



Great One Global Certification Co., Ltd.

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Optical Report For Luminaires

Applicant..... : GlacialTech Inc.

Applicant Add..... : 9F1, No. 352, Sec. 2, Jung Shan Rd., Jung He Dist, New Taipei
City 235, Taiwan (R.O.C.)

Report No..... : GO1412160401E

Product Name..... : LED Panel Light

Model No : GL-PL24-SM-CW

Sample No..... : 14121604-1

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 : January 28, 2015

Issue Date..... : January 29, 2015

- 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 :

Alex Sung

Donald Chang

Project Engineer

Team Leader

Great One Global Certification Co., Ltd.

Product: GL-PL24-SM -CW

Manufacturer: GlacialTech Inc.

Sample No.: 14121604-1

Tested By: Alex Sung

Date: 1-28-2015

Reviewed By: Donald Chang

Test Condition

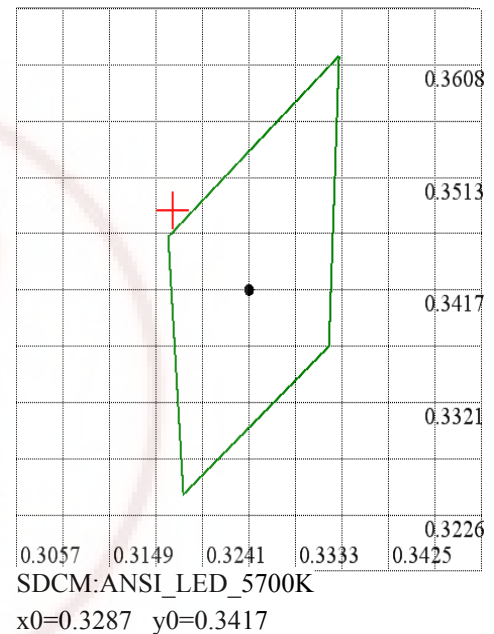
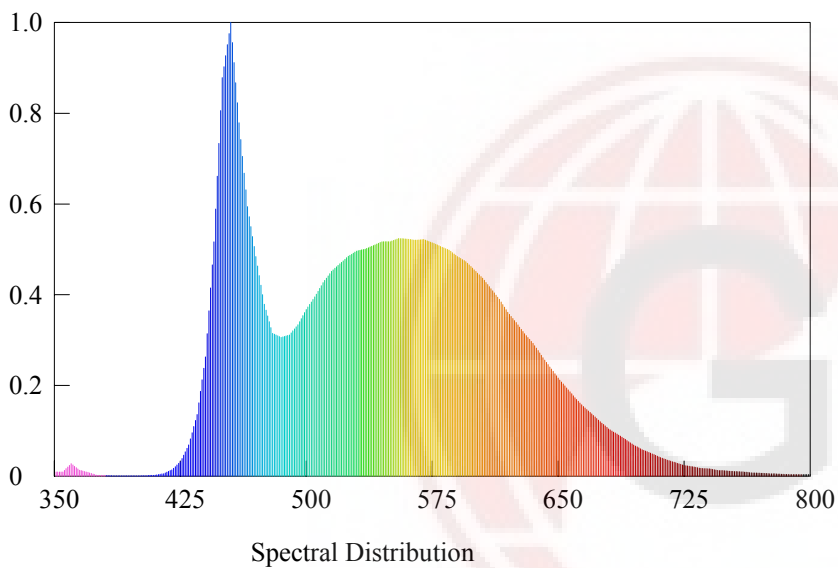
Temperature: 25.1°C

Spectrum Range: 350-800 nm

RH: 46%

Scan Step: 5 nm

Spectroradiometric Parameters



Chromaticity Coordinates: $x=0.3211$ $y=0.3485$ $u'=0.1964$ $v'=0.4796$

Correlated Color Temperature: 5994 K

Chromaticity Difference: +0.0089Duv

Color Ratio: $K_r=30.2\%$ $K_g=56.7\%$ $K_b=13.1\%$

Bandwidth: 24.3nm

Rendering Index: $R_a=82.3$

Dominant Wavelength: 509.0 nm(E)

Purity: 0.0379

Peak Wavelength: 454.3 nm

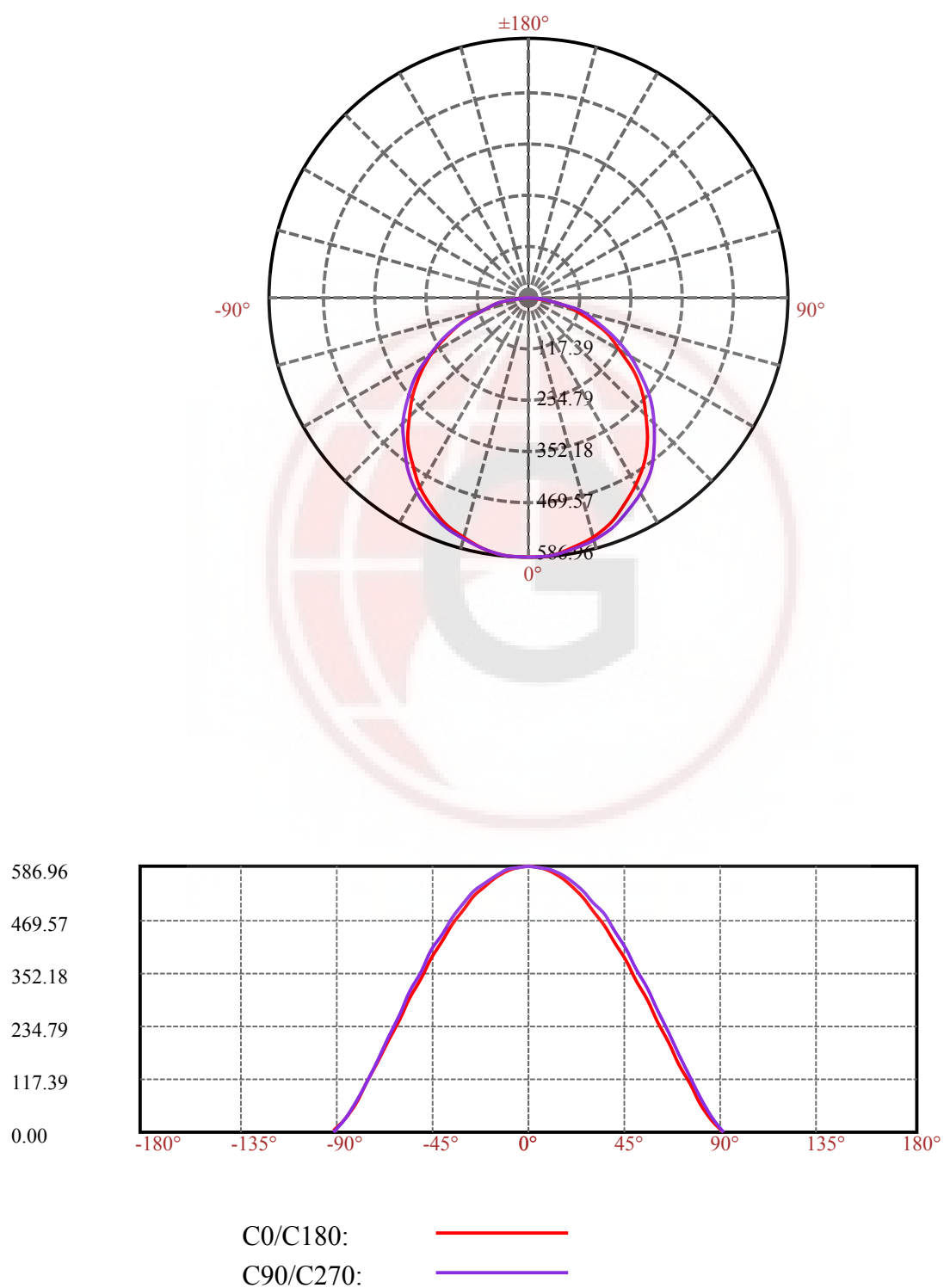
Color Tolerance: 0.0 SDCM

Radiant Flux: 4.768 W

R1=79 R2=89 R3=94 R4=78 R5=79 R6=84 R7=87 R8=66

R9=3 R10=74 R11=77 R12=55 R13=83 R14=97 R15=74

Light Distribution Curve [Unit: cd]

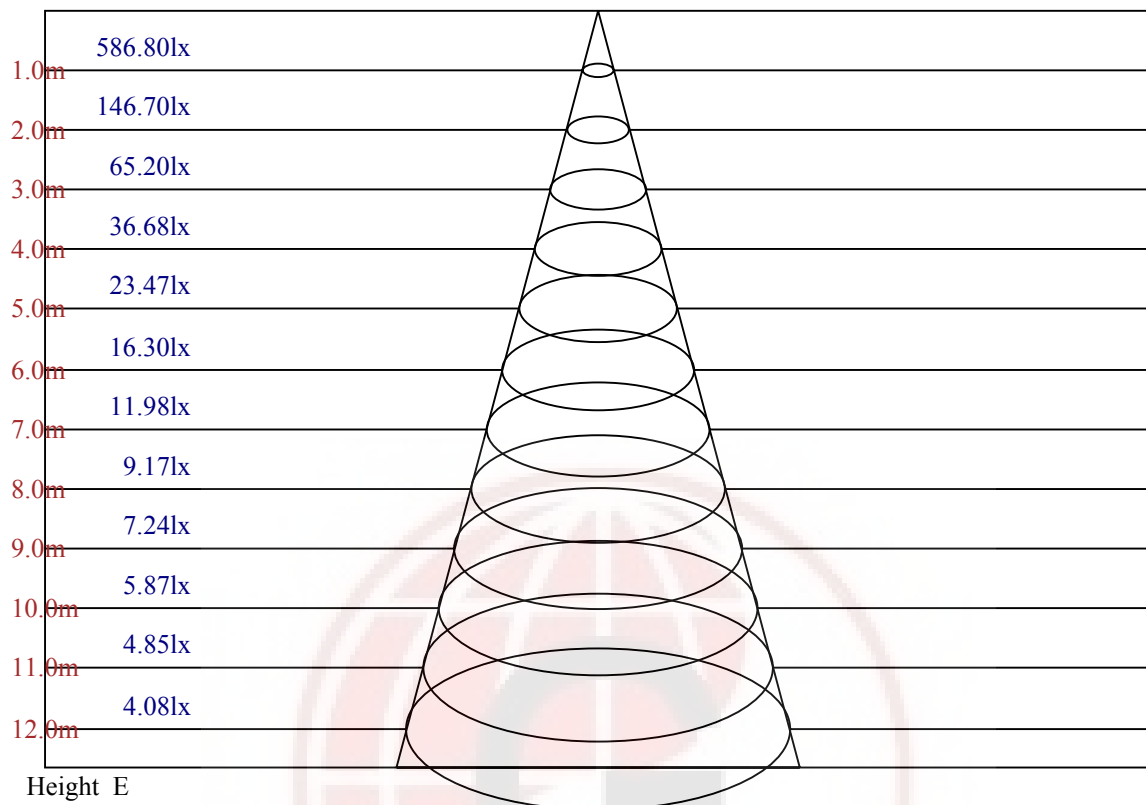


Equipment: HW-1015
Temperature(°C): 25.5

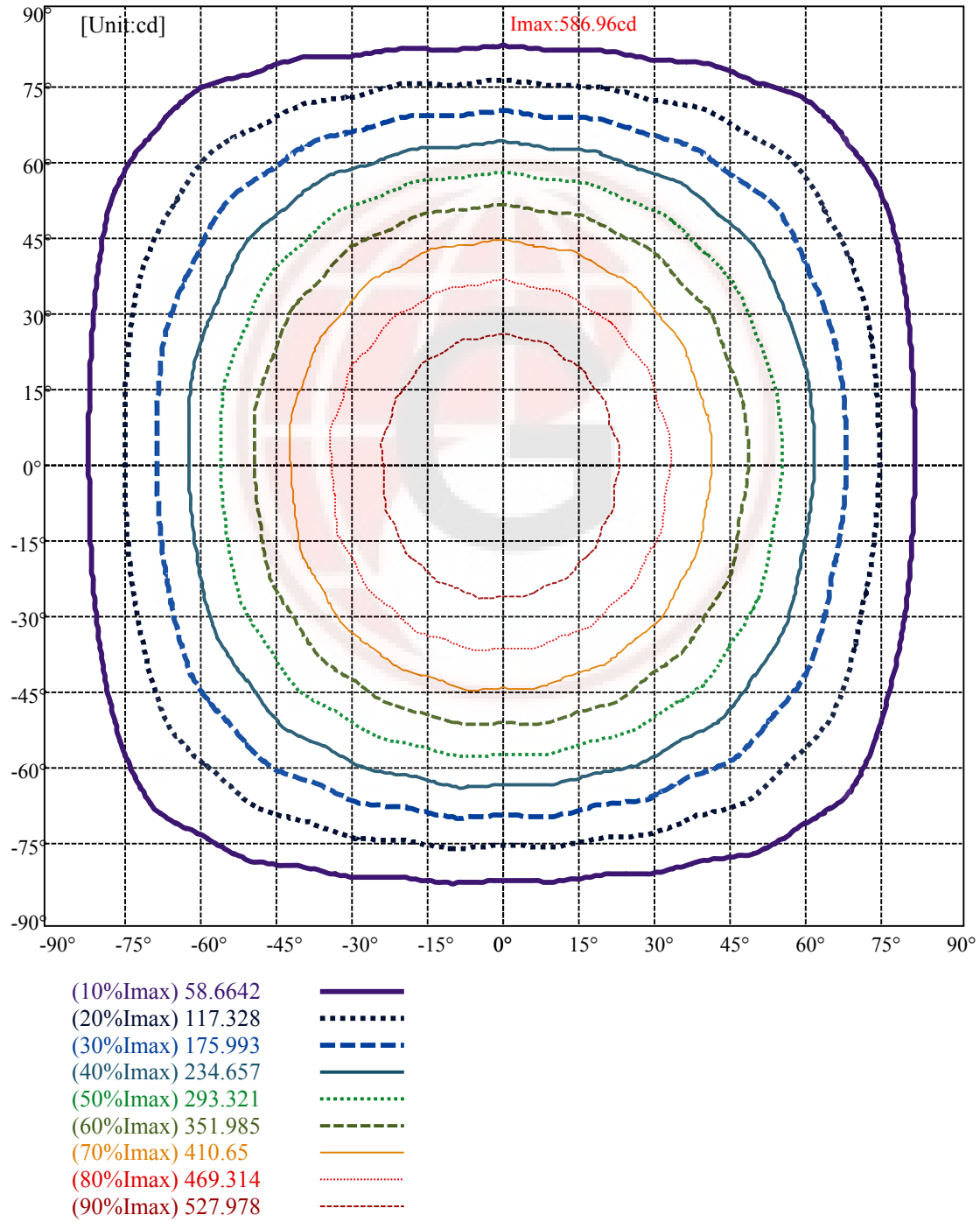
Date: 2015/1/28
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 12.65

Lux distance Curve



ISO-Intensity(V-H)

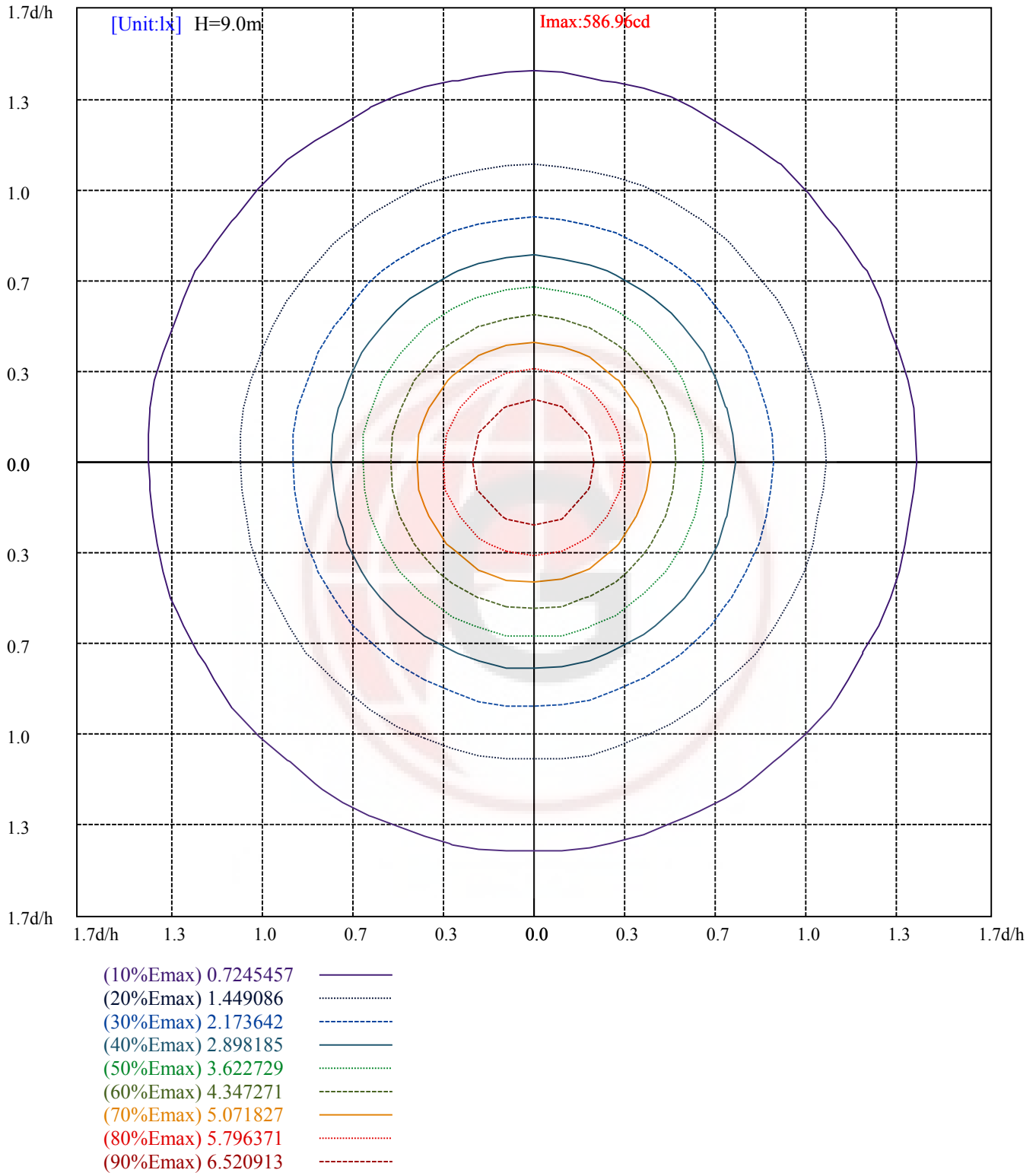


Equipment: HW-1015
Temperature(°C): 25.5

Date: 2015/1/28
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 12.65

ISO illuminance diagram



Equipment: HW-1015
Temperature(°C): 25.5

Date: 2015/1/28
Humidity(%): 60.0%

Operator: Alex Sung
Distance(m): 12.65

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	586.80	583.92	574.48	560.56	542.32	517.03	488.07	454.62	417.98
10.0	586.80	583.92	574.96	561.04	541.84	517.83	489.03	455.90	419.10
20.0	586.64	582.64	573.04	558.64	538.96	514.15	485.19	451.42	414.46
30.0	586.96	583.76	575.60	562.16	544.08	520.71	492.71	460.38	422.14
40.0	586.80	582.96	573.84	560.72	542.32	518.79	489.19	458.30	421.50
50.0	586.96	583.76	576.40	563.76	546.64	524.71	497.67	466.47	430.94
60.0	586.64	582.96	575.12	562.64	545.36	523.27	496.71	465.03	429.18
70.0	586.96	584.08	577.36	566.00	550.48	529.99	504.55	474.31	437.34
80.0	586.48	583.60	575.76	564.40	549.20	528.23	501.35	470.47	437.02
90.0	586.64	584.40	578.00	567.92	552.88	532.07	507.27	479.43	443.26
100.0	586.48	583.76	576.72	565.52	549.52	529.03	503.59	473.19	437.98
110.0	586.32	584.56	578.32	567.44	552.24	531.91	507.43	477.35	442.94
120.0	586.64	584.08	576.72	565.04	548.56	527.11	501.03	469.99	434.62
130.0	586.48	584.88	578.32	566.80	550.64	529.51	503.75	473.19	437.98
140.0	586.64	584.08	576.72	563.28	545.52	524.55	495.75	463.91	427.74
150.0	586.48	585.04	577.52	566.16	549.36	525.67	498.95	469.19	431.42
160.0	586.64	584.24	576.24	562.80	544.56	521.67	493.51	460.86	424.54
170.0	586.80	584.88	578.00	565.52	547.60	525.03	497.83	465.51	429.66
180.0	586.80	584.56	576.08	562.80	543.76	520.55	492.23	459.42	422.94
190.0	586.80	584.72	576.24	562.80	544.24	521.99	492.23	459.26	422.78
200.0	586.64	585.36	578.00	566.64	549.52	525.67	498.47	468.23	430.14
210.0	586.96	584.72	577.04	564.40	546.64	523.75	496.07	463.91	427.26
220.0	586.80	585.36	579.12	567.44	551.44	529.51	502.95	472.07	436.22
230.0	586.96	584.72	577.84	565.52	549.04	528.55	500.23	468.39	432.22
240.0	586.64	585.36	579.92	569.04	554.16	532.55	508.71	478.31	441.18
250.0	586.96	584.56	578.48	567.28	551.92	531.27	505.51	474.63	438.94
260.0	586.48	585.52	579.44	569.52	554.80	535.12	510.47	480.55	445.66
270.0	586.64	584.24	578.00	566.80	551.76	531.11	505.35	474.79	438.94
280.0	586.48	584.72	579.28	568.72	554.16	533.03	509.51	479.43	442.30
290.0	586.32	584.24	577.04	565.84	549.36	527.27	502.15	470.95	432.54
300.0	586.64	584.72	578.00	566.64	550.80	529.51	503.59	472.55	434.62
310.0	586.48	583.76	575.12	562.96	545.52	522.63	493.67	462.95	425.98
320.0	586.64	584.08	576.56	563.60	546.16	523.59	495.59	463.59	426.78
330.0	586.48	582.96	573.84	559.76	540.88	516.55	487.43	454.14	416.70
340.0	586.64	583.92	575.60	562.16	542.16	519.59	491.27	457.98	419.10
350.0	586.80	582.96	572.72	558.00	538.96	514.15	482.79	449.18	413.66
360.0	586.80	583.92	574.48	560.56	542.32	517.03	488.07	454.62	417.98

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	377.81	334.93	290.12	243.71	197.15	150.10	105.29	63.53	24.96
10.0	379.25	336.21	291.40	245.15	197.79	151.06	105.93	63.85	25.12
20.0	373.81	330.77	285.32	238.59	191.55	144.34	97.29	58.25	23.84
30.0	384.53	341.49	293.96	247.23	202.43	155.06	106.90	64.65	26.24
40.0	378.93	335.89	289.96	243.07	194.91	147.70	101.93	60.33	25.60
50.0	390.94	348.37	303.08	255.72	207.55	159.70	113.14	69.77	28.32
60.0	389.17	345.97	299.72	249.64	203.55	155.38	106.25	63.21	27.84
70.0	400.54	357.81	312.20	261.96	215.87	166.74	116.66	72.49	31.20
80.0	395.26	352.37	306.12	258.28	208.83	159.86	112.34	68.17	30.72
90.0	404.38	361.65	316.20	268.20	219.39	169.94	121.94	76.97	34.08
100.0	398.94	355.73	309.64	259.08	212.67	163.38	113.30	68.81	32.16
110.0	404.22	361.49	316.36	265.96	219.71	171.06	122.90	75.85	34.40
120.0	395.10	352.21	306.60	256.20	210.27	161.62	112.18	68.49	32.16
130.0	398.78	356.37	311.56	264.20	216.35	167.86	118.26	76.65	34.56
140.0	390.13	345.17	299.56	252.68	204.83	156.98	110.90	67.69	31.84
150.0	392.22	349.65	305.16	258.60	210.91	163.70	117.30	73.77	33.28
160.0	385.01	341.97	297.32	250.92	200.83	156.34	110.58	65.77	30.72
170.0	390.45	348.21	303.72	257.96	210.91	163.54	117.46	74.09	32.96
180.0	383.09	340.37	295.88	249.48	202.27	155.54	109.30	66.89	30.40
190.0	382.61	339.73	295.08	248.51	201.63	154.10	108.66	66.09	30.56
200.0	390.61	348.21	303.24	256.84	209.95	162.42	116.02	72.65	32.32
210.0	385.01	344.21	298.76	249.16	201.47	156.34	107.86	65.45	30.24
220.0	396.70	353.97	308.36	261.32	213.63	165.30	116.02	74.41	32.48
230.0	394.46	348.37	302.28	254.44	205.63	157.14	110.10	67.21	30.08
240.0	401.34	358.61	312.20	264.52	215.55	166.58	119.06	74.09	32.32
250.0	396.70	355.25	309.00	257.64	207.71	158.74	110.90	67.21	30.40
260.0	406.30	363.09	317.00	268.20	219.23	169.14	120.98	75.37	32.16
270.0	399.26	355.09	308.52	259.40	209.63	160.02	109.30	67.69	28.96
280.0	402.62	361.65	312.52	264.36	214.75	167.86	116.98	72.17	30.24
290.0	392.38	350.77	301.48	252.52	203.39	153.78	106.74	63.21	27.04
300.0	394.78	353.65	304.84	256.68	207.87	161.78	112.02	68.01	27.52
310.0	382.93	338.93	295.24	244.35	195.87	147.70	101.45	59.69	24.48
320.0	386.61	343.41	297.32	250.12	202.59	154.42	108.34	65.77	25.28
330.0	375.57	332.21	286.28	238.91	191.39	144.02	96.49	57.77	22.72
340.0	380.85	337.97	290.12	243.55	198.91	149.30	104.17	62.25	24.32
350.0	370.29	327.09	281.96	235.07	187.87	141.46	96.49	56.01	22.72
360.0	377.81	334.93	290.12	243.71	197.15	150.10	105.29	63.53	24.96

Intensity data(cd)

C/ γ (°)	90.0
0.0	0.48
10.0	0.48
20.0	0.48
30.0	0.32
40.0	0.48
50.0	0.48
60.0	0.32
70.0	0.48
80.0	0.48
90.0	0.48
100.0	0.96
110.0	1.44
120.0	1.44
130.0	2.08
140.0	1.92
150.0	2.40
160.0	2.40
170.0	2.88
180.0	2.56
190.0	1.76
200.0	2.08
210.0	1.76
220.0	1.60
230.0	0.96
240.0	0.96
250.0	0.48
260.0	0.32
270.0	0.00
280.0	0.16
290.0	0.48
300.0	0.32
310.0	0.32
320.0	0.32
330.0	0.48
340.0	0.48
350.0	0.32
360.0	0.48





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1. Luminaire Specification :

- (1) Input Voltage/Frequency : 240 Vac / 50 Hz
- (2) Input Watt : 17.26 W
- (3) Input Current : 0.085 A
- (4) Total Luminous Flux Output : 1675.50 lm
- (5) Luminaire Efficacy : 97.07 lm/W
- (6) Central Intensity (cd) : 586.643 cd
- (7) Maximum Intensity(cd) : 586.963 cd
- (8) PF : 0.832
- (9) Beam angle: (C0-C180) : 109.9°, (C90-C270) : 113.9°

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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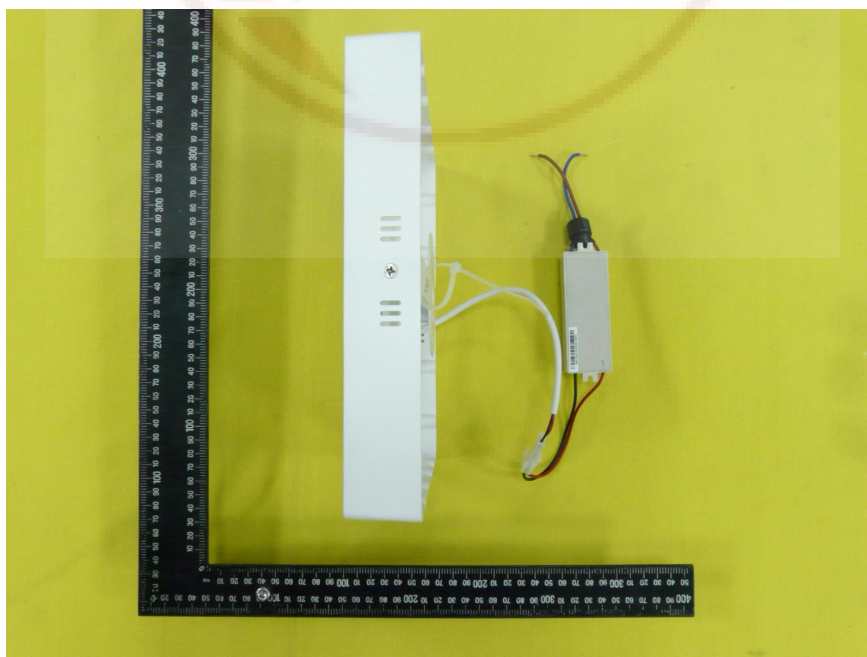
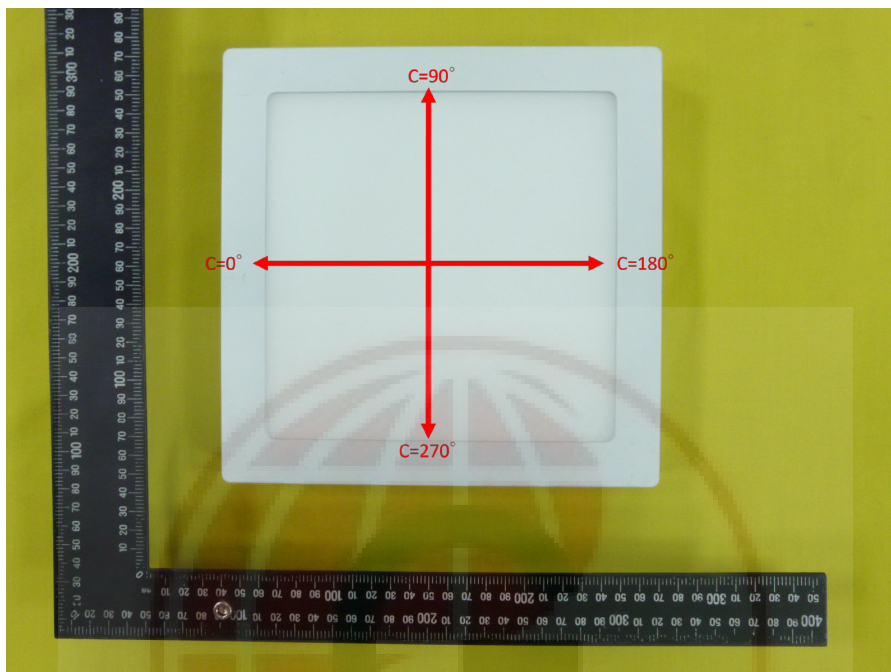
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3. Photograph of EUT :

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	2014/10/10	2015/10/09	V : Auto (0~300Vac) A : Auto (0~20A)
L204	Goniophotometer Photo Detector	N/A	N/A	
L205	Goniophotometer System	N/A	N/A	
L206	AC Power Source	N/A	N/A	AC 0~150VAC4.2A AC0~300VAC2.1A
L207	Power Meter	2014/12/12	2015/12/11	V : Auto (0~600Vac) A : Auto (0~20A)
L221	Luminous Intensity Lamp	2013/11/13	2023/11/12	
L242	DC Standard Light	2014/10/14	2024/10/13	