

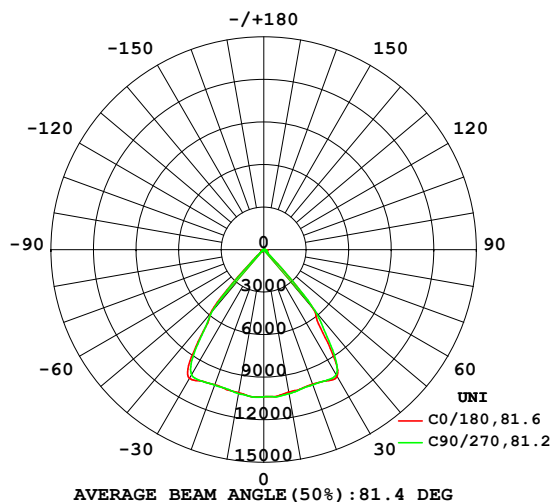
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

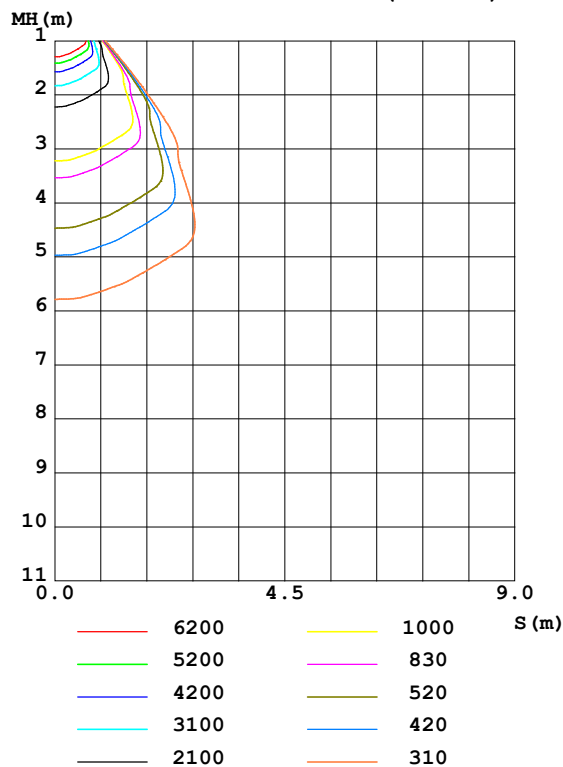
Test:U:229.80V I:0.4261A P:97.740W PF:0.9983 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:15590.5x1 lm		
NAME: LHB09-100-5070-L03902	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 159.51 lm/W			
MODEL	/	Imax(cd)	10488	S/MH(C0/180)	1.20
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.18
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	15591	$\eta$ UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	15590.5	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	0.85

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

$\gamma$  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

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	1021	1023	1031	1030	1025	1022	1031	1020	0- 10	986.9	986.9	6.33,6.33
20	1010	998.5	1015	999.9	1015	1004	1017	997.6	10- 20	2875	3862	24.8,24.8
30	1034	1008	1020	1016	1048	1015	1020	1004	20- 30	4705	8567	54.9,54.9
40	543.5	485.1	558.4	529.1	585.3	525.2	566.0	465.7	30- 40	5157	13723	88,88
50	27.23	32.79	30.46	32.42	29.22	33.84	28.39	29.36	40- 50	1395	15118	97,97
60	20.18	19.29	17.21	19.10	20.02	18.74	15.82	17.28	50- 60	197.3	15316	98.2,98.2
70	20.25	12.30	12.72	12.63	20.19	11.93	11.76	11.13	60- 70	142.3	15458	99.1,99.1
80	21.84	6.486	3.607	7.588	21.81	7.687	3.550	6.674	70- 80	101.8	15560	99.8,99.8
90	0.0276	0.0161	0.0161	0.0218	0.0333	0.0563	0.0287	0.0172	80- 90	30.92	15591	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): 14896 lm

%lum = 95.5%

%lamp = 95.5%

Conical surface Flux(120deg): 15316 lm

%lum = 98.2%

%lamp = 98.2%

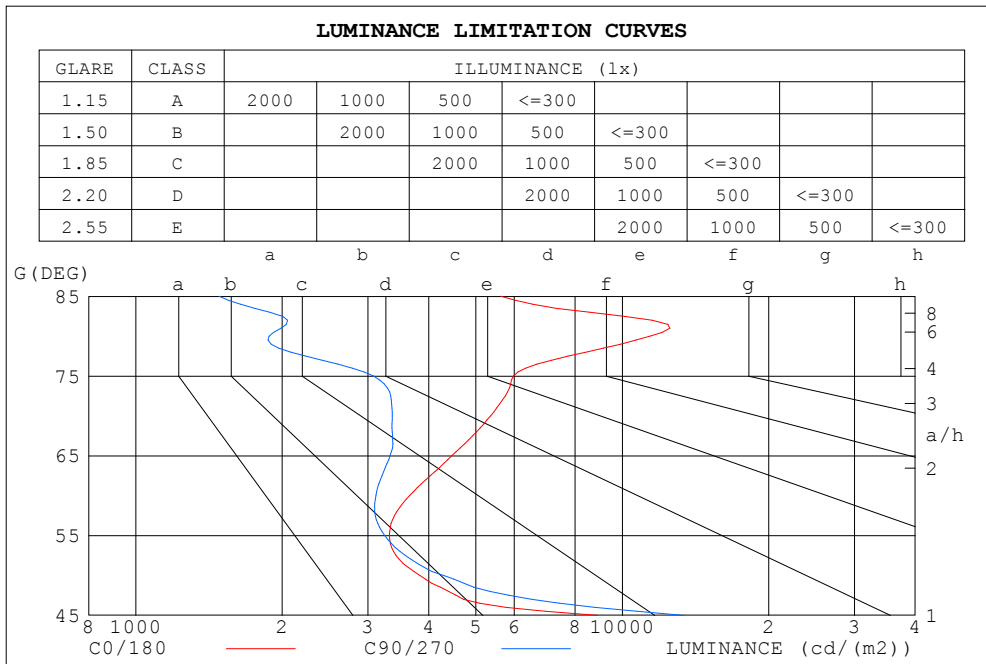
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-03-01

$\gamma$  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	5624	1483
80	11386	1880
75	5977	3078
70	5359	3365
65	4465	3332
60	3654	3114
55	3324	3247
50	3834	4288
45	8890	13357

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

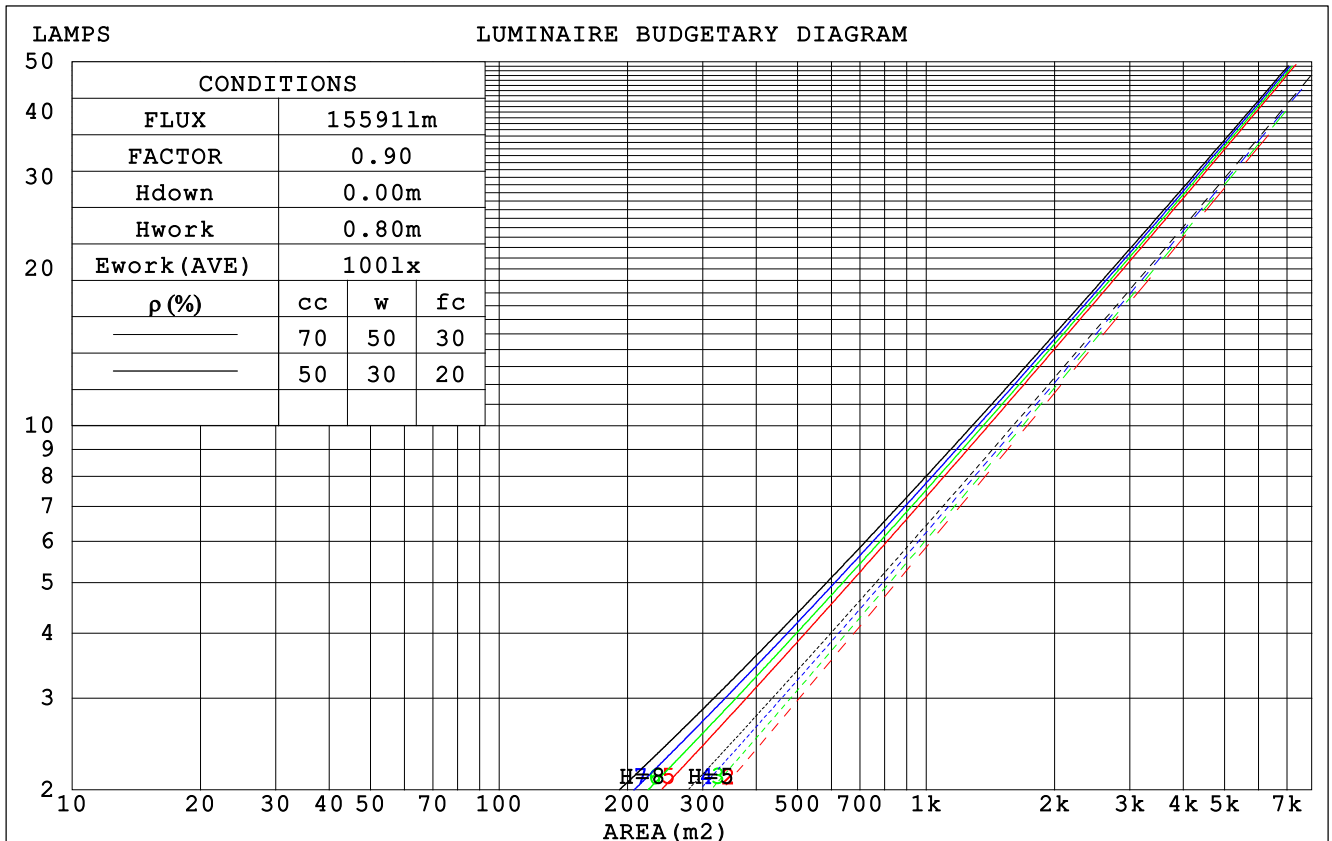
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4574]  
 Remarks:



# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.07	1.04	1.08	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.93	.99	.95	.92	.96	.92	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.87	.83	.92	.86	.82	.89	.85	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.86	.80	.75	.85	.79	.74	.82	.77	.74	.80	.76	.73	.78	.75	.72	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.66	.62	.71	.66	.61	.70	.65	.61	.68	.64	.61	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.52	.63	.57	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.50
9.0	.59	.53	.48	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.46
10.0	.55	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.52	.48	.44	.43



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

## 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	.198	.113	.036	.192	.109	.035	.179	.103	.033	.167	.096	.031	.156	.091	.029	
2.0	.191	.105	.032	.185	.102	.031	.175	.097	.030	.165	.092	.029	.155	.088	.028	
3.0	.183	.097	.029	.178	.095	.029	.168	.091	.028	.160	.088	.027	.152	.084	.026	
4.0	.174	.091	.027	.170	.089	.026	.162	.086	.026	.154	.083	.025	.147	.080	.024	
5.0	.166	.085	.025	.162	.083	.024	.155	.081	.024	.149	.078	.023	.142	.076	.023	
6.0	.159	.080	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.138	.072	.022	
7.0	.152	.075	.021	.149	.074	.021	.143	.072	.021	.138	.071	.021	.133	.069	.020	
8.0	.145	.071	.020	.142	.070	.020	.137	.069	.020	.132	.067	.019	.128	.066	.019	
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.063	.018	
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.138	.099	.069	.119	.086	.060	.082	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.118	.072	.040	.101	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.097	.057	.030	.067	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.103	.056	.026	.089	.049	.022	.061	.035	.016	.036	.020	.010	.012	.007	.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	7.5	8.6	7.9	8.9	9.2	7.6	8.6	8.0	9.0	9.3
3H	10.3	11.2	10.7	11.6	11.9	9.4	10.3	9.8	10.7	11.0
4H	11.7	12.6	12.1	12.9	13.3	10.2	11.1	10.6	11.4	11.8
6H	13.5	14.3	13.9	14.7	15.1	10.5	11.3	10.9	11.7	12.1
8H	14.5	15.2	14.9	15.6	16.0	10.6	11.3	11.1	11.7	12.1
12H	14.8	15.5	15.2	15.8	16.3	10.6	11.3	11.1	11.7	12.2
4H 2H	8.3	9.2	8.7	9.5	9.9	8.4	9.3	8.8	9.6	10.0
3H	11.0	11.7	11.4	12.1	12.5	10.3	11.0	10.7	11.4	11.8
4H	12.4	13.0	12.8	13.4	13.9	11.2	11.8	11.6	12.2	12.7
6H	14.0	14.6	14.5	15.0	15.5	11.6	12.1	12.1	12.6	13.0
8H	14.9	15.4	15.4	15.9	16.3	11.7	12.2	12.2	12.6	13.1
12H	15.2	15.7	15.7	16.2	16.6	11.7	12.2	12.2	12.7	13.1
8H 4H	12.7	13.2	13.2	13.6	14.1	11.7	12.2	12.2	12.6	13.1
6H	14.3	14.7	14.8	15.2	15.7	12.3	12.7	12.8	13.2	13.7
8H	15.2	15.5	15.7	16.0	16.5	12.4	12.8	13.0	13.3	13.8
12H	15.5	15.8	16.0	16.3	16.9	12.5	12.8	13.0	13.3	13.9
12H 4H	12.7	13.1	13.2	13.6	14.1	11.7	12.2	12.2	12.7	13.1
6H	14.3	14.7	14.9	15.2	15.7	12.4	12.8	13.0	13.2	13.8
8H	15.2	15.5	15.7	16.0	16.6	12.6	12.9	13.1	13.4	14.0
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) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	81	91	85	81	90	85	81	77
1.00	97	91	87	96	91	87	95	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	104	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	108	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

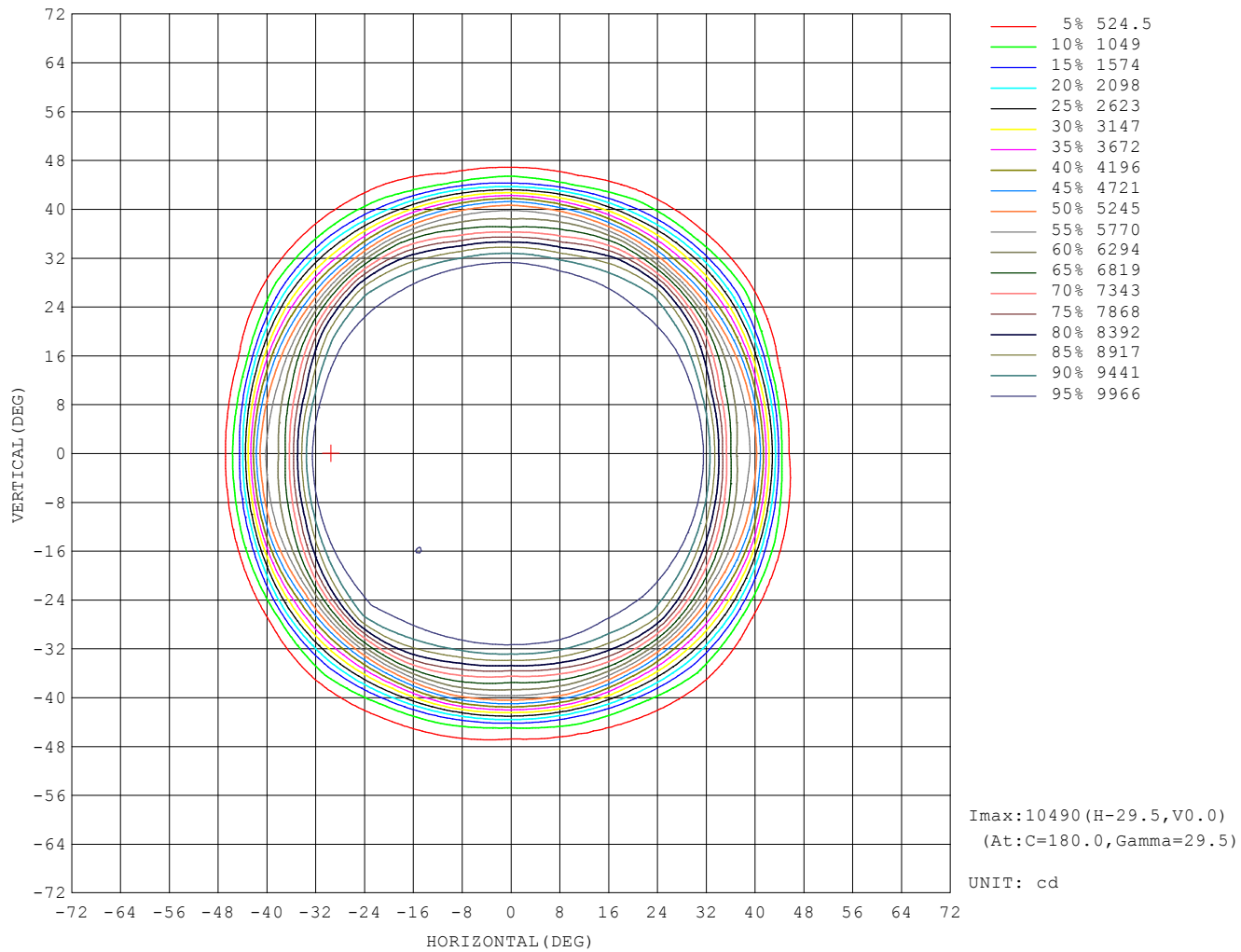
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-03-01

$\gamma$  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

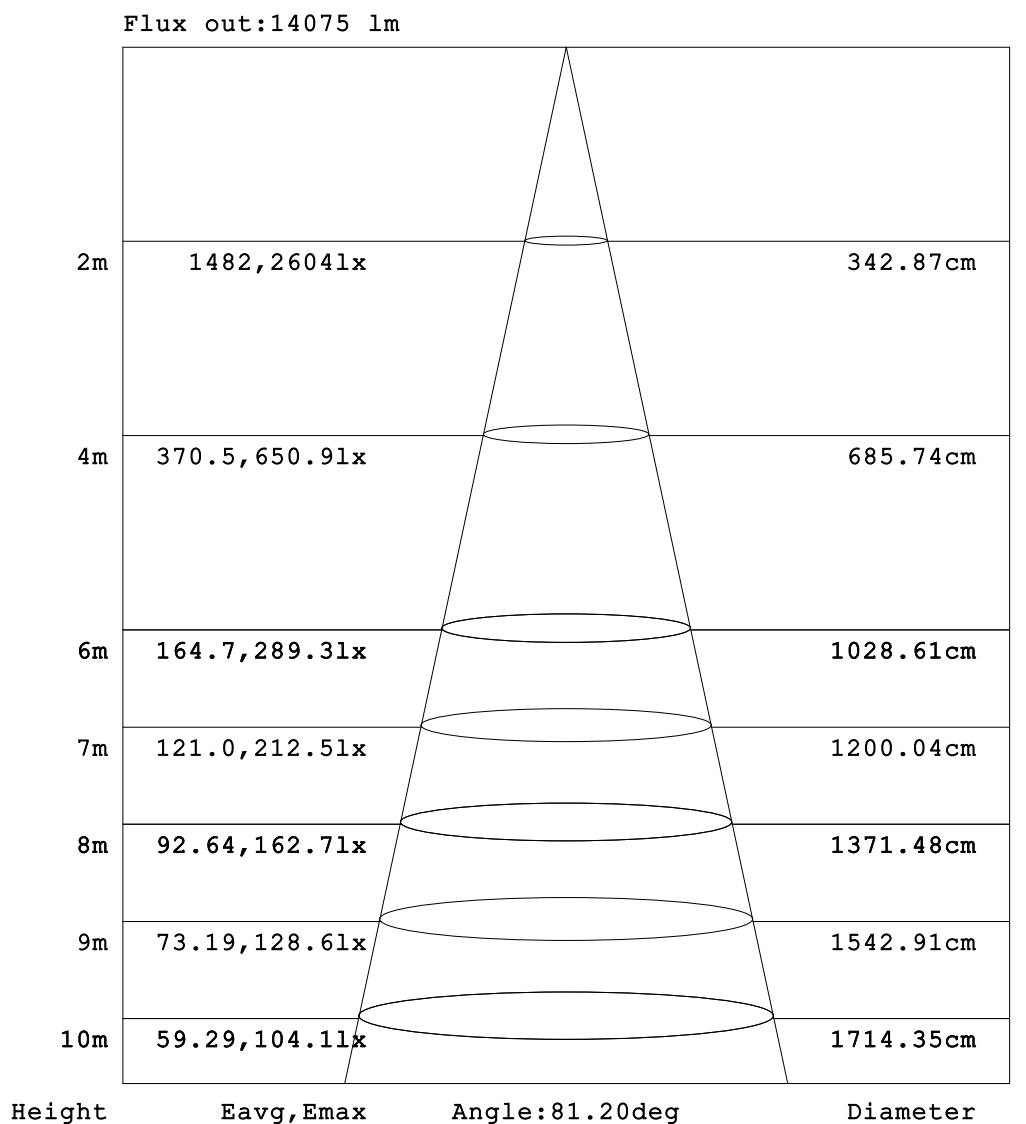


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-03-01

$\gamma$  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



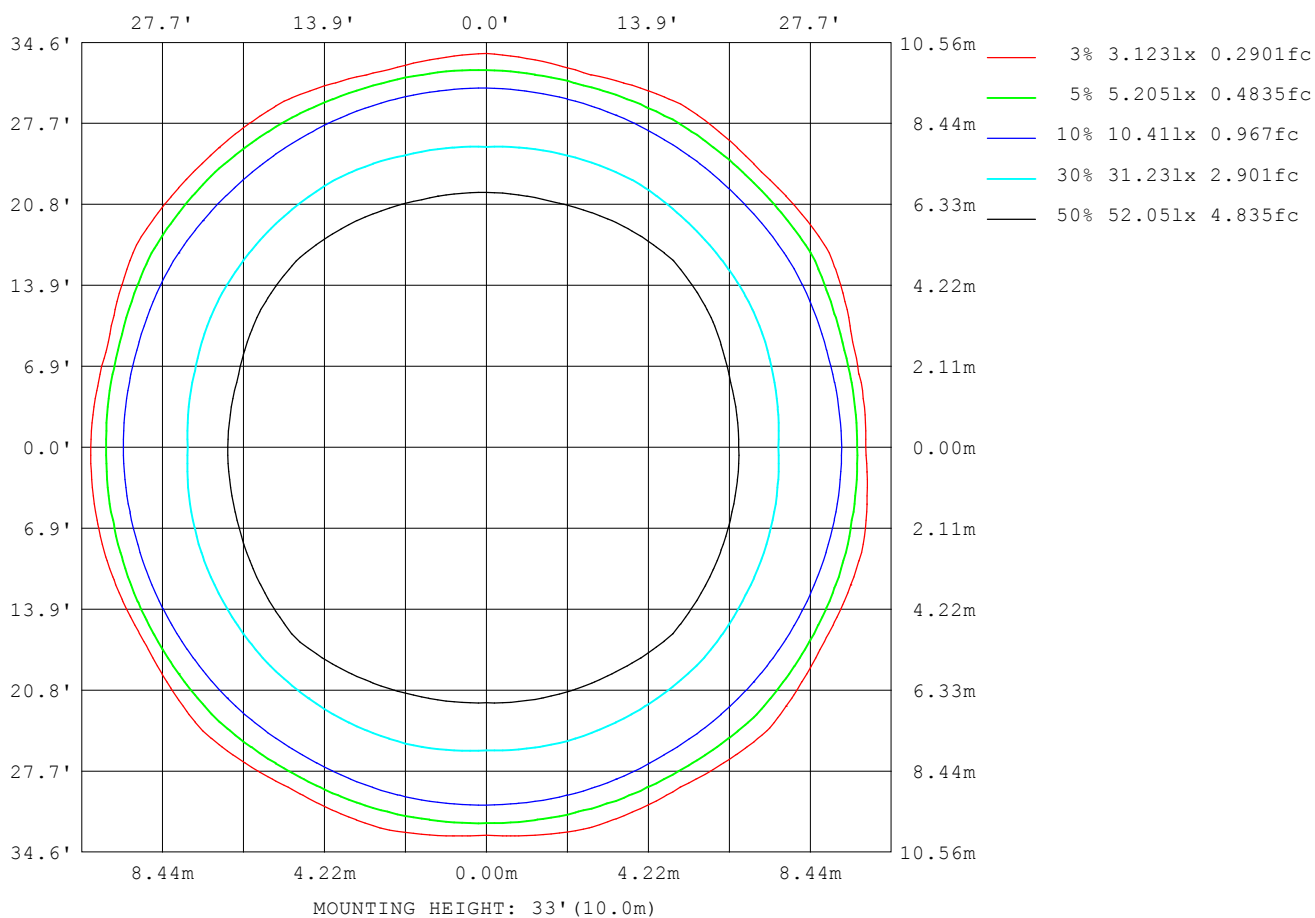
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:



ISOLUX DIAGRAM

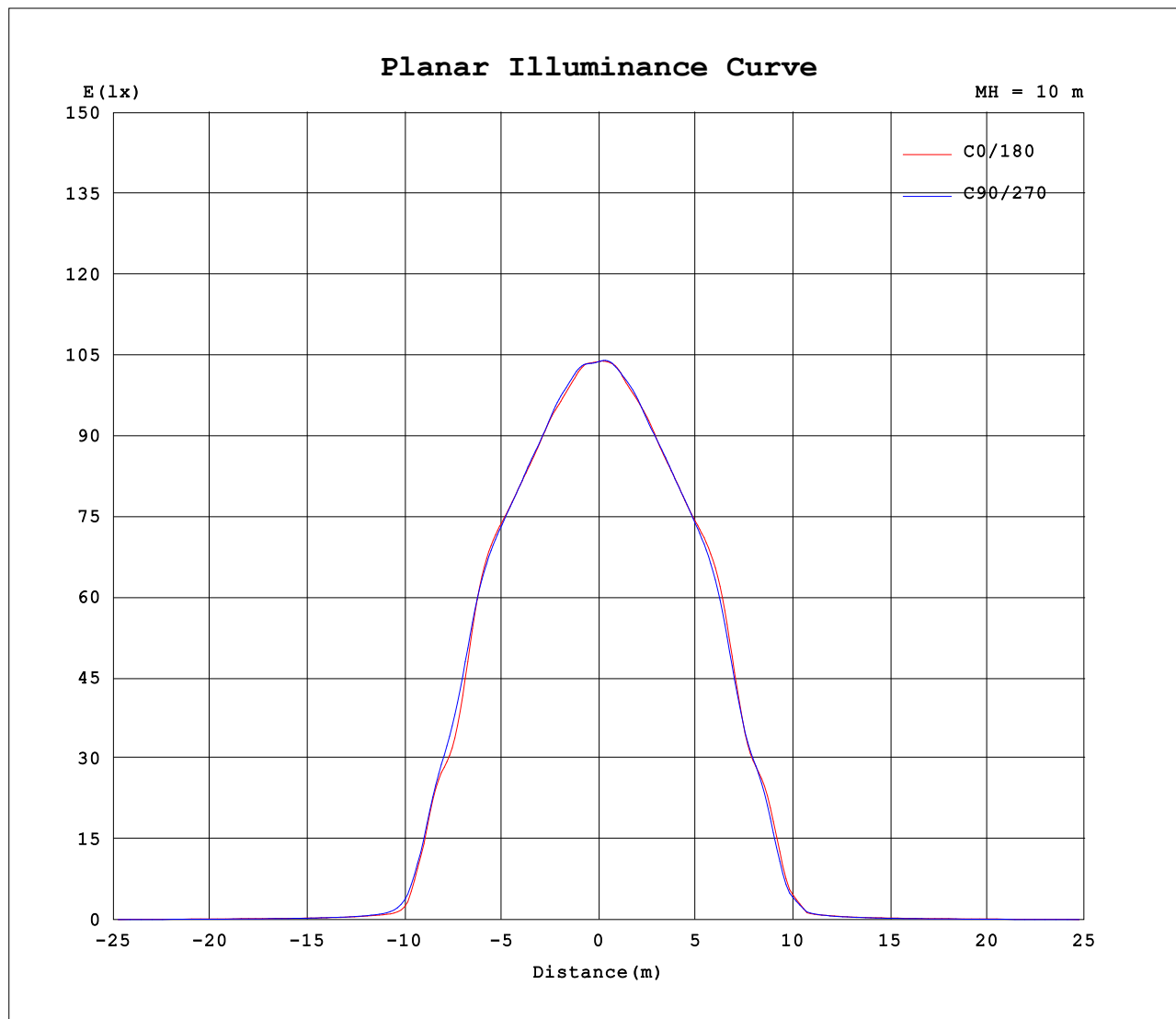


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

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:



## 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: