

VISUAL COMFORT & COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700PRTDES38**-LED927

PROJECT NUMBER

G104349704

REPORT NUMBER

104349704CHI-010

ISSUE DATE

8/24/2020

REVISED DATE

None

TEST DATES

08/11/2020 through 08/12/2020.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104349704CHI-010

MODEL NUMBER(s)

700PRTDES38**-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
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Reviewer:



Jeff Davis
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SAMPLE INFORMATION

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ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH08062020034718-010	700PRTDES38**-LED927	DESSAU 38 FLOOR LAMP	Production	8/6/2020

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700PRTDES38**-LED927	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700PRTDES38**-LED927
Product Description:	DESSAU 38 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)	443.9	461.5
Input Power (W) @ 120VAC (Vac)	10.51	10.39
Lumen Efficacy (lm/W)	42.3	44.4
Input Power Factor (I) @ 120VAC (Vac)	0.862	0.861

Criteria	Results
Input ATHD (%) @ 120VAC (Vac)	49.56
Correlated Color Temperature (K)	2681
Color Rendering Index - Ra (I)	91.2
Color Rendering Index - R9 (I)	49.7
Duv (I)	-0.0021
Chromaticity Coordinate (x)	0.458
Chromaticity Coordinate (y)	0.405
Chromaticity Coordinate (u')	0.264
Chromaticity Coordinate (v')	0.525

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

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTDES38**-LED927	NA

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

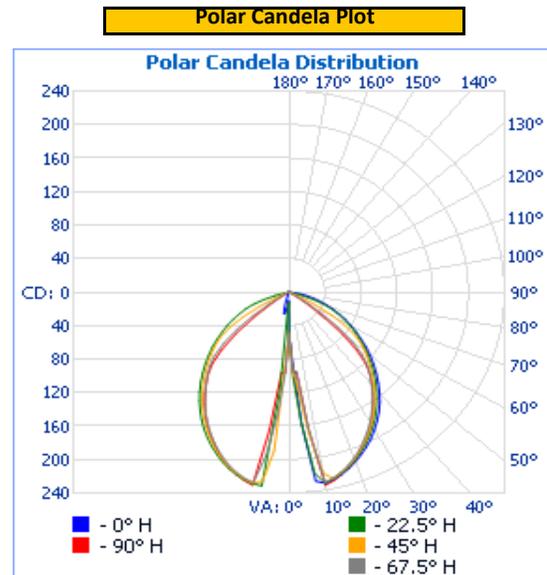
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.00	101.6	10.51	0.862

Light Output (lm)	Lumen Efficacy (lm/W)
443.9	42.3

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	49	49	49	49	49
5	157	156	117	95	97
10	232	231	220	231	234
15	225	224	223	223	226
20	216	214	212	211	214
25	204	201	198	196	199
30	190	186	183	180	182
35	174	170	166	162	164
40	157	152	147	143	144
45	137	133	128	123	121
50	118	114	110	91	78
55	98	95	89	44	27
60	80	77	54	11	6
65	62	59	15	2	1
70	44	39	2	0	0
75	28	13	0	0	0
80	13	0	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

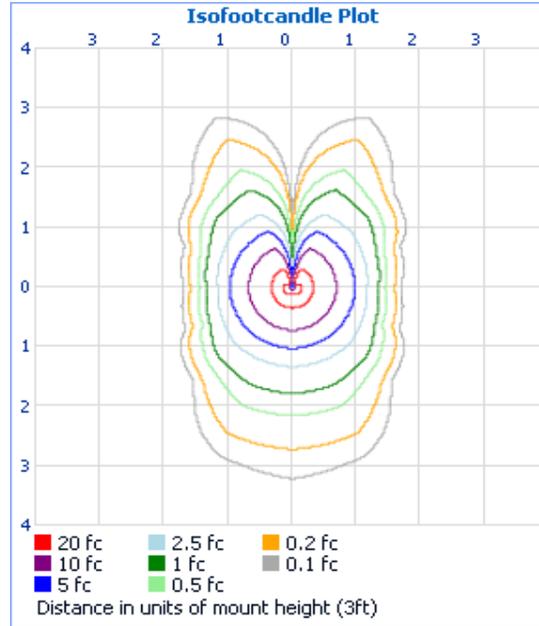
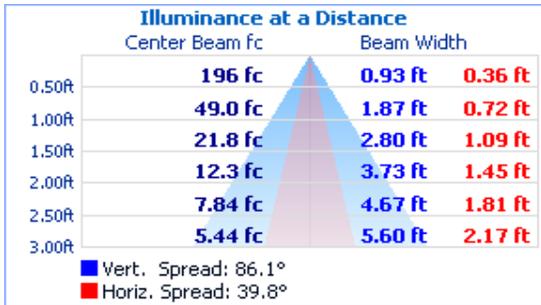
Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY

Mounting Height: 3ft

Illuminance - Cone Of Light Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	161.2	36.3%
0-40	258.9	58.3%
0-60	412.3	92.9%
60-90	31.7	7.1%
70-100	6.8	1.5%
90-120	0.0	0.0%
0-90	443.9	100.0%
90-180	0.0	0.0%
0-180	443.9	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	15.6	3.5%	90-100	0.0	0.0%
10-20	59.4	13.4%	100-110	0.0	0.0%
20-30	86.2	19.4%	110-120	0.0	0.0%
30-40	97.8	22.0%	120-130	0.0	0.0%
40-50	92.2	20.8%	130-140	0.0	0.0%
50-60	61.1	13.8%	140-150	0.0	0.0%
60-70	24.9	5.6%	150-160	0.0	0.0%
70-80	6.4	1.4%	160-170	0.0	0.0%
80-90	0.4	0.1%	170-180	0.0	0.0%

INTEGRATING SPHERE TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTDES38**-LED927	NA

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

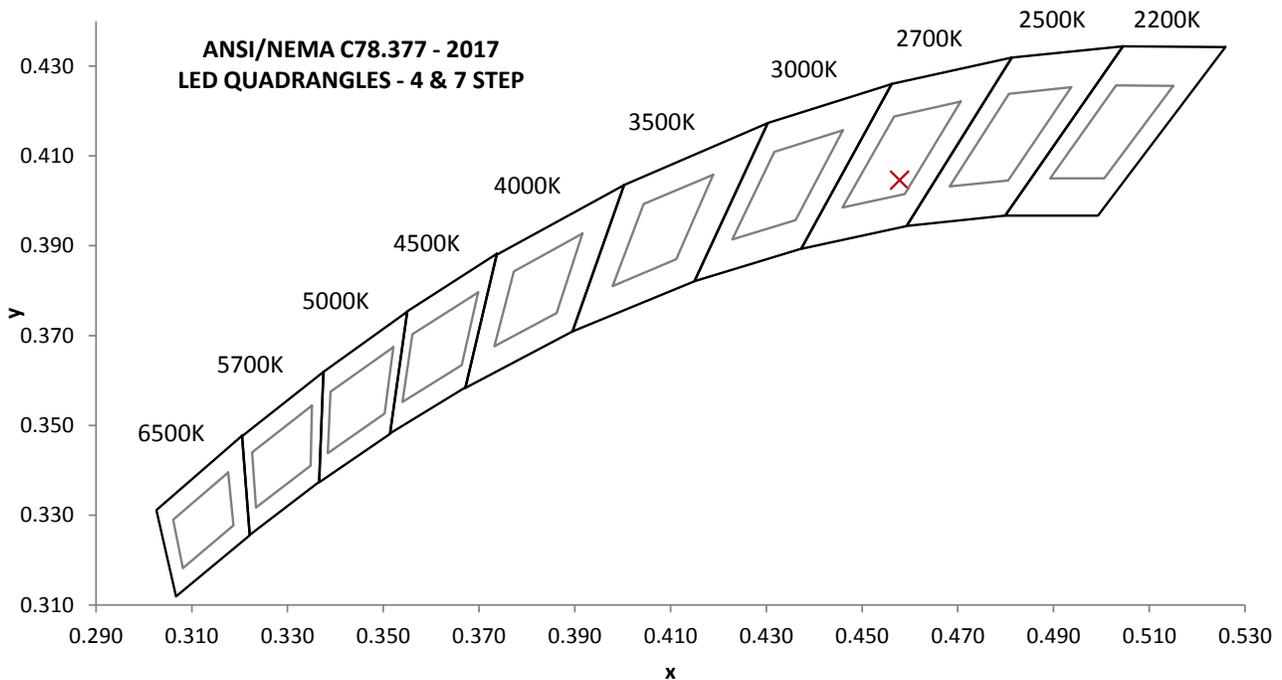
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()	Input ATHD (%)
120.02	100.5	10.39	0.861	49.56

Measured at 120.02(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra ()	CRI - R9 ()
461.5	44.4	2681	91.2	49.7

Duv ()	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0021	0.458	0.405	0.264	0.525

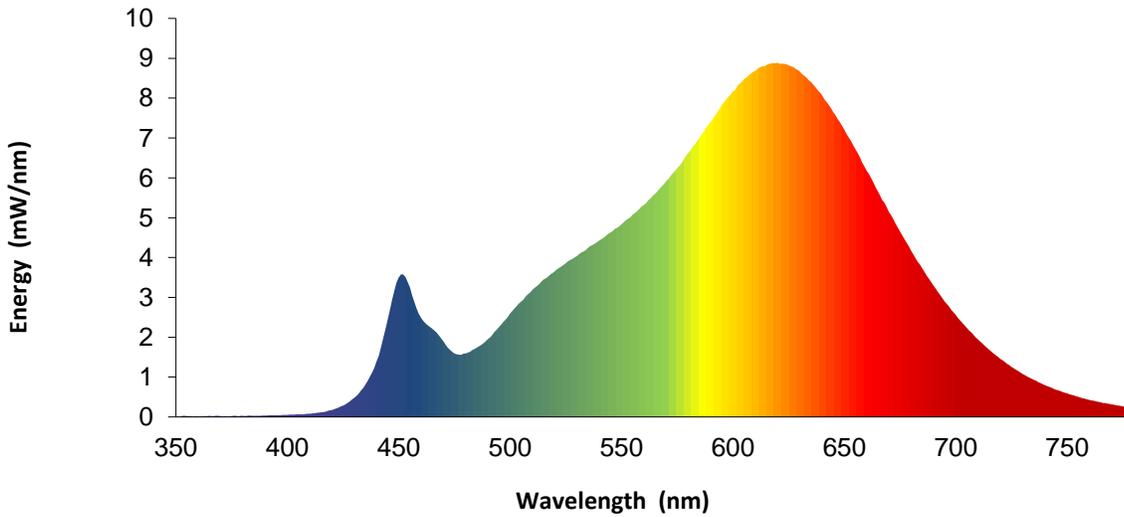


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SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.0	460	2.5	570	5.9	680	4.2
355	0.0	465	2.2	575	6.2	685	3.7
360	0.0	470	1.9	580	6.6	690	3.3
365	0.0	475	1.6	585	7.0	695	2.9
370	0.0	480	1.6	590	7.4	700	2.6
375	0.0	485	1.7	595	7.8	705	2.2
380	0.0	490	2.0	600	8.2	710	1.9
385	0.0	495	2.3	605	8.5	715	1.7
390	0.0	500	2.6	610	8.7	720	1.5
395	0.0	505	2.9	615	8.8	725	1.3
400	0.1	510	3.2	620	8.9	730	1.1
405	0.1	515	3.4	625	8.8	735	0.9
410	0.1	520	3.7	630	8.7	740	0.8
415	0.1	525	3.9	635	8.4	745	0.7
420	0.2	530	4.0	640	8.1	750	0.6
425	0.3	535	4.3	645	7.7	755	0.5
430	0.5	540	4.4	650	7.2	760	0.4
435	0.8	545	4.6	655	6.7	765	0.4
440	1.4	550	4.8	660	6.2	770	0.3
445	2.4	555	5.1	665	5.7	775	0.3
450	3.5	560	5.3	670	5.1	780	0.2
455	3.2	565	5.6	675	4.7	---	---

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

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#	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
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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
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