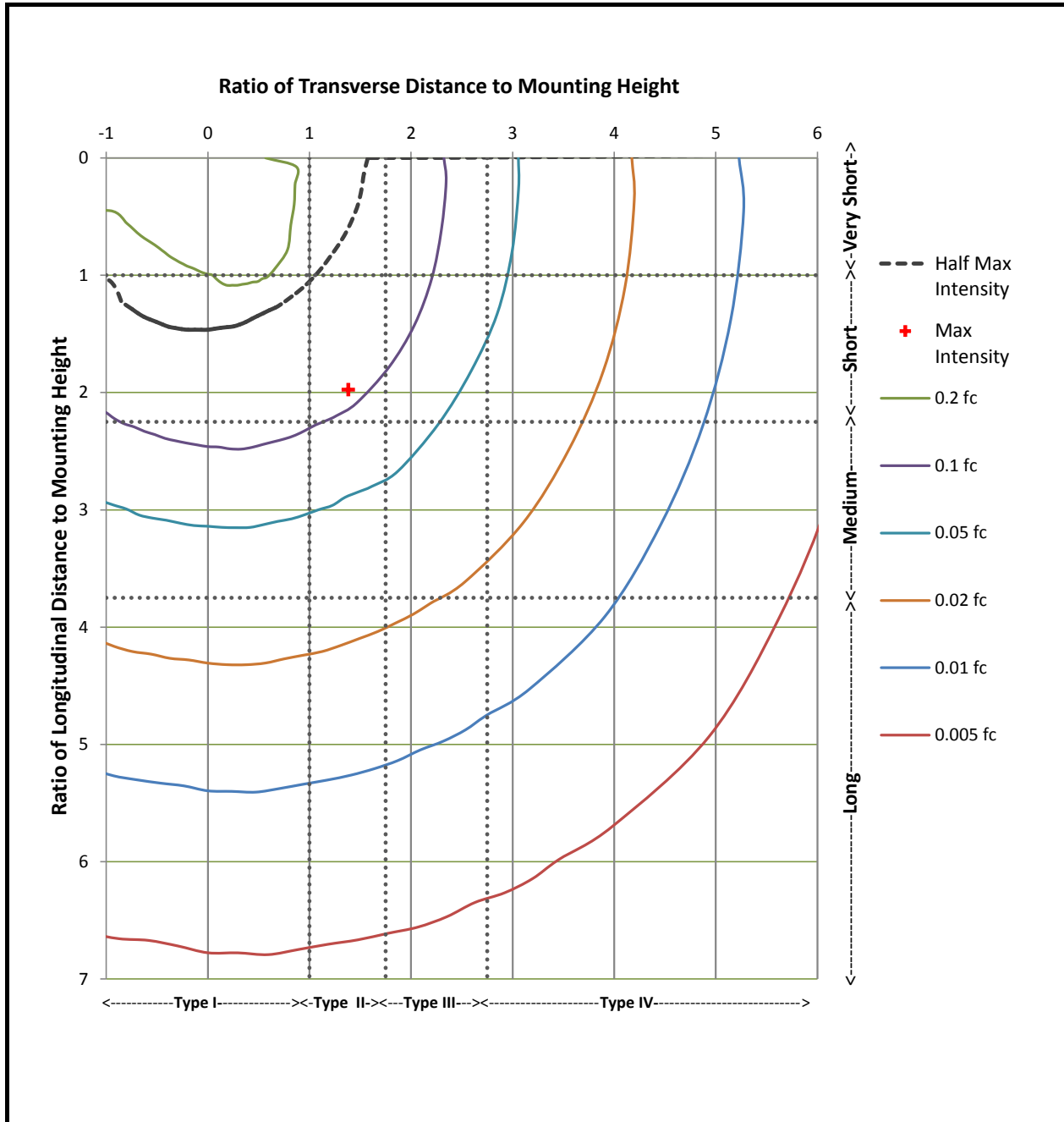
Distribution Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 24.7 °C | 120.0 VAC | 0.2493 A | 29.80 W | 0.996 | 60 Hz | 6.90 % |

Summary of Results

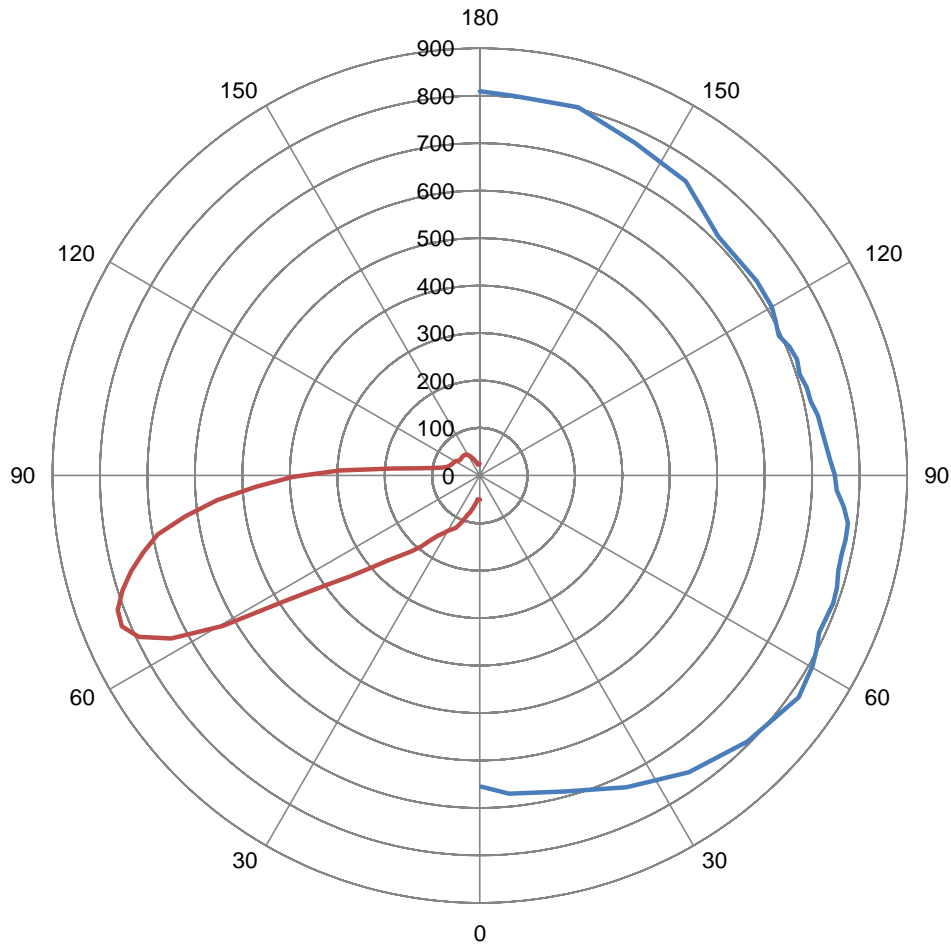
| | | | |
|------------------------------------|----------------|----------------------------|-------------|
| IES Roadway Classification: | Type II, Short | Total Lumen Output: | 3228 Lumens |
| Cutoff Classification | Noncutoff | Luminaire Efficacy: | 108.3 lm/w |
| BUG Rating: | B2 U3 G3 | Maximum Candela: | 818 Candela |

ISO FootCandle Plot at 20 Feet





Maximum Plane and Cone Plots of Candela



Vertical Plane Through

55 ° Lateral

Lateral Cone Through

67.5 ° Vertical

Maximum Intensity (Candlepower):

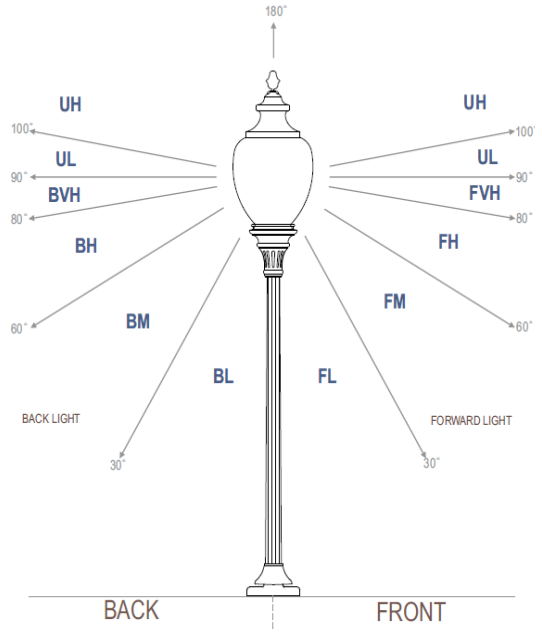
818.3 Candela

Zonal Lumen Summary

| Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire |
|-------|--------|----------------|---------|--------|----------------|---------|--------|----------------|
| 0-5 | 1.3 | 0.0% | 60-65 | 331.6 | 10.3% | 120-125 | 26.3 | 0.8% |
| 5-10 | 4.2 | 0.1% | 65-70 | 377.1 | 11.7% | 125-130 | 23.4 | 0.7% |
| 10-15 | 8.7 | 0.3% | 70-75 | 377.1 | 11.7% | 130-135 | 21.6 | 0.7% |
| 15-20 | 14.8 | 0.5% | 75-80 | 358.3 | 11.1% | 135-140 | 20.3 | 0.6% |
| 20-25 | 23.2 | 0.7% | 80-85 | 310.9 | 9.6% | 140-145 | 18.6 | 0.6% |
| 25-30 | 31.6 | 1.0% | 85-90 | 234.8 | 7.3% | 145-150 | 16.0 | 0.5% |
| 30-35 | 41.7 | 1.3% | 90-95 | 143.0 | 4.4% | 150-155 | 12.4 | 0.4% |
| 35-40 | 57.2 | 1.8% | 95-100 | 67.7 | 2.1% | 155-160 | 8.6 | 0.3% |
| 40-45 | 77.0 | 2.4% | 100-105 | 42.2 | 1.3% | 160-165 | 5.5 | 0.2% |
| 45-50 | 102.3 | 3.2% | 105-110 | 34.5 | 1.1% | 165-170 | 3.2 | 0.1% |
| 50-55 | 144.0 | 4.5% | 110-115 | 31.5 | 1.0% | 170-175 | 1.7 | 0.1% |
| 55-60 | 225.6 | 7.0% | 115-120 | 29.3 | 0.9% | 175-180 | 0.6 | 0.0% |



IES "BUG" Rating
 (Back Light, Uplight, Glare)
 Per IES TM-15-11



Luminaire Classification System (LCS)

| LCS | Zone | Lumens | Luminaire % |
|-------------------|-----------------|--------|-------------|
| FL | (0-30) | 41.6 | 1.3% |
| FM | (30-60) | 321.6 | 10.0% |
| FH | (60-80) | 726.5 | 22.5% |
| FVH | (80-90) | 283.5 | 8.8% |
| BL | (0-30) | 42.1 | 1.3% |
| BM | (30-60) | 326.2 | 10.1% |
| BH | (60-80) | 717.6 | 22.2% |
| BVH | (80-90) | 262.1 | 8.1% |
| UL | (90-100) | 210.6 | 6.5% |
| UH | (100-180) | 296.0 | 9.2% |
| Total | | 3227.9 | 100.0% |
| BUG Rating | B2 U3 G3 | | |



In-Situ Test

In-Situ Test Conditions

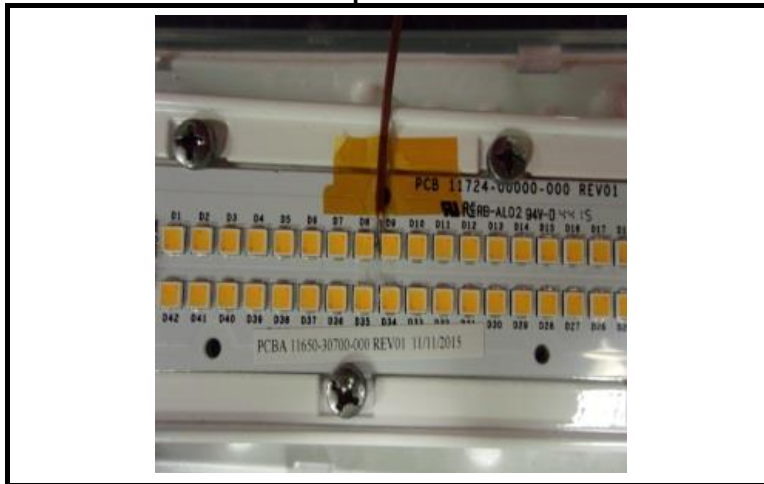
| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|---------|-------|--------------|-----------|-------------|
| 23.7 °C | 119.6 VAC | N/A | N/A | N/A | 60 Hz | N/A |

Summary of Results

LED Temperature: 60.3 °C
Driver Temperature: 51.5 °C
Measured LED Current: 0.03410 A

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

LED Temperature Location



Driver Temperature Location

