




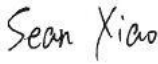
Test Report

Applicant Company & Address:			
PROGRESS LIGHTING ADD: 701 MILLENNIUM BLVD. GREENVILLE, SC			
Contact Person:	Clyde George (cgeorge@progresslighting.com)		
Telephone:	864-678-1000	Fax:	864-678-1781

Manufacturer Name:	Progress Lighting
Country of Origin:	China
Country of Export:	USA
Product Description:	Lamp Type: LED LIGHTING KIT Total Amount Of Light Source: 15 pcs Manufacturer Of Light Source: Seoul semiconductor Model Number Of Light Source: 3030
Model Number:	P2659-09
Electrical Specification:	120 V AC, 60 Hz, 16.5 W

Test Laboratory & Address:			
UL Verification Services (Guangzhou) Co., Ltd. ADD: Building A1, 1F & 2F, Nansha Science and Technology Innovation Center, No. 25, South Huanshi Avenue, Nansha District, Guangzhou 511458, China			
Telephone:	+86 20 28667188	Fax:	+86 20 83486605

Receipt of Test Samples:	2015-10-13	Test Period:	2015-10-23 ~ 2015-11-11
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Tested By	Approved By
 / Derek Zhang	 / Sean Xiao
Tester Signature / Print Name	Approver Signature / Print Name

The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.



Verification Services

Project No: 4787117073-1

Report No: 4787117073-1b

Report Issued Date: 2015-11-30

Test Report

Statement of Results

Test Flow	Test Method	Sample ID (Lab)	Sample Serial No.	Pass/Fail/NA
1. Integrating Sphere Test	IES LM-79-2008	2234170-S001	N/A	Evaluate by customer

Deviation from Test Method (if any)

N/A

Remark (if any)

1. This report shall not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the US government.



Test Report

Test Flow 1: Integrating Sphere Test

Environmental Conditions

Temperature: 25.1 °C

Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
GVS-LE-PE001	Integrating Sphere	Before Use	Before Use
GVS-LE-PM002	Digital Power Meter	2015-06-09	2016-06-08
GVS-LE-FS009	Measurement Standard Lamp	2015-08-20	2016-08-19

Test Sample

2234170-S001

Test Method

The sample (bare lamp) was tested according to the IES LM-79-2008. Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

Test Results

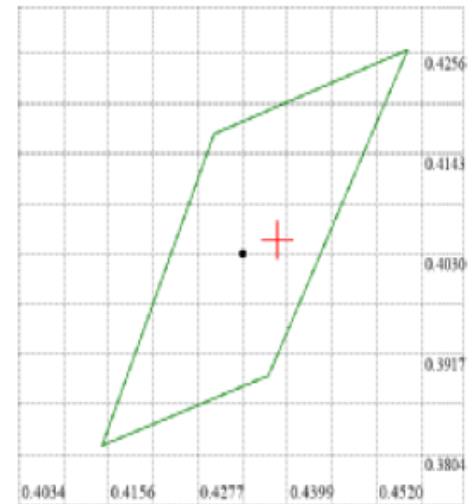
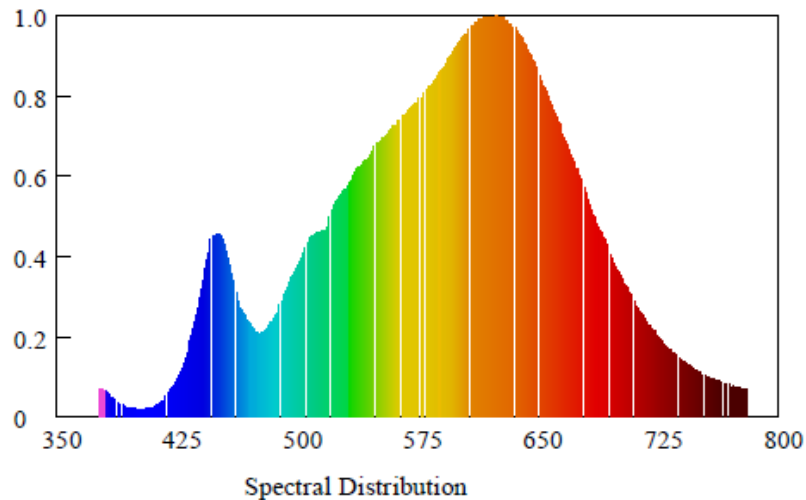
Test Type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation	Operate time (Min.)	Stabilization time (Min.)
Input	120.02	60	0.137	16.37	0.998	Base up	58	50

Test Type	CCT (K)	Luminous Flux (lm)	Color Rendering Index Ra	Luminous Efficacy (lm/W)
Output	2977	960.6	91.5	58.67



Test Report

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.4385$ $y=0.4046$ $u'=0.2514$ $v'=0.5218$

Correlated Color Temperature: 2977 K

Dominant Wavelength: 581.0 nm(E)

Luminous Flux: 960.625 lm

Purity: 0.5340

Chromaticity Difference: -0.00002 Duv

Peak Wavelength: 624.7 nm

Color Ratio: $K_r=43.6\%$ $K_g=48.8\%$ $K_b=7.6\%$

Bandwidth: 162.6nm

Radiant Flux: 3.069 W

Rendering Index: $R_a=91.5$

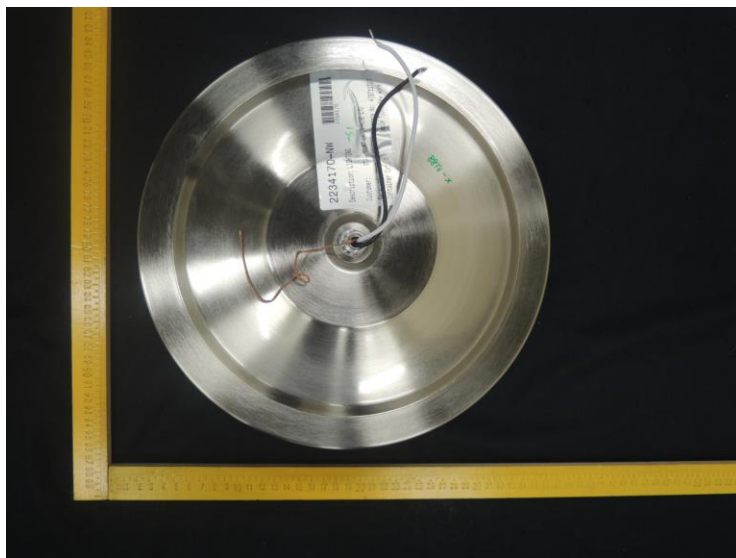
$R_1=92$ $R_2=94$ $R_3=95$ $R_4=92$ $R_5=91$ $R_6=92$ $R_7=93$ $R_8=83$

$R_9=61$ $R_{10}=85$ $R_{11}=91$ $R_{12}=79$ $R_{13}=92$ $R_{14}=97$ $R_{15}=89$



Test Report

Photos of sample



*******END OF TEST REPORT*******