

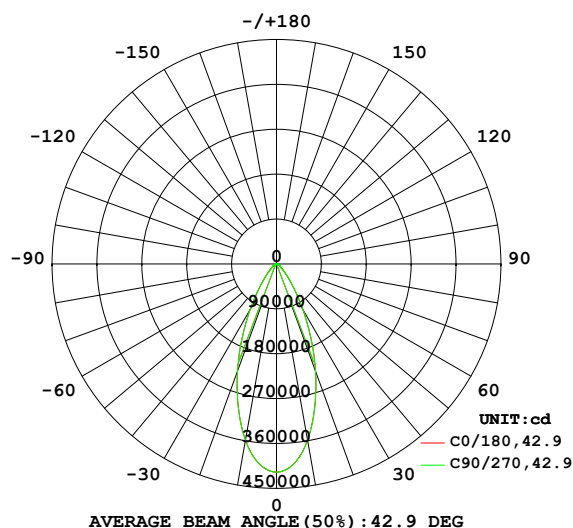
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

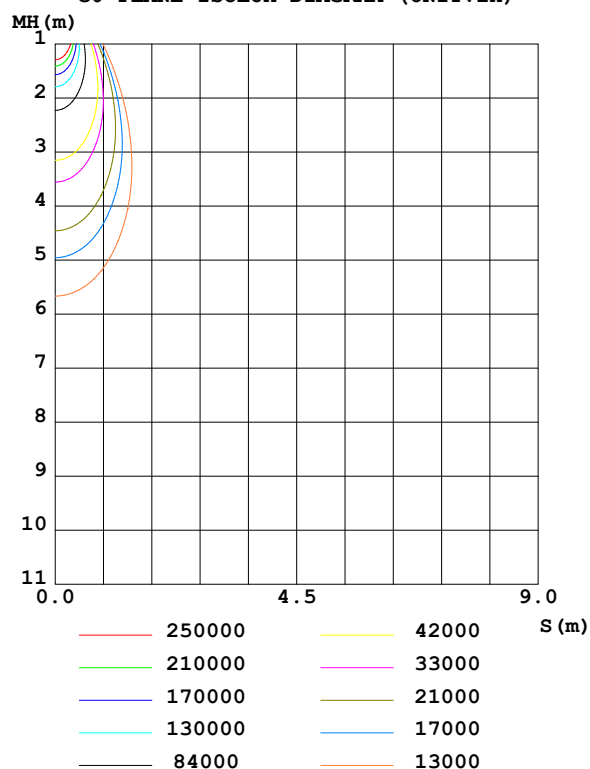
Test:U:230.0V I:7.842A P:1800.0W PF:0.998 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:268749x1 lm		
NAME: SP04-1K8-5770-F04004Z	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 149.30 lm/W			
MODEL	5050	I <sub>max</sub> (cd)	417509	S/MH (C0/180)	0.68
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.68
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	268749	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	268749	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	0.70

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	3587	3587	3587	3587	3587	3587	3587	3587	0- 10	36985	36985	13.8,13.8
20	2286	2286	2286	2286	2286	2286	2286	2286	10- 20	81741	118725	44.2,44.2
30	1064	1064	1064	1064	1064	1064	1064	1064	20- 30	74257	192983	71.8,71.8
40	371.4	371.4	371.4	371.4	371.4	371.4	371.4	371.4	30- 40	40892	233874	87,87
50	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	40- 50	17515	251389	93.5,93.5
60	72.91	72.91	72.91	72.91	72.91	72.91	72.91	72.91	50- 60	8849	260238	96.8,96.8
70	39.03	39.03	39.03	39.03	39.03	39.03	39.03	39.03	60- 70	5465	265703	98.9,98.9
80	11.77	11.77	11.77	11.77	11.77	11.77	11.77	11.77	70- 80	2594	268297	99.8,99.8
90	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	0.0555	80- 90	452.2	268749	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): 2.4445e+005 lm

%lum = 91.0%

%lamp = 91.0%

Conical surface Flux(120deg): 2.6024e+005 lm

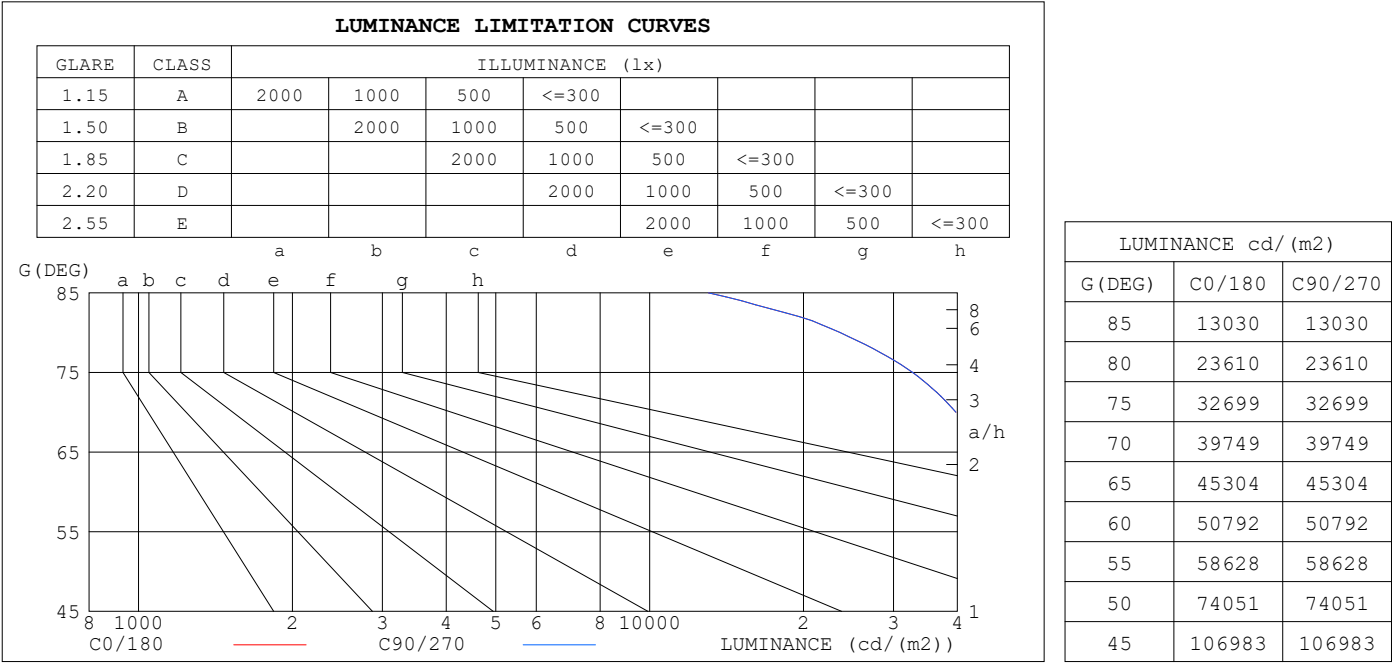
%lum = 96.8%

%lamp = 96.8%

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



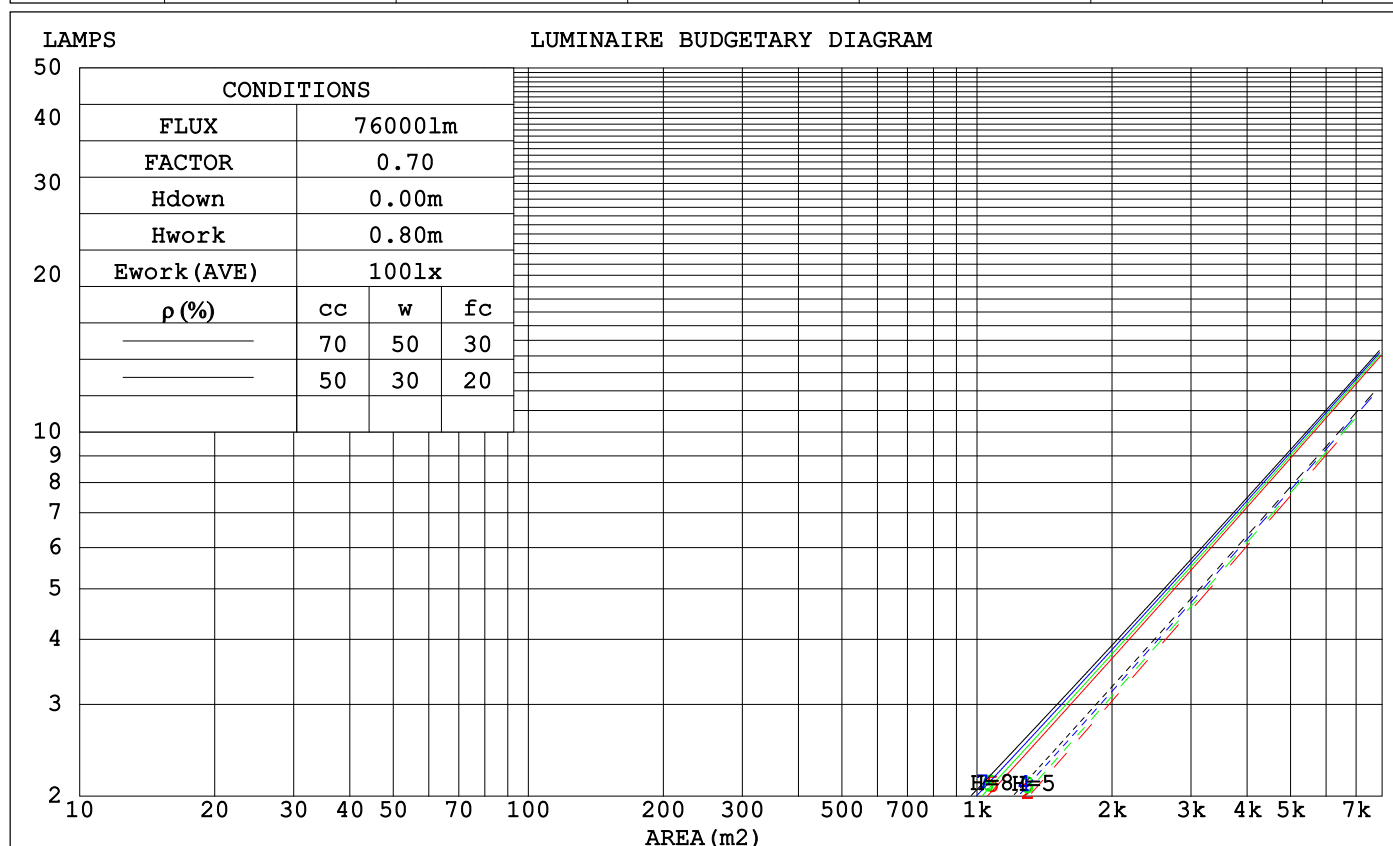
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Temperature:25.3°C  
Operators:LYJ  
Test Date:15 November 2022

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	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.95	1.01	.97	.94	.97	.94	.92	.94	.92	.90	.92	.90	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.86	.83	.87	.84	.81	.80
4.0	.89	.83	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.79	.76	.74
5.0	.84	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.72	.78	.74	.71	.70
6.0	.79	.73	.68	.78	.72	.68	.76	.71	.68	.75	.71	.67	.74	.70	.67	.65
7.0	.74	.68	.64	.74	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.61
8.0	.70	.64	.60	.70	.64	.60	.69	.63	.60	.68	.63	.60	.67	.62	.59	.58
9.0	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.63	.59	.56	.55
10.0	.63	.58	.54	.63	.57	.54	.62	.57	.54	.61	.57	.53	.61	.56	.53	.52



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
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$\gamma$  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	.186	.106	.034	.179	.102	.032	.167	.096	.031	.155	.089	.029	.144	.084	.027	
2.0	.177	.097	.030	.172	.095	.029	.161	.089	.028	.151	.085	.027	.142	.080	.025	
3.0	.168	.089	.027	.163	.087	.026	.154	.083	.025	.145	.080	.024	.137	.076	.024	
4.0	.158	.082	.024	.154	.081	.024	.146	.078	.023	.139	.075	.023	.132	.072	.022	
5.0	.150	.076	.022	.146	.075	.022	.139	.073	.021	.133	.070	.021	.127	.068	.020	
6.0	.142	.071	.020	.139	.070	.020	.133	.068	.020	.127	.066	.019	.122	.064	.019	
7.0	.135	.067	.019	.132	.066	.019	.127	.064	.018	.122	.063	.018	.117	.061	.018	
8.0	.129	.063	.018	.126	.062	.018	.121	.061	.017	.117	.059	.017	.113	.058	.017	
9.0	.123	.059	.017	.121	.059	.016	.116	.058	.016	.112	.056	.016	.109	.055	.016	
10.0	.117	.056	.016	.115	.056	.016	.112	.055	.015	.108	.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	.134	.114	.097	.092	.079	.067	.053	.046	.040	.017	.015	.013		
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.134	.099	.072	.115	.086	.062	.079	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.126	.087	.059	.108	.076	.051	.074	.053	.036	.043	.031	.022	.014	.010	.007		
6.0	.118	.078	.049	.101	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006		
7.0	.111	.071	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005		
8.0	.105	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004		
10.0	.095	.055	.027	.082	.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	20.9	22.0	21.3	22.3	22.6	20.9	22.0	21.3	22.3	22.6
3H	22.2	23.2	22.6	23.5	23.9	22.2	23.2	22.6	23.5	23.9
4H	22.6	23.5	23.0	23.8	24.2	22.6	23.5	23.0	23.8	24.2
6H	22.8	23.6	23.2	24.0	24.4	22.8	23.6	23.2	24.0	24.4
8H	22.8	23.6	23.3	24.0	24.4	22.8	23.6	23.3	24.0	24.4
12H	22.8	23.5	23.2	23.9	24.3	22.8	23.5	23.2	23.9	24.3
4H 2H	21.3	22.2	21.7	22.6	22.9	21.3	22.2	21.7	22.6	22.9
3H	22.8	23.5	23.2	23.9	24.3	22.8	23.5	23.2	23.9	24.3
4H	23.3	23.9	23.7	24.3	24.8	23.3	23.9	23.7	24.3	24.8
6H	23.5	24.1	24.0	24.5	25.0	23.5	24.1	24.0	24.5	25.0
8H	23.6	24.1	24.0	24.5	25.0	23.6	24.1	24.0	24.5	25.0
12H	23.6	24.0	24.0	24.5	25.0	23.6	24.0	24.0	24.5	25.0
8H 4H	23.4	23.9	23.9	24.3	24.8	23.4	23.9	23.9	24.3	24.8
6H	23.7	24.1	24.2	24.6	25.1	23.7	24.1	24.2	24.6	25.1
8H	23.8	24.1	24.3	24.6	25.1	23.8	24.1	24.3	24.6	25.1
12H	23.8	24.1	24.3	24.6	25.2	23.8	24.1	24.3	24.6	25.2
12H 4H	23.3	23.8	23.8	24.3	24.8	23.3	23.8	23.8	24.3	24.8
6H	23.7	24.0	24.2	24.5	25.1	23.7	24.0	24.2	24.5	25.1
8H	23.8	24.1	24.3	24.6	25.2	23.8	24.1	24.3	24.6	25.2
CIE190: 2010										

CIE190: 2010  
Area: 0.2871 m2

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Test Date:15 November 2022

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 $\gamma$  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

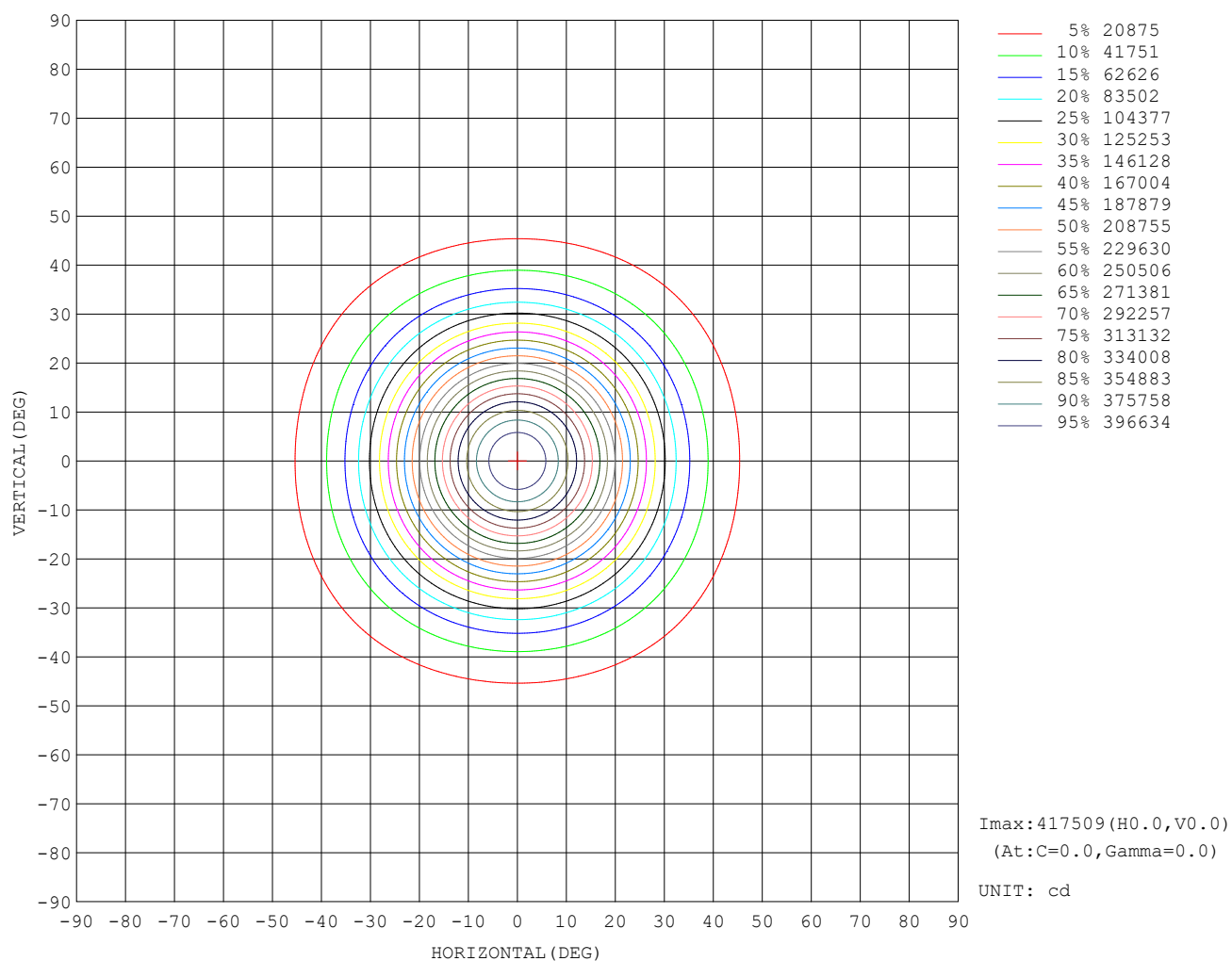
## UTILIZATION FACTORS TABLE

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	83	76	72	82	76	72	68
0.80	91	85	81	91	84	80	89	84	80	76
1.00	96	90	86	95	90	86	94	90	85	81
1.25	101	95	91	100	94	91	98	93	90	85
1.50	104	98	95	102	98	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	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	106	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

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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:

## ISOCANDELA DIAGRAM

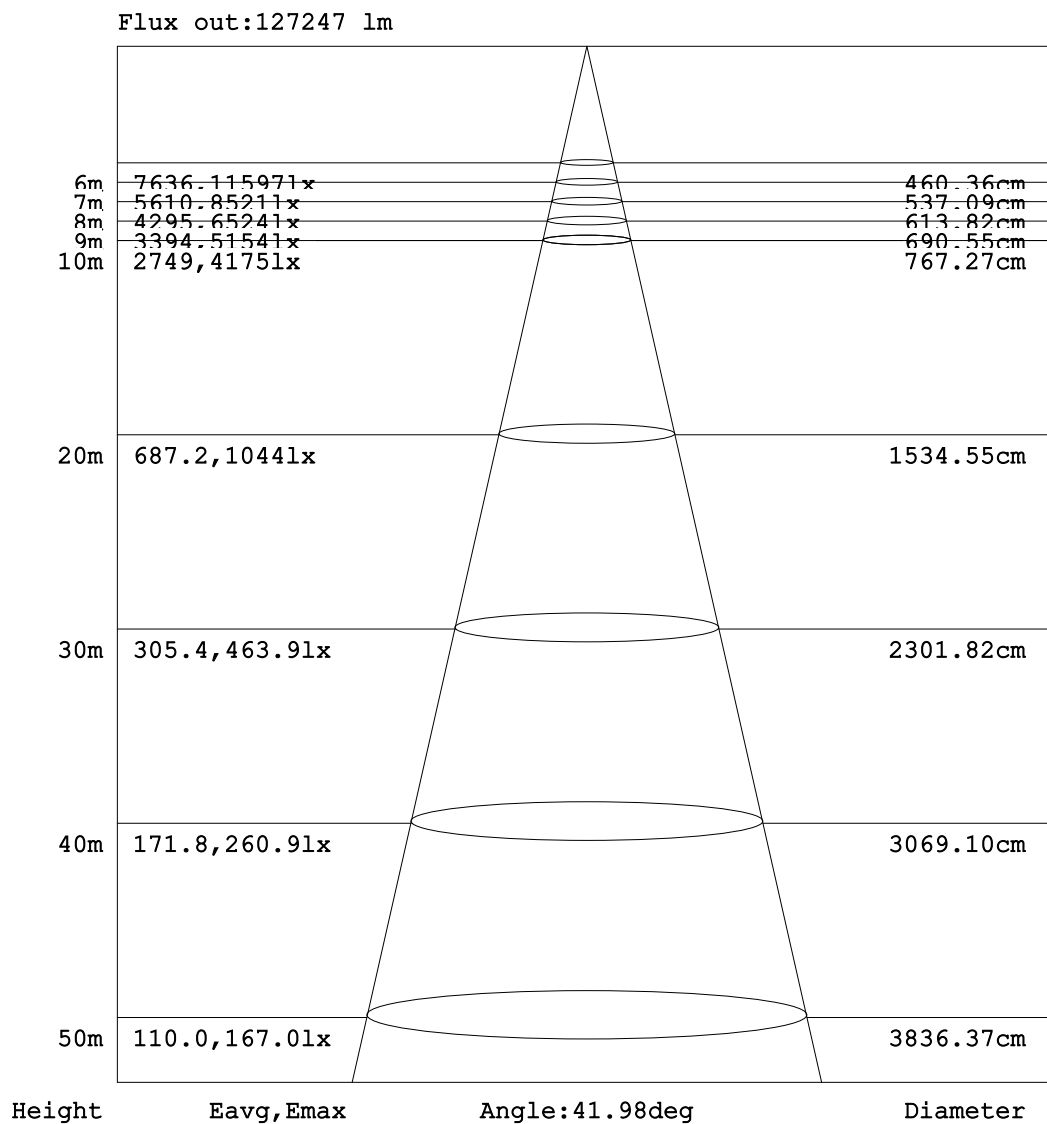


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Humidity:65.0%  
Test Distance:26.000m [K=0.4548]  
Remarks:



## 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

$\gamma$  Range: 0 - 90DEG

$\gamma$  Interval: 0.5DEG

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

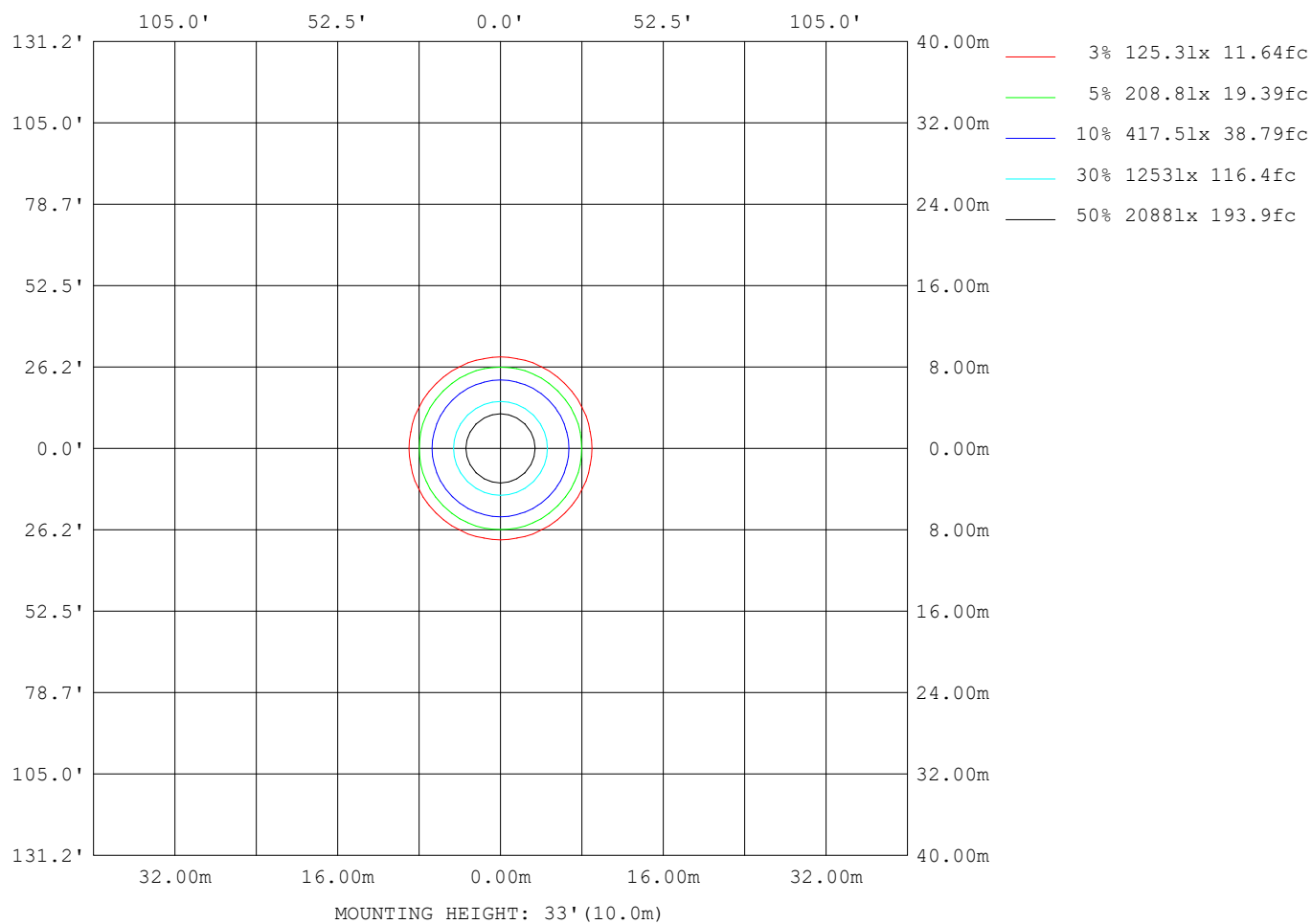
Humidity: 65.0%

Test Distance: 26.000m [K=0.4548]

Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

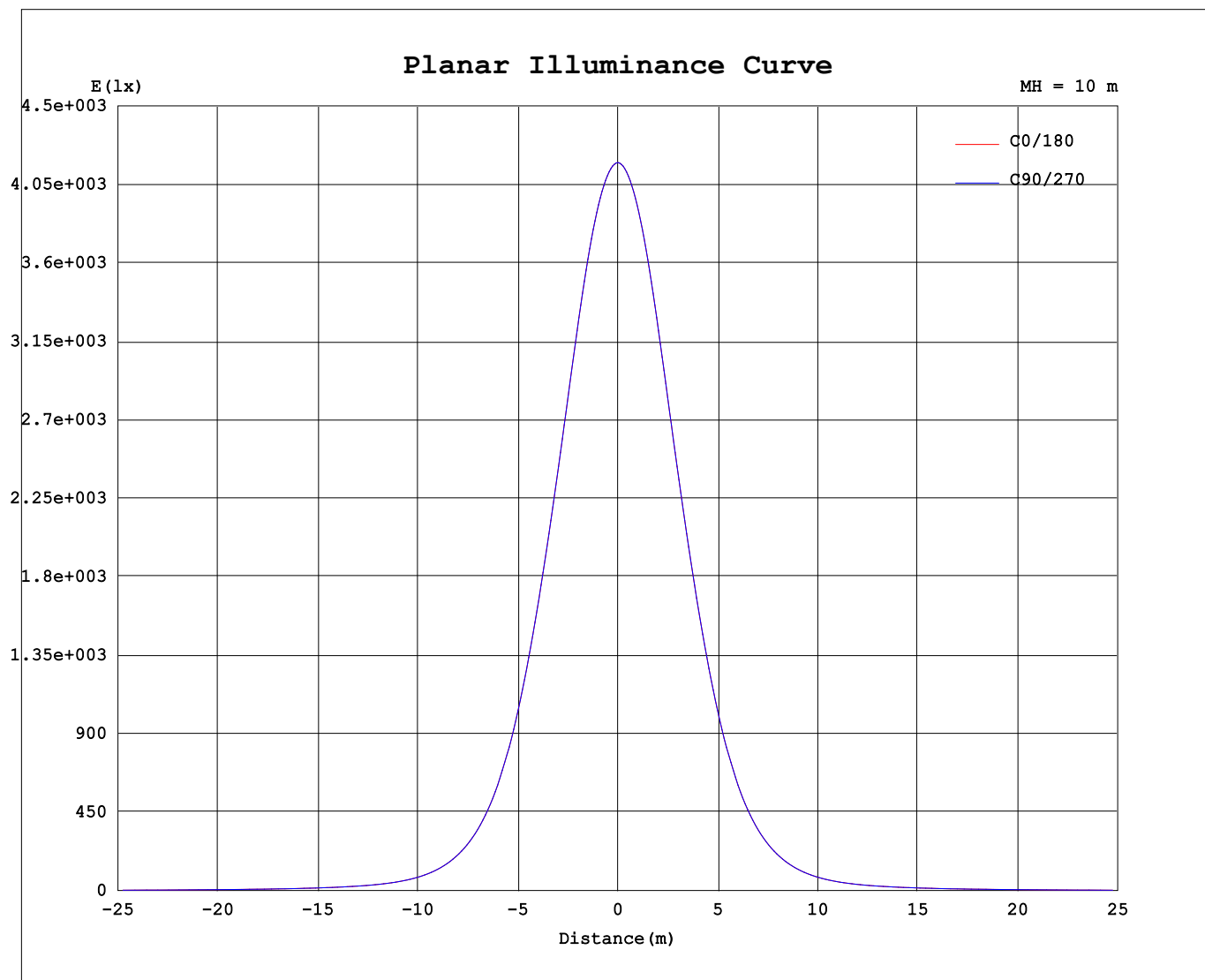
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
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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  
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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: