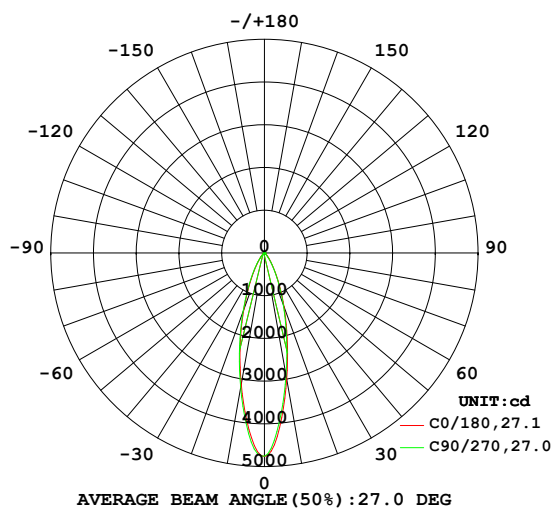


LUMINAIRE PHOTOMETRIC TEST REPORT

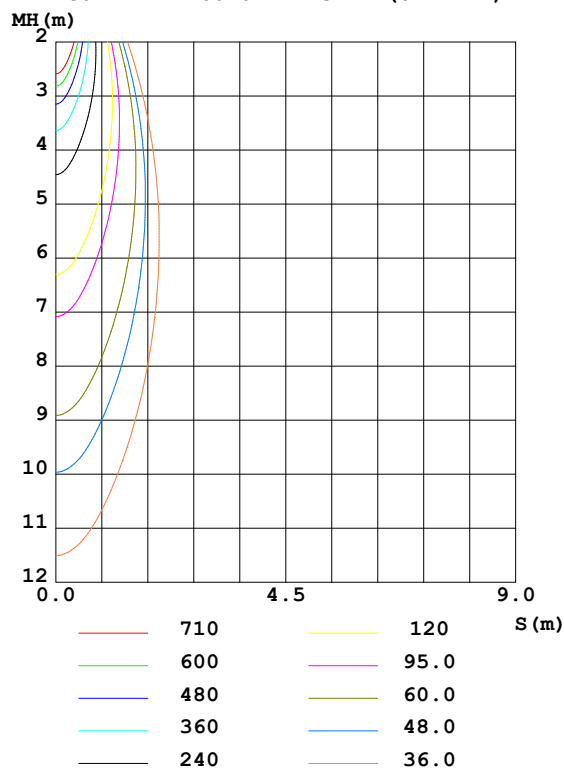
Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm					
NAME: W018LED		TYPE:		WEIGHT:	
SPEC.: P-W018LED-2x10W3025-CI20037R90-PSL600		DIM.:		SERIAL No.:	
MFR.: CETTIGA		SUR.: 0.0003		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 79.33 lm/W
MODEL	CLU029-1202	I _{max} (cd)	4764	S/MH (C0/180)	0.46	
NOMINAL POWER (W)	10	LOR (%)	79.1	S/MH (C90/270)	0.47	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1623.3	η UP, DN (C0-180)	0.0, 38.2	
NOMINAL FLUX (lm)	1026	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 40.9	
LAMPS INSIDE	2	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	220.2	η down (%)	79.1	CIBSE SHR MAX	0.50	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Li Huifeng
Test Date: 2018-10-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.800m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

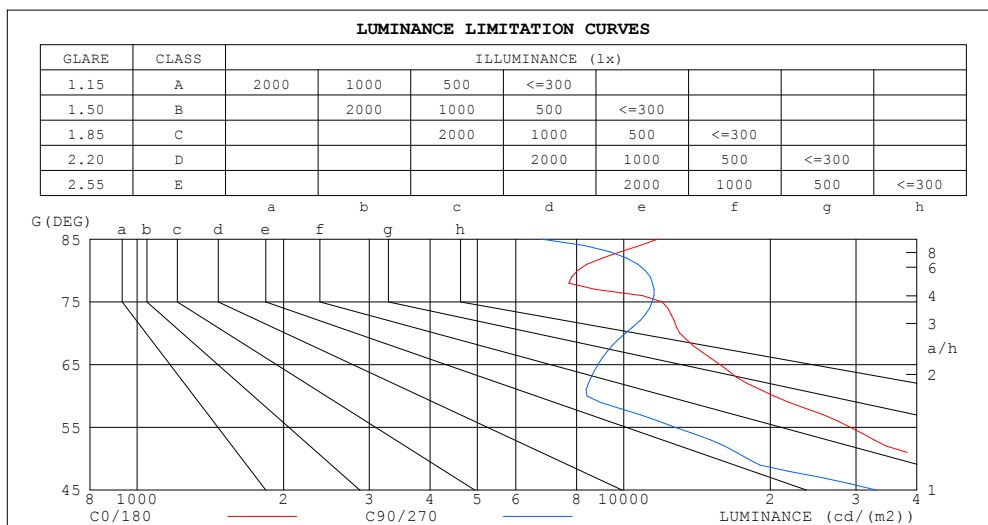
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	3000	2955	2906	3012	3124	3159	3201	3110	0- 10	358.4	358.4	22.1,17.5
20	1338	1314	1296	1354	1417	1439	1465	1394	10- 20	584.7	943.1	58.1,46
30	470.1	457.2	451.9	469.5	490.0	503.2	520.5	493.6	20- 30	388.8	1332	82,64.9
40	154.7	152.6	115.8	154.1	162.9	167.4	154.0	166.2	30- 40	176.4	1508	92.9,73.5
50	54.03	61.57	23.11	56.79	53.61	67.86	22.91	64.91	40- 50	70.97	1579	97.3,77
60	20.34	15.77	8.402	15.22	20.41	16.12	8.922	14.94	50- 60	26.09	1605	98.9,78.2
70	8.917	6.359	6.885	6.342	9.502	6.404	6.936	6.460	60- 70	10.03	1615	99.5,78.7
80	2.790	4.147	3.845	4.104	2.736	4.241	4.046	4.202	70- 80	5.958	1621	99.9,79
90	0.3551	0	0	0	0.4200	0	0	0	80- 90	1.896	1623	100,79.1
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Li Huifeng
 Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.800m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	11736	6787
80	8034	11070
75	11991	11429
70	13036	10065
65	15767	8849
60	20337	8402
55	29219	12752
50	42029	17979
45	64540	33017

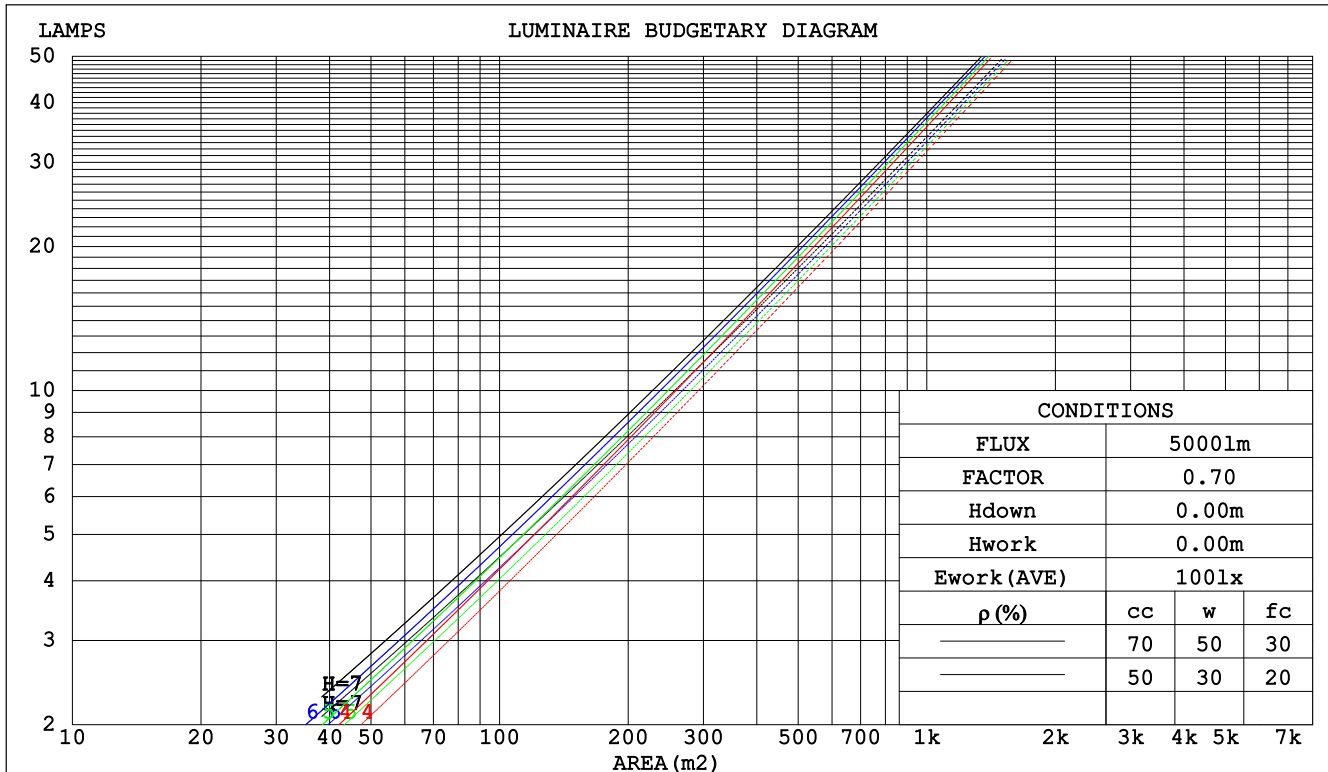
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	.94	.94	.94	.92	.92	.92	.88	.88	.88	.84	.84	.84	.81	.81	.81	.79
1.0	.88	.86	.85	.87	.85	.83	.83	.82	.81	.80	.79	.78	.78	.77	.76	.75
2.0	.83	.80	.78	.82	.79	.77	.79	.77	.75	.77	.75	.73	.75	.73	.72	.71
3.0	.78	.75	.72	.77	.74	.71	.75	.72	.70	.73	.71	.69	.71	.70	.68	.67
4.0	.74	.70	.67	.73	.70	.67	.71	.68	.66	.70	.67	.65	.69	.66	.65	.63
5.0	.70	.66	.63	.70	.66	.63	.68	.65	.62	.67	.64	.62	.66	.63	.61	.60
6.0	.67	.63	.60	.66	.62	.60	.65	.62	.59	.64	.61	.59	.63	.60	.58	.57
7.0	.64	.60	.57	.63	.59	.57	.62	.59	.56	.61	.58	.56	.61	.58	.56	.55
8.0	.61	.57	.54	.61	.57	.54	.60	.56	.54	.59	.56	.54	.58	.55	.53	.52
9.0	.58	.54	.52	.58	.54	.52	.57	.54	.51	.57	.54	.51	.56	.53	.51	.50
10.0	.56	.52	.50	.56	.52	.49	.55	.52	.49	.55	.51	.49	.54	.51	.49	.48



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Li Huifeng
 Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.800m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm					
NAME: W018LED			TYPE:		WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600			DIM.:		SERIAL No.:
MFR.: CETTIGA			SUR.:0.0003		Shielding Angle:

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.129	.073	.023	.124	.071	.022	.114	.065	.021	.105	.060	.019	.096	.056	.018		
2.0	.122	.067	.020	.117	.065	.020	.109	.061	.019	.102	.057	.018	.095	.053	.017		
3.0	.115	.061	.018	.111	.060	.018	.104	.056	.017	.098	.054	.016	.092	.051	.016		
4.0	.109	.056	.017	.105	.055	.016	.099	.053	.016	.094	.050	.015	.089	.048	.015		
5.0	.103	.052	.015	.100	.051	.015	.095	.049	.015	.090	.048	.014	.086	.046	.014		
6.0	.098	.049	.014	.095	.048	.014	.091	.047	.014	.087	.045	.013	.083	.043	.013		
7.0	.093	.046	.013	.091	.045	.013	.087	.044	.013	.083	.043	.012	.080	.041	.012		
8.0	.089	.043	.012	.087	.043	.012	.083	.042	.012	.080	.041	.012	.077	.039	.012		
9.0	.085	.041	.011	.083	.041	.011	.080	.040	.011	.077	.039	.011	.074	.038	.011		
10.0	.081	.039	.011	.080	.039	.011	.077	.038	.011	.074	.037	.010	.072	.036	.010		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.151	.151	.151	.129	.129	.129	.088	.088	.088	.050	.050	.050	.016	.016	.016	
1.0	.135	.125	.115	.115	.107	.099	.079	.074	.069	.045	.043	.040	.015	.014	.013	
2.0	.122	.105	.091	.104	.090	.078	.071	.062	.055	.041	.036	.032	.013	.012	.010	
3.0	.111	.090	.073	.095	.077	.063	.065	.054	.044	.038	.031	.026	.012	.010	.009	
4.0	.102	.078	.059	.088	.067	.052	.060	.047	.036	.035	.027	.021	.011	.009	.007	
5.0	.095	.069	.049	.081	.059	.043	.056	.041	.030	.032	.024	.018	.010	.008	.006	
6.0	.088	.061	.041	.076	.053	.036	.052	.037	.025	.030	.022	.015	.010	.007	.005	
7.0	.083	.055	.035	.071	.047	.031	.049	.033	.022	.029	.020	.013	.009	.006	.004	
8.0	.078	.050	.030	.067	.043	.026	.046	.030	.019	.027	.018	.011	.009	.006	.004	
9.0	.074	.045	.026	.064	.039	.023	.044	.028	.016	.026	.016	.010	.008	.005	.003	
10.0	.070	.042	.023	.060	.036	.020	.042	.026	.014	.024	.015	.008	.008	.005	.003	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm											
NAME: W018LED						TYPE:			WEIGHT:		
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600						DIM.:			SERIAL No.:		
MFR.: CETTIGA						SUR.:0.0003			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H		18.2	19.0	18.4	19.1	19.3	17.1	18.0	17.4	18.1	18.3
	3H	18.2	19.0	18.4	19.1	19.3	17.1	17.9	17.4	18.1	18.3
	4H	18.2	18.9	18.5	19.2	19.4	17.2	17.9	17.4	18.1	18.3
	6H	18.2	18.9	18.5	19.1	19.3	17.2	17.9	17.5	18.1	18.4
	8H	18.2	18.8	18.5	19.1	19.3	17.2	17.9	17.5	18.1	18.4
	12H	18.2	18.8	18.5	19.1	19.3	17.2	17.8	17.5	18.1	18.4
4H	2H	18.0	18.7	18.3	19.0	19.2	17.0	17.8	17.3	18.0	18.2
	3H	18.1	18.7	18.4	19.0	19.3	17.1	17.7	17.4	18.0	18.2
	4H	18.2	18.7	18.5	19.0	19.3	17.2	17.7	17.5	18.0	18.3
	6H	18.2	18.7	18.5	19.0	19.3	17.3	17.8	17.7	18.1	18.5
	8H	18.2	18.6	18.5	19.0	19.3	17.3	17.8	17.7	18.1	18.5
	12H	18.2	18.6	18.6	19.0	19.4	17.3	17.8	17.7	18.1	18.5
8H	4H	18.1	18.5	18.5	18.9	19.3	17.1	17.6	17.5	17.9	18.3
	6H	18.1	18.5	18.6	18.9	19.3	17.3	17.7	17.8	18.1	18.5
	8H	18.2	18.5	18.6	18.9	19.4	17.4	17.7	17.8	18.2	18.6
	12H	18.2	18.5	18.7	19.0	19.4	17.4	17.7	17.9	18.2	18.6
12H	4H	18.0	18.5	18.5	18.8	19.2	17.1	17.5	17.5	17.9	18.3
	6H	18.1	18.5	18.6	18.9	19.3	17.3	17.7	17.8	18.1	18.5
	8H	18.2	18.5	18.6	18.9	19.4	17.4	17.7	17.9	18.1	18.6
Variations with the observer position at spacings:											
S = 1.0H		+ 1.9 / - 3.0					+ 1.9 / - 3.5				
1.5H		+ 2.9 / - 2.5					+ 3.2 / - 3.6				
2.0H		+ 3.3 / - 2.9					+ 2.6 / - 2.4				

CIE Pub.117, 2052 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.5)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

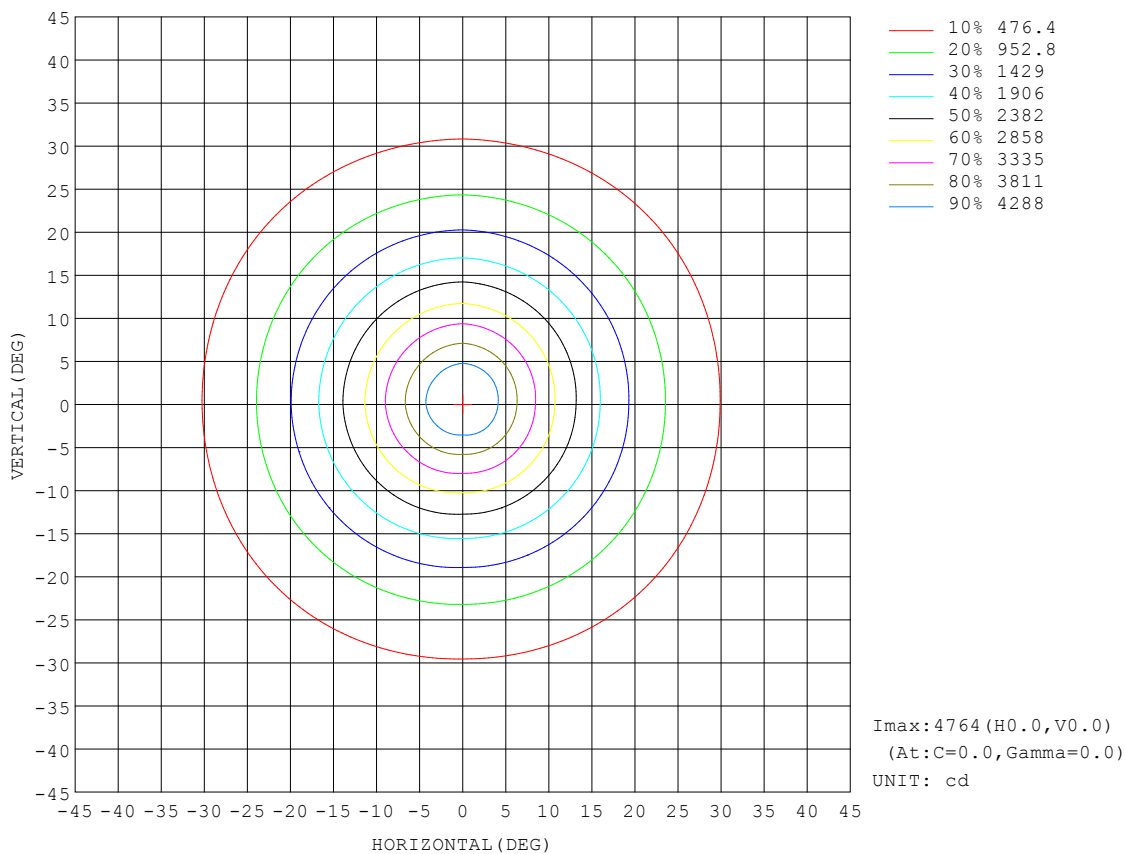
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	64	61	68	64	61	68	63	61	58
0.80	75	70	67	74	70	67	73	69	67	64
1.00	78	74	71	78	74	71	76	73	70	67
1.25	82	77	75	81	77	74	79	76	74	70
1.50	84	80	77	83	79	77	81	78	76	72
2.00	86	82	80	85	82	79	83	80	78	74
2.50	87	84	82	86	83	81	83	81	80	75
3.00	88	86	83	87	85	83	84	82	81	76
4.00	90	88	86	88	86	85	85	84	83	77
5.00	91	89	88	89	88	86	86	85	84	78
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

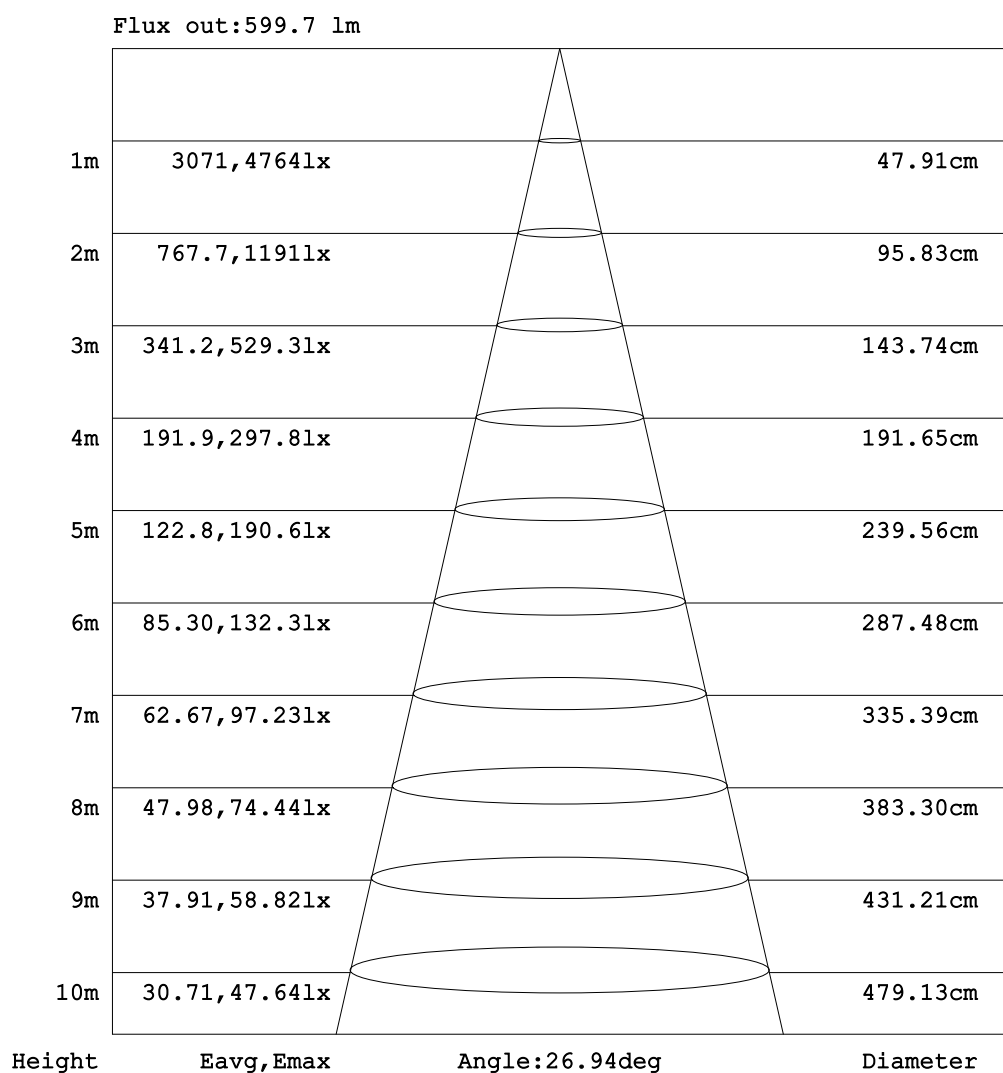


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Li Huifeng
Test Date: 2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.800m [K=1.0000]
Remarks:

AAI Figure

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



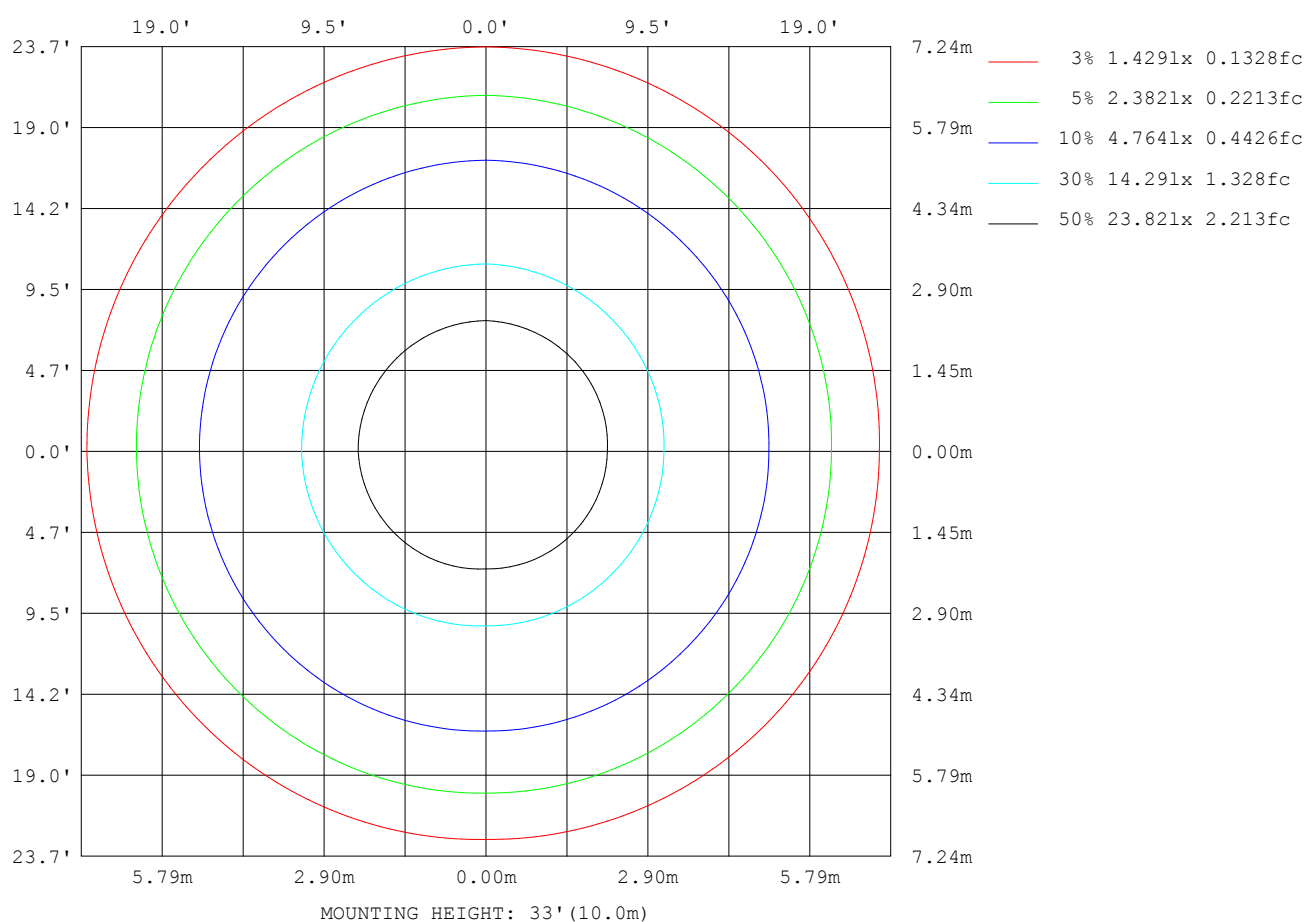
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Li Huifeng
 Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.800m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:221.0V I:0.0982A P:20.46W PF:0.9427 Freq:59.98Hz Lamp Flux:1026x2 lm		
NAME: W018LED	TYPE:	WEIGHT:
SPEC.:P-W018LED-2x10W3025-CI20037R90-PSL600	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

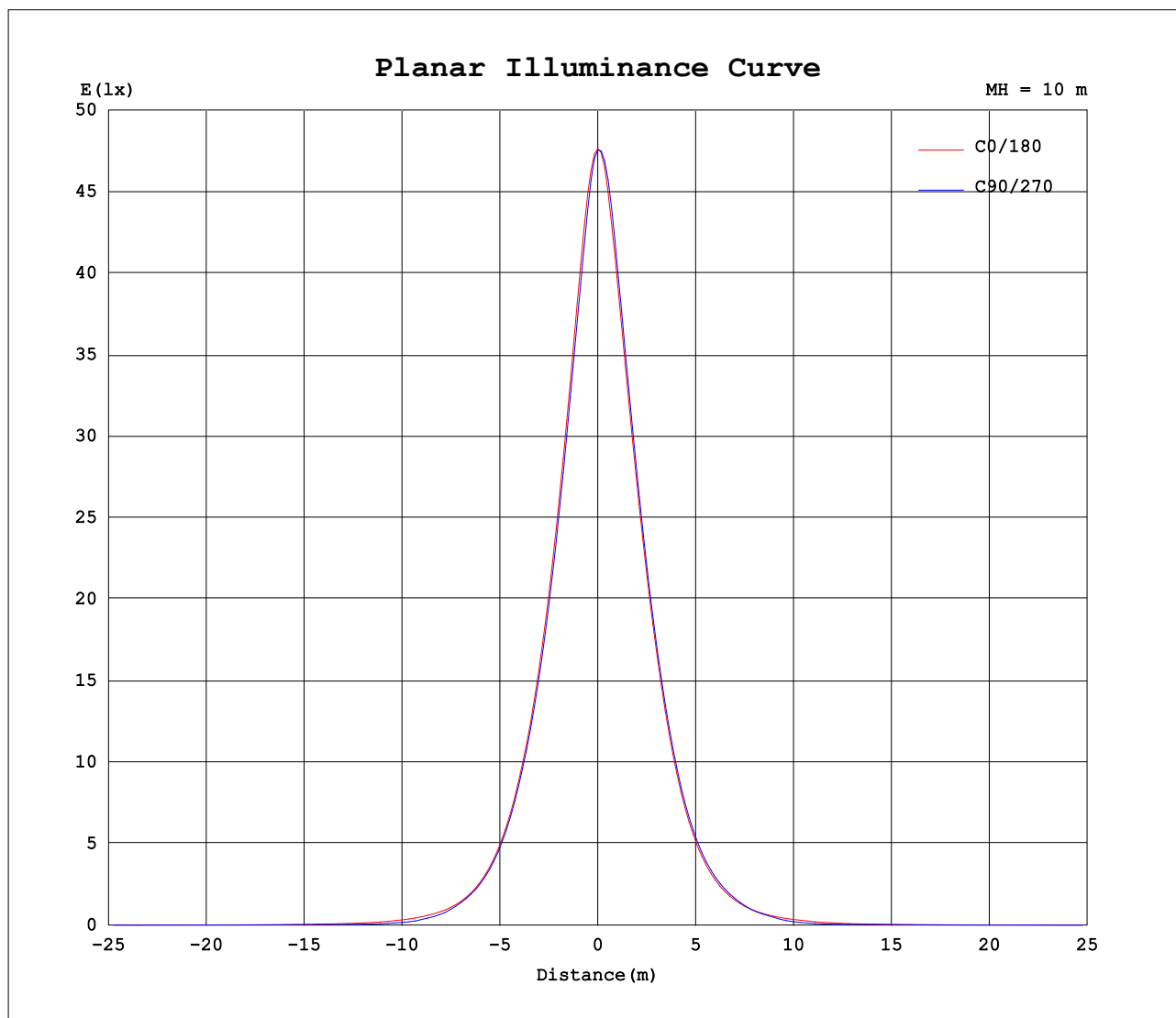
AvgL	cd/m2
L_0~180 (65) av	15738
L_0~180 (75) av	12268
L_0~180 (85) av	11628
L_90~270 (65) av	8889
L_90~270 (75) av	11576
L_90~270 (85) av	7386
L_45 (65) av	10609
L_45 (75) av	10581
L_45 (85) av	10416

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Li Huifeng
Test Date:2018-10-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Li Huifeng
Test Date: 2018-10-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.800m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.800m [K=1.0000]
Remarks:

```