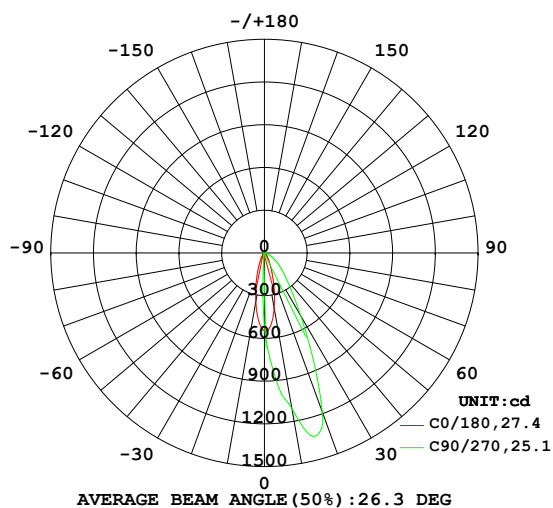


LUMINAIRE PHOTOMETRIC TEST REPORT

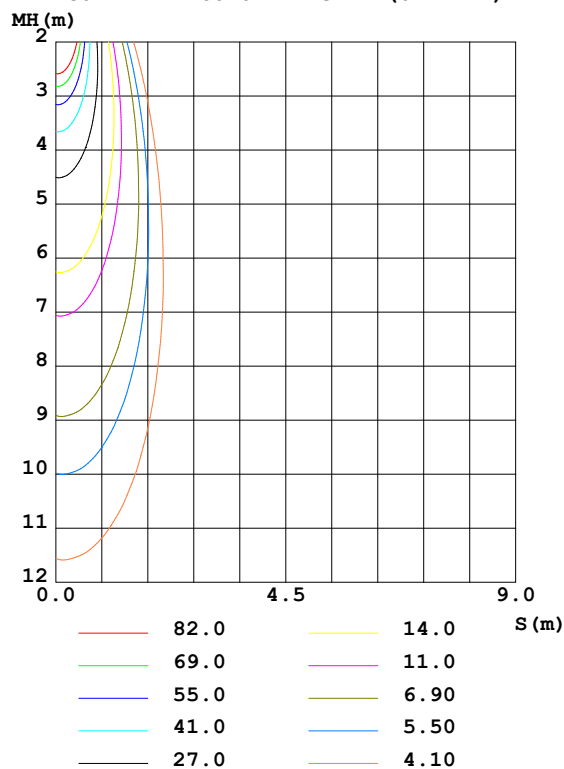
Test:U:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 43.03 lm/W			
MODEL	OS 2835	I _{max} (cd)	1334	S/MH (C0/180)	0.43
NOMINAL POWER (W)	10W	LOR (%)	100.0	S/MH (C90/270)	0.09
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	443.32	η UP, DN (C0-180)	0.3, 88.2
NOMINAL FLUX (lm)	443.316	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.2, 11.3
LAMPS INSIDE	1	η up (%)	0.5	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220.2	η down (%)	99.5	CIBSE SHR MAX	1.00

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: 2021-05-31

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:

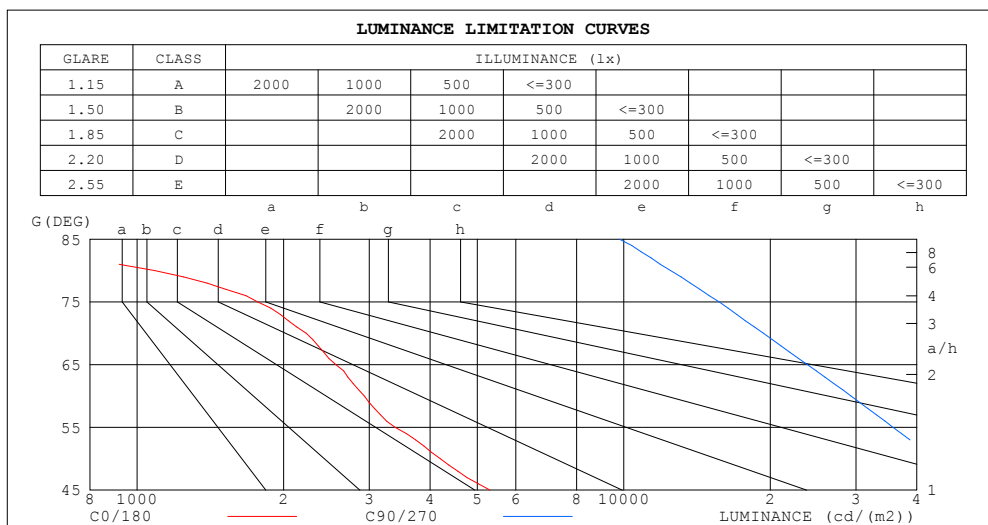
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	393.3	1107	347.3	5.298					0- 10	45.90	45.90	10.4,10.4
20	163.7	1189	139.5	0.0322					10- 20	124.3	170.2	38.4,38.4
30	61.35	512.2	49.44	0.0064					20- 30	113.3	283.5	63.9,63.9
40	26.13	243.8	21.61	0					30- 40	66.14	349.6	78.9,78.9
50	12.96	134.5	12.29	0					40- 50	41.89	391.5	88.3,88.3
60	7.033	70.30	7.792	0					50- 60	26.60	418.1	94.3,94.3
70	3.656	31.79	4.466	0					60- 70	14.97	433.1	97.7,97.7
80	0.9061	10.40	1.469	0					70- 80	6.636	439.7	99.2,99.2
90	0	1.489	0	0					80- 90	1.454	441.2	99.5,99.5
100	0	1.846	0	0					90-100	0.4323	441.6	99.6,99.6
110	0	0.7637	0	0.0635					100-110	0.0992	441.7	99.6,99.6
120	0	0	0.0128	0.1337					110-120	0.5701	442.3	99.8,99.8
130	0.0254	0	0.0446	0.2801					120-130	0.0542	442.3	99.8,99.8
140	0.1718	0	0.1274	0.6112					130-140	0.1151	442.5	99.8,99.8
150	0.4200	0	0.2930	1.190					140-150	0.2122	442.7	99.9,99.9
160	0.7959	0.1533	0.6117	1.414					150-160	0.2795	443.0	99.9,99.9
170	1.089	0.8726	0.9617	1.331					160-170	0.2512	443.2	100,100
180	1.165	1.433	1.127	1.433					170-180	0.1108	443.3	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:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	290	9799
80	1087	12477
75	1769	15707
70	2227	19367
65	2561	23832
60	2930	29292
55	3390	35738
50	4199	43577
45	5310	53204

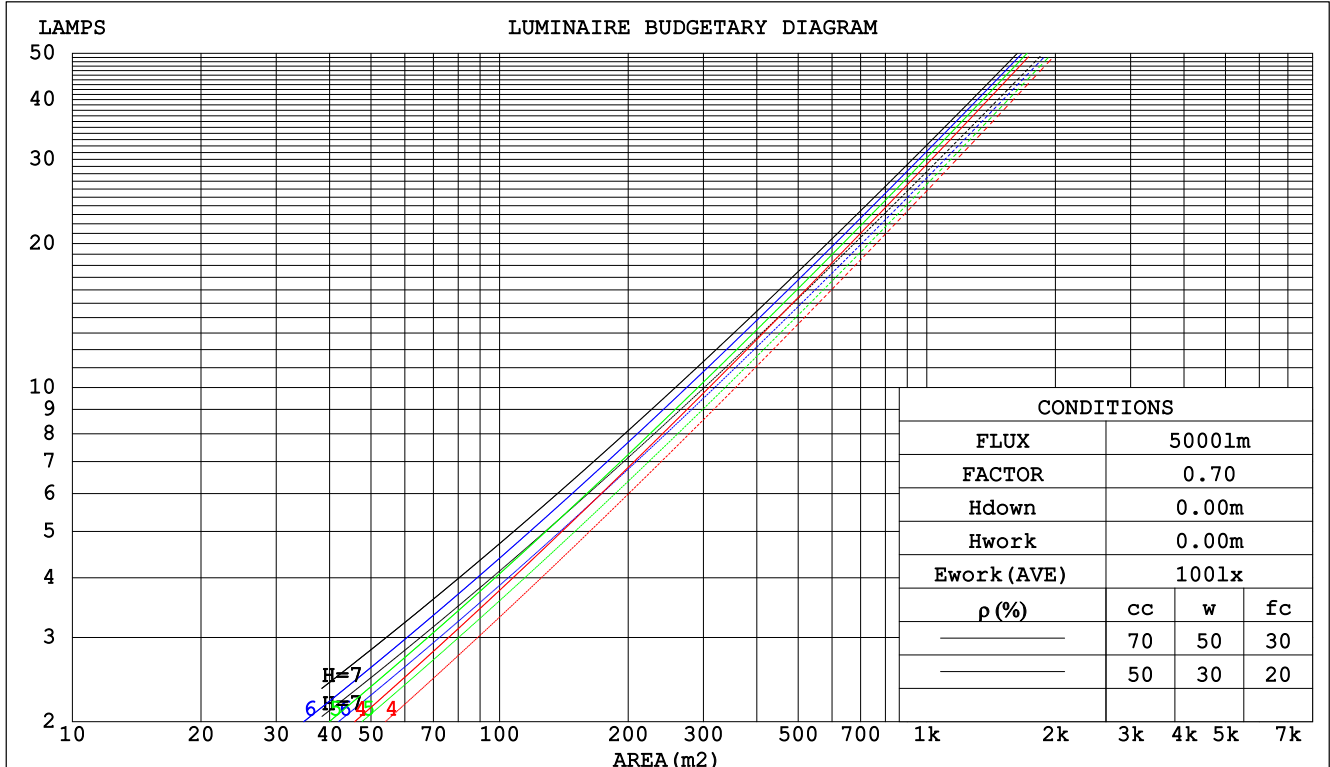
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	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	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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.93	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.86	.80	.75	.85	.79	.74	.82	.77	.73	.80	.76	.73	.78	.75	.72	.70
5.0	.80	.73	.69	.79	.73	.68	.77	.72	.68	.75	.71	.67	.73	.69	.66	.65
6.0	.75	.68	.63	.74	.68	.63	.72	.67	.63	.71	.66	.62	.69	.65	.62	.60
7.0	.70	.63	.59	.69	.63	.59	.68	.62	.58	.67	.62	.58	.65	.61	.58	.56
8.0	.66	.59	.55	.65	.59	.55	.64	.58	.54	.63	.58	.54	.62	.57	.54	.52
9.0	.62	.56	.51	.61	.55	.51	.60	.55	.51	.60	.55	.51	.59	.54	.51	.49
10.0	.59	.53	.48	.58	.52	.48	.57	.52	.48	.56	.52	.48	.56	.51	.48	.46



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	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	.205	.116	.037	.198	.113	.036	.185	.106	.034	.173	.100	.032	.162	.094	.030		
2.0	.195	.107	.033	.189	.104	.032	.178	.099	.031	.168	.094	.030	.159	.090	.028		
3.0	.185	.098	.029	.179	.096	.029	.170	.092	.028	.161	.088	.027	.153	.085	.026		
4.0	.174	.090	.027	.170	.089	.026	.161	.085	.026	.153	.082	.025	.146	.080	.024		
5.0	.164	.084	.024	.160	.082	.024	.153	.080	.023	.146	.077	.023	.140	.075	.022		
6.0	.155	.078	.022	.152	.077	.022	.145	.074	.022	.139	.072	.021	.134	.070	.021		
7.0	.147	.073	.021	.144	.072	.020	.138	.070	.020	.133	.068	.020	.128	.066	.019		
8.0	.139	.068	.019	.137	.067	.019	.132	.066	.019	.127	.064	.019	.122	.063	.018		
9.0	.132	.064	.018	.130	.063	.018	.125	.062	.018	.121	.061	.017	.117	.059	.017		
10.0	.126	.061	.017	.124	.060	.017	.120	.059	.017	.116	.058	.016	.112	.057	.016		

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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.177	.161	.146	.151	.138	.126	.103	.095	.087	.060	.055	.051	.019	.018	.016	
2.0	.163	.136	.113	.140	.117	.098	.096	.081	.068	.055	.047	.040	.018	.015	.013	
3.0	.152	.117	.090	.130	.101	.078	.089	.070	.055	.052	.041	.032	.017	.013	.011	
4.0	.142	.103	.073	.122	.089	.064	.084	.062	.045	.048	.036	.027	.016	.012	.009	
5.0	.134	.092	.061	.115	.079	.053	.079	.055	.037	.046	.033	.022	.015	.011	.007	
6.0	.126	.083	.051	.108	.072	.045	.075	.050	.032	.043	.029	.019	.014	.010	.006	
7.0	.120	.075	.044	.103	.065	.038	.071	.046	.027	.041	.027	.016	.013	.009	.005	
8.0	.114	.069	.038	.098	.060	.033	.068	.042	.024	.039	.025	.014	.013	.008	.005	
9.0	.108	.064	.034	.093	.055	.030	.065	.039	.021	.038	.023	.013	.012	.008	.004	
10.0	.103	.059	.030	.089	.052	.026	.062	.036	.019	.036	.021	.011	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm											
NAME: 12491LED					TYPE:			WEIGHT:			
SPEC.:P-12491LED-10W308-OS50018R90-JG700					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		21.8	22.9	22.1	23.1	23.2	28.3	29.3	28.5	29.5	29.7
	3H	22.0	23.0	22.3	23.2	23.4	28.9	29.9	29.2	30.1	30.3
	4H	22.0	22.9	22.3	23.2	23.4	29.1	30.0	29.4	30.3	30.5
	6H	22.0	22.8	22.3	23.1	23.3	29.2	30.1	29.5	30.3	30.6
	8H	21.9	22.8	22.2	23.0	23.3	29.2	30.1	29.6	30.3	30.6
	12H	21.9	22.7	22.2	23.0	23.3	29.2	30.0	29.6	30.3	30.6
4H	2H	22.9	23.8	23.2	24.0	24.3	28.2	29.1	28.5	29.4	29.6
	3H	23.2	24.0	23.6	24.3	24.6	29.0	29.8	29.3	30.0	30.3
	4H	23.3	24.1	23.7	24.4	24.7	29.3	30.0	29.6	30.3	30.6
	6H	23.3	24.0	23.7	24.3	24.7	29.4	30.1	29.8	30.4	30.8
	8H	23.3	23.9	23.7	24.2	24.6	29.5	30.1	29.9	30.5	30.8
	12H	23.2	23.8	23.7	24.2	24.6	29.5	30.1	29.9	30.5	30.9
8H	4H	23.7	24.3	24.1	24.6	25.0	29.2	29.8	29.6	30.1	30.5
	6H	23.7	24.2	24.2	24.6	25.1	29.4	29.9	29.9	30.3	30.8
	8H	23.7	24.2	24.2	24.6	25.1	29.5	30.0	30.0	30.4	30.8
	12H	23.7	24.1	24.2	24.5	25.0	29.6	30.0	30.1	30.4	30.9
12H	4H	23.7	24.2	24.1	24.6	25.0	29.1	29.7	29.6	30.1	30.5
	6H	23.8	24.2	24.3	24.7	25.1	29.4	29.8	29.9	30.3	30.7
	8H	23.8	24.2	24.3	24.6	25.1	29.5	29.9	30.0	30.3	30.8
Variations with the observer position at spacings:											
S = 1.0H	+ 1.3 / - 1.3					+ 1.0 / - 0.7					
1.5H	+ 1.3 / - 1.9					+ 1.7 / - 1.4					
2.0H	+ 1.7 / - 2.7					+ 2.4 / - 1.9					

CIE Pub.117, 443.3 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -2.8$)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

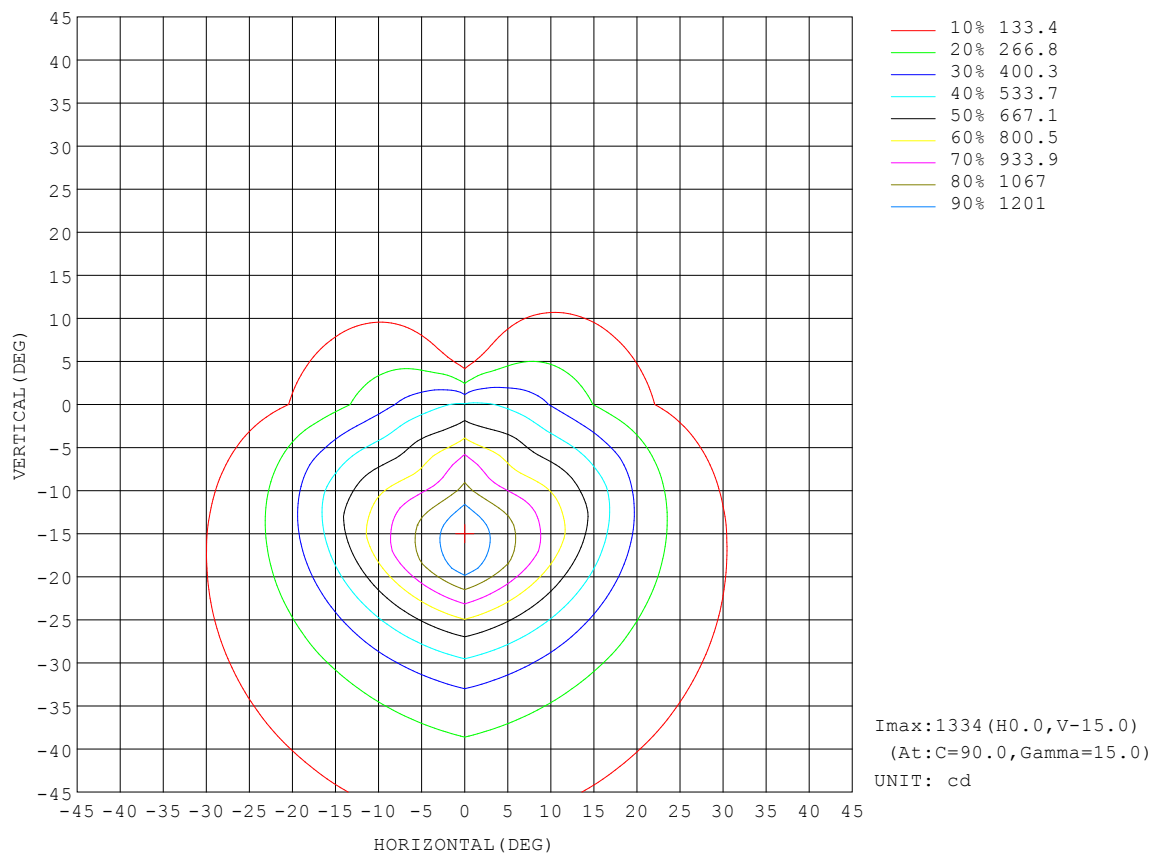
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	66	78	70	66	77	70	65	61
0.80	87	79	74	86	79	74	85	78	74	69
1.00	93	85	81	92	85	80	90	85	80	75
1.25	98	91	86	96	90	86	94	89	85	80
1.50	101	95	90	100	94	90	97	92	89	83
2.00	105	100	95	103	98	95	100	96	93	87
2.50	107	102	98	105	101	98	102	98	96	89
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	110	106	104	106	103	101	93
5.00	113	110	108	111	108	106	107	105	103	95
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:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



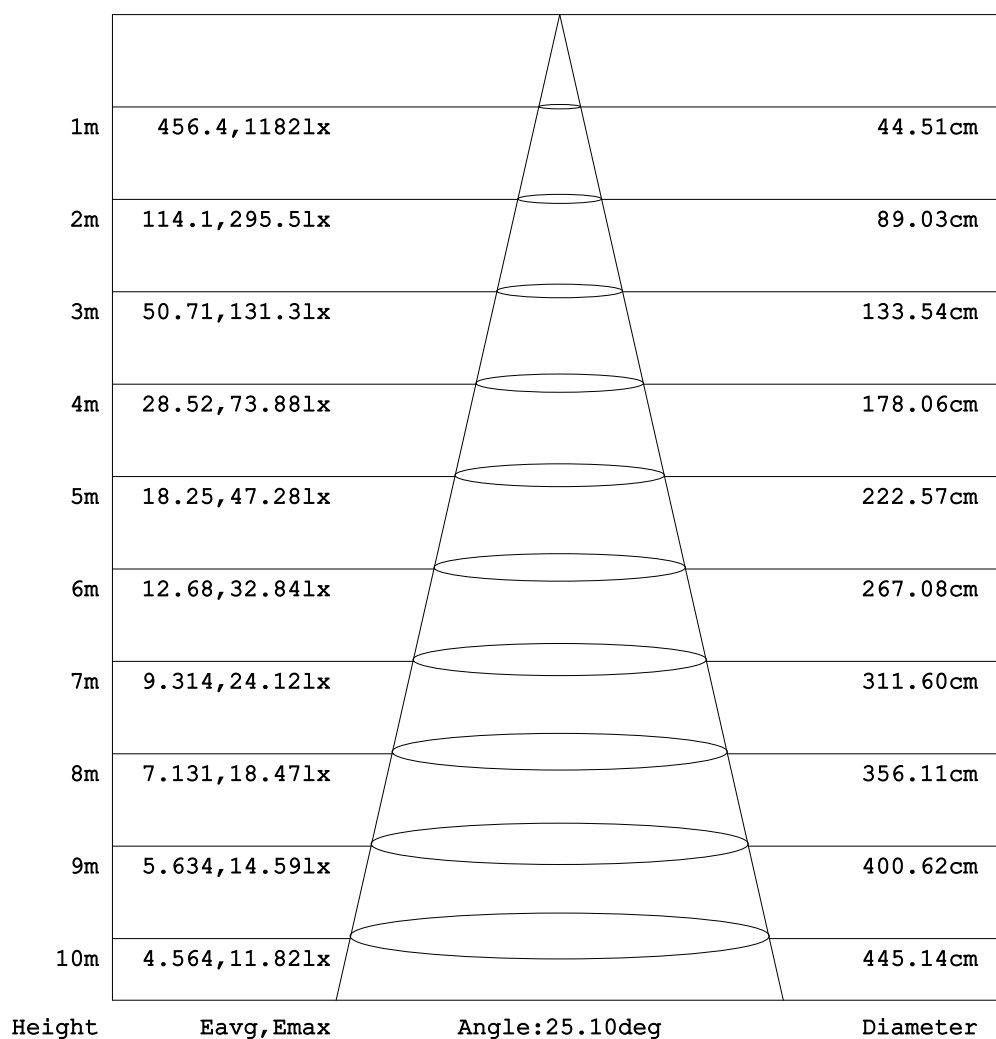
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Flux out:76.42 lm



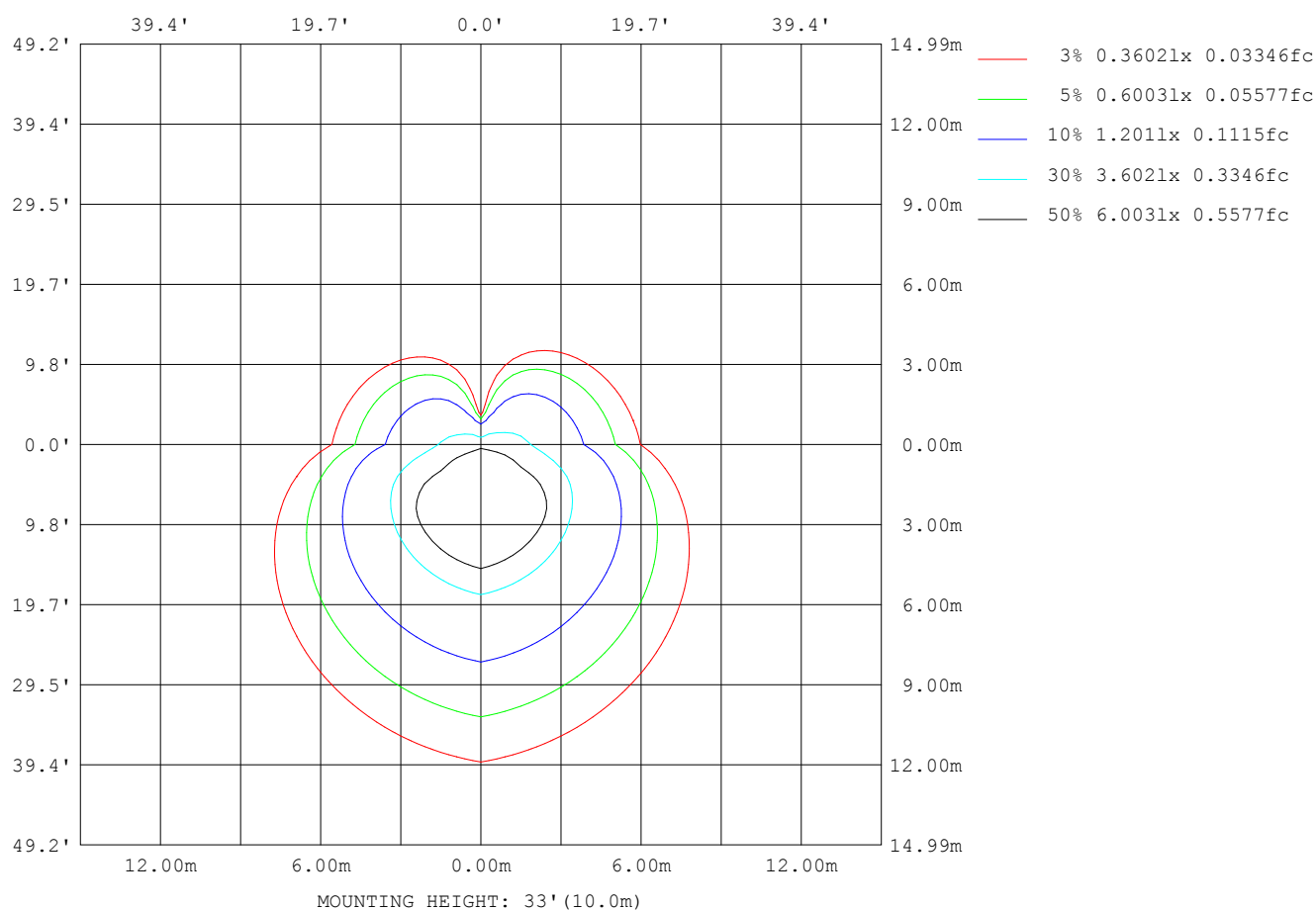
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Xie Bi
 Test Date: 2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	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:2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

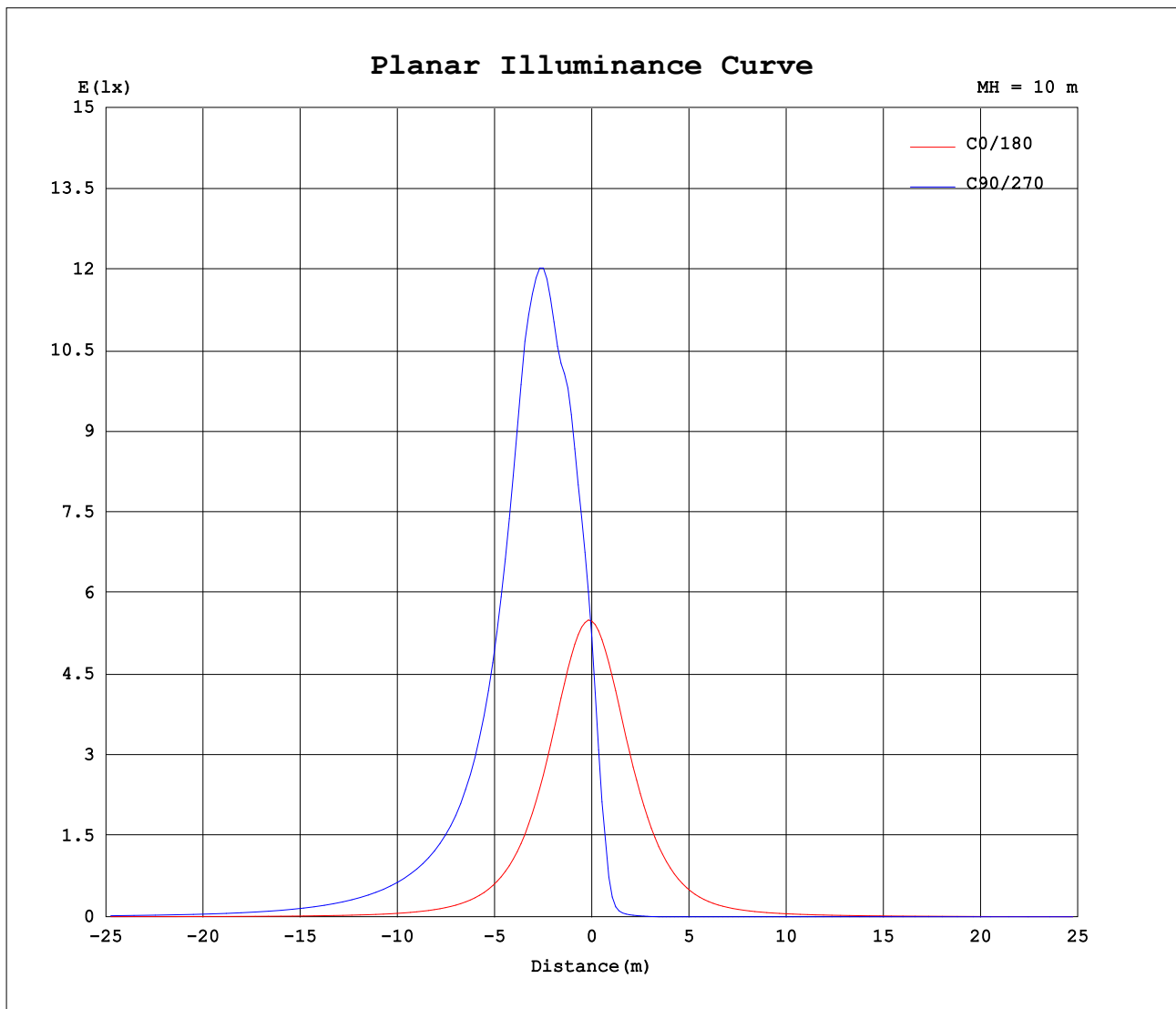
AvgL	cd/m2
L_0~180 (65) av	2773
L_0~180 (75) av	2073
L_0~180 (85) av	198
L_90~270 (65) av	11916
L_90~270 (75) av	7853
L_90~270 (85) av	4899
L_45 (65) av	8501
L_45 (75) av	5705
L_45 (85) av	3273

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2021-05-31

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: 2021-05-31

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:220.0V I:0.0579A P:10.30W PF:0.8085 Freq:49.99Hz Lamp Flux:443.316x1 lm		
NAME: 12491LED	TYPE:	WEIGHT:
SPEC.:P-12491LED-10W308-OS50018R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	548	517	548	517															
5	511	877	476	74.5															
10	393	1107	347	5.30															
15	264	1334	228	1.49															
20	164	1189	140	0.03															
25	99.5	796	82.6	0.01															
30	61.4	512	49.4	0.01															
35	39.2	341	31.5	0.00															
40	26.1	244	21.6	0.00															
45	18.0	181	15.9	0.00															
50	13.0	134	12.3	0.00															
55	9.33	98.4	9.83	0.00															
60	7.03	70.3	7.79	0.00															
65	5.19	48.3	6.05	0.00															
70	3.66	31.8	4.47	0.00															
75	2.20	19.5	2.95	0.00															
80	0.91	10.4	1.47	0.00															
85	0.12	4.10	0.04	0.00															
90	0.00	1.49	0.00	0.00															
95	0.00	1.55	0.00	0.00															
100	0.00	1.85	0.00	0.00															
105	0.00	0.00	0.00	0.00															
110	0.00	0.76	0.00	0.06															
115	0.00	3.19	0.00	0.07															
120	0.00	0.00	0.01	0.13															
125	0.00	0.00	0.03	0.20															
130	0.03	0.00	0.04	0.28															
135	0.08	0.00	0.08	0.41															
140	0.17	0.00	0.13	0.61															
145	0.27	0.00	0.20	0.89															
150	0.42	0.00	0.29	1.19															
155	0.60	0.01	0.45	1.39															
160	0.80	0.15	0.61	1.41															
165	0.98	0.46	0.80	1.38															
170	1.09	0.87	0.96	1.33															
175	1.13	1.27	1.08	1.38															
180	1.17	1.43	1.13	1.43															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2021-05-31

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: