

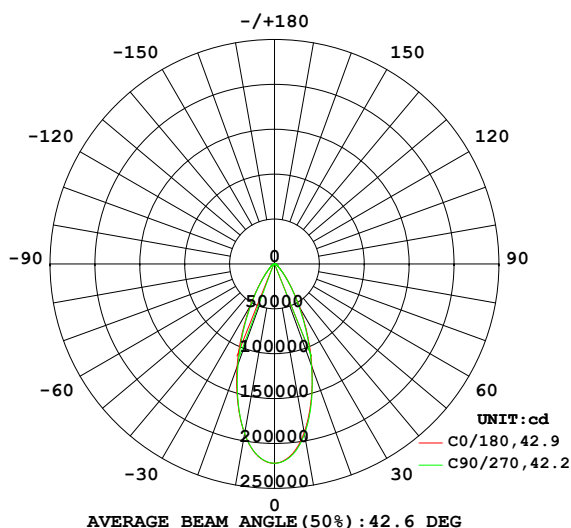
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

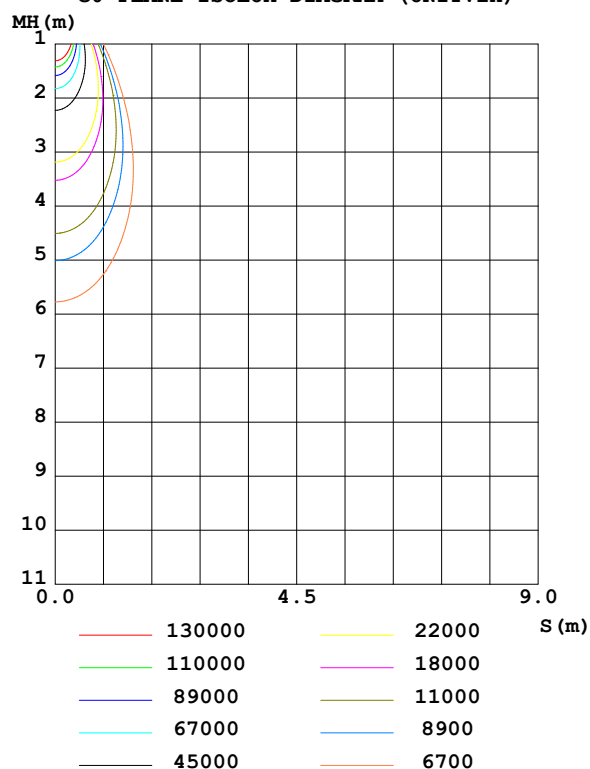
Test:U:230.0V I:4.272A P:960.0W PF:0.977 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:144584x1 lm		
NAME: SP04-960-5770-F04004Z	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 150.61 lm/W			
MODEL	5050	I <sub>max</sub> (cd)	221993	S/MH (C0/180)	0.68
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.67
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	144584	η UP,DN (C0-180)	0.0,50.6
NOMINAL FLUX (lm)	144584	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	0.75

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:15 November 2022

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=0.4548]  
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	1907	1919	1925	1921	1919	1921	1917	1909	0- 10	19732	19732	13.6,13.6
20	1215	1220	1203	1220	1219	1215	1187	1212	10- 20	43589	63321	43.8,43.8
30	565.5	603.9	547.5	578.1	540.7	570.7	523.6	577.3	20- 30	39190	102511	70.9,70.9
40	197.5	243.9	194.8	223.5	183.0	216.1	179.5	228.3	30- 40	22199	124710	86.3,86.3
50	72.66	97.61	72.61	88.20	67.26	83.78	67.87	90.67	40- 50	10042	134752	93.2,93.2
60	38.77	47.92	39.66	44.90	37.31	43.40	38.32	45.91	50- 60	5078	139829	96.7,96.7
70	20.75	24.12	20.63	23.51	20.22	23.00	20.12	23.80	60- 70	3080	142909	98.8,98.8
80	6.259	6.802	6.094	6.766	6.223	6.678	5.984	6.853	70- 80	1431	144340	99.8,99.8
90	0.0295	0.0305	0.0300	0.0393	0.0431	0.0430	0.0322	0.0336	80- 90	244.1	144584	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): 1.3073e+005 lm

%lum = 90.4%

%lamp = 90.4%

Conical surface Flux(120deg): 1.3983e+005 lm

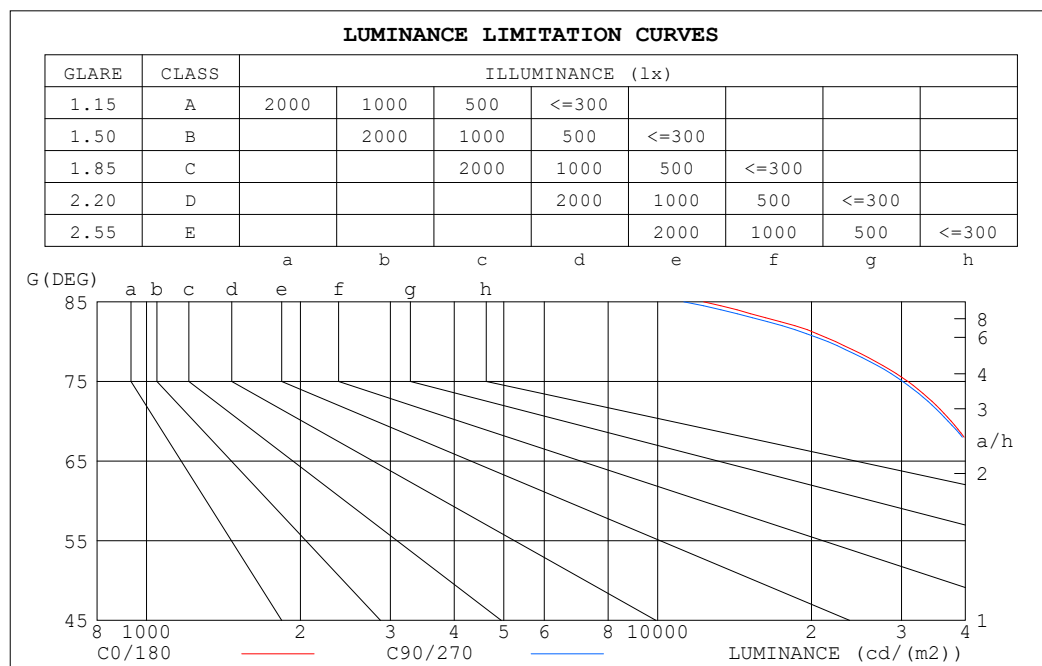
%lum = 96.7%

%lamp = 96.7%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:15 November 2022

$\gamma$  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=0.4548]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12305	11253
80	22297	21535
75	30880	30169
70	37537	37007
65	42784	42729
60	47966	48682
55	55367	55657
50	69931	69317
45	101032	98856

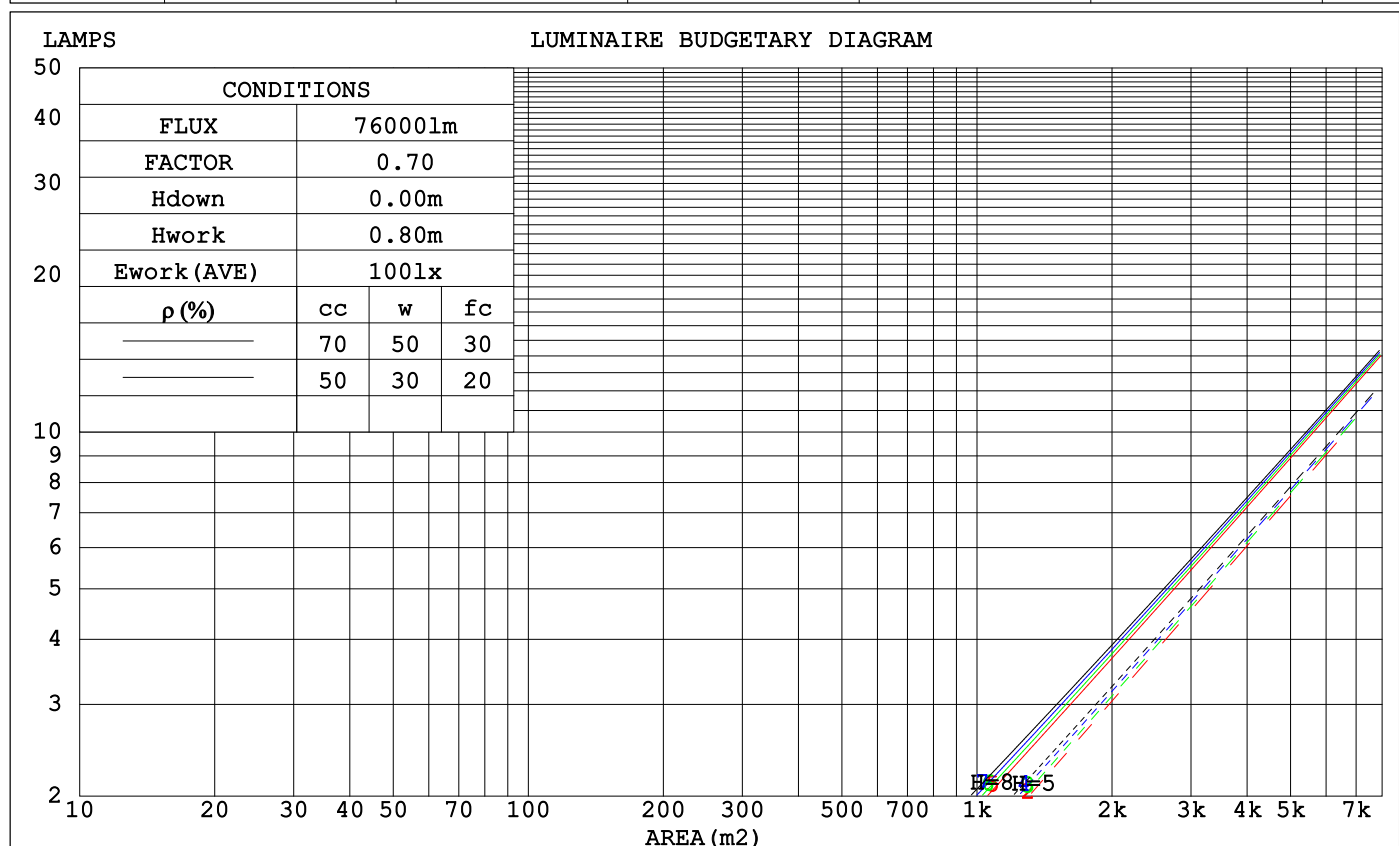
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 15 November 2022

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=0.4548]  
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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.85	.82	.86	.84	.81	.80
4.0	.89	.83	.79	.88	.82	.78	.86	.81	.77	.84	.80	.77	.82	.78	.76	.74
5.0	.83	.77	.73	.82	.77	.73	.81	.76	.72	.79	.75	.71	.77	.74	.71	.69
6.0	.78	.72	.68	.78	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65
7.0	.74	.68	.64	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.62	.61
8.0	.70	.64	.60	.69	.64	.60	.68	.63	.59	.67	.63	.59	.66	.62	.59	.58
9.0	.66	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
10.0	.63	.57	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.52



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:LYJ  
 Test Date:15 November 2022

$\gamma$  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=0.4548]  
 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	.187	.107	.034	.181	.103	.033	.168	.096	.031	.156	.090	.029	.146	.084	.027		
2.0	.179	.098	.030	.173	.095	.029	.162	.090	.028	.152	.086	.027	.143	.081	.026		
3.0	.169	.090	.027	.164	.088	.026	.155	.084	.026	.147	.080	.025	.139	.077	.024		
4.0	.160	.083	.024	.155	.081	.024	.148	.078	.023	.140	.075	.023	.133	.073	.022		
5.0	.151	.077	.022	.147	.076	.022	.141	.073	.022	.134	.071	.021	.128	.068	.021		
6.0	.143	.072	.021	.140	.071	.020	.134	.069	.020	.128	.067	.020	.123	.065	.019		
7.0	.136	.067	.019	.133	.066	.019	.128	.065	.019	.123	.063	.018	.118	.061	.018		
8.0	.130	.063	.018	.127	.063	.018	.122	.061	.017	.118	.060	.017	.114	.058	.017		
9.0	.124	.060	.017	.121	.059	.017	.117	.058	.016	.113	.057	.016	.109	.056	.016		
10.0	.118	.057	.016	.116	.056	.016	.112	.055	.015	.109	.054	.015	.105	.053	.015		

$\rho_{cc}$	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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.157	.132	.112	.135	.114	.097	.092	.079	.067	.053	.046	.039	.017	.015	.013		
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.072	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.126	.087	.059	.108	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007		
6.0	.118	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006		
7.0	.112	.071	.042	.096	.061	.036	.066	.043	.026	.039	.025	.015	.012	.008	.005		
8.0	.106	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.101	.059	.031	.087	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004		
10.0	.096	.055	.027	.083	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:LYJ  
 Test Date:15 November 2022

$\gamma$  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=0.4548]  
 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	21.3	22.4	21.6	22.7	23.0	21.1	22.2	21.5	22.5	22.8
3H	22.5	23.4	22.8	23.7	24.1	22.3	23.3	22.7	23.6	24.0
4H	22.8	23.7	23.2	24.0	24.4	22.7	23.5	23.1	23.9	24.3
6H	23.0	23.8	23.4	24.2	24.6	22.8	23.6	23.2	24.0	24.4
8H	23.0	23.7	23.4	24.1	24.5	22.8	23.6	23.3	24.0	24.4
12H	23.0	23.7	23.4	24.1	24.5	22.8	23.5	23.2	23.9	24.3
4H 2H	21.8	22.7	22.2	23.0	23.4	21.6	22.5	22.0	22.9	23.2
3H	23.2	23.9	23.6	24.3	24.7	23.0	23.7	23.4	24.1	24.5
4H	23.6	24.2	24.0	24.7	25.1	23.4	24.1	23.9	24.5	24.9
6H	23.8	24.4	24.3	24.8	25.3	23.6	24.2	24.1	24.6	25.1
8H	23.8	24.4	24.3	24.8	25.3	23.7	24.2	24.1	24.6	25.1
12H	23.8	24.3	24.3	24.8	25.2	23.6	24.1	24.1	24.6	25.0
8H 4H	23.7	24.2	24.2	24.7	25.1	23.5	24.0	24.0	24.5	25.0
6H	24.0	24.4	24.5	24.9	25.4	23.8	24.2	24.3	24.7	25.2
8H	24.0	24.4	24.6	24.9	25.4	23.9	24.2	24.4	24.7	25.2
12H	24.1	24.4	24.6	24.9	25.4	23.9	24.2	24.4	24.7	25.3
12H 4H	23.7	24.1	24.2	24.6	25.1	23.5	23.9	24.0	24.4	24.9
6H	24.0	24.3	24.5	24.8	25.4	23.8	24.2	24.3	24.6	25.2
8H	24.0	24.4	24.6	24.9	25.4	23.9	24.2	24.4	24.7	25.3
CIE190: 2010										

CIE190: 2010  
Area: 0.16269 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 15 November 2022

$\gamma$  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=0.4548]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

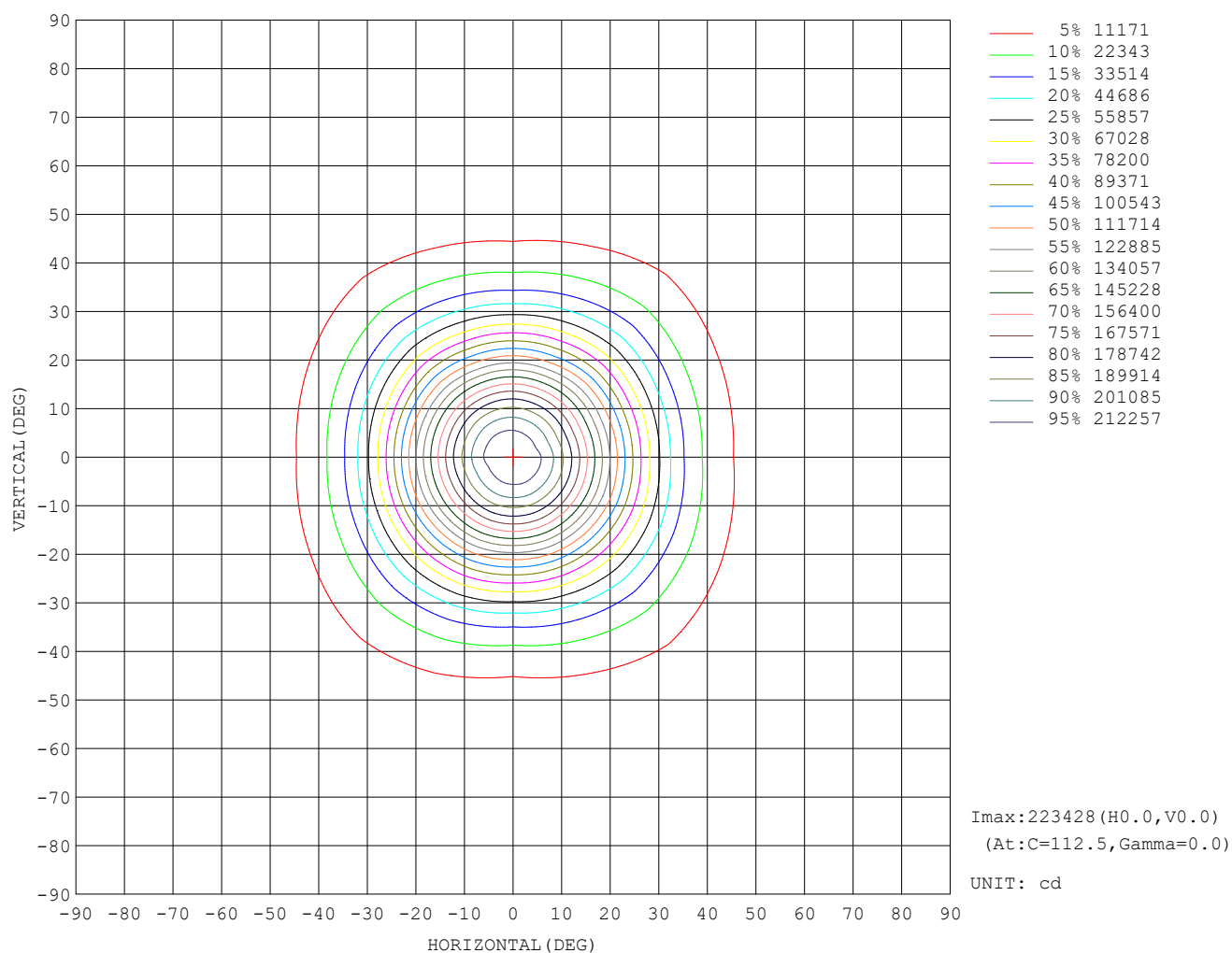
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	83	76	72	82	76	71	82	75	71	67
0.80	91	84	80	90	84	80	89	83	79	75
1.00	96	90	85	95	89	85	93	89	85	80
1.25	100	95	91	99	94	90	97	93	89	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	98	105	101	98	102	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	106	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

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 C Interval: 22.5DEG  
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 Temperature: 25.3°C  
 Operators: LYJ  
 Test Date: 15 November 2022

$\gamma$  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=0.4548]  
 Remarks:

# ISOCANDELA DIAGRAM

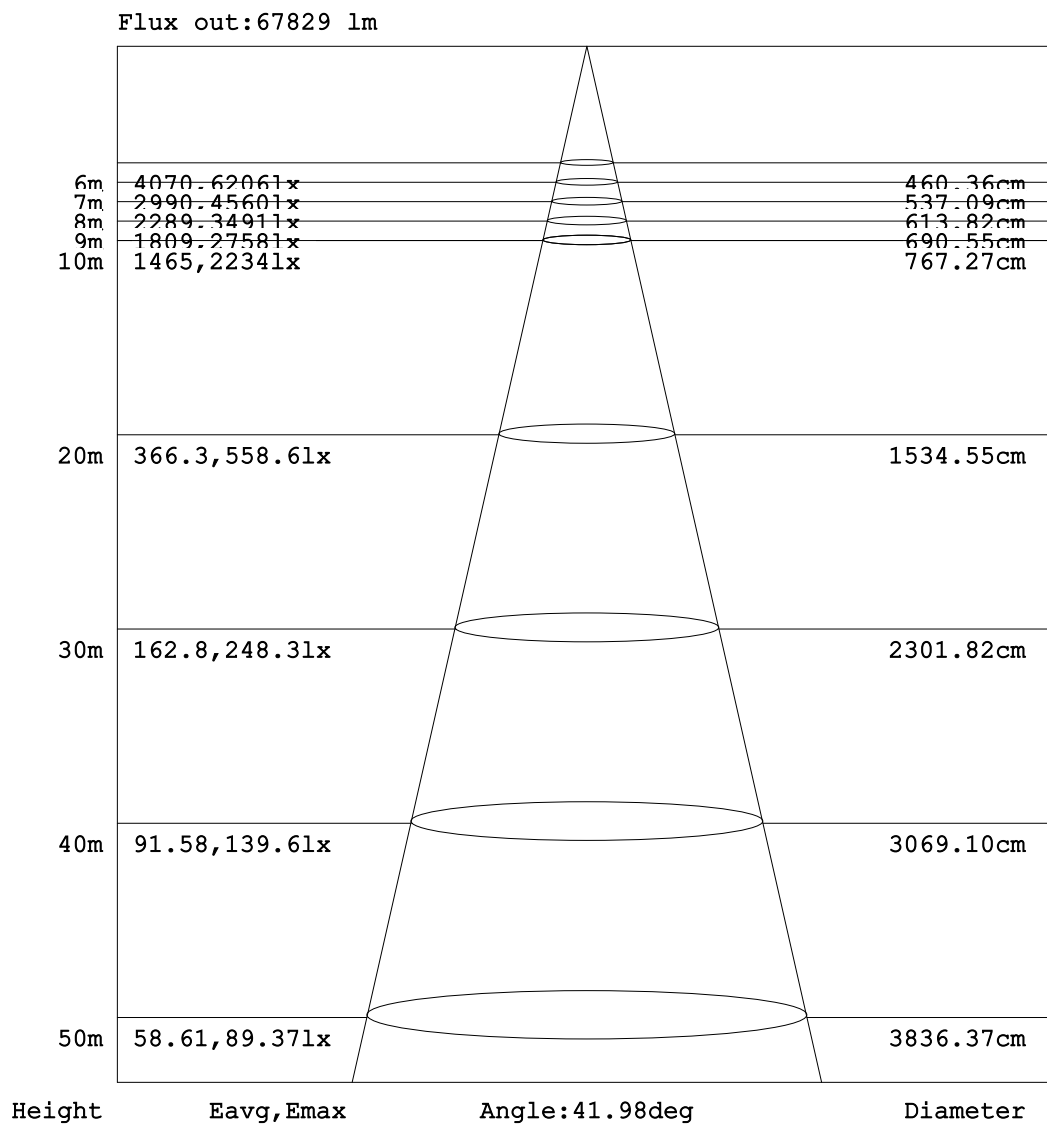


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:15 November 2022

$\gamma$  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=0.4548]  
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: 22.5DEG

Test Speed: HIGH

Temperature: 25.3°C

Operators: LYJ

Test Date: 15 November 2022

γ Range: 0 - 90DEG

γ Interval: 0.5DEG

Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465

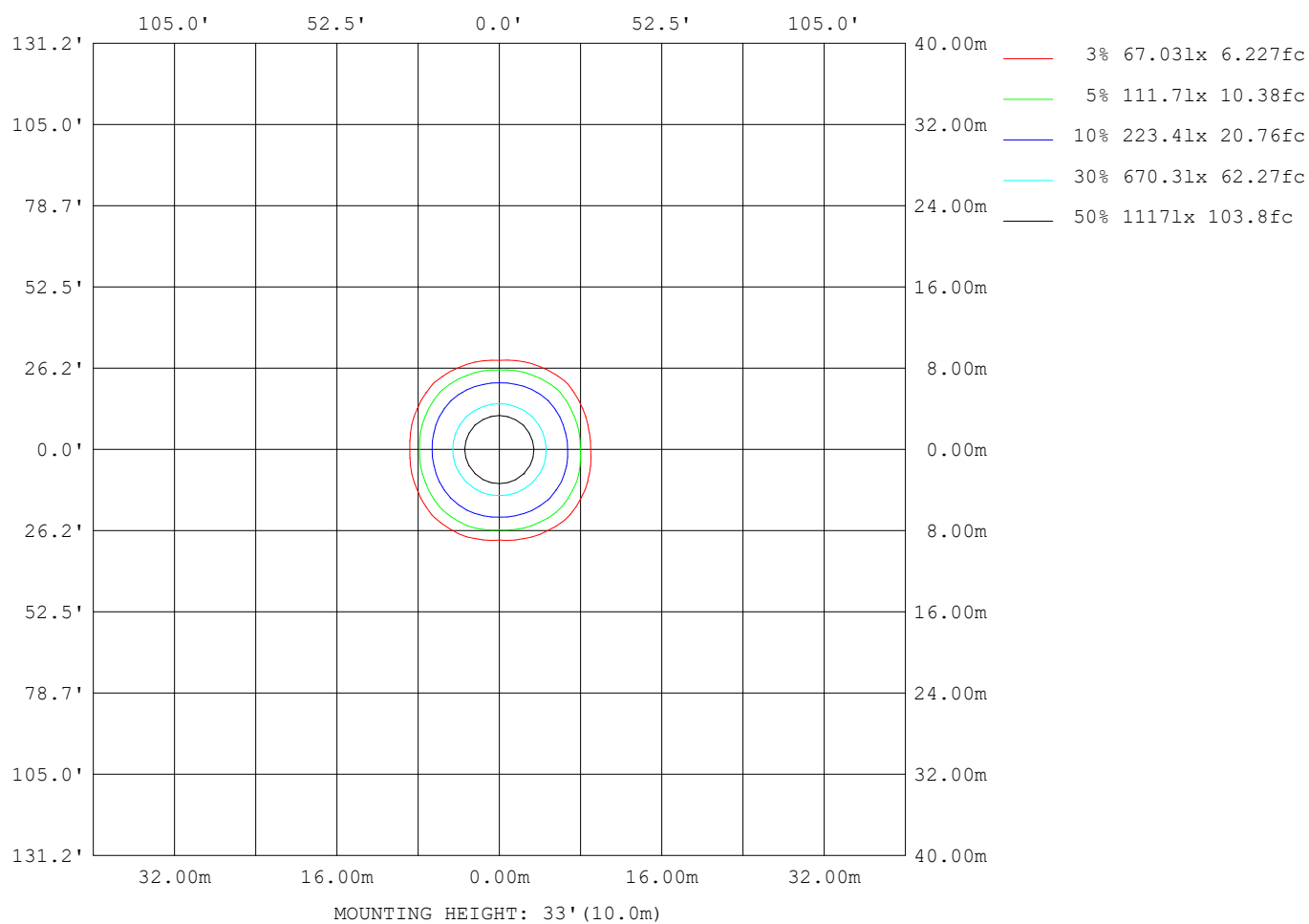
Humidity: 65.0%

Test Distance: 26.000m [K=0.4548]

Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

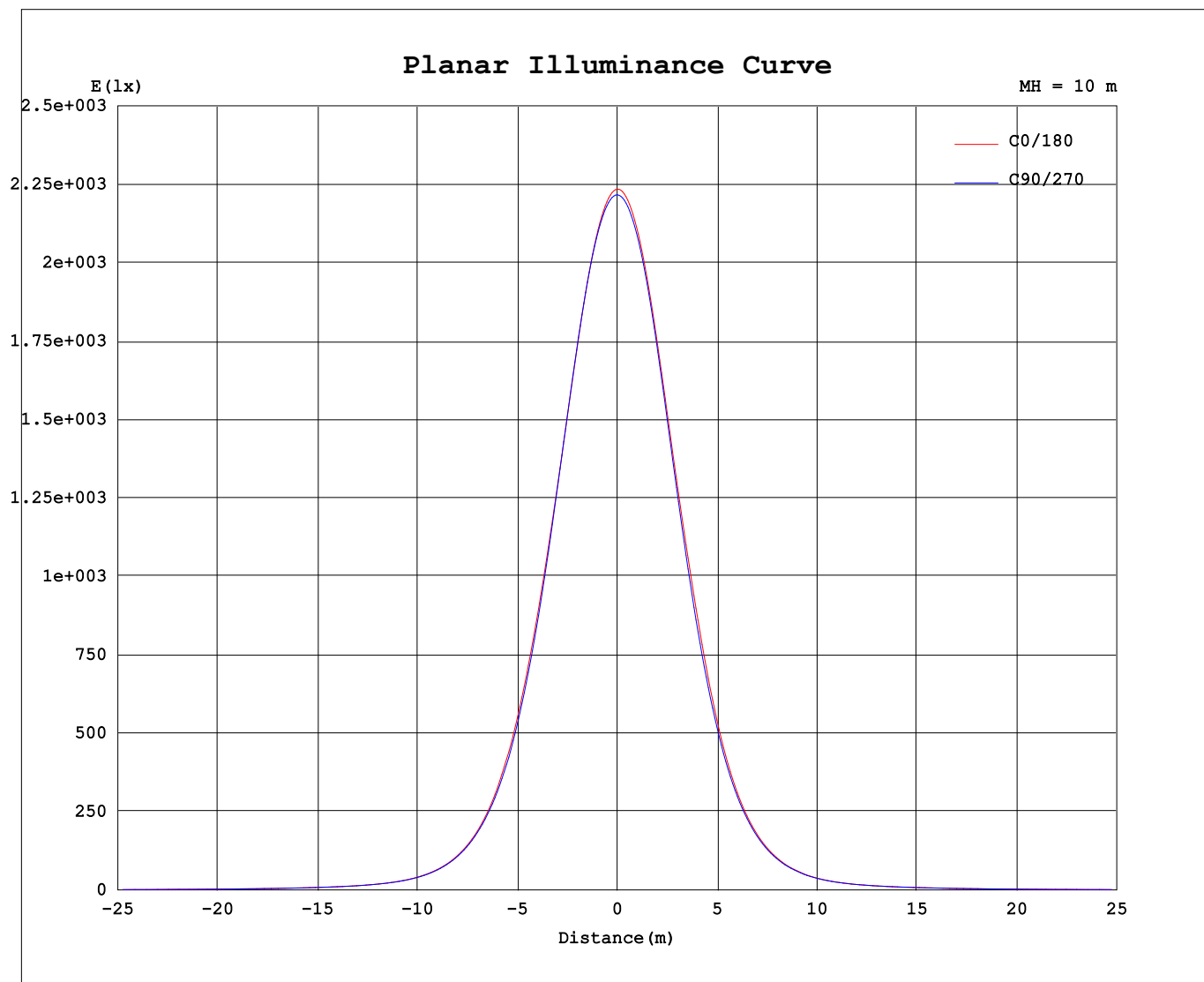
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 15 November 2022

$\gamma$  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=0.4548]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 15 November 2022

$\gamma$  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=0.4548]  
Remarks: