

itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
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REPORT NUMBER: ITL64902 Page 1 of 3
DATE: 05/25/10
PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: AE26R16--25 6500K D1

LAMP: ONE R16 STYLE MEDIUM BASE LED LAMP WITH INTEGRAL LED DRIVER, MOLDED FINNED WHITE PLASTIC BODY, ONE WHITE CIRCUIT BOARD WITH 40 VERTICAL BASE-UP WHITE LIGHT EMITTING DIODES (LEDS), MULTIPLE METAL POSTS BETWEEN UPPER AND LOWER HOUSING, FROSTED FLAT PLASTIC LENS WITH ONE CLEAR OPTIC BELOW EACH LED, VERTICAL BASE-UP POSITION.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LAMP.

INSTRUMENTATION: Kikusui PCR500L AC Power Source
Yokogawa WT210 Digital Power Meter
Optronics OL770 Spectroradiometer
ITL 1.5 Meter Diameter Integrating Sphere, 4 π Geometry

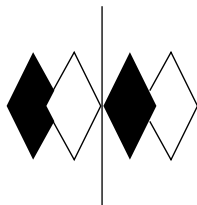
OBJECT OF TEST: Measure the Total Luminous Flux*, Spectral Power Distribution, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters to the lamp.

PROCEDURE: The lamp was provided by customer and the LEDs had an unknown number of burn hours. The lamp was mounted inside the integrating sphere with the lamp in a base up position (LEDs facing down). The lamp was allowed to stabilize at 120 VAC input. After stabilization occurred, total flux, spectral power distribution, CCT, CRI, x/y chromaticity coordinates, ANSI C78.377 Duv, and input electrical data were measured with the lamp operating in the integrating sphere. In order to measure the mean performance, multiple sets were recorded and averaged. Readings were taken with the lamp operating at 120 VAC input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. All data are traceable to the National Institute of Standards and Technology.

*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional lamps will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of lamps with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results

RESULTS: See subsequent pages

| |
|-----------------------------------|
| Checked: <u> N Gully </u> |
| Approved: <u> R Bergin </u> |



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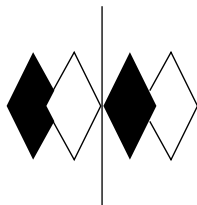
CATALOG NUMBER: AE26R16--25 6500K D1

RESULTS:

| | |
|--------------------------------|-------------------|
| PHOTOMETRIC | |
| Total Integrated Flux (lumens) | 184* |
| SPECTRORADIOMETRIC | |
| Observer | CIE 1931 2 degree |
| Chromaticity Ordinate x | 0.3039 |
| Chromaticity Ordinate y | 0.3142 |
| Correlated Color Temp CCT (K) | 7194 |
| Color Rendering Index (CRI) | 85 |
| ANSI C78.377-2008 Duv | 0.000 |
| ELECTRICAL | |
| Input Voltage (Volts AC) | 120.0 |
| Input Current (mA AC) | 24.4 |
| Input Power (Watts) | 2.70 |
| Input Power Factor (%) | 92.2 |
| EFFICACY | |
| Lumens/Watt | 68.1 |

*NOTE:

Proper calibration of integrating spheres for measuring total flux output of non-directional lamps will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of lamps with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results



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RESULTS:

| Wavelength | mW per nm | Wavelength | mW per nm | Wavelength | mW per nm |
|------------|-----------|------------|-----------|------------|-----------|
| 380 | 0.085 | 515 | 2.517 | 650 | 1.420 |
| 385 | 0.084 | 520 | 2.639 | 655 | 1.327 |
| 390 | 0.085 | 525 | 2.742 | 660 | 1.233 |
| 395 | 0.093 | 530 | 2.814 | 665 | 1.135 |
| 400 | 0.103 | 535 | 2.843 | 670 | 1.043 |
| 405 | 0.126 | 540 | 2.875 | 675 | 0.949 |
| 410 | 0.168 | 545 | 2.887 | 680 | 0.861 |
| 415 | 0.245 | 550 | 2.889 | 685 | 0.776 |
| 420 | 0.402 | 555 | 2.877 | 690 | 0.695 |
| 425 | 0.708 | 560 | 2.852 | 695 | 0.619 |
| 430 | 1.266 | 565 | 2.811 | 700 | 0.551 |
| 435 | 2.116 | 570 | 2.759 | 705 | 0.488 |
| 440 | 3.457 | 575 | 2.692 | 710 | 0.431 |
| 445 | 5.583 | 580 | 2.620 | 715 | 0.377 |
| 450 | 6.852 | 585 | 2.539 | 720 | 0.331 |
| 455 | 5.647 | 590 | 2.457 | 725 | 0.289 |
| 460 | 3.890 | 595 | 2.371 | 730 | 0.252 |
| 465 | 2.930 | 600 | 2.283 | 735 | 0.219 |
| 470 | 2.149 | 605 | 2.200 | 740 | 0.190 |
| 475 | 1.595 | 610 | 2.116 | 745 | 0.165 |
| 480 | 1.384 | 615 | 2.034 | 750 | 0.143 |
| 485 | 1.356 | 620 | 1.957 | 755 | 0.124 |
| 490 | 1.440 | 625 | 1.864 | 760 | 0.108 |
| 495 | 1.635 | 630 | 1.780 | 765 | 0.092 |
| 500 | 1.883 | 635 | 1.693 | 770 | 0.080 |
| 505 | 2.119 | 640 | 1.606 | 775 | 0.069 |
| 510 | 2.328 | 645 | 1.518 | 780 | 0.060 |

