

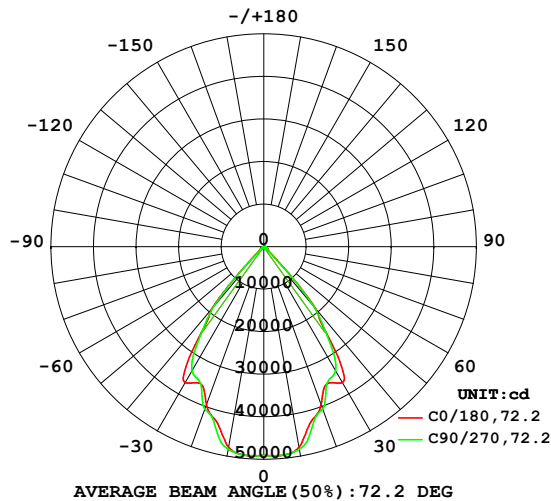
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

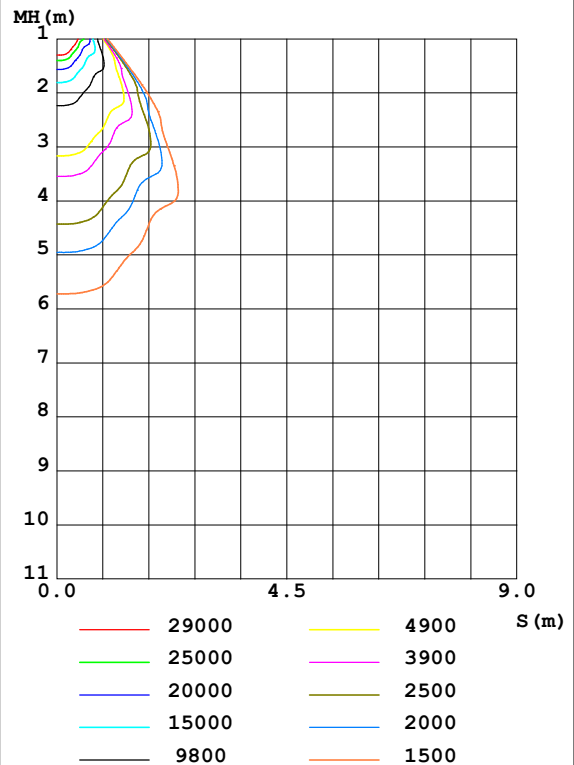
Test:U:230.0V I:2.0989A P:480.24W PF:0.9948 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:54354.1x1 lm		
NAME: LHB09-480-5070-L03902+GRID28	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.18 lm/W			
MODEL	/	I <sub>max</sub> (cd)	49307	S/MH(C0/180)	1.05
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.02
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	54354	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	54354.1	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)	230	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:25.3DEG  
Operators:LYJ  
Test Date:2021-10-11

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=0.4538]  
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	4786	4885	4832	4885	4786	4885	4832	4885	0- 10	4681	4681	8.61,8.61
20	3944	3946	4058	3946	3944	3946	4058	3946	10- 20	12493	17174	31.6,31.6
30	3691	2940	3374	2940	3691	2940	3374	2940	20- 30	16521	33695	62,62
40	1885	1225	1806	1225	1885	1225	1806	1225	30- 40	15697	49392	90.9,90.9
50	120.2	106.6	95.90	106.6	120.2	106.6	95.90	106.6	40- 50	3946	53338	98.1,98.1
60	69.58	42.30	39.67	42.30	69.58	42.30	39.67	42.30	50- 60	619.4	53958	99.3,99.3
70	36.20	13.97	11.17	13.97	36.20	13.97	11.17	13.97	60- 70	290.7	54248	99.8,99.8
80	5.599	3.320	2.774	3.320	5.599	3.320	2.774	3.320	70- 80	89.32	54338	100,100
90	0.0969	0.1070	0.0755	0.1070	0.0969	0.1070	0.0755	0.1070	80- 90	16.38	54354	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): 52655 lm

%lum = 96.9%

%lamp = 96.9%

Conical surface Flux(120deg): 53958 lm

%lum = 99.3%

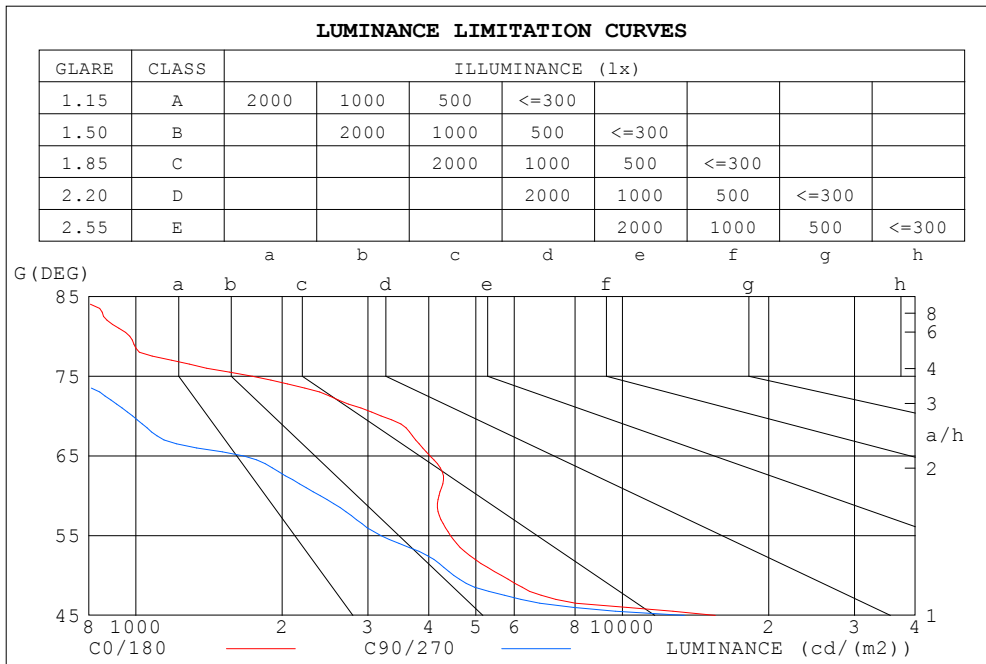
%lamp = 99.3%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-10-11

$\gamma$  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=0.4538]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	766	385
80	973	482
75	1736	669
70	3193	985
65	4026	1666
60	4198	2393
55	4434	3192
50	5640	4501
45	15526	13436

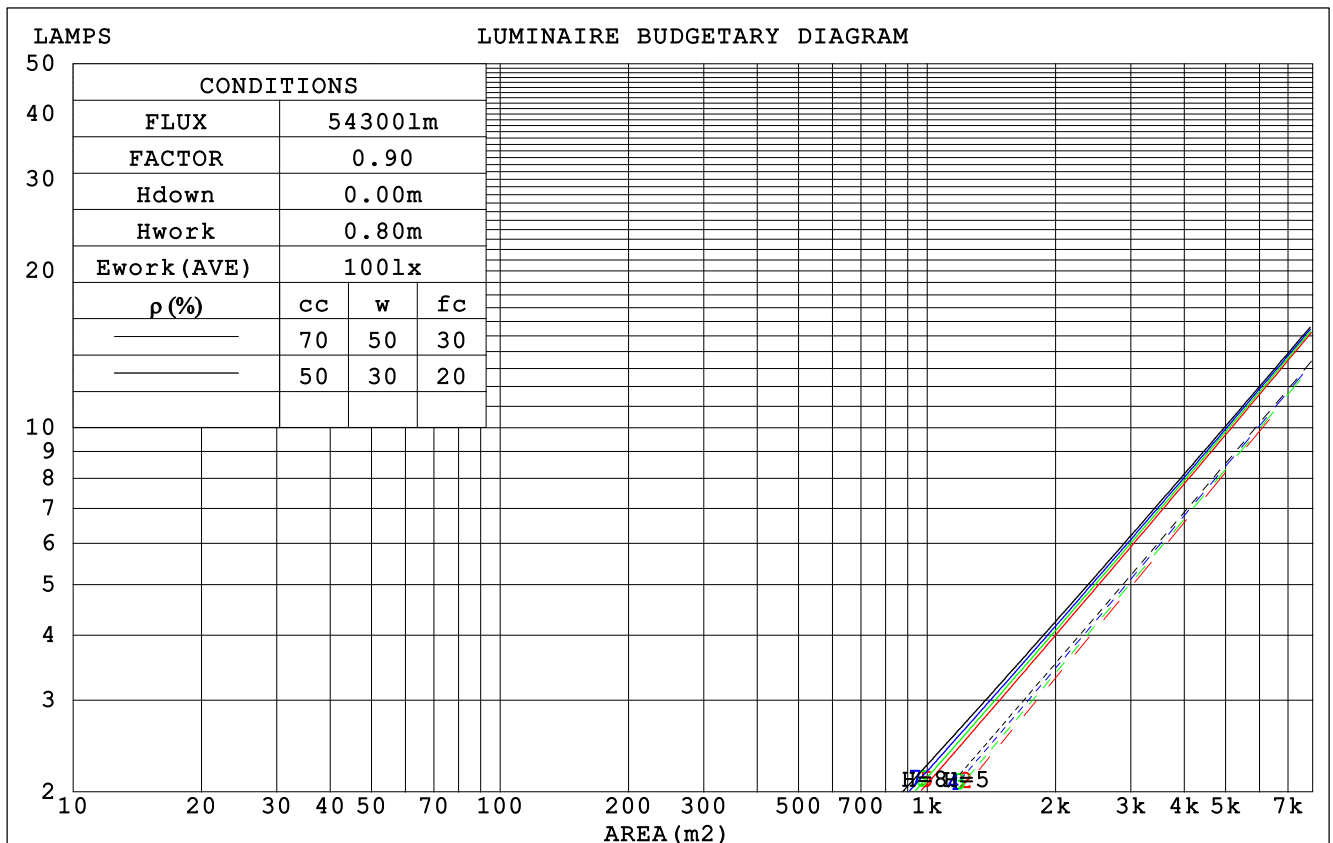
C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-10-11

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=0.4538]  
 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	1.10	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	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.89	.85	.93	.88	.85	.91	.87	.83	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.82	.78	.87	.81	.77	.85	.80	.76	.83	.79	.75	.81	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.67
6.0	.76	.70	.65	.75	.70	.65	.74	.69	.65	.72	.68	.64	.71	.67	.64	.62
7.0	.71	.65	.60	.71	.65	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58
8.0	.67	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.55	.63	.59	.55	.54
9.0	.63	.56	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.59	.55	.51	.50
10.0	.59	.53	.49	.58	.53	.49	.58	.52	.48	.57	.52	.48	.56	.51	.48	.47



C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-10-11

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=0.4538]  
 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	.186	.106	.034	.179	.102	.032	.167	.096	.031	.155	.089	.029	.144	.084	.027		
2.0	.180	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.082	.026		
3.0	.172	.091	.027	.167	.089	.027	.158	.086	.026	.149	.082	.025	.141	.078	.024		
4.0	.164	.085	.025	.160	.084	.025	.152	.081	.024	.145	.078	.023	.138	.075	.023		
5.0	.157	.080	.023	.153	.079	.023	.146	.076	.022	.140	.074	.022	.134	.071	.021		
6.0	.150	.075	.022	.147	.074	.021	.140	.072	.021	.135	.070	.021	.129	.068	.020		
7.0	.143	.071	.020	.140	.070	.020	.135	.068	.020	.130	.067	.019	.125	.065	.019		
8.0	.137	.067	.019	.135	.066	.019	.130	.065	.019	.125	.063	.018	.121	.062	.018		
9.0	.131	.064	.018	.129	.063	.018	.125	.062	.017	.121	.060	.017	.117	.059	.017		
10.0	.126	.060	.017	.124	.060	.017	.120	.059	.017	.116	.058	.016	.113	.057	.016		

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.040	.025	.015	.013	.008	.005	
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.104	.060	.030	.090	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.056	.026	.086	.048	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-10-11

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=0.4538]  
 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	7.8	8.8	8.1	9.1	9.4	5.7	6.7	6.0	7.0	7.3
3H	9.1	10.0	9.5	10.3	10.7	5.9	6.8	6.3	7.1	7.5
4H	9.3	10.1	9.7	10.4	10.8	6.0	6.8	6.4	7.1	7.5
6H	9.3	10.0	9.7	10.4	10.8	5.9	6.7	6.4	7.1	7.4
8H	9.3	10.0	9.7	10.3	10.8	5.9	6.6	6.3	7.0	7.4
12H	9.2	9.9	9.7	10.3	10.7	5.9	6.5	6.3	6.9	7.3
4H 2H	7.7	8.6	8.2	8.9	9.3	5.9	6.7	6.3	7.0	7.4
3H	9.1	9.8	9.5	10.2	10.6	6.2	6.8	6.6	7.2	7.6
4H	9.3	9.9	9.8	10.3	10.8	6.2	6.8	6.7	7.2	7.7
6H	9.4	9.9	9.8	10.3	10.8	6.2	6.7	6.7	7.2	7.6
8H	9.3	9.8	9.8	10.3	10.7	6.2	6.6	6.7	7.1	7.6
12H	9.3	9.7	9.8	10.2	10.7	6.1	6.5	6.6	7.0	7.5
8H 4H	9.2	9.7	9.7	10.1	10.6	6.2	6.7	6.7	7.1	7.6
6H	9.3	9.6	9.8	10.1	10.6	6.2	6.6	6.7	7.1	7.6
8H	9.2	9.6	9.8	10.1	10.6	6.2	6.5	6.7	7.0	7.5
12H	9.2	9.5	9.8	10.0	10.6	6.2	6.5	6.7	7.0	7.6
12H 4H	9.1	9.5	9.6	10.0	10.5	6.2	6.6	6.6	7.0	7.5
6H	9.2	9.5	9.7	10.0	10.5	6.2	6.5	6.7	7.0	7.5
8H	9.2	9.5	9.7	10.0	10.6	6.2	6.5	6.7	7.0	7.6
CIE190: 2010										

CIE190: 2010  
Area: 0.3315 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-10-11

$\gamma$  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=0.4538]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

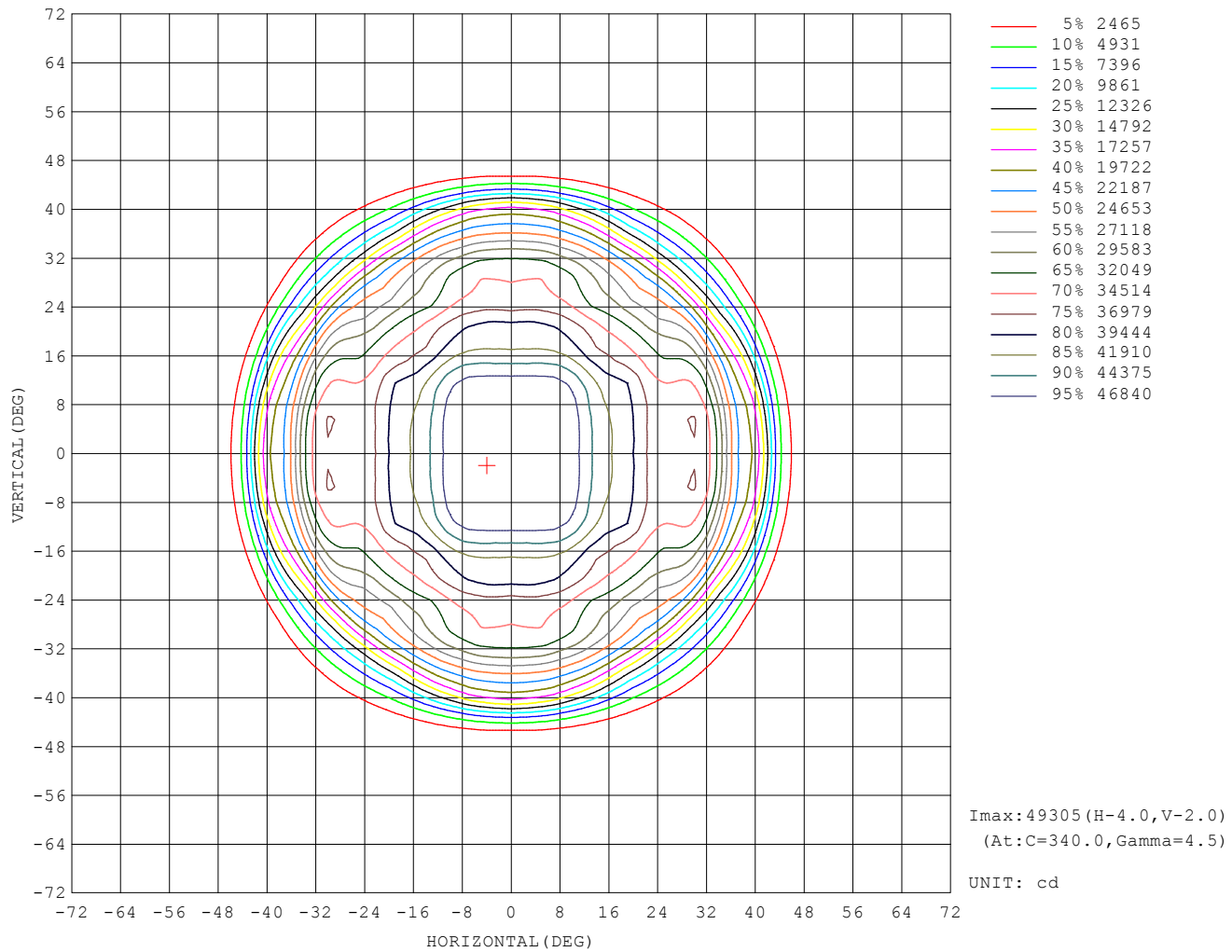
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	85	79	75	71
0.80	94	87	84	93	87	83	92	86	83	79
1.00	98	93	89	98	92	89	96	92	88	84
1.25	103	97	94	101	97	93	100	95	92	88
1.50	105	100	97	104	100	97	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-10-11

$\gamma$  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=0.4538]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

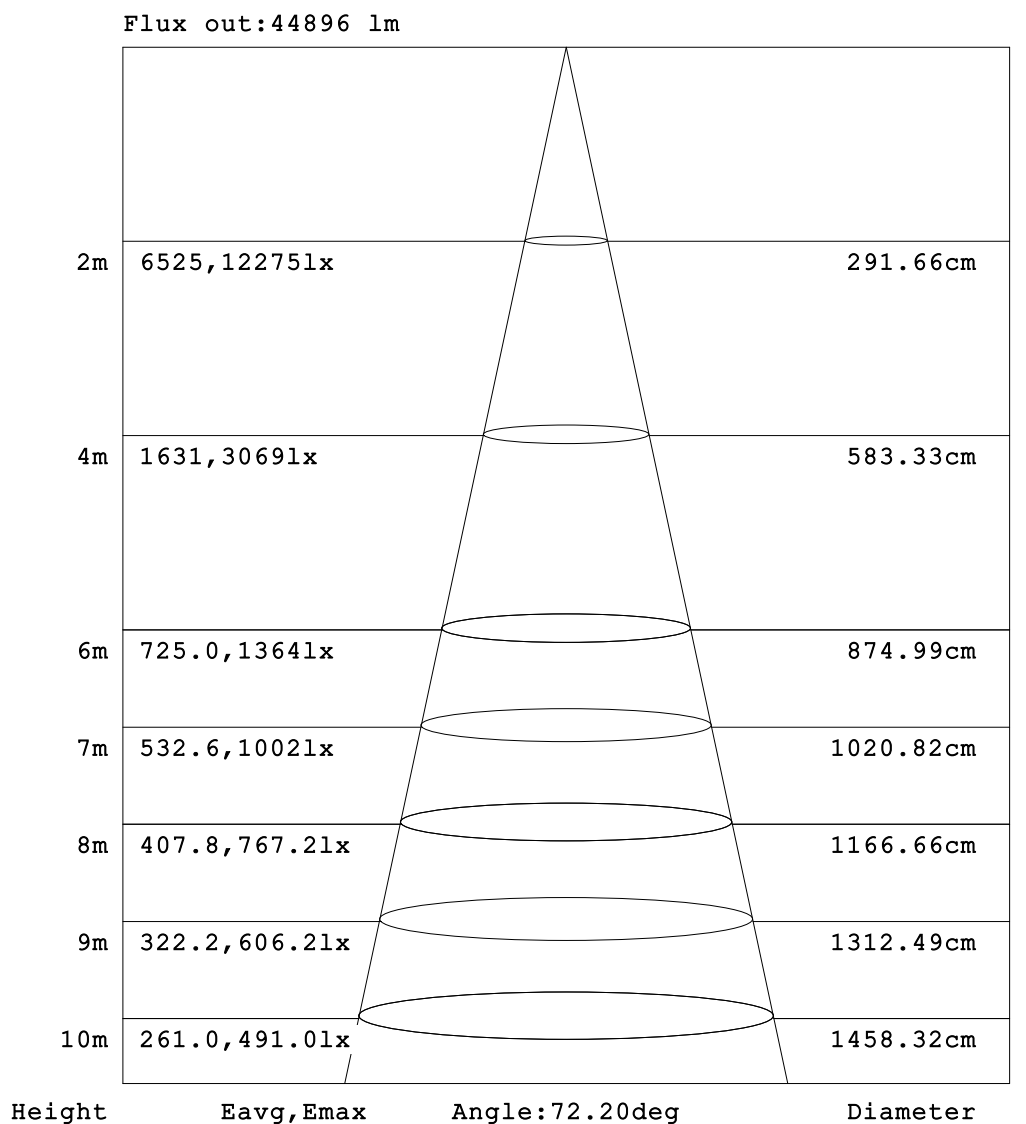


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-10-11

$\gamma$  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=0.4538]  
Remarks:



## AAI Figure



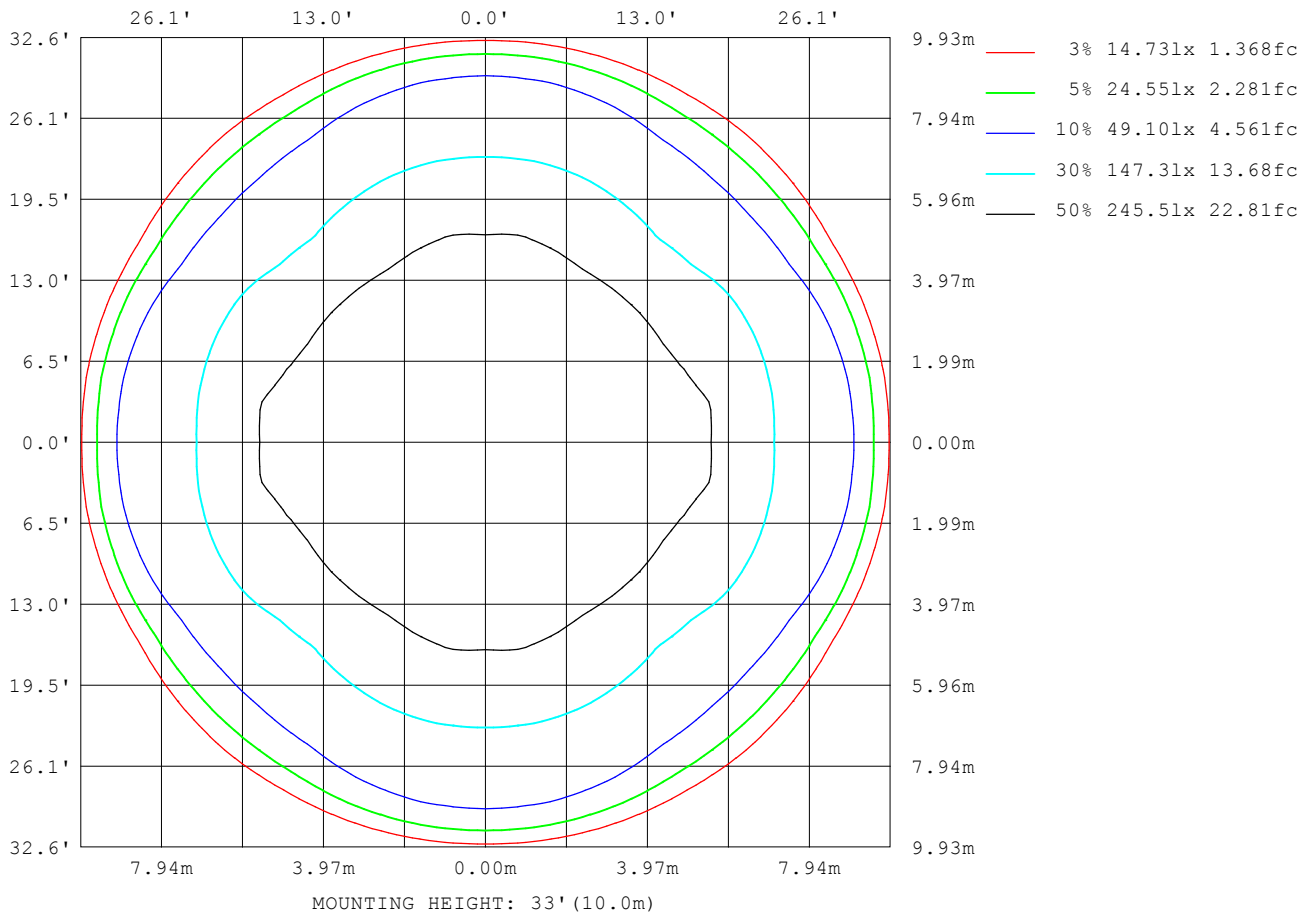
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-10-11

$\gamma$  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=0.4538]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

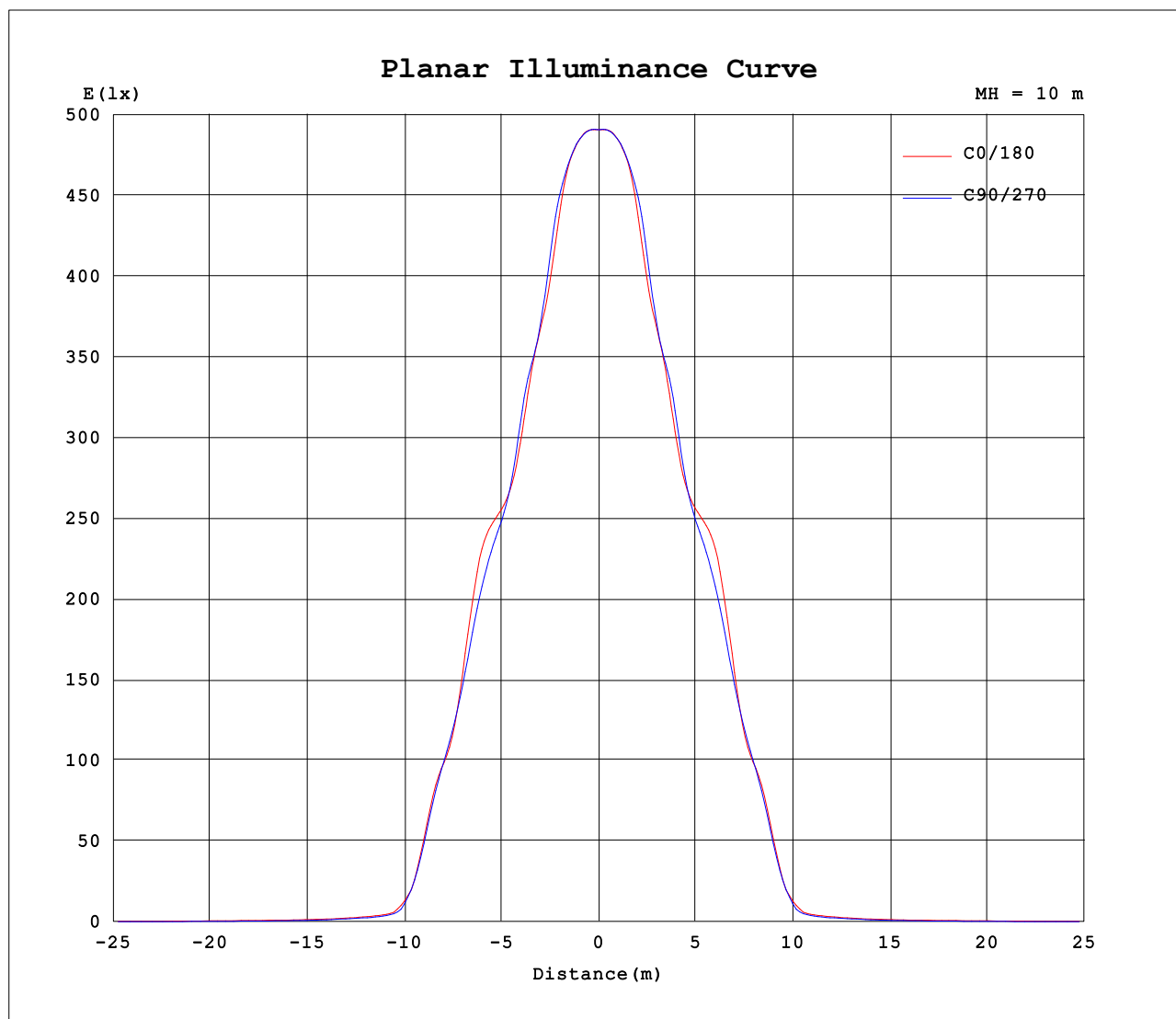
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-10-11

$\gamma$  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=0.4538]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-10-11

$\gamma$  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=0.4538]  
Remarks: