



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303)442-1255 • FAX: (970)535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

Page 1 of 4

REPORT NUMBER: ITL88145-SPHERE
DATE: 08/26/16
PREPARED FOR: BOYD LIGHTING COMPANY
CATALOG NUMBER: C-10620

ADDRESS: 1455 VAPOR TRAIL
COLORADO SPRINGS, CO 80916

LUMINAIRE: FABRICATED WHITE PAINTED METAL MOUNTING BASE AND SUPPORT ROD,
FABRICATED WHITE PAINTED METAL 0.75" WIDE RING HOUSING, 78 LEDS,
3-PIECE TRANSLUCENT WHITE FROSTED PLASTIC DIFFUSER. DIFFUSER FROSTED
SIDE OUT.

LAMP: SEVENTY-EIGHT WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP
POSITION.

DRIVER: OSRAM OT25W/PRG1250C/UNV/DIM-1, DRIVER HAS MULTIPLE LEADS, ONLY LINE
INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES
DRIVER PROGRAMMED FOR 525mA OUTPUT.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT
VOLTAGE (120VAC, 60Hz) TO THE DRIVER. LED INFORMATION PROVIDED BY
CLIENT.

	Calibration Due:
INSTRUMENTS:	
Associated Power Technologies APT5040 AC Power Source	N/A
Yokogawa WT210 Digital Power Meter #6	12/07/16
Ocean Optics QE65000 Spectroradiometer	04/19/17
ITL 2.0m Diameter Integrating Sphere S20-2, 4PI Geometry	04/19/17

OBJECT OF TEST: Measure the Absolute Flux in lumens*, Spectral Power Distribution (SPD),
Correlated Color Temperature (CCT), Color Rendering Index (CRIa,1-14),
Chromaticity Coordinates (x,y; u',v'), ANSI C78.377 Duv, Total Radiant
Flux*, Scotopic / Photopic Lumen Ratio, and electrical data including
ANSI C82.77-2002 Power Factor (PF) and Total Harmonic Distortion (THD)
to the test sample.

PROCEDURE: The test sample was provided by the customer and had an unknown number
of operating hours. The test sample was mounted inside the integrating
sphere and allowed to stabilize. After stabilization occurred,
measurements were taken. In order to measure mean performance, multiple
data sets were recorded and averaged. Readings were taken with the test
sample operating at 120VAC 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.

RESULTS: (continued subsequent pages)

THIS ITL REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM
PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE
FEDERAL GOVERNMENT.

Checked	<i>N WHITE</i>
Approved	<i>P O'CONNOR</i> Sphere Lab Supervisor



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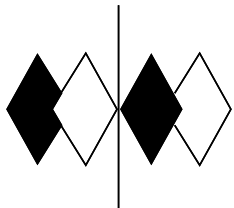
Page 2 of 4

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	1106 *
SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4610
Chromaticity Ordinate y	0.4109
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2631
Chromaticity Ordinate v'	0.5277
Correlated Color Temp CCT (K)	2687
ANSI C78.377-2008 Duv	0.000
Total Radiant Flux (milliWatts)	3772 *
Scotopic / Photopic Lumen Ratio	1.339
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.203
Input Power (Watts)	24.3
Input Power Factor (%)	99.8
Input Current THD (%)	5.8
Input Voltage THD (%)	0.1
EFFICACY (lumens/Watt)	45.5

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	90
R1 Light greyish red	90
R2 Dark greyish yellow	97
R3 Strong yellowish green	96
R4 Moderate yellowish green	89
R5 Light bluish green	91
R6 Light blue	97
R7 Light violet	87
R8 Light reddish purple	73
R9 Strong red	44
R10 Strong yellow	93
R11 Strong green	90
R12 Strong blue	86
R13 Light yellowish pink (skin)	92
R14 Moderate olive green (leaf)	99

*NOTE: The total lumen output shown on this report was obtained from photometric test ITL88145-GONIOPHOTOMETRY



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NVLAP LAB CODE: 200925-0

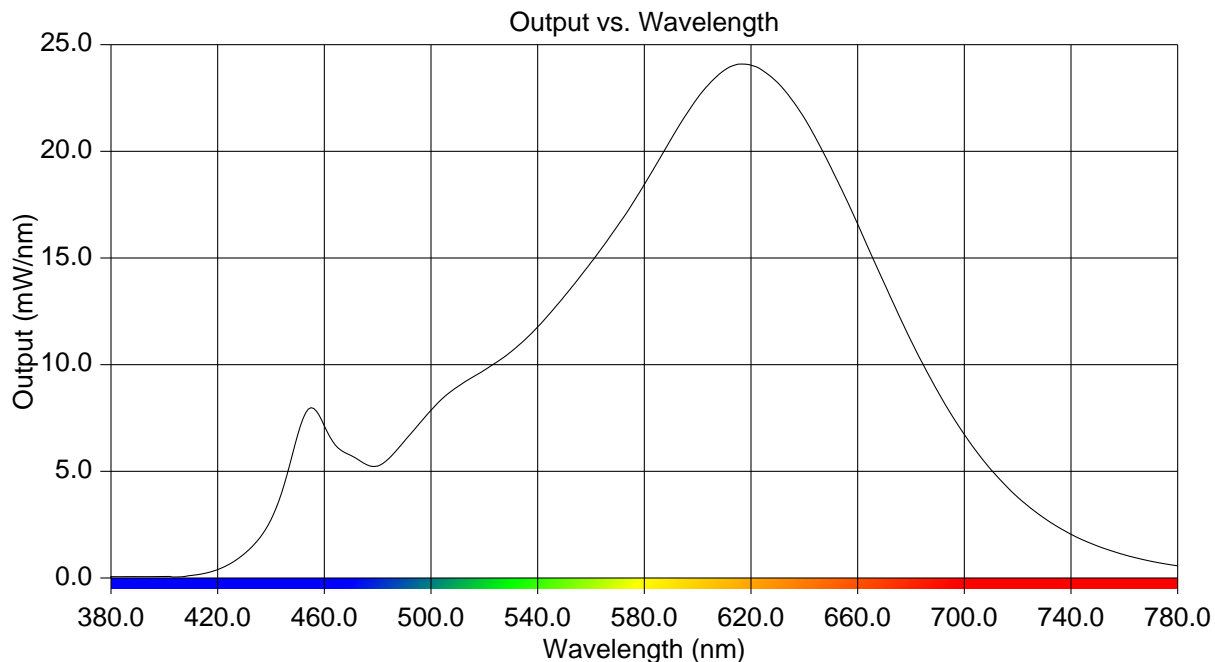
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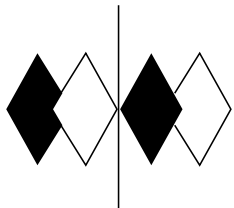
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Page 3 of 4

RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.064	515	9.372	650	19.237
385	0.062	520	9.741	655	17.947
390	0.063	525	10.148	660	16.590
395	0.063	530	10.605	665	15.180
400	0.069	535	11.144	670	13.806
405	0.050	540	11.770	675	12.439
410	0.118	545	12.461	680	11.123
415	0.214	550	13.207	685	9.901
420	0.395	555	13.979	690	8.751
425	0.691	560	14.789	695	7.688
430	1.135	565	15.625	700	6.727
435	1.760	570	16.516	705	5.857
440	2.733	575	17.439	710	5.079
445	4.403	580	18.446	715	4.401
450	6.707	585	19.494	720	3.789
455	7.982	590	20.566	725	3.264
460	7.132	595	21.594	730	2.803
465	6.113	600	22.509	735	2.399
470	5.743	605	23.253	740	2.049
475	5.367	610	23.801	745	1.751
480	5.247	615	24.083	750	1.496
485	5.699	620	24.039	755	1.278
490	6.411	625	23.732	760	1.088
495	7.142	630	23.220	765	0.926
500	7.864	635	22.474	770	0.785
505	8.495	640	21.563	775	0.668
510	8.967	645	20.448	780	0.571





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CIE Chromaticity Diagram

