

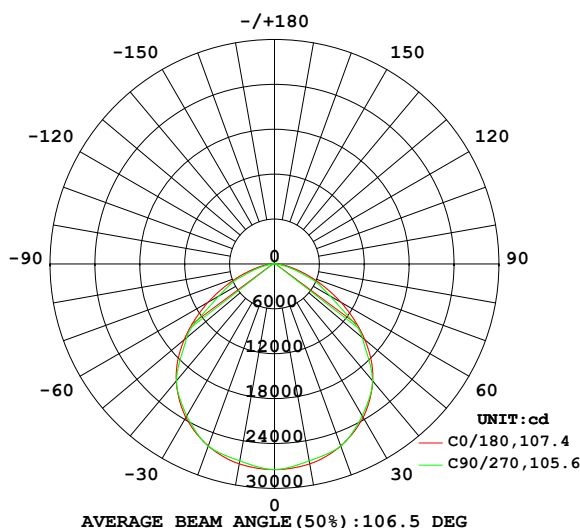
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

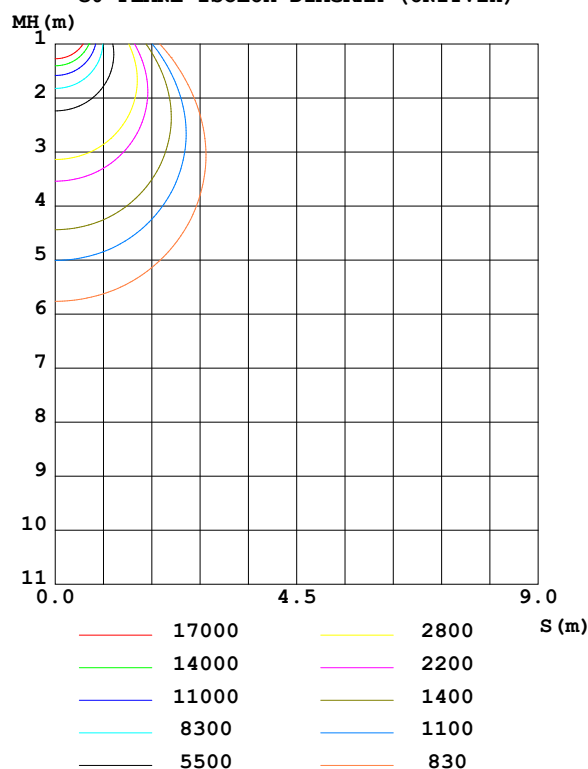
Test:U:229.9V I:1.761A P:399.6W PF:0.987 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:71185.9x1 lm		
NAME: LHB09-400H-5070-L00404	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 178.13 lm/W			
MODEL	/	Imax (cd)	27488	S/MH (C0/180)	1.28
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	71186	$\eta$ UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	71185.9	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	/	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
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	2712	2681	2673	2681	2712	2681	2673	2681	0- 10	2591	2591	3.64,3.64
20	2588	2568	2590	2568	2588	2568	2590	2568	10- 20	7456	10047	14.1,14.1
30	2369	2375	2344	2375	2369	2375	2344	2375	20- 30	11434	21481	30.2,30.2
40	2043	2011	2037	2011	2043	2011	2037	2011	30- 40	13788	35269	49.5,49.5
50	1576	1549	1533	1549	1576	1549	1533	1549	40- 50	13873	49143	69,69
60	1027	1019	859.7	1019	1027	1019	859.7	1019	50- 60	11241	60383	84.8,84.8
70	514.9	464.7	413.4	464.7	514.9	464.7	413.4	464.7	60- 70	7011	67394	94.7,94.7
80	177.4	151.6	118.9	151.6	177.4	151.6	118.9	151.6	70- 80	3136	70530	99.1,99.1
90	1.465	1.866	4.243	1.866	1.465	1.866	4.243	1.866	80- 90	655.7	71186	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 42380 lm

%lum = 59.5%

%lamp = 59.5%

Conical surface Flux(120deg): 60383 lm

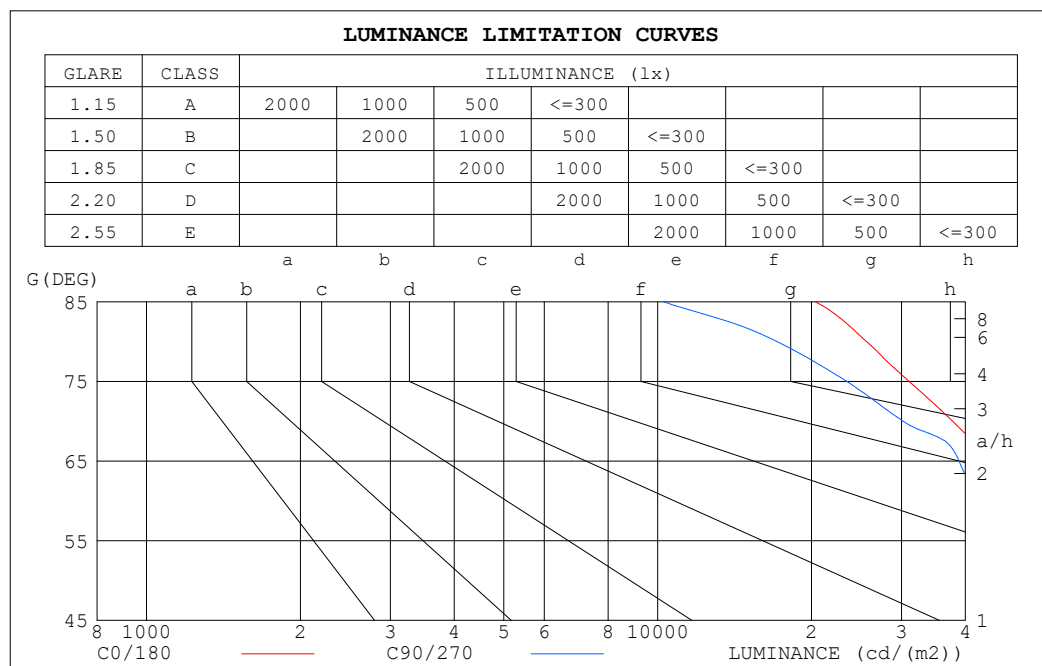
%lum = 84.8%

%lamp = 84.8%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:26.000m [K=0.4548]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20334	10271
80	25634	17124
75	31051	23456
70	37770	30220
65	44777	38888
60	51507	42987
55	56885	51547
50	61500	59643
45	64904	62726

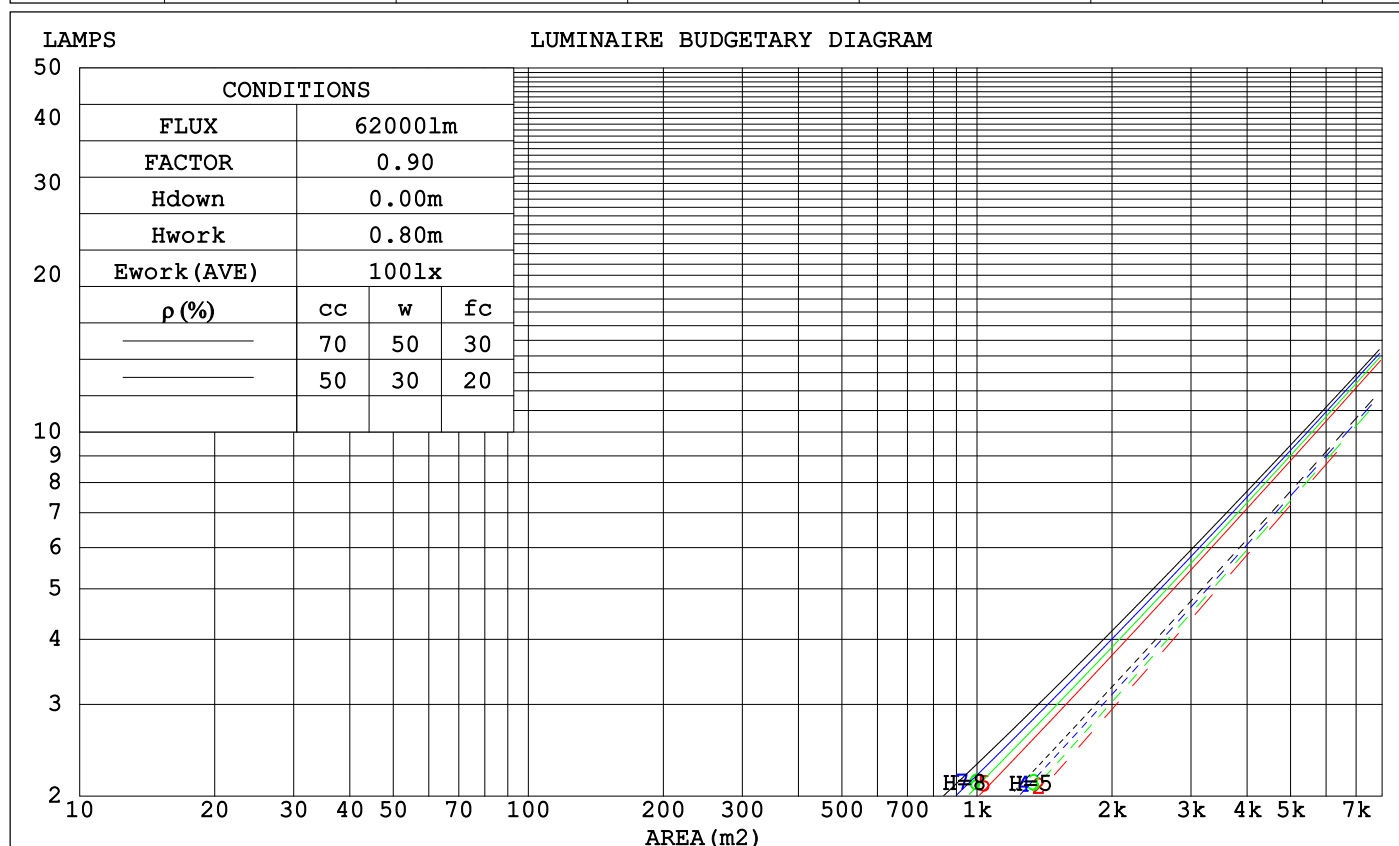
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4548]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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						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	1.05	1.02	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.81	.91	.85	.80	.87	.83	.78	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.74	.68	.81	.73	.68	.78	.72	.67	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.65	.58	.72	.64	.58	.69	.63	.57	.67	.61	.56	.65	.60	.56	.54
5.0	.66	.57	.51	.64	.56	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.32
9.0	.45	.37	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.38	.32	.28	.27



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:LYJ  
 Test Date:2022-08-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
 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	.279	.159	.050	.272	.155	.049	.259	.149	.048	.247	.143	.046	.236	.137	.044		
2.0	.269	.147	.045	.262	.145	.045	.251	.140	.043	.240	.135	.042	.231	.130	.041		
3.0	.252	.134	.040	.247	.132	.040	.237	.128	.039	.227	.125	.038	.219	.121	.037		
4.0	.235	.122	.036	.231	.121	.036	.222	.118	.035	.213	.115	.035	.206	.112	.034		
5.0	.219	.112	.032	.215	.111	.032	.207	.108	.032	.200	.105	.031	.193	.103	.031		
6.0	.205	.103	.029	.201	.102	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028		
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026		
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024		
9.0	.169	.082	.023	.167	.081	.023	.161	.080	.023	.157	.079	.022	.152	.077	.022		
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.072	.021		

$\rho_{cc}$	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	.178	.156	.137	.152	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009		
4.0	.153	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007		
5.0	.146	.090	.049	.126	.078	.042	.086	.054	.030	.050	.032	.018	.016	.010	.006		
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005		
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004		
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003		
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:LYJ  
 Test Date:2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
 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	26.0	27.6	26.4	27.9	28.2	25.2	26.8	25.6	27.1	27.4
3H	27.3	28.7	27.7	29.0	29.4	26.5	27.9	26.8	28.2	28.6
4H	27.7	29.0	28.1	29.4	29.8	26.7	28.1	27.1	28.4	28.8
6H	28.0	29.2	28.4	29.6	30.0	26.9	28.1	27.3	28.5	28.9
8H	28.1	29.2	28.5	29.6	30.0	26.9	28.1	27.3	28.5	28.9
12H	28.1	29.2	28.5	29.6	30.0	26.9	28.0	27.3	28.4	28.8
4H 2H	26.4	27.7	26.8	28.1	28.5	25.7	27.0	26.1	27.4	27.8
3H	27.9	29.0	28.3	29.4	29.8	27.2	28.3	27.6	28.7	29.1
4H	28.4	29.4	28.8	29.8	30.2	27.5	28.5	28.0	28.9	29.4
6H	28.8	29.6	29.2	30.1	30.5	27.7	28.6	28.2	29.0	29.5
8H	28.9	29.7	29.4	30.1	30.6	27.8	28.6	28.2	29.0	29.5
12H	29.0	29.7	29.4	30.2	30.6	27.8	28.5	28.3	29.0	29.5
8H 4H	28.5	29.3	29.0	29.8	30.2	27.7	28.5	28.2	29.0	29.4
6H	29.0	29.6	29.5	30.1	30.6	28.0	28.7	28.5	29.1	29.6
8H	29.1	29.7	29.7	30.2	30.7	28.1	28.7	28.6	29.2	29.6
12H	29.3	29.8	29.8	30.3	30.9	28.1	28.6	28.6	29.1	29.7
12H 4H	28.5	29.2	29.0	29.7	30.2	27.7	28.4	28.2	28.9	29.4
6H	29.0	29.6	29.5	30.0	30.6	28.0	28.6	28.5	29.1	29.6
8H	29.2	29.7	29.7	30.2	30.8	28.1	28.6	28.6	29.1	29.7
CIE190: 2010										

CIE190: 2010  
Area: 0.39968 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:LYJ  
Test Date:2022-08-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:26.000m [K=0.4548]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

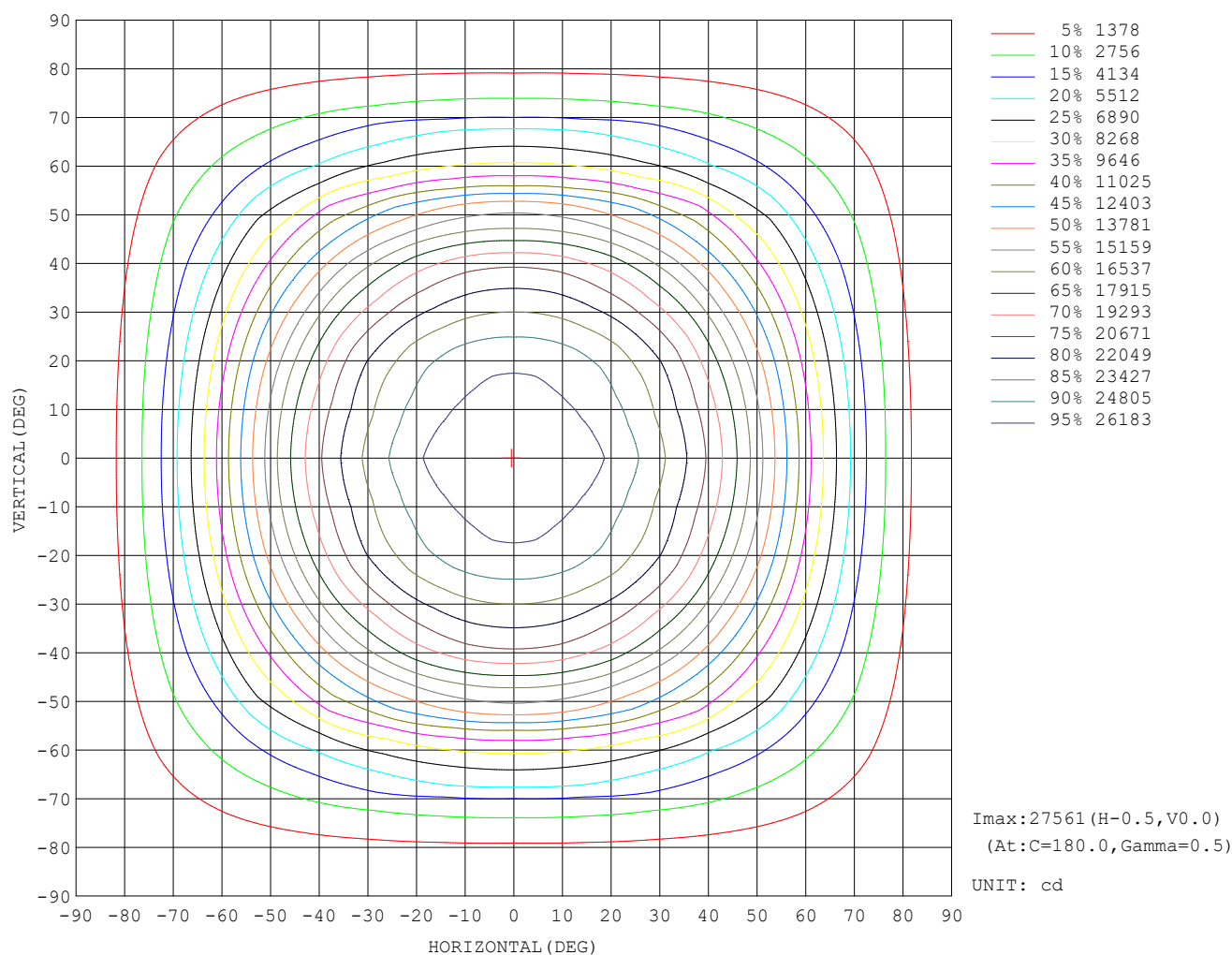
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	69	62	78	68	61	76	69	61	54
1.25	86	76	70	85	76	69	82	74	68	62
1.50	91	82	75	89	81	75	86	79	74	67
2.00	97	90	84	96	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	86	78
3.00	104	98	93	102	96	92	98	93	90	81
4.00	108	102	98	105	101	97	101	97	94	86
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: LYJ  
 Test Date: 2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4548]  
 Remarks:

## ISOCANDELA DIAGRAM

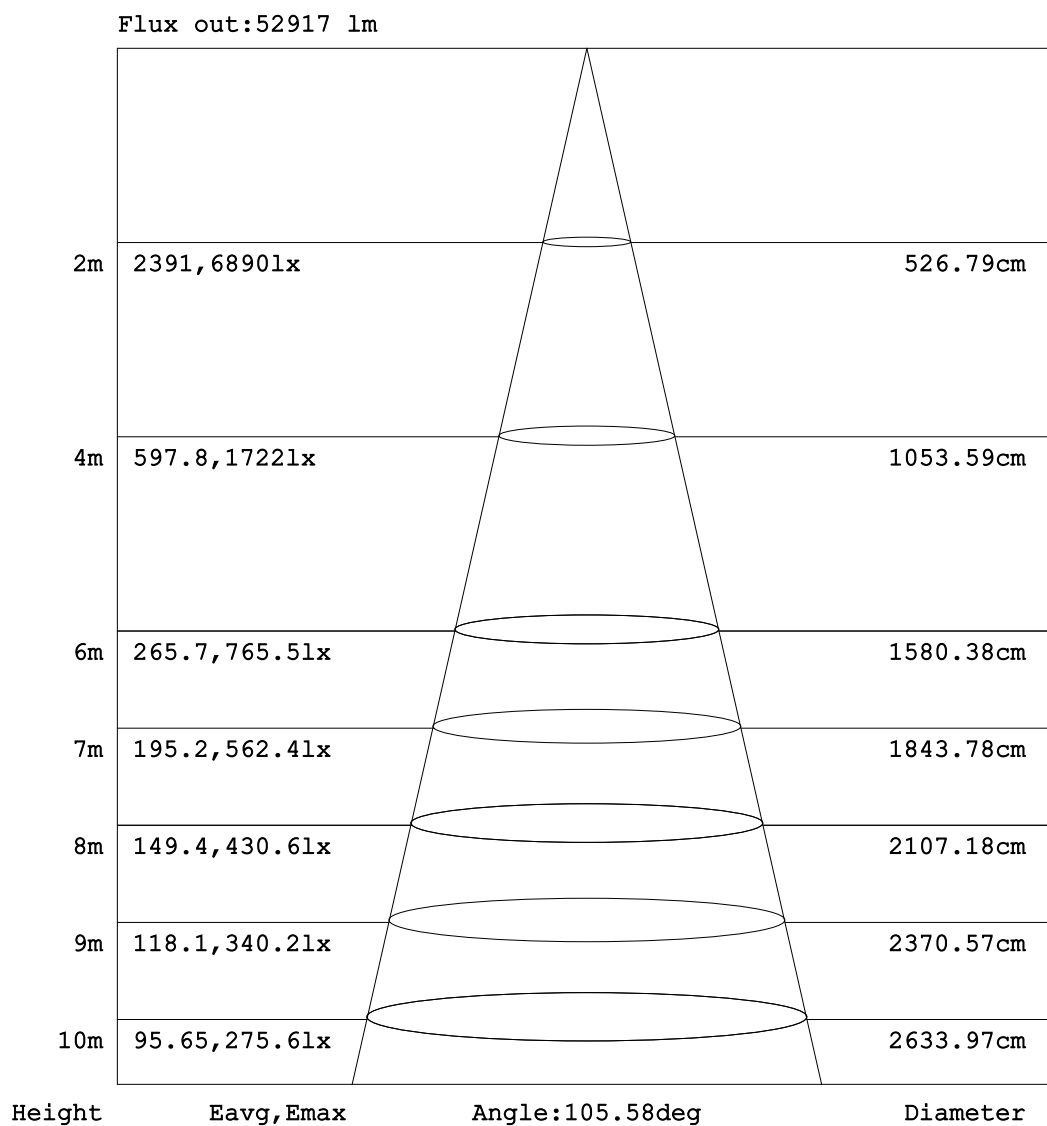


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:26.000m [K=0.4548]  
Remarks:



## AAI Figure



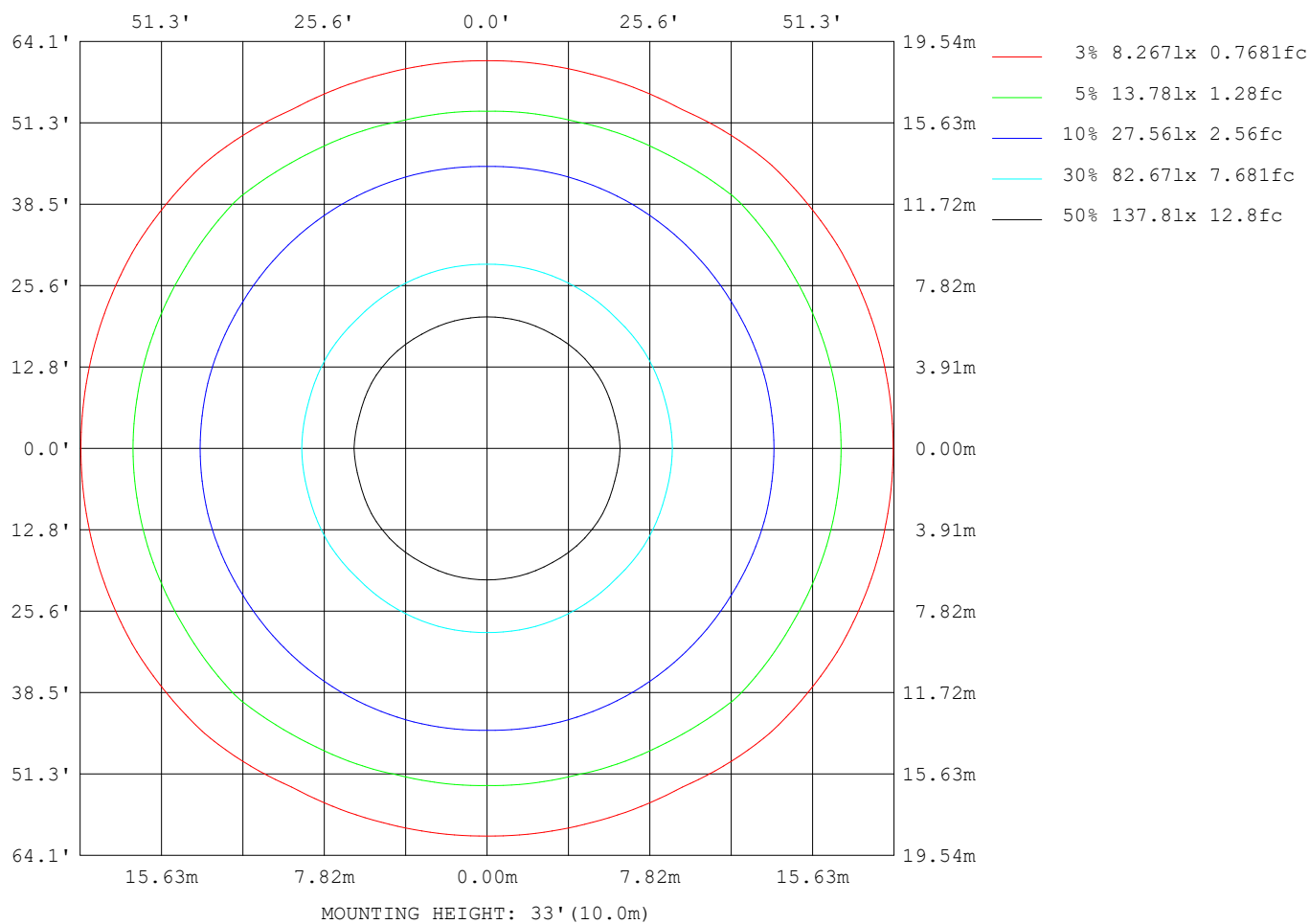
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4548]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

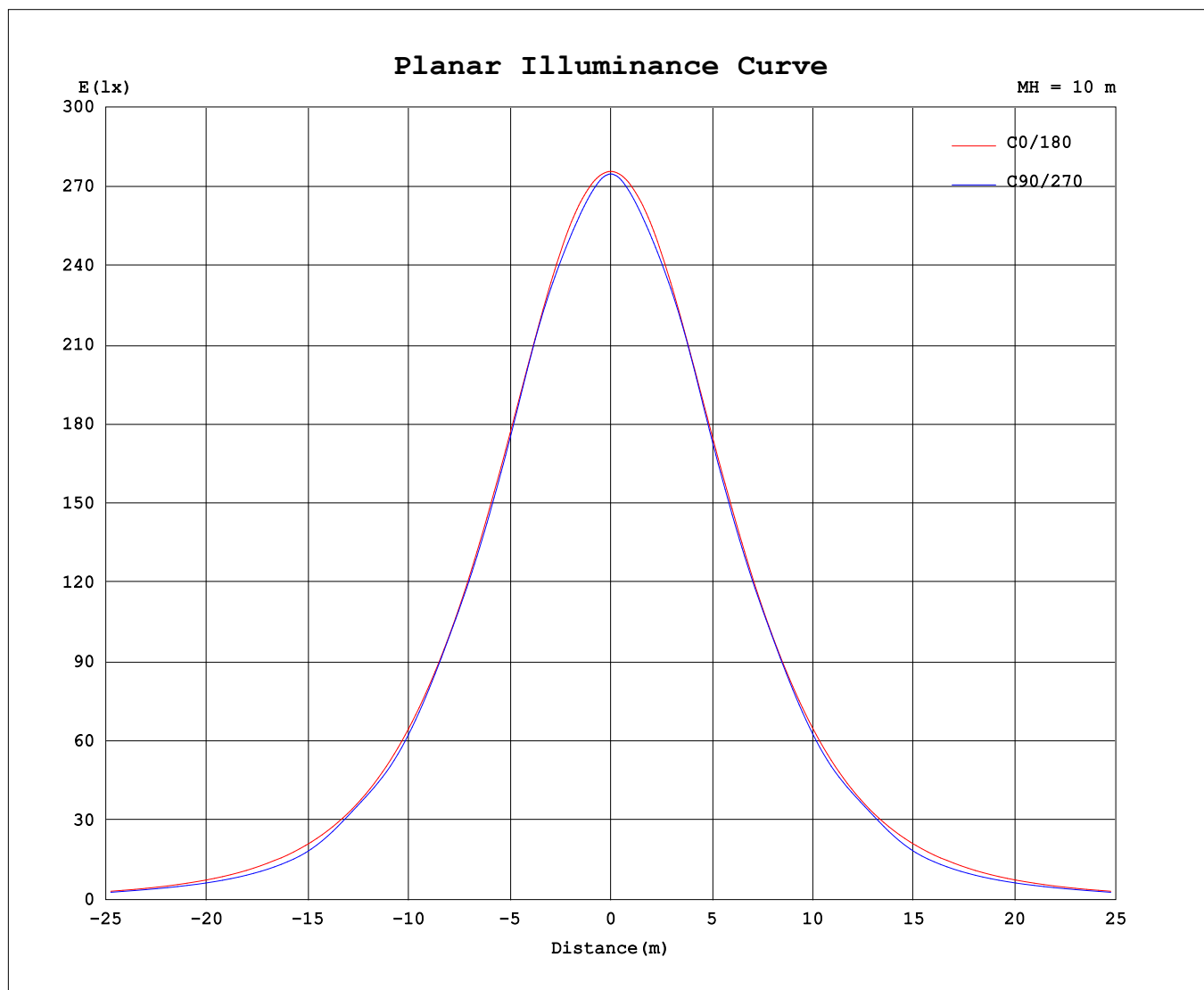
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4548]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4548]  
Remarks:

UNIT: X10cd

C Range: 0 - 360DEG	$\gamma$ Range: 0 - 90DEG
C Interval: 15.0DEG	$\gamma$ Interval: 0.5DEG
Test Speed: HIGH	Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Temperature: 25.3°C	Humidity: 65.0%
Operators: LYJ	Test Distance: 26.000m [K=0.4548]
Test Date: 2022-08-17	Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4548]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-17

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4548]
Remarks:

```