

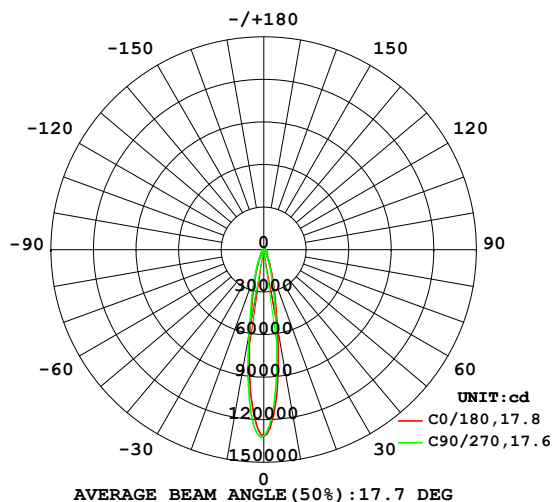
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

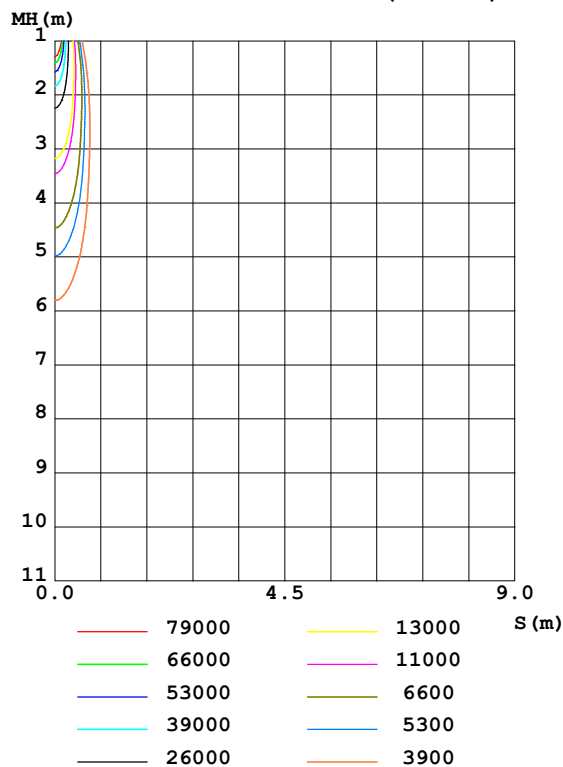
Test:U:119.5V I:1.2948A P:154.64W PF:0.9995 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:25267.2x1 lm		
NAME: HA04-150-5770-F01603	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 163.40 lm/W			
MODEL	/	I <sub>max</sub> (cd)	132035	S/MH(C0/180)	0.31
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.33
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	25267	η UP,DN(C0-180)	0.0,47.5
NOMINAL FLUX(lm)	25267.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	0.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-29

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=0.4536]  
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	559.3	528.2	500.5	528.2	559.3	583.9	605.5	583.9	0- 10	8284	8284	32.8,32.8
20	150.3	136.5	128.2	136.5	150.3	159.1	164.8	159.1	10- 20	8001	16285	64.5,64.5
30	46.12	42.43	40.02	42.43	46.12	47.62	48.58	47.62	20- 30	3743	20028	79.3,79.3
40	21.74	20.48	19.77	20.48	21.74	21.97	22.18	21.97	30- 40	1882	21910	86.7,86.7
50	14.11	12.93	12.92	12.93	14.11	14.01	14.43	14.01	40- 50	1296	23206	91.8,91.8
60	9.578	8.431	8.709	8.431	9.578	9.266	9.786	9.266	50- 60	1003	24209	95.8,95.8
70	5.490	4.381	4.824	4.381	5.490	4.903	5.535	4.903	60- 70	687.7	24897	98.5,98.5
80	1.661	1.122	1.162	1.122	1.661	1.377	1.638	1.377	70- 80	321.7	25218	99.8,99.8
90	0.0060	0.0049	0.0050	0.0049	0.0060	0.0107	0.0139	0.0107	80- 90	48.78	25267	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): 22600 lm

%lum = 89.4%

%lamp = 89.4%

Conical surface Flux(120deg): 24209 lm

%lum = 95.8%

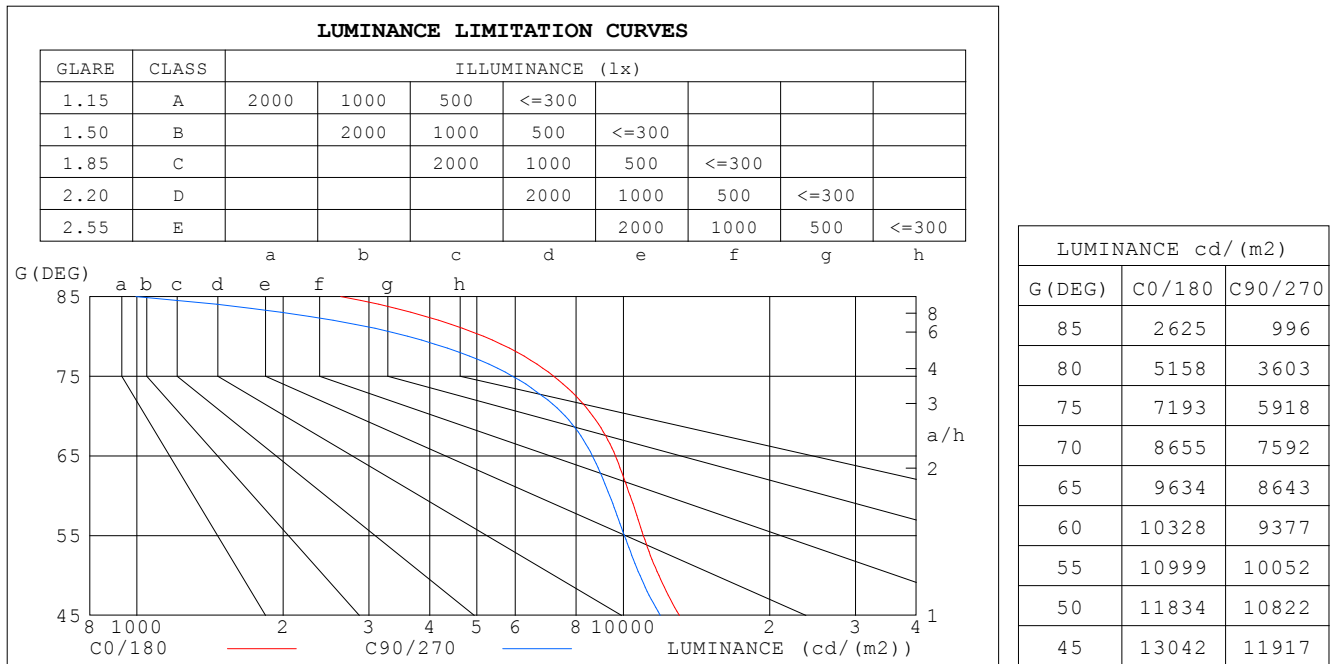
%lamp = 95.8%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-29

$\gamma$  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=0.4536]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINANCE LIMITATION CURVES



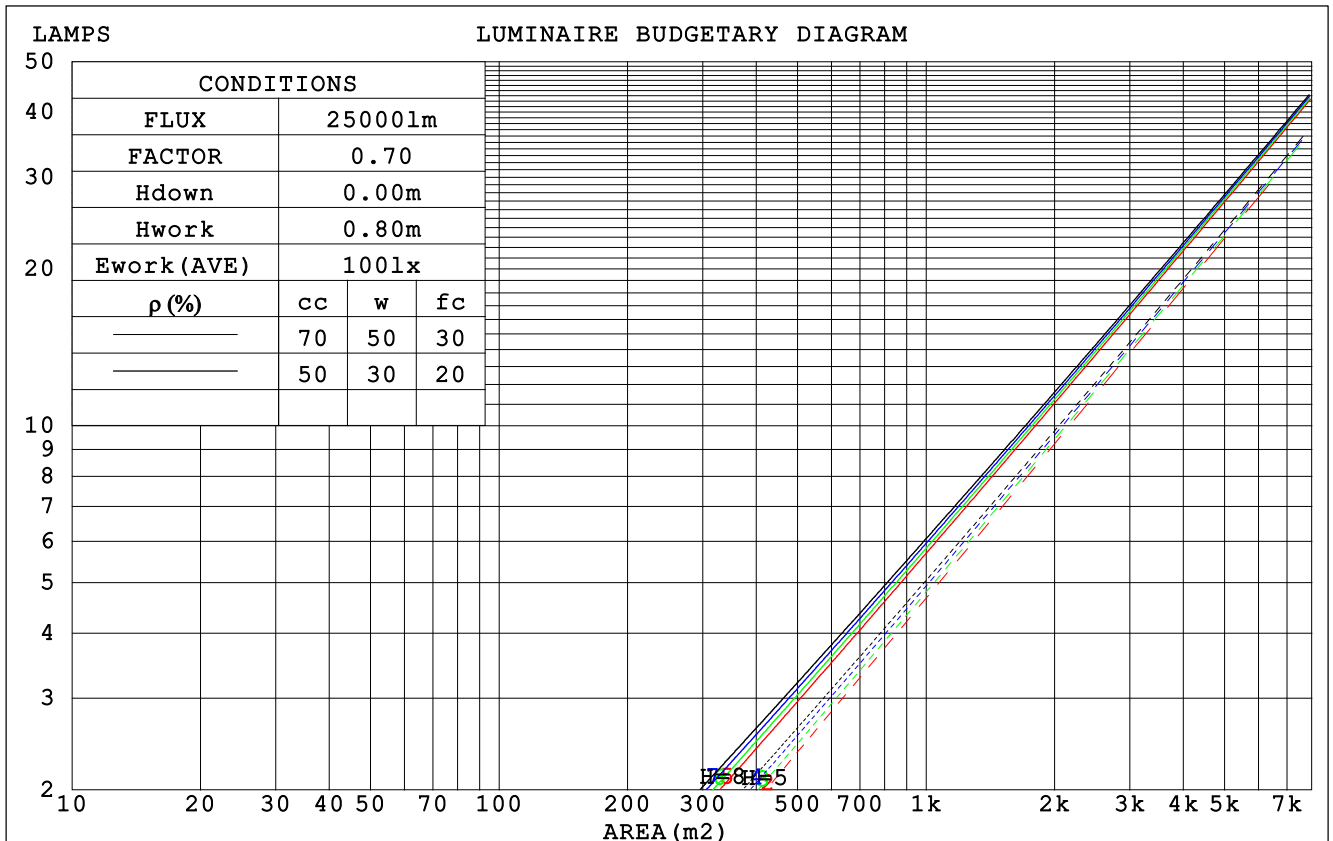
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-29

$\gamma$  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=0.4536]  
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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.01	.97	1.03	.99	.96	.99	.97	.94	.96	.94	.92	.94	.92	.90	.89
3.0	.98	.94	.90	.97	.93	.89	.94	.91	.88	.92	.89	.87	.90	.87	.85	.84
4.0	.93	.88	.85	.92	.88	.84	.90	.86	.83	.88	.85	.82	.86	.84	.81	.80
5.0	.89	.84	.80	.88	.83	.80	.86	.82	.79	.85	.81	.78	.83	.80	.78	.76
6.0	.85	.80	.76	.84	.79	.76	.83	.79	.75	.82	.78	.75	.80	.77	.74	.73
7.0	.82	.77	.73	.81	.76	.73	.80	.75	.72	.79	.75	.72	.78	.74	.72	.70
8.0	.79	.74	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.76	.71	.68	.75	.71	.68	.75	.70	.67	.74	.70	.67	.73	.69	.67	.66
10.0	.73	.69	.65	.73	.68	.65	.72	.68	.65	.72	.68	.65	.71	.67	.65	.64



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-29

$\gamma$  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=0.4536]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.169	.096	.030	.163	.093	.029	.150	.086	.027	.138	.080	.026	.128	.074	.024		
2.0	.159	.087	.027	.153	.084	.026	.143	.079	.025	.133	.075	.023	.124	.070	.022		
3.0	.148	.079	.024	.144	.077	.023	.135	.073	.022	.127	.069	.021	.119	.066	.020		
4.0	.138	.072	.021	.134	.070	.021	.127	.067	.020	.120	.064	.019	.113	.062	.019		
5.0	.130	.066	.019	.126	.065	.019	.120	.062	.018	.114	.060	.018	.108	.058	.017		
6.0	.122	.061	.017	.119	.060	.017	.113	.058	.017	.108	.056	.016	.103	.054	.016		
7.0	.115	.057	.016	.112	.056	.016	.107	.054	.016	.103	.053	.015	.098	.051	.015		
8.0	.109	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014		
9.0	.103	.050	.014	.101	.049	.014	.097	.048	.014	.093	.047	.013	.090	.046	.013		
10.0	.098	.047	.013	.096	.046	.013	.093	.045	.013	.089	.044	.013	.086	.043	.012		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.132	.114	.099	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.111	.077	.052	.096	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.089	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.079	.049	.029	.055	.035	.021	.032	.020	.012	.010	.007	.004	
10.0	.086	.052	.030	.074	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-11-29

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=0.4536]  
 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	15.9	17.0	16.3	17.3	17.6	15.5	16.6	15.8	16.9	17.2
3H	17.5	18.4	17.9	18.8	19.1	16.9	17.9	17.3	18.2	18.6
4H	17.9	18.8	18.4	19.2	19.6	17.3	18.2	17.7	18.6	19.0
6H	18.2	19.0	18.6	19.4	19.8	17.5	18.3	17.9	18.7	19.1
8H	18.2	19.0	18.6	19.4	19.8	17.5	18.2	17.9	18.6	19.0
12H	18.2	18.9	18.6	19.3	19.7	17.4	18.1	17.9	18.5	19.0
4H 2H	16.3	17.2	16.7	17.5	17.9	15.9	16.8	16.3	17.1	17.5
3H	17.9	18.7	18.4	19.1	19.5	17.5	18.2	17.9	18.6	19.0
4H	18.5	19.1	18.9	19.6	20.0	17.9	18.6	18.4	19.0	19.5
6H	18.8	19.3	19.3	19.8	20.3	18.1	18.7	18.6	19.1	19.6
8H	18.8	19.3	19.3	19.8	20.3	18.1	18.6	18.6	19.1	19.6
12H	18.8	19.3	19.3	19.8	20.2	18.1	18.5	18.6	19.0	19.5
8H 4H	18.5	19.0	19.0	19.5	20.0	18.0	18.5	18.5	19.0	19.5
6H	18.9	19.3	19.4	19.8	20.3	18.3	18.7	18.8	19.2	19.6
8H	18.9	19.3	19.5	19.8	20.3	18.3	18.6	18.8	19.1	19.6
12H	19.0	19.3	19.5	19.8	20.3	18.2	18.5	18.7	19.0	19.6
12H 4H	18.5	18.9	19.0	19.4	19.9	18.0	18.4	18.5	18.9	19.4
6H	18.8	19.2	19.4	19.7	20.2	18.2	18.6	18.8	19.1	19.6
8H	18.9	19.2	19.4	19.7	20.3	18.2	18.6	18.8	19.1	19.6
CIE190: 2010										

CIE190: 2010  
Area: 0.18564 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-29

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=0.4536]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

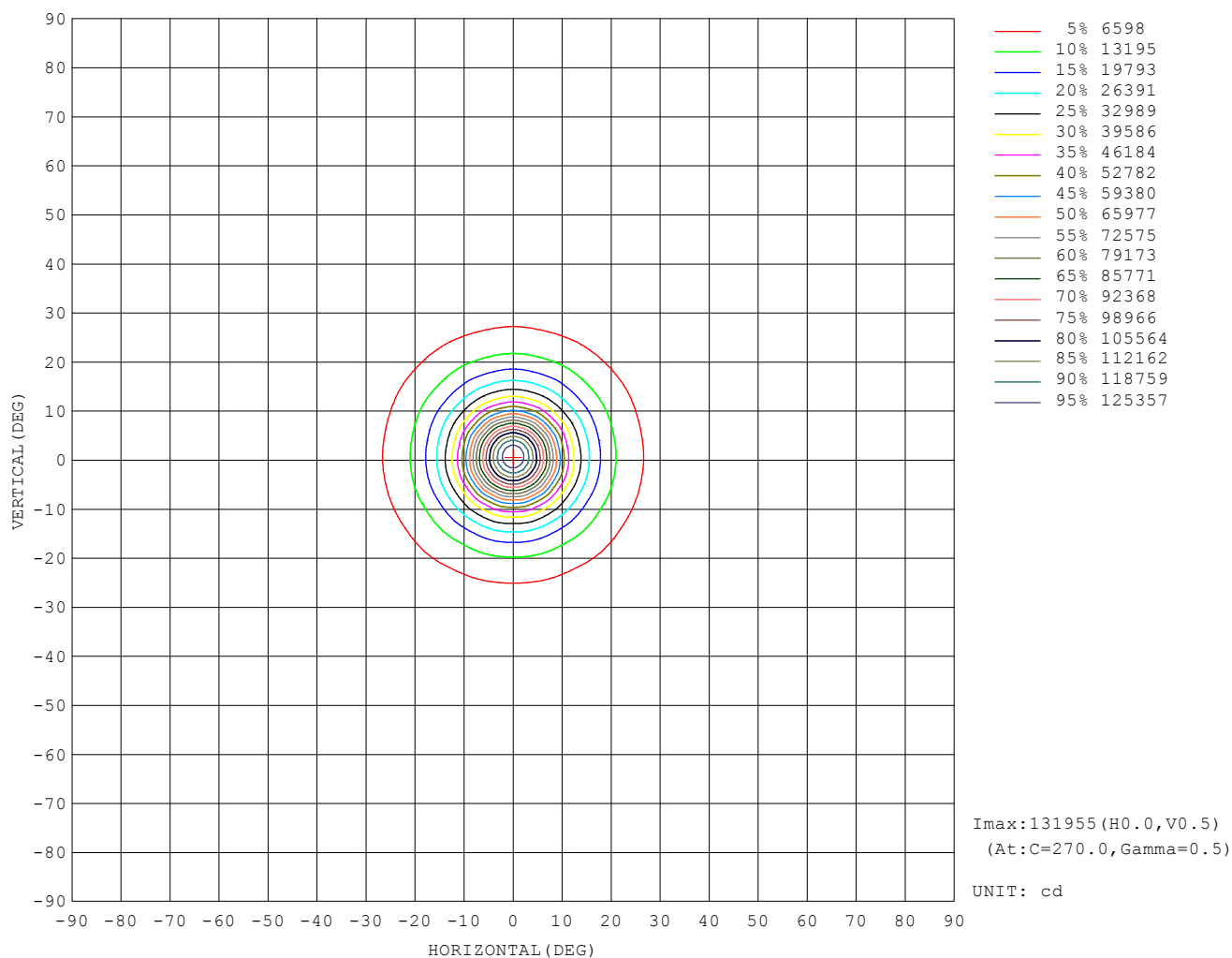
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	83	76	72	83	76	72	82	76	72	68
0.80	91	84	80	90	84	80	89	83	80	76
1.00	96	90	85	95	89	85	93	89	85	80
1.25	100	94	90	99	94	90	97	93	89	85
1.50	103	98	94	102	97	94	100	96	93	88
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	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		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-11-29

$\gamma$  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=0.4536]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

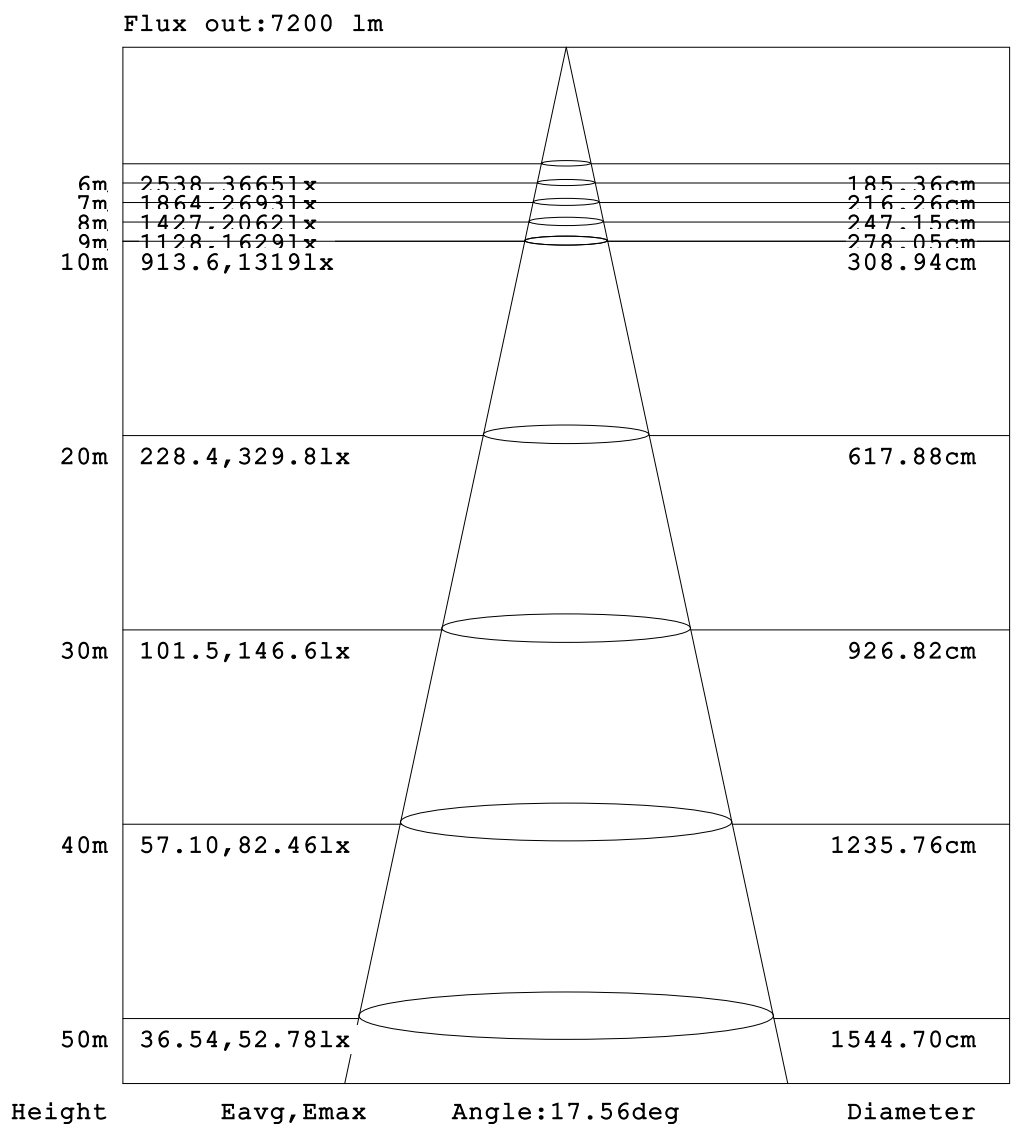
## ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-29

$\gamma$  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=0.4536]  
Remarks:

## AAI Figure



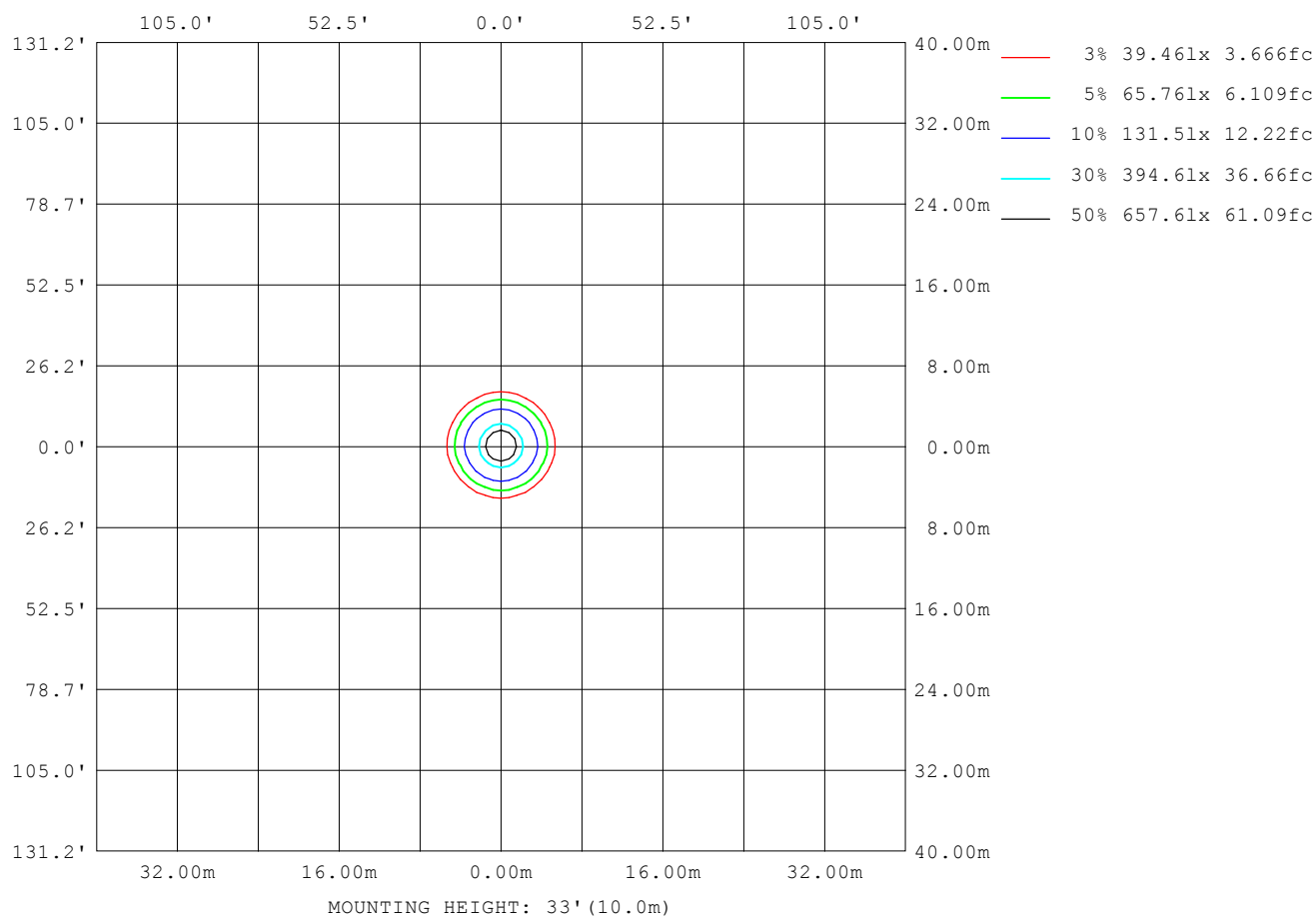
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-29

$\gamma$  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=0.4536]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

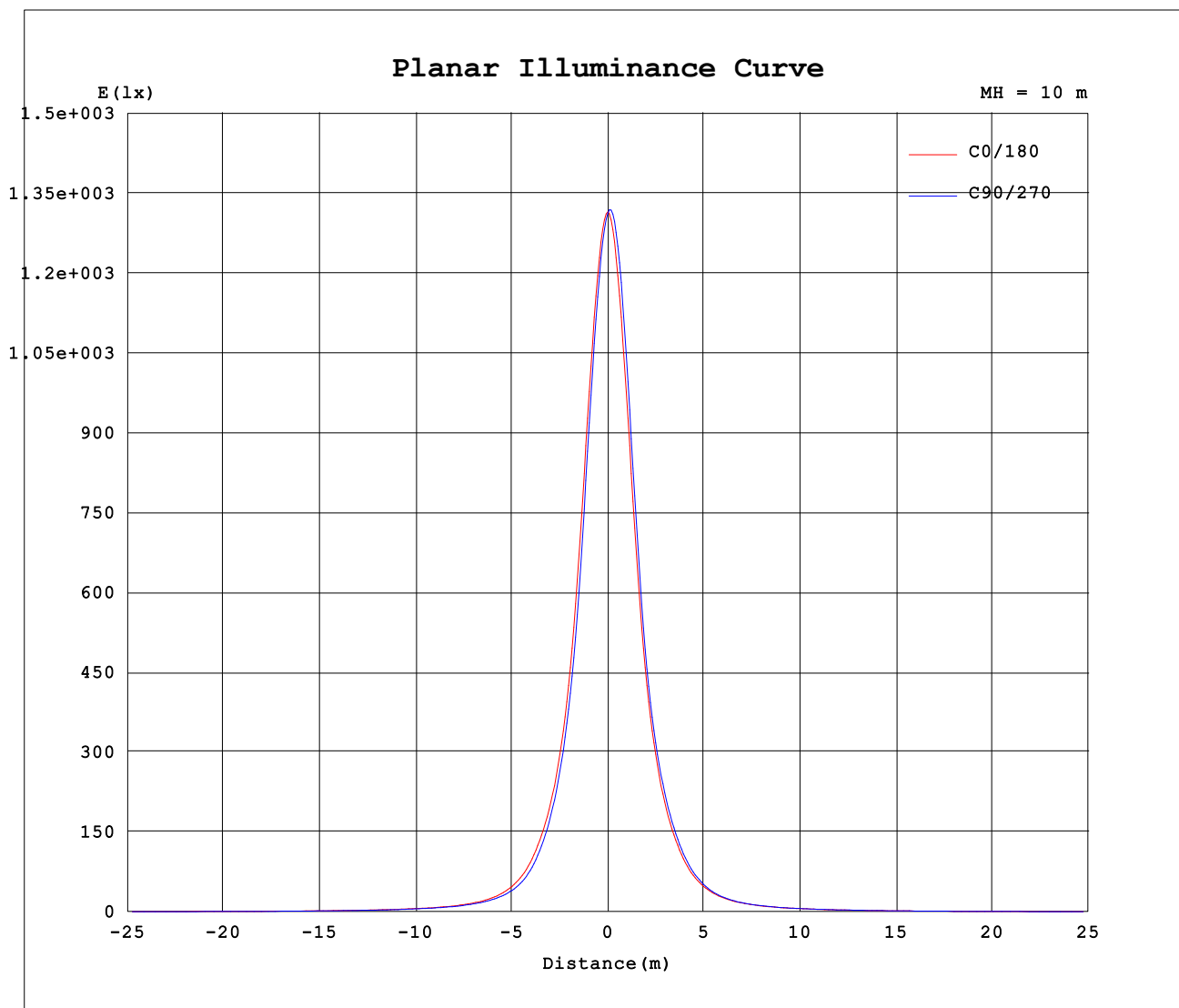
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-29

$\gamma$  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=0.4536]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-29

$\gamma$  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=0.4536]  
Remarks: