

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
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REPORT NUMBER: ITL61614

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DATE: 1/13/08

PREPARED FOR: PURE LIGHTING

CATALOG NUMBER: SH4-SP4-WW

LUMINAIRE: FABRICATED SEMI-DIFFUSE METAL HOUSING, FORMED MULTI-FACETED SPECULAR METAL REFLECTOR, FABRICATED WHITE PAINTED METAL LED DRIVER HOUSING, FOUR WHITE CIRCUIT BOARDS EACH WITH TWELVE LEDS, FOUR PIECE MOLDED WHITE PLASTIC LOUVER ASSEMBLY WITH ONE APERTURE PER LED, OPEN BOTTOM.

LAMP: FORTY-EIGHT 1-WATT WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS), LEDS AIMED AT THE HORIZON.

LED DRIVER: PURE LIGHTING PDS3

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LED DRIVER. LAMP INFORMATION PROVIDED BY CLIENT. UPPER HEMISPHERE NOT MEASURED AT CLIENT'S REQUEST.

INSTRUMENTATION: Elgar CW2501 Voltage Regulator
Yokogawa WT210 Digital Power Meter
Optronics OL770 Spectroradiometer
ITL 1.5 Meter Diameter Integrating Sphere

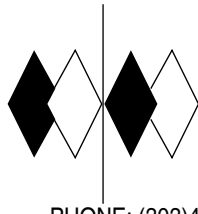
OBJECT OF TEST: Measure the Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters to the LED driver.

PROCEDURE: The luminaire was provided by customer and the LEDs had an unknown number of burn hours. The luminaire was mounted inside the integrating sphere with the luminaire in a horizontal position (LEDs aimed at the horizon). The luminaire was allowed to stabilize at 120 VAC input. After stabilization occurred, CCT, CRI, x/y chromaticity coordinates, ANSI C78.377 Duv, and input electrical data were measured with the luminaire operating in the integrating sphere. In order to measure the mean performance, twenty data sets were recorded and averaged within the OL770. All data are traceable to the National Institute of Standards and Technology.

RESULTS:

| SPECTRORADIOMETRIC | |
|-------------------------------|-------------------|
| Observer | CIE 1931 2 degree |
| Correlated Color Temp CCT (K) | 2969 |
| Chromaticity Ordinate x | 0.4400 |
| Chromaticity Ordinate y | 0.4065 |
| Color Rendering Index (CRI) | 95 |
| ANSI C78.377-2008 Duv | 0.001 |
| ELECTRICAL | |
| Input Voltage (Volts AC) | 120.0 |
| Input Current (mA AC) | 854 |
| Input Power (Watts) | 79.3 |

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



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RESULTS: DO NOT SEND!

| Percent of Integrated Radiant Flux for each 5nm | | Percent of Integrated Radiant Flux for each 5nm | | Percent of Integrated Radiant Flux for each 5nm | |
|---|----------------------|---|----------------------|---|----------------------|
| Wavelength | wavelength window(%) | Wavelength | wavelength window(%) | Wavelength | wavelength window(%) |
| 380 | 0.02040 | 515 | 1.28712 | 650 | 2.62139 |
| 385 | 0.01890 | 520 | 1.38480 | 655 | 2.52003 |
| 390 | 0.01947 | 525 | 1.47519 | 660 | 2.39774 |
| 395 | 0.02037 | 530 | 1.55462 | 665 | 2.25595 |
| 400 | 0.02186 | 535 | 1.61719 | 670 | 2.10615 |
| 405 | 0.02509 | 540 | 1.68059 | 675 | 1.94159 |
| 410 | 0.03087 | 545 | 1.74102 | 680 | 1.78308 |
| 415 | 0.04118 | 550 | 1.79795 | 685 | 1.62261 |
| 420 | 0.06011 | 555 | 1.85106 | 690 | 1.46523 |
| 425 | 0.09531 | 560 | 1.90326 | 695 | 1.31441 |
| 430 | 0.15823 | 565 | 1.95353 | 700 | 1.17184 |
| 435 | 0.26456 | 570 | 2.00345 | 705 | 1.03829 |
| 440 | 0.44568 | 575 | 2.05605 | 710 | 0.91530 |
| 445 | 0.75903 | 580 | 2.11220 | 715 | 0.80234 |
| 450 | 1.13729 | 585 | 2.17406 | 720 | 0.70172 |
| 455 | 1.28907 | 590 | 2.24149 | 725 | 0.61165 |
| 460 | 1.13636 | 595 | 2.31657 | 730 | 0.52985 |
| 465 | 0.94277 | 600 | 2.39788 | 735 | 0.45744 |
| 470 | 0.80379 | 605 | 2.48200 | 740 | 0.39364 |
| 475 | 0.69758 | 610 | 2.56692 | 745 | 0.33839 |
| 480 | 0.64141 | 615 | 2.64481 | 750 | 0.29099 |
| 485 | 0.64844 | 620 | 2.71095 | 755 | 0.24991 |
| 490 | 0.70447 | 625 | 2.75869 | 760 | 0.21418 |
| 495 | 0.79992 | 630 | 2.78592 | 765 | 0.18281 |
| 500 | 0.92050 | 635 | 2.78764 | 770 | 0.15617 |
| 505 | 1.04661 | 640 | 2.76219 | 775 | 0.13321 |
| 510 | 1.16899 | 645 | 2.70143 | 780 | 0.11729 |

Output vs. Wavelength

