

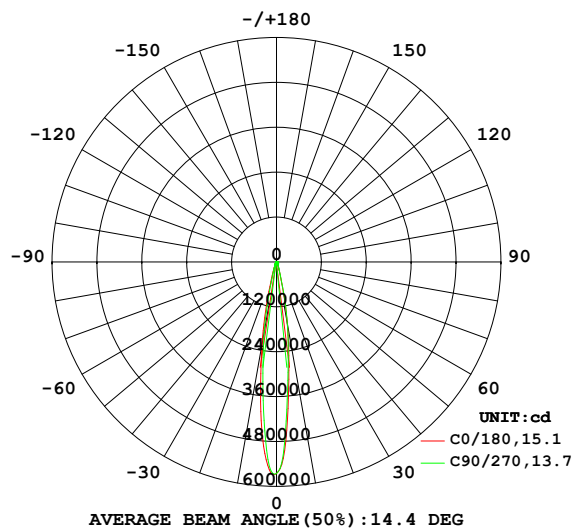
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

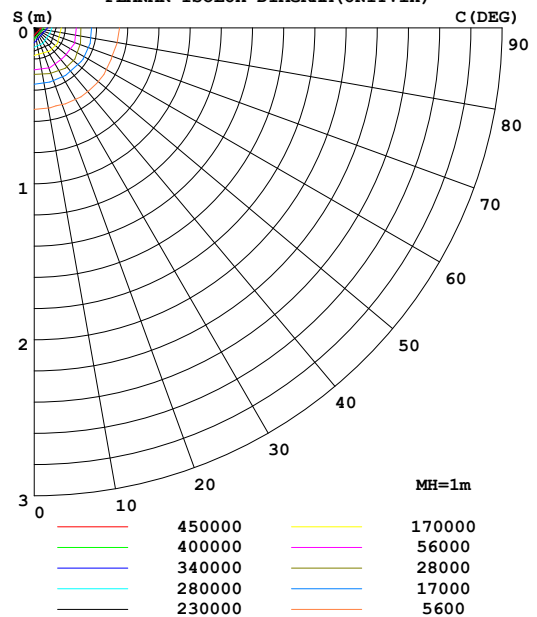
Test:U:230.0V I:2.141A P:480.0W PF:0.975 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:67945.4x1 lm		
NAME: SP04-480-5770-F04015X	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.55 lm/W			
MODEL	/	Imax (cd)	569854	S/MH (C0/180)	0.29
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.26
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	67945	$\eta$ UP, DN (C0-180)	0.0, 48.1
NOMINAL FLUX (lm)	67945.4	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°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

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1657	1802	1673	2105	2221	2237	1893	1991	0- 10	31085	31085	45.7,45.7
20	172.3	213.4	190.1	284.6	239.2	316.9	204.0	236.3	10- 20	20020	51104	75.2,75.2
30	61.58	67.71	72.15	77.19	72.06	79.44	80.17	70.92	20- 30	5653	56757	83.5,83.5
40	39.07	39.67	44.89	42.87	41.74	42.97	48.63	41.73	30- 40	3327	60084	88.4,88.4
50	28.76	28.78	32.83	30.85	30.21	31.29	34.16	30.76	40- 50	2788	62872	92.5,92.5
60	19.14	21.25	22.75	22.79	20.70	22.85	22.55	22.50	50- 60	2387	65258	96,96
70	10.88	13.45	12.64	14.92	12.22	15.04	12.33	14.14	60- 70	1722	66980	98.6,98.6
80	3.099	3.394	3.420	4.135	3.887	4.368	3.459	3.840	70- 80	837.0	67817	99.8,99.8
90	0.0174	0.0161	0.0135	0.0269	0.0477	0.0393	0.0237	0.0205	80- 90	128.1	67945	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:X100cd									UNIT:lm		

Conical surface Flux(90deg): 61520 lm

%lum = 90.5%

%lamp = 90.5%

Conical surface Flux(120deg): 65258 lm

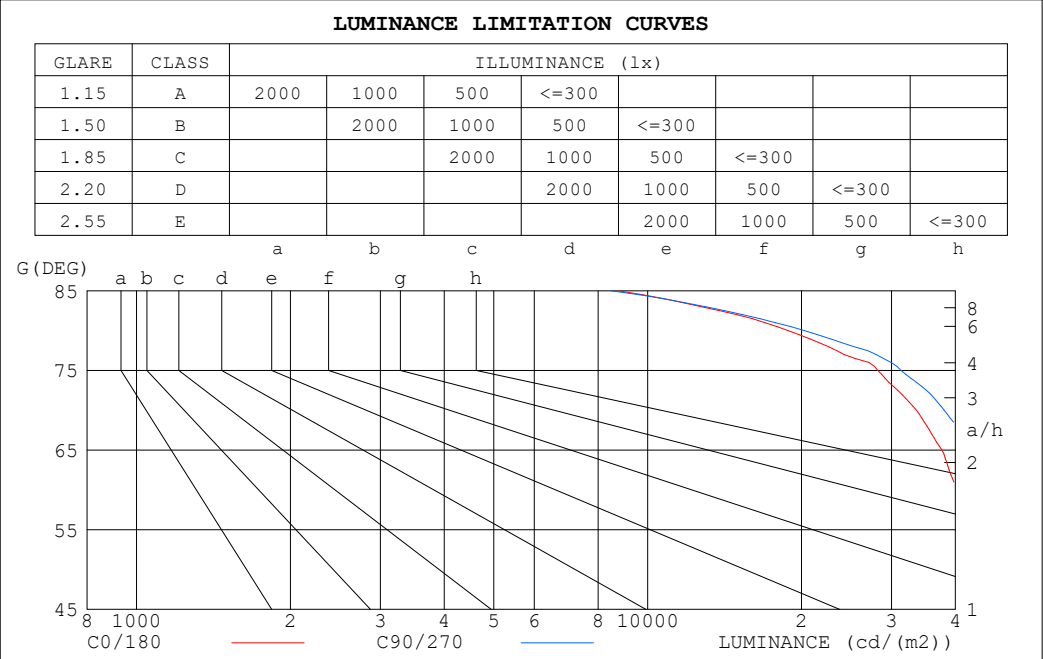
%lum = 96.0%

%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



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8787	8482
80	18827	20264
75	28203	31317
70	33562	38032
65	37655	43819
60	40389	46801
55	44552	52664
50	47190	52542
45	49171	54700

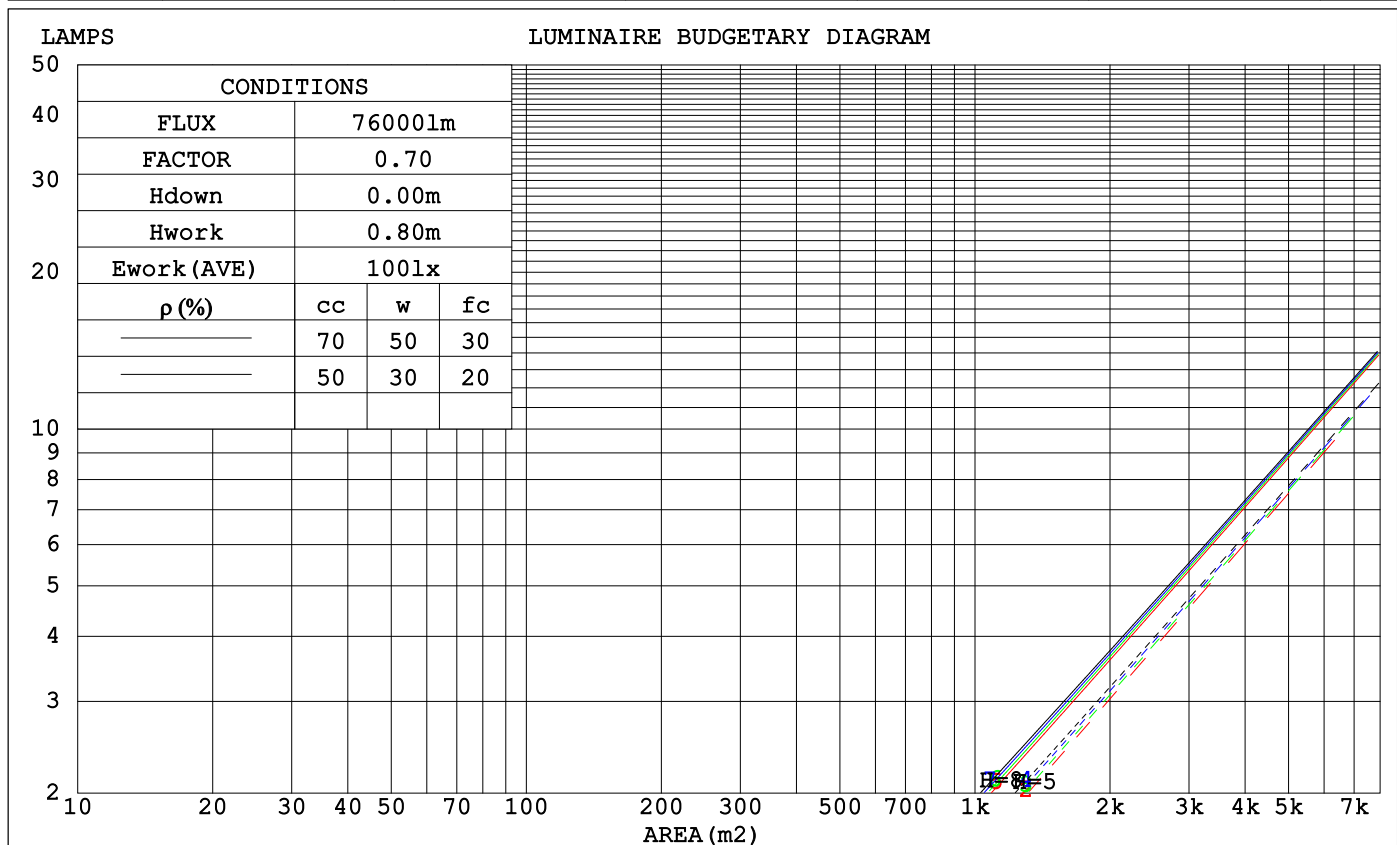
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:ZZX  
Test Date:2023-12-01

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	20.3	21.4	20.7	21.7	22.0	20.6	21.7	21.0	22.0	22.3
3H	21.8	22.8	22.2	23.1	23.5	22.2	23.2	22.6	23.5	23.9
4H	22.3	23.1	22.7	23.5	23.9	22.7	23.6	23.1	23.9	24.3
6H	22.5	23.3	22.9	23.6	24.0	22.9	23.7	23.3	24.1	24.5
8H	22.5	23.2	22.9	23.6	24.0	22.9	23.7	23.4	24.1	24.5
12H	22.4	23.2	22.9	23.5	24.0	22.9	23.6	23.3	24.0	24.4
4H 2H	21.0	21.9	21.4	22.2	22.6	21.4	22.2	21.8	22.6	23.0
3H	22.7	23.4	23.1	23.8	24.2	23.0	23.7	23.5	24.2	24.6
4H	23.2	23.8	23.6	24.2	24.7	23.5	24.2	24.0	24.6	25.1
6H	23.4	24.0	23.9	24.4	24.9	23.8	24.3	24.3	24.8	25.3
8H	23.4	23.9	23.9	24.4	24.9	23.8	24.3	24.3	24.8	25.2
12H	23.4	23.8	23.9	24.3	24.8	23.8	24.2	24.3	24.7	25.2
8H 4H	23.3	23.8	23.8	24.3	24.7	23.7	24.2	24.2	24.7	25.2
6H	23.6	24.0	24.1	24.5	25.0	24.1	24.5	24.6	25.0	25.4
8H	23.7	24.0	24.2	24.5	25.0	24.1	24.4	24.6	25.0	25.5
12H	23.7	24.0	24.2	24.5	25.0	24.1	24.4	24.6	24.9	25.5
12H 4H	23.3	23.7	23.8	24.2	24.7	23.7	24.2	24.2	24.6	25.1
6H	23.6	24.0	24.1	24.4	25.0	24.0	24.4	24.6	24.9	25.4
8H	23.7	24.0	24.2	24.5	25.0	24.1	24.4	24.6	24.9	25.5
CIE190: 2010										

CIE190: 2010  
Area: 0.097 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

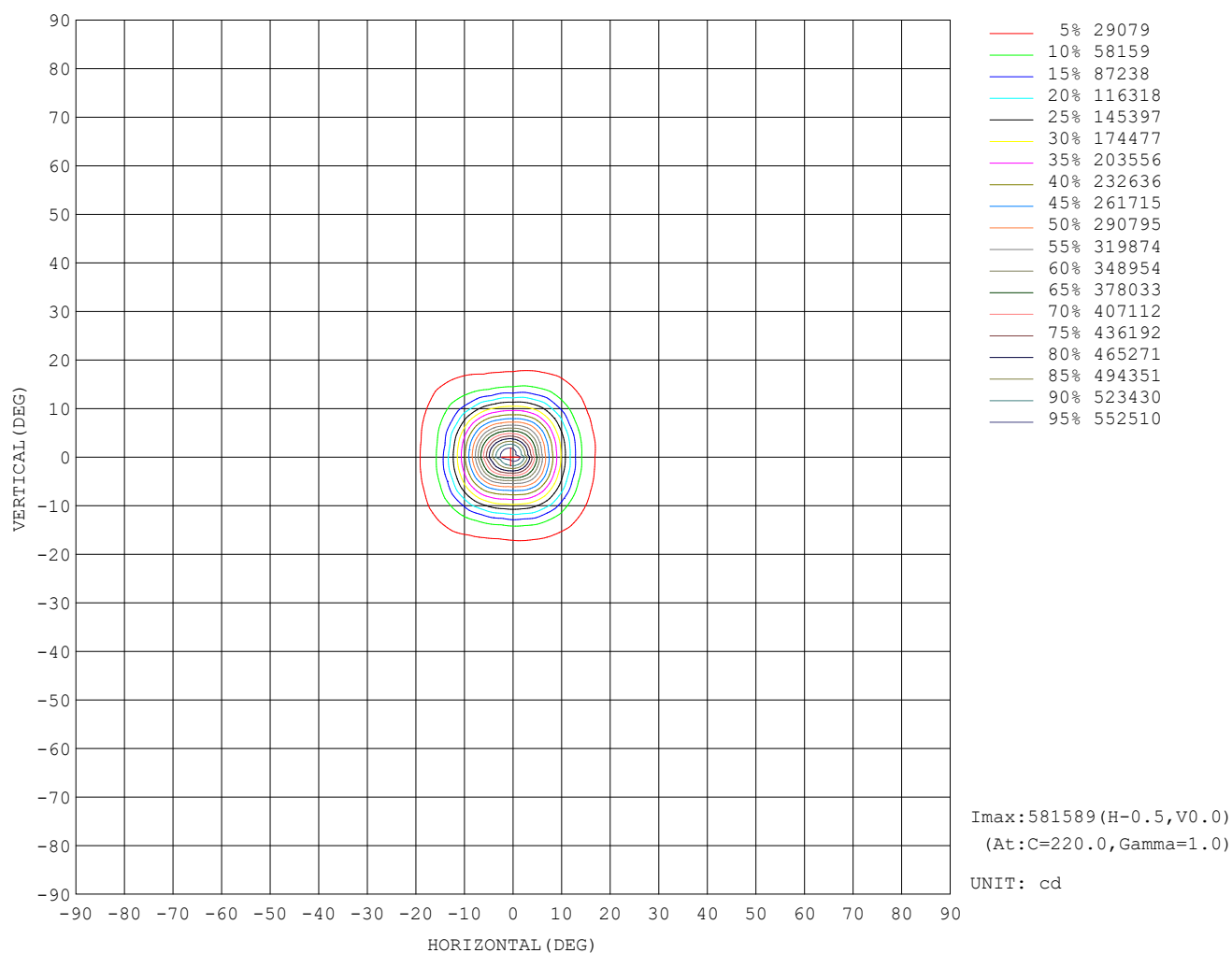
## UTILIZATION FACTORS TABLE

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  
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 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

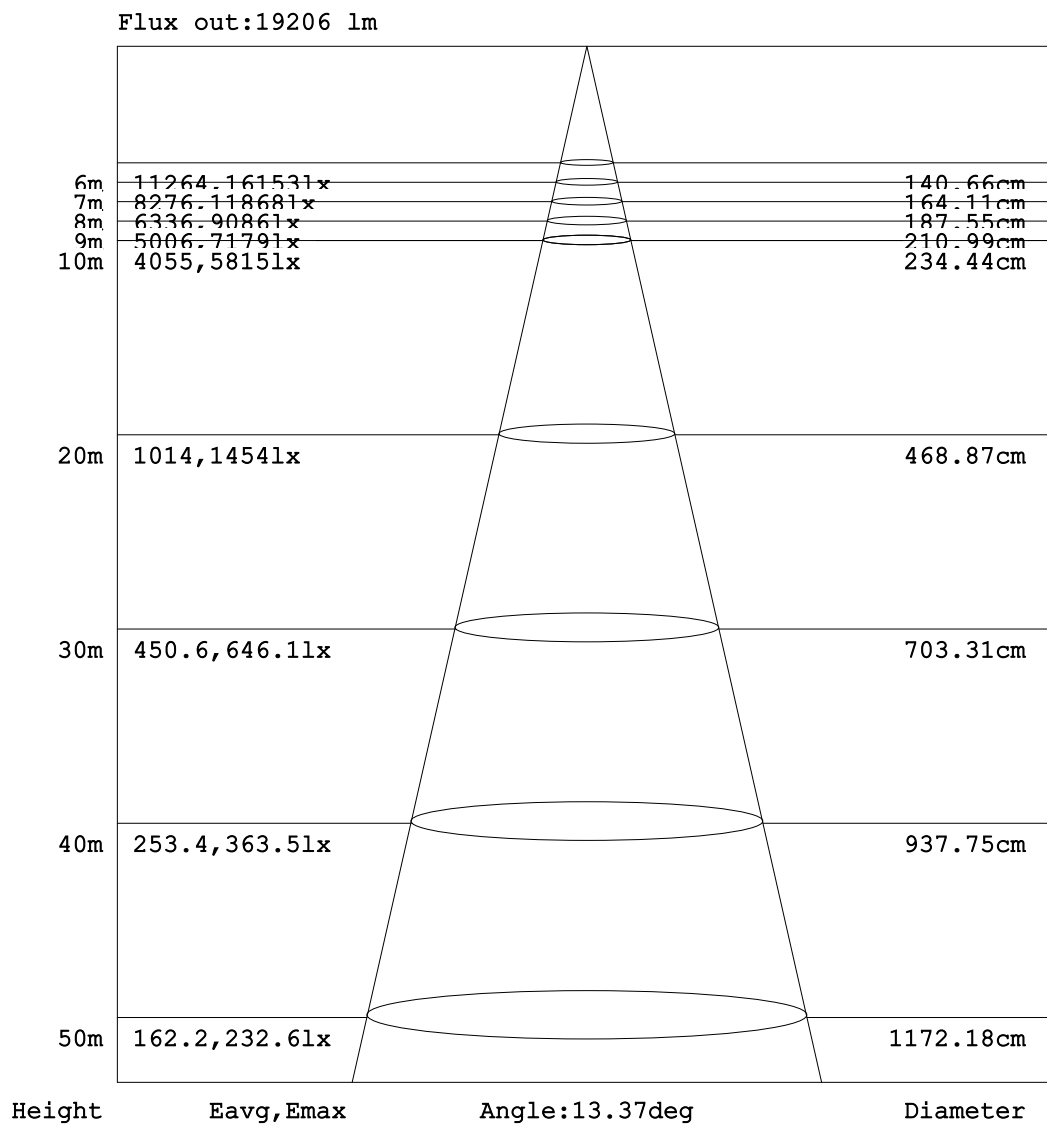


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-12-01

$\gamma$  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:



## AAI Figure



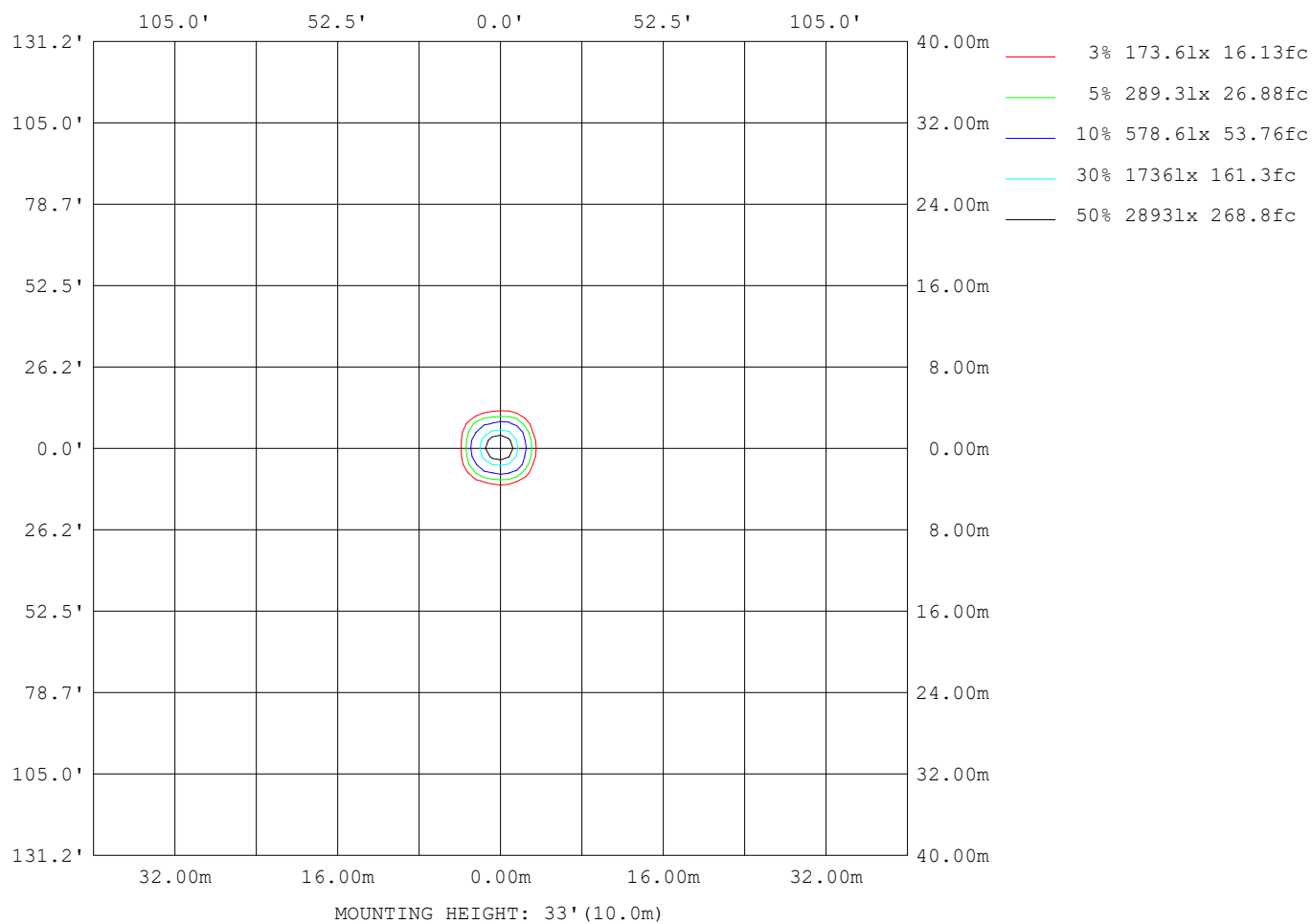
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

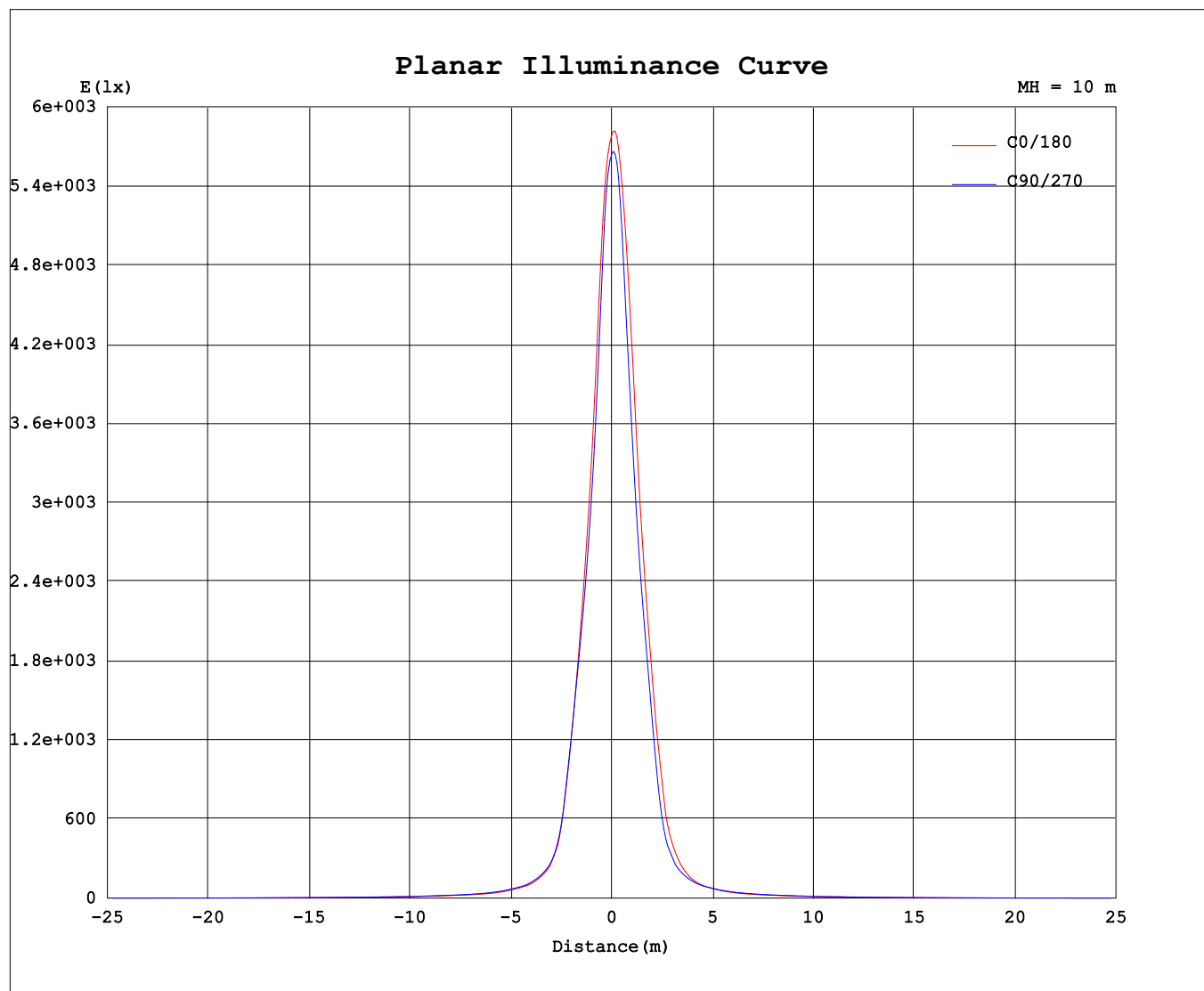
## ISOLUX DIAGRAM



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

$\gamma$  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:

## 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: X100cd

```

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: X100cd

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:

```