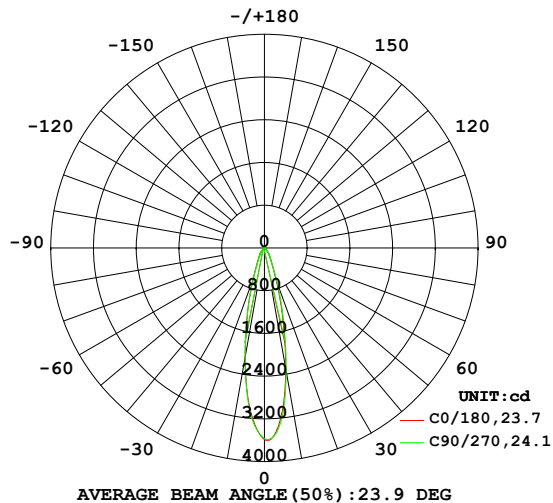


LUMINAIRE PHOTOMETRIC TEST REPORT

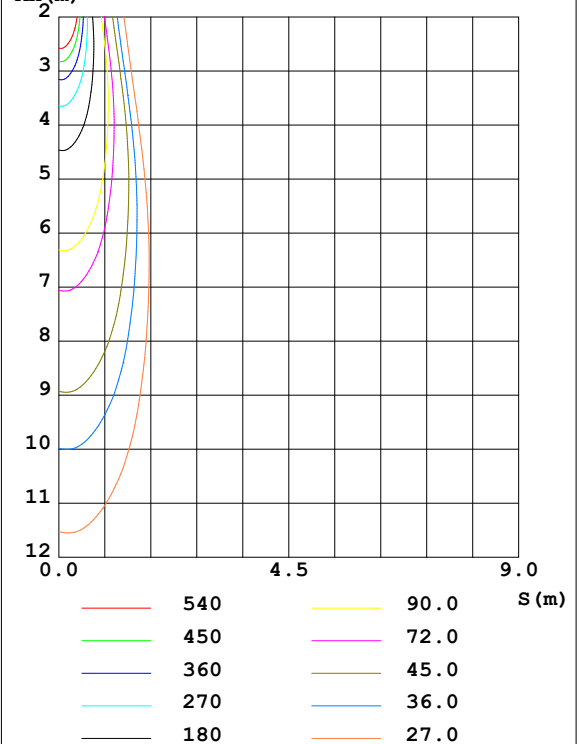
Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm					
NAME: 8906LED		TYPE:		WEIGHT:	
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700		DIM.:		SERIAL No.:	
MFR.: CETTIGA		SUR.:		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 61.87 lm/W
MODEL	CLU701 1002	I _{max} (cd)	3603	S/MH (C0/180)	0.39	
NOMINAL POWER (W)	15W	LOR (%)	100.0	S/MH (C90/270)	0.39	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	933.42	η UP, DN (C0-180)	0.2, 52.1	
NOMINAL FLUX (lm)	933.419	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 47.6	
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.00	
TEST VOLTAGE (V)	220.2	η down (%)	99.7	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: 2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity: 65.0%
 Test Distance: 6.810m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

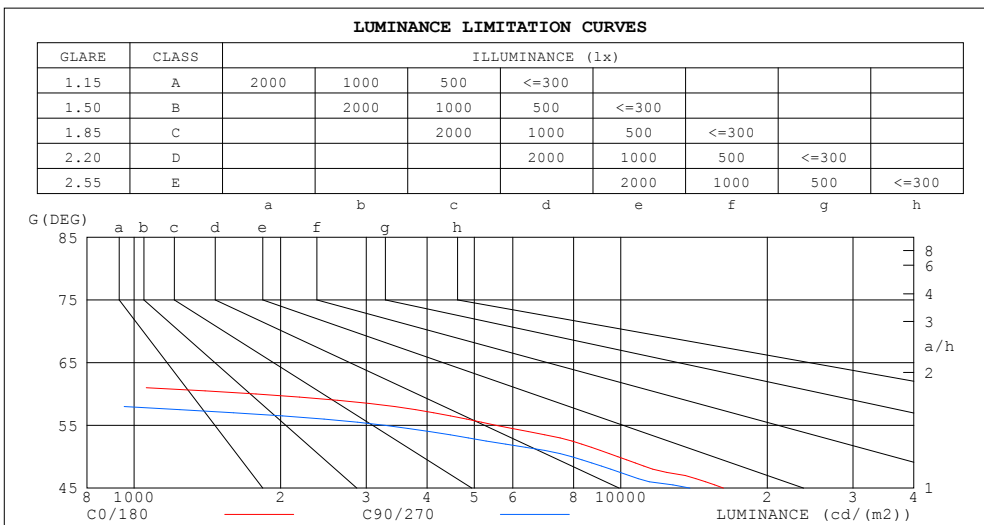
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	2292	2339	2081	2081					0- 10	271.3	271.3	29.1,29.1
20	648.8	700.3	618.4	594.1					10- 20	350.1	621.4	66.6,66.6
30	215.2	224.1	212.9	197.6					20- 30	163.6	785.0	84.1,84.1
40	103.7	93.72	99.10	82.80					30- 40	93.03	878.0	94.1,94.1
50	31.70	25.49	30.01	22.55					40- 50	40.87	918.9	98.4,98.4
60	4.451	0.4638	2.575	0.5251					50- 60	11.18	930.0	99.6,99.6
70	0.0645	0.0679	0.0488	0.0907					60- 70	0.3785	930.4	99.7,99.7
80	0.0053	0.0105	0.0069	0.0280					70- 80	0.0390	930.5	99.7,99.7
90	0	0	0	0					80- 90	0.0041	930.5	99.7,99.7
100	0	0	0	0					90-100	0	930.5	99.7,99.7
110	0	0	0.0070	0.0018					100-110	0.0003	930.5	99.7,99.7
120	0.0645	0.0454	0.0506	0.0436					110-120	0.0192	930.5	99.7,99.7
130	0.2614	0.1971	0.1483	0.1534					120-130	0.0982	930.6	99.7,99.7
140	0.5159	0.4799	0.3211	0.3243					130-140	0.2193	930.8	99.7,99.7
150	1.567	1.481	0.8757	0.9169					140-150	0.4587	931.3	99.8,99.8
160	3.248	3.219	2.232	2.340					150-160	0.8774	932.1	99.9,99.9
170	3.959	3.967	3.298	3.292					160-170	0.9296	933.1	100,100
180	3.648	3.702	3.652	3.702					170-180	0.3462	933.4	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:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	6	12
75	23	26
70	38	40
65	160	58
60	1780	186
55	5540	3279
50	9864	7931
45	16251	13870

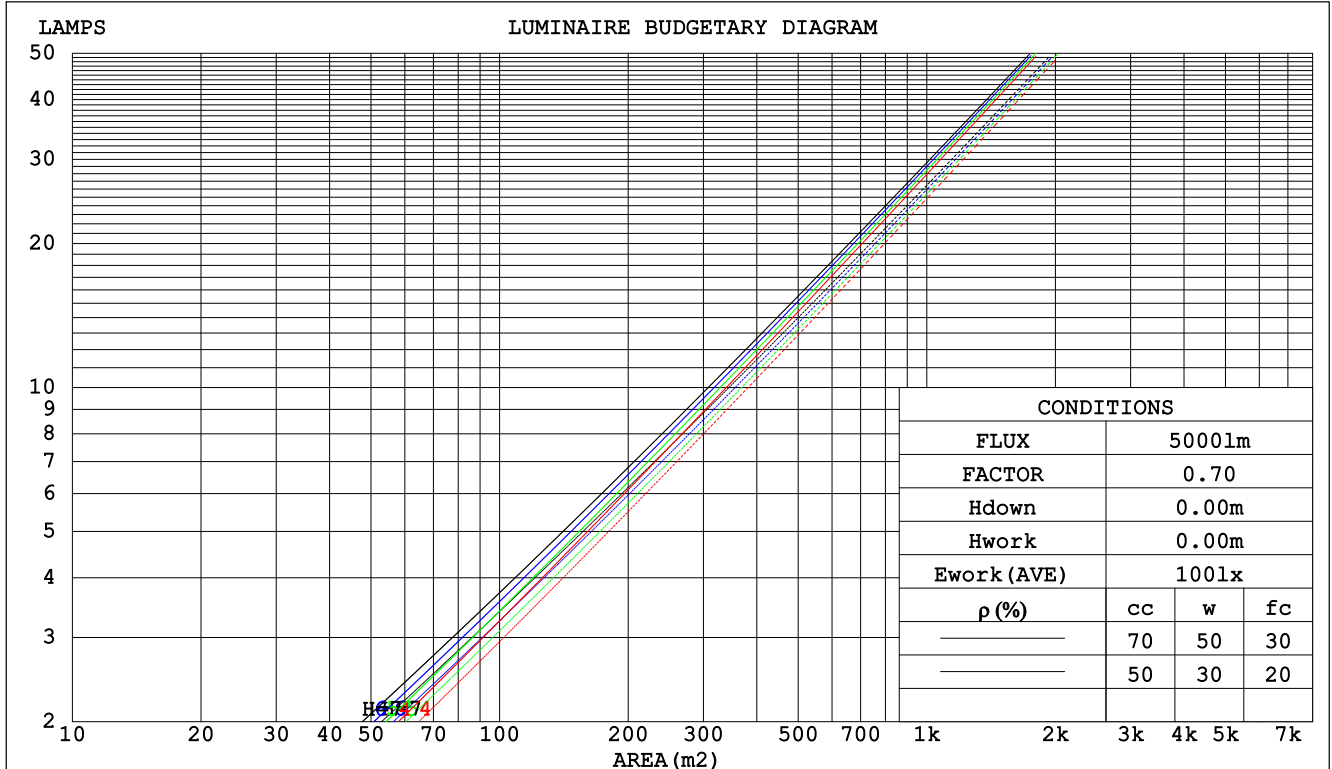
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	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)															
RCR:Room Cavity Ratio																
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	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.03	.00	1.04	1.01	.99	1.01	.99	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.97	.93	.91	.94	.92	.89	.92	.90	.88	.87
4.0	.96	.91	.88	.95	.90	.87	.92	.89	.86	.91	.88	.85	.89	.86	.84	.83
5.0	.91	.87	.83	.90	.86	.83	.89	.85	.82	.87	.84	.81	.86	.83	.81	.79
6.0	.87	.83	.79	.87	.82	.79	.85	.81	.78	.84	.80	.78	.83	.80	.77	.76
7.0	.84	.79	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.80	.77	.74	.73
8.0	.81	.76	.73	.80	.76	.72	.79	.75	.72	.78	.75	.72	.77	.74	.72	.70
9.0	.78	.73	.70	.77	.73	.70	.76	.72	.70	.76	.72	.69	.75	.72	.69	.68
10.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.70	.67	.73	.69	.67	.66



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	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	.151	.086	.027	.144	.082	.026	.132	.076	.024	.120	.069	.022	.109	.063	.020		
2.0	.142	.078	.024	.137	.075	.023	.126	.070	.022	.116	.065	.020	.108	.061	.019		
3.0	.134	.071	.021	.129	.069	.021	.120	.065	.020	.112	.062	.019	.105	.058	.018		
4.0	.127	.066	.019	.123	.064	.019	.115	.061	.018	.108	.058	.017	.101	.055	.017		
5.0	.120	.061	.018	.116	.060	.017	.110	.057	.017	.104	.055	.016	.098	.052	.016		
6.0	.114	.057	.016	.111	.056	.016	.105	.054	.016	.100	.052	.015	.095	.050	.015		
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.096	.049	.014	.092	.048	.014		
8.0	.103	.050	.014	.101	.050	.014	.097	.048	.014	.092	.047	.014	.089	.045	.013		
9.0	.099	.048	.013	.097	.047	.013	.093	.046	.013	.089	.045	.013	.086	.043	.013		
10.0	.094	.045	.013	.093	.045	.012	.089	.044	.012	.086	.043	.012	.083	.042	.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	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.172	.160	.149	.147	.137	.129	.101	.094	.089	.058	.055	.052	.019	.018	.017	
2.0	.155	.135	.119	.133	.116	.102	.091	.080	.071	.052	.047	.042	.017	.015	.014	
3.0	.141	.116	.096	.121	.100	.083	.083	.069	.058	.048	.041	.034	.015	.013	.011	
4.0	.129	.101	.079	.111	.087	.069	.076	.061	.048	.044	.036	.029	.014	.012	.009	
5.0	.119	.089	.066	.102	.077	.057	.071	.054	.041	.041	.031	.024	.013	.010	.008	
6.0	.111	.079	.056	.095	.068	.049	.066	.048	.035	.038	.028	.021	.012	.009	.007	
7.0	.104	.071	.048	.089	.062	.042	.062	.043	.030	.036	.025	.018	.012	.008	.006	
8.0	.097	.064	.042	.084	.056	.036	.058	.039	.026	.034	.023	.015	.011	.008	.005	
9.0	.092	.059	.037	.079	.051	.032	.055	.036	.023	.032	.021	.014	.010	.007	.004	
10.0	.087	.054	.032	.075	.047	.028	.052	.033	.020	.030	.020	.012	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-12-04

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm											
NAME: 8906LED						TYPE:			WEIGHT:		
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700						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	15.4	16.1	15.6	16.3	16.4	15.0	15.8	15.2	15.9	16.1	
	3H	15.2	15.9	15.5	16.1	16.3	14.9	15.5	15.1	15.7	15.9
	4H	15.1	15.8	15.4	16.0	16.2	14.8	15.4	15.0	15.6	15.9
	6H	15.0	15.7	15.3	15.9	16.1	14.7	15.3	15.0	15.5	15.8
	8H	15.0	15.6	15.3	15.8	16.1	14.6	15.2	14.9	15.5	15.8
	12H	14.9	15.5	15.3	15.8	16.1	14.6	15.2	14.9	15.4	15.7
4H	2H	15.1	15.8	15.4	16.0	16.2	14.8	15.5	15.1	15.7	15.9
	3H	15.0	15.5	15.3	15.8	16.1	14.6	15.2	14.9	15.5	15.7
	4H	14.9	15.4	15.2	15.7	16.0	14.5	15.1	14.9	15.3	15.7
	6H	14.8	15.2	15.1	15.6	15.9	14.4	14.9	14.8	15.2	15.6
	8H	14.7	15.1	15.1	15.5	15.9	14.4	14.8	14.8	15.2	15.5
	12H	14.7	15.1	15.1	15.4	15.8	14.3	14.7	14.7	15.1	15.5
8H	4H	14.7	15.1	15.1	15.5	15.9	14.4	14.8	14.8	15.2	15.5
	6H	14.6	15.0	15.0	15.4	15.8	14.3	14.6	14.7	15.0	15.4
	8H	14.5	14.9	15.0	15.3	15.7	14.2	14.5	14.7	14.9	15.4
	12H	14.5	14.8	15.0	15.2	15.7	14.1	14.4	14.6	14.9	15.3
12H	4H	14.7	15.1	15.1	15.4	15.8	14.3	14.7	14.7	15.1	15.5
	6H	14.5	14.9	15.0	15.3	15.7	14.2	14.5	14.7	14.9	15.4
	8H	14.5	14.8	15.0	15.2	15.7	14.1	14.4	14.6	14.9	15.3
Variations with the observer position at spacings:											
S = 1.0H	+ 2.6 / - 8.4					+ 2.7 / -13.1					
1.5H	+ 3.7 / - 6.1					+ 4.2 / - 6.9					
2.0H	+ 5.6 / -24.2					+ 5.8 / -24.2					

CIE Pub.117, 933.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)
Area: 0.005 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

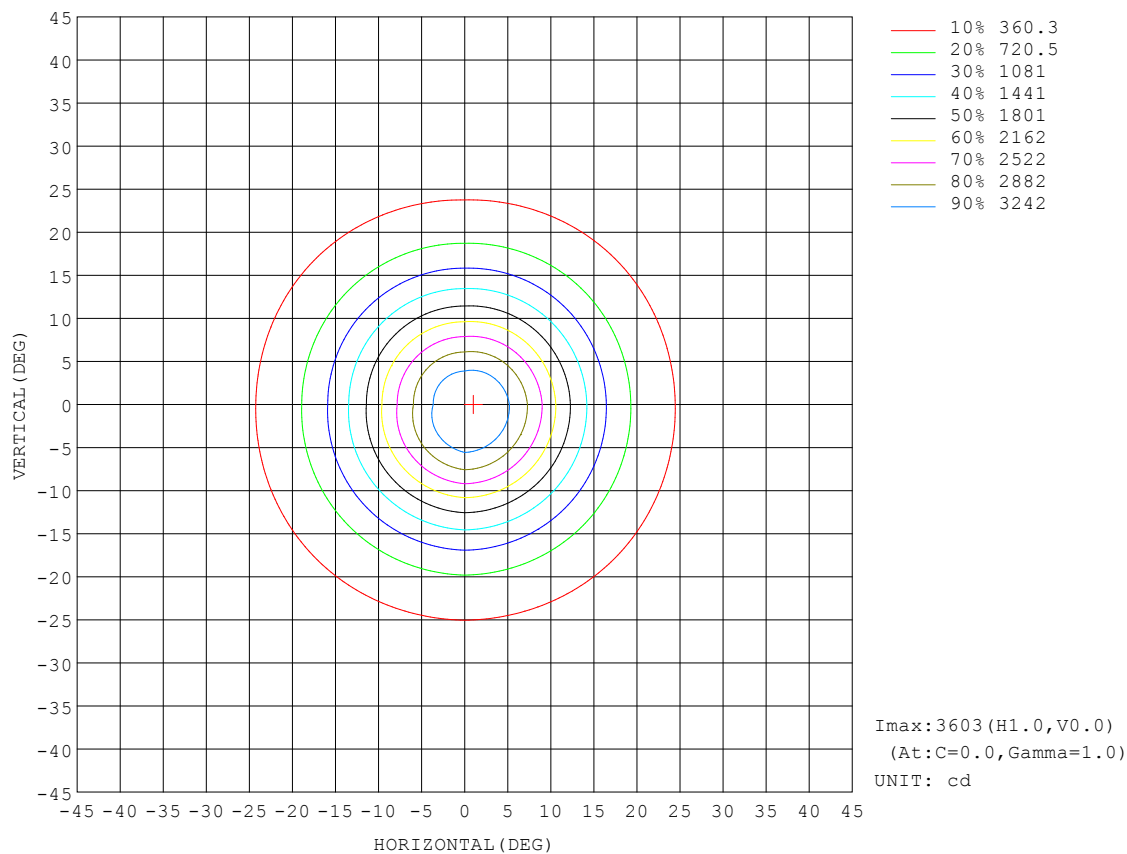
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	81	78	87	81	78	86	81	78	74
0.80	95	89	86	95	89	86	93	89	85	82
1.00	100	94	91	99	94	90	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	98	105	101	98	103	99	97	92
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	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:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

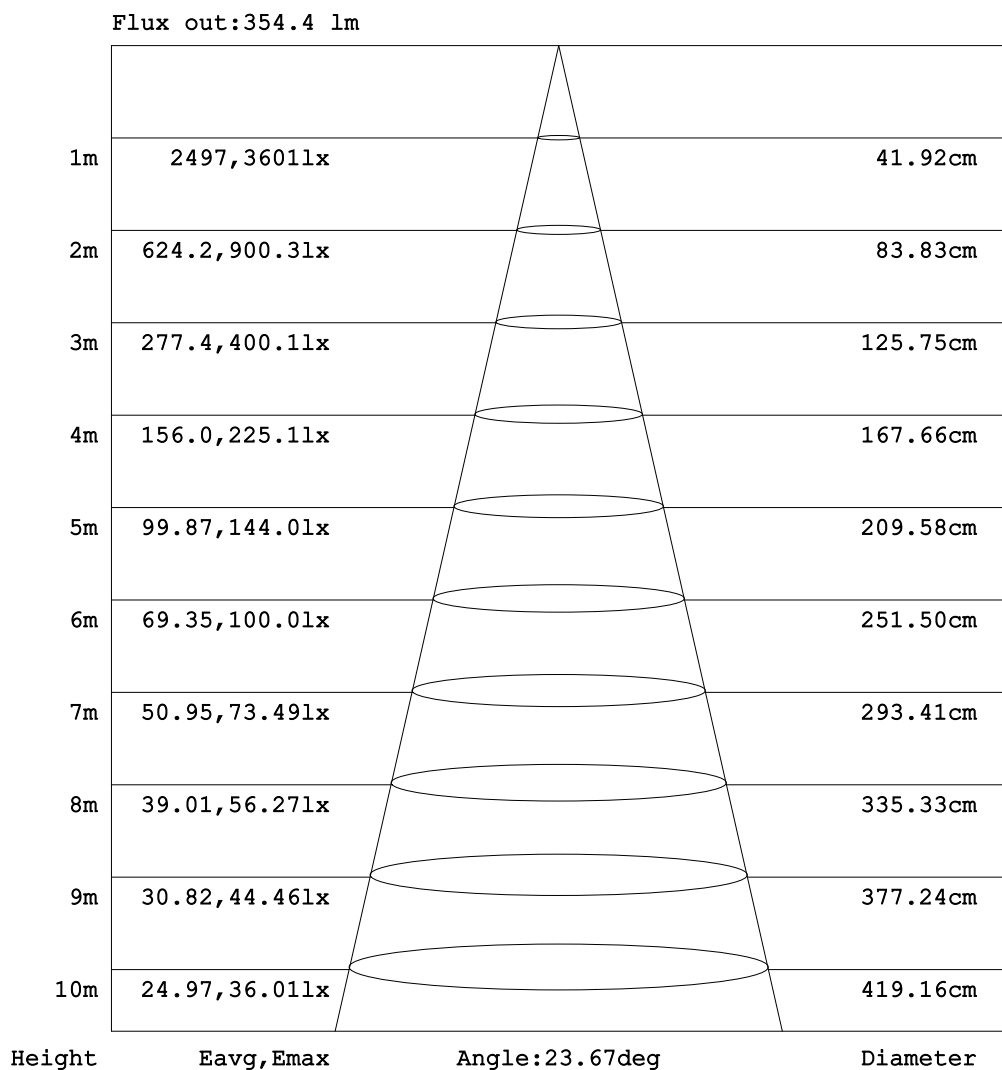


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

AAI Figure

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



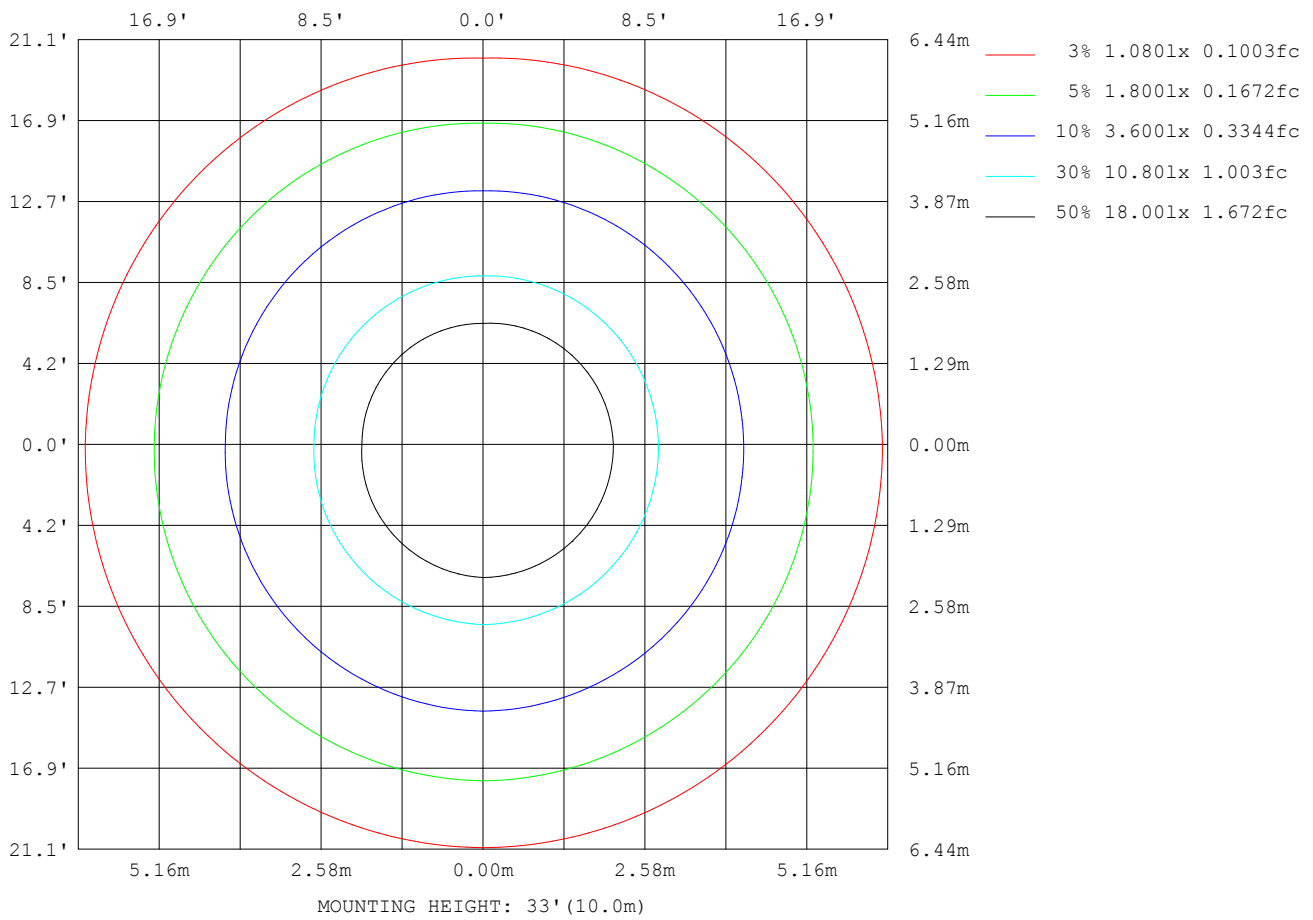
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2023-12-04

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	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:2023-12-04

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

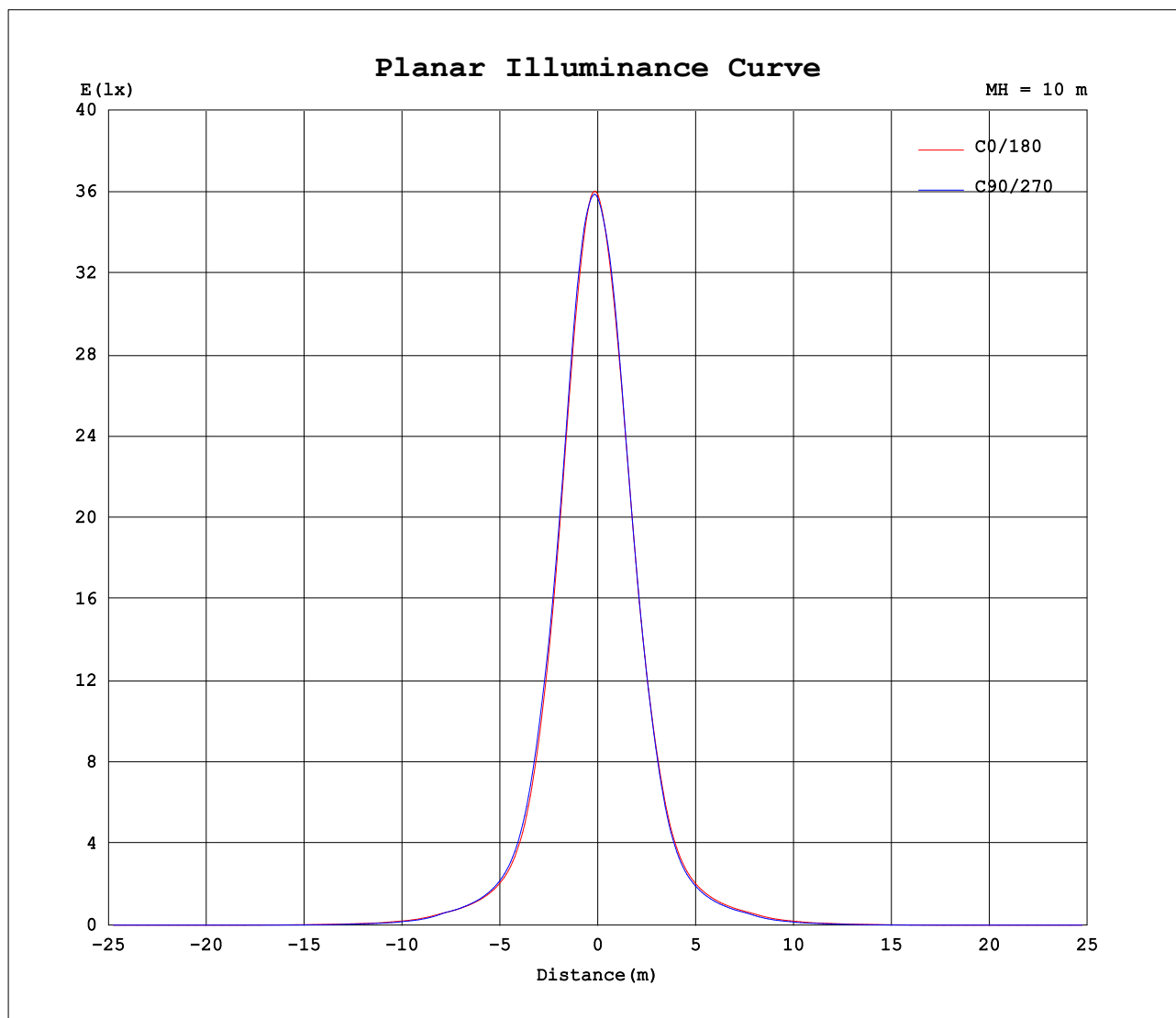
AvgL	cd/m2
L_0~180 (65) av	141
L_0~180 (75) av	21
L_0~180 (85) av	0
L_90~270 (65) av	64
L_90~270 (75) av	32
L_90~270 (85) av	12
L_45 (65) av	92
L_45 (75) av	28
L_45 (85) av	8

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 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: 2023-12-04

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:232.41V I:0.1237A P:15.086W PF:0.5249 Freq:49.37Hz Lamp Flux:933.419x1 lm		
NAME: 8906LED	TYPE:	WEIGHT:
SPEC.:P-8906LED-15W3024-CI40031R90-LDK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	3585	3566	3585	3566															
5	3272	3323	3045	3079															
10	2292	2339	2081	2081															
15	1303	1371	1208	1201															
20	649	700	618	594															
25	338	362	332	313															
30	215	224	213	198															
35	151	153	150	137															
40	104	93.7	99.1	82.8															
45	57.5	49.0	55.3	43.1															
50	31.7	25.5	30.0	22.5															
55	15.9	9.40	13.7	8.00															
60	4.45	0.46	2.57	0.53															
65	0.34	0.12	0.26	0.15															
70	0.06	0.07	0.05	0.09															
75	0.03	0.03	0.02	0.05															
80	0.01	0.01	0.01	0.03															
85	0.00	0.00	0.00	0.01															
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	0.01	0.00															
115	0.02	0.01	0.02	0.02															
120	0.06	0.05	0.05	0.04															
125	0.14	0.10	0.09	0.09															
130	0.26	0.20	0.15	0.15															
135	0.33	0.36	0.22	0.21															
140	0.52	0.48	0.32	0.32															
145	0.89	0.84	0.52	0.56															
150	1.57	1.48	0.88	0.92															
155	2.35	2.30	1.48	1.56															
160	3.25	3.22	2.23	2.34															
165	3.84	3.83	2.97	2.96															
170	3.96	3.97	3.30	3.29															
175	3.76	3.80	3.43	3.44															
180	3.65	3.70	3.65	3.70															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-12-04

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks: