

# VISUAL COMFORT & COMPANY TEST REPORT

## SCOPE OF WORK

LED Performance Testing

## MODEL NUMBER

700PRTDES46\*\*-LED927

## PROJECT NUMBER

G104349704

## REPORT NUMBER

104349704CHI-011

## ISSUE DATE

8/24/2020

## REVISED DATE

None

## TEST DATES

08/12/2020 through 08/13/2020.

## DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

© 2017 INTERTEK



**REPORT NUMBER**

104349704CHI-011

**MODEL NUMBER(s)**

700PRTDES46\*\*-LED927

**REPORT RENDERED TO:**

VISUAL COMFORT & COMPANY  
7400 LINDER AVE  
SKOKIE, IL 60077

**STATEMENT OF LIMITATION**

NVLAP Lab Code 600186-0. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

**AUTHORIZATION**

The testing performed was authorized by signed quote number Qu-01080748-1.

**TEST STANDARDS**

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

ANSI NEMA ANSLG C78.377: 2017: Specifications for the Chromaticity of Solid State Lighting (SSL) Products

In Charge of Testing:



Ian Smith  
Engineer  
Lighting Division

Reviewer:



Jeff Davis  
NA Technical Lead  
Lighting Division

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## SAMPLE INFORMATION

REPORT NO. 104349704CHI-011

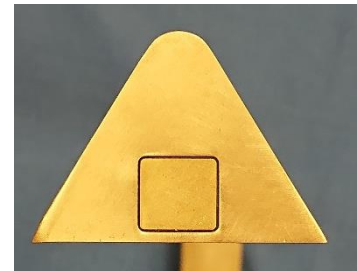
### ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH08062020034718-011	700PRTDES46**-LED927	DESSAU 46 FLOOR LAMP	Production	8/6/2020

### TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700PRTDES46**-LED927	1

### SAMPLE PHOTOS - TESTED CONFIGURATIONS



## SUMMARY

REPORT NO. 104349704CHI-011

### PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700PRTDES46**-LED927
Product Description:	DESSAU 46 FLOOR LAMP
LED Model No.:	LUMINUS MP-3030-1100-27-90
Driver Model No.:	XINSPower A122.1201000ID
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	531.3	548.3
Input Power (W) @ 120VAC (Vac)	10.46	10.39
Lumen Efficacy (lm/W)	50.8	52.8
Input Power Factor (I) @ 120VAC (Vac)	0.854	0.860

Criteria	Results
Input ATHD (%) @ 120VAC (Vac)	49.72
Correlated Color Temperature (K)	2592
Color Rendering Index - Ra (I)	90.4
Color Rendering Index - R9 (I)	47.0
Duv (I)	-0.0023
Chromaticity Coordinate (x)	0.465
Chromaticity Coordinate (y)	0.405
Chromaticity Coordinate (u')	0.268
Chromaticity Coordinate (v')	0.526

## TEST METHODS

### SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

### INTEGRATING SPHERE TESTING

A spectroradiometer and integrating sphere were used to measure the spectral distribution for each EUT resulting in photometric and colorimetric data. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position inside the sphere and stabilization procedures to LM-79 were followed.

### TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

**TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING**

**REPORT NO. 104349704CHI-011**

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTDES46**-LED927	NA

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)**

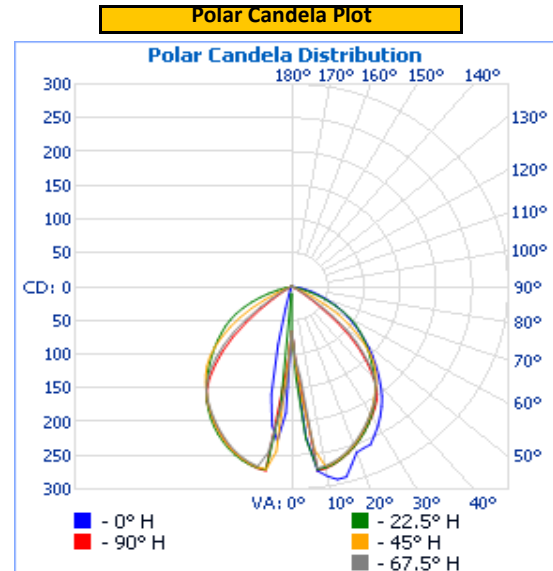
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Up	120.0	102.1	10.46	0.854

Light Output (lm)	Lumen Efficacy (lm/W)
531.3	50.8

**INTENSITY SUMMARY - CANDELA**

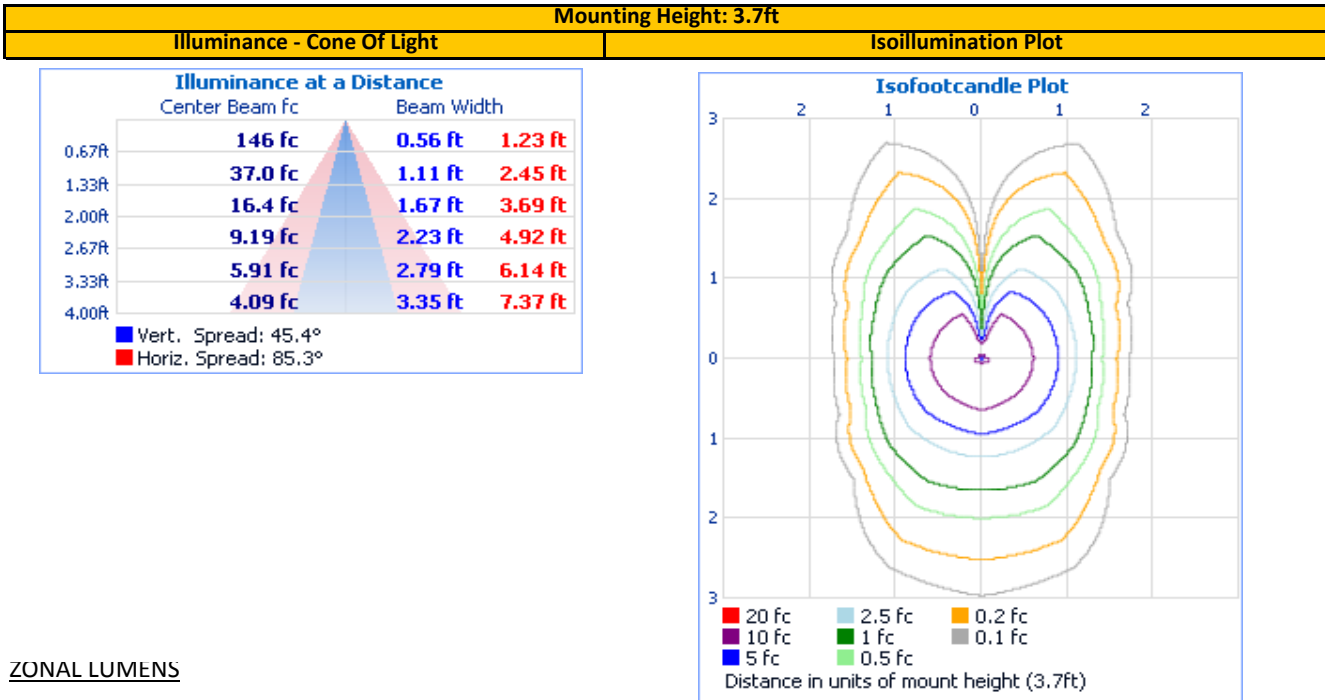
Angle	0	22.5	45	67.5	90
0	66	66	66	66	66
5	222	226	170	135	156
10	285	272	270	270	273
15	292	264	262	261	265
20	262	252	250	249	252
25	258	238	235	234	237
30	239	221	218	218	222
35	217	201	200	201	205
40	192	179	182	179	177
45	164	156	161	141	135
50	139	135	131	98	82
55	113	115	96	46	31
60	90	94	54	14	10
65	68	66	16	4	2
70	47	39	3	1	1
75	29	11	1	1	0
80	13	1	0	0	0
85	2	0	0	0	0
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



REPORT NO. 104349704CHI-011

ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	194.8	36.7%	90-100	0.0	0.0%
0-40	314.0	59.1%	100-110	0.0	0.0%
0-60	494.2	93.0%	110-120	0.0	0.0%
60-90	37.1	7.0%	120-130	0.0	0.0%
70-100	7.7	1.5%	130-140	0.0	0.0%
90-120	0.0	0.0%	140-150	0.0	0.0%
0-90	531.3	100.0%	150-160	0.0	0.0%
90-180	0.0	0.0%	160-170	0.0	0.0%
0-180	531.3	100.0%	170-180	0.0	0.0%

# **INTEGRATING SPHERE TESTING**

**REPORT NO. 104349704CHI-011**

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTDES46**-LED927	NA

PHOTOMETRIC, COLORIMETRIC, AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

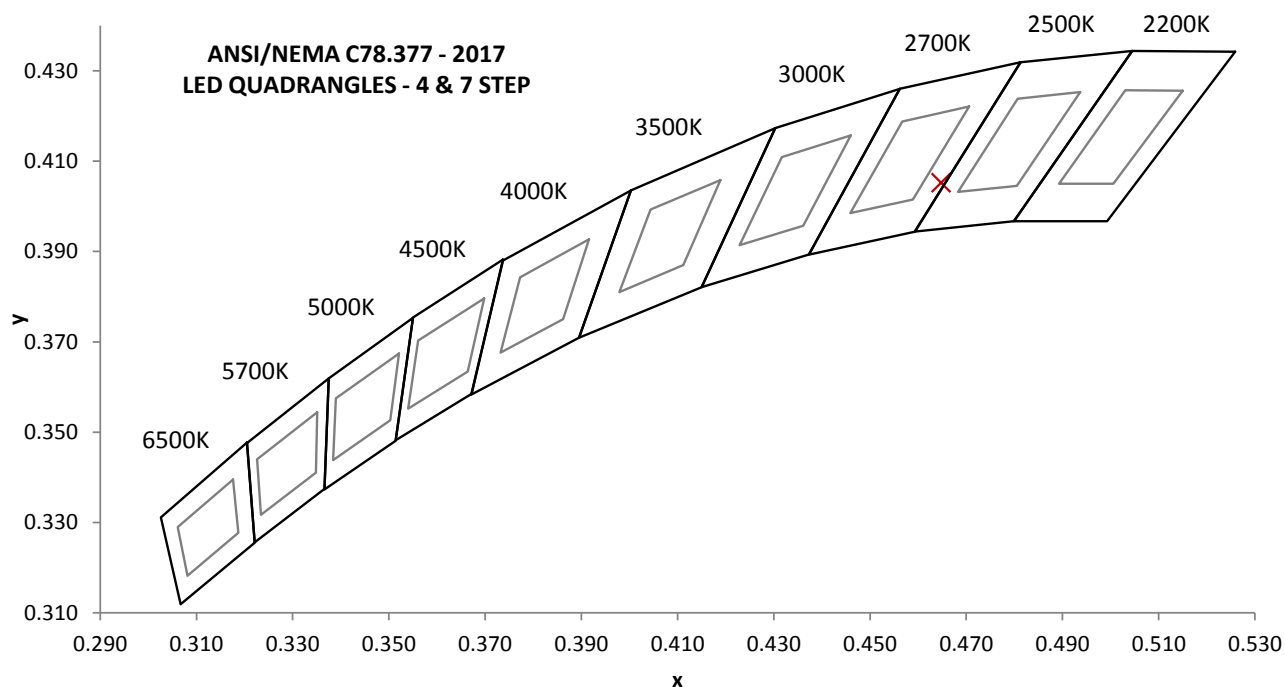
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )	Input ATHD (%)
120.02	100.7	10.39	0.860	49.72

Measured at 120.02(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra ( )	CRI - R9 ( )
548.3	52.8	2592	90.4	47.0

Duv ( )	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0023	0.465	0.405	0.268	0.526

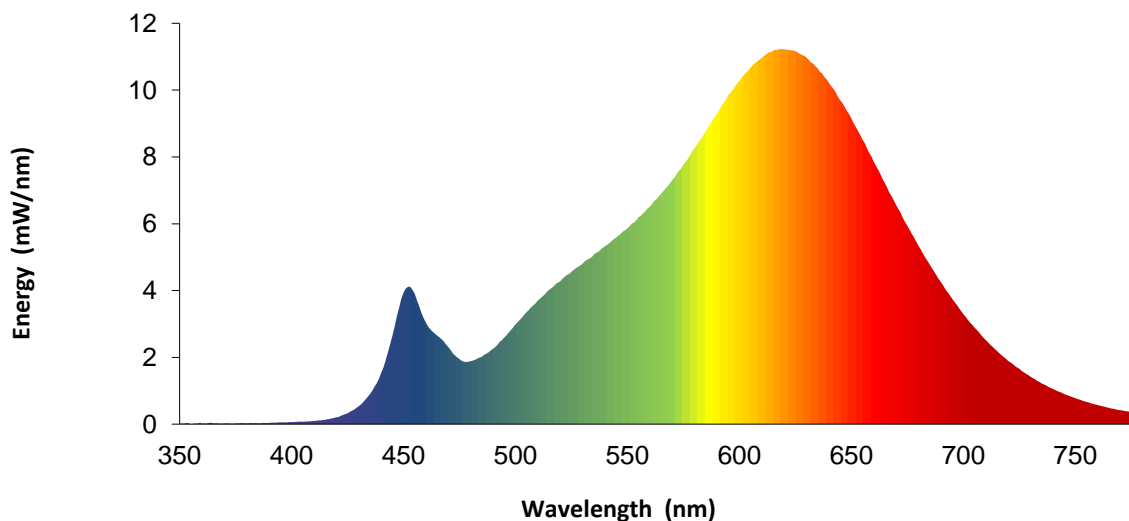


**REPORT NO. 104349704CHI-011**

SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.0		460	3.0		570	7.3		680	5.3
355	0.0		465	2.7		575	7.8		685	4.8
360	0.0		470	2.3		580	8.3		690	4.3
365	0.0		475	1.9		585	8.8		695	3.8
370	0.0		480	1.9		590	9.3		700	3.3
375	0.0		485	2.0		595	9.8		705	2.9
380	0.0		490	2.3		600	10.3		710	2.5
385	0.0		495	2.6		605	10.7		715	2.2
390	0.0		500	3.0		610	11.0		720	1.9
395	0.0		505	3.4		615	11.2		725	1.7
400	0.1		510	3.7		620	11.2		730	1.4
405	0.1		515	4.0		625	11.2		735	1.2
410	0.1		520	4.3		630	11.0		740	1.1
415	0.1		525	4.6		635	10.7		745	0.9
420	0.2		530	4.8		640	10.2		750	0.8
425	0.3		535	5.1		645	9.7		755	0.7
430	0.5		540	5.3		650	9.1		760	0.6
435	0.9		545	5.6		655	8.5		765	0.5
440	1.5		550	5.9		660	7.9		770	0.4
445	2.6		555	6.2		665	7.2		775	0.4
450	3.9		560	6.5		670	6.6		780	0.3
455	3.9		565	6.9		675	5.9		---	---

Without correction of sample absorption.



Portrayed color in graphic is estimated by wavelength (nm) and may not be exact - it is a visual representation only



**EQUIPMENT LIST**

**REPORT NO. 104349704CHI-011**

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
2	Omega Thermometer	DPI8-C24	146920	10/3/2019	10/3/2020
3	LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
4	Newport Thermohygrometer	iServer	146957	12/2/2019	12/2/2020
5	Pacific AC Power Supply	118-ACX	CHI0153	VBU	VBU
6	Newport Humidity Recorder	iServer	CHI0456	10/11/2019	10/11/2020
7	Labsphere Spectroradiometer	CDS2600	CHI0539	VBU	VBU
8	3 Meter Sphere	SPR600	CHI0088	VBU	VBU
9	Elgar AC Power Supply	CW1251	146112	VBU	VBU
10	Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU
11	Yokogawa Power Meter	WT1600	146769	4/6/2020	4/6/2021
12	Extech K Temperature Meter	421502	CHI0476	10/1/2019	10/1/2020
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

**REVISION HISTORY**

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
---	---	---	---	---
---	---	---	---	---