

# VISUAL COMFORT & CO. TEST REPORT

## SCOPE OF WORK

Electrical and Photometric tests as required to the IESNA LM-79 test standard.

## MODEL NUMBER

E4PSLRD-8307-W

## REPORT NUMBER

104206403CHI-105

## ISSUE DATE

July 24, 2020

## REVISION DATE

None

## DOCUMENT CONTROL NUMBER

TBD

© 2017 INTERTEK



**REPORT NO.: 104206403CHI-105**

**TEST REPORT**

**REPORT DATE: July 24, 2020**

TEST OF ONE E4PSL 75DEG 300MA

MODEL NO. E4PSLRD-8307-W  
LED MODEL NO. BRIDGELUX BXRE-\*\*E2000-C-83  
DRIVER MODEL NO. ERP 255ESS015W300

RENDERED TO:

VISUAL COMFORT & CO.  
7400 LINDER AVE.  
SKOKIE IL 60077

**STATEMENT OF LIMITATIONS**

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-01040682-1.

**STANDARDS USED**

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting  
ANSI NEMA ANSLG C78.377: 2015: Specifications of the Chromaticity of Solid State Lighting Products

**DESCRIPTION OF SAMPLE**

The client submitted one production sample of model number E4PSLRD-8307-W. The sample was received by Intertek on July 13, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH07132020091733-105.

**DATE OF TESTS**

July 14, 2020 through July 22, 2020.

**REPORT NO.: 104206403CHI-105**

**REPORT DATE: July 24, 2020**

**TEST REPORT**

**SUMMARY**

<b>MODEL NO:</b>	E4PSLRD-8307-W
<b>DESCRIPTION:</b>	E4PSL 75deg 300mA

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1143.5	1144.7
Input Power (W) @ 120 (VAC)	11.56	11.57
Lumen Efficacy (lm/W)	99.0	98.9
Input Power Factor ( ) @ 120 (VAC)	0.981	0.983

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	16.66
Correlated Color Temperature (K)	2990
Color Rendering Index - Ra	82.1
Color Rendering - R9	8.0
DUV	0.0010
Chromaticity Coordinate (x)	0.439
Chromaticity Coordinate (y)	0.407
Chromaticity Coordinate (u')	0.251
Chromaticity Coordinate (v')	0.523

**REPORT NO.: 104206403CHI-105**

**TEST REPORT**

**REPORT DATE: July 24, 2020**

**EQUIPMENT LIST**

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
Omega Thermometer	DPI8-C24	146920	10/3/2019	10/3/2020
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Thermohygrometer	iServer	146957	12/2/2019	12/2/2020
Pacific, AC Power Supply	118-ACX	CHI0153	VBU	VBU
Labsphere Spectroradiometer	CDS-600	146923	VBU	VBU
2M Rotating Sphere	7660-ROT	146923	VBU	VBU
Omega thermometer	USB TC08	EQA002615	4/7/2020	4/7/2021
Ametek DC Power Supply	XFR150-8	146846	VBU	VBU
Newport Humidity Recorder	iTHX-SD	146961	7/26/2019	7/26/2020
Yokogawa Power Meter	WT210	146880	10/2/2019	10/2/2020
Chroma Power Supply	61604	CHI0371	VBU	VBU

**REPORT NO.: 104206403CHI-105**

**REPORT DATE: July 24, 2020**

**TEST REPORT**

**TEST METHODS**

**SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS**

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

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD**

A Spectroradiometer and integrating sphere was used to measure correlated color temperature, chromaticity coordinates, and the color rendering index for each SSL unit.

Ambient temperature was measured at a position inside the sphere. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation. Each SSL unit was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

The calibration of the sphere photometer-spectroradiometer system is traceable to the National Institute of Standards and Technology.

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD**

A Type C Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for the SSL sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniometer equipment. The SSL sample was operated on the client provided driver at rated input volts in its designated orientation. The SSL sample was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

REPORT NO.: 104206403CHI-105

TEST REPORT

REPORT DATE: July 24, 2020

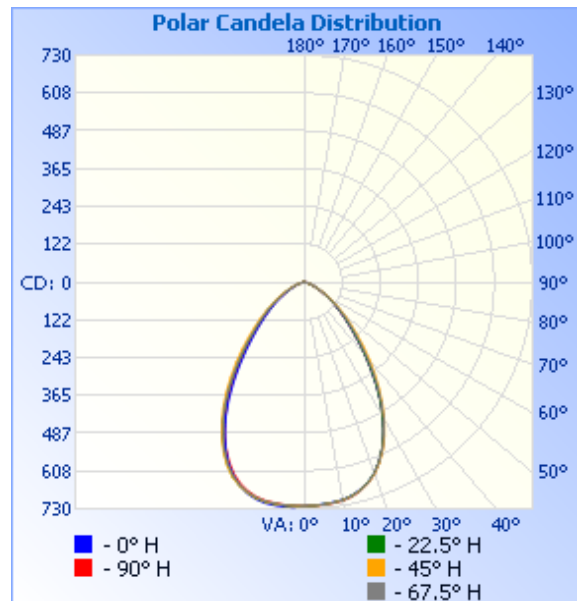
RESULTS OF TESTS

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

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR	LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)
AH07132020091733-105	Base Up	119.9	98.1	11.57	0.983	1144.7	98.9

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	721	721	721	721	721
5	717	718	718	719	719
10	711	712	712	713	714
15	691	693	694	694	695
20	655	654	657	655	656
25	591	590	595	591	590
30	505	503	512	508	505
35	401	402	417	409	402
40	300	302	323	310	301
45	217	220	240	228	218
50	157	160	173	165	157
55	111	112	121	116	111
60	73	74	80	77	73
65	46	46	49	47	45
70	27	26	27	26	26
75	15	14	14	14	13
80	8	7	7	7	7
85	4	3	3	3	3
90	0	0	0	0	0



REPORT NO.: 104206403CHI-105

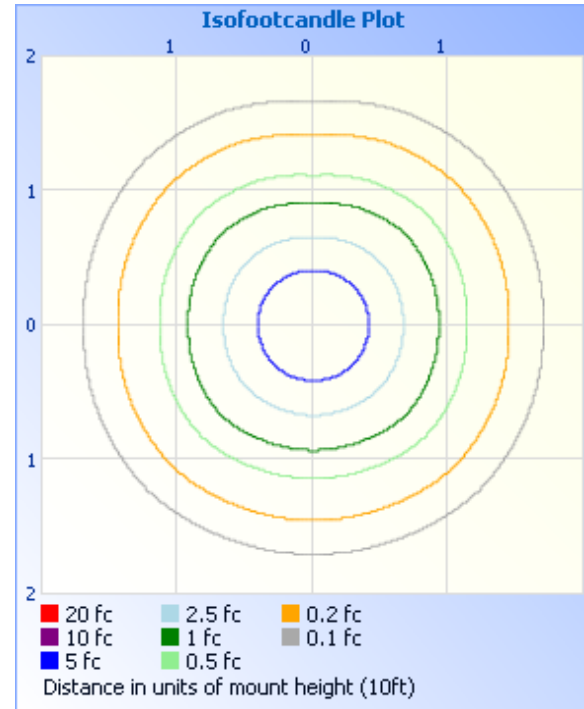
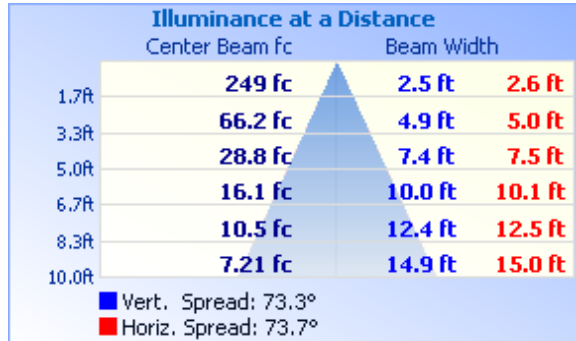
REPORT DATE: July 24, 2020

TEST REPORT

RESULTS OF TESTS

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

MOUNTING HEIGHT: 10ft	
ILLUMINANCE - CONE OF LIGHT	ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	536.0	46.8
0-40	792.5	69.2
0-60	1076.9	94.1
60-90	67.8	5.9
70-100	19.5	1.7
90-120	0.0	0.0
0-90	1144.7	100.0
90-180	0.0	0.0
0-180	1144.7	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	68.5	6.0
10-20	195.6	17.1
20-30	271.9	23.8
30-40	256.4	22.4
40-50	179.0	15.6
50-60	105.5	9.2
60-70	48.3	4.2
70-80	15.7	1.4
80-90	3.7	0.3

REPORT NO.: 104206403CHI-105

TEST REPORT

REPORT DATE: July 24, 2020

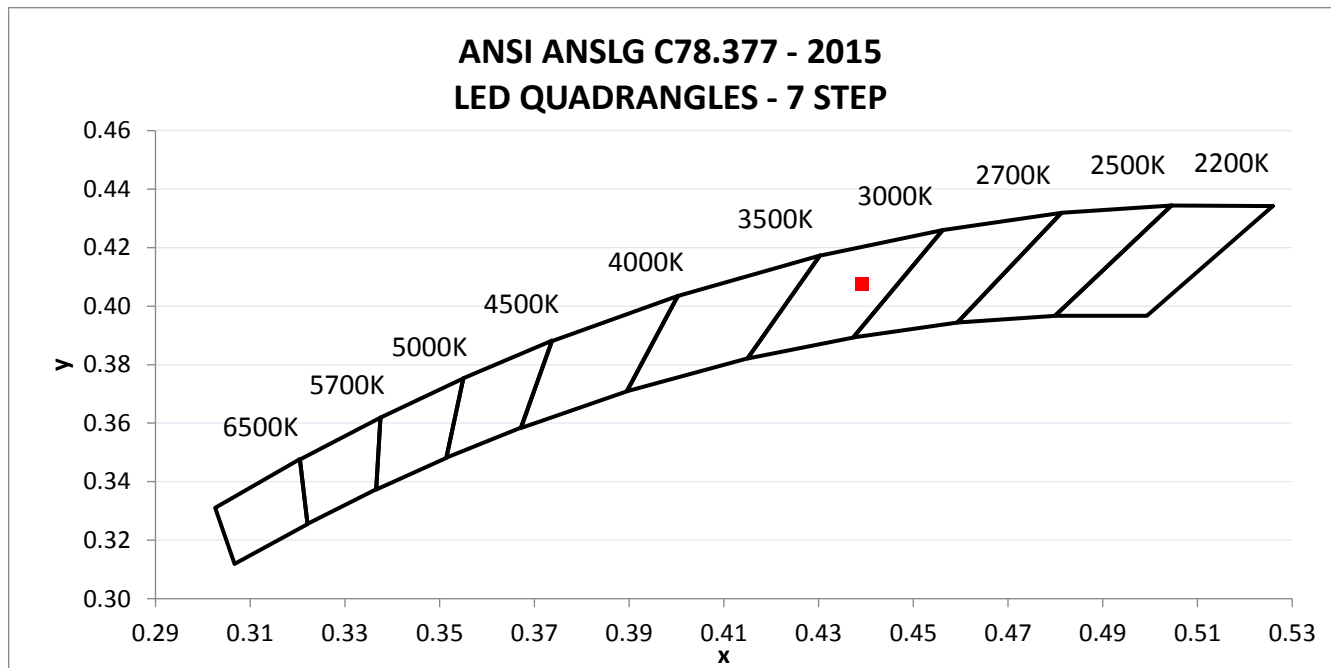
RESULTS OF TESTS

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

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR ( )	INPUT CURRENT ATHD (%)
AH07132020091733-105	Base Up	120.06	98.10	11.56	0.981	16.66

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1143.5	99.0	2990	82.1	8.0	0.0010

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.439	0.407	0.251	0.523





REPORT NO.: 104206403CHI-105

TEST REPORT

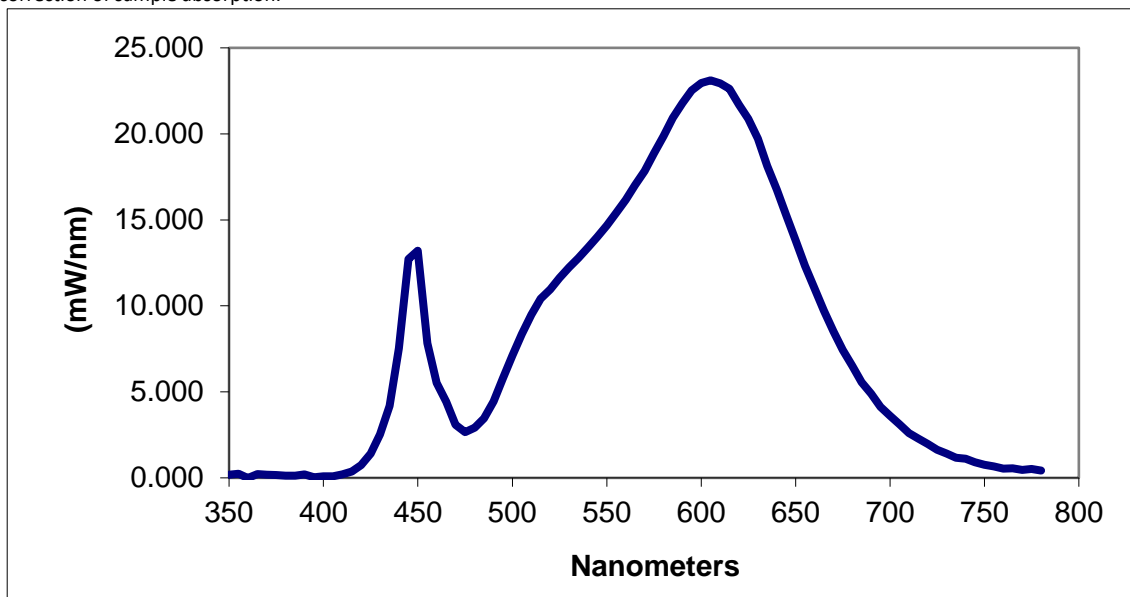
REPORT DATE: July 24, 2020

RESULTS OF TESTS

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

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.193	460	5.531	570	17.841	680	6.514
355	0.235	465	4.427	575	18.854	685	5.564
360	-0.009	470	3.091	580	19.875	690	4.889
365	0.213	475	2.650	585	20.930	695	4.129
370	0.189	480	2.925	590	21.778	700	3.600
375	0.158	485	3.461	595	22.526	705	3.127
380	0.123	490	4.446	600	22.949	710	2.598
385	0.124	495	5.776	605	23.111	715	2.283
390	0.208	500	7.122	610	22.935	720	1.972
395	0.030	505	8.349	615	22.627	725	1.630
400	0.090	510	9.490	620	21.693	730	1.412
405	0.090	515	10.417	625	20.863	735	1.169
410	0.208	520	10.948	630	19.720	740	1.108
415	0.372	525	11.632	635	18.132	745	0.907
420	0.750	530	12.234	640	16.764	750	0.760
425	1.405	535	12.783	645	15.288	755	0.674
430	2.525	540	13.390	650	13.794	760	0.546
435	4.181	545	14.010	655	12.326	765	0.552
440	7.526	550	14.684	660	11.012	770	0.461
445	12.727	555	15.398	665	9.734	775	0.526
450	13.203	560	16.162	670	8.514	780	0.418
455	7.828	565	17.015	675	7.444		

\*Without correction of sample absorption.



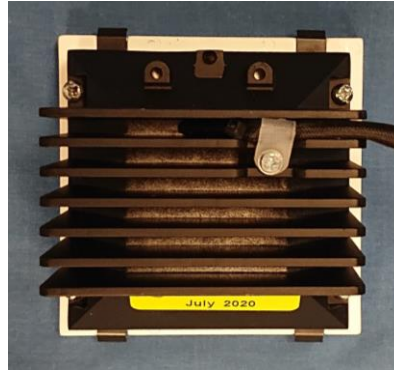
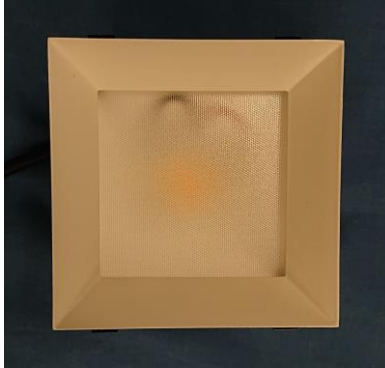
End Of Test Results

**REPORT NO.: 104206403CHI-105**

**REPORT DATE: July 24, 2020**

**TEST REPORT**

**PICTURES**



**CONCLUSION**

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:

*Ian Smith*

Ian Smith  
Engineer  
Lighting Division

Report Reviewed By:

*Jeff Davis*

Jeff Davis  
N.A. Technical Lead  
Lighting Division

Attachments: IES File

**REVISION HISTORY**

JOB NUMBER	DATE OF REVISION	PROJECT HANDLER	REVIEWED BY	REVISION NOTE
None				