

REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656

Date: May 13, 2019

REPORT NO. 103924656LAX-012

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-HV-30K-T5
LED MODEL NO. GWP9LR34.PM-M2M3
DRIVER MODEL NO. ESD-150S350DT
RETROFIT MODEL NO. LITHONIA KAD CONTOUR SERIES

RENDERED TO

SIMPLYLED LLC
111 W. 34TH STREET
GARDEN CITY, IDAHO, 83714

TEST: Electrical and Photometric tests as required to the IESNA test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-00973316-1.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

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

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number ALD-R-160W-HV-30K-T5. The sample was received by Intertek on March 19, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1903191345-003A.

DATES OF TESTS: May 11, 2019

SUMMARY

| |
|---|
| Model No.: ALD-R-160W-HV-30K-T5 Description: LED Luminaire |
|---|

| Criteria | Result |
|-----------------------------|----------|
| Total Lumen Output (Lumens) | 20278 |
| Total Power (W) | 158.8 |
| Luminaire Efficacy (LPW) | 127.7 |
| Power Factor | 0.994 |
| BUG Rating | B4-U0-G3 |
| IES Classification | Type VS |
| Longitudinal Classification | Short |

EQUIPMENT LIST

| Equipment Used | Model Number | Control Number | Last Date Calibrated | Calibration Due Date | Date Used |
|---------------------------|-----------------|----------------|----------------------|----------------------|-----------|
| Goniophotometer | 6440T | 000943 | VBU | VBU | 05/11/19 |
| Power Analyzer | WT210 | 000945 | 11/28/18 | 11/28/19 | 05/11/19 |
| Magnetic Level | 581-9 | 001610 | 10/31/18 | 10/31/19 | 05/11/19 |
| Thermometer | DPI8-C24 | 001782 | 09/21/18 | 09/21/19 | 05/11/19 |
| Temp. & RH Meter | 971 | 001177 | 01/29/19 | 01/29/20 | 05/11/19 |
| Power Supply (AC 3P / DC) | CSW5550-208-LAN | 001339 | VBU | VBU | 05/11/19 |

TEST METHODS

Seasoning in Sample Orientation – LED Products

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

Photometric and Electrical Measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

BUG Ratings (Backlight, Uplight, Glare) – for Outdoor Fixtures Only

Zonal Lumens were calculated and grouped using the formula in IESNA TM-15-11 for each zone as defined in the BUG addendum. The maximum lumen rating in each zone was compared against the BUG zonal requirements of Energy Star. Photometric Toolbox software was used to calculate results.

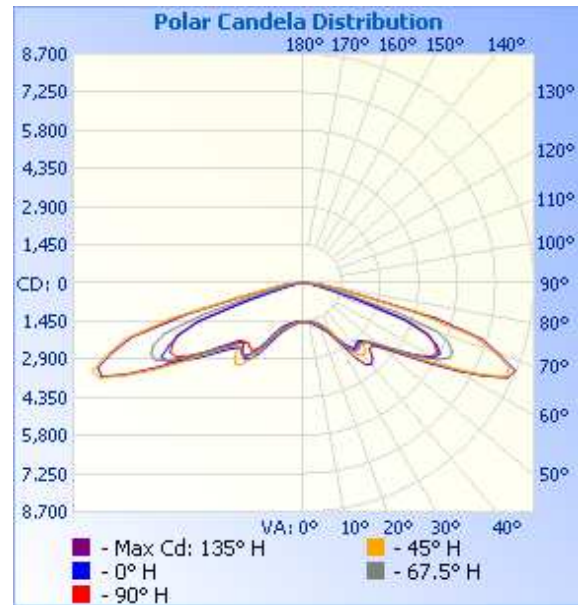
RESULTS OF TEST

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

| Intertek Sample No. | Base Orientation | Input Voltage {Vac} | Input Current (mA) | Input Power (Watts) | Input Power Factor | Current ATHD | Absolute Luminous Flux (Lumens) | Lumen Efficacy (LPW) |
|------------------------|---------------------|---------------------------|--------------------------|---------------------------|--------------------------|-----------------|---------------------------------------|----------------------------|
| LAN1903191345-003A | UP | 277.1 | 576.0 | 158.8 | 0.994 | 7.80 | 20278 | 127.7 |
| | | 480.0 | 345.4 | 159.4 | 0.962 | 6.61 | | |

Intensity (Candlepower) Summary at 25°C - Candelas

| Angle | 0 | 25 | 45 | 67.5 | 90 |
|-------|------|------|------|------|------|
| 0 | 1460 | 1460 | 1460 | 1460 | 1460 |
| 5 | 1458 | 1461 | 1464 | 1465 | 1467 |
| 10 | 1482 | 1490 | 1497 | 1505 | 1514 |
| 15 | 1543 | 1551 | 1561 | 1578 | 1599 |
| 20 | 1650 | 1652 | 1663 | 1696 | 1731 |
| 25 | 1862 | 1834 | 1827 | 1892 | 1974 |
| 30 | 2320 | 2264 | 2231 | 2382 | 2507 |
| 35 | 2921 | 2998 | 3126 | 3084 | 3081 |
| 40 | 3084 | 3383 | 3581 | 3256 | 3162 |
| 45 | 3083 | 3184 | 3169 | 3184 | 3167 |
| 50 | 3617 | 3546 | 3541 | 3613 | 3700 |
| 55 | 4555 | 4508 | 4630 | 4572 | 4616 |
| 60 | 5673 | 5924 | 6410 | 5790 | 5577 |
| 65 | 5542 | 6552 | 8418 | 6198 | 5462 |
| 70 | 4071 | 5537 | 7703 | 5368 | 4190 |
| 75 | 1232 | 2050 | 4553 | 1904 | 1260 |
| 80 | 532 | 837 | 1398 | 753 | 524 |
| 85 | 279 | 466 | 673 | 399 | 244 |
| 90 | 0 | 0 | 0 | 0 | 0 |

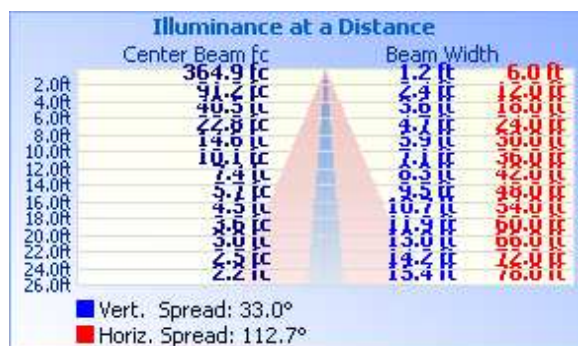


RESULTS OF TEST (cont'd)

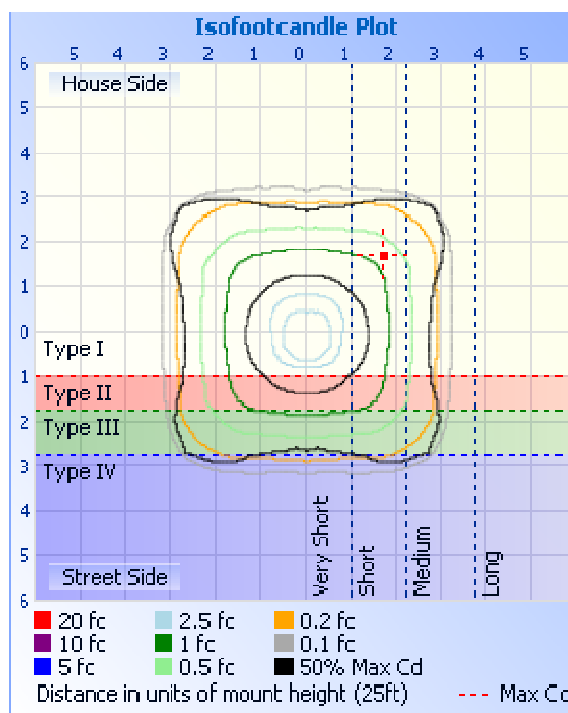
Illumination Plots

Mounting Height: 25 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1536 | 7.6 |
| 0-40 | 3509 | 17.3 |
| 0-60 | 10451 | 51.5 |
| 60-90 | 9827 | 48.5 |
| 0-90 | 20278 | 100.0 |
| 90-180 | 0.0 | 0.0 |
| 0-180 | 20278 | 100.0 |

Luminaire Classification System (LCS)

| LCS | Zone | Lumens | % Luminaire |
|-----|-----------|--------|-------------|
| FL | (0-30) | 742.9 | 3.7 |
| FM | (30-60) | 4305.9 | 21.2 |
| FH | (60-80) | 4573.9 | 22.6 |
| FVH | (80-90) | 234.3 | 1.2 |
| BL | (0-30) | 791.2 | 3.9 |
| BM | (30-60) | 4605.8 | 22.7 |
| BH | (60-80) | 4782.6 | 23.6 |
| BVH | (80-90) | 237.8 | 1.2 |
| UL | (90-100) | 0.0 | 0.0 |
| UH | (100-180) | 0.0 | 0.0 |

Zonal Lumens and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|-------|--------|-------------|
| 0-10 | 142.4 | 0.7 |
| 10-20 | 460.3 | 2.3 |
| 20-30 | 932.8 | 4.6 |
| 30-40 | 1974 | 9.7 |
| 40-50 | 2655 | 13.1 |
| 50-60 | 4287 | 21.1 |
| 60-70 | 6336 | 31.2 |
| 70-80 | 3019 | 14.9 |
| 80-90 | 471.9 | 2.3 |

BUG Rating: B4-U0-G3

IES Classification: Type VS

Longitudinal Classification: Short

PICTURES (not to scale)



CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:



Erik Linares
Associate Engineer
Lighting Division

Attachment: None

Report Reviewed By:



Vladimir Kozak
Engineering Supervisor
Lighting Division