



TL-1235

Report No.: AOC250916010ER

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Test Report

Applicant : Euro Lighting Ltd.
Address : Room 2607, 26/F, CC Wu Building, No. 302-308 Hennessy Road, Wan Chai, Hong Kong

Description of the submitted sample(s):

Sample Name : LED Dimmable Bulkhead
Model/Type : MG1212 18W
Trademark : EURO
Ratings : 220-240VAC, 50/60Hz, 18W
Test Item : LM-79-19
State of Sample(s) : Normal
Sample Quantity : 15 PCS
Up-shine Lighting Co., Ltd.
Factory : 2-5 Floor, 2nd Building, Runheng Industrial Zone, Fuyuan 1st Road, West Fuyong Sub-district, Bao'an, Shenzhen, 518103 China
Sample Received Date : 2025-09-09
Sample tested Date : 2025-09-09
Test Standard : LM-79-19
Test Laboratory : Shenzhen AOCE Electronic Technology Service Co., Ltd
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial
Testing location : Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Remark : The tested sample(s) and the sample information are provided by the client.

Compiled by:

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2025-09-26

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Summary of Result

Test Item	Test Result	
	Luminous Flux (lm)	Luminous Efficacy (lm/W)
Integrating Sphere Test (Sample No: S01)	2008.765	109.769
Integrating Sphere Test (Sample No: S02)	2100.190	115.395
Integrating Sphere Test (Sample No: S03)	1961.467	110.817
Integrating Sphere Test (Sample No: S04)	2011.227	116.932
Integrating Sphere Test (Sample No: S05)	2041.910	109.78
Integrating Sphere Test (Sample No: S06)	2092.731	113.121
Integrating Sphere Test (Sample No: S07)	2068.290	113.642
Integrating Sphere Test (Sample No: S08)	2035.281	110.613
Integrating Sphere Test (Sample No: S09)	2075.302	115.295
Integrating Sphere Test (Sample No: S10)	2049.749	112.624
Integrating Sphere Test (Sample No: S11)	2027.973	112.043
Integrating Sphere Test (Sample No: S12)	2157.040	117.871
Integrating Sphere Test (Sample No: S13)	2066.641	112.317
Integrating Sphere Test (Sample No: S14)	2039.974	112.086
Integrating Sphere Test (Sample No: S15)	1982.496	112.005
Goniophotometer Test (Sample No: S01)	2062.92	113.97
Goniophotometer Test (Sample No: S02)	2055.66	114.20
Goniophotometer Test (Sample No: S03)	2020.86	114.82
Goniophotometer Test (Sample No: S04)	2060.85	113.86

Goniophotometer Test (Sample No: S05)	2088.63	114.13
Goniophotometer Test (Sample No: S06)	2058.64	113.11
Goniophotometer Test (Sample No: S07)	2074.66	115.90
Goniophotometer Test (Sample No: S08)	2107.18	116.42
Goniophotometer Test (Sample No: S09)	2088.68	118.0
Goniophotometer Test (Sample No: S10)	2104.66	118.24
Goniophotometer Test (Sample No: S11)	2083.28	116.38
Goniophotometer Test (Sample No: S12)	2105.33	116.32
Goniophotometer Test (Sample No: S13)	2115.13	116.86
Goniophotometer Test (Sample No: S14)	2100.11	116.67
Goniophotometer Test (Sample No: S15)	2003.94	115.83

1 Test Condition

1.1 Air Temperature

The ambient temperature in which measurements are being taken shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the SSL product and at the same height as the SSL product. The temperature sensor shall be shielded from direct optical radiation from the SSL product and optical radiation from any other source. If measurements are performed at other than this recommended temperature, this is a non-standard condition and shall be noted in the test report.

1.2 Thermal Conditions for Mounting SSL Products

The method of mounting can be the primary path for heat flow away from the device and can affect measurement results significantly. The SSL product under test shall be mounted to the measuring instrument so that heat conduction through supporting objects causes negligible cooling effects. If the SSL product under test is provided with a support structure that is designated to be used as a component of the luminaire thermal management system, the product shall be tested with the support structure attached. Any such support structure included in the measurement shall be reported.

1.3 Air Movement

The incidence of air movements on the surface of a SSL product under test may substantially affect electrical and photometric values. Air flow around the SSL product being tested should be such that normal convective air flow induced by device under test is not affected.

1.4 Waveshape of AC Power Supply

The AC power supply, while operating the SSL product, shall have a sinusoidal voltage waveshape at the prescribed frequency typically 50/60 Hz or 50 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

1.5 Voltage Regulation

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ± 0.2 percent under load.

1.6 Seasoning

For the purpose of rating new SSL products, SSL products shall be tested with no seasoning.

1.7 Stabilization

Before measurements are taken, the SSL product under test shall be operated long enough to reach stabilization and temperature equilibrium. The time required for stabilization depends on the type of SSL products under test. The stabilization time typically ranges from 30 min to 2 or more hours for large SSL products.

1.8 Operating Orientation

The SSL product under test shall be evaluated in the operating orientation recommended by the manufacturer for an intended use of the SSL product. Stabilization and photometric measurements of SSL products shall be done in such operating orientation.

2 Test Method

2.1 Integrating Sphere Measurement

The integrating sphere system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The system is calibrated by standard lamp before measurement weekly. The standard lamp has been calibrated regularly and traced to the National Primary Standard.

The 4π geometry was used to measure total luminous, luminous efficacy, chromaticity coordinates, correlated color temperature, and color rendering index, the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm. The product was operated in its intended orientation and was recorded in the report.

2.2 Goniophotometer Measurement

The goniophotometer system is calibrated by standard lamp before measurement weekly. The standard lamp has been calibrated regularly and traced to National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous efficacy, luminous intensity distribution, and color angular uniformity, which were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. The product was operated in its intended orientation and was recorded in the report.

2.3 Electrical Measurement

According to ANSI C82.77-2002, the measurement was made using a digital power meter and power supply, the SSL product under test was operated at rated voltage and stabilized enough before measurement. The total harmonic distortion of current and power factor can be calculated from the digital power meter. The digital power meter was calibrated regularly and traced to National Primary Standard

3 Test Result

3.1 Integrating Sphere

Sample No: S01					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.968	18.3

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2008.765	6.144	4171	+0.00085	109.769

Ra	SDCM	X	y	u'	v'
84.7	2.95	0.3737	0.3742	0.2217	0.4995

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	66	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S02					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.6	49.2%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.081	0.969	18.2

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2100.19	6.418	4173	+0.00111	115.395

Ra	SDCM	X	y	u'	v'
84.7	2.89	0.3738	0.3748	0.2215	0.4998

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S03					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.079	0.968	17.7

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
1961.467	5.991	4171	+0.00103	110.817

Ra	SDCM	X	y	u'	v'
84.6	2.89	0.3738	0.3747	0.2216	0.4997

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	66	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S04					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.961	18.1

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2011.227	6.148	4177	+0.00101	111.118

Ra	SDCM	X	y	u'	v'
84.8	2.98	0.3736	0.3745	0.2215	0.4996

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S05					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.083	0.970	18.6

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2041.91	6.244	4161	+0.00076	109.78

Ra	SDCM	X	y	u'	v'
84.7	0.970	0.3741	0.3743	0.2219	0.4995

R1	R2	R3	R4	R5
83	91	96	84	84
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S06					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.083	0.971	18.5

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2092.731	6.391	4163	+0.00121	113.121

Ra	SDCM	X	y	u'	v'
84.8	2.66	0.3743	0.3754	0.2216	0.5001

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S07					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.081	0.969	18.2

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2068.29	6.317	4156	+0.00111	113.642

Ra	SDCM	X	y	u'	v'
84.7	2.56	0.3745	0.3753	0.2218	0.5001

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S08					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.969	18.4

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2035.281	6.216	4176	+0.00111	110.613

Ra	SDCM	X	y	u'	v'
84.6	2.94	0.3737	0.3748	0.2214	0.4997

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	66	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S09					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.08	0.968	18.0

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2075.302	6.338	4167	+0.00114	115.295

Ra	SDCM	X	y	u'	v'
84.6	2.75	0.3741	0.3751	0.2216	0.4999

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	66	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S10					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.968	18.2

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2049.749	6.267	4176	+0.00099	112.624

Ra	SDCM	X	y	u'	v'
84.8	2.98	0.3736	0.3745	0.2215	0.4996

R1	R2	R3	R4	R5
83	91	96	84	84
R6	R7	R8	R9	R10
87	87	67	14	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S11					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.081	0.968	18.1

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2027.973	6.192	4156	+0.0011	112.043

Ra	SDCM	X	y	u'	v'
84.7	2.56	0.3745	0.3753	0.2218	0.5000

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S12					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.969	18.3

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2157.04	6.596	4152	+0.00088	117.871

Ra	SDCM	X	y	u'	v'
84.7	2.58	0.3745	0.3749	0.222	0.4999

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S13					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.082	0.965	18.4

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2066.641	6.308	4150	+0.00114	112.317

Ra	SDCM	X	y	u'	v'
84.7	2.42	0.3748	0.3756	0.2218	0.5002

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	66	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S14					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.081	0.967	18.2

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
2039.974	6.225	4157	+0.00121	112.086

Ra	SDCM	X	y	u'	v'
84.7	2.56	0.3745	0.3755	0.2217	0.5002

R1	R2	R3	R4	R5
83	91	96	84	83
R6	R7	R8	R9	R10
87	87	67	13	78
R11	R12	R13	R14	R15
84	65	86	98	77

Sample No: S15					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.5	49.0%	Face down	10	3	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.1	50	0.079	0.966	17.7

Luminous Flux (lm)	Radiant Flux (W)	CCT (K)	Duv	Luminous Efficacy (lm/W)
1982.496	6.059	4154	+0.00093	112.005

Ra	SDCM	X	y	u'	v'
84.9	2.58	0.3745	0.3749	0.2219	0.4999

R1	R2	R3	R4	R5
83	91	96	84	84
R6	R7	R8	R9	R10
87	87	67	14	79
R11	R12	R13	R14	R15
84	65	86	98	77

Spectral Distribution & Chromaticity Diagram

Tel: (86)755-85277785

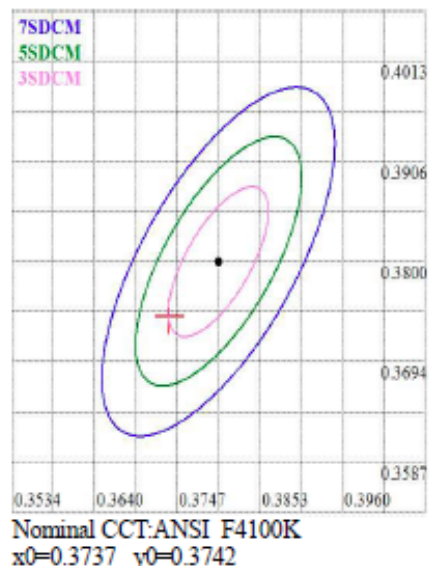
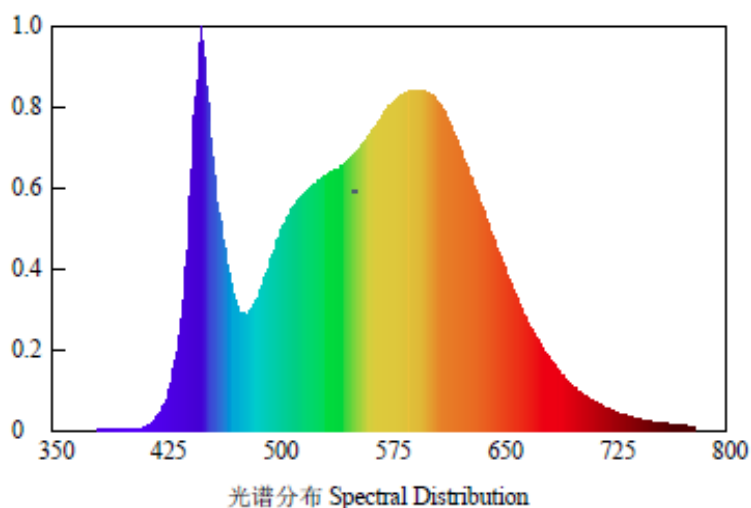
Fax: (86)755-23705230

E-mail: postmaster@aoc-cert.com

Website: [Http://www.aoc-cert.com](http://www.aoc-cert.com)

Sample No: S01

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3737$ $y=0.3742$ $u'=0.2217$ $v'=0.4995$

相关色温 Correlated Color Temperature: 4171 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.2 nm

色纯度 Purity: 0.2444

谱线带宽 Bandwidth: 23.2nm

光通量 Luminous Flux: 2008.765 lm

辐射通量 Radiant Flux: 6.144 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.1\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.9516

色偏差 Chromaticity Difference: +0.00085Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

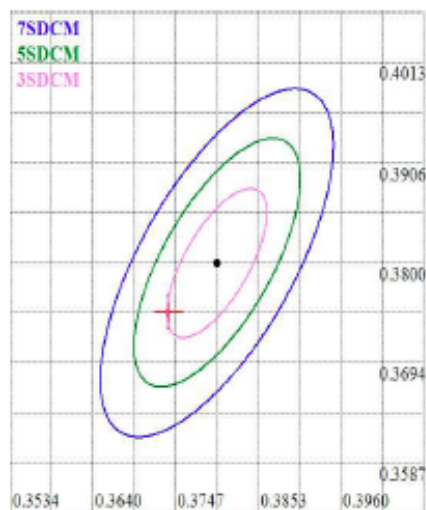
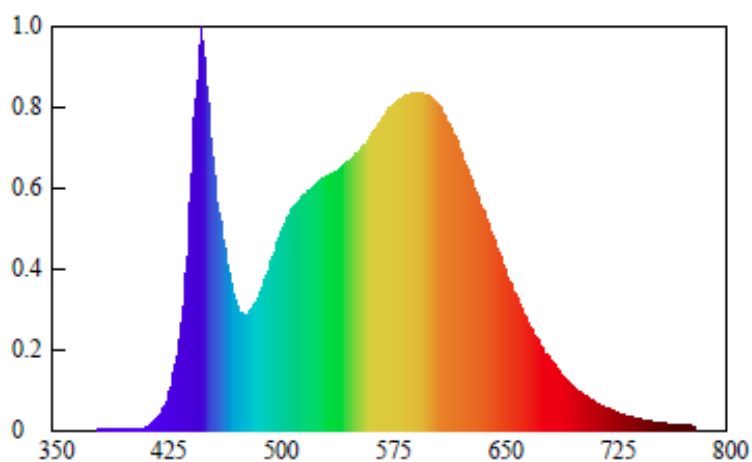
功率因数 Power Factor: 0.968

功率 Power: 18.3 W

发光效率 Luminous Efficacy: 109.769 lm/W

Sample No: S02

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3738$ $y=0.3748$ $u'=0.2215$ $v'=0.4998$

相关色温 Correlated Color Temperature: 4173 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.2 nm

色纯度 Purity: 0.2465

谱线带宽 Bandwidth: 22.9nm

光通量 Luminous Flux: 2100.190 lm

辐射通量 Radiant Flux: 6.418 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.8898

色偏差 Chromaticity Difference: +0.00111Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.081 A

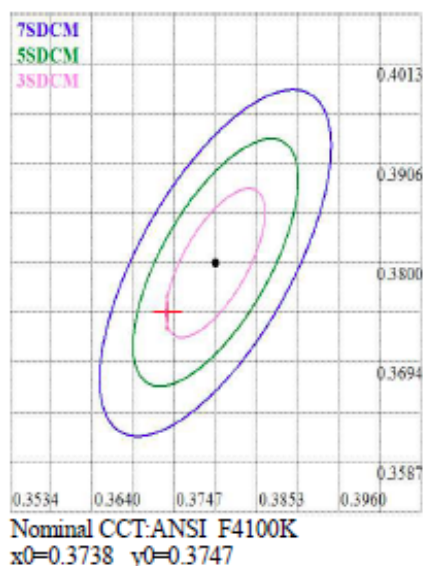
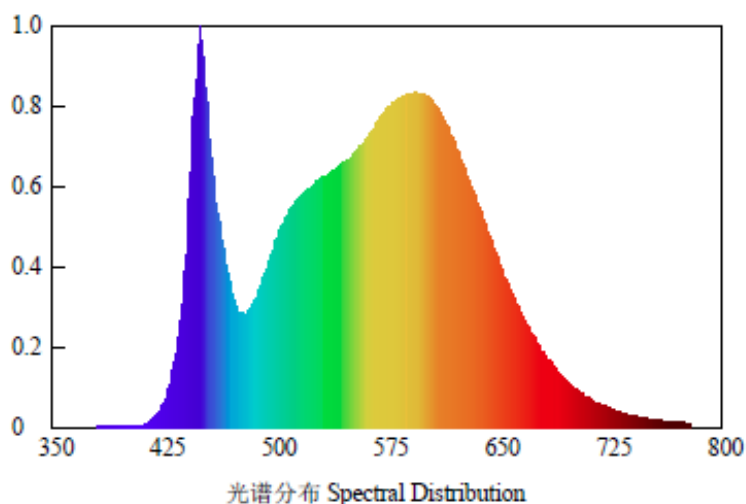
功率因数 Power Factor: 0.969

功率 Power: 18.2 W

发光效率 Luminous Efficacy: 115.395 lm/W

Sample No: S03

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3738$ $y=0.3747$ $u'=0.2216$ $v'=0.4997$

相关色温 Correlated Color Temperature: 4171 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.6$

峰值波长 Peak Wavelength: 450.2 nm

色纯度 Purity: 0.2462

谱线带宽 Bandwidth: 22nm

光通量 Luminous Flux: 1961.467 lm

辐射通量 Radiant Flux: 5.991 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.8909

色偏差 Chromaticity Difference: +0.00103Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.079 A

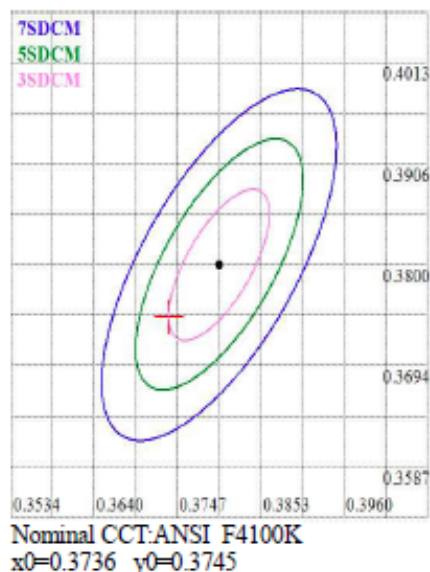
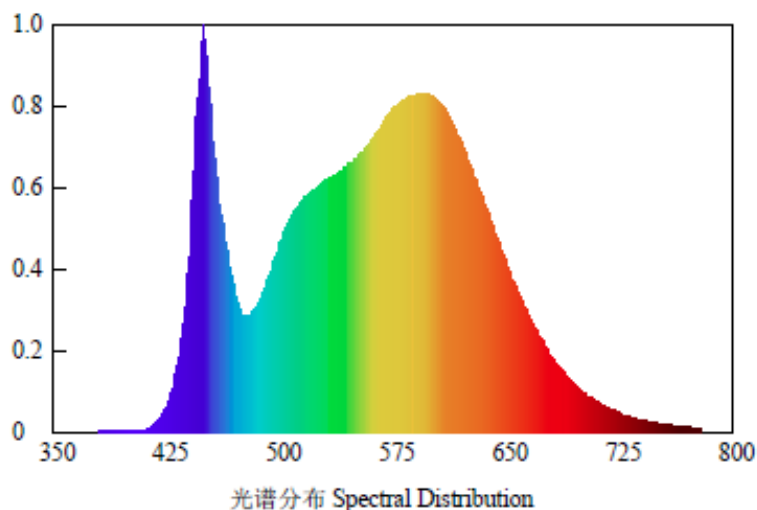
功率因数 Power Factor: 0.968

功率 Power: 17.7 W

发光效率 Luminous Efficacy: 110.817 lm/W

Sample No: S04

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3736$ $y=0.3745$ $u'=0.2215$ $v'=0.4996$

相关色温 Correlated Color Temperature: 4177 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.8$

峰值波长 Peak Wavelength: 450.2 nm

色纯度 Purity: 0.2450

谱线带宽 Bandwidth: 23nm

光通量 Luminous Flux: 2011.227 lm

辐射通量 Radiant Flux: 6.148 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.9847

色偏差 Chromaticity Difference: +0.00101Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

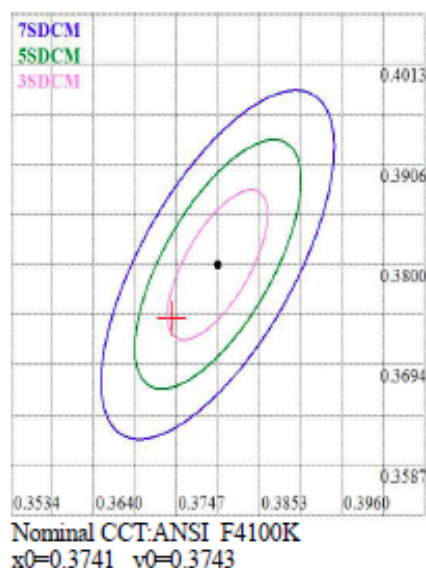
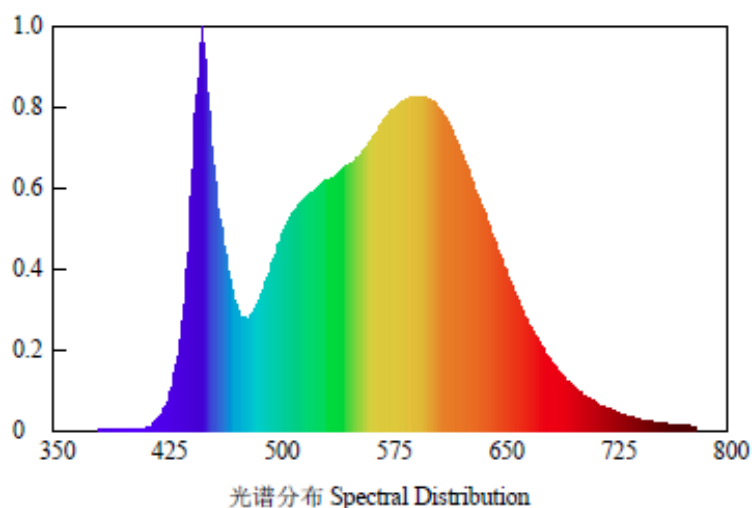
功率因数 Power Factor: 0.961

功率 Power: 18.1W

发光效率 Luminous Efficacy: 111.118 lm/W

Sample No: S05

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3741$ $y=0.3743$ $u'=0.2219$ $v'=0.4995$

相关色温 Correlated Color Temperature: 4161 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.0 nm

色纯度 Purity: 0.2459

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2041.910 lm

辐射通量 Radiant Flux: 6.244 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.1\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.7814

色偏差 Chromaticity Difference: +0.00076Duv

R1=83 R2=91 R3=96 R4=84 R5=84 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.083 A

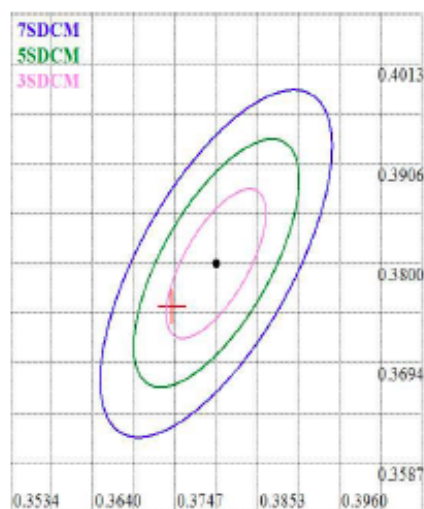
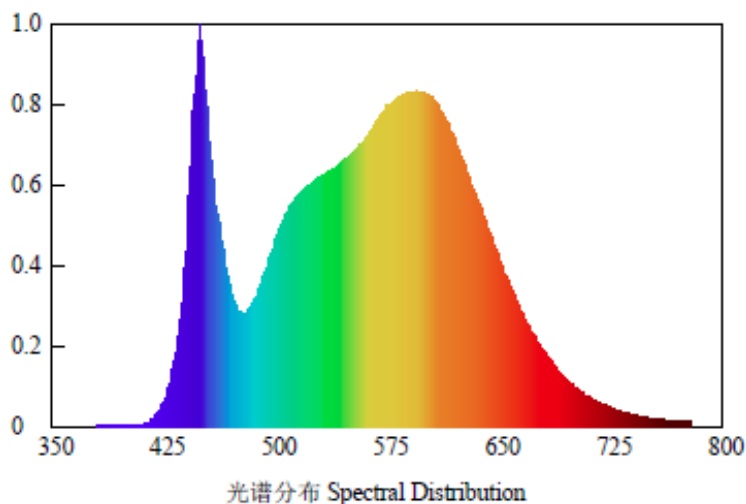
功率因数 Power Factor: 0.970

功率 Power: 18.6 W

发光效率 Luminous Efficacy: 109.78 lm/W

Sample No: S06

光色参数 Spectroradiometric Parameters



Nominal CCT: ANSI F4100K

 $x_0=0.3743$ $y_0=0.3754$ 色品坐标 Chromaticity Coordinates: $x=0.3743$ $y=0.3754$ $u'=0.2216$ $v'=0.5001$

相关色温 Correlated Color Temperature: 4163 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.8$

峰值波长 Peak Wavelength: 450.1 nm

色纯度 Purity: 0.2498

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2092.731 lm

辐射通量 Radiant Flux: 6.391 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.6572

色偏差 Chromaticity Difference: +0.00121Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.083 A

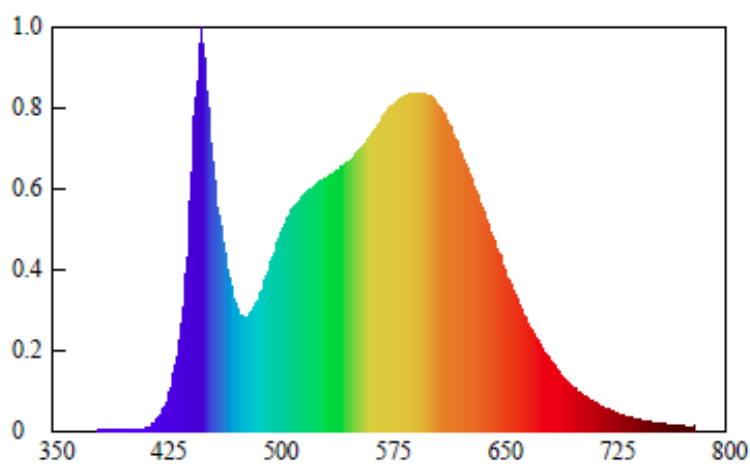
功率因数 Power Factor: 0.971

功率 Power: 18.5 W

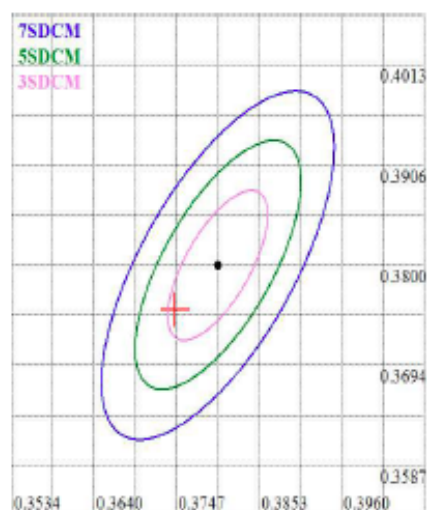
发光效率 Luminous Efficacy: 113.121 lm/W

Sample No: S07

光色参数 Spectroradiometric Parameters



光谱分布 Spectral Distribution

色品坐标 Chromaticity Coordinates: $x=0.3745$ $y=0.3753$ $u'=0.2218$ $v'=0.5001$

相关色温 Correlated Color Temperature: 4156 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.1 nm

色纯度 Purity: 0.2501

谱线带宽 Bandwidth: 22nm

光通量 Luminous Flux: 2068.290 lm

辐射通量 Radiant Flux: 6.317 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.5645

色偏差 Chromaticity Difference: +0.00111Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.081 A

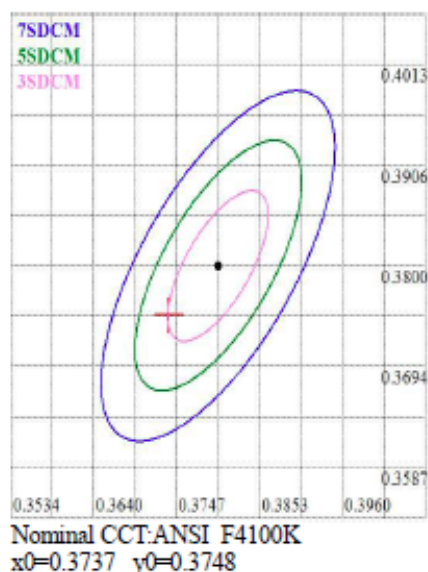
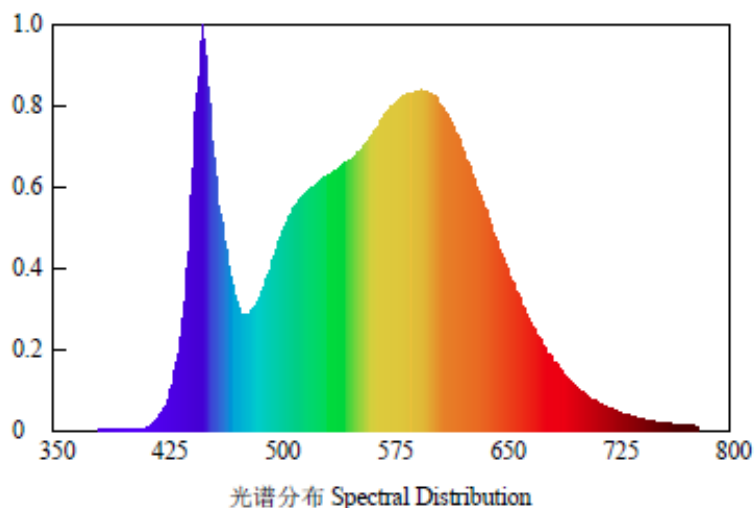
功率因数 Power Factor: 0.969

功率 Power: 18.2 W

发光效率 Luminous Efficacy: 113.642 lm/W

Sample No: S08

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3737$ $y=0.3748$ $u'=0.2214$ $v'=0.4997$

相关色温 Correlated Color Temperature: 4176 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.6$

峰值波长 Peak Wavelength: 450.1 nm

色纯度 Purity: 0.2462

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2035.281 lm

辐射通量 Radiant Flux: 6.216 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.9362

色偏差 Chromaticity Difference: +0.00111Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

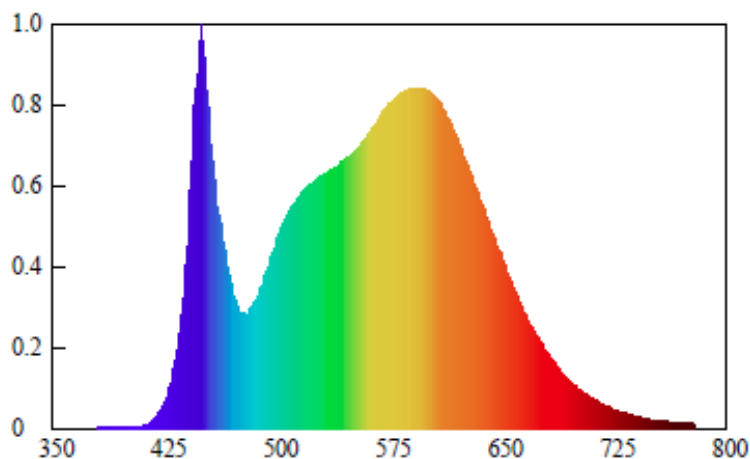
功率因数 Power Factor: 0.969

功率 Power: 18.4 W

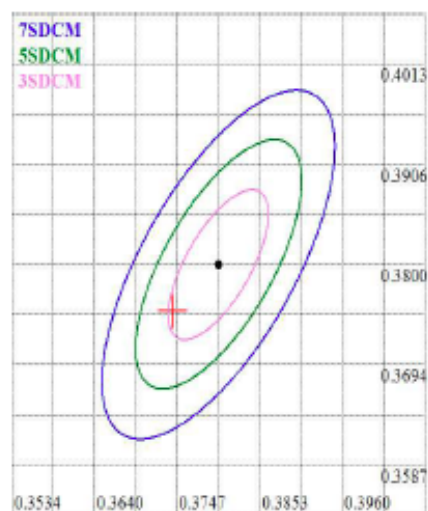
发光效率 Luminous Efficacy: 110.613 lm/W

Sample No: S09

光色参数 Spectroradiometric Parameters



光谱分布 Spectral Distribution

色品坐标 Chromaticity Coordinates: $x=0.3741$ $y=0.3751$ $u'=0.2216$ $v'=0.4999$

相关色温 Correlated Color Temperature: 4167 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.6$

峰值波长 Peak Wavelength: 450.0 nm

色纯度 Purity: 0.2483

谱线带宽 Bandwidth: 22.3nm

光通量 Luminous Flux: 2075.302 lm

辐射通量 Radiant Flux: 6.338 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.7498

色偏差 Chromaticity Difference: +0.00114Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.08 A

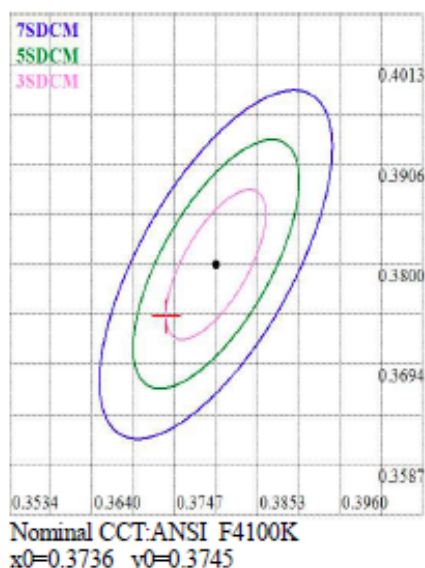
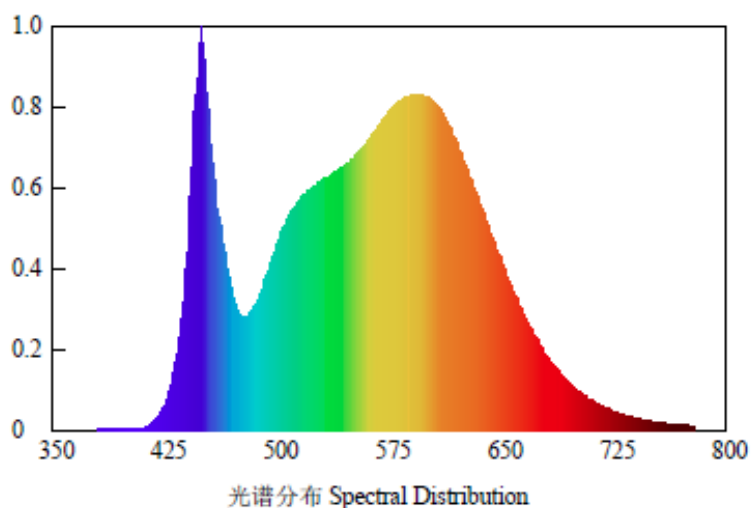
功率因数 Power Factor: 0.968

功率 Power: 18.0 W

发光效率 Luminous Efficacy: 115.295 lm/W

Sample No: S10

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3736$ $y=0.3745$ $u'=0.2215$ $v'=0.4996$

相关色温 Correlated Color Temperature: 4176 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.8$

峰值波长 Peak Wavelength: 450.0 nm

色纯度 Purity: 0.2450

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2049.749 lm

辐射通量 Radiant Flux: 6.267 W

色比 Color Ratio: $K_r=37.4\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.9847

色偏差 Chromaticity Difference: +0.00099Duv

R1=83 R2=91 R3=96 R4=84 R5=84 R6=87 R7=87 R8=67

R9=14 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

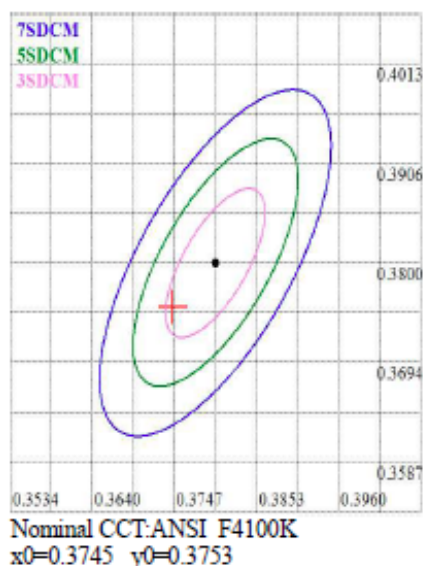
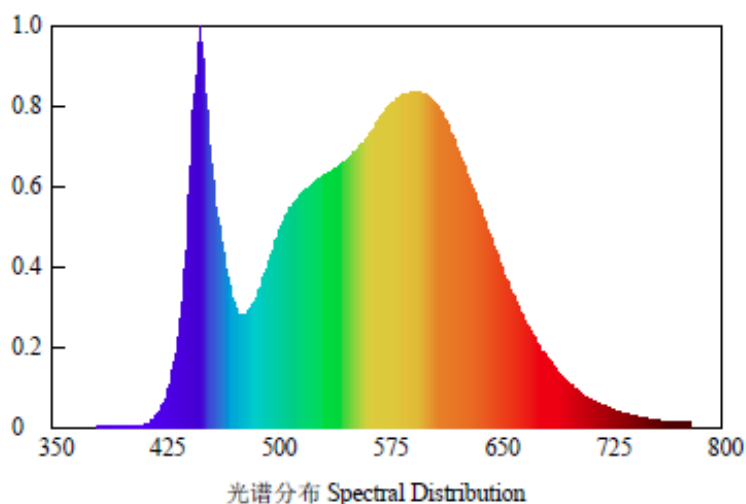
功率因数 Power Factor: 0.968

功率 Power: 18.2 W

发光效率 Luminous Efficacy: 112.624 lm/W

Sample No: S11

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3745$ $y=0.3753$ $u'=0.2218$ $v'=0.5$

相关色温 Correlated Color Temperature: 4156 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.0 nm

色纯度 Purity: 0.2501

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2027.973 lm

辐射通量 Radiant Flux: 6.192 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.5645

色偏差 Chromaticity Difference: +0.0011Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.081 A

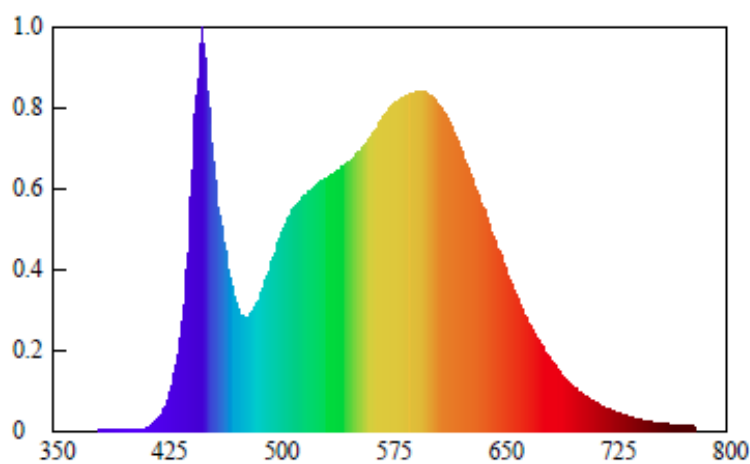
功率因数 Power Factor: 0.968

功率 Power: 18.1 W

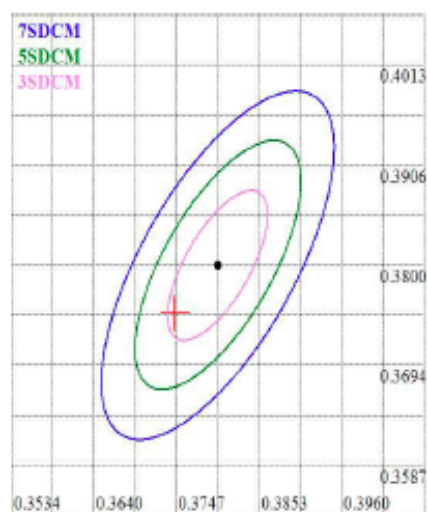
发光效率 Luminous Efficacy: 112.043 lm/W

Sample No: S12

光色参数 Spectroradiometric Parameters



光谱分布 Spectral Distribution



Nominal CCT: ANSI F4100K

x0=0.3745 y0=0.3749

色品坐标 Chromaticity Coordinates: x=0.3745 y=0.3749 u'=0.222 v'=0.4999

相关色温 Correlated Color Temperature: 4152 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: Ra=84.7

峰值波长 Peak Wavelength: 450.1 nm

色纯度 Purity: 0.2489

谱线带宽 Bandwidth: 22.1nm

光通量 Luminous Flux: 2157.040 lm

辐射通量 Radiant Flux: 6.596 W

色比 Color Ratio: Kr=37.5% Kg=52.1% Kb=10.4%

色容差 Color Tolerance(SDCM): 2.5787

色偏差 Chromaticity Difference: +0.00088Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=67

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

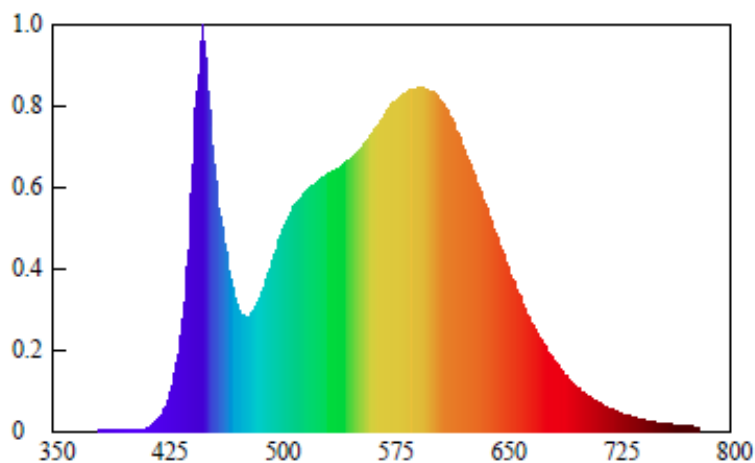
功率因数 Power Factor: 0.969

功率 Power: 18.3 W

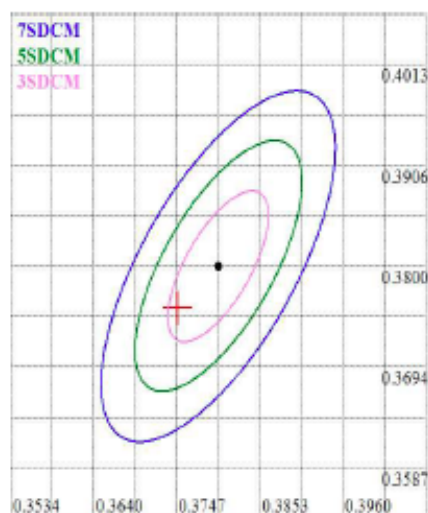
发光效率 Luminous Efficacy: 117.871 lm/W

Sample No: S13

光色参数 Spectroradiometric Parameters



光谱分布 Spectral Distribution



Nominal CCT: ANSI F4100K

x0=0.3748 y0=0.3756

色品坐标 Chromaticity Coordinates: $x=0.3748$ $y=0.3756$ $u'=0.2218$ $v'=0.5002$

相关色温 Correlated Color Temperature: 4150 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.0 nm

色纯度 Purity: 0.2519

谱线带宽 Bandwidth: 22.2nm

光通量 Luminous Flux: 2066.641 lm

辐射通量 Radiant Flux: 6.308 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.1\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.424

色偏差 Chromaticity Difference: +0.00114Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.082 A

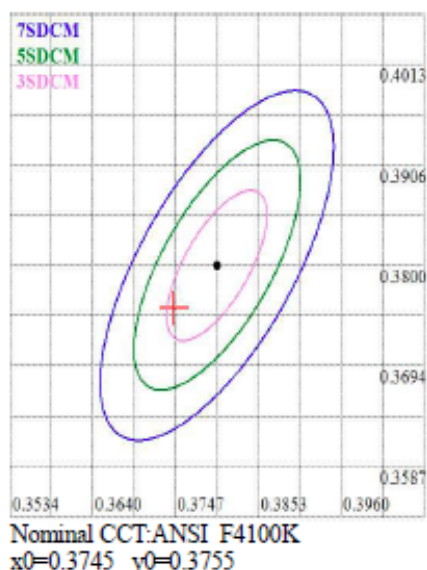
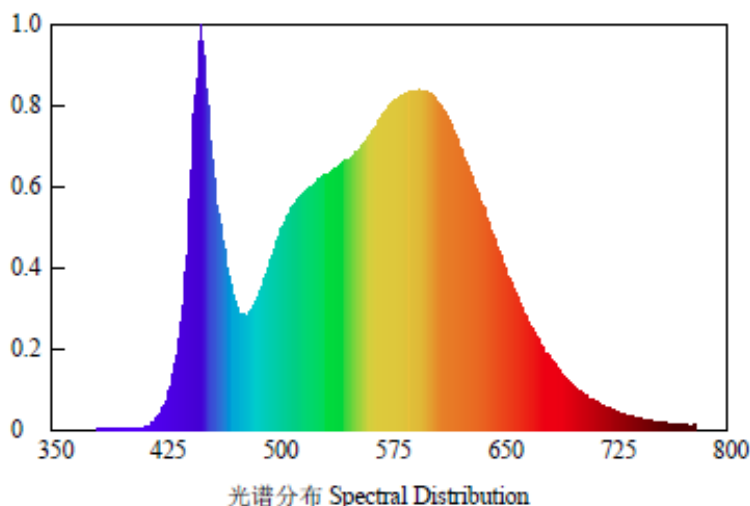
功率因数 Power Factor: 0.965

功率 Power: 18.4 W

发光效率 Luminous Efficacy: 112.317 lm/W

Sample No: S14

光色参数 Spectroradiometric Parameters

色品坐标 Chromaticity Coordinates: $x=0.3745$ $y=0.3755$ $u'=0.2217$ $v'=0.5002$

相关色温 Correlated Color Temperature: 4157 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.7$

峰值波长 Peak Wavelength: 450.1 nm

色纯度 Purity: 0.2507

谱线带宽 Bandwidth: 22nm

光通量 Luminous Flux: 2039.974 lm

辐射通量 Radiant Flux: 6.225 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.2\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.5634

色偏差 Chromaticity Difference: +0.00121Duv

R1=83 R2=91 R3=96 R4=84 R5=83 R6=87 R7=87 R8=66

R9=13 R10=78 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.081 A

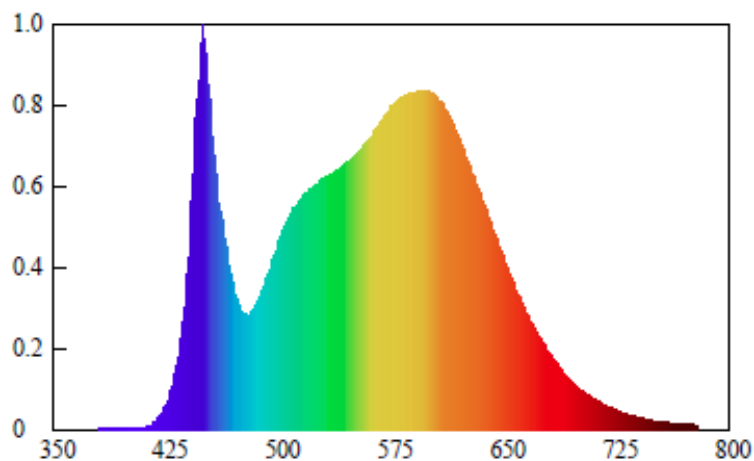
功率因数 Power Factor: 0.967

功率 Power: 18.2 W

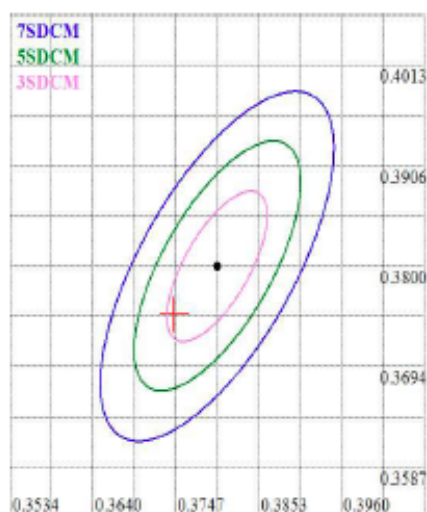
发光效率 Luminous Efficacy: 112.086 lm/W

Sample No: S15

光色参数 Spectroradiometric Parameters



光谱分布 Spectral Distribution



Nominal CCT: ANSI F4100K

 $x_0=0.3745$ $y_0=0.3749$ 色品坐标 Chromaticity Coordinates: $x=0.3745$ $y=0.3749$ $u'=0.2219$ $v'=0.4999$

相关色温 Correlated Color Temperature: 4154 K

主波长 Dominant Wavelength: 576.0 nm(E)

显色指数 Rendering Index: $R_a=84.9$

峰值波长 Peak Wavelength: 450.3 nm

色纯度 Purity: 0.2489

谱线带宽 Bandwidth: 22.9nm

光通量 Luminous Flux: 1982.496 lm

辐射通量 Radiant Flux: 6.059 W

色比 Color Ratio: $K_r=37.5\%$ $K_g=52.1\%$ $K_b=10.4\%$

色容差 Color Tolerance(SDCM): 2.5787

色偏差 Chromaticity Difference: +0.00093Duv

R1=83 R2=91 R3=96 R4=84 R5=84 R6=87 R7=87 R8=67

R9=14 R10=79 R11=84 R12=65 R13=86 R14=98 R15=77

电参数 Electric Parameters

电压 Voltage: 230.1 V

电流 Current: 0.079 A

功率因数 Power Factor: 0.966

功率 Power: 17.7 W

发光效率 Luminous Efficacy: 112.005 lm/W

3.2. Goniophotometer

Sample No: S01					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.081	0.964	18.1

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2062.92	458.738	278.3*167.9	117.3*155.9	113.97

Photometric Results

Lumens(lm): 2062.92
 Efficiency(%): 104.19%
 Lumens(lm)/Power(W): 113.97
 Central intensity(cd): 451.673
 Maximum intensity(cd): 458.738
 Angle of maximum intensity: C=30.0 γ =0.0
 Beam Angle(50%Imax): [C0/180]Total=117.3
 [C90/270]Total=155.9
 Field angle(10%Imax): [C0/180]Total=167.9
 [C90/270]Total=278.3
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.40
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.55
 Up flux rate of lamp(%): 15.20%
 Down flux rate of lamp(%): 88.99%
 Up flux rate of LUM(%): 14.59%
 Down flux rate of LUM(%): 85.41%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.466%

Sample No: S02					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.081	0.965	18.0

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2055.6	458.066	167.8*279.1	117.2*155.3	114.20

Photometric Results

Lumens(lm): 2055.66
 Efficiency(%): 103.82%
 Lumens(lm)/Power(W): 114.20
 Central intensity(cd): 450.327
 Maximum intensity(cd): 458.066
 Angle of maximum intensity: C=30.0 γ =0.0
 Beam Angle(50%Imax): [C0/180]Total=117.2
 [C90/270]Total=155.3
 Field angle(10%Imax): [C0/180]Total=167.8
 [C90/270]Total=279.1
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.18%
 Down flux rate of lamp(%): 88.65%
 Up flux rate of LUM(%): 14.62%
 Down flux rate of LUM(%): 85.38%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.476%

Sample No: S03					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
229.9	50	0.079	0.963	17.6

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2020.86	451.841	167.6*279.4	117.2*155.1	14.82

Photometric Results

Lumens(lm): 2020.86
 Efficiency(%): 102.06%
 Lumens(lm)/Power(W): 114.82
 Central intensity(cd): 444.608
 Maximum intensity(cd): 451.841
 Angle of maximum intensity: C=30.0 γ =0.0
 Beam Angle(50%Imax): [C0/180]Total=117.2
 [C90/270]Total=155.1
 Field angle(10%Imax): [C0/180]Total=167.6
 [C90/270]Total=279.4
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.40
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.56
 Up flux rate of lamp(%): 14.83%
 Down flux rate of lamp(%): 87.23%
 Up flux rate of LUM(%): 14.53%
 Down flux rate of LUM(%): 85.47%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.613%

Sample No: S04					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.082	0.965	18.1

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2060.85	458.57	167.7*275.7	117.5*155.5	113.86

Photometric Results

Lumens(lm): 2060.85
 Efficiency(%): 104.08%
 Lumens(lm)/Power(W): 113.86
 Central intensity(cd): 452.178
 Maximum intensity(cd): 458.570
 Angle of maximum intensity: C=90.0 γ =15.0
 Beam Angle(50%Imax): [C0/180]Total=117.5
 [C90/270]Total=155.5
 Field angle(10%Imax): [C0/180]Total=167.7
 [C90/270]Total=275.7
 Maximum s/h(1/2): C0_180=1.30 C90_270=1.48
 Maximum s/h(1/4): C0_180=1.42 C90_270=1.62
 Up flux rate of lamp(%): 15.15%
 Down flux rate of lamp(%): 88.93%
 Up flux rate of LUM(%): 14.56%
 Down flux rate of LUM(%): 85.44%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.436%

Sample No: S05					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
229.9	50	0.082	0.965	18.3

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2088.63	464.794	167.5*279.0	117.3*155.5	114.13

Photometric Results

Lumens(lm): 2088.63
 Efficiency(%): 105.49%
 Lumens(lm)/Power(W): 114.13
 Central intensity(cd): 455.879
 Maximum intensity(cd): 464.794
 Angle of maximum intensity: C=270.0 γ =10.0
 Beam Angle(50%Imax): [C0/180]Total=117.3
 [C90/270]Total=155.5
 Field angle(10%Imax): [C0/180]Total=167.5
 [C90/270]Total=279.0
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.45%
 Down flux rate of lamp(%): 90.04%
 Up flux rate of LUM(%): 14.64%
 Down flux rate of LUM(%): 85.36%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.432%

Sample No: S06					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
229.9	50	0.082	0.965	18.2

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2058.64	457.056	168.6*279.7	117.5*155.9	113.11

Photometric Results

Lumens(lm): 2058.64
 Efficiency(%): 103.97%
 Lumens(lm)/Power(W): 113.11
 Central intensity(cd): 449.150
 Maximum intensity(cd): 457.056
 Angle of maximum intensity: $C=270.0$ $\gamma=10.0$
 Beam Angle(50%Imax): [C0/180]Total=117.5
 [C90/270]Total=155.9
 Field angle(10%Imax): [C0/180]Total=168.6
 [C90/270]Total=279.7
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.27%
 Down flux rate of lamp(%): 88.70%
 Up flux rate of LUM(%): 14.68%
 Down flux rate of LUM(%): 85.32%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.351%

Sample No: S07					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.08	0.964	17.9

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2074.66	461.366	167.6*279.7	117.2*155.6	115.90

Photometric Results

Lumens(lm): 2074.66
 Efficiency(%): 104.78%
 Lumens(lm)/Power(W): 115.90
 Central intensity(cd): 453.573
 Maximum intensity(cd): 461.366
 Angle of maximum intensity: C=270.0 γ =15.0
 Beam Angle(50%Imax): [C0/180]Total=117.2
 [C90/270]Total=155.6
 Field angle(10%Imax): [C0/180]Total=167.6
 [C90/270]Total=279.7
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.37%
 Down flux rate of lamp(%): 89.41%
 Up flux rate of LUM(%): 14.67%
 Down flux rate of LUM(%): 85.33%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.419%

Sample No: S08					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
229.9	50	0.081	0.964	18.1

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2107.18	465.003	168.3*280.9	117.4*156.7	116.42

Photometric Results

Lumens(lm): 2107.18
 Efficiency(%): 106.42%
 Lumens(lm)/Power(W): 116.42
 Central intensity(cd): 458.249
 Maximum intensity(cd): 465.003
 Angle of maximum intensity: $C=30.0$ $\gamma=0.0$
 Beam Angle(50%Imax): [C0/180]Total=117.4
 [C90/270]Total=156.7
 Field angle(10%Imax): [C0/180]Total=168.3
 [C90/270]Total=280.9
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.39
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.55
 Up flux rate of lamp(%): 15.75%
 Down flux rate of lamp(%): 90.67%
 Up flux rate of LUM(%): 14.80%
 Down flux rate of LUM(%): 85.20%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.204%

Sample No: S09					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.08	0.964	17.7

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2088.68	462.752	167.9*280.6	117.2*156.4	118.0

Photometric Results

Lumens(lm): 2088.68
 Efficiency(%): 105.49%
 Lumens(lm)/Power(W): 118.00
 Central intensity(cd): 456.690
 Maximum intensity(cd): 462.752
 Angle of maximum intensity: $C=30.0$ $\gamma=0.0$
 Beam Angle(50%Imax): [C0/180]Total=117.2
 [C90/270]Total=156.4
 Field angle(10%Imax): [C0/180]Total=167.9
 [C90/270]Total=280.6
 Maximum s/h(1/2): C0_180=1.27 C90_270=1.39
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.55
 Up flux rate of lamp(%): 15.51%
 Down flux rate of lamp(%): 89.97%
 Up flux rate of LUM(%): 14.71%
 Down flux rate of LUM(%): 85.29%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.347%

Sample No: S10					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.08	0.963	17.8

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2104.66	466.216	167.9*277.6	117.5*156.4	118.24

Photometric Results

Lumens(lm): 2104.66
 Efficiency(%): 106.30%
 Lumens(lm)/Power(W): 118.24
 Central intensity(cd): 459.115
 Maximum intensity(cd): 466.216
 Angle of maximum intensity: $C=30.0$ $\gamma=0.0$
 Beam Angle(50%Imax): [C0/180]Total=117.5
 [C90/270]Total=156.4
 Field angle(10%Imax): [C0/180]Total=167.9
 [C90/270]Total=277.6
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.39
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.55
 Up flux rate of lamp(%): 15.53%
 Down flux rate of lamp(%): 90.76%
 Up flux rate of LUM(%): 14.61%
 Down flux rate of LUM(%): 85.39%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.387%

Sample No: S11					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.08	0.964	17.9

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2083.28	466.042	168.0*278.8	117.3*154.8	116.38

Photometric Results

Lumens(lm): 2083.28
 Efficiency(%): 105.22%
 Lumens(lm)/Power(W): 116.38
 Central intensity(cd): 458.769
 Maximum intensity(cd): 466.042
 Angle of maximum intensity: C=270.0 γ =10.0
 Beam Angle(50%Imax): [C0/180]Total=117.3
 [C90/270]Total=154.8
 Field angle(10%Imax): [C0/180]Total=168.0
 [C90/270]Total=278.8
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.24%
 Down flux rate of lamp(%): 89.98%
 Up flux rate of LUM(%): 14.48%
 Down flux rate of LUM(%): 85.52%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.661%

Sample No: S12					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.081	0.964	18.1

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2105.33	465.003	168.1*280.9	117.4*156.7	116.32

Photometric Results

Lumens(lm): 2105.33
 Efficiency(%): 106.33%
 Lumens(lm)/Power(W): 116.32
 Central intensity(cd): 457.037
 Maximum intensity(cd): 465.003
 Angle of maximum intensity: C=30.0 γ =0.0
 Beam Angle(50%Imax): [C0/180]Total=117.4
 [C90/270]Total=156.7
 Field angle(10%Imax): [C0/180]Total=168.1
 [C90/270]Total=280.9
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.39
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.55
 Up flux rate of lamp(%): 15.74%
 Down flux rate of lamp(%): 90.59%
 Up flux rate of LUM(%): 14.81%
 Down flux rate of LUM(%): 85.19%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.202%

Sample No: S13					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.081	0.965	18.1

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2115.13	470.372	168.5*279.7	117.5*155.4	116.86

Photometric Results

Lumens(lm): 2115.13
 Efficiency(%): 106.82%
 Lumens(lm)/Power(W): 116.86
 Central intensity(cd): 462.059
 Maximum intensity(cd): 470.372
 Angle of maximum intensity: C=270.0 γ =10.0
 Beam Angle(50%Imax): [C0/180]Total=117.5
 [C90/270]Total=155.4
 Field angle(10%Imax): [C0/180]Total=168.5
 [C90/270]Total=279.7
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 15.63%
 Down flux rate of lamp(%): 91.19%
 Up flux rate of LUM(%): 14.64%
 Down flux rate of LUM(%): 85.36%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.426%

Sample No: S14					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
230.0	50	0.08	0.973	18.0

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2100.11	464.830	167.8*280.2	117.3*156.4	116.67

Photometric Results

Lumens(lm): 2100.11
 Efficiency(%): 106.07%
 Lumens(lm)/Power(W): 116.67
 Central intensity(cd): 457.383
 Maximum intensity(cd): 464.830
 Angle of maximum intensity: $C=30.0$ $\gamma=0.0$
 Beam Angle(50%Imax): [C0/180]Total=117.3
 [C90/270]Total=156.4
 Field angle(10%Imax): [C0/180]Total=167.8
 [C90/270]Total=280.2
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.40
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.56
 Up flux rate of lamp(%): 15.64%
 Down flux rate of lamp(%): 90.43%
 Up flux rate of LUM(%): 14.75%
 Down flux rate of LUM(%): 85.25%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.294%

Sample No: S15					
Temperature (°C)	Test Humidity	Orientation	Stabilization Time(min)	Test Time(min)	Number of hours operated prior to measurement
24.7	48.2%	Face forward	15	35	0

Input Voltage (V)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
229.8	50	0.078	0.961	17.3

Luminous Flux (lm)	CBCP (cd)	Field Angle (10%)	Beam Angle (50%)	Luminous Efficacy (lm/W)
2003.94	444.048	168.0*279.9	117.4*156.0	115.83

Photometric Results

Lumens(lm): 2003.94
 Efficiency(%): 101.21%
 Lumens(lm)/Power(W): 115.83
 Central intensity(cd): 436.947
 Maximum intensity(cd): 444.048
 Angle of maximum intensity: $C=270.0$ $\gamma=10.0$
 Beam Angle(50%Imax): [C0/180]Total=117.4
 [C90/270]Total=156.0
 Field angle(10%Imax): [C0/180]Total=168.0
 [C90/270]Total=279.9
 Maximum s/h(1/2): C0_180=1.28 C90_270=1.38
 Maximum s/h(1/4): C0_180=1.40 C90_270=1.54
 Up flux rate of lamp(%): 14.89%
 Down flux rate of lamp(%): 86.32%
 Up flux rate of LUM(%): 14.72%
 Down flux rate of LUM(%): 85.28%
 CIE Type : Semidirect lighting
 Output flux ratio in π solid angle : 56.322%

4.1. Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	456.315	.000	.000	.000%	.000%
5.0	455.291	10.898	10.898	.550%	.550%
10.0	452.346	32.469	43.367	1.640%	2.190%
15.0	447.382	53.371	96.738	2.696%	4.886%
20.0	439.834	73.119	169.857	3.693%	8.579%
25.0	429.212	91.147	261.004	4.603%	13.182%
30.0	415.645	106.917	367.921	5.400%	18.582%
35.0	399.150	119.984	487.906	6.060%	24.642%
40.0	380.041	130.002	617.908	6.566%	31.207%
45.0	358.465	136.741	754.648	6.906%	38.114%
50.0	334.465	140.017	894.665	7.072%	45.185%
55.0	308.256	139.749	1034.414	7.058%	52.243%
60.0	280.517	136.093	1170.507	6.873%	59.117%
65.0	251.523	129.340	1299.847	6.532%	65.649%
70.0	220.841	119.606	1419.453	6.041%	71.690%
75.0	190.302	107.466	1526.919	5.428%	77.117%
80.0	160.832	93.954	1620.872	4.745%	81.862%
85.0	134.969	80.376	1701.249	4.059%	85.922%
90.0	117.290	69.071	1770.319	3.488%	89.410%
95.0	106.654	61.317	1831.637	3.097%	92.507%
100.0	95.483	54.925	1886.562	2.774%	95.281%
105.0	72.998	45.081	1931.643	2.277%	97.558%
110.0	57.830	34.196	1965.839	1.727%	99.285%
115.0	38.923	24.498	1990.337	1.237%	100.522%
120.0	23.409	15.153	2005.490	.765%	101.287%
125.0	34.233	13.324	2018.814	.673%	101.960%
130.0	36.946	15.477	2034.291	.782%	102.742%
135.0	30.163	13.560	2047.851	.685%	103.427%
140.0	24.477	10.117	2057.968	.511%	103.938%
145.0	17.506	7.005	2064.973	.354%	104.292%
150.0	9.338	3.953	2068.926	.200%	104.491%
155.0	6.725	2.033	2070.958	.103%	104.594%
160.0	6.264	1.362	2072.321	.069%	104.663%
165.0	6.105	1.019	2073.340	.051%	104.714%
170.0	6.090	.723	2074.063	.037%	104.751%
175.0	6.220	.440	2074.504	.022%	104.773%
180.0	6.466	.152	2074.656	.008%	104.781%

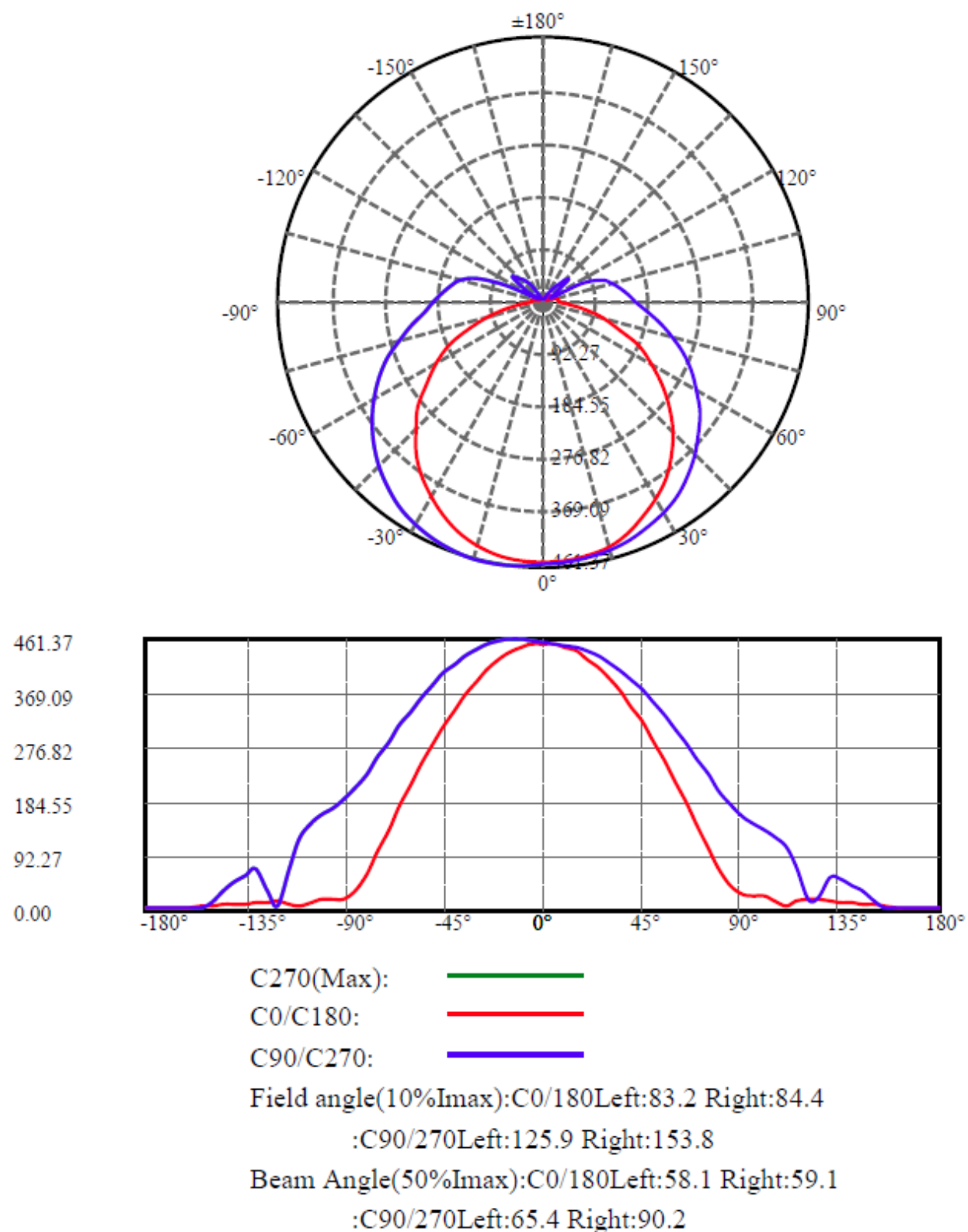
4.2. Zonal flux distribution table

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	367.92	18.58%	17.73%
0-40	617.91	31.21%	29.78%
0-60	1170.51	59.12%	56.42%
0-90	1770.32	89.41%	85.33%
0-120	2005.49	101.29%	96.67%
0-180	2074.66	104.78%	100.00%
60-90	735.91	37.17%	35.47%
90-120	304.24	15.37%	14.66%
90-130	333.04	16.82%	16.05%
90-150	367.68	18.57%	17.72%
90-180	373.26	18.85%	17.99%
0-82.42	1659.72	83.82%	80.00%

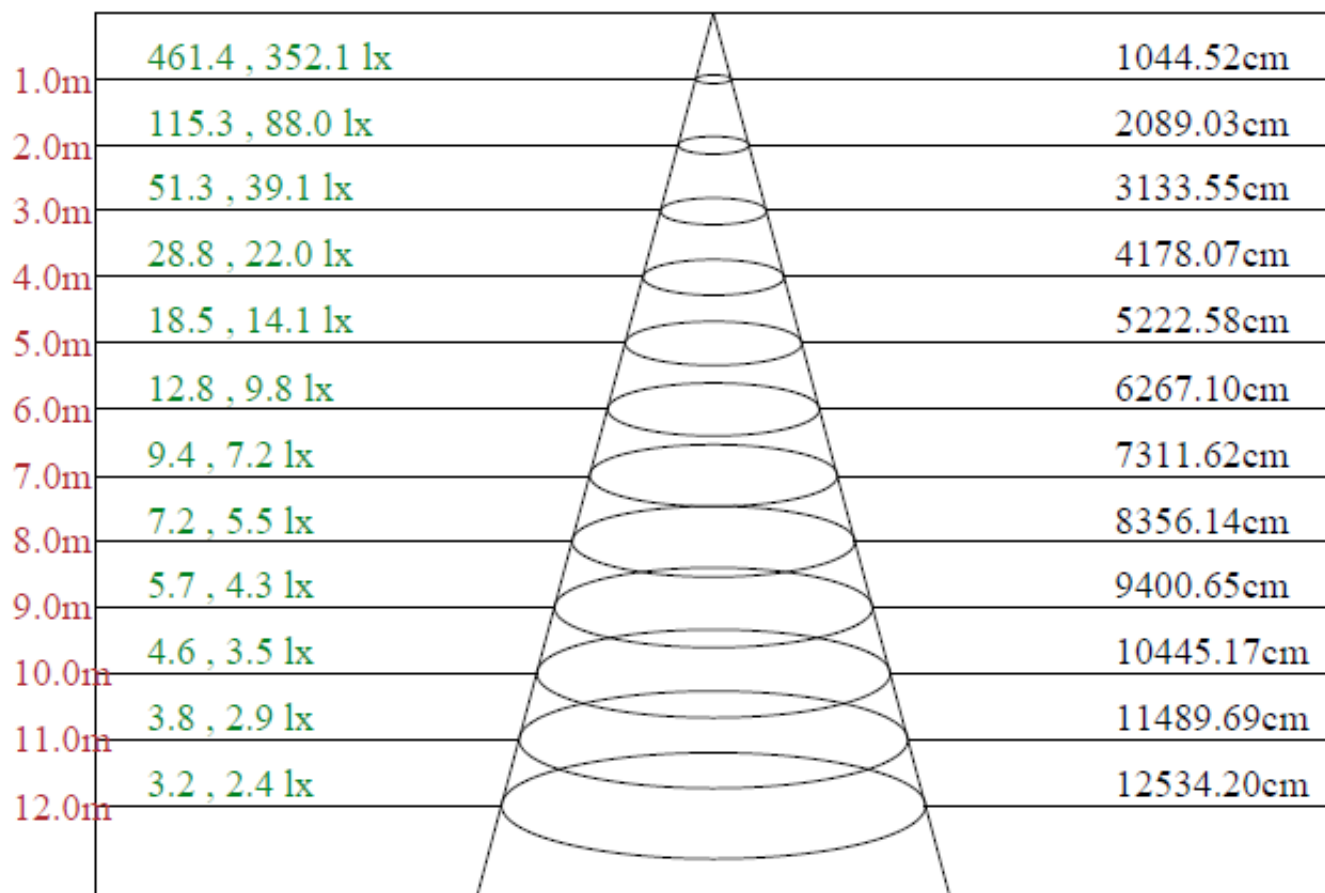
ZONAL LUMEN SUMMARY

0-10	43.37
10-20	126.49
20-30	198.06
30-40	249.99
40-50	276.76
50-60	275.84
60-70	248.95
70-80	201.42
80-90	149.45
90-100	116.24
100-110	79.28
110-120	39.65
120-130	28.80
130-140	23.68
140-150	10.96
150-160	3.40
160-170	1.74
170-180	0.44

4.3. Light Distribution Curve

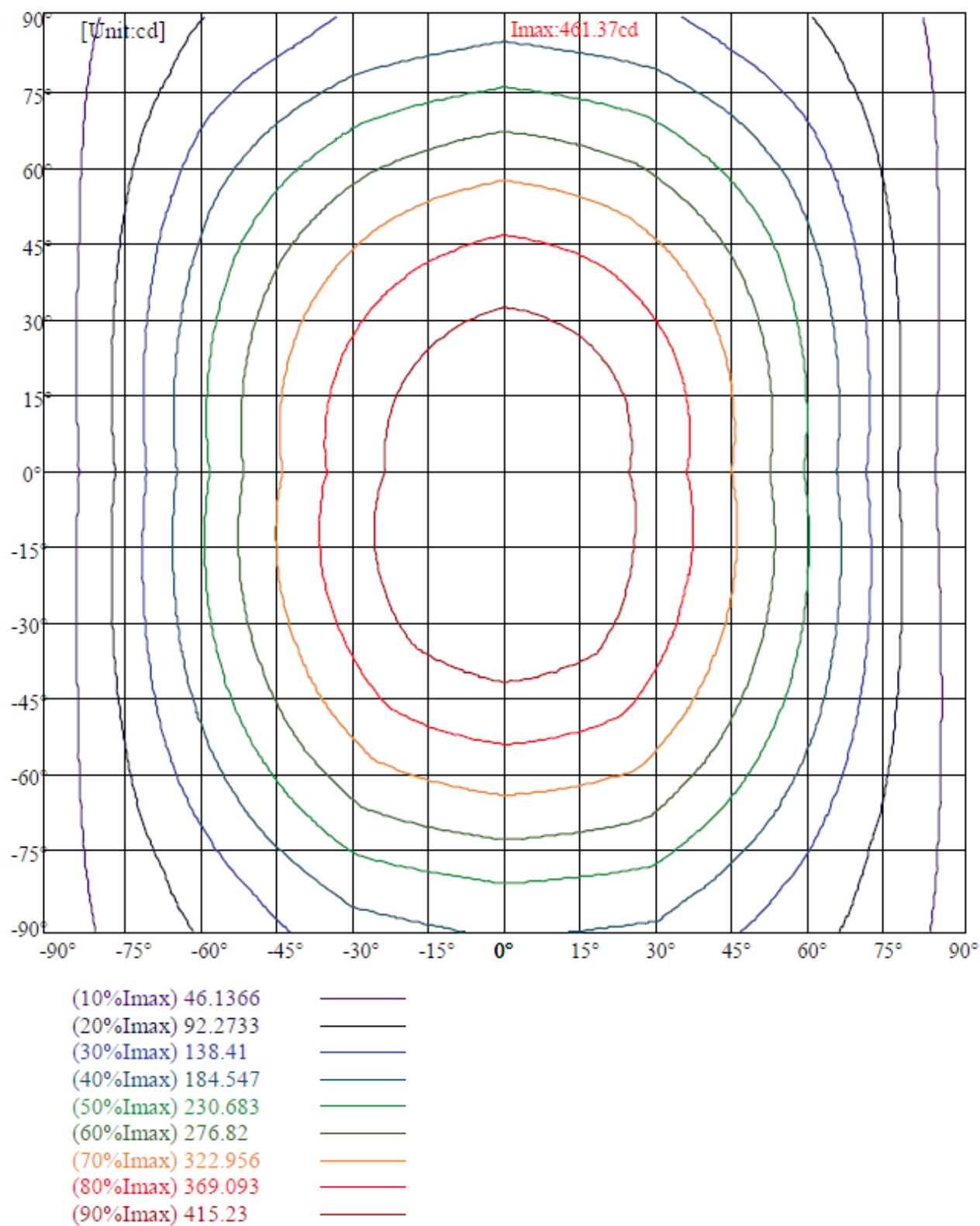


4.4. Lux distance Curve

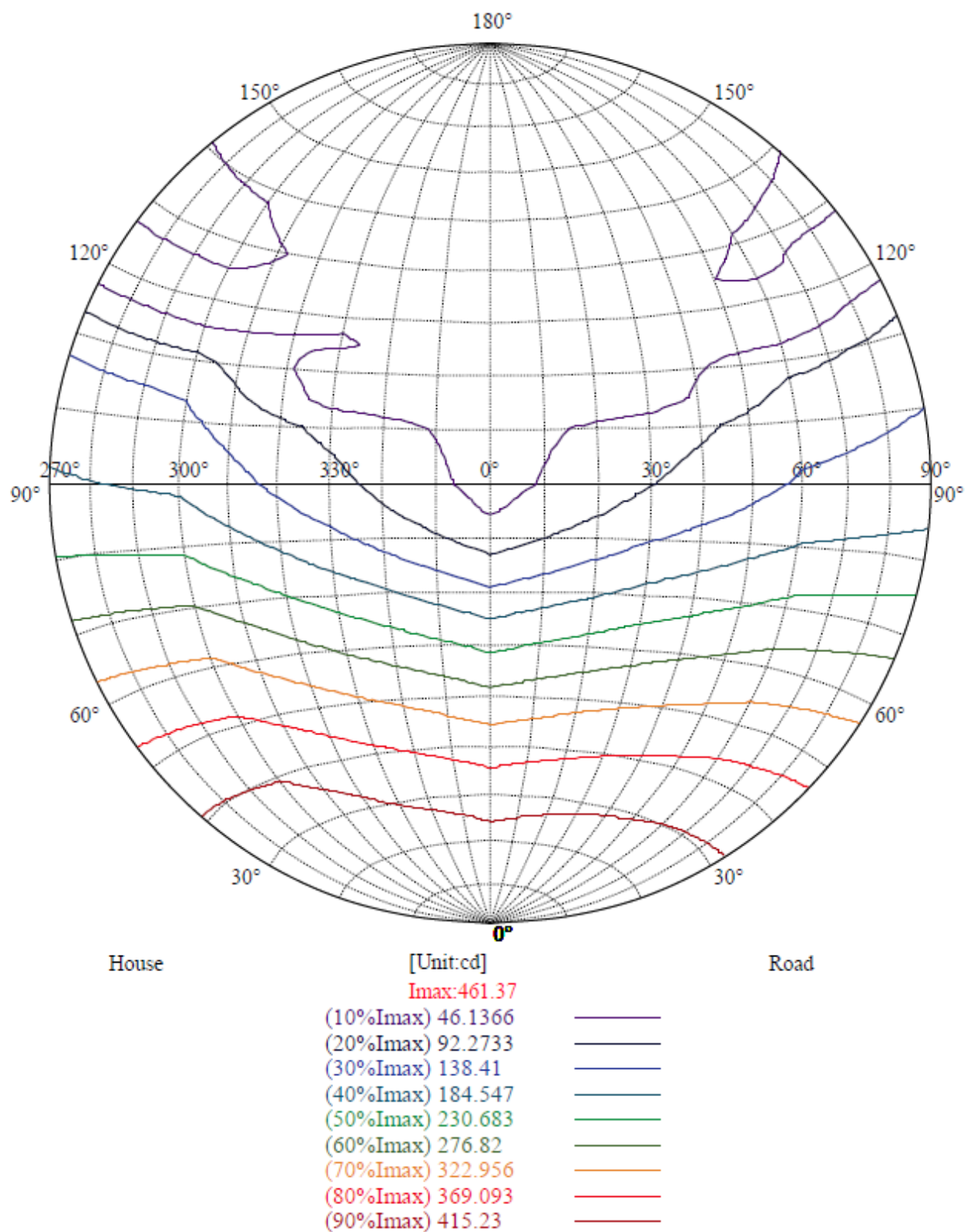


Max , Ave Beam angle of C270plane157.10

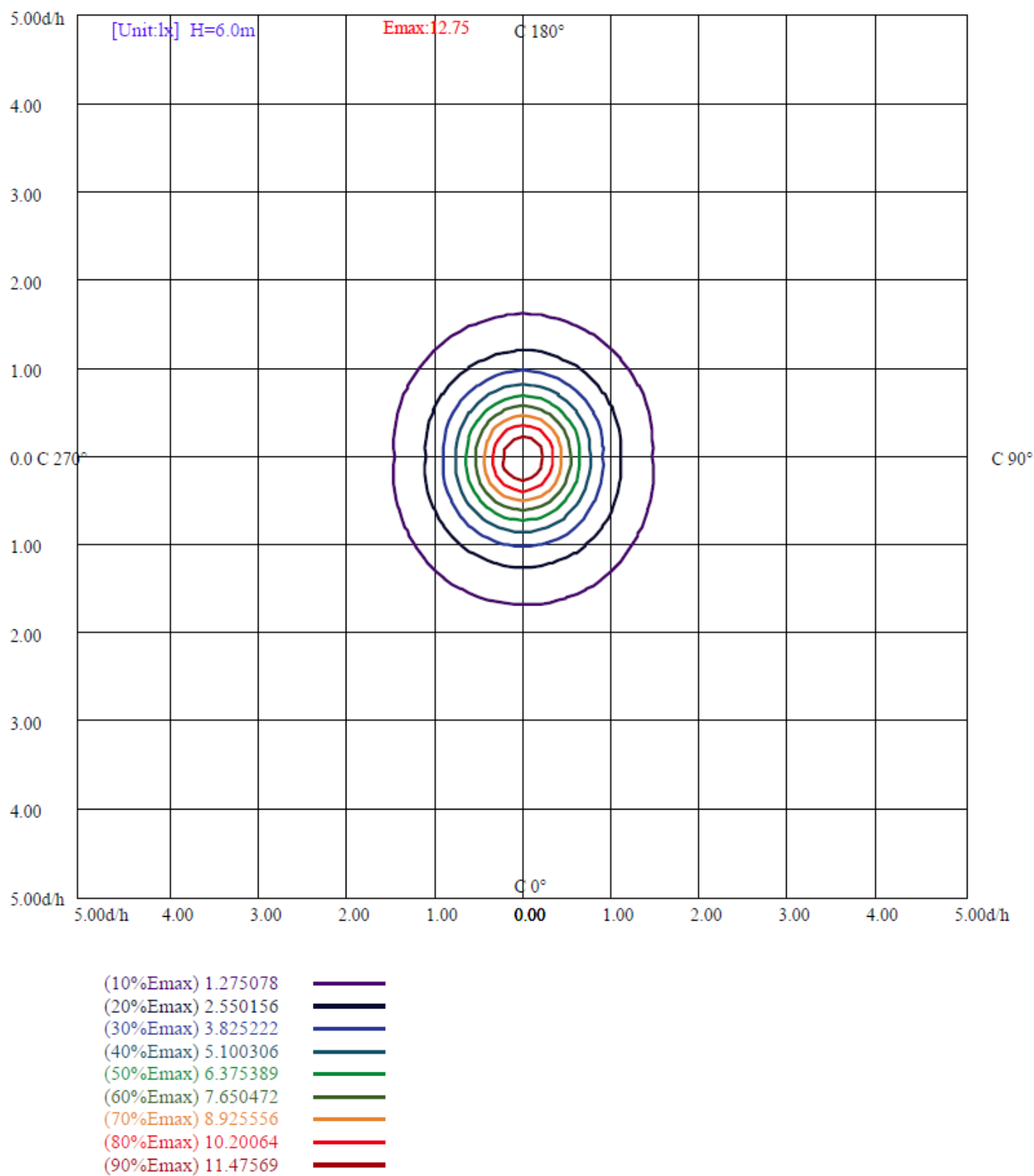
4.5. ISO-Intensity(V-H)



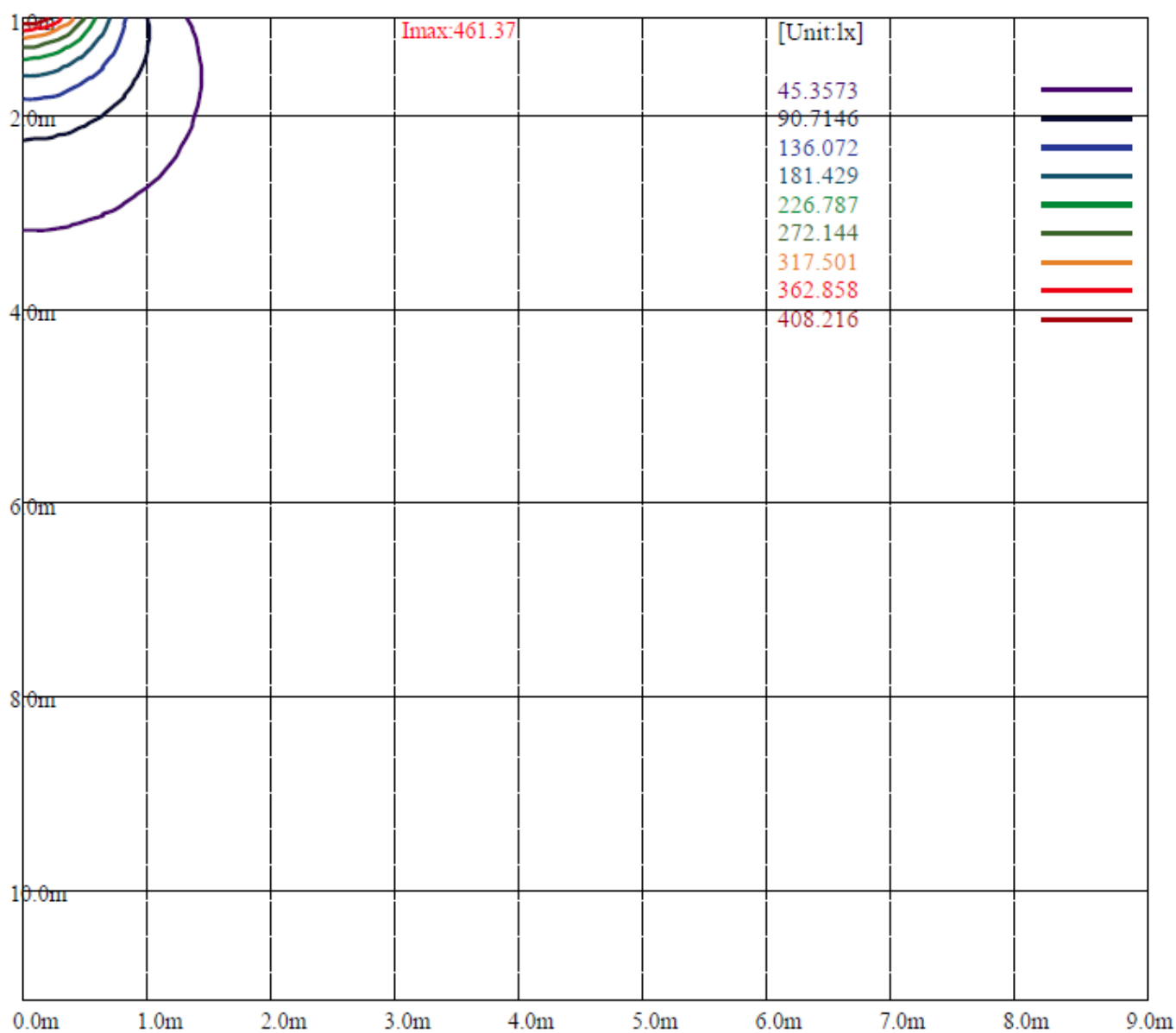
4.6. ISO candela diagram on circular web



4.7. ISO illuminance diagram



4.8. Space ISO Lux diagram



4.9. Luminance Limiting Curve(no luminous side)

Luminance Table

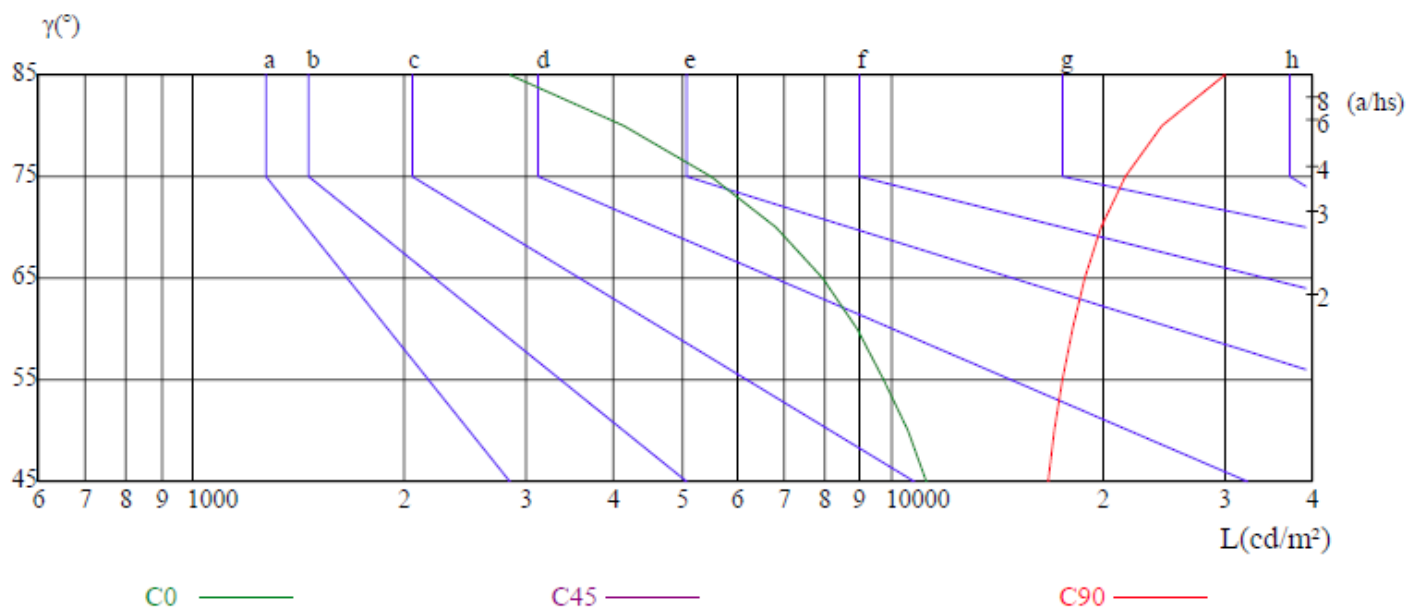
γ	45	50	55	60	65	70	75	80	85
C0	11213	10543	9765	8930	7986	6831	5503	4133	2847
C45	0	0	0	0	0	0	0	0	0
C90	16795	17125	17527	18123	18936	19965	21660	24398	29958

L _横 (65)	L _纵 (65)	L45(65)	L _横 (75)	L _纵 (75)	L45(75)	L _横 (85)	L _纵 (85)	L45(85)
15297	25403	0	14234	34032	0	15811	79804	0

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

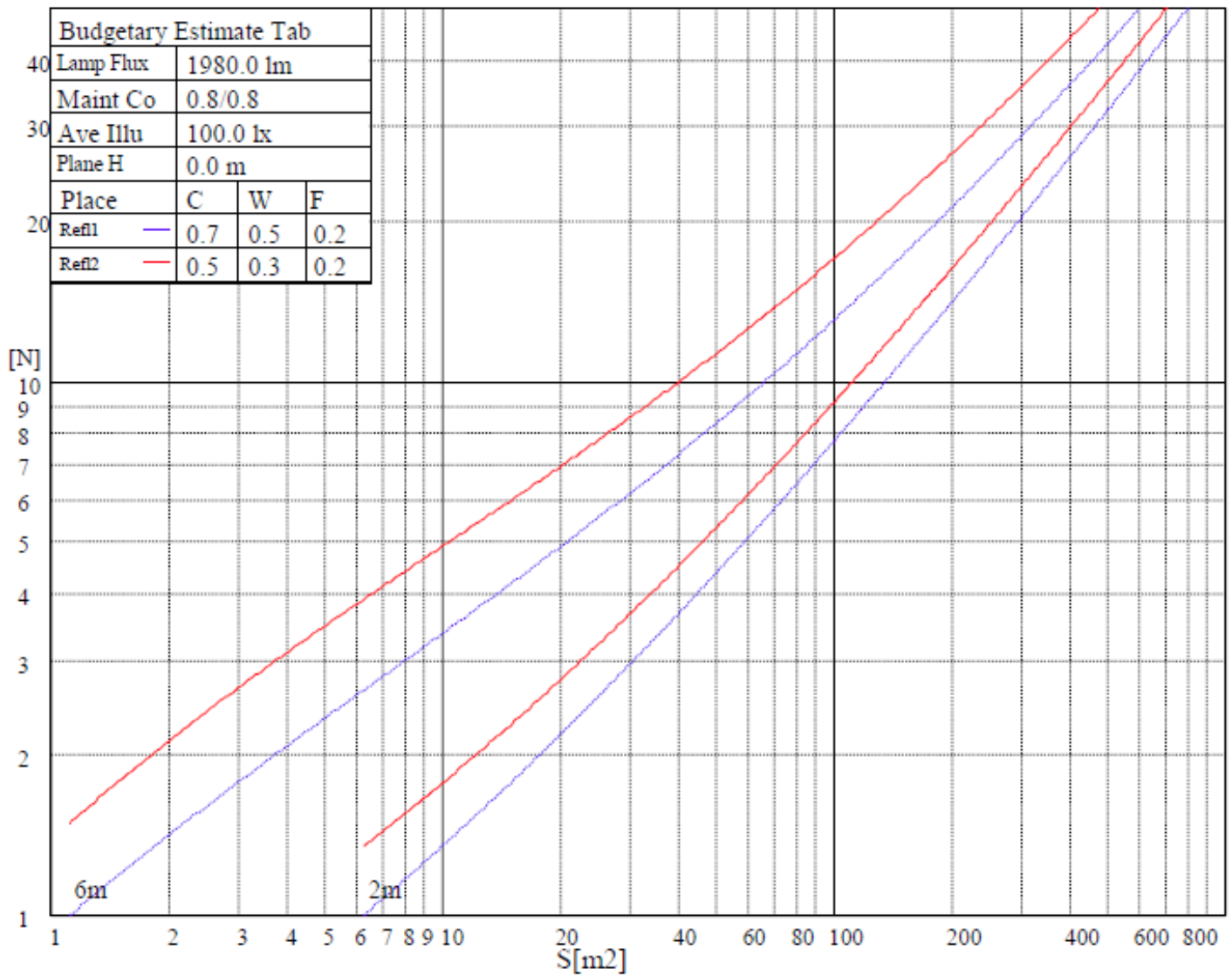
Luminance Limiting Curve



4.10. UGR Glare

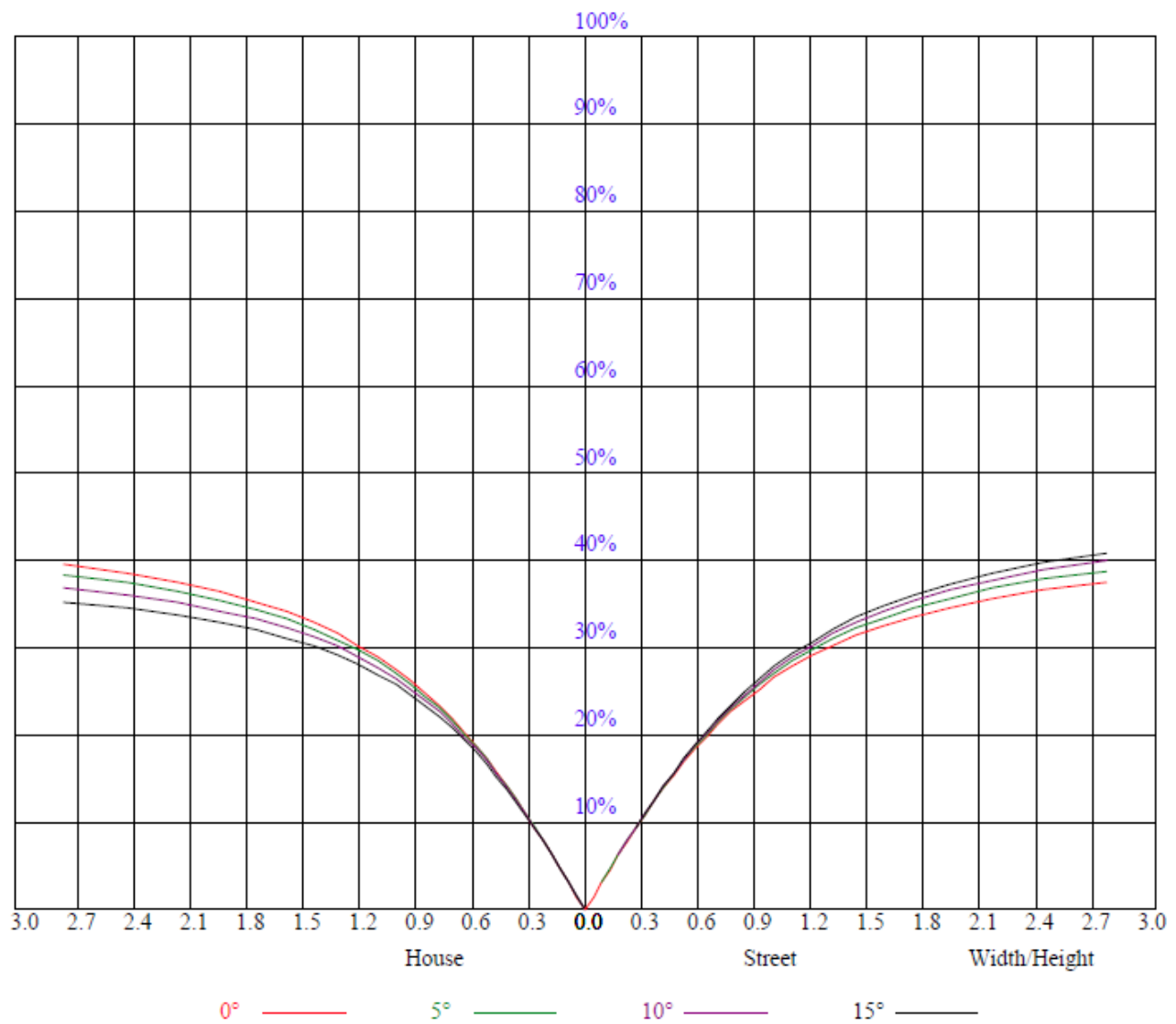
Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	19.1	20.7	19.6	21.2	21.7	19.3	20.9	19.8	21.4	21.9
	3H	20.4	21.9	20.9	22.4	23.0	21.0	22.5	21.5	23.1	23.6
	4H	20.9	22.4	21.5	22.9	23.5	21.7	23.2	22.2	23.7	24.3
	6H	21.3	22.7	21.8	23.2	23.8	22.2	23.6	22.8	24.1	24.7
	8H	21.4	22.7	21.9	23.3	23.9	22.4	23.7	23.0	24.3	24.9
	12H	21.5	22.8	22.1	23.4	24.0	22.7	23.9	23.2	24.5	25.1
4H	2H	19.9	21.3	20.4	21.8	22.4	20.0	21.5	20.6	22.0	22.6
	3H	21.6	22.8	22.1	23.4	24.0	22.1	23.4	22.6	23.9	24.5
	4H	19.1	20.7	19.6	21.2	21.7	19.3	20.9	19.8	21.4	21.9
	6H	22.6	23.7	23.2	24.3	25.0	23.4	24.5	24.0	25.1	25.8
	8H	22.8	23.9	23.4	24.5	25.1	23.7	24.8	24.3	25.4	26.0
	12H	23.0	24.0	23.6	24.6	25.3	24.0	25.0	24.6	25.6	26.3
8H	4H	23.0	24.0	23.5	24.6	25.3	23.5	24.6	24.1	25.2	25.8
	6H	23.6	25.3	24.2	25.2	25.9	24.3	26.0	24.9	25.9	26.6
	8H	23.9	24.8	24.5	25.4	26.1	24.7	25.6	25.4	26.2	26.9
	12H	24.3	25.1	24.9	26.3	26.5	25.3	26.1	25.9	27.3	27.4
12H	4H	23.2	24.1	23.8	24.8	25.4	23.7	24.6	24.3	25.3	25.9
	6H	25.7	24.8	24.6	25.4	26.2	26.3	25.5	25.2	26.1	26.8
	8H	24.4	25.2	25.0	25.8	26.5	25.1	25.9	25.7	26.5	27.3
Variation with the observer position at spacings:											
S = 1.0H		0.2/-1.1					0.2/-0.6				
S = 1.5H		0.4/-0.9					0.4/-0.6				
S = 2.0H		0.3/-0.6					0.4/-0.8				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		12.2					9.3				

4.11. Budgetary Estimate Table



4.12. Utilization factor table for indoor luminaire

RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOC=20 CU															
0	1.21	1.21	1.21	1.16	1.16	1.16	1.08	1.08	1.08	1.00	1.00	1.00	0.93	0.93	0.93	0.89
1	1.01	0.95	0.90	0.97	0.92	0.87	0.90	0.86	0.82	0.83	0.80	0.77	0.77	0.74	0.72	0.68
2	0.86	0.78	0.71	0.83	0.75	0.69	0.77	0.70	0.65	0.71	0.66	0.61	0.65	0.61	0.58	0.54
3	0.75	0.65	0.58	0.72	0.63	0.56	0.67	0.59	0.53	0.62	0.55	0.50	0.57	0.52	0.48	0.44
4	0.66	0.56	0.48	0.63	0.54	0.47	0.59	0.51	0.45	0.54	0.48	0.42	0.50	0.45	0.40	0.37
5	0.58	0.48	0.41	0.56	0.47	0.40	0.52	0.44	0.38	0.48	0.42	0.36	0.45	0.39	0.34	0.32
6	0.52	0.42	0.35	0.50	0.41	0.34	0.47	0.39	0.33	0.44	0.37	0.31	0.40	0.35	0.30	0.27
7	0.47	0.37	0.31	0.45	0.36	0.30	0.42	0.34	0.29	0.39	0.33	0.28	0.37	0.31	0.26	0.24
8	0.43	0.33	0.27	0.41	0.33	0.27	0.39	0.31	0.25	0.36	0.29	0.24	0.34	0.28	0.23	0.21
9	0.39	0.30	0.24	0.38	0.29	0.24	0.35	0.28	0.23	0.33	0.27	0.22	0.31	0.25	0.21	0.19
10	0.36	0.27	0.22	0.35	0.27	0.21	0.33	0.25	0.21	0.31	0.24	0.20	0.29	0.23	0.19	0.17

4.13. Coefficient Utilization Curve

4.13. Intensity data(cd)

C/ γ ($^{\circ}$)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	C/ γ ($^{\circ}$)	180.0
0.0	453.57	452.36	447.51	439.89	427.94	413.22	395.21	372.52	348.10	0.0	6.41
30.0	459.98	457.90	453.05	445.61	435.22	422.40	407.16	388.46	367.33	30.0	6.58
60.0	458.08	454.96	450.28	445.61	438.85	428.81	415.82	400.92	383.78	60.0	6.58
90.0	456.69	453.75	449.94	445.78	440.58	432.27	421.19	407.85	392.09	90.0	6.41
120.0	454.96	451.49	447.17	441.45	434.18	423.61	410.80	394.69	377.37	120.0	6.58
150.0	454.61	451.84	446.82	439.03	429.15	415.82	400.75	381.53	360.40	150.0	6.23
180.0	453.57	451.49	446.30	437.81	425.69	409.41	389.67	367.67	341.70	180.0	6.41
210.0	459.98	459.46	456.17	449.94	440.93	428.98	413.39	395.38	374.08	210.0	6.58
240.0	458.08	459.63	459.63	458.60	454.44	447.17	437.12	423.96	408.20	240.0	6.58
270.0	456.69	459.12	461.19	461.37	458.42	452.71	444.22	433.14	418.59	270.0	6.41
300.0	454.96	457.04	457.90	457.04	454.09	448.38	439.20	427.08	412.70	300.0	6.58
330.0	454.61	454.44	452.19	446.47	438.51	427.77	413.22	396.60	376.16	330.0	6.23
360.0	453.57	452.36	447.51	439.89	427.94	413.22	395.21	372.52	348.10	360.0	6.41
C/ γ ($^{\circ}$)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	319.53	289.22	255.45	220.47	183.92	144.78	105.64	70.49	42.08		
30.0	344.47	317.45	289.91	259.61	229.12	197.09	166.43	135.78	109.97		
60.0	363.52	342.04	318.32	293.72	268.09	240.38	213.54	185.83	161.93		
90.0	374.08	354.34	332.17	309.31	285.06	258.05	231.72	204.71	180.29		
120.0	357.28	335.11	311.73	287.31	260.82	234.32	206.26	180.46	156.39		
150.0	337.19	310.69	283.16	254.06	223.06	192.58	161.24	132.49	105.99		
180.0	313.64	282.99	248.87	213.54	176.82	137.34	99.93	64.43	34.81		
210.0	349.66	323.86	295.63	264.45	233.45	200.20	168.68	137.34	111.19		
240.0	389.84	369.58	346.54	322.30	296.49	268.44	240.55	212.15	187.04		
270.0	402.66	383.26	361.44	338.58	313.99	286.80	259.78	232.93	207.82		
300.0	395.90	375.81	354.51	331.30	305.50	278.83	250.43	223.24	197.60		
330.0	353.82	329.23	301.34	271.56	241.94	211.29	179.42	150.15	124.52		
360.0	319.53	289.22	255.45	220.47	183.92	144.78	105.64	70.49	42.08		
C/ γ ($^{\circ}$)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	28.75	27.19	25.80	17.66	7.45	18.01	20.26	18.70	17.15		
30.0	90.75	79.67	67.54	24.42	25.46	40.53	33.42	27.36	18.88		
60.0	143.22	131.45	120.02	104.60	74.47	21.65	23.73	55.07	48.67		
90.0	160.72	149.46	138.03	126.25	109.28	74.30	18.88	21.99	58.54		
120.0	140.63	128.50	117.07	103.74	75.16	25.80	18.70	49.70	46.59		
150.0	87.81	76.89	66.50	36.89	12.99	40.01	32.21	25.63	18.88		
180.0	21.48	20.44	19.74	14.89	7.45	11.43	16.11	14.89	13.85		
210.0	94.04	81.40	62.87	13.16	41.56	40.01	32.21	23.21	9.70		
240.0	167.30	153.27	139.07	123.48	89.88	23.38	23.03	62.52	54.90		
270.0	190.50	176.13	162.45	148.42	123.31	71.87	9.18	34.64	70.49		
300.0	176.30	161.41	147.73	133.53	105.30	49.70	13.51	44.86	60.44		
330.0	105.99	94.04	78.97	28.92	21.65	50.40	39.66	32.21	25.29		
360.0	28.75	27.19	25.80	17.66	7.45	18.01	20.26	18.70	17.15		
C/ γ ($^{\circ}$)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	15.41	13.68	11.95	10.22	8.49	6.93	6.41	6.06	6.06		
30.0	11.26	11.08	10.39	9.53	8.66	7.62	6.93	6.58	6.41		
60.0	41.22	31.87	19.22	6.75	6.75	6.58	6.41	6.58	6.58		
90.0	53.17	43.99	33.42	18.53	6.06	6.23	6.41	6.41	6.41		
120.0	39.31	30.48	16.80	6.23	6.23	6.06	6.06	6.23	6.41		
150.0	9.70	8.66	8.49	7.79	7.45	6.75	6.41	6.23	6.06		
180.0	12.64	11.43	10.04	8.83	7.62	6.75	6.58	6.23	6.41		
210.0	8.83	8.49	7.79	7.10	6.41	5.89	5.89	5.89	6.06		
240.0	45.89	35.50	19.05	5.37	5.37	5.37	5.37	5.72	6.06		
270.0	59.23	48.49	35.16	13.34	5.02	5.20	5.37	5.72	6.06		
300.0	50.92	41.56	29.61	10.56	5.54	5.37	5.37	5.72	6.06		
330.0	14.37	8.49	8.14	7.79	7.10	6.41	6.06	5.72	6.06		
360.0	15.41	13.68	11.95	10.22	8.49	6.93	6.41	6.06	6.06		

5.Test Equipment

Equipment Name	Manufacturer	Model No.	Equipment No.	Calibration Due Date
2m Integrating Sphere	SENSING	SL-300	AOC-S-126	2025-04-12
Horizontal Distribution Photometer	SENSING	GMS1800D	AOC-S-124	2025-04-12
Standard Lamp	SENSING	240V/150W	AOC-S-151	2024-07-18
Digital power meter	HENGHE	WT310E	AOC-S-012	2025-04-12
Digital power meter	SENSING	UI2008	AOC-S-123	2025-04-12
Digital power meter	SENSING	UI2021	AOC-S-123	2025-04-12
DC source	OYHS	OYHS-Z120V-50A	AOC-S-062	2025-04-12
Variable frequency power supply	WOSEN	BP6005	AOC-S-129	2025-04-12
Variable frequency power supply	AIPUSI	KDF-500	AOC-S-130	2025-04-12
Oscilloscope	TEKTRONIX	MDO3012	AOC-S-028	2025-04-12

Photo Document



Fig.1



Fig.2

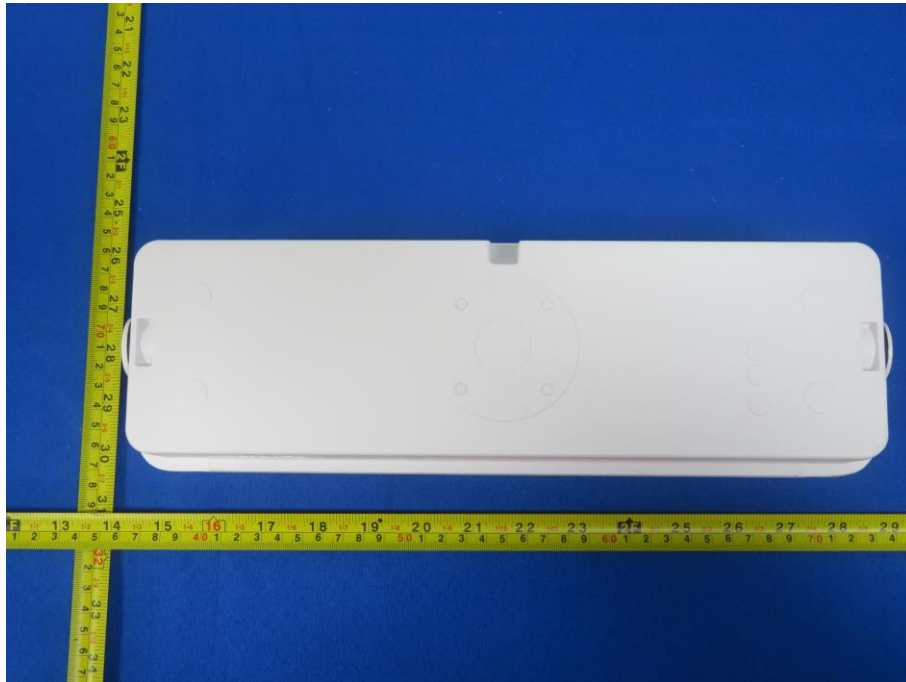


Fig.3



Fig.4



Fig.5



Fig.6

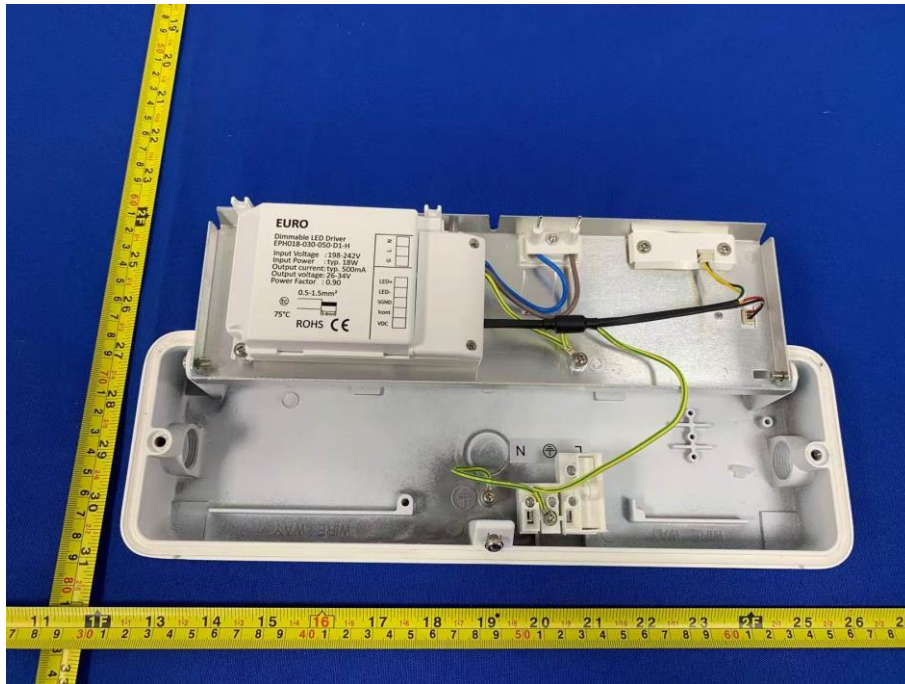


Fig.7



Fig.8

-- End of Report --

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