

# VISUAL COMFORT AND COMPANY TEST REPORT

## SCOPE OF WORK

LED Performance Testing

## MODEL NUMBER

ESRLCVP4862930FWABES

## PROJECT NUMBER

G104941221

## REPORT NUMBER

104941221CHI-027

## ISSUE DATE

5/31/2022

## REVISED DATE

5/31/2022

## TEST DATES

2022-05-27.

## DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104941221CHI-027

**MODEL NUMBER(s)**

ESRLCVP4862930FWABES

**REPORT RENDERED TO:**

VISUAL COMFORT AND COMPANY  
7400 LINDER AVE  
SKOKIE, IL 60077  
USA

**STATEMENT OF LIMITATION**

NVLAP Lab Code 600186-0. 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.

**AUTHORIZATION**

The testing performed was authorized by signed quote number Qu-01236637-1.

**TEST STANDARDS**

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:

*Maximilian Carvajal*

Maximilian Carvajal  
Engineer  
Lighting Division

Reviewer:

*Jeff Davis*

Jeff Davis  
N.A. Technical Lead  
Lighting Division

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**SAMPLE INFORMATION**

**REPORT NO. 104941221CHI-027**

ITEMS RECEIVED

| Item No. | Control No.      | Model No.            | Description                                 | Type       | Received  |
|----------|------------------|----------------------|---------------------------------------------|------------|-----------|
| 1        | AH05202022102311 | ESRLCVP4862930FWABES | Essence Cove/Toe Kick<br>P-Series 800 lm/ft | Production | 5/20/2022 |

TESTED SAMPLE CONFIGURATIONS

| Config No. | Tested Model No.     | Item Nos. Utilized |
|------------|----------------------|--------------------|
| 1          | ESRLCVP4862930FWABES | 1                  |

SAMPLE PHOTOS - TESTED CONFIGURATIONS



## SUMMARY

REPORT NO. 104941221CHI-027

### PRODUCT INFORMATION AND SUMMARY OF DATA

|                      |                                          |
|----------------------|------------------------------------------|
| Product Model No.:   | ESRLCVP4862930FWABES                     |
| Product Description: | Essence Cove/Toe Kick P-Series 800 lm/ft |
| LED Model No.:       | AA5592-02                                |
| Driver Model No.:    | NA                                       |
| Light Source:        | LED                                      |

| Criteria                      | Results |
|-------------------------------|---------|
| Light Output (lumens)         | 1766.9  |
| Input Power (W) @ 24VDC (Vdc) | 28.32   |
| Lumen Efficacy (lm/W)         | 62.4    |

## TEST METHODS

### SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

### TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

**TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING**

**REPORT NO. 104941221CHI-027**

| Test Configuration | Tested Model No.     | Pass/Fail/NA |
|--------------------|----------------------|--------------|
| 1                  | ESRLCVP4862930FWABES | NA           |

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)**

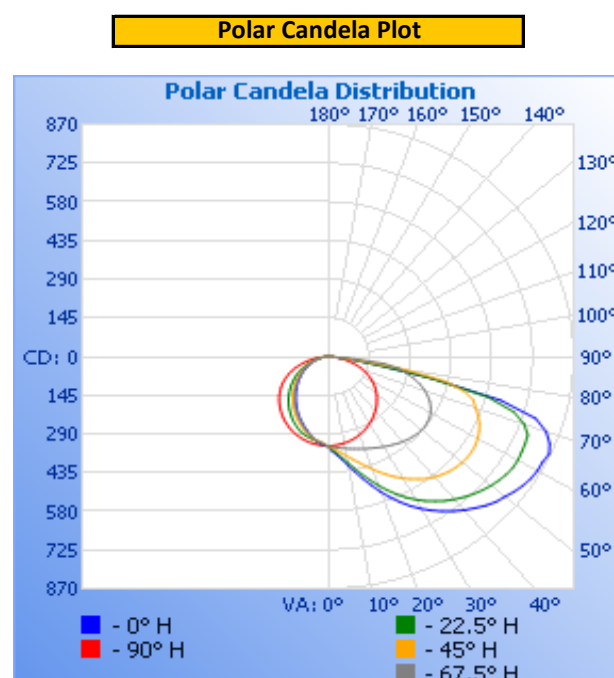
| Base Orientation | Input Voltage (Vdc) | Input Current (mA) | Input Power (W) |
|------------------|---------------------|--------------------|-----------------|
| Up               | 23.99               | 1180.4             | 28.32           |

| Light Output (lm) | Lumen Efficacy (lm/W) |
|-------------------|-----------------------|
| 1766.9            | 62.4                  |

**INTENSITY SUMMARY - CANDELA**

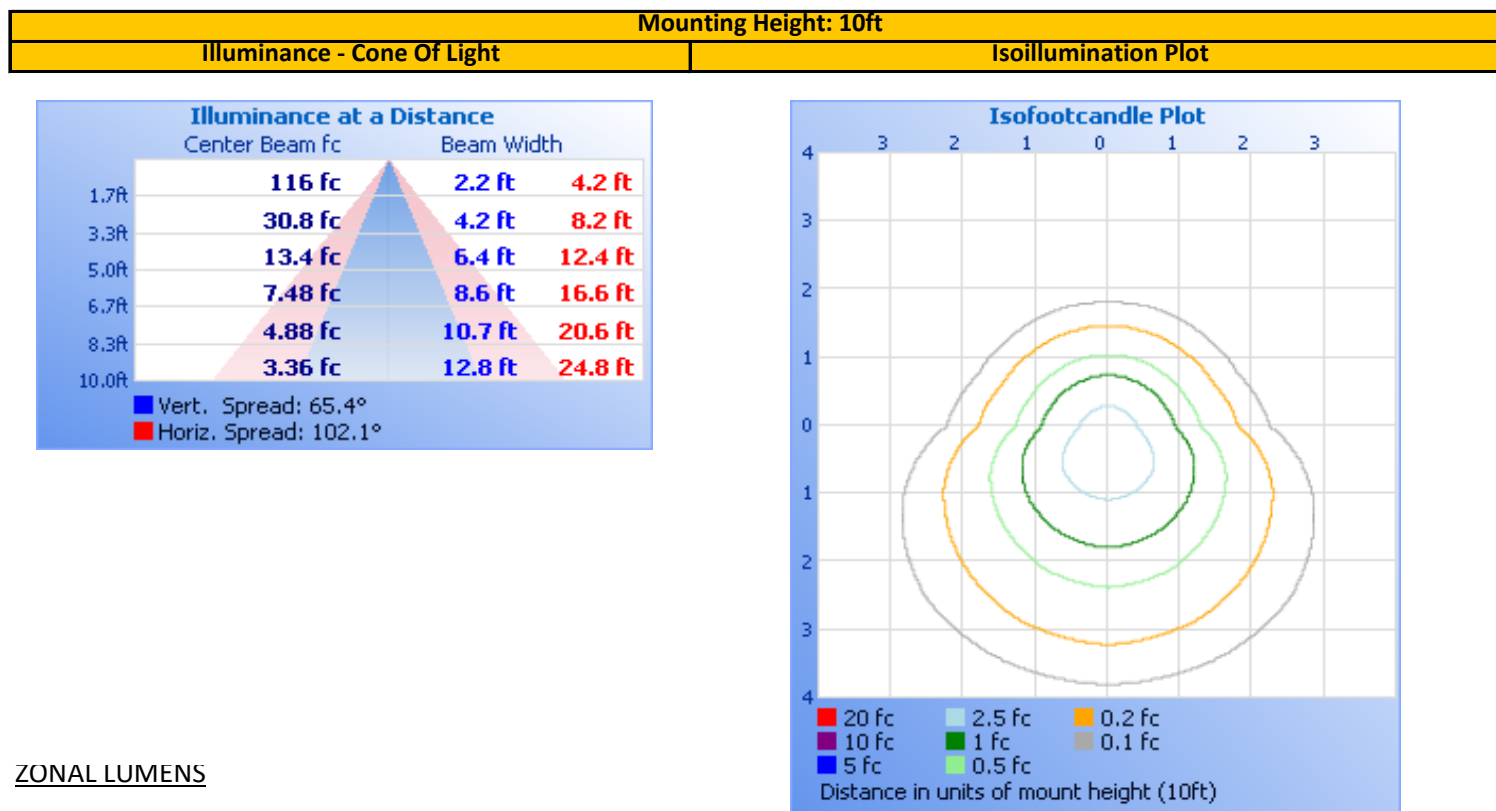
| Angle | 0     | 22.5  | 45    | 67.5  | 90    |
|-------|-------|-------|-------|-------|-------|
| 0     | 335.9 | 335.9 | 335.9 | 335.9 | 335.9 |
| 5     | 370.2 | 364.3 | 352.5 | 342.1 | 332.9 |
| 10    | 414.5 | 403.5 | 377.5 | 349.2 | 329.3 |
| 15    | 472.6 | 454.6 | 409.2 | 357.8 | 323.4 |
| 20    | 537.1 | 511.3 | 446.7 | 367.3 | 315.1 |
| 25    | 600.9 | 567.7 | 487.3 | 378.1 | 304.4 |
| 30    | 658.1 | 618.4 | 526.0 | 390.0 | 291.9 |
| 35    | 707.3 | 661.8 | 560.7 | 402.6 | 277.6 |
| 40    | 750.5 | 697.9 | 588.6 | 414.7 | 261.6 |
| 45    | 789.1 | 728.2 | 607.8 | 424.7 | 244.2 |
| 50    | 817.0 | 752.4 | 618.6 | 430.7 | 225.0 |
| 55    | 842.6 | 770.6 | 620.9 | 429.9 | 203.7 |
| 60    | 855.7 | 775.9 | 612.6 | 419.4 | 179.9 |
| 65    | 863.4 | 770.0 | 591.4 | 397.5 | 153.0 |
| 70    | 821.6 | 738.5 | 555.5 | 362.3 | 122.1 |
| 75    | 632.6 | 585.5 | 497.9 | 314.8 | 89.2  |
| 80    | 177.1 | 180.0 | 270.3 | 254.4 | 56.0  |
| 85    | 32.1  | 30.9  | 47.2  | 92.7  | 25.7  |
| 90    | 0     | 0     | 0     | 0     | 0     |
| 95    | 0     | 0     | 0     | 0     | 0     |
| 100   | 0     | 0     | 0     | 0     | 0     |
| 105   | 0     | 0     | 0     | 0     | 0     |
| 110   | 0     | 0     | 0     | 0     | 0     |
| 115   | 0     | 0     | 0     | 0     | 0     |
| 120   | 0     | 0     | 0     | 0     | 0     |
| 125   | 0     | 0     | 0     | 0     | 0     |
| 130   | 0     | 0     | 0     | 0     | 0     |
| 135   | 0     | 0     | 0     | 0     | 0     |
| 140   | 0     | 0     | 0     | 0     | 0     |
| 145   | 0     | 0     | 0     | 0     | 0     |
| 150   | 0     | 0     | 0     | 0     | 0     |
| 155   | 0     | 0     | 0     | 0     | 0     |
| 160   | 0     | 0     | 0     | 0     | 0     |
| 165   | 0     | 0     | 0     | 0     | 0     |
| 170   | 0     | 0     | 0     | 0     | 0     |
| 175   | 0     | 0     | 0     | 0     | 0     |
| 180   | 0     | 0     | 0     | 0     | 0     |

Entire luminous intensity matrix found in .IES file



REPORT NO. 104941221CHI-027

# ILLUMINANCE SUMMARY



# ZONAL LUMENS

| Zonal Lumen Summary |         |           |         |        |       |
|---------------------|---------|-----------|---------|--------|-------|
| Zone                | Lumens  | Luminaire | Zone    | Lumens | Total |
| 0-30                | 302.8   | 17.1%     | 0-10    | 32.5   | 1.8%  |
| 0-40                | 539.4   | 30.5%     | 10-20   | 100.0  | 5.7%  |
| 0-60                | 1,153.5 | 65.3%     | 20-30   | 170.3  | 9.6%  |
| 60-90               | 613.4   | 34.7%     | 30-40   | 236.6  | 13.4% |
| 70-100              | 288.0   | 16.3%     | 40-50   | 290.4  | 16.4% |
| 90-120              | 0.0     | 0.0%      | 50-60   | 323.7  | 18.3% |
| 0-90                | 1,766.9 | 100.0%    | 60-70   | 325.4  | 18.4% |
| 90-180              | 0.0     | 0.0%      | 70-80   | 242.4  | 13.7% |
| 0-180               | 1,766.9 | 100.0%    | 80-90   | 45.6   | 2.6%  |
|                     |         |           | 90-100  | 0.0    | 0.0%  |
|                     |         |           | 100-110 | 0.0    | 0.0%  |
|                     |         |           | 110-120 | 0.0    | 0.0%  |
|                     |         |           | 120-130 | 0.0    | 0.0%  |
|                     |         |           | 130-140 | 0.0    | 0.0%  |
|                     |         |           | 140-150 | 0.0    | 0.0%  |
|                     |         |           | 150-160 | 0.0    | 0.0%  |
|                     |         |           | 160-170 | 0.0    | 0.0%  |
|                     |         |           | 170-180 | 0.0    | 0.0%  |

**EQUIPMENT LIST**

**REPORT NO. 104941221CHI-027**

| # | Equipment                        | Model No | Control No. | Last Cal  | Cal Due   |
|---|----------------------------------|----------|-------------|-----------|-----------|
| 1 | Yokogawa Power Meter             | WT310E   | CHI0664     | 3/30/2022 | 3/30/2023 |
| 2 | Omega Thermometer                | DPI8-C24 | 146920      | 10/4/2021 | 10/4/2022 |
| 3 | LSI High Speed Mirror Goniometer | 6440T    | 146928      | VBU       | VBU       |
| 4 | Newport Thermohygrometer         | iServer  | CHI0452     | 2/3/2022  | 2/3/2023  |
| 5 | Chroma Power Supply              | 61604    | CHI0371     | VBU       | VBU       |

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

**REVISION HISTORY**

| #   | Revision Date | Updated By         | Reviewed By      | Description of Change                                                                         |
|-----|---------------|--------------------|------------------|-----------------------------------------------------------------------------------------------|
| 1   | 5/31/2022     | Max Carvajal<br>MC | Jeff Davis<br>JD | Reran distribution test ensuring proper lens on sample and no significant line voltage losses |
| --- | ---           | ---                | ---              | ---                                                                                           |
| --- | ---           | ---                | ---              | ---                                                                                           |