

**itl boulder**

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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

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

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REPORT NUMBER: ITL86573  
DATE: 01/28/16  
PREPARED FOR: H.E. WILLIAMS, INC.  
CATALOG NUMBER: S10-G-L3/840-FTG-DBZ-120

ADDRESS: 831 W. FAIRVIEW AVE  
CARTHAGE, MO 64836

LUMINAIRE: CAST UNFINISHED METAL HOUSING, ONE LED MODULE, FABRICATED WHITE PAINTED METAL REFLECTOR/LED MODULE MOUNTING PLATE, FROSTED FLAT GLASS DIFFUSER IN CAST BROWN PAINTED LOUVERED METAL FACEPLATE. DIFFUSER FROSTED SIDE IN.

LAMP: ONE LED MODULE, OSRAM PL-CUBE-1100-840-0.35A-G2, AIMED AT THE HORIZON.

DRIVER: OSRAM OT25W/PRG1250C/UNV/DIM, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 350mA OUTPUT.

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

INSTRUMENTS:	Associated Power Technologies APT5040 AC Power Source	Calibration Due: N/A
	Yokogawa WT210 Digital Power Meter #6	12/07/16
	Ocean Optics QE65000 Spectroradiometer	12/14/16
	ITL 2.0m Diameter Integrating Sphere S20-2, 4PI Geometry	12/14/16

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)

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



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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	271 *
SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3773
Chromaticity Ordinate y	0.3753
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2236
Chromaticity Ordinate v'	0.5005
Correlated Color Temp CCT (K)	4076
ANSI C78.377-2008 Duv	0.000
Total Radiant Flux (milliWatts)	856 *
Scotopic / Photopic Lumen Ratio	1.739
ELECTRICAL	
Input Voltage (Volts AC )	120.0
Input Current (Amps AC )	0.116
Input Power (Watts)	13.8
Input Power Factor (%)	99.1
Input Current THD (%)	7.0
Input Voltage THD (%)	0.1
EFFICACY (lumens/Watt)	19.6

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	83
R1 Light greyish red	82
R2 Dark greyish yellow	89
R3 Strong yellowish green	93
R4 Moderate yellowish green	81
R5 Light bluish green	81
R6 Light blue	84
R7 Light violet	88
R8 Light reddish purple	69
R9 Strong red	21
R10 Strong yellow	73
R11 Strong green	78
R12 Strong blue	57
R13 Light yellowish pink (skin)	83
R14 Moderate olive green (leaf)	96

\*NOTE: The total lumen output shown on this report was obtained from photometric test ITL86570



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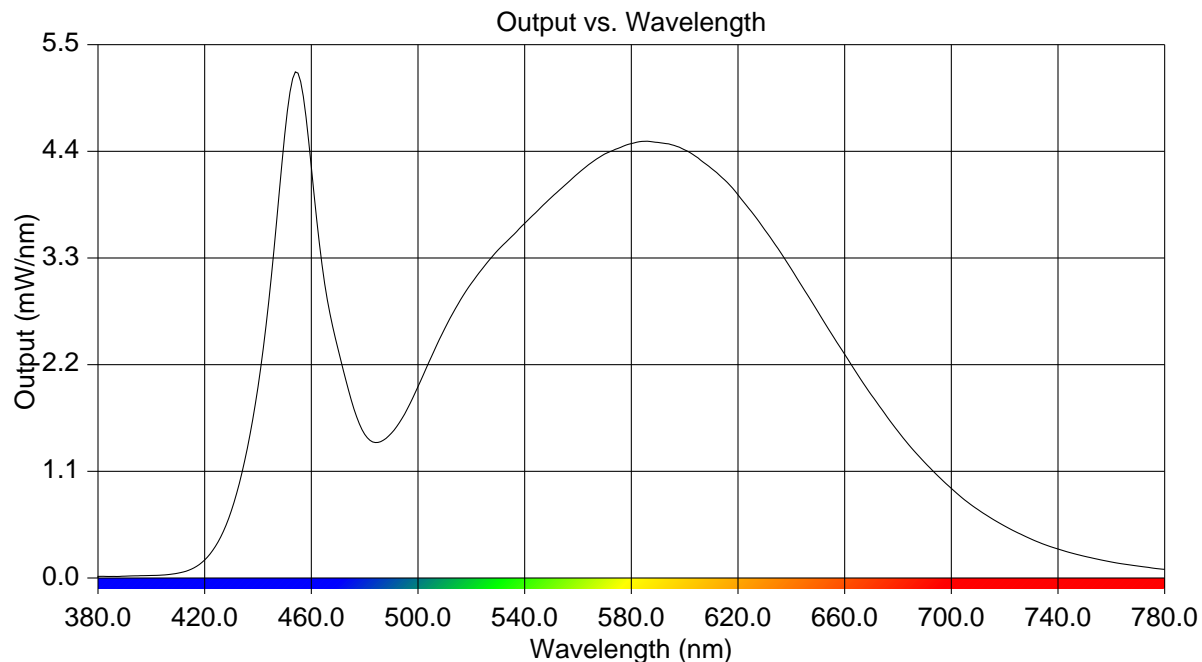
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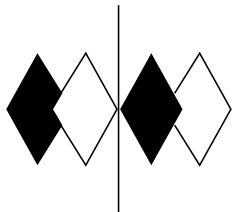
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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.016	515	2.824	650	2.744
385	0.016	520	3.039	655	2.521
390	0.019	525	3.220	660	2.307
395	0.022	530	3.382	665	2.092
400	0.026	535	3.518	670	1.888
405	0.032	540	3.657	675	1.698
410	0.050	545	3.791	680	1.513
415	0.091	550	3.925	685	1.343
420	0.186	555	4.049	690	1.192
425	0.371	560	4.172	695	1.052
430	0.693	565	4.282	700	0.924
435	1.209	570	4.372	705	0.805
440	1.969	575	4.430	710	0.705
445	3.107	580	4.480	715	0.616
450	4.566	585	4.503	720	0.536
455	5.207	590	4.492	725	0.465
460	4.238	595	4.469	730	0.401
465	3.035	600	4.415	735	0.345
470	2.363	605	4.333	740	0.299
475	1.833	610	4.224	745	0.258
480	1.482	615	4.105	750	0.223
485	1.398	620	3.951	755	0.193
490	1.493	625	3.780	760	0.165
495	1.691	630	3.592	765	0.142
500	1.974	635	3.398	770	0.123
505	2.280	640	3.186	775	0.104
510	2.570	645	2.964	780	0.089





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## CIE Chromaticity Diagram

