



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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

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REPORT NUMBER: ITL83587
DATE: 12/09/14
PREPARED FOR: B-K LIGHTING, INC.
CATALOG NUMBER: K2-LED-X51-NFL-12

ADDRESS: 40429 BRICKYARD DRIVE
MADERA, CA 93636-9515

LUMINAIRE: CAST METAL HOUSING WITH UNFINISHED BROWN INTERIOR FINISH, CAST METAL DRIVER HOUSING, MACHINED BLACK FINISHED CIRCUIT BOARD MOUNTING BLOCK, 1 CIRCUIT BOARD WITH ONE LED, MOLDED WHITE PLASTIC LED SURROUND, MOLDED MULTI-FACETED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR MICRO-PRISMATIC FLAT GLASS LENS IN MACHINED WHITE PAINTED METAL FRAME. LENS PRISMS IN.

LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), AIMED AT THE HORIZON.

DRIVER: THOMAS RESEARCH PRODUCTS PLED75W-054-C1400-D, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST.

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

		Calibration Due:
INSTRUMENTS:	Associated Power Technologies APT5040 AC Power Source	N/A
	Yokogawa WT210 Digital Power Meter #8	12/31/14
	Ocean Optics QE65000 Spectroradiometer	07/14/15
	ITL 2.0m Diameter Integrating Sphere S20-2, 4PI Geometry	07/14/15

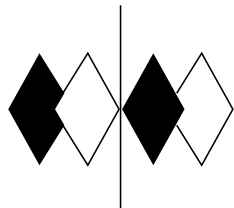
OBJECT OF TEST: Measure the Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRI_a,1-14), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and electrical data including ANSI C82.77-2002 Power Factor (PF) to the test sample.

PROCEDURE: The test sample was provided by the customer and had an unknown number of burn 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 THOMAS</i>
Approved	<i>P O'CONNOR</i> Sphere Lab Supervisor



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NVLAP LAB CODE: 200925-0

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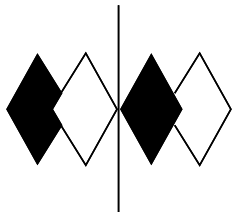
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CATALOG NUMBER: K2-LED-X51-NFL-12

RESULTS:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3821
Chromaticity Ordinate y	0.3783
Correlated Color Temp CCT (K)	3966
Color Rendering Index (CRIa)	83
Color Rendering Index 1 (Light greyish red)	81
Color Rendering Index 2 (Dark greyish yellow)	88
Color Rendering Index 3 (Strong yellowish green)	93
Color Rendering Index 4 (Moderate yellowish green)	81
Color Rendering Index 5 (Light bluish green)	81
Color Rendering Index 6 (Light blue)	83
Color Rendering Index 7 (Light violet)	88
Color Rendering Index 8 (Light reddish purple)	68
Color Rendering Index 9 (Strong red)	17
Color Rendering Index 10 (Strong yellow)	71
Color Rendering Index 11 (Strong green)	79
Color Rendering Index 12 (Strong blue)	60
Color Rendering Index 13 (Light yellowish pink (skin))	82
Color Rendering Index 14 (Moderate olive green (leaf))	96
ANSI C78.377-2008 Duv	0.000
ELECTRICAL FOR SPECTRORADIOMETRIC TEST	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.495
Input Power (Watts)	59.0
Input Power Factor (%)	99.3



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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.397	515	56.985	650	55.800
385	0.447	520	60.846	655	50.841
390	0.455	525	64.366	660	46.055
395	0.557	530	67.881	665	41.419
400	0.748	535	71.334	670	37.064
405	1.158	540	74.583	675	33.012
410	1.999	545	77.736	680	29.253
415	3.654	550	80.819	685	25.827
420	6.513	555	83.516	690	22.651
425	11.199	560	86.006	695	19.840
430	18.551	565	88.121	700	17.343
435	29.710	570	89.854	705	15.102
440	47.873	575	91.331	710	13.121
445	77.560	580	92.453	715	11.359
450	100.407	585	93.175	720	9.821
455	88.463	590	93.462	725	8.477
460	63.373	595	93.120	730	7.284
465	49.086	600	92.276	735	6.255
470	38.580	605	90.954	740	5.367
475	30.727	610	88.960	745	4.624
480	28.318	615	86.324	750	3.989
485	29.422	620	83.069	755	3.436
490	32.405	625	79.259	760	2.962
495	37.063	630	75.007	765	2.547
500	42.500	635	70.464	770	2.200
505	47.785	640	65.713	775	1.898
510	52.610	645	60.857	780	1.631

