



廣益全球驗證有限公司
新北市中和區橋和路120號9樓之二
TEL: 886 - 2 - 2248.0810
Fax: 886 - 2 - 2248.0811

Great One Global Certification Co Ltd
9F-2, No.120, Qiaohe Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan (R.O.C.)
Email: sales@go-safety.com.tw

Optical Report For Luminaires

Applicant : GlacialTech Inc

Applicant Add : 9Fl., No.352, Sec.2, Jung Shan Rd., Jung He Dist, Taipei,
Taiwan, 235, (R.O.C.)

Report No : GO1205250101

Product Name : LED Baylight

Model No : GL-BL220-CW-30D

Sample No : 12052501-1

Test Specification : IESNA LM-79-08, Approved Method: Electrical and
Photometric Measurements of Solid-State Lighting
Products. (Deviation - Type C Goniophotometer of
Rotating Luminaire)

Test Date : 2012-5-31

Issue Date : 2012-6-13

- Note: 1. The test results of this report relate only to the tested sample identified in this report.
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3. The data in report cannot be used for advertisement, publication and promotion.

Tested By:

Reviewed By:

Eason Yang

David Yuan

Project Engineer

Manager

Great One Global Certification Co., Ltd

Product: LED HighBay Lamp, GL-BL220-CW-30D

Manufacturer: GlacialTech Inc

Sample No.: 12052501-1

Tested By: Eason Yang

Date: 6-1-2012

Reviewed By: David Yuan

Test Condition

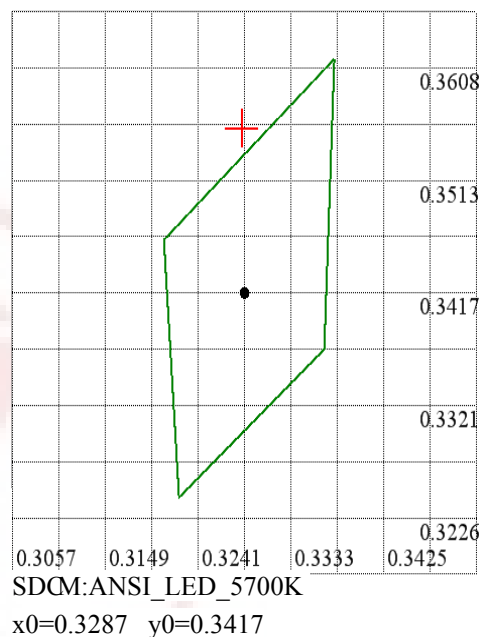
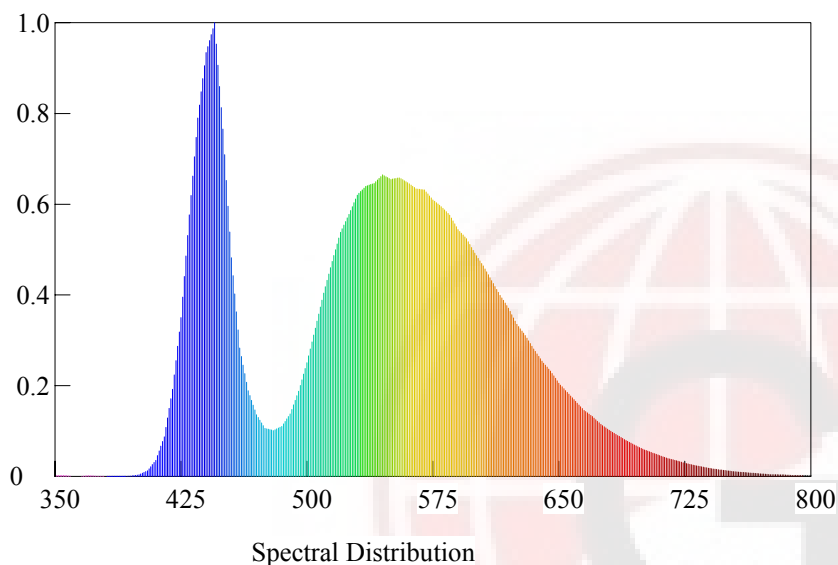
Temperature: 26°C

Spectrum Range: 350-800 nm

RH:56%

Scan Step: 5 nm

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.3284$ $y=0.3557$ $u'=0.1987$ $v'=0.4842$

Correlated Color Temperature: 5668 K

Dominant Wavelength: 541.0 nm(E)

Purity:0.0538

Chromaticity Difference: +0.00908Duv

Peak Wavelength: 443.6 nm

Color Ratio: $K_r=29.1\%$ $K_g=62.0\%$ $K_b=8.9\%$

Color Tolerance: 0.0 SDCM

Bandwidth:26.6nm

Radiant Flux: 48.136 W

Rendering Index: $R_a=67.1$

$R_1=64$ $R_2=70$ $R_3=75$ $R_4=69$ $R_5=66$ $R_6=61$ $R_7=76$ $R_8=55$

$R_9=-44$ $R_{10}=30$ $R_{11}=68$ $R_{12}=41$ $R_{13}=65$ $R_{14}=85$ $R_{15}=58$

Electric Parameters

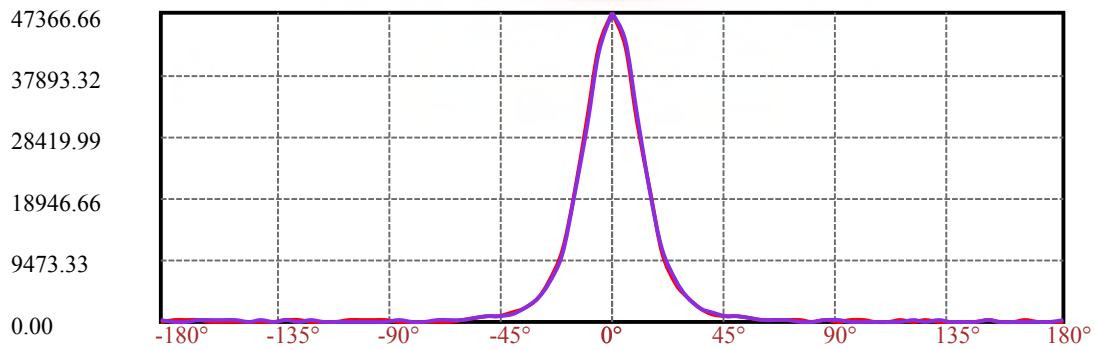
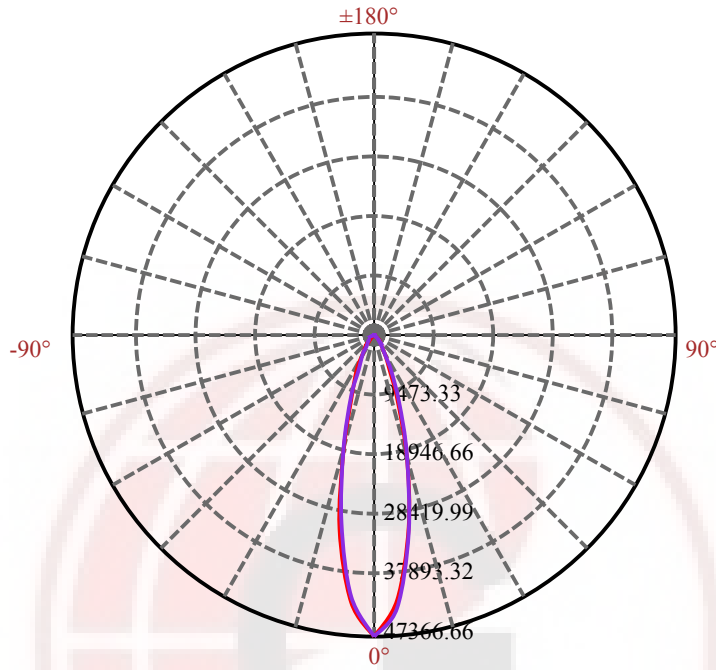
Voltage: 220.2 V

Current: 0.978 A

Power Factor: 0.971

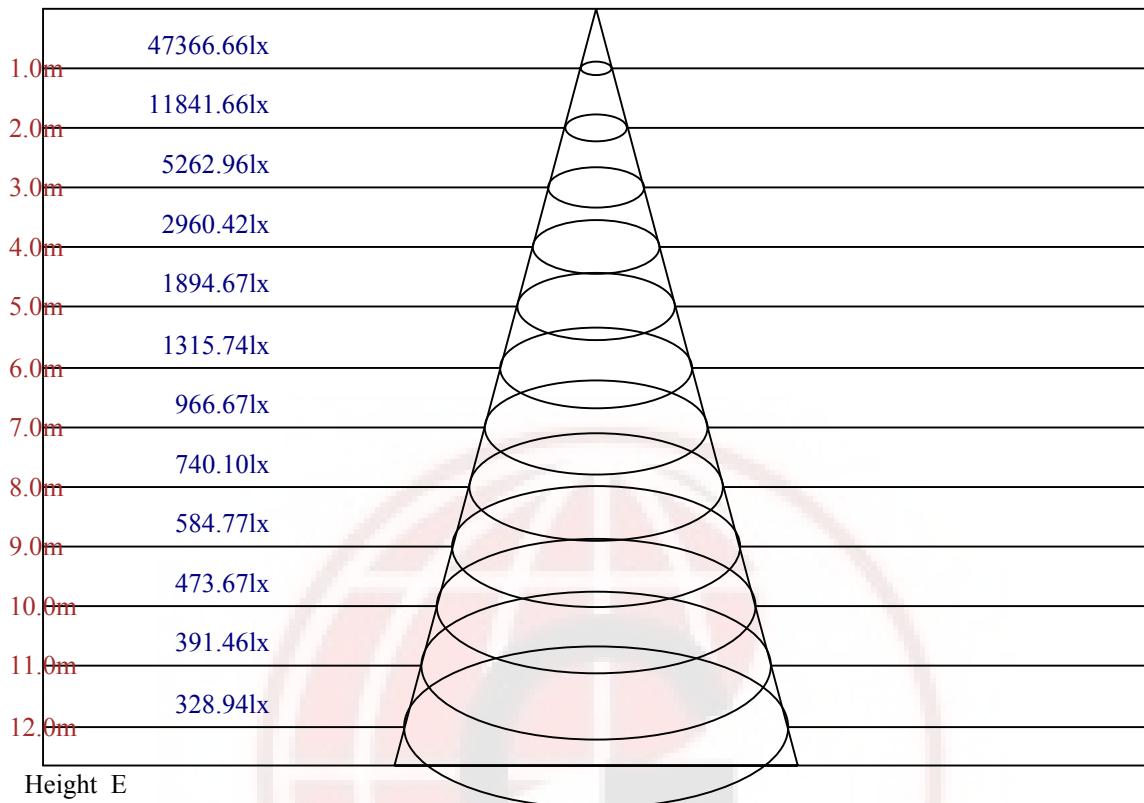
Power: 209.3 W

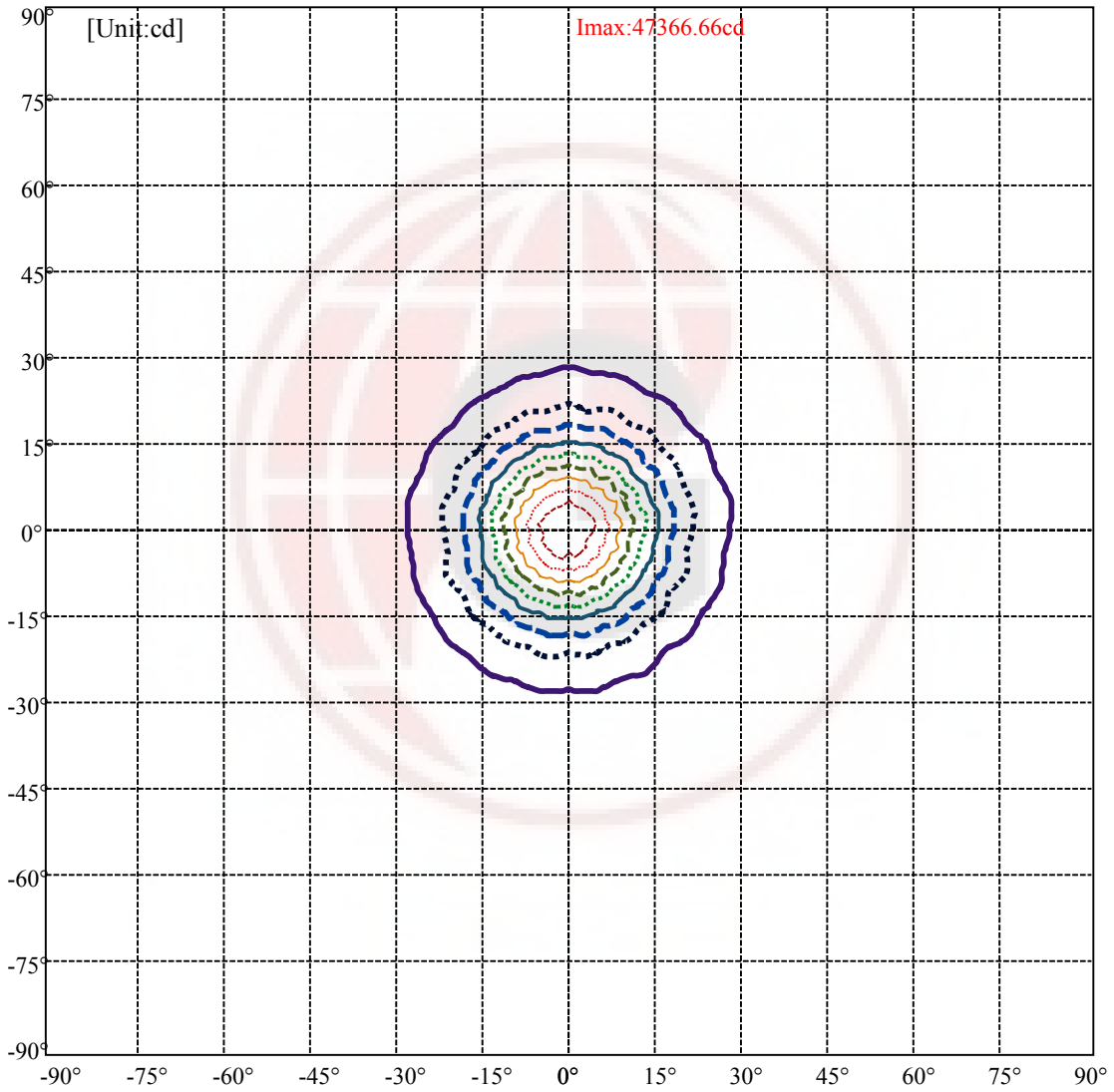
Light Distribution Curve [Unit: cd]



C0/C180: ———
C90/C270: ———

Lux distance Curve





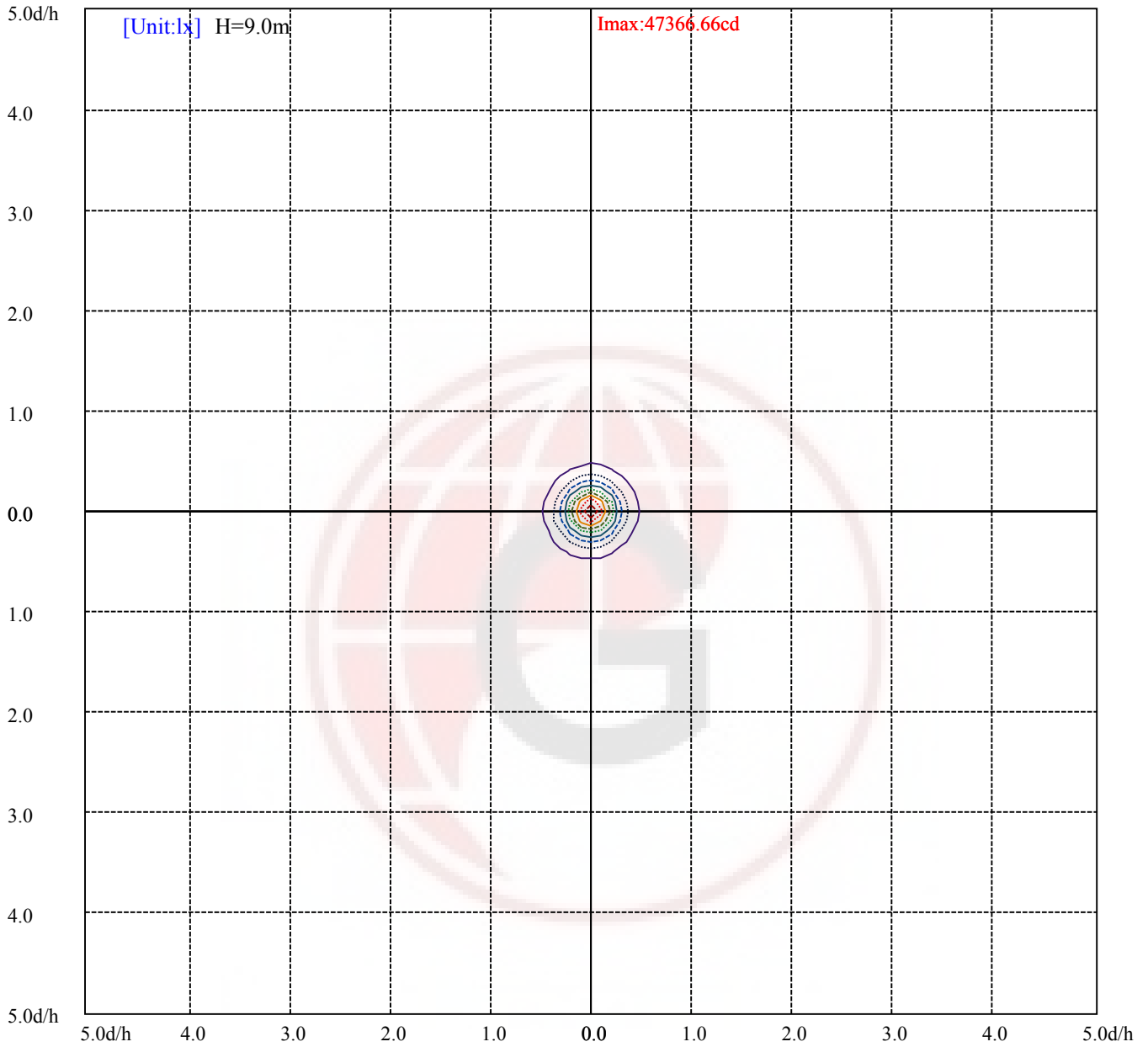
- (10%Imax) 4736.67
- (20%Imax) 9473.33
- (30%Imax) 14210
- (40%Imax) 18946.7
- (50%Imax) 23683.3
- (60%Imax) 28420
- (70%Imax) 33156.7
- (80%Imax) 37893.3
- (90%Imax) 42630

Equipment: GMS1800
Temperature(°C): 26.0

Date: 2012/5/31
Humidity(%): 60.0%

Operator: Eason Yang
Distance(m): 12.65

ISO illuminance diagram



- (10%Emax) 58.37827
- (20%Emax) 116.7567
- (30%Emax) 175.1346
- (40%Emax) 233.5136
- (50%Emax) 291.8914
- (60%Emax) 350.2704
- (70%Emax) 408.6482
- (80%Emax) 467.0259
- (90%Emax) 525.405

Equipment: GMS1800
Temperature(°C): 26.0

Date: 2012/5/31
Humidity(%): 60.0%

Operator: Eason Yang
Distance(m): 12.65

GlacialTech Inc

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	47366.66	41925.89	30724.32	19682.77	10721.51	5920.83	3680.52	2080.29	1280.18
10.0	47366.66	42726.00	31844.48	20322.86	11361.60	6400.90	3840.54	2080.29	1440.20
20.0	47366.66	41445.82	29444.14	18562.61	10401.46	5760.81	3360.47	2080.29	1440.20
30.0	47366.66	43046.05	32644.59	19522.74	11361.60	6240.88	3520.50	2080.29	1440.20
40.0	47366.66	41285.80	29764.18	17922.52	10241.44	5760.81	3040.43	1920.27	1280.18
50.0	47206.64	42726.00	31684.45	19842.79	11201.57	6400.90	3360.47	2080.29	1440.20
60.0	47366.66	41445.82	28804.05	18722.63	10401.46	5600.79	3360.47	2080.29	1280.18
70.0	47366.66	42886.03	31364.41	19522.74	11681.64	6240.88	3520.50	2080.29	1440.20
80.0	47366.66	41605.85	29604.16	18722.63	9761.37	5760.81	3520.50	1920.27	1440.20
90.0	47366.66	42886.03	31684.45	19362.72	11201.57	6400.90	3680.52	2080.29	1440.20
100.0	47366.66	41285.80	29764.18	18242.56	10081.42	5920.83	3200.45	1920.27	1280.18
110.0	47366.66	42726.00	31524.43	19682.77	10881.53	5920.83	3360.47	2080.29	1440.20
120.0	47366.66	41445.82	29924.21	18402.59	10081.42	5600.79	3040.43	1760.25	1440.20
130.0	47366.66	42565.98	31524.43	19522.74	10721.51	5920.83	3200.45	1760.25	1440.20
140.0	47366.66	41605.85	29604.16	18722.63	9761.37	5440.77	3040.43	1760.25	1280.18
150.0	47206.64	43206.07	31524.43	19522.74	11361.60	6080.85	3360.47	2080.29	1280.18
160.0	47206.64	41605.85	30084.23	19042.68	10241.44	5760.81	3360.47	1760.25	1440.20
170.0	47206.64	43366.09	32484.57	19842.79	11521.62	6560.92	3520.50	2080.29	1440.20
180.0	47366.66	42085.91	31044.36	19202.70	10881.53	6080.85	3520.50	1920.27	1440.20
190.0	47366.66	41445.82	30084.23	18562.61	10401.46	5920.83	3360.47	1920.27	1440.20
200.0	47366.66	43846.16	31844.48	20002.81	12161.71	6400.90	3520.50	2080.29	1440.20
210.0	47366.66	41445.82	30244.25	19202.70	10401.46	5760.81	3360.47	2080.29	1280.18
220.0	47366.66	43046.05	32324.54	20002.81	11521.62	6400.90	3520.50	2080.29	1280.18
230.0	47206.64	41765.87	30564.29	19042.68	10561.48	5920.83	3360.47	1920.27	1440.20
240.0	47366.66	43846.16	32004.50	20162.83	11361.60	6240.88	3680.52	2080.29	1600.23
250.0	47366.66	41925.89	30084.23	19042.68	10721.51	5920.83	3520.50	2080.29	1440.20
260.0	47366.66	43046.05	31684.45	19842.79	11681.64	6400.90	3680.52	2240.32	1440.20
270.0	47366.66	41285.80	29924.21	18882.65	10401.46	5920.83	3520.50	2080.29	1280.18
280.0	47366.66	42886.03	31844.48	19362.72	11361.60	6560.92	3520.50	2080.29	1280.18
290.0	47366.66	41125.78	29924.21	18402.59	10241.44	5760.81	3200.45	2080.29	1280.18
300.0	47366.66	42565.98	31364.41	19522.74	10881.53	6080.85	3520.50	1920.27	1280.18
310.0	47366.66	41125.78	28964.07	18082.54	9921.40	5120.72	3040.43	1920.27	1280.18
320.0	47366.66	42565.98	30724.32	19042.68	10721.51	5920.83	3360.47	2080.29	1280.18
330.0	47206.64	40005.62	28964.07	18082.54	9601.35	5440.77	3200.45	1760.25	1280.18
340.0	47206.64	42245.94	31044.36	18722.63	10881.53	6400.90	3360.47	2080.29	1280.18
350.0	47206.64	40485.69	28964.07	18242.56	9921.40	5600.79	3360.47	1920.27	1280.18
360.0	47366.66	41925.89	30724.32	19682.77	10721.51	5920.83	3680.52	2080.29	1280.18

Equipment: GMS1800
 Temperature(°C): 26.0

Date: 2012/5/31
 Humidity(%): 60.0%

Operator: Eason Yang
 Distance(m): 12.65

Intensity data(cd)

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	960.13	800.11	480.07	160.02	160.02	160.02	160.02	0.00	160.02
10.0	960.13	800.11	480.07	160.02	160.02	160.02	0.00	160.02	0.00
20.0	1120.16	800.11	480.07	320.05	160.02	0.00	160.02	160.02	0.00
30.0	960.13	800.11	480.07	160.02	160.02	160.02	160.02	160.02	0.00
40.0	960.13	640.09	480.07	320.05	0.00	0.00	0.00	0.00	160.02
50.0	1120.16	640.09	480.07	320.05	160.02	0.00	160.02	0.00	160.02
60.0	1120.16	640.09	480.07	160.02	0.00	160.02	0.00	160.02	0.00
70.0	1120.16	800.11	480.07	320.05	160.02	0.00	0.00	0.00	0.00
80.0	960.13	800.11	480.07	320.05	160.02	0.00	0.00	0.00	0.00
90.0	960.13	800.11	480.07	160.02	160.02	160.02	0.00	0.00	160.02
100.0	1120.16	960.13	480.07	320.05	160.02	160.02	160.02	160.02	0.00
110.0	1120.16	800.11	640.09	160.02	0.00	0.00	0.00	0.00	160.02
120.0	960.13	800.11	480.07	320.05	160.02	0.00	160.02	160.02	160.02
130.0	1120.16	960.13	480.07	160.02	160.02	160.02	0.00	0.00	160.02
140.0	1120.16	960.13	480.07	160.02	160.02	160.02	0.00	0.00	160.02
150.0	960.13	960.13	640.09	160.02	0.00	0.00	160.02	160.02	0.00
160.0	960.13	800.11	480.07	160.02	160.02	0.00	160.02	0.00	160.02
170.0	1120.16	800.11	640.09	160.02	0.00	160.02	160.02	0.00	0.00
180.0	960.13	800.11	480.07	320.05	0.00	0.00	0.00	0.00	0.00
190.0	960.13	800.11	320.05	160.02	0.00	160.02	160.02	160.02	0.00
200.0	960.13	800.11	480.07	160.02	0.00	160.02	160.02	0.00	160.02
210.0	1120.16	800.11	480.07	320.05	160.02	160.02	0.00	0.00	0.00
220.0	1120.16	640.09	480.07	320.05	160.02	0.00	160.02	0.00	0.00
230.0	960.13	800.11	480.07	320.05	160.02	0.00	160.02	160.02	160.02
240.0	1120.16	640.09	480.07	320.05	160.02	160.02	0.00	0.00	160.02
250.0	960.13	800.11	480.07	320.05	160.02	160.02	160.02	0.00	0.00
260.0	1120.16	800.11	480.07	160.02	160.02	160.02	160.02	160.02	0.00
270.0	960.13	800.11	640.09	160.02	160.02	160.02	0.00	0.00	160.02
280.0	1280.18	800.11	480.07	320.05	0.00	160.02	0.00	160.02	160.02
290.0	960.13	800.11	640.09	320.05	160.02	160.02	160.02	0.00	0.00
300.0	1120.16	800.11	640.09	160.02	0.00	160.02	0.00	0.00	0.00
310.0	1120.16	960.13	480.07	160.02	160.02	0.00	0.00	0.00	0.00
320.0	1120.16	800.11	480.07	160.02	160.02	160.02	0.00	0.00	160.02
330.0	960.13	800.11	320.05	160.02	0.00	0.00	0.00	0.00	160.02
340.0	1120.16	960.13	480.07	160.02	160.02	0.00	0.00	0.00	0.00
350.0	1120.16	800.11	480.07	160.02	0.00	0.00	0.00	160.02	160.02
360.0	960.13	800.11	480.07	160.02	160.02	160.02	160.02	0.00	160.02

Intensity data(cd)

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	160.02	160.02	0.00	0.00	160.02	0.00	160.02	0.00
10.0	0.00	0.00	160.02	160.02	0.00	160.02	0.00	0.00	0.00
20.0	160.02	0.00	160.02	160.02	160.02	160.02	0.00	0.00	0.00
30.0	0.00	160.02	0.00	160.02	0.00	0.00	0.00	0.00	160.02
40.0	0.00	0.00	160.02	160.02	0.00	0.00	160.02	160.02	160.02
50.0	160.02	0.00	160.02	160.02	160.02	160.02	160.02	0.00	0.00
60.0	160.02	160.02	160.02	0.00	0.00	160.02	160.02	0.00	0.00
70.0	0.00	0.00	160.02	160.02	0.00	160.02	0.00	0.00	0.00
80.0	0.00	0.00	0.00	160.02	160.02	160.02	0.00	160.02	160.02
90.0	160.02	0.00	0.00	0.00	-160.02	0.00	160.02	0.00	160.02
100.0	0.00	160.02	160.02	0.00	160.02	0.00	160.02	0.00	160.02
110.0	0.00	0.00	0.00	0.00	160.02	160.02	0.00	0.00	0.00
120.0	160.02	0.00	160.02	0.00	160.02	0.00	0.00	0.00	160.02
130.0	160.02	160.02	160.02	160.02	0.00	0.00	0.00	0.00	0.00
140.0	160.02	160.02	160.02	160.02	160.02	160.02	160.02	0.00	0.00
150.0	160.02	160.02	160.02	0.00	160.02	0.00	0.00	160.02	160.02
160.0	160.02	160.02	0.00	0.00	160.02	0.00	160.02	160.02	160.02
170.0	160.02	0.00	160.02	160.02	0.00	0.00	160.02	0.00	160.02
180.0	160.02	160.02	160.02	160.02	0.00	0.00	0.00	160.02	160.02
190.0	160.02	0.00	160.02	0.00	0.00	0.00	160.02	0.00	0.00
200.0	0.00	0.00	0.00	160.02	0.00	160.02	0.00	160.02	160.02
210.0	160.02	160.02	0.00	160.02	0.00	0.00	0.00	160.02	0.00
220.0	160.02	160.02	0.00	160.02	0.00	0.00	0.00	160.02	0.00
230.0	0.00	0.00	160.02	160.02	0.00	160.02	160.02	0.00	0.00
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160.02	160.02
250.0	0.00	160.02	160.02	160.02	0.00	160.02	160.02	160.02	160.02
260.0	0.00	0.00	160.02	0.00	0.00	0.00	160.02	160.02	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	160.02	0.00	160.02
280.0	0.00	0.00	160.02	160.02	0.00	160.02	0.00	160.02	0.00
290.0	0.00	160.02	0.00	160.02	0.00	0.00	160.02	0.00	160.02
300.0	0.00	0.00	160.02	0.00	0.00	160.02	0.00	160.02	0.00
310.0	0.00	0.00	160.02	0.00	0.00	0.00	0.00	0.00	0.00
320.0	160.02	160.02	0.00	160.02	160.02	0.00	160.02	160.02	160.02
330.0	160.02	0.00	0.00	160.02	0.00	0.00	0.00	0.00	160.02
340.0	0.00	160.02	160.02	0.00	160.02	160.02	0.00	0.00	160.02
350.0	0.00	160.02	160.02	160.02	0.00	0.00	160.02	0.00	160.02
360.0	0.00	160.02	160.02	0.00	0.00	160.02	0.00	160.02	0.00

Intensity data(cd)

C/\u03b3(\u00b0)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	160.02	0.00	0.00	160.02	0.00	0.00
10.0	160.02	0.00	160.02	0.00	320.05	0.00	160.02	160.02	160.02
20.0	160.02	0.00	160.02	160.02	0.00	160.02	160.02	0.00	0.00
30.0	0.00	160.02	160.02	160.02	0.00	160.02	0.00	0.00	160.02
40.0	160.02	160.02	160.02	160.02	160.02	160.02	160.02	0.00	0.00
50.0	0.00	0.00	160.02	0.00	160.02	0.00	0.00	160.02	160.02
60.0	0.00	160.02	0.00	0.00	0.00	160.02	160.02	0.00	0.00
70.0	160.02	-160.02	160.02	160.02	0.00	160.02	160.02	160.02	0.00
80.0	160.02	0.00	0.00	0.00	0.00	0.00	160.02	160.02	0.00
90.0	0.00	0.00	0.00	160.02	0.00	0.00	0.00	0.00	0.00
100.0	160.02	160.02	160.02	160.02	0.00	0.00	160.02	0.00	0.00
110.0	160.02	160.02	160.02	0.00	160.02	160.02	0.00	160.02	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160.02	0.00
130.0	0.00	0.00	160.02	0.00	0.00	160.02	160.02	0.00	160.02
140.0	0.00	160.02	0.00	0.00	0.00	0.00	0.00	160.02	160.02
150.0	160.02	160.02	160.02	0.00	160.02	160.02	160.02	0.00	160.02
160.0	160.02	0.00	160.02	0.00	0.00	0.00	0.00	0.00	160.02
170.0	160.02	0.00	160.02	160.02	160.02	160.02	0.00	0.00	160.02
180.0	0.00	0.00	0.00	0.00	0.00	0.00	160.02	160.02	160.02
190.0	160.02	0.00	0.00	0.00	0.00	160.02	160.02	160.02	160.02
200.0	160.02	0.00	0.00	160.02	160.02	160.02	160.02	160.02	160.02
210.0	160.02	160.02	0.00	0.00	160.02	0.00	0.00	160.02	160.02
220.0	160.02	0.00	160.02	0.00	0.00	0.00	160.02	160.02	160.02
230.0	160.02	0.00	160.02	160.02	0.00	0.00	160.02	160.02	0.00
240.0	0.00	0.00	160.02	160.02	160.02	0.00	160.02	0.00	160.02
250.0	0.00	0.00	0.00	160.02	0.00	0.00	160.02	0.00	160.02
260.0	0.00	0.00	160.02	0.00	160.02	-160.02	160.02	0.00	0.00
270.0	0.00	160.02	0.00	160.02	160.02	160.02	160.02	0.00	0.00
280.0	0.00	160.02	160.02	0.00	0.00	160.02	0.00	0.00	0.00
290.0	0.00	0.00	160.02	0.00	0.00	160.02	0.00	0.00	0.00
300.0	0.00	0.00	0.00	160.02	0.00	0.00	0.00	0.00	0.00
310.0	160.02	160.02	160.02	160.02	0.00	160.02	0.00	0.00	0.00
320.0	0.00	0.00	160.02	0.00	160.02	160.02	0.00	0.00	0.00
330.0	0.00	0.00	0.00	160.02	160.02	160.02	0.00	0.00	0.00
340.0	0.00	160.02	160.02	160.02	160.02	160.02	0.00	160.02	0.00
350.0	0.00	160.02	160.02	0.00	160.02	0.00	0.00	160.02	0.00
360.0	0.00	0.00	0.00	160.02	0.00	0.00	160.02	0.00	0.00

Intensity data(cd)

C/γ(°)	180.0
0.0	0.00
10.0	0.00
20.0	160.02
30.0	0.00
40.0	160.02
50.0	0.00
60.0	160.02
70.0	160.02
80.0	160.02
90.0	160.02
100.0	0.00
110.0	0.00
120.0	160.02
130.0	0.00
140.0	0.00
150.0	0.00
160.0	160.02
170.0	160.02
180.0	0.00
190.0	0.00
200.0	160.02
210.0	0.00
220.0	160.02
230.0	0.00
240.0	160.02
250.0	160.02
260.0	160.02
270.0	160.02
280.0	0.00
290.0	0.00
300.0	160.02
310.0	0.00
320.0	0.00
330.0	0.00
340.0	160.02
350.0	160.02
360.0	0.00





廣益全球驗證有限公司
新北市中和區橋和路120號9樓之二
TEL: 886 - 2 - 2248.0810
Fax: 886 - 2 - 2248.0811

Great One Global Certification Co Ltd
9F-2, No.120, Qiaohe Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan (R.O.C.)
Email: sales@go-safety.com.tw

1. Luminaire Specification :

- (1) Input Voltage/Frequency : 218.3 V ac / 50Hz
- (2) Input Watt : 209.1 W
- (3) Input Current : 0.987 A
- (4) Total Luminous Flux Output : 15416.33 lm
- (5) Luminaire Efficacy : 73.73 lm/W
- (6) Central Intensity (cd) : 47366.660
- (7) Maximum Intensity(cd): 47366.660
- (8) PF : 0.970
- (9) Beam angle : (C0-C180) 26.3 (C90-C270) 26

2. Description of EUT Setup :

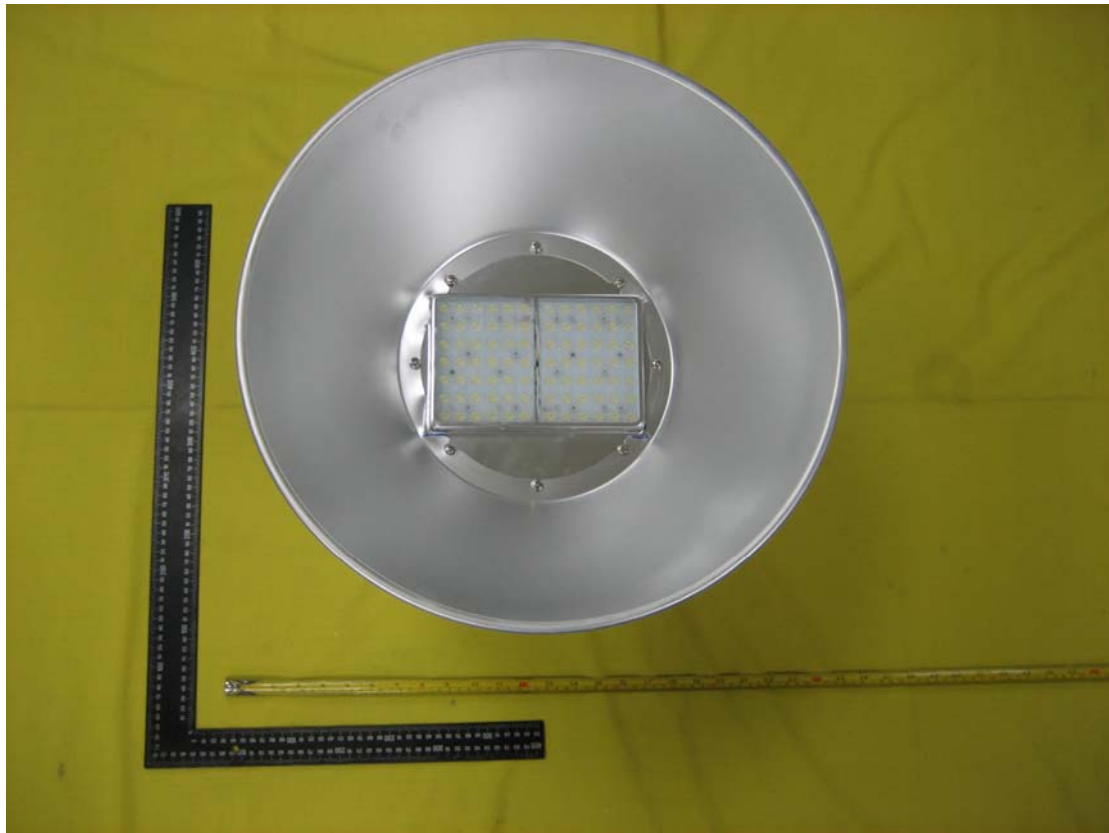
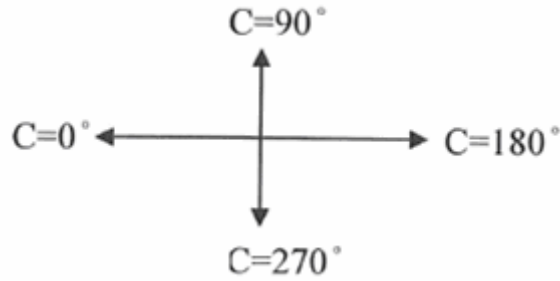
- (1) Operating Orientation : The light source is considered as horizontal.
- (2) Light Source : LED
- (3) Stabilization time : 1 Hour
- (4) Environment Condition : Temperature: 25 ± 1 °C , Humidity: $60\pm 20\%$



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3. Photograph of EUT :





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4. Equipments List:

Equipment ID	Equipment Type	Manufacturer	Model #	Cal. Date	Due Date	Range Used
L204	Goniophotometer-1800	SENSING	GMS1800	N/A	N/A	
L205	GMS-1800B Goniophotometer System	SENSING		N/A	N/A	
L206	AC Power Source	Twintex	TFC 500VA	N/A	N/A	
L207	Power Meter	SENSING	UI2008	2011/12/4	2012/12/3	V : Auto (0~300Vac) A : Auto (0~20A)
L201	2m Integrating Sphere	SENSING		N/A	N/A	
L202	Spetroradiometer	SENSING	SL300	N/A	N/A	
L203	AC Power Source	EXTECH ELECTRONICS	6190	N/A	N/A	
L210	Standard Lamp(100W)	SENSING	S01107	2012/01/05	2013/01/04	
L221	Irradiance Standard lamp	SENSING	LSD1003029	2012/05/30	2013/05/29	
L222	Power Meter	Yokogawa	WT-210	2011/10/13	2012/10/12	V : Auto (0~300Vac) A : Auto (0~20A)