

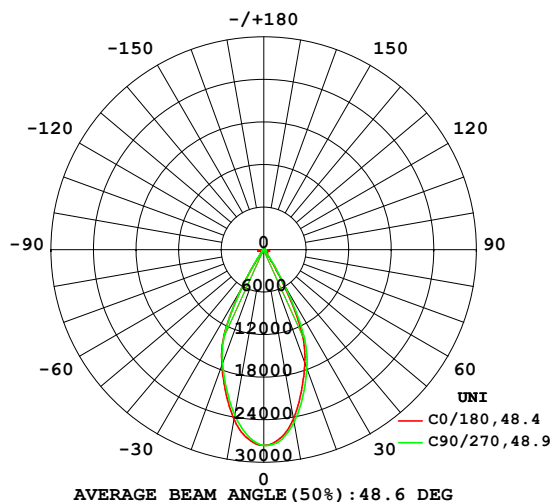
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

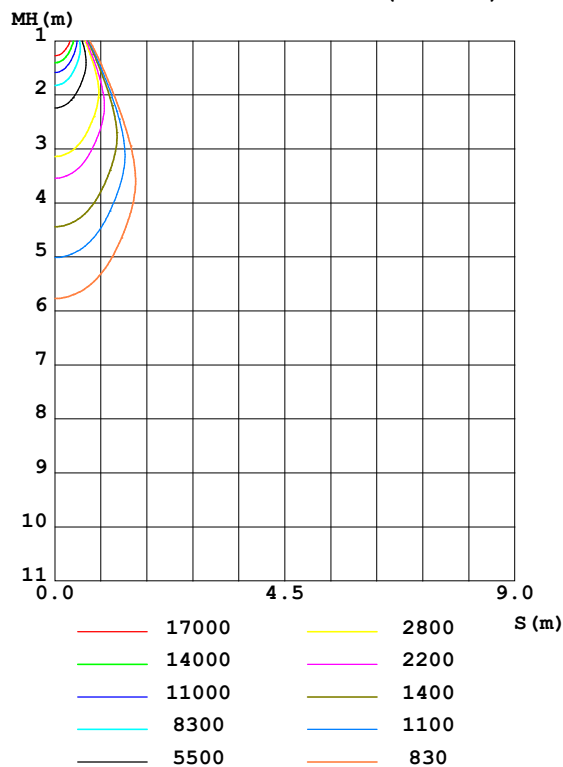
Test:U:229.80V I:0.4265A P:97.850W PF:0.9983 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:15670.7x1 lm		
NAME: LHB09-100-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.15 lm/W			
MODEL	/	I <sub>max</sub> (cd)	27639	S/MH(C0/180)	0.74
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.74
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	15671	η UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	15670.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.75

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: 2021-03-01

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
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	2420	2474	2471	2483	2429	2389	2366	2398	0- 10	2472	2472	15.8,15.8
20	1698	1608	1779	1638	1732	1563	1705	1537	10- 20	5730	8202	52.3,52.3
30	517.9	571.4	605.6	622.0	615.5	609.9	617.3	558.7	20- 30	5176	13378	85.4,85.4
40	60.07	58.53	50.00	62.12	62.76	67.21	49.63	53.55	30- 40	1336	14714	93.9,93.9
50	40.52	25.45	27.20	25.40	41.58	25.30	26.52	23.51	40- 50	254.1	14968	95.5,95.5
60	30.19	20.02	20.83	20.62	31.72	20.51	20.97	19.23	50- 60	194.5	15162	96.8,96.8
70	24.12	14.57	12.90	14.61	19.45	14.32	12.97	14.38	60- 70	158.9	15321	97.8,97.8
80	50.55	15.59	15.38	16.12	56.51	14.50	14.18	15.24	70- 80	203.4	15524	99.1,99.1
90	0.0792	0.0396	0.0442	0.3614	0.3950	1.903	0.2422	0.0560	80- 90	146.3	15671	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 14857 lm

%lum = 94.8%

%lamp = 94.8%

Conical surface Flux(120deg): 15162 lm

%lum = 96.8%

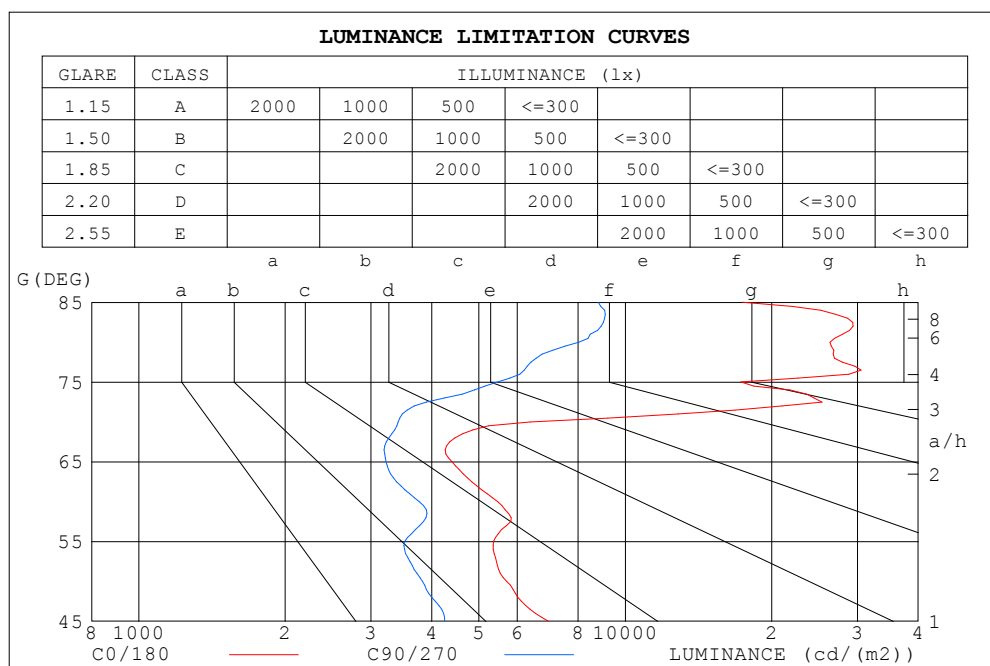
%lamp = 96.8%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17435	8794
80	26358	8018
75	17288	5465
70	6385	3414
65	4402	3223
60	5467	3771
55	5365	3523
50	5708	3830
45	6957	4253

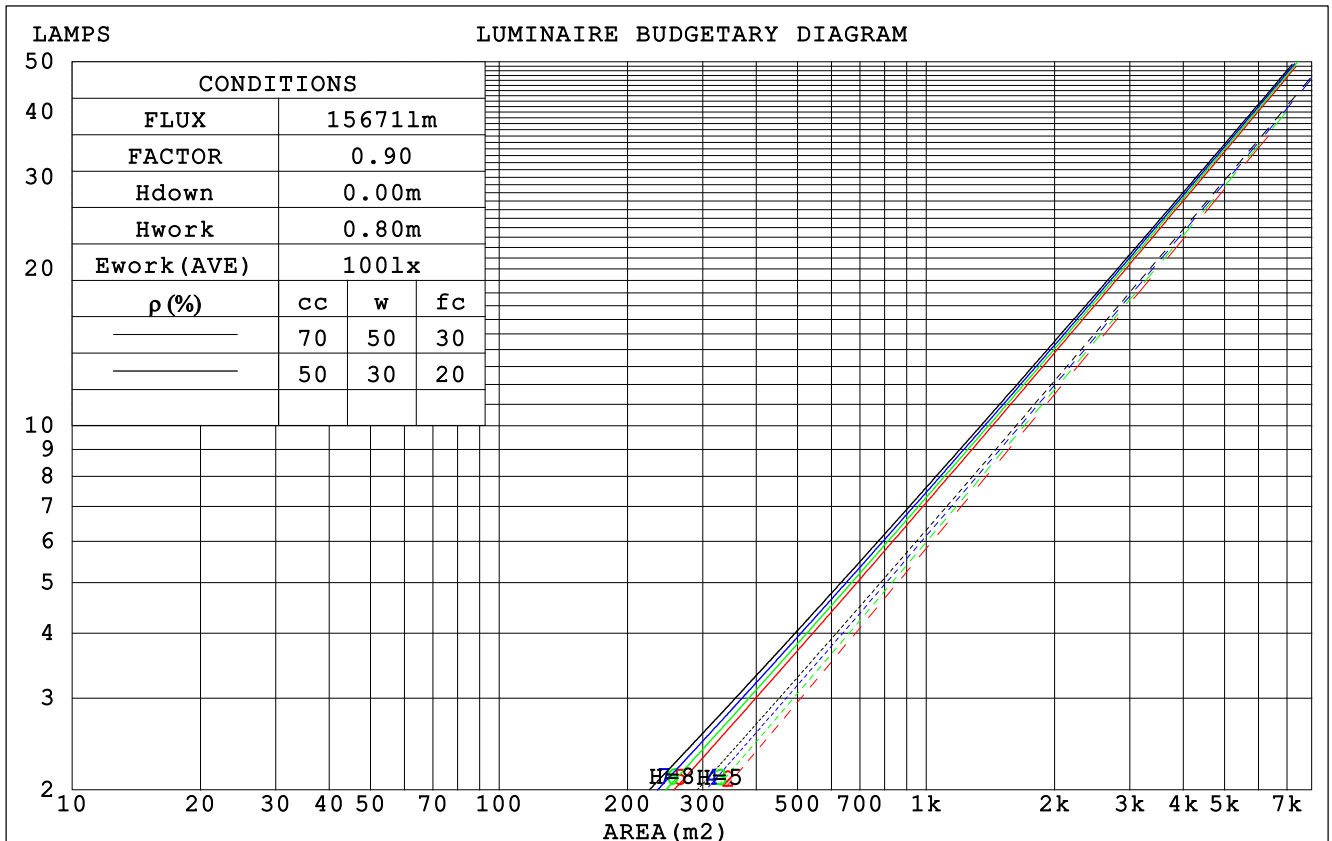
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4574]  
 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	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.04	.90	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.86	.89	.86	.84	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.83	.77	.73	.82	.77	.73	.80	.76	.73	.79	.75	.72	.78	.74	.72	.70
7.0	.79	.73	.69	.78	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.72	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.69	.63	.60	.68	.63	.60	.67	.63	.60	.67	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
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	.180	.102	.032	.173	.099	.031	.161	.092	.029	.149	.086	.028	.138	.080	.026															
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.078	.025	.131	.074	.023															
3.0	.154	.082	.025	.150	.080	.024	.141	.076	.023	.132	.072	.022	.125	.069	.021															
4.0	.145	.075	.022	.141	.074	.022	.133	.070	.021	.126	.068	.020	.119	.065	.020															
5.0	.136	.069	.020	.133	.068	.020	.126	.066	.019	.120	.063	.019	.114	.061	.018															
6.0	.129	.065	.019	.126	.064	.018	.120	.062	.018	.115	.060	.018	.110	.058	.017															
7.0	.123	.061	.017	.120	.060	.017	.115	.058	.017	.110	.057	.016	.106	.055	.016															
8.0	.117	.057	.016	.115	.056	.016	.110	.055	.016	.106	.054	.015	.102	.052	.015															
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014															
10.0	.107	.051	.014	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.048	.014															

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	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.044	.092	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4574]  
 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	8.2	9.2	8.6	9.5	9.9	6.9	7.9	7.3	8.2	8.5
3H	10.8	11.7	11.2	12.0	12.4	9.3	10.1	9.7	10.5	10.8
4H	14.9	15.7	15.3	16.1	16.5	11.1	11.9	11.5	12.3	12.6
6H	19.8	20.5	20.2	20.9	21.3	13.6	14.4	14.0	14.7	15.1
8H	21.2	21.9	21.7	22.3	22.7	14.7	15.3	15.1	15.7	16.1
12H	22.0	22.7	22.4	23.1	23.5	15.4	16.0	15.8	16.4	16.8
4H 2H	8.9	9.7	9.3	10.0	10.4	8.0	8.8	8.4	9.1	9.5
3H	11.6	12.2	12.0	12.7	13.1	10.5	11.2	10.9	11.6	12.0
4H	15.4	16.0	15.8	16.4	16.8	12.7	13.3	13.1	13.7	14.1
6H	20.4	20.9	20.8	21.3	21.8	15.2	15.8	15.7	16.2	16.7
8H	22.0	22.5	22.5	23.0	23.4	16.3	16.8	16.8	17.2	17.7
12H	23.0	23.5	23.5	24.0	24.4	17.1	17.5	17.6	18.0	18.5
8H 4H	15.8	16.3	16.3	16.7	17.2	13.7	14.2	14.2	14.7	15.1
6H	20.6	21.0	21.1	21.5	22.0	16.4	16.8	16.9	17.3	17.8
8H	22.4	22.7	22.9	23.2	23.7	17.7	18.0	18.2	18.5	19.0
12H	23.8	24.0	24.3	24.5	25.1	18.7	19.0	19.2	19.5	20.1
12H 4H	15.9	16.3	16.4	16.8	17.3	14.0	14.5	14.5	14.9	15.4
6H	20.7	21.0	21.2	21.5	22.1	16.8	17.1	17.3	17.6	18.1
8H	22.5	22.8	23.0	23.3	23.9	18.2	18.5	18.7	19.0	19.5
CIE190: 2010										

CIE190: 2010  
Area: 0.1105 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

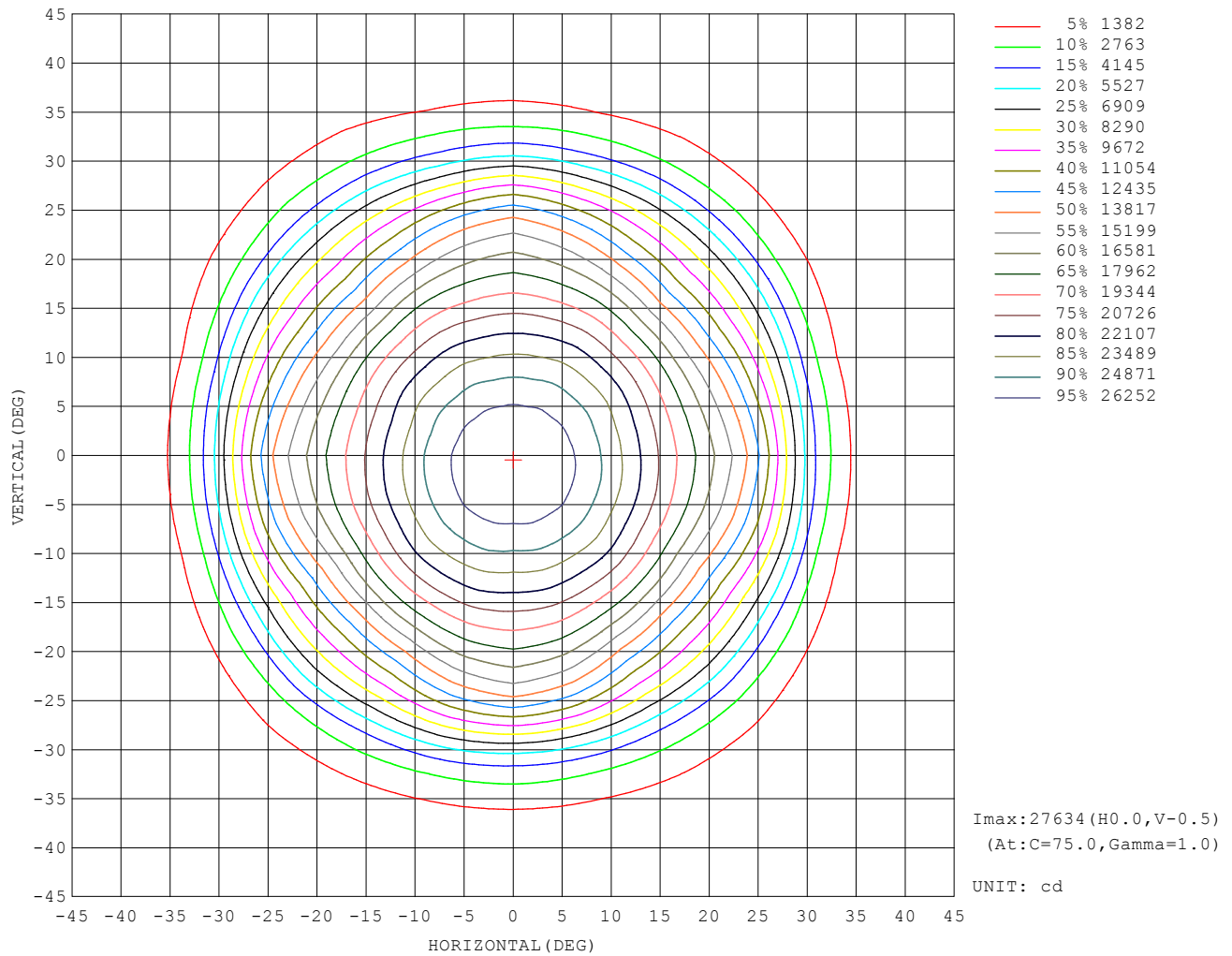
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	87	82	78	87	81	78	74
0.80	95	89	86	94	89	85	93	88	85	81
1.00	99	93	90	98	93	90	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	105	101	97	104	100	97	102	98	96	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	102	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	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: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4574]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

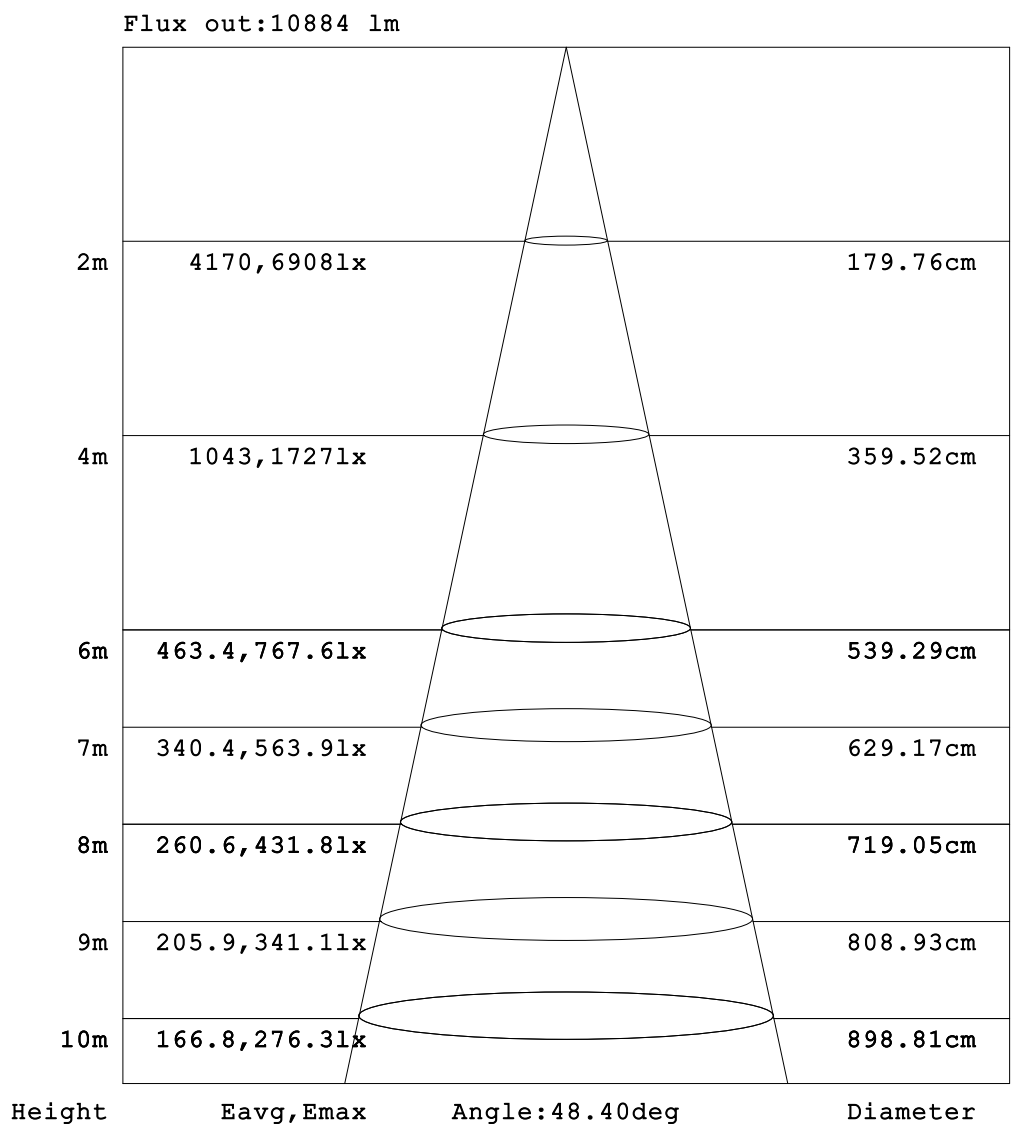


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks:



## AAI Figure



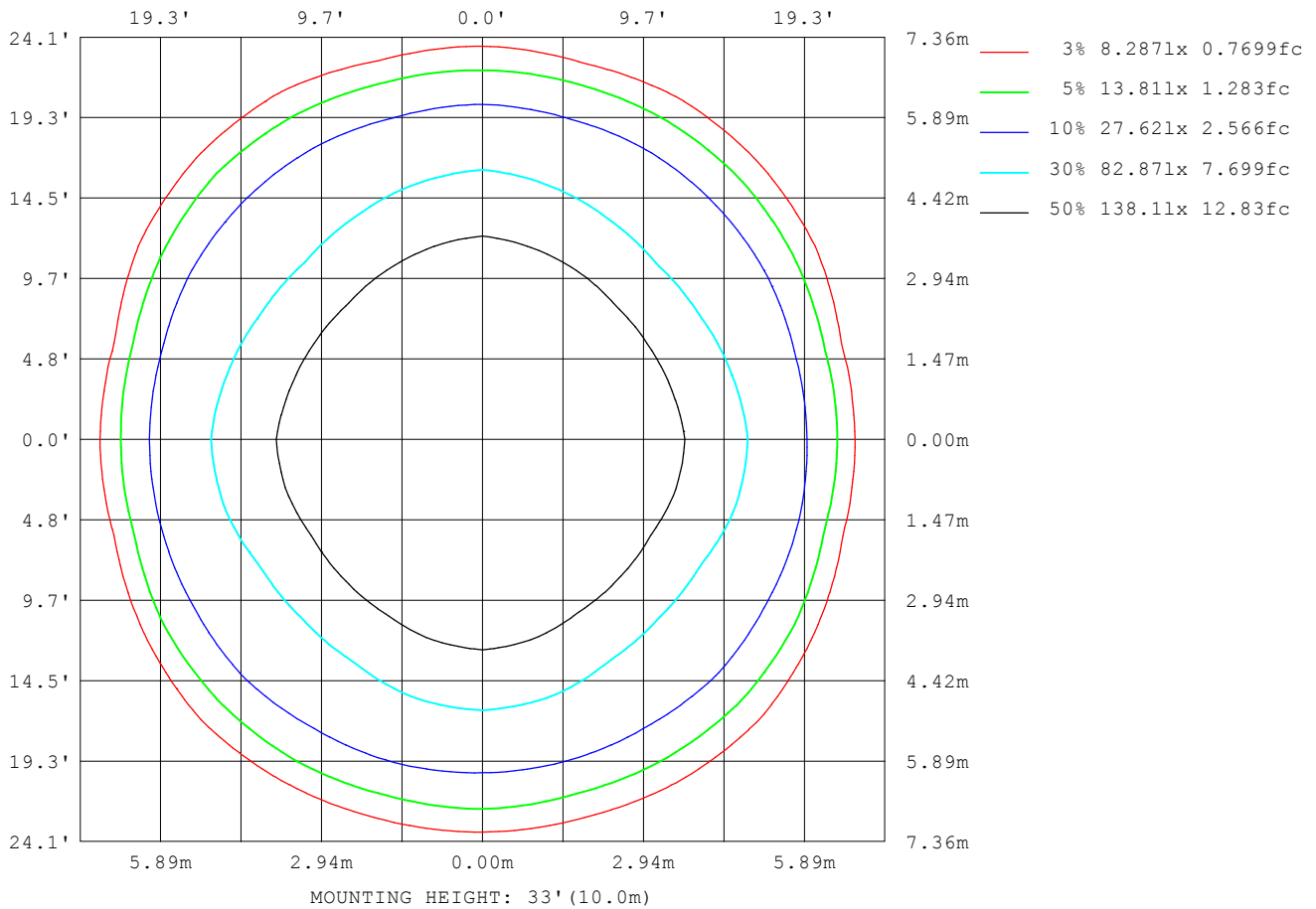
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

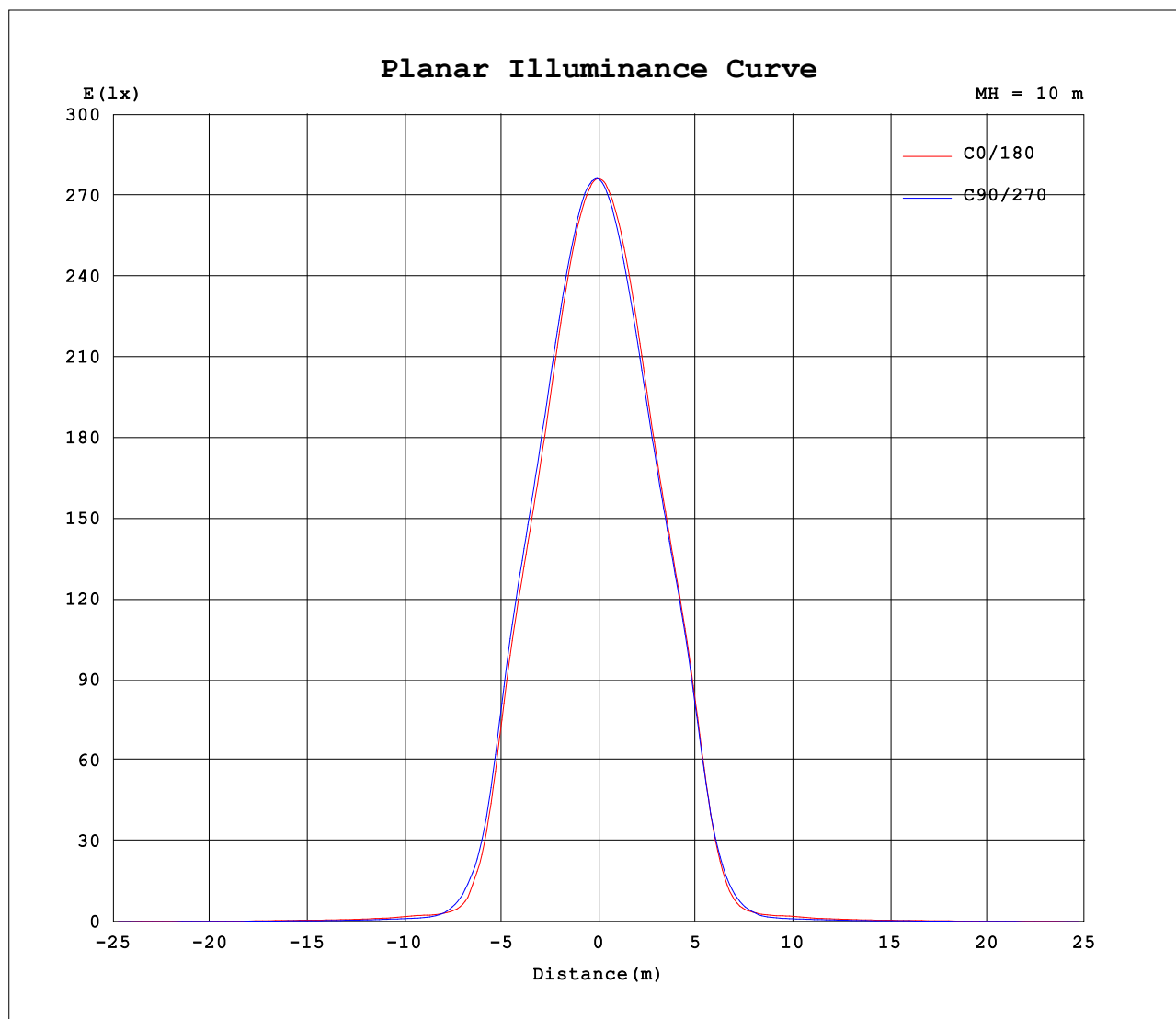
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks: