

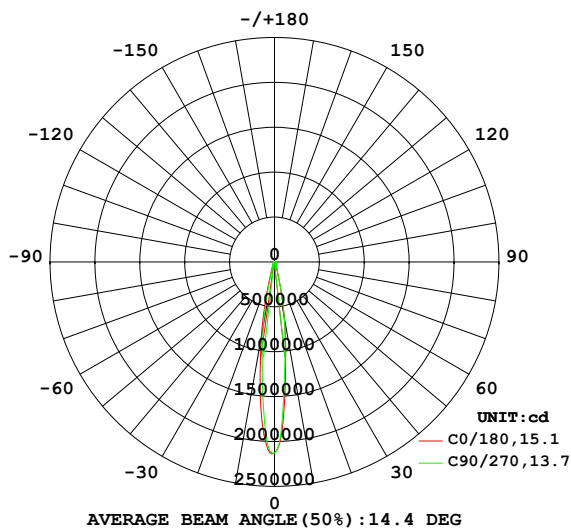
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

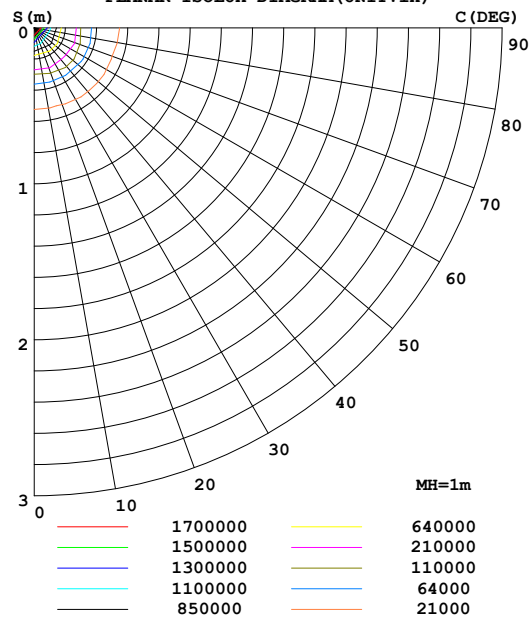
Test:U:230.0V I:7.842A P:1800.0W PF:0.998 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:255377x1 lm		
NAME: SP04-1K8-5770-F04015X	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.88 lm/W			
MODEL	/	Imax (cd)	2141831	S/MH(C0/180)	0.29
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.26
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	255377	$\eta$ UP,DN(C0-180)	0.0,48.1
NOMINAL FLUX(lm)	255377	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,51.9
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	/	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM(UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:ZZX  
Test Date:2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4621]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	622.6	677.2	628.9	791.2	834.9	840.8	711.6	748.3	0- 10	116833	116833	45.7,45.7
20	64.75	80.23	71.44	107.0	89.90	119.1	76.69	88.82	10- 20	75246	192079	75.2,75.2
30	23.15	25.45	27.12	29.01	27.08	29.86	30.13	26.66	20- 30	21246	213326	83.5,83.5
40	14.69	14.91	16.87	16.11	15.69	16.15	18.28	15.68	30- 40	12504	225830	88.4,88.4
50	10.81	10.82	12.34	11.60	11.36	11.76	12.84	11.56	40- 50	10477	236308	92.5,92.5
60	7.195	7.988	8.550	8.566	7.780	8.588	8.476	8.458	50- 60	8970	245278	96,96
70	4.090	5.054	4.753	5.609	4.594	5.651	4.633	5.314	60- 70	6472	251749	98.6,98.6
80	1.165	1.276	1.286	1.554	1.461	1.642	1.300	1.443	70- 80	3146	254895	99.8,99.8
90	0.0065	0.0061	0.0051	0.0101	0.0179	0.0148	0.0089	0.0077	80- 90	481.5	255377	100,100
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:X1000cd									UNIT:lm		

Conical surface Flux(90deg): 2.3123e+005 lm

%lum = 90.5%

%lamp = 90.5%

Conical surface Flux(120deg): 2.4528e+005 lm

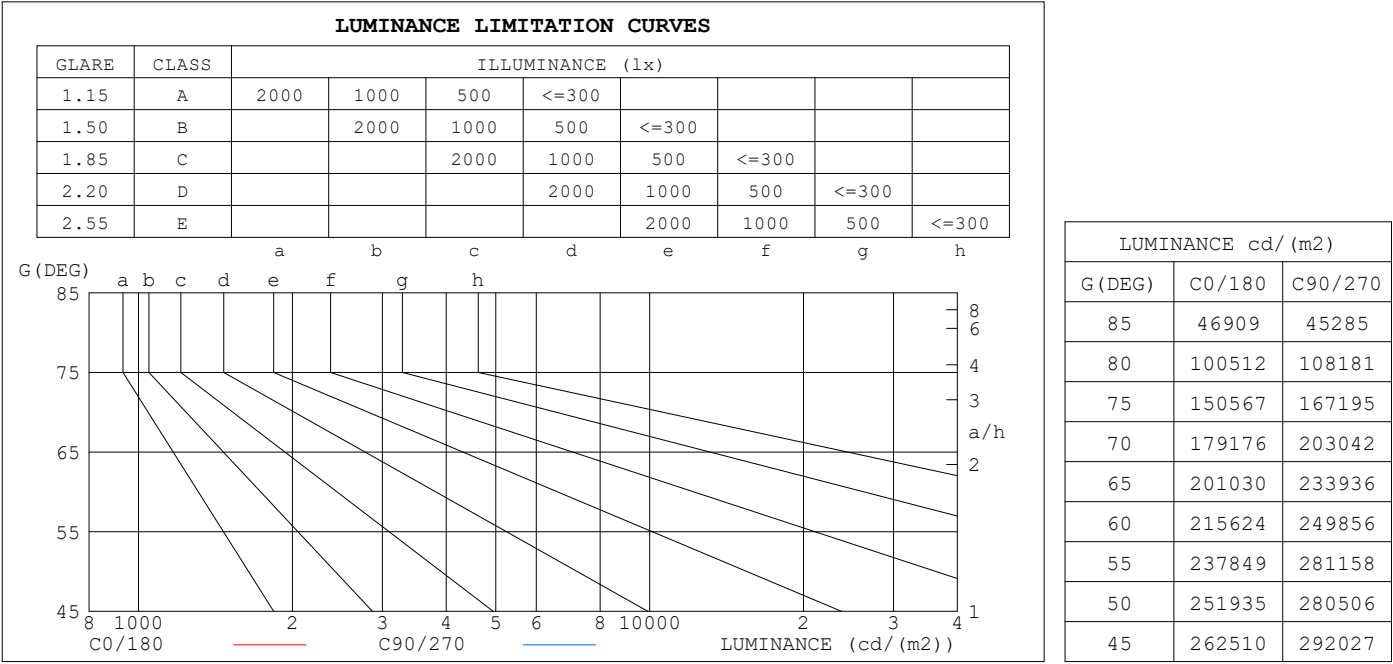
%lum = 96.0%

%lamp = 96.0%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4621]  
Remarks:

LUMINANCE LIMITATION CURVES



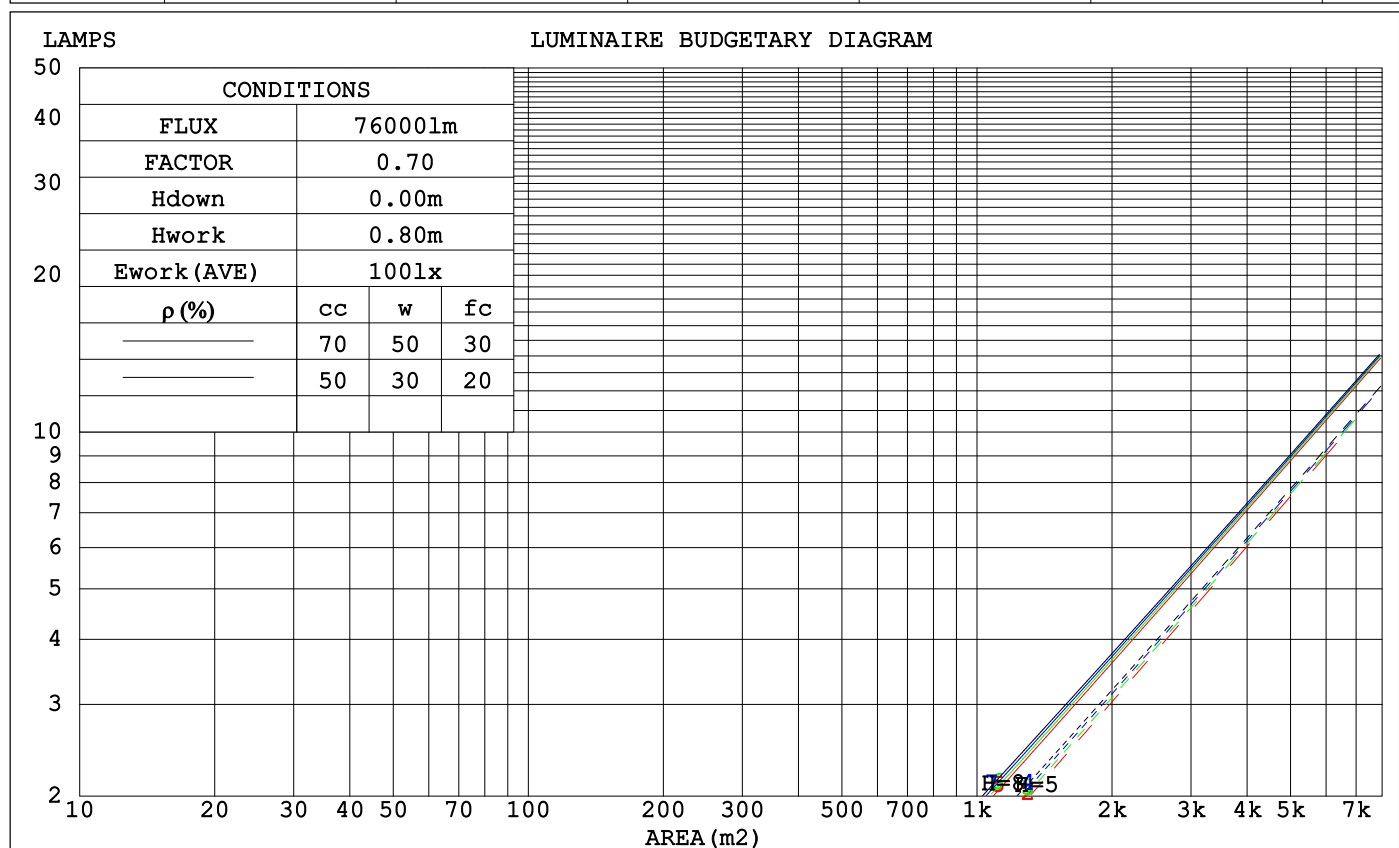
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-12-01

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4621]  
Remarks:

## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.00
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	1.02	.00	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.01	.97	.93	.99	.96	.93	.97	.94	.91	.94	.92	.90	.92	.90	.88	.87
4.0	.96	.92	.89	.95	.91	.88	.93	.90	.87	.91	.88	.86	.90	.87	.85	.84
5.0	.93	.88	.85	.92	.88	.84	.90	.86	.84	.89	.85	.83	.87	.84	.82	.81
6.0	.89	.85	.82	.89	.84	.81	.87	.84	.81	.86	.83	.80	.85	.82	.80	.79
7.0	.87	.82	.79	.86	.82	.79	.85	.81	.78	.84	.80	.78	.83	.80	.78	.77
8.0	.84	.80	.77	.84	.79	.77	.83	.79	.76	.82	.78	.76	.81	.78	.76	.75
9.0	.82	.78	.75	.81	.77	.75	.81	.77	.74	.80	.77	.74	.79	.76	.74	.73
10.0	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.73	.78	.75	.72	.71



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4621]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.155	.088	.028	.149	.085	.027	.136	.078	.025	.125	.072	.023	.114	.066	.021	
2.0	.144	.079	.024	.139	.076	.024	.128	.071	.022	.119	.067	.021	.110	.062	.020	
3.0	.134	.071	.021	.129	.069	.021	.120	.065	.020	.112	.061	.019	.105	.058	.018	
4.0	.124	.064	.019	.120	.063	.019	.113	.060	.018	.106	.057	.017	.099	.054	.016	
5.0	.115	.059	.017	.112	.057	.017	.106	.055	.016	.100	.053	.016	.094	.050	.015	
6.0	.108	.054	.015	.105	.053	.015	.099	.051	.015	.094	.049	.014	.090	.047	.014	
7.0	.101	.050	.014	.098	.049	.014	.094	.047	.014	.089	.046	.013	.085	.044	.013	
8.0	.095	.046	.013	.093	.046	.013	.089	.044	.013	.085	.043	.012	.081	.042	.012	
9.0	.090	.043	.012	.088	.043	.012	.084	.042	.012	.081	.041	.012	.078	.039	.011	
10.0	.085	.041	.011	.084	.040	.011	.080	.039	.011	.077	.038	.011	.074	.037	.011	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.138	.113	.094	.118	.098	.081	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.126	.098	.077	.108	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.064	.099	.074	.056	.068	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.106	.076	.054	.091	.066	.047	.063	.046	.034	.037	.027	.020	.012	.009	.007	
7.0	.098	.068	.047	.085	.059	.041	.059	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.092	.061	.040	.079	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.086	.055	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.080	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ZZX  
 Test Date:2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4621]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UGR(Unified Glare Rating) Table

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	2H	26.1	27.2	26.5	27.5	27.8	26.4	27.5	26.8	27.8	28.1
	3H	27.6	28.6	28.0	28.9	29.3	28.1	29.0	28.4	29.3	29.7
	4H	28.1	29.0	28.5	29.3	29.7	28.5	29.4	28.9	29.7	30.1
	6H	28.3	29.1	28.7	29.5	29.8	28.7	29.5	29.2	29.9	30.3
	8H	28.3	29.0	28.7	29.4	29.8	28.7	29.5	29.2	29.9	30.3
	12H	28.3	29.0	28.7	29.4	29.8	28.7	29.4	29.1	29.8	30.2
4H	2H	26.8	27.7	27.2	28.0	28.4	27.2	28.1	27.6	28.4	28.8
	3H	28.5	29.2	28.9	29.6	30.0	28.9	29.6	29.3	30.0	30.4
	4H	29.0	29.6	29.4	30.0	30.5	29.4	30.0	29.8	30.4	30.9
	6H	29.2	29.8	29.7	30.2	30.7	29.6	30.2	30.1	30.6	31.1
	8H	29.2	29.8	29.7	30.2	30.7	29.6	30.1	30.1	30.6	31.1
	12H	29.2	29.7	29.7	30.1	30.6	29.6	30.0	30.1	30.5	31.0
8H	4H	29.1	29.6	29.6	30.1	30.6	29.6	30.1	30.0	30.5	31.0
	6H	29.4	29.8	29.9	30.3	30.8	29.9	30.3	30.4	30.8	31.3
	8H	29.5	29.8	30.0	30.4	30.8	29.9	30.3	30.4	30.8	31.3
	12H	29.5	29.8	30.0	30.3	30.9	29.9	30.2	30.4	30.7	31.3
12H	4H	29.1	29.5	29.6	30.0	30.5	29.5	30.0	30.0	30.5	30.9
	6H	29.4	29.8	29.9	30.2	30.8	29.9	30.2	30.4	30.7	31.2
	8H	29.5	29.8	30.0	30.3	30.9	29.9	30.2	30.4	30.7	31.3
CIE190: 2010											

CIE190: 2010  
Area: 0.06829 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4621]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

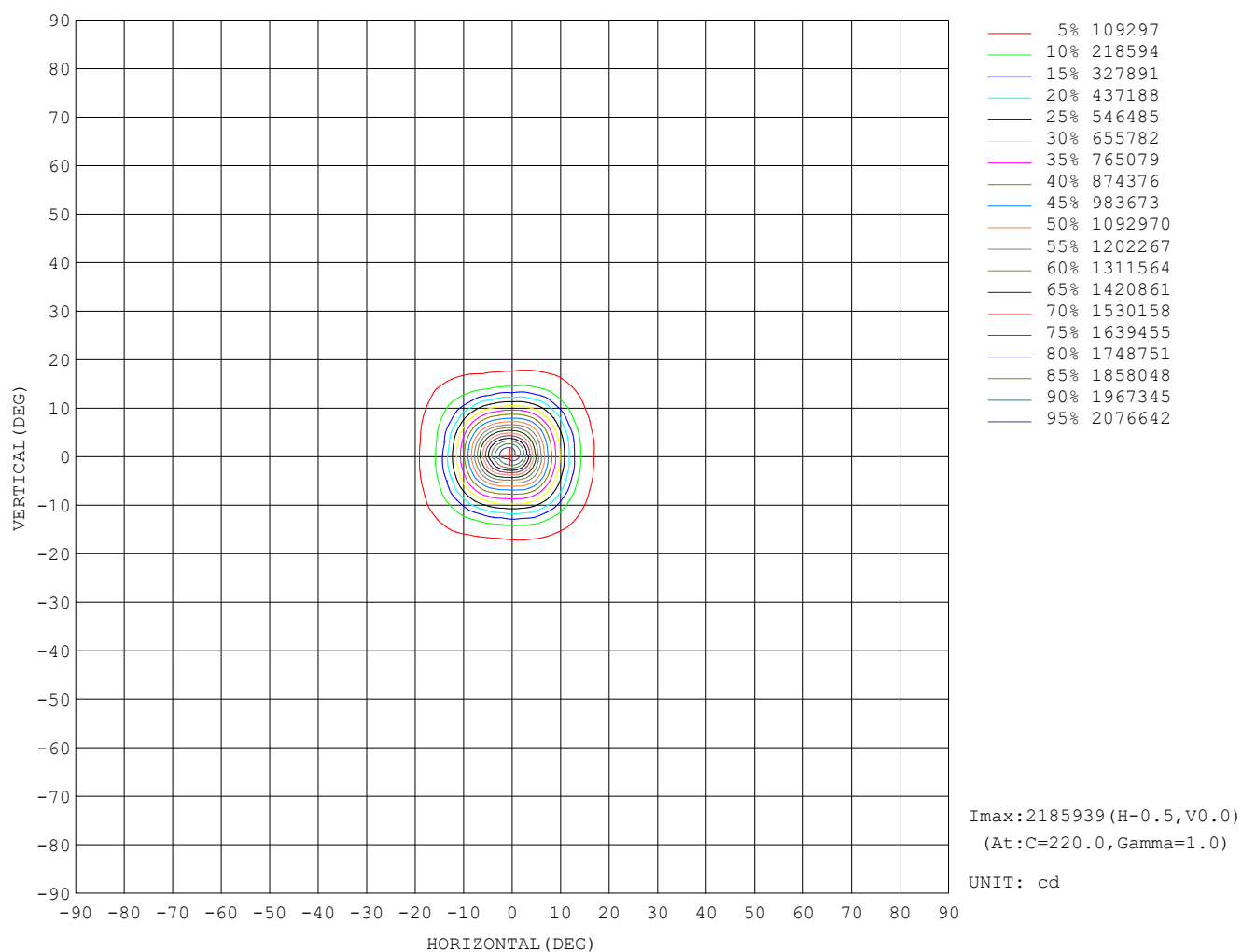
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	84	78	73	84	77	73	83	77	73	69
0.80	92	86	81	91	85	81	90	85	81	77
1.00	97	91	87	96	90	86	94	90	86	81
1.25	101	95	91	100	95	91	98	93	90	86
1.50	104	99	95	103	98	94	100	96	93	88
2.00	107	102	99	106	101	98	103	99	97	91
2.50	109	105	101	107	103	100	104	101	99	92
3.00	111	107	104	109	105	103	105	103	101	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ZZX  
 Test Date: 2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4621]  
 Remarks:

# ISOCANDELA DIAGRAM

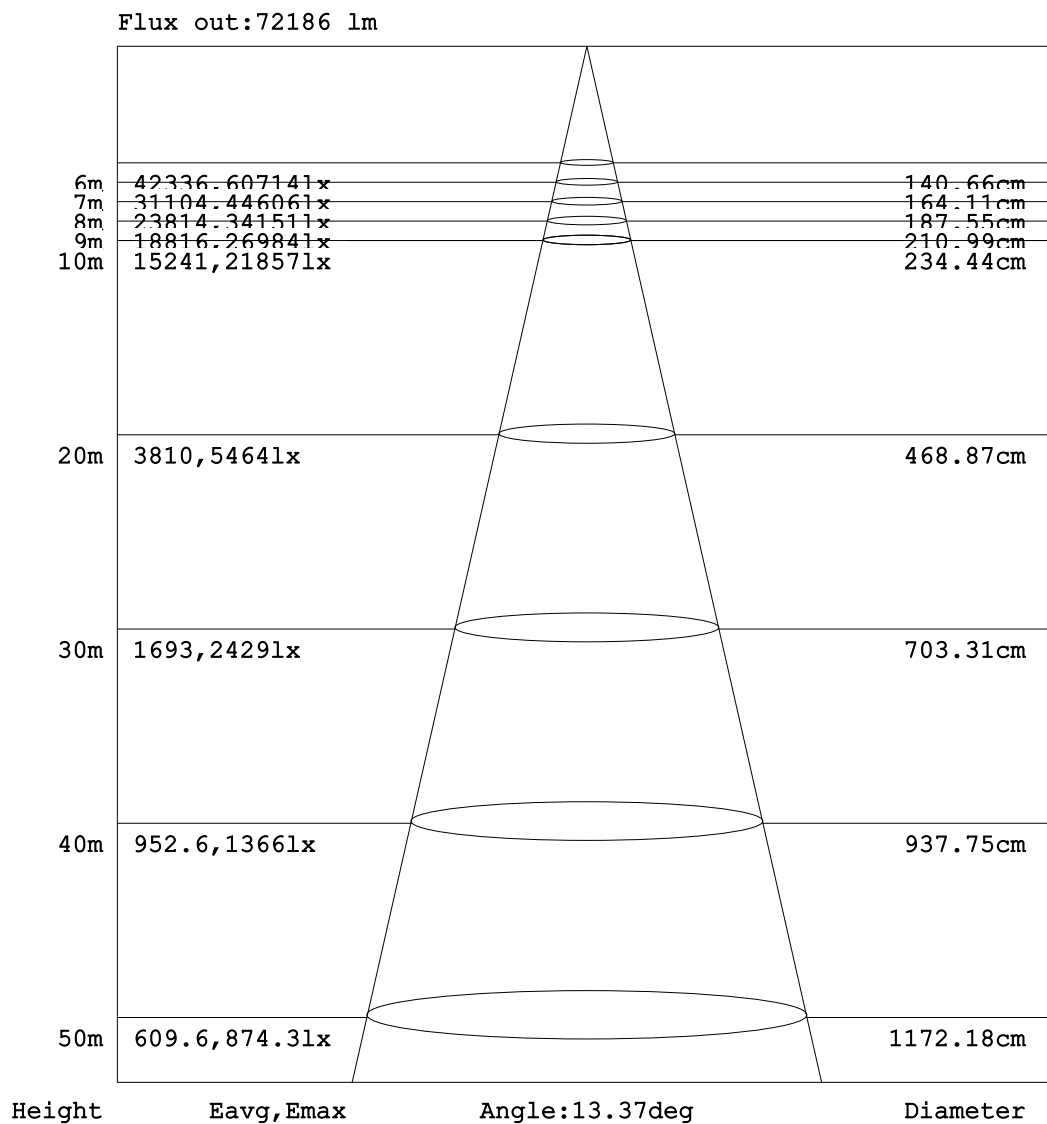


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZK  
Test Date: 2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4621]  
Remarks:



## AAI Figure



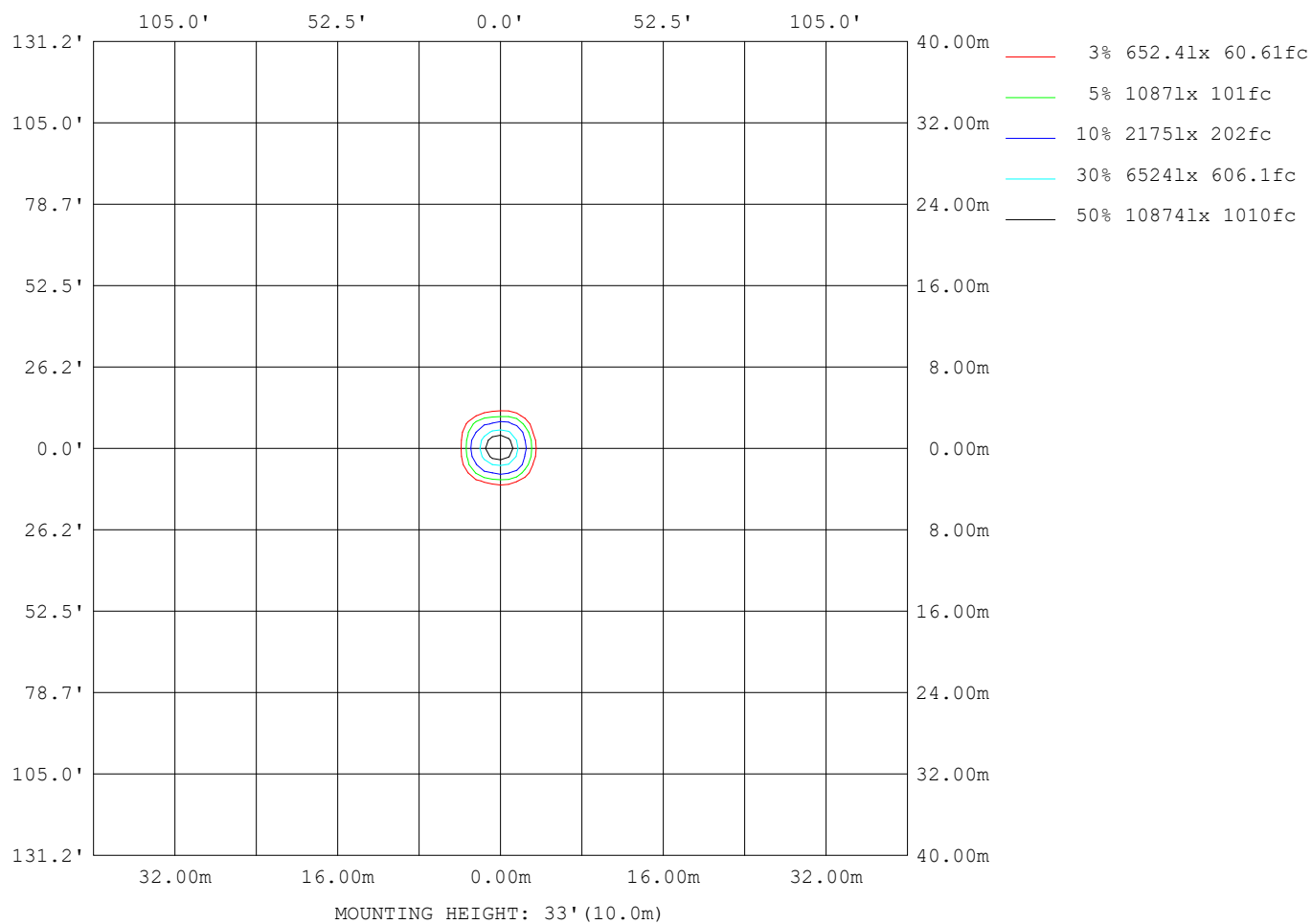
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4621]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

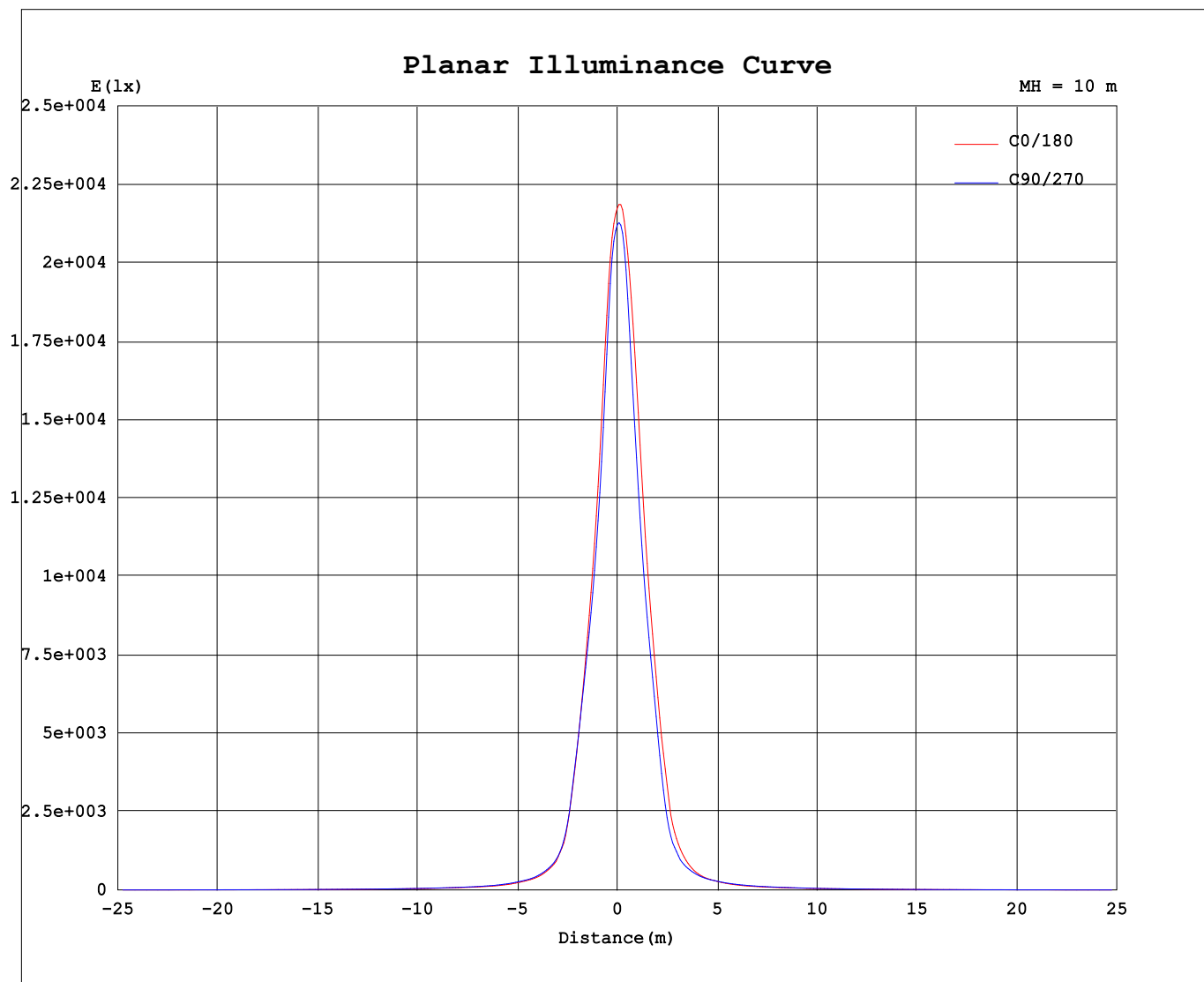
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-12-01

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4621]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4621]  
Remarks:

UNIT: X1000cd

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4621]
Remarks:

```

UNIT: X1000cd

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-12-01

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4621]
Remarks:

```