



Great One Global Certification Co., Ltd.

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Optical Report For Luminaires

Applicant..... : GlacialTech Inc.

Applicant Add : 6Fl., No. 346, Sec. 2, Jung Shan Rd., Jung He Dist., New Taipei
City 235, Taiwan (R.O.C.)

Report No..... : GO1512170101F

Product Name..... : LED Flood Light

Model No : GL-FL15-CW

Sample No..... : 15121701-1

Test Specification..... : IESNA LM-79-08, Approved Method: Electrical and Photometric
Measurements of Solid-State Lighting Products.

Test Date : January 7, 2016 to January 8, 2016

Issue Date..... : January 11, 2016

- Note:
1. The test results of this report relate only to the tested sample identified in this report.
 2. This report shall not be reproduced, in full or in portion, except for having written approval from Great One Global Certification Co. , Ltd.
 3. The data in report cannot be used for advertisement, publication and promotion.

Tested By :

Reviewed By :

Alex Sung

Donald Chang

Project Engineer

Team Leader

Great One Global Certification Co., Ltd.

Product: GL-FL15-CW

Manufacturer: GlacialTech Inc.

Sample No.: 15121701-1

Tested By: Alex Sung

Date: 1-8-2016

Reviewed By: Donald Chang

Test Condition

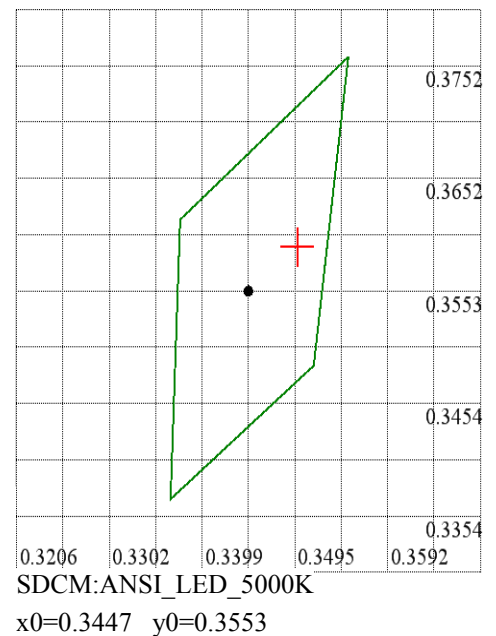
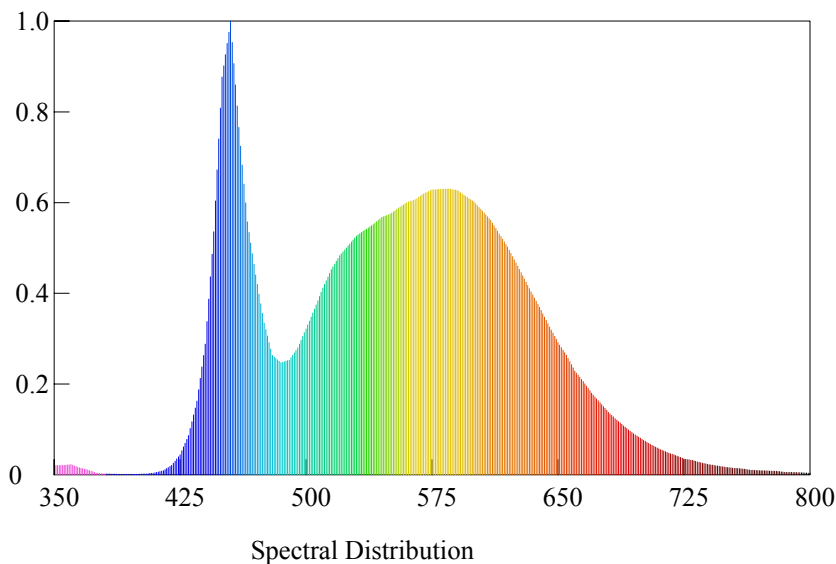
Temperature: 25.3°C

Spectrum Range: 350-800 nm

RH: 60.0%

Scan Step: 5 nm

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.3498$ $y=0.3592$ $u'=0.2116$ $v'=0.489$

Correlated Color Temperature: 4856 K

Dominant Wavelength: 571.0 nm(E)

Chromaticity Difference: +0.00195Duv

Purity: 0.1268

Color Ratio: Kr=34.4% Kg=55.0% Kb=10.6%

Peak Wavelength: 454.2 nm

Bandwidth: 22.7nm

Color Tolerance: 0.0 SDCM

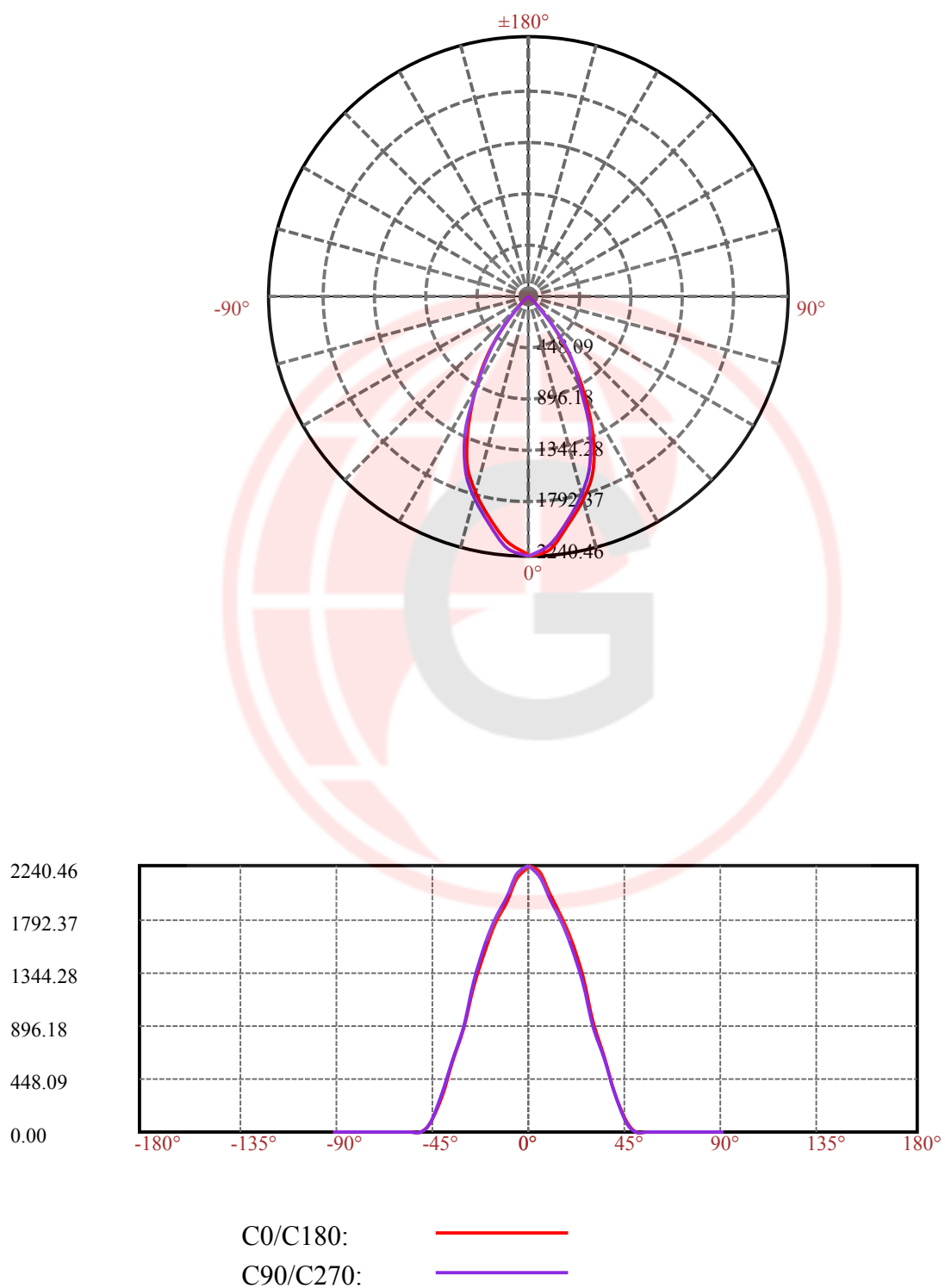
Rendering Index: Ra=81.9

Radiant Flux: 5.488 W

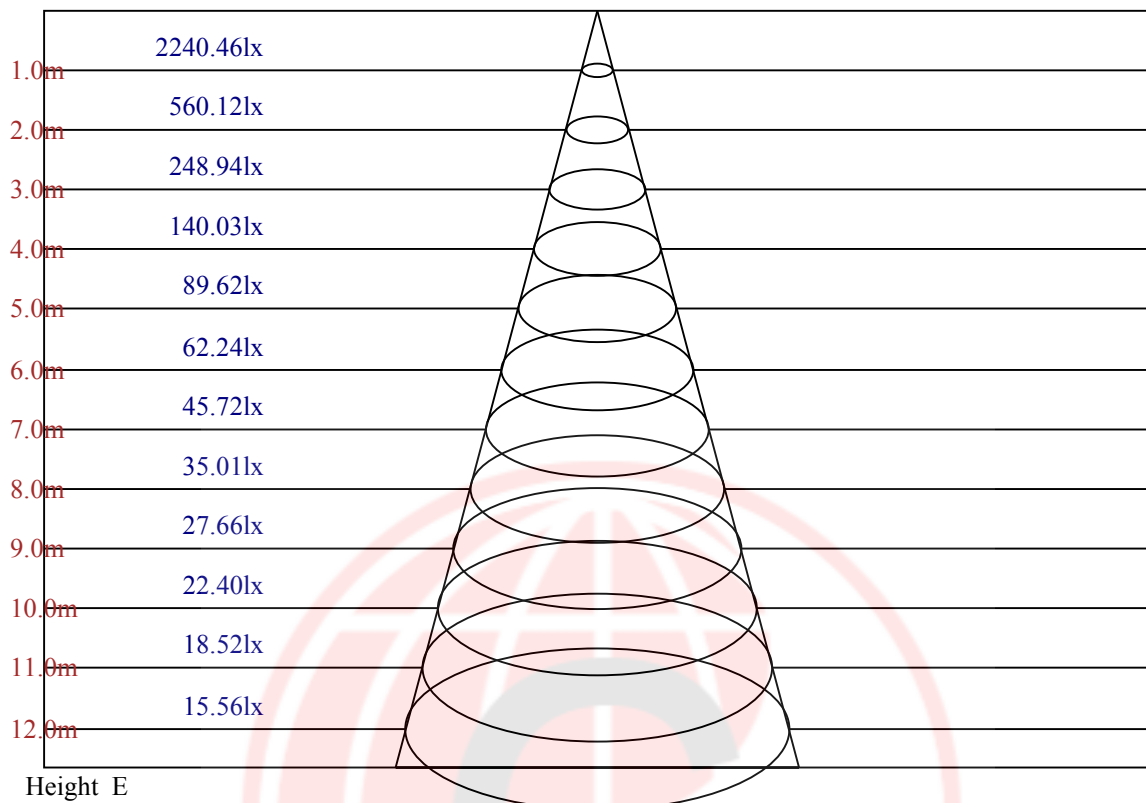
R1=80 R2=89 R3=94 R4=79 R5=79 R6=83 R7=87 R8=66

R9=6 R10=72 R11=76 R12=52 R13=83 R14=96 R15=75

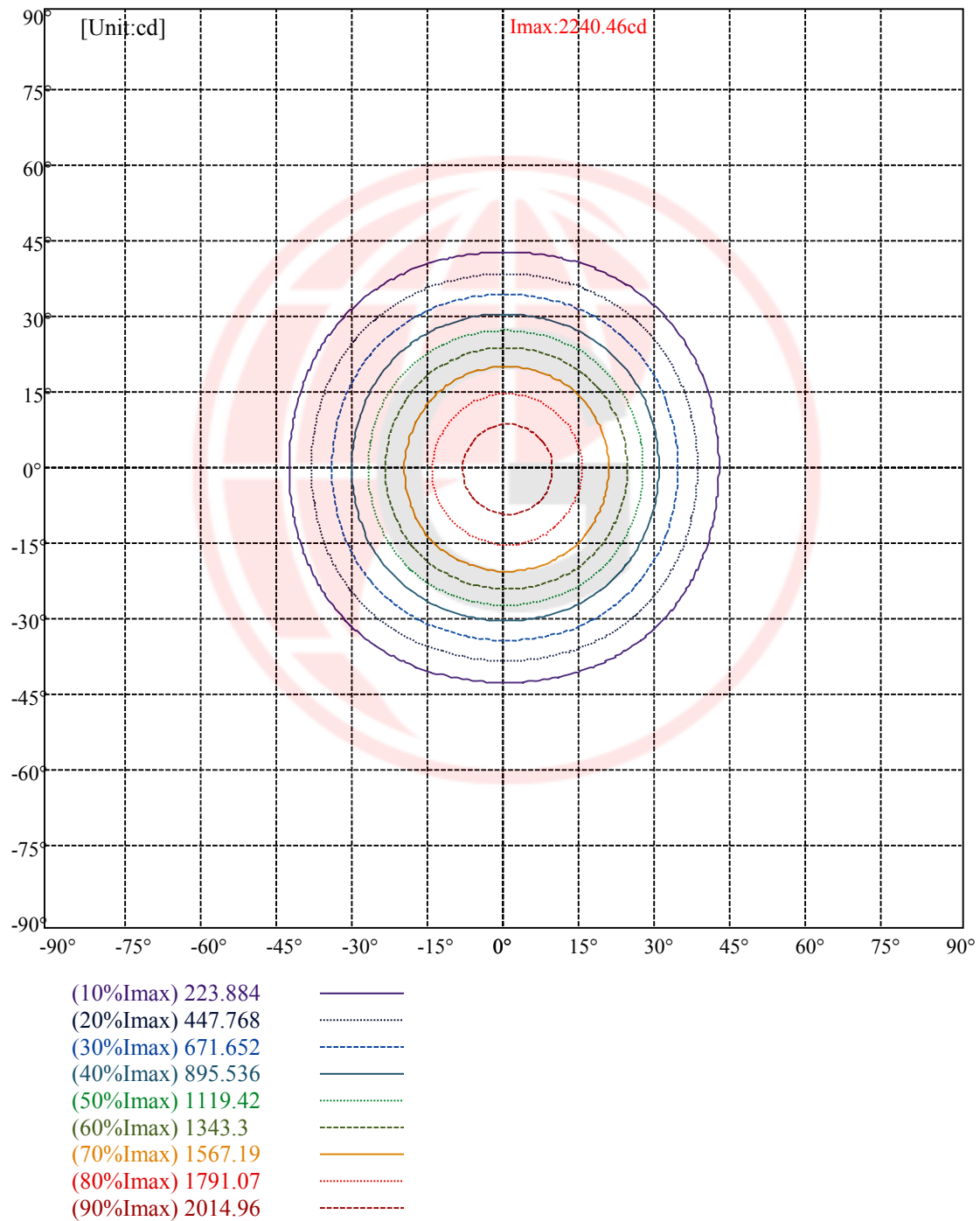
Light Distribution Curve [Unit: cd]



Lux distance Curve



ISO-Intensity(V-H)

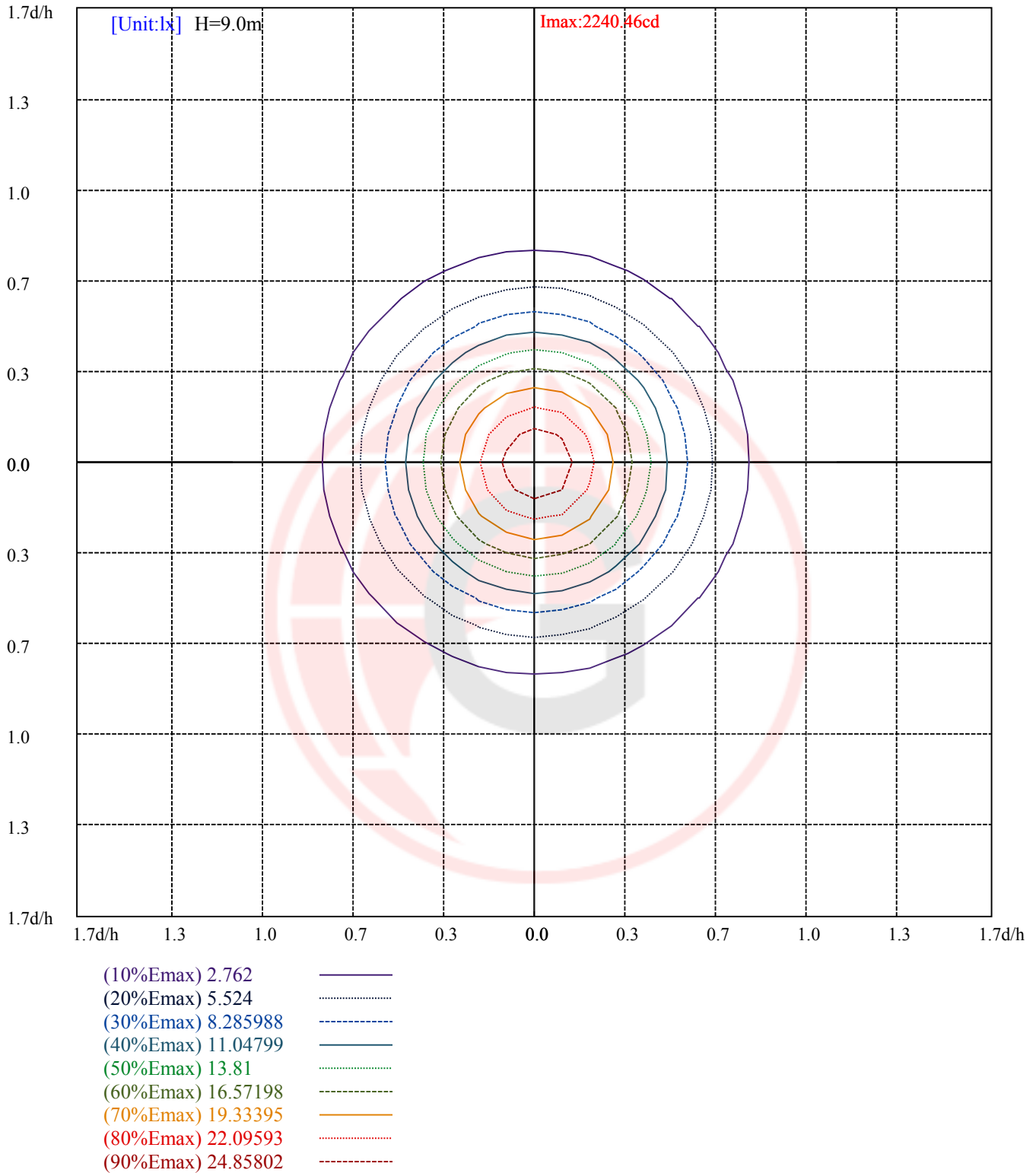


Equipment: GMS1980
Temperature(°C): 25.5

Date: 2016/1/7
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 9.00

ISO illuminance diagram



Equipment: GMS1980
Temperature(°C): 25.5

Date: 2016/1/7
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 9.00

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	2240.46	2191.05	2003.94	1811.97	1613.52	1304.91	928.26	632.61	337.77
10.0	2239.65	2187.81	2002.32	1809.54	1610.28	1304.10	925.83	631.80	338.90
20.0	2239.65	2183.76	1997.46	1805.49	1603.80	1300.86	925.02	629.37	340.85
30.0	2238.84	2177.28	1992.60	1803.06	1598.13	1295.19	923.40	625.32	340.20
40.0	2238.03	2172.42	1986.12	1794.96	1591.65	1285.47	919.35	622.08	342.39
50.0	2236.41	2167.56	1978.83	1788.48	1582.74	1278.18	914.49	620.46	340.85
60.0	2238.03	2161.89	1972.35	1785.24	1575.45	1272.51	909.63	619.65	338.82
70.0	2238.03	2154.60	1965.87	1777.14	1568.97	1263.60	905.58	616.41	337.28
80.0	2239.65	2149.74	1962.63	1773.09	1563.30	1253.88	899.10	614.79	335.66
90.0	2238.84	2143.26	1956.96	1768.23	1557.63	1249.83	895.86	611.55	331.78
100.0	2238.03	2138.40	1948.86	1764.99	1554.39	1243.35	895.05	609.12	327.89
110.0	2237.22	2132.73	1943.19	1760.94	1549.53	1236.06	891.81	603.45	323.76
120.0	2237.22	2130.30	1936.71	1754.46	1543.05	1230.39	886.95	598.59	319.55
130.0	2236.41	2125.44	1933.47	1748.79	1537.38	1225.53	882.09	593.73	314.93
140.0	2235.60	2124.63	1930.23	1743.93	1530.90	1222.29	878.04	593.73	311.69
150.0	2235.60	2122.20	1928.61	1743.93	1531.71	1219.05	872.37	588.87	311.20
160.0	2234.79	2122.20	1927.80	1743.12	1532.52	1219.05	871.56	588.06	310.47
170.0	2232.36	2123.01	1928.61	1746.36	1535.76	1219.05	869.94	587.25	311.69
180.0	2231.55	2123.82	1932.66	1749.60	1537.38	1219.05	870.75	588.06	312.26
190.0	2230.74	2127.06	1933.47	1754.46	1540.62	1220.67	871.56	588.87	314.60
200.0	2230.74	2131.11	1937.52	1760.13	1544.67	1223.10	876.42	591.30	317.36
210.0	2232.36	2133.54	1947.24	1764.99	1551.15	1227.96	878.04	592.92	317.84
220.0	2233.17	2139.21	1949.67	1768.23	1556.82	1232.82	875.61	592.11	318.49
230.0	2233.98	2146.50	1952.91	1775.52	1563.30	1237.68	877.23	592.92	320.27
240.0	2234.79	2152.17	1959.39	1776.33	1568.16	1244.16	879.66	593.73	320.60
250.0	2234.79	2159.46	1965.87	1782.00	1572.21	1250.64	883.71	594.54	321.57
260.0	2236.41	2165.13	1973.16	1788.48	1580.31	1257.12	887.76	599.40	324.57
270.0	2238.03	2170.80	1982.88	1794.96	1587.60	1267.65	892.62	605.07	327.65
280.0	2238.84	2177.28	1989.36	1802.25	1594.89	1275.75	898.29	613.17	332.02
290.0	2238.84	2185.38	1996.65	1807.92	1602.18	1282.23	905.58	618.03	334.77
300.0	2239.65	2189.43	2001.51	1810.35	1607.04	1289.52	908.82	622.89	337.12
310.0	2239.65	2195.10	2007.18	1811.97	1611.09	1296.81	911.25	626.13	340.20
320.0	2239.65	2196.72	2008.80	1809.54	1611.90	1300.05	916.92	627.75	338.99
330.0	2240.46	2195.91	2008.80	1808.73	1610.28	1302.48	919.35	631.80	335.18
340.0	2238.84	2195.91	2007.99	1811.16	1613.52	1306.53	922.59	633.42	335.26
350.0	2238.03	2195.91	2005.56	1812.78	1613.52	1306.53	926.64	633.42	334.77
360.0	2240.46	2191.05	2003.94	1811.97	1613.52	1304.91	928.26	632.61	337.77

Equipment: GMS1980
Temperature(°C): 25.5

Date: 2016/1/7
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 9.00

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	92.75	6.48	4.86	4.62	4.13	4.05	3.08	1.70	1.38
10.0	93.15	6.32	4.78	4.70	4.21	4.05	3.00	1.70	1.46
20.0	93.56	6.16	4.78	4.37	2.03	1.62	2.27	1.30	1.13
30.0	94.45	6.08	4.70	4.54	4.13	3.97	2.92	1.54	1.30
40.0	94.12	6.08	4.70	4.46	4.13	3.97	3.08	1.62	1.30
50.0	93.23	6.08	4.70	4.54	4.21	4.05	3.16	1.70	1.38
60.0	92.75	6.08	4.78	4.62	4.21	4.13	3.32	1.70	1.38
70.0	90.15	6.16	4.70	4.37	4.21	4.21	3.32	1.78	1.46
80.0	89.99	6.16	4.70	4.54	4.29	4.29	3.32	1.86	1.46
90.0	88.13	6.16	4.70	4.46	4.21	4.13	3.24	1.62	1.46
100.0	88.37	6.16	4.70	4.37	4.29	4.13	3.16	1.62	1.38
110.0	85.94	6.24	4.70	4.29	4.13	4.13	3.08	1.54	1.38
120.0	84.08	6.32	4.78	4.37	4.13	4.05	3.08	1.54	1.38
130.0	83.11	6.40	4.86	4.46	4.13	3.97	3.00	1.38	1.30
140.0	83.03	6.48	4.86	4.46	4.05	4.05	3.00	1.46	1.22
150.0	81.24	6.56	4.86	4.37	4.13	3.97	2.92	1.46	1.13
160.0	80.92	6.56	4.86	4.37	3.97	3.89	2.92	1.38	1.13
170.0	80.03	6.40	4.78	4.21	3.89	3.89	2.92	1.38	1.05
180.0	77.84	6.40	4.70	4.13	3.81	3.81	2.92	1.38	1.13
190.0	75.09	6.32	4.70	4.21	3.81	3.89	3.00	1.54	1.13
200.0	73.79	6.16	4.62	4.13	3.81	3.89	3.00	1.54	1.22
210.0	73.95	6.16	4.62	4.21	3.81	3.89	3.00	1.54	1.22
220.0	75.49	6.24	4.70	4.21	3.89	3.89	3.00	1.54	1.22
230.0	78.25	6.40	4.78	4.29	3.89	3.89	3.08	1.62	1.22
240.0	79.95	6.56	4.78	4.29	3.97	3.97	3.08	1.54	1.30
250.0	81.24	6.56	4.70	4.29	4.05	3.97	3.16	1.54	1.38
260.0	83.03	6.48	4.70	4.37	4.13	3.97	3.00	1.38	1.22
270.0	83.67	6.24	4.70	4.37	4.13	4.05	3.00	1.38	1.22
280.0	84.32	6.16	4.62	4.37	4.13	4.05	3.16	1.46	1.22
290.0	84.00	6.16	4.70	4.37	4.13	4.05	3.08	1.46	1.22
300.0	84.56	6.16	4.62	4.37	4.21	4.13	3.08	1.38	1.22
310.0	85.62	6.24	4.70	4.37	4.13	4.05	3.08	1.62	1.30
320.0	87.64	6.32	4.70	4.29	4.13	3.97	3.08	1.62	1.38
330.0	89.83	6.40	4.78	4.37	4.21	4.13	3.08	1.62	1.38
340.0	90.72	6.48	4.86	4.46	4.29	4.05	3.08	1.62	1.38
350.0	91.85	6.48	4.86	4.54	4.29	4.05	3.08	1.62	1.38
360.0	92.75	6.48	4.86	4.62	4.13	4.05	3.08	1.70	1.38

Equipment: GMS1980
Temperature(°C): 25.5

Date: 2016/1/7
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 9.00

Intensity data(cd)

C/γ(°)	90.0
0.0	1.54
10.0	1.54
20.0	1.38
30.0	1.54
40.0	1.62
50.0	1.70
60.0	1.78
70.0	1.86
80.0	1.86
90.0	1.86
100.0	1.62
110.0	1.78
120.0	1.78
130.0	1.70
140.0	1.62
150.0	1.54
160.0	1.54
170.0	1.38
180.0	1.38
190.0	1.38
200.0	1.13
210.0	1.38
220.0	1.46
230.0	1.62
240.0	1.70
250.0	1.62
260.0	1.62
270.0	1.54
280.0	1.62
290.0	1.62
300.0	1.54
310.0	1.62
320.0	1.54
330.0	1.54
340.0	1.54
350.0	1.54
360.0	1.54





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1. Luminaire Specification :

- (1) Input Voltage / Frequency : 240.00 Vac / 50 Hz
- (2) Input Watt : 14.84 W
- (3) Input Current : 0.072 A
- (4) Total Luminous Flux Output : 1755.53 lm
- (5) Luminaire Efficacy : 118.30 lm/W
- (6) Central Intensity : 2240.460 cd
- (7) Maximum Intensity : 2240.460 cd
- (8) PF : 0.863
- (9) Beam Angle : (C0-C180) : 53.9°, (C90-C270) : 53.8°
- (10) Correlated Color Temperature (CCT) : 4856 K
- (11) Duv : +0.00195
- (12) Color Rendering Index (CRI) : 81.9

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±20 %



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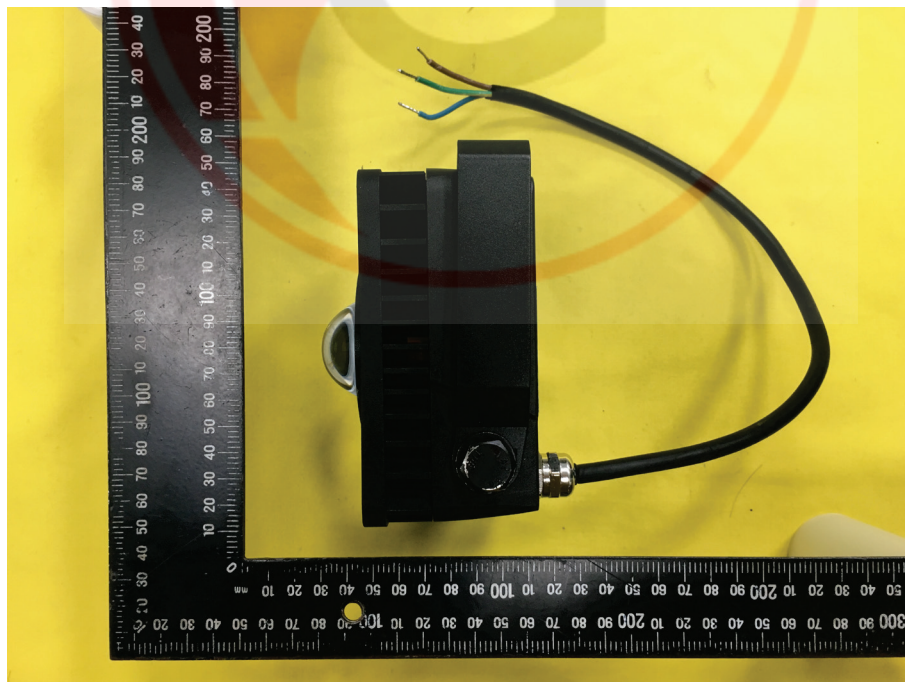
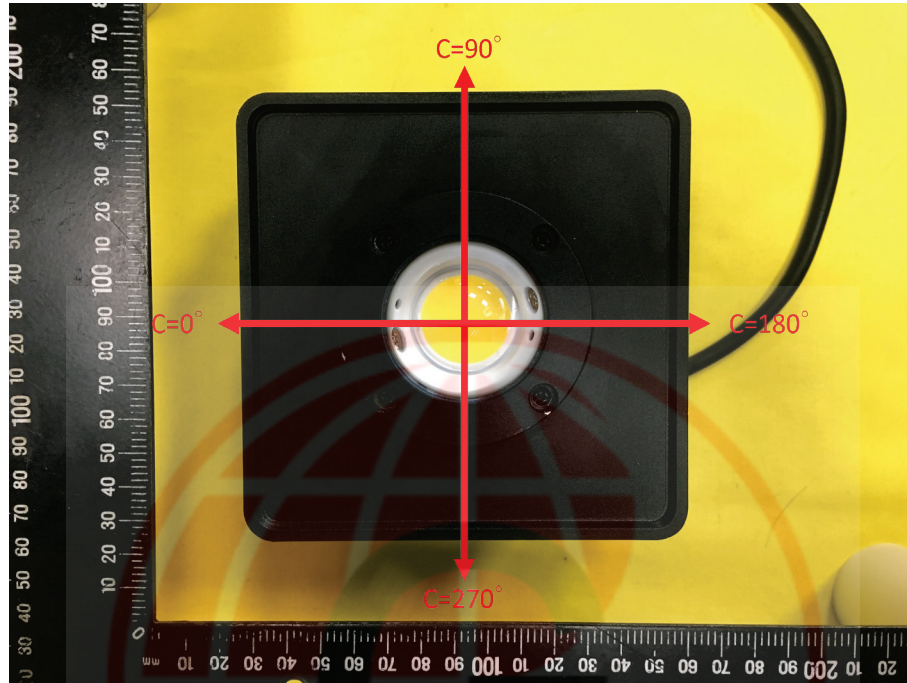
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3. Photograph of EUT :

Complete Sample Angle Definition





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4. Equipments List:

Equipment List				
Equipment ID	Equipment Type	Cal. Date	Due Date	Range Used
L201	Integrating Sphere	N/A	N/A	
L202	Spetroradiometer	N/A	N/A	
L203	AC Power Source	N/A	N/A	
L222	Power Meter	2015/10/10	2016/10/09	V : Auto (0~300Vac) A : Auto (0~20A)
L217	Goniophotometer Photo Detector	2015/4/10	2018/4/9	
L218	Goniophotometer System	N/A	N/A	
L219	AC Power Source	N/A	N/A	AC 0~150VAC4.2A AC0~300VAC2.1A
L220	Power Meter	2015/08/26	2016/08/25	V : Auto (0~300Vac) A : Auto (0~20A)
L221	Luminous Intensity Lamp	2015/11/13	2016/11/12	
L242	DC Standard Light	2015/10/14	2016/10/13	