

# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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REPORT NUMBER: ITL64847 Page 1 of 3  
DATE: 05/11/10  
PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: AE26R16--25 3000K L1

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 $\pi$  Geometry

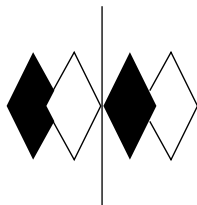
OBJECT OF TEST: Measure the Total Luminous Flux\*, Spectral Power Distribution, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters to the lamp.

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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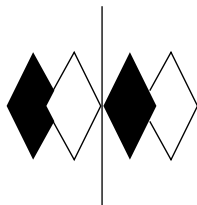
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RESULTS:

<b>PHOTOMETRIC</b>	
Total Integrated Flux (lumens)	156*
<b>SPECTRORADIOMETRIC</b>	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4265
Chromaticity Ordinate y	0.3893
Correlated Color Temp CCT (K)	3060
Color Rendering Index (CRI)	89
ANSI C78.377-2008 Duv	-0.005
<b>ELECTRICAL</b>	
Input Voltage (Volts AC)	120.0
Input Current (mA AC)	24.1
Input Power (Watts)	2.67
Input Power Factor (%)	92.3
<b>EFFICACY</b>	
Lumens/Watt	58.4

\*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	0.031	515	1.367	650	2.687
385	0.032	520	1.520	655	2.569
390	0.031	525	1.663	660	2.434
395	0.034	530	1.788	665	2.281
400	0.038	535	1.883	670	2.127
405	0.046	540	1.978	675	1.963
410	0.061	545	2.059	680	1.799
415	0.091	550	2.133	685	1.639
420	0.150	555	2.203	690	1.482
425	0.260	560	2.268	695	1.333
430	0.448	565	2.329	700	1.194
435	0.712	570	2.389	705	1.063
440	1.105	575	2.449	710	0.942
445	1.736	580	2.513	715	0.830
450	2.139	585	2.577	720	0.730
455	1.789	590	2.646	725	0.638
460	1.243	595	2.714	730	0.558
465	0.950	600	2.782	735	0.486
470	0.720	605	2.848	740	0.422
475	0.550	610	2.904	745	0.368
480	0.488	615	2.948	750	0.319
485	0.494	620	2.988	755	0.276
490	0.548	625	2.984	760	0.240
495	0.662	630	2.971	765	0.207
500	0.822	635	2.937	770	0.179
505	1.003	640	2.880	775	0.155
510	1.182	645	2.799	780	0.134

