




Ningbo TengLi Testing Co., Ltd

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LM-79-19 Test Report

For

LEDVANCE LLC

(Brand Name:  LEDVANCE)

200 Ballardvale Street, Wilmington, MA 01887, U.S.A

Model name(s):
LNSLOT1A18UNHD8SC124PWH

Report Type: Testing and Report According to IES LM-79-2008

**Type of
Luminaire:** LED Linear Light

Report Date: 2022-07-14

Ningbo TengLi Testing Co., Ltd

Prepared By: 2nd floor, Block B, Ningbo Testing and Certification Base,
No. 66 Qingyi Road, Ningbo National Hi-Tech Zone,
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Test & Report By:

Nick Song

Engineer: Nick Song

Review By:

Garman Mo

Manager: Garman Mo

Note: 1. The results contained in this report pertain only to the tested samples

2. This report does not imply product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.

Report No.: JAE220201-B

Report Format Number STD/QP019-409-A/0-NB

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1.1 Product Information:

Model Number	LNSLOT1A18UNHD8SC124PWH	
Remark	N/A	
Representative (Tested) Model	LNSLOT1A18UNHD8SC124PWH(3000K) LNSLOT1A18UNHD8SC124PWH(3500K) LNSLOT1A18UNHD8SC124PWH(4000K)	
Model Difference	N/A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Linear Light	
LED Manufacturer	Bridgelux, Inc.	
LED Model	BXEN-XXX-11L-37A-00-0-0	
Dimming	Dimmable	
Integral Controls	N/A	
Sample Number	JAE220201-B1	
Date of Receipt	Jul. 11. 2021	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

1.2 Rated Values:

Rated Voltage / Frequency	120-347Vac, 50/60Hz
Nominal Power	18W
Rated Initial Lamp Lumen	1800lm
Declared CCT	3000K, 3500K, 4000K

1.3 Test Specifications:

Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2019 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source

1.4 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.



2.1 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A18UNHD8SC124PWH (3000K)	Total Operating Time(min)	75

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-B1	120.1	60.01	0.1483	17.70	0.9940	4.20
	347.1	60.01	0.5680	18.04	0.9157	13.10

Photometric Measurement – Goniophotometer Method(Tset Distance: 26.00m):

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	1807.9	1809.7
Luminous Efficacy (lm/W)	102.17	100.30
Beam Angle (°)	101.1	--
Center Beam Candle Power (cd)	722	--



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	541.4	29.9%
0-40	867.3	48%
0-60	1,471.0	81.4%
60-90	336.7	18.6%
70-100	131.5	7.3%
90-120	0	0%
0-90	1,807.7	100%
90-180	0.0	0%
0-180	1,807.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	68.1	3.8%	90-100	0	0%
10-20	191.7	10.6%	100-110	0	0%
20-30	281.6	15.6%	110-120	0	0%
30-40	325.9	18.0%	120-130	0	0%
40-50	323.4	17.9%	130-140	0	0%
50-60	280.3	15.5%	140-150	0	0%
60-70	205.2	11.4%	150-160	0.0	0%
70-80	109.8	6.1%	160-170	0.0	0%
80-90	21.7	1.2%	170-180	0.0	0%

Photometric Data

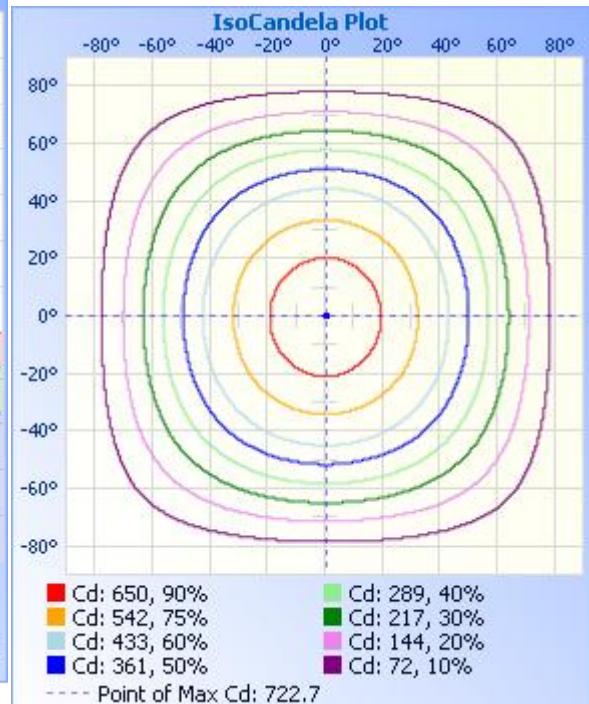
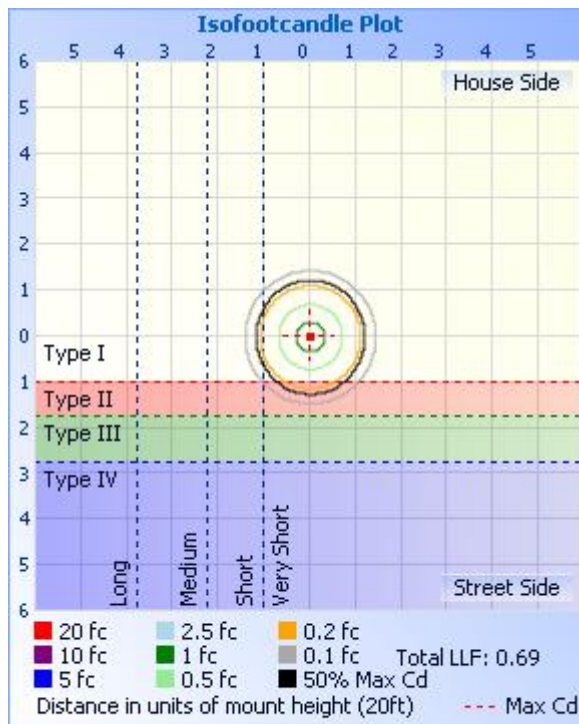
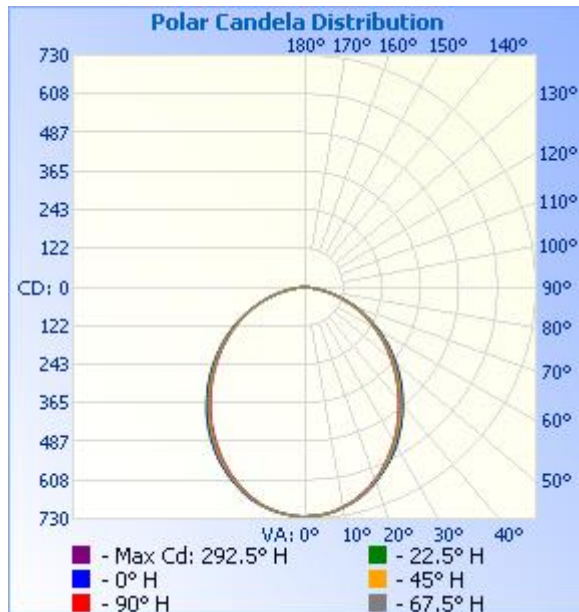




Table--1

UNIT: cd

C (DEG) □ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	722	722	722	722	722	722	722	722	722	722	722	722	722	722	722	722			
5	717	718	718	718	718	718	718	717	718	718	717	718	717	718	717	718			
10	701	703	703	704	704	705	704	704	701	703	704	705	705	703	704	704			
15	677	678	679	682	684	681	682	679	677	679	680	681	685	682	681	679			
20	643	646	650	653	655	651	650	647	646	646	650	652	655	652	649	646			
25	604	607	611	616	618	616	612	608	607	607	613	618	619	615	612	609			
30	560	564	569	574	577	573	568	563	561	562	569	574	578	574	568	565			
35	513	515	522	528	531	527	523	515	513	514	522	527	531	527	521	517			
40	462	465	472	479	482	476	471	464	461	462	470	478	481	477	471	466			
45	411	414	419	428	431	425	419	413	409	411	418	426	429	425	419	415			
50	359	362	367	375	378	372	367	360	357	358	364	372	376	372	367	362			
55	307	310	313	322	324	320	313	307	305	306	311	319	321	318	314	309			
60	255	257	261	267	269	266	260	253	253	253	258	264	267	265	261	257			
65	203	206	209	213	214	212	208	202	201	202	205	210	212	210	207	205			
70	152	154	157	160	160	159	155	150	151	151	151	156	157	156	155	154			
75	102	104	105	107	107	106	104	99.2	101	101	101	103	104	104	104	104			
80	55.5	56.3	56.4	56.5	56.3	55.6	54.1	53.8	55.3	54.8	54.0	54.0	54.8	55.5	56.3	57.1			
85	18.0	17.8	17.0	16.7	15.9	15.7	15.8	16.5	17.3	16.5	15.1	14.5	14.3	15.3	16.8	17.9			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10			



2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A18UNHD8SC124PWH (3000K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-B1	120.0	60	0.1494	17.81	0.9933	4.25
	347.0	60	0.0572	18.15	0.9150	13.15

Chromaticity Measurement - Sphere-Spectroradiometer

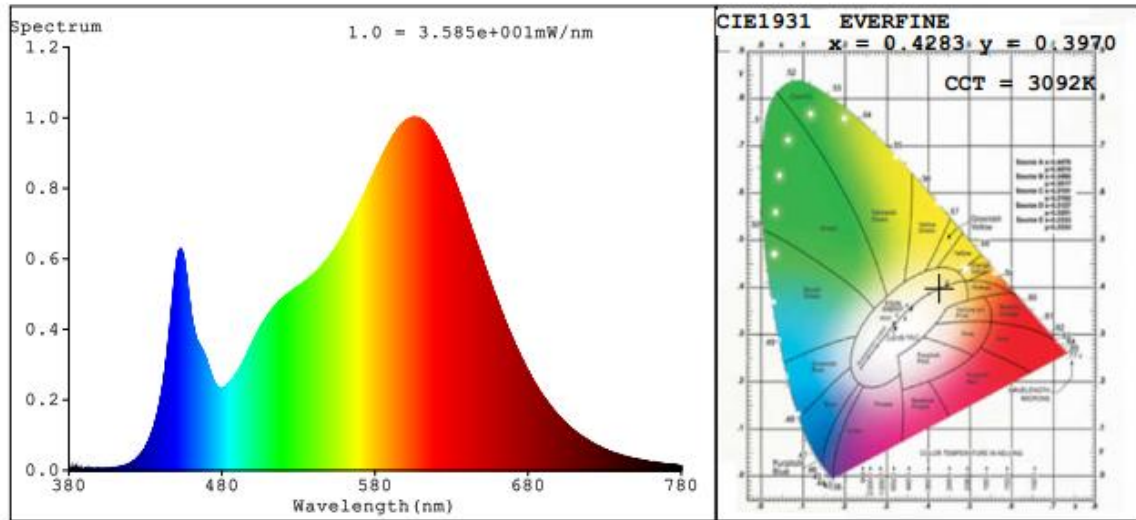
Method(Self-absorption:1.1178)(4 π geometry):

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3092
Duv	-0.0016
Chromaticity (x, y)	x=0.4283 y=0.3970
Chromaticity (u', v')	u'=0.2480 v'=0.5173
Color Rendering Index (CRI)	85.7
R9	19
Rg	97
Rf	86
Rcs,h1	-11

Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	1820	1821
Luminous Efficacy (lm/W)	102.19	100.33

Spectral Power Distribution & Chromaticity Diagram



R1 =86	R2 =94	R3 =95	R4 =84	R5 =86	R6 =93	R7 =84	
R8 =64	R9 =19	R10=87	R11=85	R12=77	R13=88	R14=98	R15=78

TM30

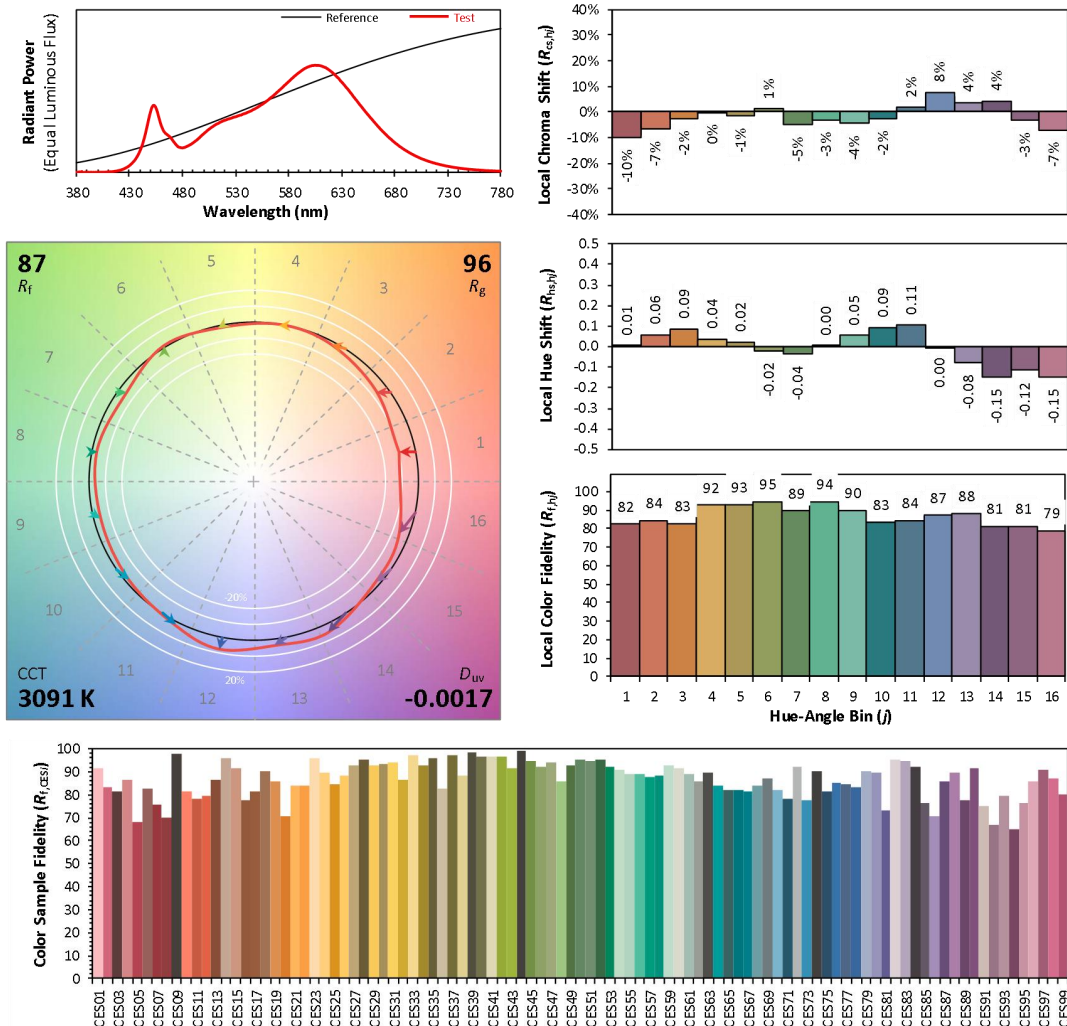
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-XXX-11L-37A-00-0-0

Manufacturer: LEDVANCE LLC

Date: 2022-07-13

Model: LNSLOT1A18UNHD8SC124PWH(3000K)



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4283
 y 0.3969
 u' 0.2481
 v' 0.5172

CIE 13.3-1995
(CRI)

R_a 86
 R_g 19

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0



2.3 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A18UNHD8SC124PWH (3500K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-B1	120.0	60	0.1445	17.22	0.9930	4.30
	347.0	60	0.0553	17.56	0.9147	13.20

Chromaticity Measurement - Sphere-Spectroradiometer

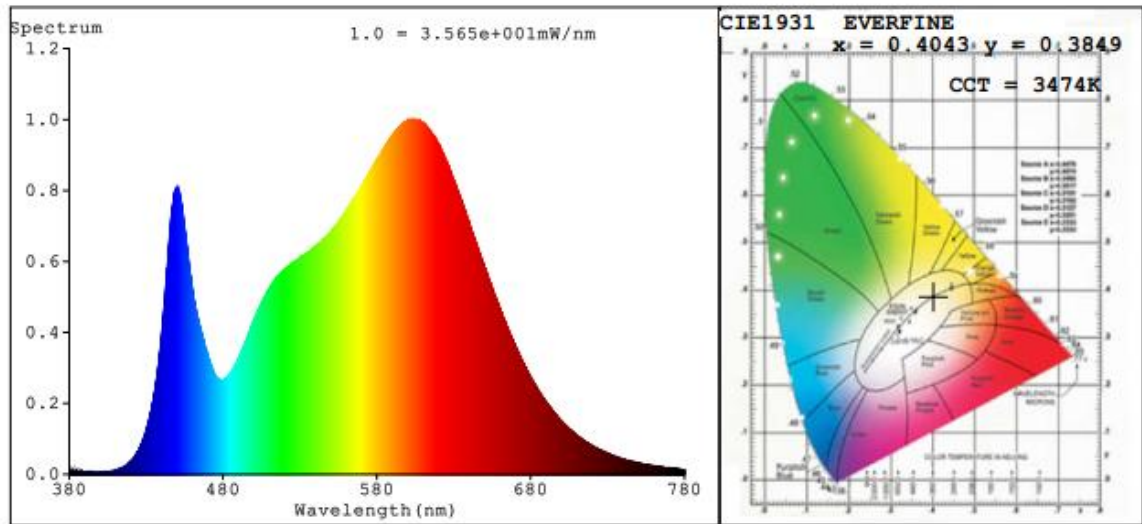
Method(Self-absorption:1.1173)(4 π geometry):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	3474
Duv	-0.0024
Chromaticity (x, y)	x=0.4043 y=0.3849
Chromaticity (u', v')	u'=0.2375 v'=0.5087
Color Rendering Index (CRI)	86.9
R9	24
Rg	98.
Rf	87
Rcs,h1	-10

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	1949	1950
Luminous Efficacy (lm/W)	113.18	111.05

Spectral Power Distribution & Chromaticity Diagram



R1 =87	R2 =93	R3 =97	R4 =86	R5 =87	R6 =91	R7 =86	
R8 =68	R9 =24	R10=85	R11=87	R12=75	R13=88	R14=99	R15=80



TM30

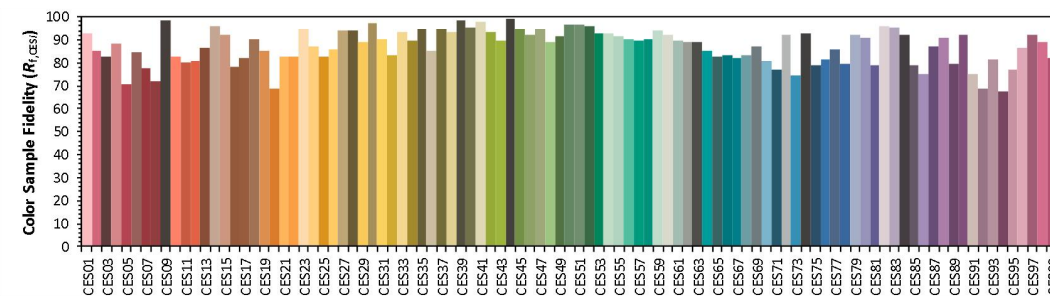
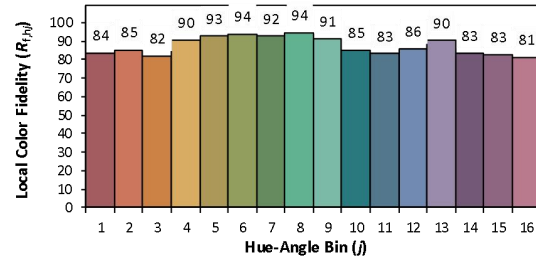
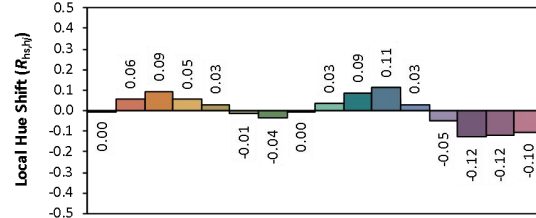
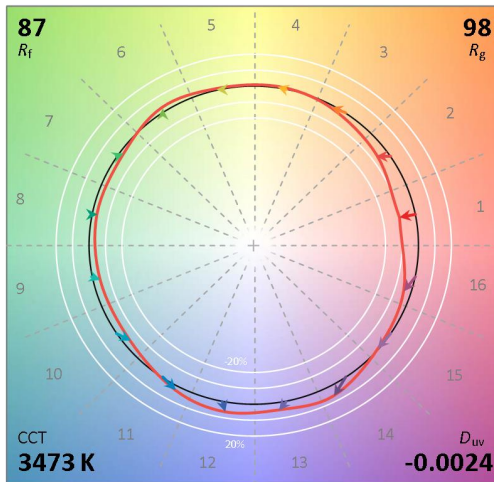
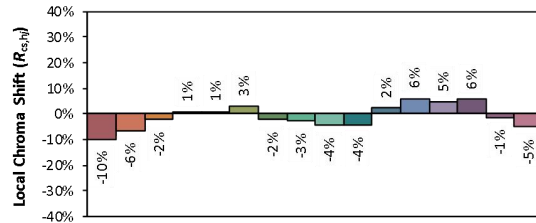
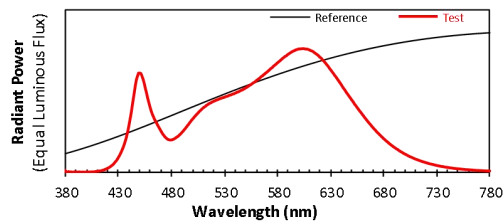
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-XXX-11L-37A-00-0-0

Manufacturer: LEDVANCE LLC

Date: 2022-07-13

Model: LNSLOT1A18UNHD8SC124PWH(3500K)



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4043
 y 0.3848
 u' 0.2375
 v' 0.5086

CIE 13.3-1995
(CRI)
 R_a 87
 R_g 24

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2.4 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A18UNHD8SC124PWH (4000K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-B1	120.0	60	0.1498	17.86	0.9935	4.24
	347.0	60	0.0567	18.20	0.9252	13.14

Chromaticity Measurement - Sphere-Spectroradiometer

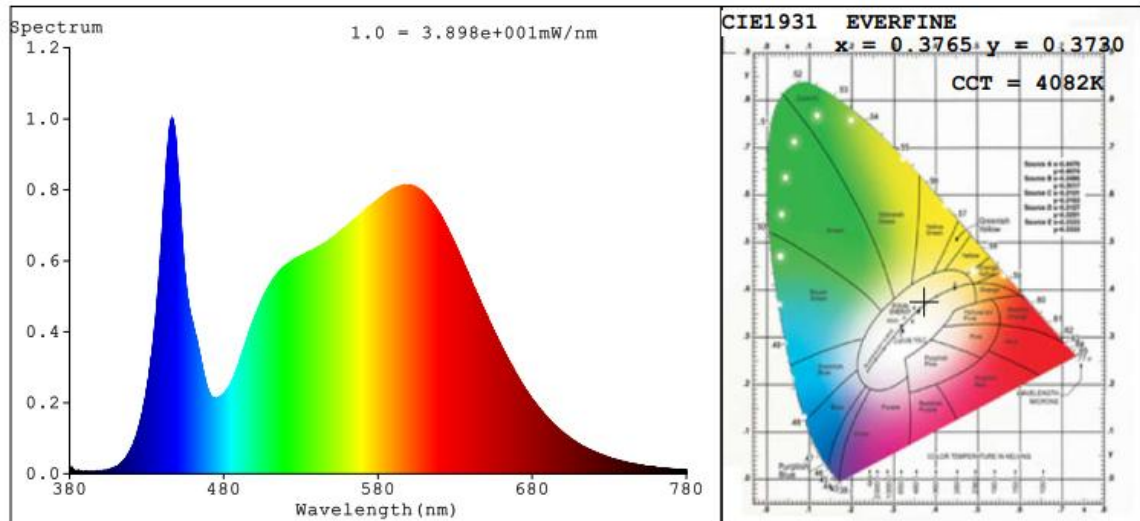
Method(Self-absorption:1.1179)(4 π geometry):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	4082
Duv	-0.0006
Chromaticity (x, y)	x=0.3765 y=0.3730
Chromaticity (u', v')	u'=0.2240 v'=0.4993
Color Rendering Index (CRI)	85.2
R9	21
Rg	98
Rf	85
Rcs,h1	-11

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	1927	1928
Luminous Efficacy (lm/W)	107.89	105.93

Spectral Power Distribution & Chromaticity Diagram



R1 =85	R2 =89	R3 =93	R4 =86	R5 =85	R6 =86	R7 =88	
R8 =70	R9 =21	R10=75	R11=87	R12=70	R13=85	R14=96	R15=79



TM30

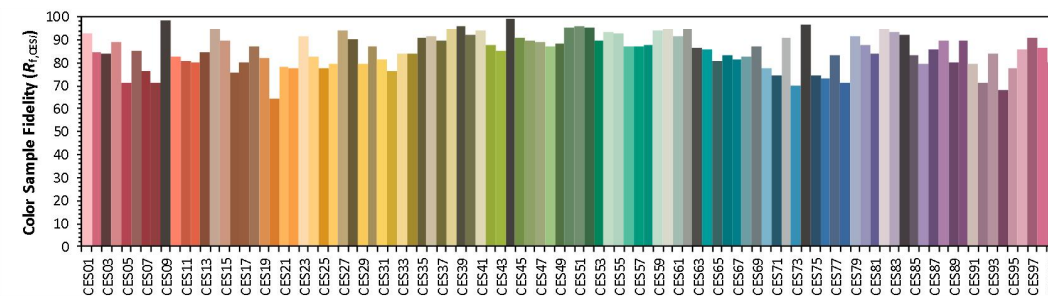
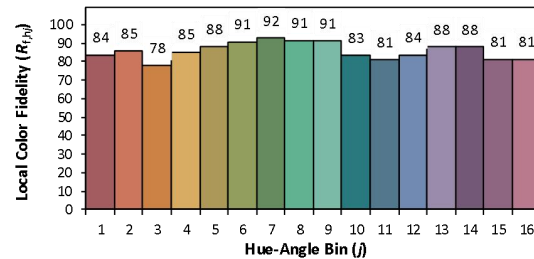
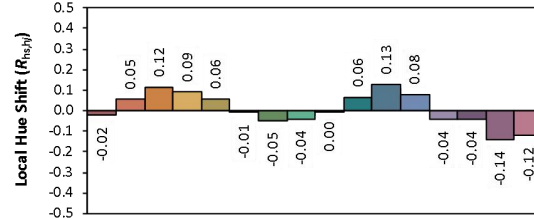
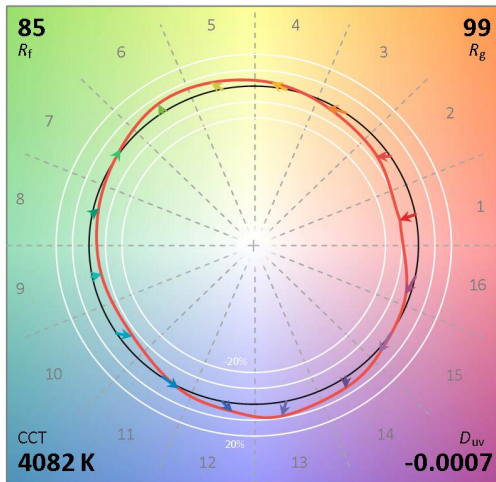
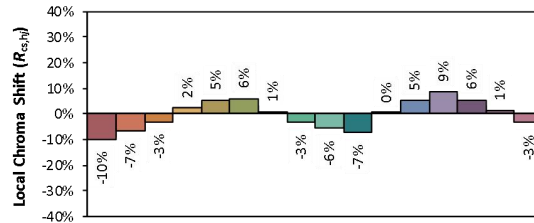
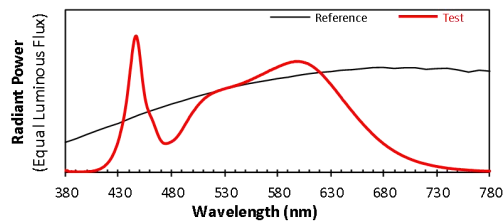
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-XXX-11L-37A-00-0-0

Manufacturer: LEDVANCE LLC

Date: 2022-07-13

Model: LNSLOT1A18UNHD8SC124PWH(4000K)



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3765
 y 0.3729
 u' 0.2241
 v' 0.4993

CIE 13.3-1995
(CRI)

R_a 85
 R_g 21

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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-702	2 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-701	Spectral analysis system HAAS-1200	Verified by D204 standard lamp	
ST-R-703	Standard Lamp D204	2022-01-14	2023-01-13
ST-R-704	Power Meter for Integrating Sphere	2022-01-03	2023-01-02
ST-R-707	Temperature Probe for Integrating Sphere	2022-01-03	2023-01-02
ST-R-714	Goniophotometer system	Verified by D908S standard lamp	
ST-R-710	Standard Lamp D908S	2022-01-14	2023-01-13
ST-R-711	Power Meter for Goniophotometer	2022-01-03	2023-01-02
ST-R-709	Hygrothermograph for Goniophotometer	2022-01-03	2023-01-02
Uncertainty(K=2): Photometric Measurement (Sphere):3.40% Chromaticity Measurement(Sphere):44.8K Photometric Measurement(Goniophotometer):3.64%			

4. Product Photo



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