

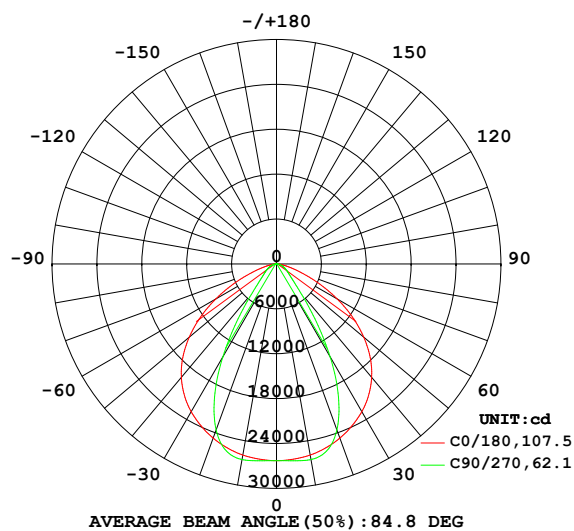
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

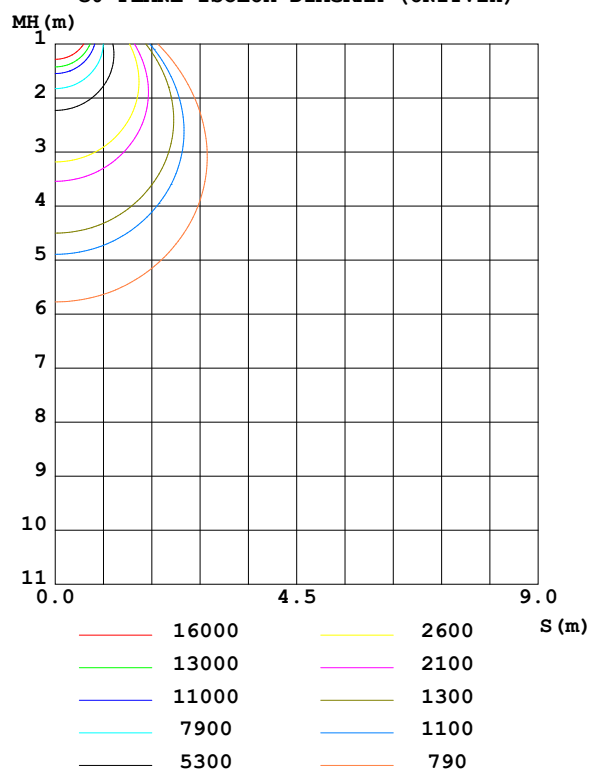
Test:U:229.9V I:1.065A P:241.5W PF:0.986 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:44751.1x1 lm		
NAME: LHB09-240H-5070-L00402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 185.27 lm/W			
MODEL	/	I <sub>max</sub> (cd)	26548	S/MH (C0/180)	1.29
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.92
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	44751	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	44751.1	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	1.05

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-02

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

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2593	2631	2654	2631	2593	2631	2654	2631	0- 10	2511	2511	5.61,5.61
20	2476	2500	2360	2500	2476	2500	2360	2500	10- 20	7264	9774	21.8,21.8
30	2281	1941	1435	1941	2281	1941	1435	1941	20- 30	10179	19953	44.6,44.6
40	1978	1095	504.1	1095	1978	1095	504.1	1095	30- 40	9554	29507	65.9,65.9
50	1523	571.3	228.3	571.3	1523	571.3	228.3	571.3	40- 50	6890	36396	81.3,81.3
60	939.6	298.9	144.2	298.9	939.6	298.9	144.2	298.9	50- 60	4404	40800	91.2,91.2
70	377.8	156.1	85.09	156.1	377.8	156.1	85.09	156.1	60- 70	2508	43308	96.8,96.8
80	98.59	59.50	31.08	59.50	98.59	59.50	31.08	59.50	70- 80	1183	44491	99.4,99.4
90	0.8653	0.5657	0.9940	0.5657	0.8653	0.5657	0.9940	0.5657	80- 90	260.0	44751	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): 33294 lm

%lum = 74.4%

%lamp = 74.4%

Conical surface Flux(120deg): 40800 lm

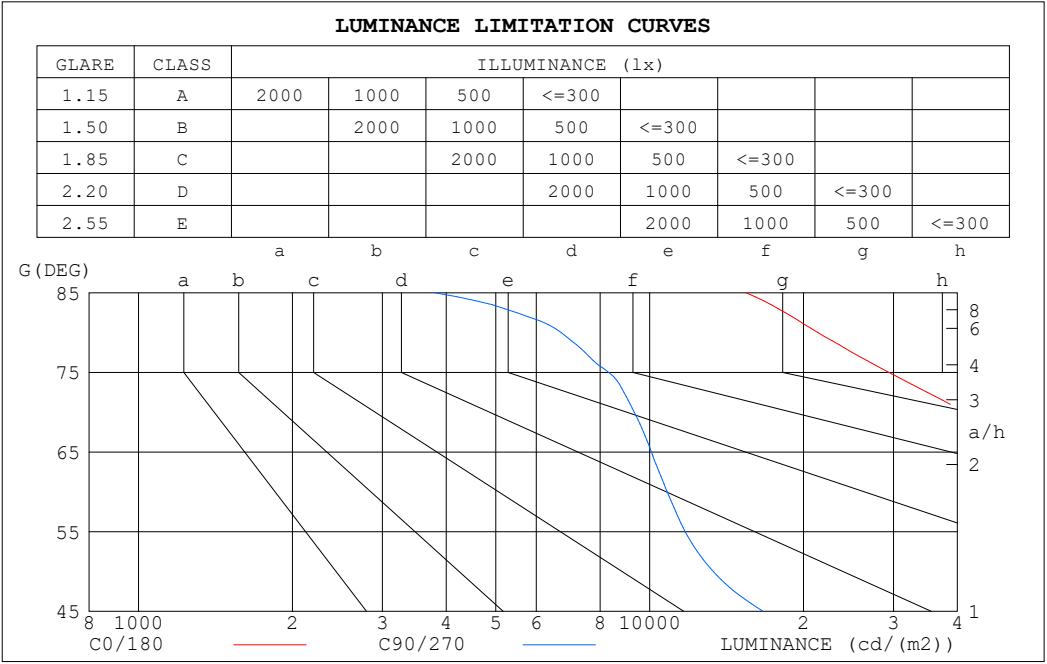
%lum = 91.2%

%lamp = 91.2%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-02

$\gamma$  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	15444	3809
80	21345	6714
75	29396	8318
70	41529	9333
65	56714	10082
60	70650	10822
55	81380	11733
50	89064	13324
45	94253	16673

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:LYJ

Test Date:2022-08-02

γ Range: 0 - 90DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446

Humidity:65.0%

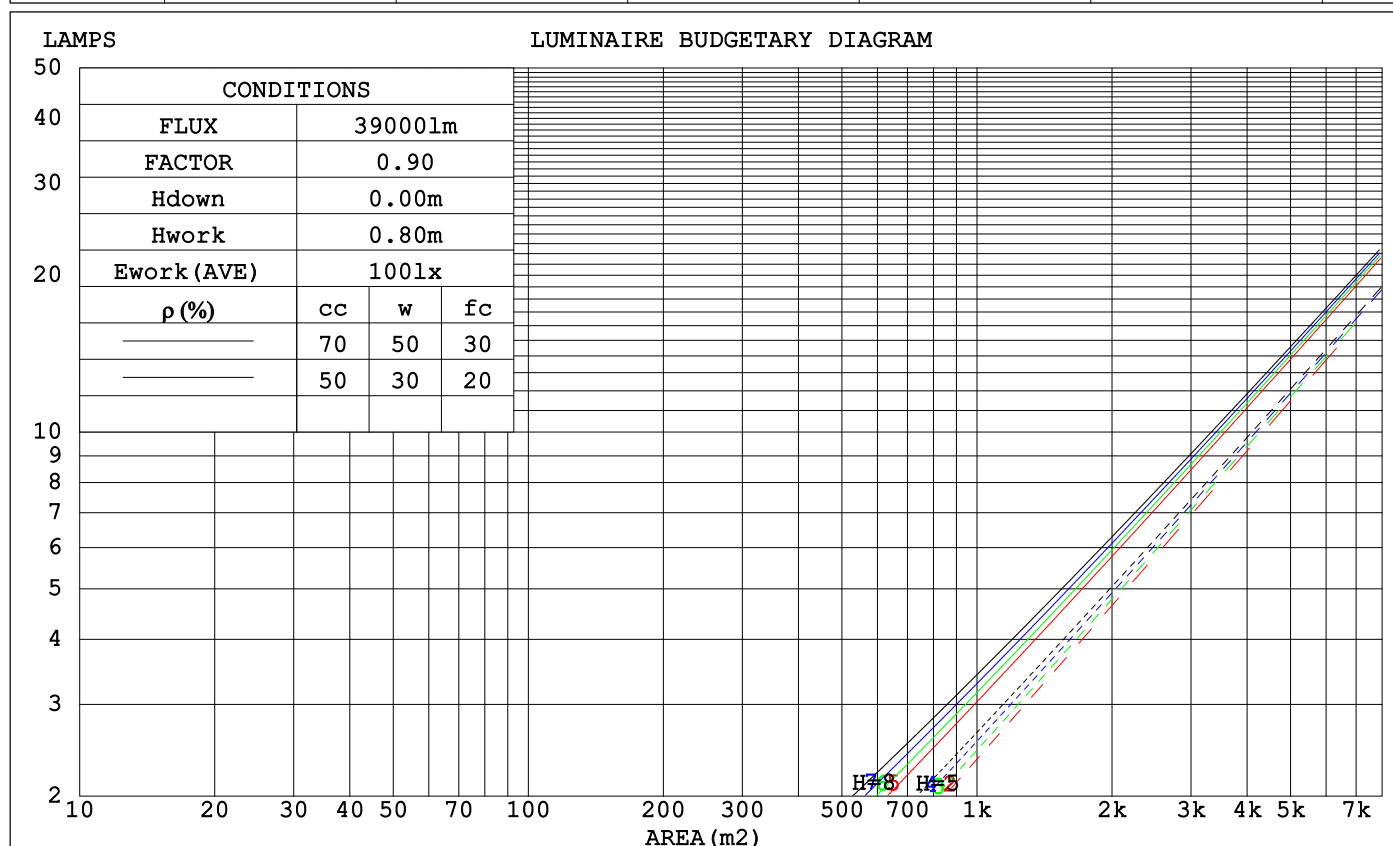
Test Distance:26.000m [K=0.4548]

Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## 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	1.08	1.04	1.01	1.05	1.02	.00	1.01	.99	.96	.97	.95	.94	.94	.92	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.92	.87	.84	.88	.85	.82	.86	.83	.80	.78
3.0	.87	.81	.76	.86	.80	.75	.83	.78	.74	.81	.76	.72	.78	.74	.71	.69
4.0	.79	.72	.67	.78	.71	.66	.76	.70	.65	.74	.69	.64	.72	.67	.64	.62
5.0	.72	.65	.59	.71	.64	.59	.69	.63	.58	.68	.62	.58	.66	.61	.57	.55
6.0	.66	.59	.53	.66	.58	.53	.64	.57	.53	.62	.57	.52	.61	.56	.52	.50
7.0	.61	.54	.48	.60	.53	.48	.59	.53	.48	.58	.52	.48	.56	.51	.47	.45
8.0	.57	.49	.44	.56	.49	.44	.55	.48	.44	.54	.48	.43	.52	.47	.43	.42
9.0	.53	.45	.40	.52	.45	.40	.51	.45	.40	.50	.44	.40	.49	.44	.40	.38
10.0	.49	.42	.37	.48	.42	.37	.48	.41	.37	.47	.41	.37	.46	.41	.37	.35



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-02

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	.240	.137	.043	.233	.133	.042	.220	.126	.040	.208	.120	.039	.198	.114	.037	
2.0	.231	.127	.039	.225	.124	.038	.214	.119	.037	.204	.114	.036	.194	.110	.035	
3.0	.218	.116	.035	.213	.114	.034	.203	.110	.033	.194	.106	.033	.186	.103	.032	
4.0	.205	.107	.031	.201	.105	.031	.192	.102	.030	.184	.099	.030	.177	.096	.029	
5.0	.193	.098	.028	.189	.097	.028	.181	.094	.028	.174	.092	.027	.168	.090	.027	
6.0	.182	.091	.026	.178	.090	.026	.171	.088	.026	.165	.086	.025	.159	.084	.025	
7.0	.171	.085	.024	.168	.084	.024	.162	.082	.024	.156	.080	.023	.151	.079	.023	
8.0	.162	.079	.022	.159	.078	.022	.154	.077	.022	.149	.075	.022	.144	.074	.022	
9.0	.153	.074	.021	.151	.073	.021	.146	.072	.020	.141	.071	.020	.137	.070	.020	
10.0	.145	.070	.019	.143	.069	.019	.139	.068	.019	.135	.067	.019	.131	.066	.019	

$\rho_{cc}$	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	.175	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.064	.056	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.056	.086	.060	.040	.050	.035	.023	.016	.011	.008	
5.0	.138	.089	.053	.119	.077	.046	.082	.054	.032	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.108	.063	.032	.074	.045	.023	.043	.026	.014	.014	.009	.004	
8.0	.119	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.022	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:LYJ  
 Test Date:2022-08-02

$\gamma$  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	24.5	25.8	24.9	26.2	26.5	16.2	17.6	16.6	17.9	18.2
3H	25.8	27.0	26.2	27.3	27.7	17.7	18.9	18.1	19.2	19.6
4H	26.2	27.3	26.6	27.7	28.1	18.2	19.3	18.6	19.7	20.1
6H	26.5	27.5	26.9	27.9	28.3	18.5	19.6	18.9	19.9	20.3
8H	26.5	27.5	27.0	27.9	28.3	18.6	19.6	19.0	20.0	20.4
12H	26.6	27.5	27.0	27.9	28.3	18.6	19.5	19.0	19.9	20.3
4H 2H	24.5	25.6	24.9	26.0	26.4	17.9	19.1	18.3	19.4	19.8
3H	26.0	26.9	26.4	27.4	27.8	19.3	20.3	19.7	20.7	21.1
4H	26.5	27.4	27.0	27.8	28.2	19.9	20.7	20.3	21.1	21.5
6H	26.9	27.6	27.4	28.1	28.5	20.2	20.9	20.7	21.4	21.8
8H	27.0	27.7	27.5	28.1	28.6	20.3	20.9	20.7	21.4	21.8
12H	27.1	27.7	27.6	28.2	28.6	20.3	20.9	20.8	21.4	21.8
8H 4H	26.5	27.2	27.0	27.7	28.1	20.6	21.3	21.1	21.8	22.2
6H	27.0	27.6	27.5	28.1	28.5	21.0	21.6	21.5	22.1	22.6
8H	27.2	27.7	27.7	28.2	28.7	21.1	21.6	21.7	22.1	22.6
12H	27.3	27.7	27.8	28.2	28.8	21.2	21.6	21.7	22.1	22.7
12H 4H	26.5	27.1	27.0	27.6	28.1	20.8	21.4	21.3	21.8	22.3
6H	27.0	27.5	27.5	27.9	28.5	21.2	21.7	21.7	22.2	22.7
8H	27.2	27.6	27.7	28.1	28.7	21.3	21.8	21.9	22.3	22.8
CIE190: 2010										

CIE190: 2010  
Area: 0.26645 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-02

$\gamma$  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

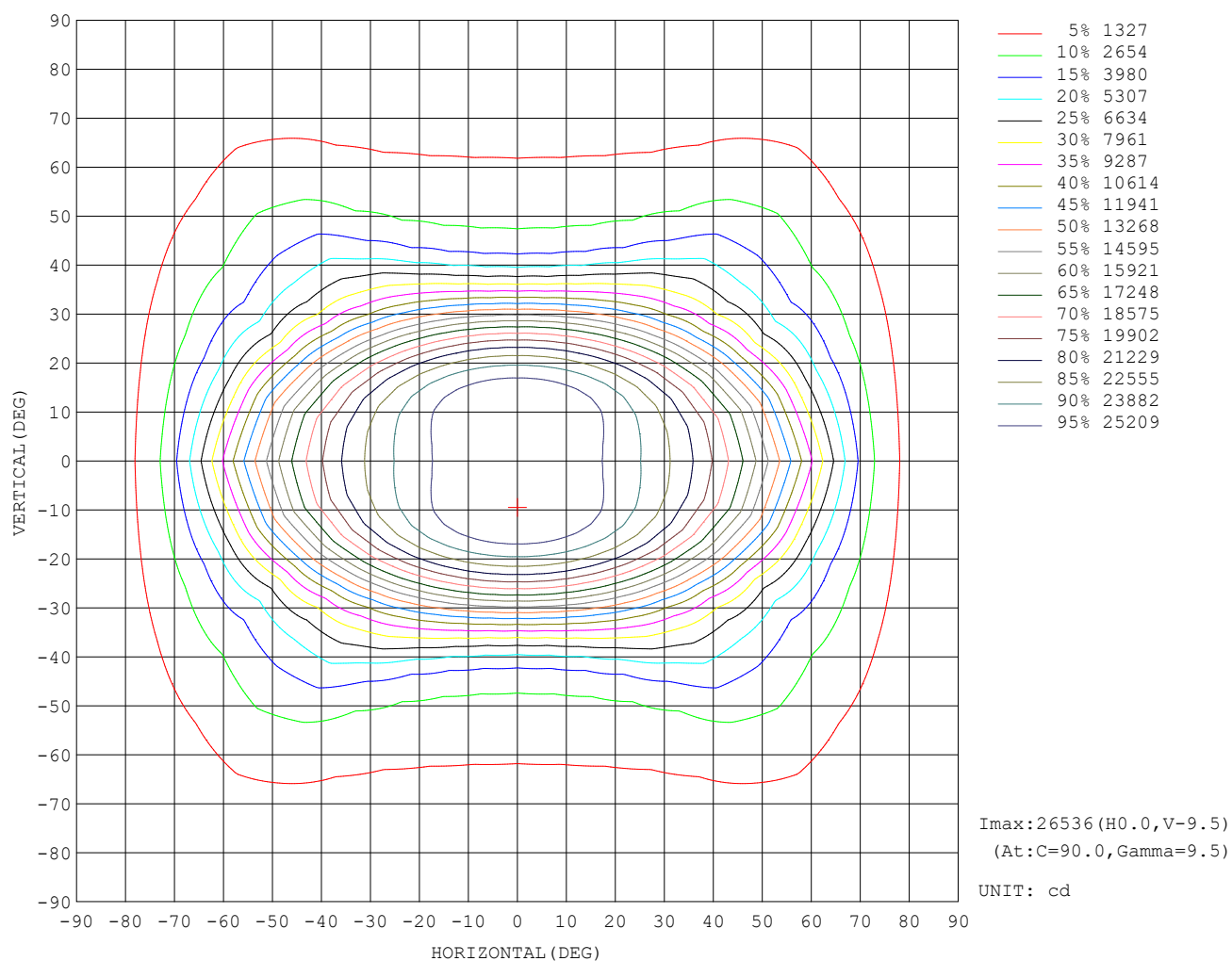
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	61	55	70	61	55	69	60	55	50
0.80	80	70	65	79	70	65	77	69	64	59
1.00	87	78	73	86	78	72	84	78	72	66
1.25	93	85	79	91	84	79	89	83	78	72
1.50	97	89	84	95	89	84	93	87	83	77
2.00	102	95	91	100	94	90	97	92	88	82
2.50	105	99	94	103	97	93	99	95	92	84
3.00	107	102	98	105	100	97	101	98	95	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	110	106	104	105	103	101	92
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: LYJ  
 Test Date: 2022-08-02

$\gamma$  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

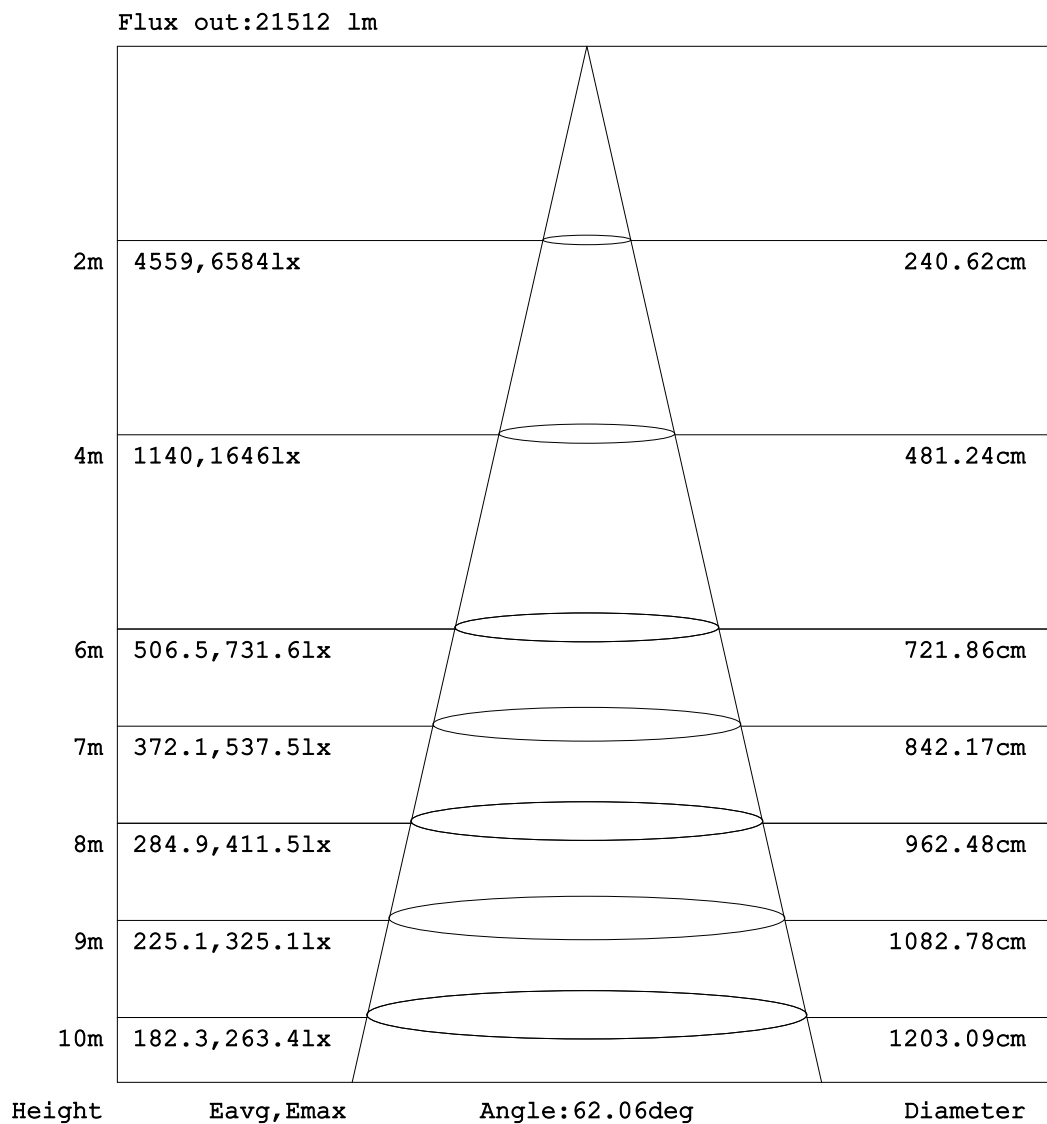


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-02

$\gamma$  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



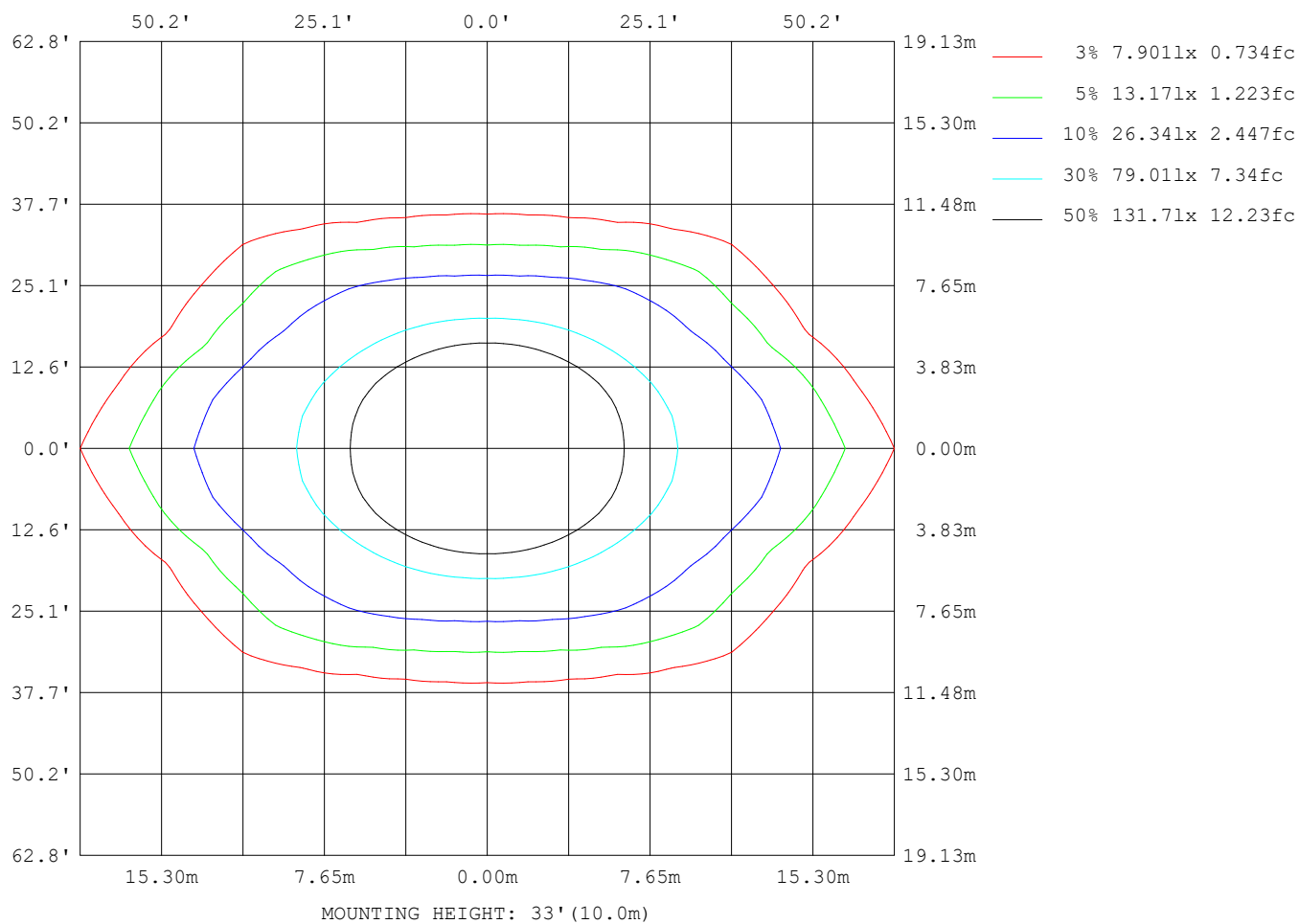
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:LYJ  
Test Date:2022-08-02

$\gamma$  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

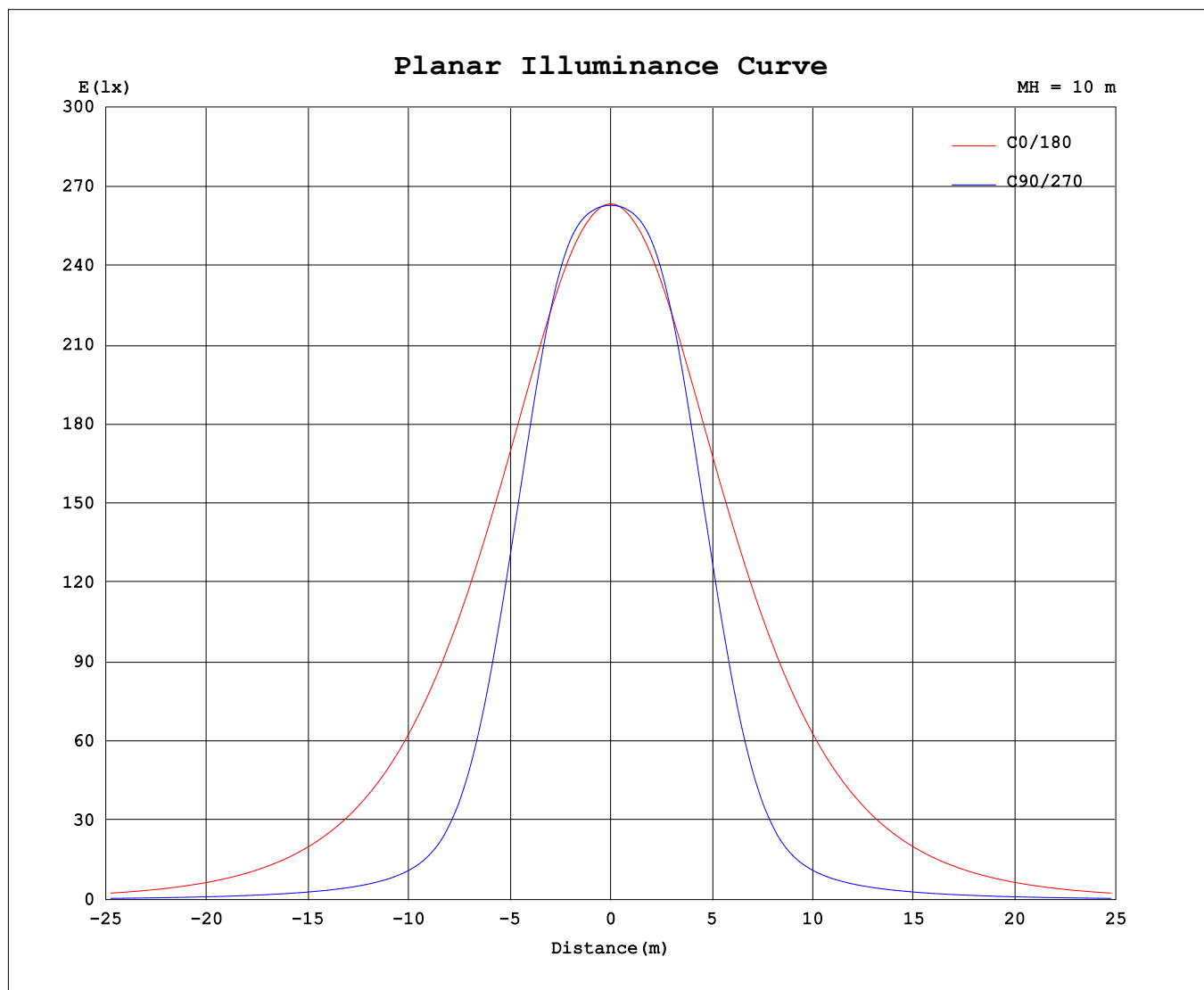
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-02

$\gamma$  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: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-02

$\gamma$  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:

# LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: LYJ  
Test Date: 2022-08-02

```

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

Table--2

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:LYJ  
Test Date:2022-08-02

```

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:

```