



## Photometric Test Report

### Relevant Standards

☒ IES LM-79-2019

Prepared For  
**GREEN CREATIVE LTD**

Room 3603, Level 36, Tower 1, Enterprise Square Five, 38 Wang Chiu Road, Kowloon Bay Kowloon, Hong Kong

Test Laboratory: UL Verification Services (Guangzhou) Co., Ltd.

Test Laboratory Address: Room 101, 201, 301, 501, 502, 503, Building A1, Nansha Science and Technology  
Innovation Center, No. 25, South Huanshi Avenue, Nansha District, Guangzhou 511458, China

### Catalog Number

EXCYL4/SM/M/8CCT3S/DIM010UNV/\*\*/\*\*\*\*\*/CC

### Project Number

4791741321

### Report Number

4791741321-2a

### Test Date

2024-09-12

### Issue Date

2025-04-15

### Revision Date

N/A

Prepared By

*Becky Fan*

Becky Fan

Approved By

*Susie Shao*

Susie Shao

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## 1.0 Test List

Sample Received Date: 2024-09-02

Test No.	Test Item	Sample ID	Model Number	Test Conducted By
1	Integrating Sphere Test	7560633-3	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	James Tan
2	Integrating Sphere Test	7560633-1	EXCYL4/SM/M/8CCT3S/DIM010UNV/SP/BK/CC	James Tan
3	Integrating Sphere Test	7560633-2	EXCYL4/SM/M/8CCT3S/DIM010UNV/VN/BK/CC	James Tan
4	Integrating Sphere Test	7560633-4	EXCYL4/SM/M/8CCT3S/DIM010UNV/MD/BK/CC	James Tan
5	Goniophotometer Test	7560633-3	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	James Tan

### Remark (if any)

[ X ] 1. UL test equipment information is recorded on Meter Use in UL's Aurora database.

## 2.0 Product Description

Luminaire Description: Downlight, Surface Mount

Model Number: EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC

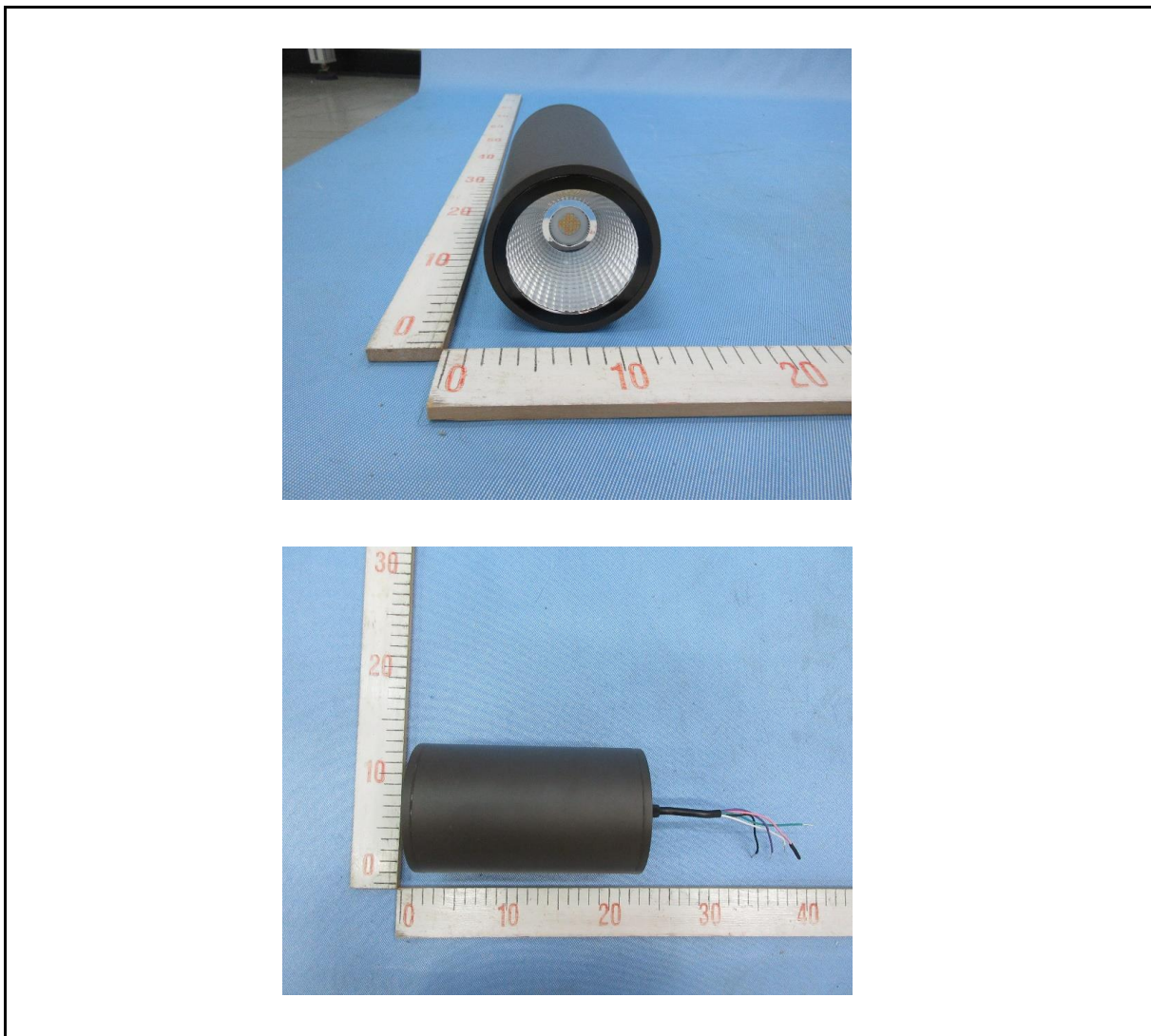
Electrical Ratings and CCT: 120-277V, 50/60Hz, 20W, 3000K/3500K/4000K color tunable

Driver Model Number: GIFBK020W

LED Package: BXCP-30E-11M-J23-3-A1 and BXCP-40E-11M-J23-3-A1, Bridgelux

Family Model and Variation: EXCYL4/SM/M/8CCT3S/DIM010UNV/\*\*/\*\*\*\*\*/CC, where "\*\*\*" represents beam angle, can be SP=15°, VN=25°, NR=40°, MD=60° or blank. "\*\*\*\*\*" represents finish color, can be BK=Black, WH=White, BZ=Bronze, SV=Silver or RALxxxx=other colors.

### Photos of Luminaire Characteristics



### 3.0 LM-79 Measurement and Test Results

#### 3.1 Integrating Sphere Test at 3000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	Sample ID.	7560633-3
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

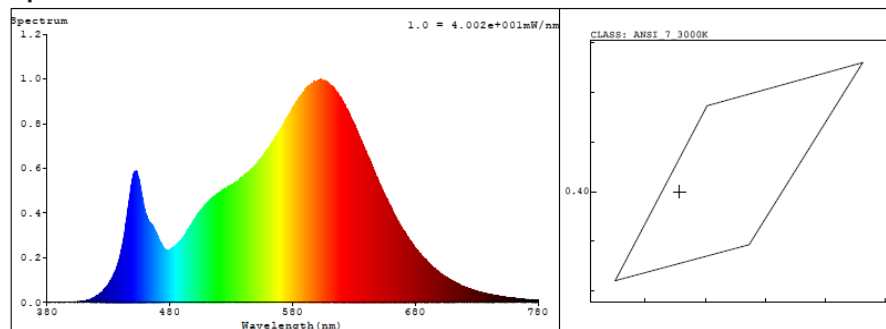
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.9	120	60	0.168	19.53	0.9673	Face down

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3164	83.6	8	0.4257	0.3999	1982.9	101.5

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4257$   $y = 0.3999$  /  $u' = 0.2451$   $v' = 0.5181$  ( $duv=8.45e-06$ )

CCT= 3164K Precp WL:  $L_d=582.1\text{nm}$  Purity=47.8%

Peak WL:  $L_p=603\text{nm}$  FWHM:  $=130.2\text{nm}$  Ratio:R=22.1% G=74.9% B=3.0%

Render Index:  $R_a = 83.6$  TM30:Rf=85 Rg=95

R1 =83 R2 =93 R3 =95 R4 =82 R5 =83 R6 =91 R7 =83

R8 =60 R9 =8 R10=83 R11=82 R12=74 R13=85 R14=98 R15=75

### 3.0 LM-79 Measurement and Test Results

#### 3.1 Integrating Sphere Test at 3500K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	Sample ID.	7560633-3
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

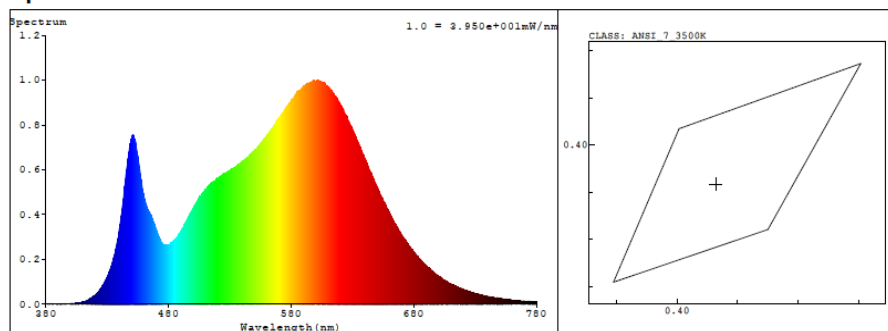
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
25.1	120	60	0.167	19.44	0.9674	Horizontal

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3484	83.9	8	0.4064	0.3918	2086	107.3

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4064$   $y = 0.3918$  /  $u' = 0.2360$   $v' = 0.5119$  ( $duv=2.10e-04$ )

CCT= 3484K Prop WL:  $L_d=580.8\text{nm}$  Purity=39.6%

Peak WL:  $L_p=599\text{nm}$  FWHM:  $=143.7\text{nm}$  Ratio:  $R=20.5\%$   $G=76.2\%$   $B=3.3\%$

Render Index:  $R_a = 83.9$  TM30:  $R_f=85$   $R_g=95$

R1 =82 R2 =92 R3 =96 R4 =83 R5 =83 R6 =89 R7 =84

R8 =62 R9 =8 R10=80 R11=82 R12=71 R13=85 R14=99 R15=75

### 3.0 LM-79 Measurement and Test Results

#### 3.1 Integrating Sphere Test at 4000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	Sample ID.	7560633-3
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

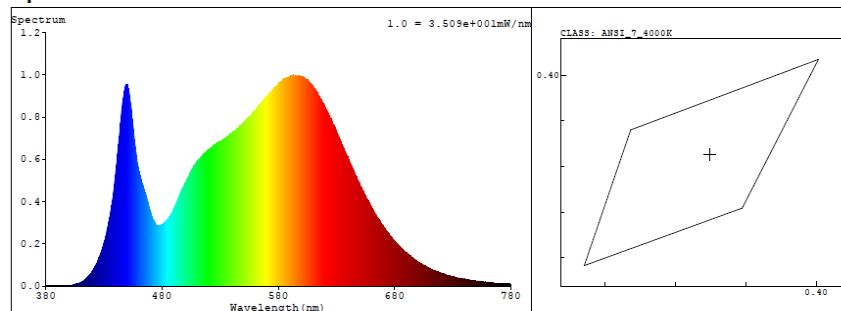
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
25.1	120	60	0.172	19.93	0.9673	Horizontal

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3926	82.5	2	0.3848	0.3826	2029.9	101.9

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3848$   $y = 0.3826$  /  $u' = 0.2257$   $v' = 0.5048$  ( $duv=1.43e-03$ )

CCT= 3926K Prcp WL:  $L_d=578.6\text{nm}$  Purity=30.3%

Peak WL:  $L_p=593\text{nm}$  FWHM:  $=147.5\text{nm}$  Ratio:R=18.4% G=78.1% B=3.6%

Render Index: Ra = 82.5 TM30:Rf=84 Rg=95

R1 =80 R2 =89 R3 =96 R4 =82 R5 =81 R6 =85 R7 =85  
R8 =62 R9 =2 R10=74 R11=81 R12=66 R13=82 R14=98 R15=73

### 3.0 LM-79 Measurement and Test Results

#### 3.2 Integrating Sphere Test at 3000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/SP/BK/CC	Sample ID.	7560633-1
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

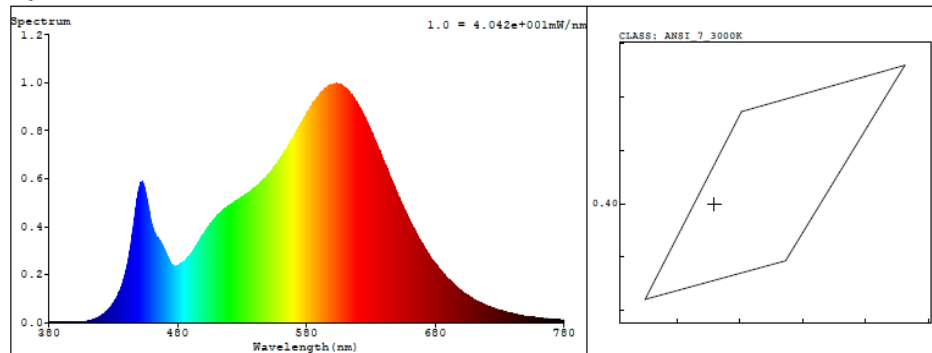
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.9	120	60	0.168	19.53	0.9673	Face down

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3159	83.6	8	0.426	0.3999	2002	102.5

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4260$   $y = 0.3999$  /  $u' = 0.2453$   $v' = 0.5181$  ( $duv = -3.92e-05$ )

CCT= 3159K Prcp WL: Ld=582.2nm Purity=47.9%

Peak WL: Lp=603nm FWHM: =130.9nm Ratio:R=22.1% G=74.8% B=3.0%

Render Index: Ra = 83.6 TM30:Rf=85 Rg=95

R1 =82 R2 =93 R3 =95 R4 =82 R5 =83 R6 =91 R7 =83

R8 =60 R9 =8 R10=83 R11=82 R12=74 R13=85 R14=98 R15=75

### 3.0 LM-79 Measurement and Test Results

#### 3.3 Integrating Sphere Test at 3000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/VN/BK/CC	Sample ID.	7560633-2
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

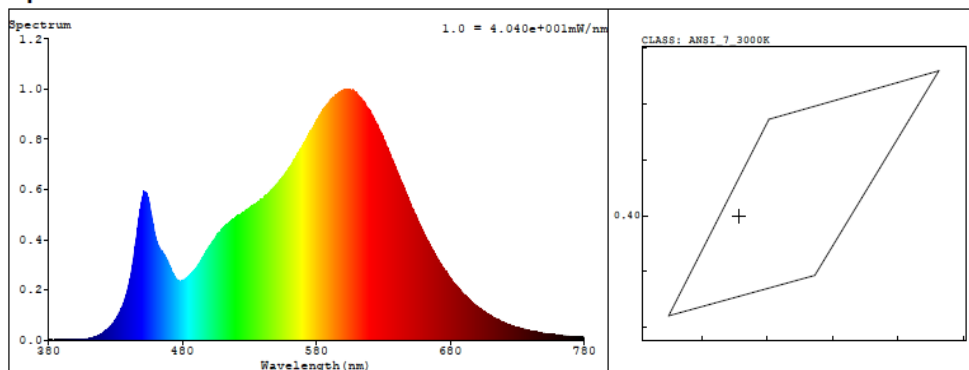
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.9	120	60	0.168	19.53	0.9673	Face down

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3164	83.6	8	0.4257	0.3999	2008	102.8

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4257$   $y = 0.3999$  /  $u' = 0.2451$   $v' = 0.5181$  ( $duv=1.47e-05$ )

CCT= 3164K Prcp WL:  $L_d=582.1\text{nm}$  Purity=47.8%

Peak WL:  $L_p=603\text{nm}$  FWHM:  $=132.3\text{nm}$  Ratio:R=22.1% G=74.9% B=3.0%

Render Index:  $R_a = 83.6$  TM30:  $R_f=85$   $R_g=95$

R1=82 R2=92 R3=95 R4=82 R5=83 R6=91 R7=83

R8=60 R9=8 R10=83 R11=82 R12=74 R13=85 R14=98 R15=74

### 3.0 LM-79 Measurement and Test Results

#### 3.4 Integrating Sphere Test at 3000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/MD/BK/CC	Sample ID.	7560633-4
Operate time (Min.)	55	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 0.9^{\circ}\text{C}$ .The reference standard lamp is power 100W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 3.The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%.Photometric measurement conditions was using  $4\pi$  geometry.The self-absorption factor is applied in the final test result.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.

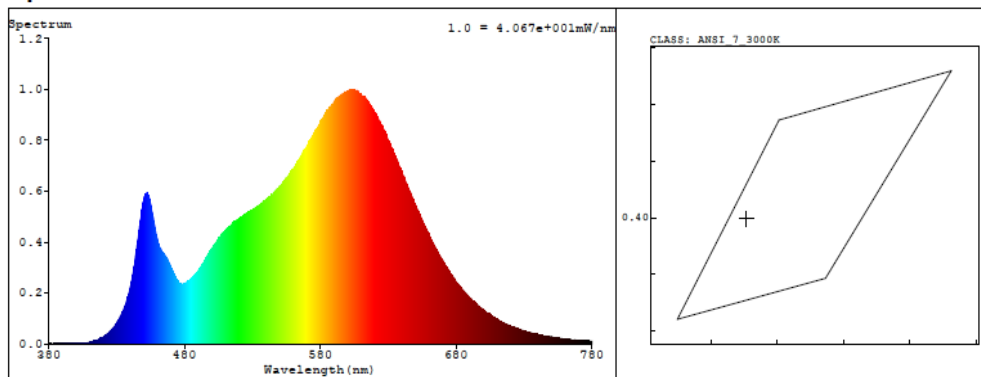
#### Integrating Sphere Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.9	120	60	0.168	19.54	0.9673	Face down

#### Test Results

CCT (K)	CRI (Ra)	R9	x	y	Luminous Flux (lm)	Luminous Efficacy (lm/W)
3170	83.7	8	0.4253	0.3999	2020.7	103.4

#### Spectrum



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4253$   $y = 0.3999$  /  $u' = 0.2449$   $v' = 0.5180$  ( $duv=3.84e-05$ )

CCT= 3170K Prcp WL:  $L_d=582.1\text{nm}$  Purity=47.7%

Peak WL:  $L_p=602\text{nm}$  FWHM:  $=131.8\text{nm}$  Ratio:R=22.1% G=74.9% B=3.0%

Render Index: Ra = 83.7 TM30:Rf=85 Rg=95

R1 =83 R2 =93 R3 =95 R4 =82 R5 =83 R6 =91 R7 =83

R8 =60 R9 =8 R10=83 R11=82 R12=74 R13=85 R14=98 R15=75

### 3.0 LM-79 Measurement and Test Results

#### 3.5 Goniophotometer Test at 4000K

Model No.	EXCYL4/SM/M/8CCT3S/DIM010UNV/NR/BK/CC	Sample ID.	7560633-3
Operate time (Min.)	60	Stabilization time (Min.)	50

#### Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using a type C goniophotometer and software.
- 3.The ambient temperature shall be maintained at 25° C ± 0.9° C, measured at a point not more than 1.5 m from the sample and at the same height as the sample. The reference standard lamp is power 400W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 4.The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. Photometric distance was more than five times of the largest dimension of the test SSL product.

#### Goniophotometer Test Conditions

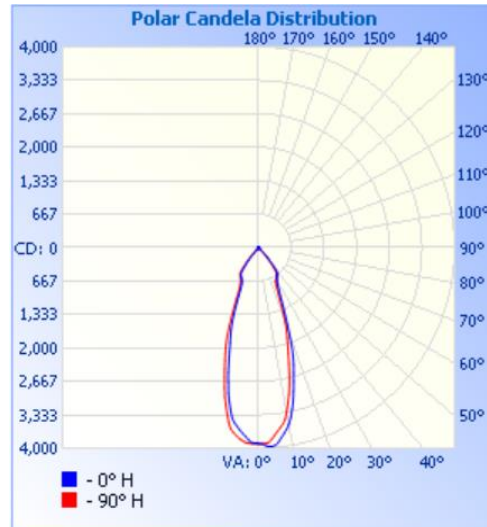
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.4	120	60	0.082	19.64	0.9900	face down

#### Test Results

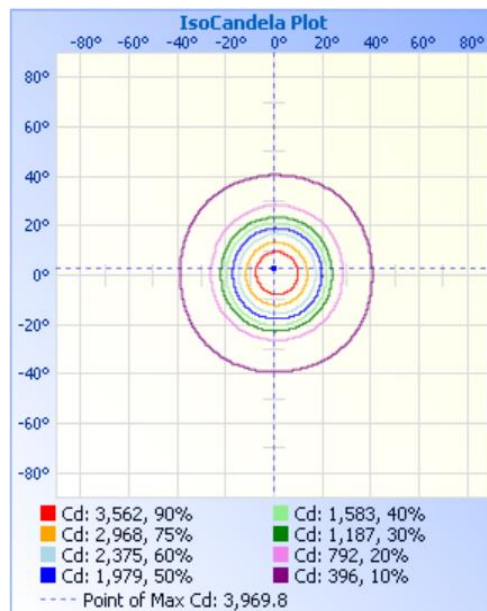
Flux (lm)	Zonal Lumen % (0-60°)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		Horizontal Spread	Vertical Spread	Horizontal Spread	Vertical Spread	
2015.1	99.7	79.4	79.7	36.7	36.6	102.6

### 3.5 Goniophotometer Test (Cont'd)

#### Light Distribution Curve



#### IsoCandela Plot



### 3.5 Goniophotometer Test (Cont'd)

#### Zonal Lumen Summary

##### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,516.9	75.3%
0-40	1,896.9	94.1%
0-60	2,000.7	99.3%
60-90	9.2	0.5%
70-100	2.8	0.1%
90-120	0.6	0%
0-90	2,009.8	99.7%
90-180	5.3	0.3%
0-180	2,015.1	100%

#### Lumens Per Zone

##### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	352.5	17.5%	90-100	0.2	0%
10-20	698.6	34.7%	100-110	0.2	0%
20-30	465.9	23.1%	110-120	0.2	0%
30-40	380.0	18.9%	120-130	0.2	0%
40-50	87.7	4.4%	130-140	0.5	0%
50-60	16.0	0.8%	140-150	0.9	0%
60-70	6.6	0.3%	150-160	1.4	0.1%
70-80	1.9	0.1%	160-170	1.2	0.1%
80-90	0.7	0.0%	170-180	0.5	0%

### 3.5 Goniophotometer Test (Cont'd)

#### Intensity Data(cd)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	3914	3922	3922	3916	3912	3906	3897	3896	3894	3898	3902	3903	3912	3917	3919	3922	3926
1	3907	3925	3921	3914	3909	3904	3897	3893	3893	3894	3897	3904	3910	3916	3918	3924	3924
2	3945	3924	3918	3912	3906	3900	3893	3886	3888	3890	3896	3903	3908	3915	3921	3923	3924
3	3970	3963	3939	3910	3889	3863	3845	3839	3842	3853	3865	3884	3902	3927	3943	3960	3964
4	3967	3948	3911	3867	3823	3792	3779	3775	3776	3796	3832	3853	3888	3918	3937	3954	3959
5	3951	3903	3850	3804	3751	3721	3707	3710	3717	3736	3782	3813	3860	3890	3901	3911	3915
6	3897	3838	3791	3734	3679	3649	3640	3647	3655	3678	3723	3767	3820	3848	3860	3870	3861
7	3811	3786	3726	3668	3612	3580	3570	3570	3592	3624	3671	3713	3768	3798	3814	3811	3804
8	3734	3728	3666	3606	3550	3512	3501	3502	3528	3562	3618	3669	3718	3750	3767	3764	3750
9	3658	3642	3583	3515	3458	3419	3414	3415	3445	3476	3519	3597	3654	3687	3713	3705	3683
10	3566	3519	3451	3363	3306	3278	3270	3275	3291	3314	3368	3463	3533	3580	3600	3589	3556
11	3443	3369	3292	3195	3141	3114	3055	3078	3135	3154	3206	3305	3373	3419	3427	3416	3389
12	3291	3200	3104	3025	2983	2926	2879	2879	2964	3001	3032	3143	3220	3255	3281	3262	3227
13	3130	3011	2927	2826	2792	2730	2702	2690	2753	2810	2859	2955	3061	3088	3104	3100	3052
14	2943	2831	2731	2653	2585	2524	2479	2485	2556	2632	2700	2784	2868	2914	2918	2914	2866
15	2766	2626	2537	2471	2382	2316	2295	2296	2348	2456	2520	2608	2683	2733	2757	2752	2689
16	2598	2439	2358	2277	2199	2144	2146	2132	2157	2274	2348	2425	2509	2577	2602	2600	2527
17	2437	2275	2189	2109	2029	1996	2001	1991	1993	2099	2194	2255	2344	2424	2441	2434	2381
18	2272	2117	2025	1956	1889	1867	1864	1856	1857	1945	2048	2108	2199	2273	2276	2266	2235
19	2072	1976	1883	1812	1748	1728	1714	1711	1722	1783	1888	1966	2053	2113	2113	2095	2082
20	1851	1819	1738	1662	1595	1551	1525	1540	1571	1608	1696	1797	1874	1921	1913	1908	1891
25	1039	986	946	877	859	834	810	812	825	845	880	961	973	1007	1060	1043	988
30	755	732	709	741	722	709	693	699	694	703	716	721	733	747	746	744	746
35	664	654	649	645	642	637	619	613	629	634	637	646	652	661	670	668	664
40	470	428	429	368	332	327	241	252	318	309	328	401	416	435	432	436	444
45	124	76	69	46	45	48	46	46	49	48	47	62	66	87	132	128	85
50	29	27	26	26	25	25	23	23	24	25	26	28	28	28	30	29	28
55	21	18	18	18	17	16	16	15	16	17	18	18	19	19	19	19	18
60	13	11	11	11	10	10	10	10	10	11	12	12	13	12	12	12	12
65	7	6	6	6	6	6	5	6	6	6	7	7	7	7	7	7	8
70	4	3	3	3	3	2	2	3	3	3	3	4	4	4	4	4	4
75	2	2	2	2	2	1	2	2	1	2	1	2	2	2	2	2	1
80	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
85	0	1	1	0	0	1	0	1	0	1	1	1	1	1	1	1	1
90	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
95	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0
100	0	0	1	0	0	0	0	0	-1	0	0	0	0	0	0	0	0
105	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
110	0	0	0	-1	0	0	0	0	0	0	0	0	1	0	0	0	0
115	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
120	-1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
130	1	1	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1
135	0	1	0	0	1	0	1	1	0	1	1	0	1	1	1	0	1
140	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
145	1	1	2	2	2	2	1	1	2	1	2	2	1	1	1	2	1
150	2	2	2	2	3	2	2	3	2	2	2	2	2	2	2	2	2
155	2	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
160	3	3	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4
165	4	4	4	4	4	4	4	4	5	4	4	5	4	4	5	5	4
170	4	4	5	4	4	5	5	5	5	5	5	5	5	5	4	4	5
175	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
180	5	5	6	5	5	5	5	5	5	5	5	5	5	5	5	5	6



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