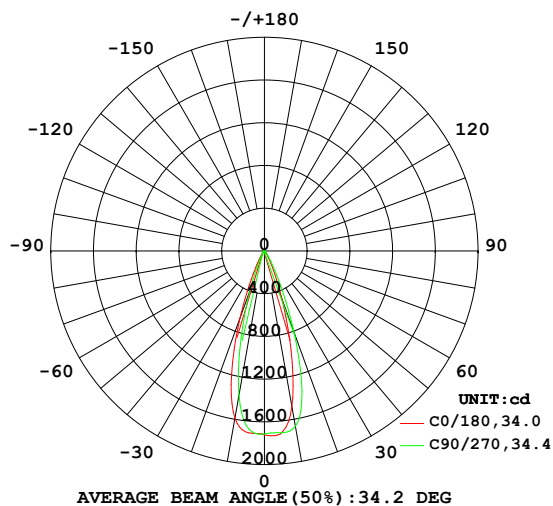


LUMINAIRE PHOTOMETRIC TEST REPORT

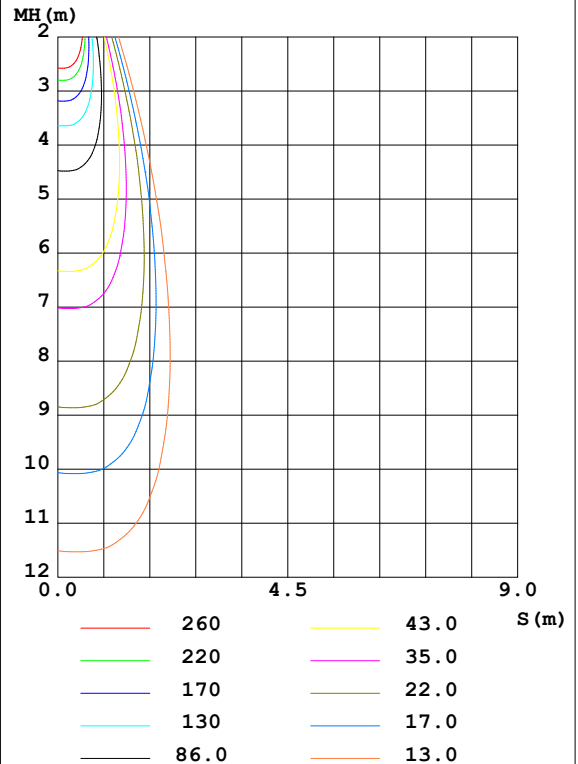
Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.: P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 68.29 lm/W			
MODEL	CMA 1303	I _{max} (cd)	1732	S/MH (C0/180)	0.56
NOMINAL POWER (W)	8W	LOR (%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	626.91	η UP, DN (C0-180)	0.2, 52.7
NOMINAL FLUX (lm)	626.908	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 47.0
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220.2	η down (%)	99.7	CIBSE SHR MAX	0.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Xie Bi
 Test Date: 2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 6.810m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

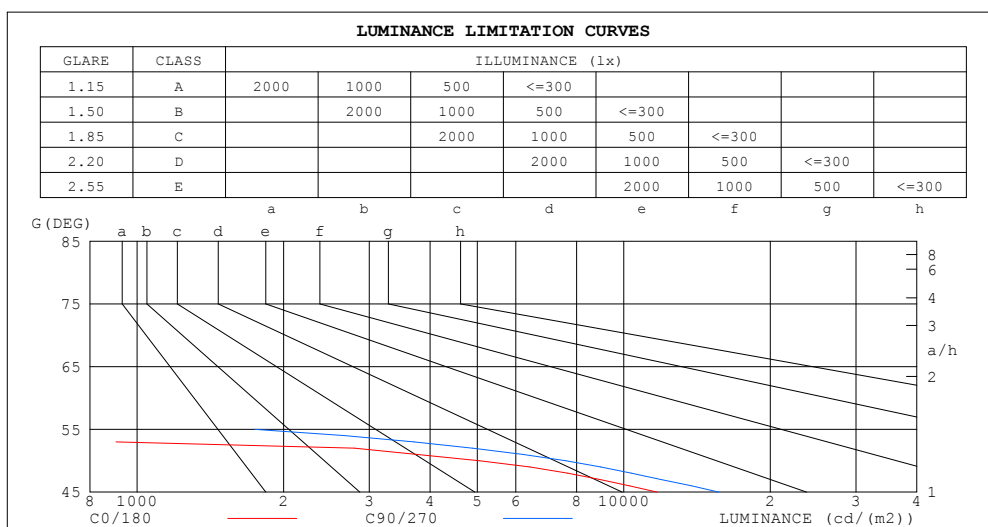
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1479	1666	1590	1374					0- 10	157.3	157.3	25.1,25.1
20	484.5	813.0	668.7	400.5					10- 20	291.2	448.5	71.5,71.5
30	90.07	147.3	124.8	75.38					20- 30	127.1	575.6	91.8,91.8
40	25.55	33.00	33.64	22.51					30- 40	35.59	611.2	97.5,97.5
50	5.156	7.765	8.779	4.440					40- 50	12.19	623.4	99.4,99.4
60	0.1762	0.0575	0.1778	0.1169					50- 60	1.507	624.9	99.7,99.7
70	0.0122	0	0.0190	0.0488					60- 70	0.0725	625.0	99.7,99.7
80	0	0	0	0					70- 80	0.0036	625.0	99.7,99.7
90	0	0	0	0					80- 90	0	625.0	99.7,99.7
100	0	0	0	0					90-100	0	625.0	99.7,99.7
110	0	0	0	0					100-110	0	625.0	99.7,99.7
120	0	0.0018	0.0105	0.0017					110-120	0.0009	625.0	99.7,99.7
130	0.0609	0.0453	0.0366	0.0401					120-130	0.0172	625.0	99.7,99.7
140	0.3694	0.2270	0.1327	0.1987					130-140	0.0873	625.1	99.7,99.7
150	1.290	0.9435	0.5496	0.8209					140-150	0.3149	625.4	99.8,99.8
160	2.352	2.099	1.440	1.730					150-160	0.6372	626.0	99.9,99.9
170	2.914	2.836	2.215	2.350					160-170	0.6342	626.6	100,100
180	2.867	3.019	2.872	3.012					170-180	0.2599	626.9	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.: P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	0
70	22	0
65	156	0
60	222	72
55	278	1744
50	5045	7598
45	11703	15663

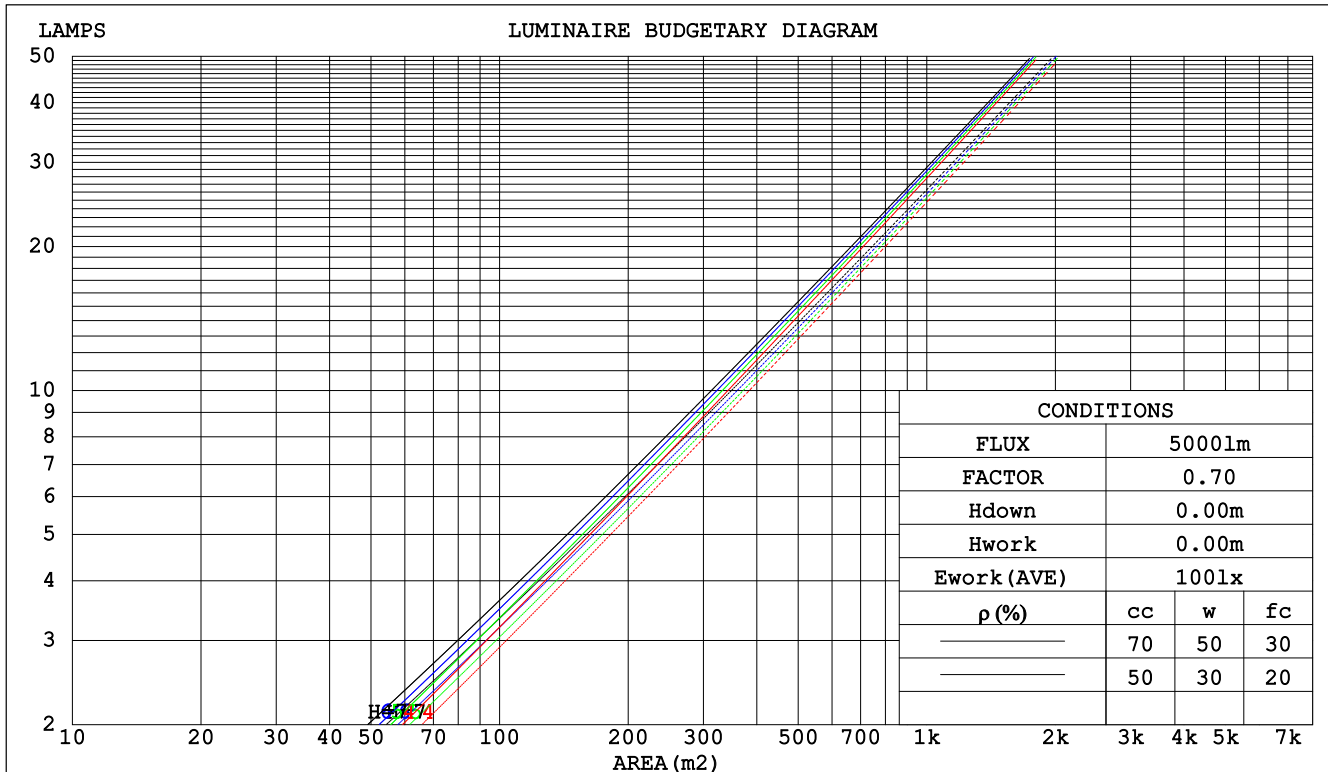
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.01	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.94	.93	.92
3.0	1.01	.97	.94	1.00	.96	.94	.97	.95	.92	.95	.93	.91	.93	.91	.89	.88
4.0	.97	.92	.89	.96	.92	.89	.94	.90	.88	.92	.89	.87	.90	.88	.86	.84
5.0	.93	.88	.85	.92	.88	.84	.90	.86	.84	.88	.85	.83	.87	.84	.82	.81
6.0	.89	.84	.81	.88	.84	.81	.87	.83	.80	.85	.82	.80	.84	.81	.79	.78
7.0	.85	.81	.78	.85	.80	.77	.84	.80	.77	.83	.79	.77	.81	.78	.76	.75
8.0	.82	.78	.74	.82	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.73	.72
9.0	.79	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.76	.73	.71	.70
10.0	.77	.72	.69	.76	.72	.69	.75	.72	.69	.75	.71	.69	.74	.71	.69	.68



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	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	.146	.083	.026	.140	.080	.025	.127	.073	.023	.115	.067	.021	.105	.061	.020		
2.0	.137	.075	.023	.131	.072	.022	.121	.067	.021	.111	.062	.020	.102	.058	.018		
3.0	.129	.068	.020	.124	.066	.020	.115	.062	.019	.107	.059	.018	.099	.055	.017		
4.0	.121	.063	.019	.117	.061	.018	.110	.058	.017	.103	.055	.017	.096	.052	.016		
5.0	.115	.059	.017	.111	.057	.017	.105	.055	.016	.099	.052	.016	.093	.050	.015		
6.0	.109	.055	.016	.106	.054	.015	.101	.052	.015	.095	.050	.015	.091	.048	.014		
7.0	.104	.051	.015	.101	.051	.014	.097	.049	.014	.092	.047	.014	.088	.046	.013		
8.0	.099	.049	.014	.097	.048	.014	.093	.046	.013	.089	.045	.013	.085	.044	.013		
9.0	.095	.046	.013	.093	.045	.013	.089	.044	.013	.086	.043	.012	.082	.042	.012		
10.0	.092	.044	.012	.090	.043	.012	.086	.042	.012	.083	.041	.012	.080	.040	.012		

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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.171	.160	.150	.147	.137	.129	.100	.094	.089	.058	.055	.052	.018	.018	.017	
2.0	.154	.135	.119	.132	.116	.103	.090	.080	.072	.052	.047	.042	.017	.015	.014	
3.0	.140	.116	.097	.120	.100	.084	.082	.069	.059	.047	.041	.035	.015	.013	.011	
4.0	.128	.101	.080	.110	.087	.069	.075	.061	.049	.044	.035	.029	.014	.012	.009	
5.0	.118	.088	.067	.101	.077	.058	.070	.053	.041	.040	.031	.024	.013	.010	.008	
6.0	.109	.079	.057	.094	.068	.049	.065	.048	.035	.038	.028	.021	.012	.009	.007	
7.0	.102	.071	.049	.088	.061	.042	.061	.043	.030	.035	.025	.018	.011	.008	.006	
8.0	.096	.064	.042	.083	.056	.037	.057	.039	.026	.033	.023	.016	.011	.008	.005	
9.0	.090	.059	.037	.078	.051	.032	.054	.036	.023	.031	.021	.014	.010	.007	.005	
10.0	.086	.054	.033	.074	.047	.029	.051	.033	.020	.030	.019	.012	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm												
NAME: W1654LED					TYPE:			WEIGHT:				
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700					DIM.:			SERIAL No.:				
MFR.: CETTIGA					SUR.:			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		13.6	14.3	13.8	14.5	14.7	15.1	15.8	15.3	16.0	16.1	
		3H	13.5	14.1	13.7	14.3	14.5	15.0	15.6	15.2	15.8	16.0
		4H	13.4	14.0	13.6	14.2	14.4	14.9	15.5	15.1	15.7	15.9
		6H	13.3	13.9	13.6	14.1	14.4	14.8	15.4	15.1	15.6	15.9
		8H	13.2	13.8	13.5	14.1	14.3	14.7	15.3	15.0	15.6	15.8
		12H	13.2	13.8	13.5	14.0	14.3	14.7	15.2	15.0	15.5	15.8
4H	2H	13.4	14.0	13.6	14.2	14.4	14.9	15.5	15.1	15.7	15.9	
	3H	13.2	13.8	13.5	14.0	14.3	14.7	15.3	15.0	15.5	15.8	
	4H	13.1	13.6	13.5	13.9	14.2	14.6	15.1	14.9	15.4	15.7	
	6H	13.0	13.5	13.4	13.8	14.1	14.5	14.9	14.9	15.3	15.6	
	8H	13.0	13.4	13.3	13.7	14.1	14.4	14.9	14.8	15.2	15.6	
	12H	12.9	13.3	13.3	13.7	14.0	14.4	14.8	14.8	15.1	15.5	
8H	4H	13.0	13.4	13.3	13.7	14.1	14.4	14.9	14.8	15.2	15.6	
	6H	12.8	13.2	13.3	13.6	14.0	14.3	14.7	14.8	15.1	15.5	
	8H	12.8	13.1	13.2	13.5	13.9	14.3	14.6	14.7	15.0	15.4	
	12H	12.7	13.0	13.2	13.4	13.9	14.2	14.5	14.7	14.9	15.4	
12H	4H	12.9	13.3	13.3	13.7	14.0	14.4	14.8	14.8	15.1	15.5	
	6H	12.8	13.1	13.2	13.5	13.9	14.3	14.6	14.7	15.0	15.4	
	8H	12.7	13.0	13.2	13.4	13.9	14.2	14.5	14.7	14.9	15.4	
Variations with the observer position at spacings:												
S = 1.0H		+ 2.6 / -25.7					+ 3.4 / -29.5					
1.5H		+ 4.3 / -19.6					+ 5.1 / -18.6					
2.0H		+ 6.7 / -21.9					+ 7.2 / -29.4					

CIE Pub.117, 626.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2022-05-17

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

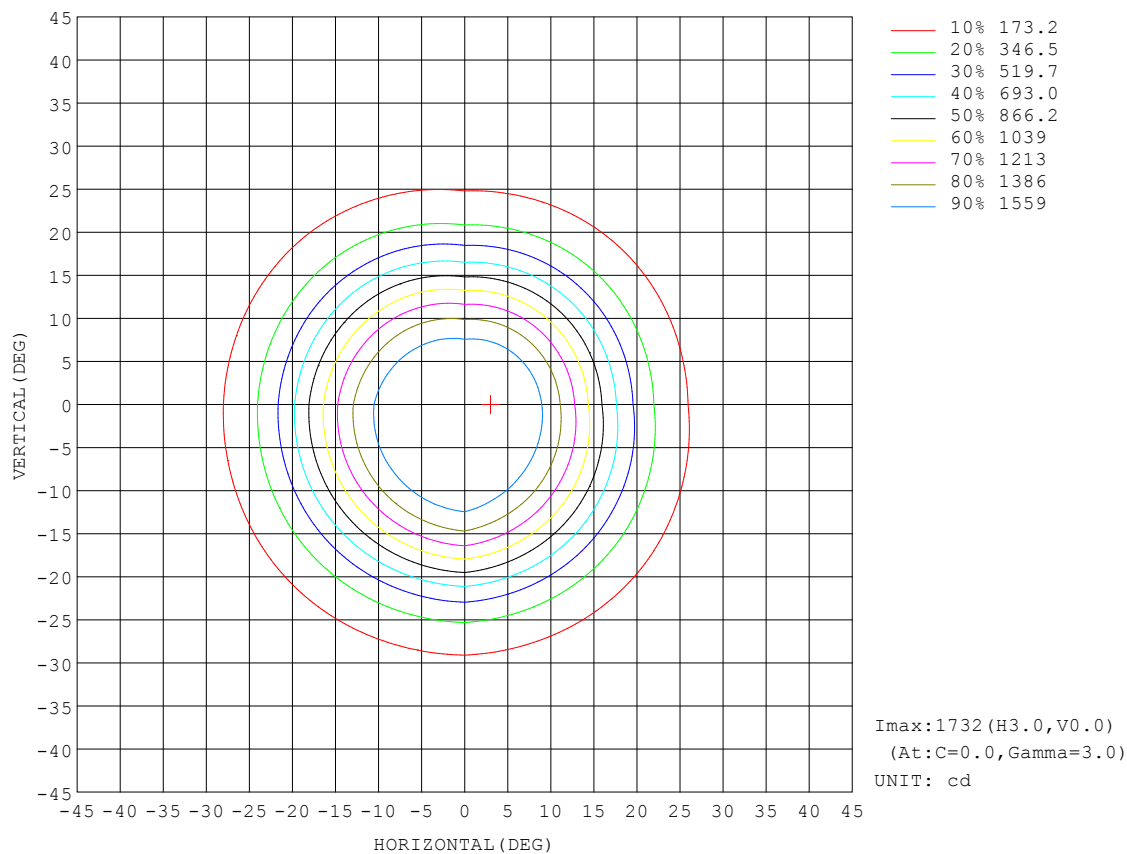
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	89	84	81	89	84	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	99
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.: P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

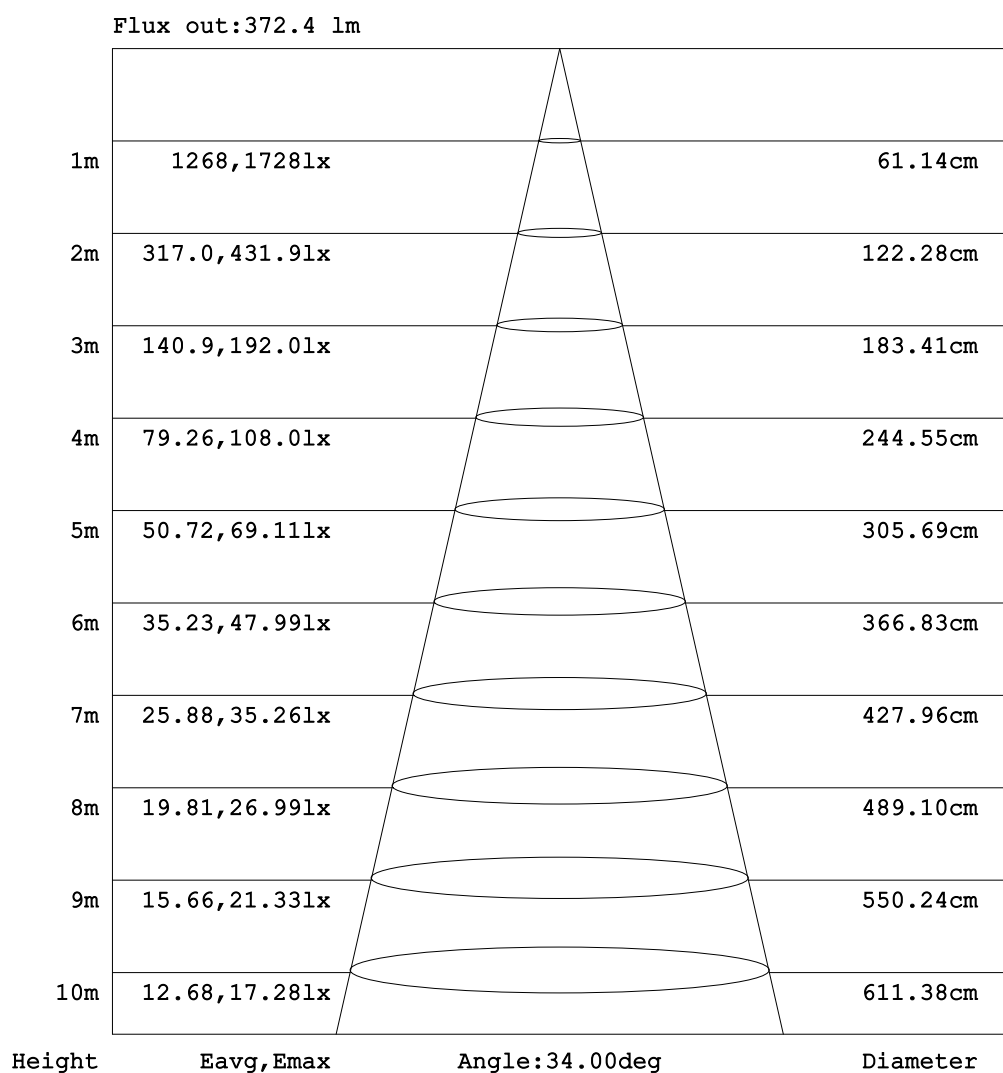


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

AAI Figure

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.: P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



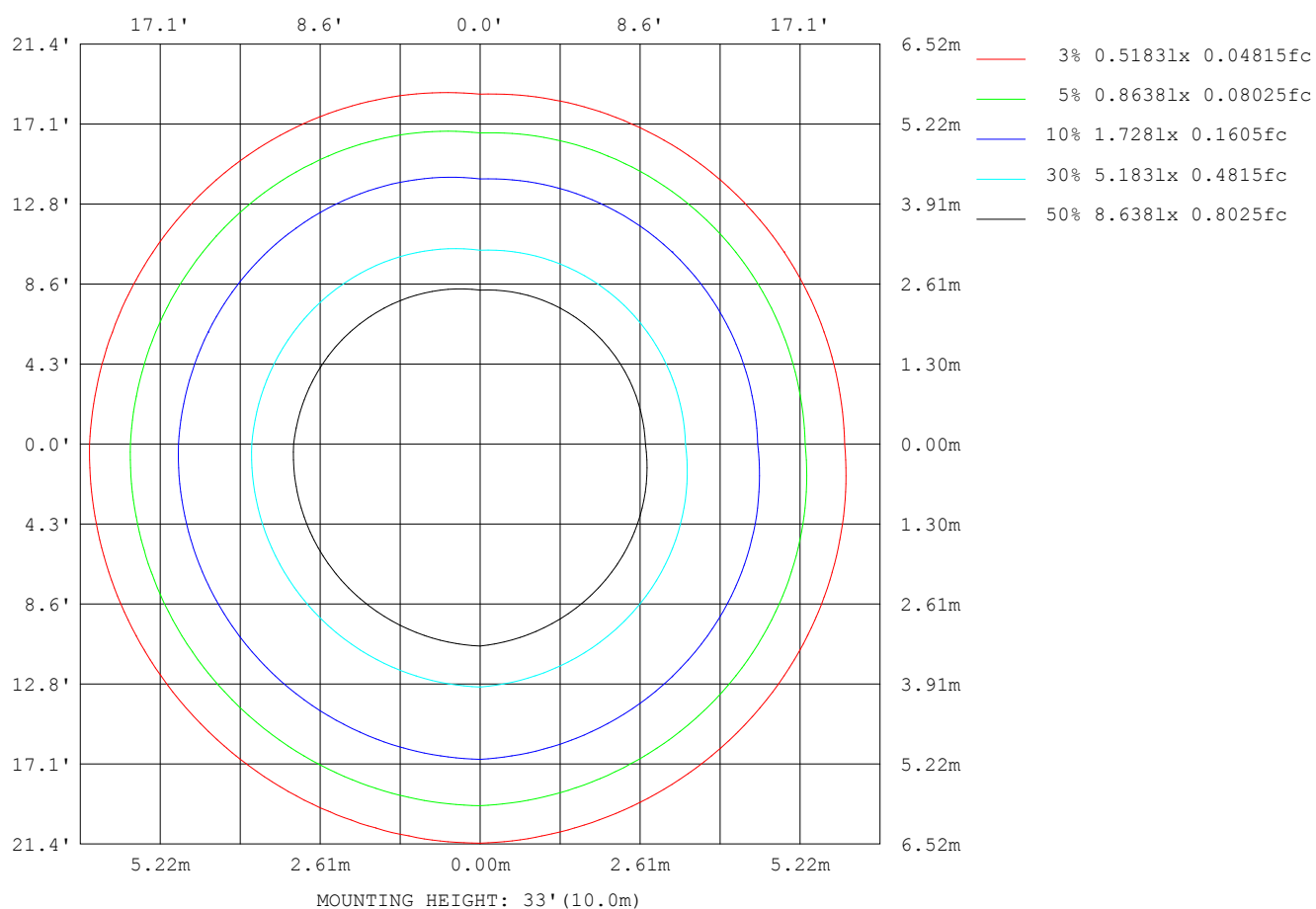
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Xie Bi
 Test Date: 2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 6.810m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.: P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

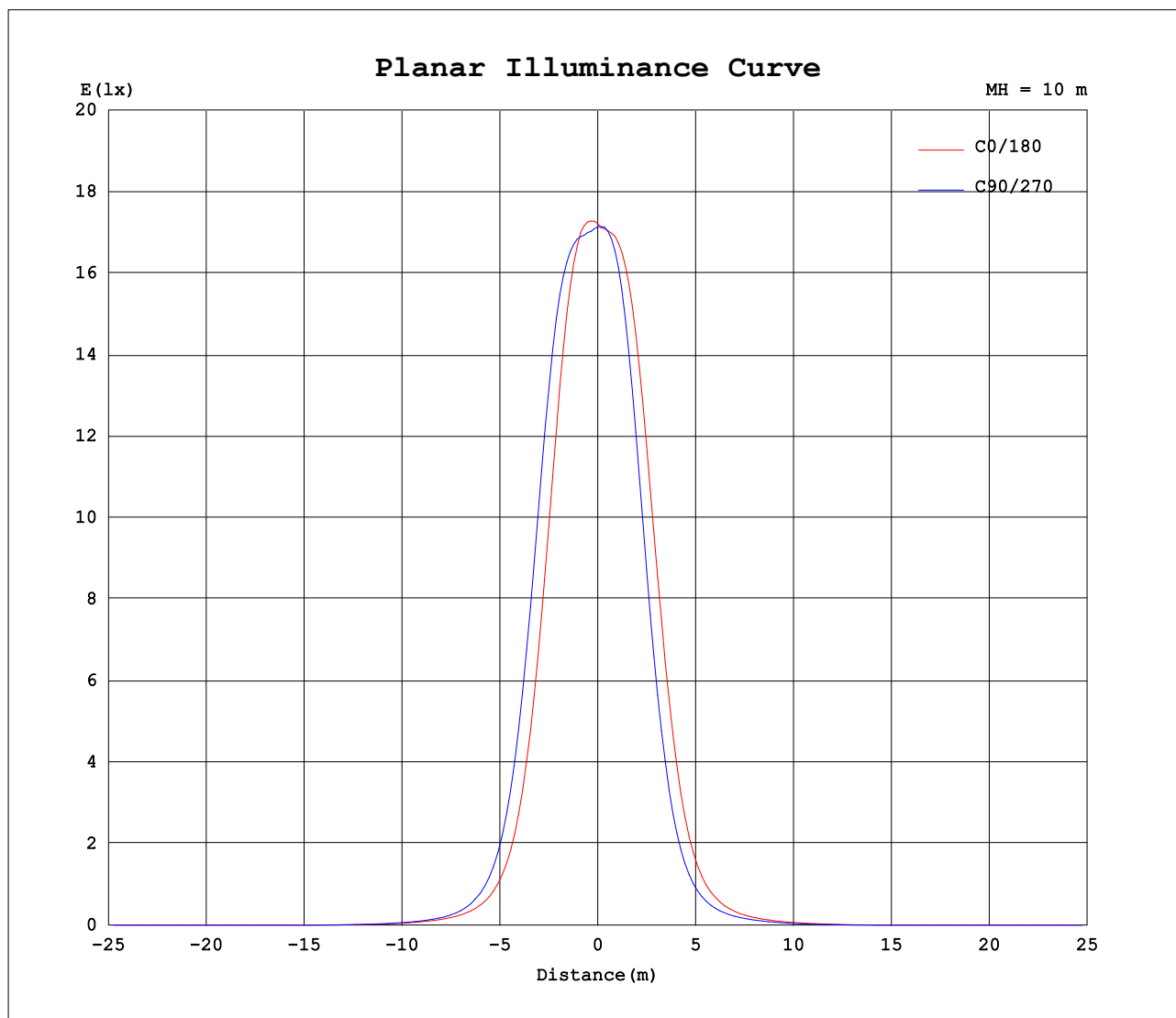
AvgL	cd/m2
L_0~180 (65) av	161
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	65
L_90~270 (75) av	2
L_90~270 (85) av	0
L_45 (65) av	101
L_45 (75) av	1
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2022-05-17

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2022-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:231.2V I:0.0432A P:9.181W PF:0.9198 Freq:49.38Hz Lamp Flux:626.908x1 lm		
NAME: W1654LED	TYPE:	WEIGHT:
SPEC.:P-W1654LED-8W3035-CR20036R90-OS700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	1721	1713	1721	1713															
5	1719	1709	1710	1674															
10	1479	1666	1590	1374															
15	968	1360	1186	844															
20	484	813	669	400															
25	203	366	292	167															
30	90.1	147	125	75.4															
35	45.8	64.8	61.1	39.4															
40	25.5	33.0	33.6	22.5															
45	13.2	17.6	18.6	11.7															
50	5.16	7.77	8.78	4.44															
55	0.25	1.59	0.71	0.20															
60	0.18	0.06	0.18	0.12															
65	0.10	0.00	0.11	0.09															
70	0.01	0.00	0.02	0.05															
75	0.00	0.00	0.00	0.00															
80	0.00	0.00	0.00	0.00															
85	0.00	0.00	0.00	0.00															
90	0.00	0.00	0.00	0.00															
95	0.00	0.00	0.00	0.00															
100	0.00	0.00	0.00	0.00															
105	0.00	0.00	0.00	0.00															
110	0.00	0.00	0.00	0.00															
115	0.00	0.00	0.00	0.00															
120	0.00	0.00	0.01	0.00															
125	0.02	0.02	0.02	0.02															
130	0.06	0.05	0.04	0.04															
135	0.16	0.10	0.07	0.09															
140	0.37	0.23	0.13	0.20															
145	0.75	0.49	0.28	0.44															
150	1.29	0.94	0.55	0.82															
155	1.86	1.52	0.97	1.29															
160	2.35	2.10	1.44	1.73															
165	2.70	2.53	1.87	2.05															
170	2.91	2.84	2.21	2.35															
175	2.95	3.00	2.54	2.68															
180	2.87	3.02	2.87	3.01															

C Range: 0 - 360DEG
C Interval: 90.0DEG
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
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Remarks: