



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: ITL86265
DATE: 01/12/16
PREPARED FOR: B-K LIGHTING, INC.
CATALOG NUMBER: MD-LED-e72-1

ADDRESS: 40429 BRICKYARD DRIVE
MADERA, CA 93636-9515

LUMINAIRE: CYLINDRICAL PLASTIC HOUSING WITH CAST BLACK PAINTED METAL TRIM. ONE LED MODULE CONSISTING OF: MACHINED CYLINDRICAL METAL HOUSING, MACHINED METAL CIRCUIT BOARD MOUNTING BASE, 1 BLACK CIRCUIT BOARD WITH 1 LED, CLEAR PLASTIC OPTIC ABOVE LED WITH RECESSED TOP CENTER, CLEAR FROSTED GLASS LENS IN CAST BLACK PAINTED METAL FACEPLATE WITH 1 APERTURE, LENS FROSTED SIDE IN.

LAMP: ONE WHITE LIGHT EMITTING DIODE (LED), VERTICAL BASE-DOWN POSITION.

DRIVER: B-K LIGHTING 518801/400187-F

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (12VAC, 60Hz) TO THE DRIVER.

INSTRUMENTS:	Associated Power Technologies APT5020 AC Power Source	Calibration Due: N/A
	Yokogawa WT210 Digital Power Meter #9	01/31/16
	Ocean Optics QE65000 Spectroradiometer	09/23/16
	ITL 1.5m Diameter Integrating Sphere S15-2, 4PI Geometry	09/23/16

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 12VAC 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	<u>N WHITE</u>
Approved	<u>P O'CONNOR</u> Sphere Lab Supervisor



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Page 2 of 4

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	16.7 *
SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3932
Chromaticity Ordinate y	0.3918
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2275
Chromaticity Ordinate v'	0.5099
Correlated Color Temp CCT (K)	3785
ANSI C78.377-2008 Duv	0.003
Total Radiant Flux (milliWatts)	50 *
Scotopic / Photopic Lumen Ratio	1.616
ELECTRICAL	
Input Voltage (Volts AC)	12.0
Input Current (Amps AC)	0.328
Input Power (Watts)	2.51
Input Power Factor (%)	63.8
Input Current THD (%)	97.8
Input Voltage THD (%)	1.1
EFFICACY (lumens/Watt)	6.7

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	81
R1 Light greyish red	79
R2 Dark greyish yellow	87
R3 Strong yellowish green	93
R4 Moderate yellowish green	81
R5 Light bluish green	79
R6 Light blue	82
R7 Light violet	87
R8 Light reddish purple	63
R9 Strong red	5
R10 Strong yellow	68
R11 Strong green	78
R12 Strong blue	59
R13 Light yellowish pink (skin)	80
R14 Moderate olive green (leaf)	96

*NOTE: The total lumen output shown on this report was obtained from photometric test ITL86256



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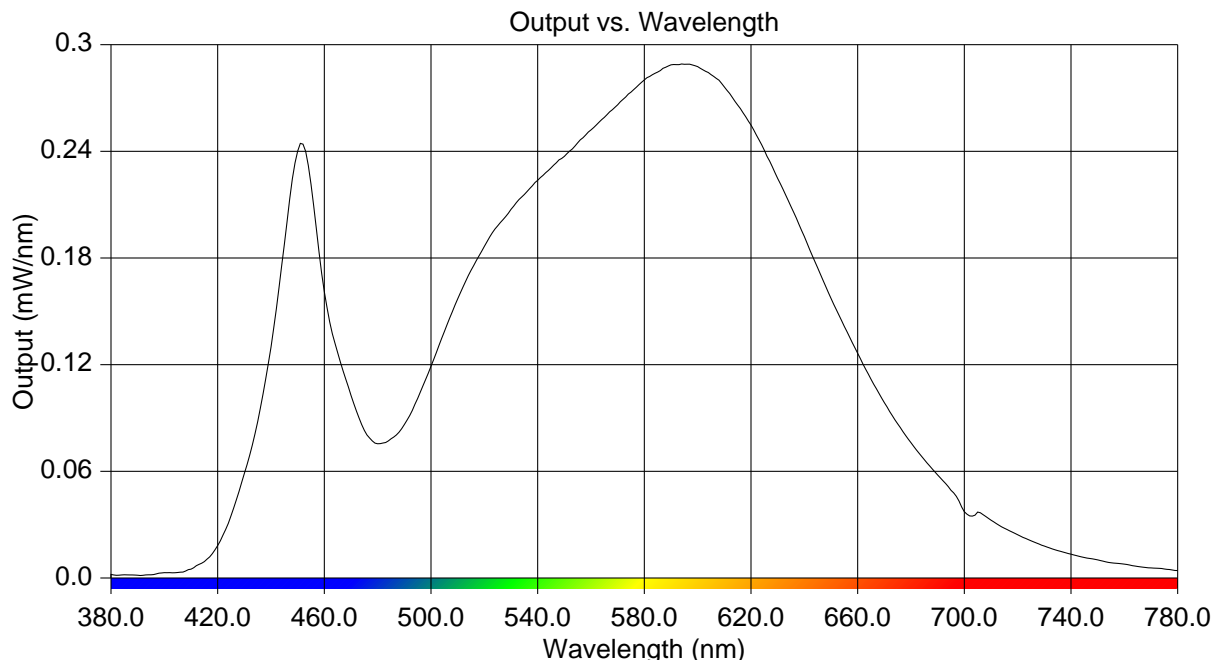
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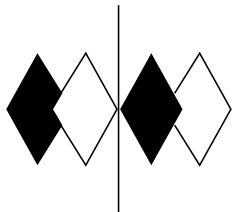
Page 3 of 4

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.002	515	0.173	650	0.157
385	0.002	520	0.187	655	0.141
390	0.002	525	0.198	660	0.126
395	0.002	530	0.207	665	0.112
400	0.003	535	0.216	670	0.099
405	0.003	540	0.224	675	0.087
410	0.005	545	0.231	680	0.076
415	0.009	550	0.237	685	0.067
420	0.018	555	0.245	690	0.058
425	0.035	560	0.252	695	0.049
430	0.059	565	0.259	700	0.037
435	0.088	570	0.266	705	0.037
440	0.130	575	0.273	710	0.033
445	0.188	580	0.280	715	0.028
450	0.240	585	0.285	720	0.024
455	0.222	590	0.289	725	0.021
460	0.161	595	0.289	730	0.018
465	0.127	600	0.288	735	0.015
470	0.103	605	0.283	740	0.013
475	0.083	610	0.276	745	0.012
480	0.076	615	0.266	750	0.010
485	0.078	620	0.255	755	0.009
490	0.086	625	0.241	760	0.008
495	0.101	630	0.225	765	0.006
500	0.119	635	0.209	770	0.006
505	0.139	640	0.192	775	0.005
510	0.157	645	0.174	780	0.004





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CIE Chromaticity Diagram

