



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

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REPORT NUMBER: ITL85552
DATE: 09/30/15
PREPARED FOR: LUMOS CUSTOM LIGHTING
CATALOG NUMBER: RM93-48-40-3000-REC

ADDRESS: 145 YUMA STREET
DENVER, CO 80223

LUMINAIRE: EXTRUDED WHITE PAINTED METAL HOUSING WITH FABRICATED WHITE PAINTED METAL END CAPS, EXTRUDED WHITE PAINTED FINNED METAL CIRCUIT BOARD/DIFFUSER MOUNTING BRACKET, TWO WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, CLEAR ACRYLIC DROP LENS WITH FROSTED TOP, BOTTOM AND ENDS.

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

DRIVER: ACELEDS AC-25CD1.25APMV, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 600mA OUTPUT.

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

		Calibration Due:
INSTRUMENTS:	Associated Power Technologies APT5040 AC Power Source	N/A
	Yokogawa WT210 Digital Power Meter #6	11/30/15
	Ocean Optics QE65000 Spectroradiometer	08/05/16
	ITL 2.0m Diameter Integrating Sphere S20-2, 4PI Geometry	08/05/16

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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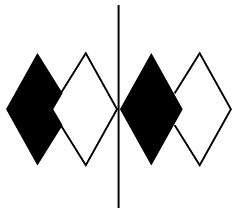
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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	2197 *
SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4341
Chromaticity Ordinate y	0.4060
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2479
Chromaticity Ordinate v'	0.5217
Correlated Color Temp CCT (K)	3063
ANSI C78.377-2008 Duv	0.001
Total Radiant Flux (milliWatts)	6660 *
Scotopic / Photopic Lumen Ratio	1.421
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.215
Input Power (Watts)	25.7
Input Power Factor (%)	99.6
Input Current THD (%)	2.6
Input Voltage THD (%)	0.1
EFFICACY (lumens/Watt)	85.5

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	82
R1 Light greyish red	80
R2 Dark greyish yellow	91
R3 Strong yellowish green	96
R4 Moderate yellowish green	79
R5 Light bluish green	81
R6 Light blue	89
R7 Light violet	82
R8 Light reddish purple	59
R9 Strong red	7
R10 Strong yellow	80
R11 Strong green	77
R12 Strong blue	69
R13 Light yellowish pink (skin)	83
R14 Moderate olive green (leaf)	98

*NOTE: The total lumen output shown on this report was obtained from photometric test ITL85551



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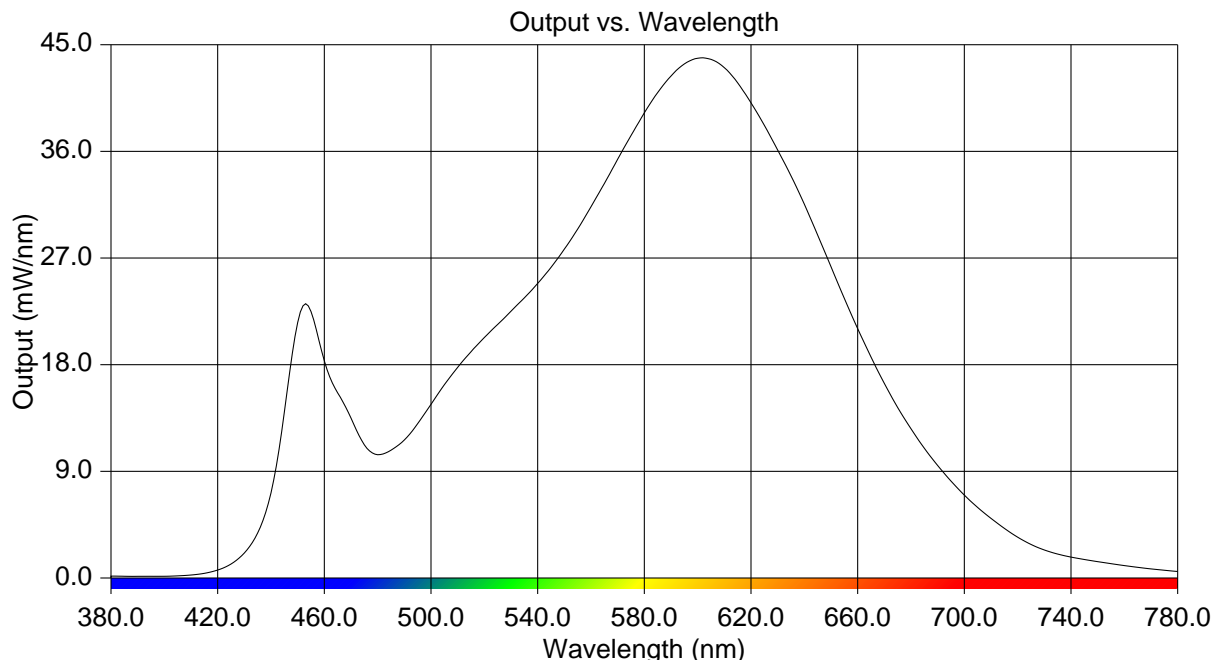
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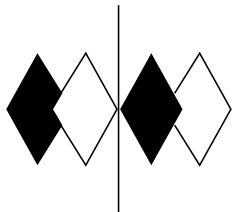
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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.158	515	19.087	650	26.266
385	0.145	520	20.290	655	23.592
390	0.141	525	21.393	660	21.039
395	0.143	530	22.510	665	18.647
400	0.144	535	23.634	670	16.420
405	0.180	540	24.858	675	14.385
410	0.251	545	26.206	680	12.592
415	0.392	550	27.750	685	10.948
420	0.672	555	29.438	690	9.491
425	1.177	560	31.324	695	8.177
430	2.108	565	33.279	700	6.996
435	3.800	570	35.337	705	5.951
440	7.177	575	37.331	710	5.031
445	13.989	580	39.248	715	4.191
450	21.550	585	40.956	720	3.444
455	22.483	590	42.351	725	2.832
460	18.326	595	43.374	730	2.364
465	15.618	600	43.853	735	2.019
470	13.495	605	43.760	740	1.764
475	11.236	610	43.059	745	1.561
480	10.400	615	41.779	750	1.379
485	10.782	620	40.092	755	1.210
490	11.645	625	38.198	760	1.047
495	13.024	630	36.109	765	0.900
500	14.651	635	33.929	770	0.767
505	16.306	640	31.542	775	0.654
510	17.773	645	28.931	780	0.550





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CIE Chromaticity Diagram

