

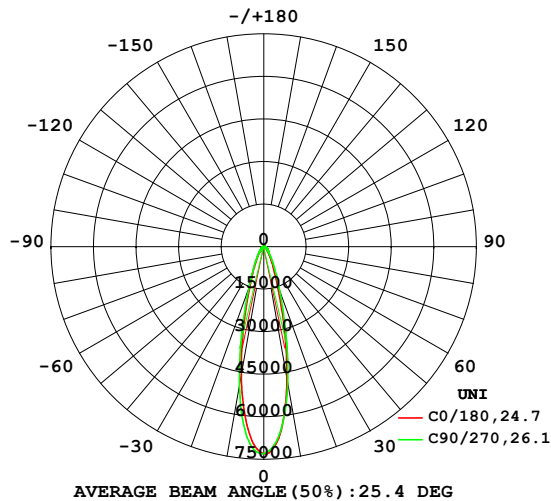
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

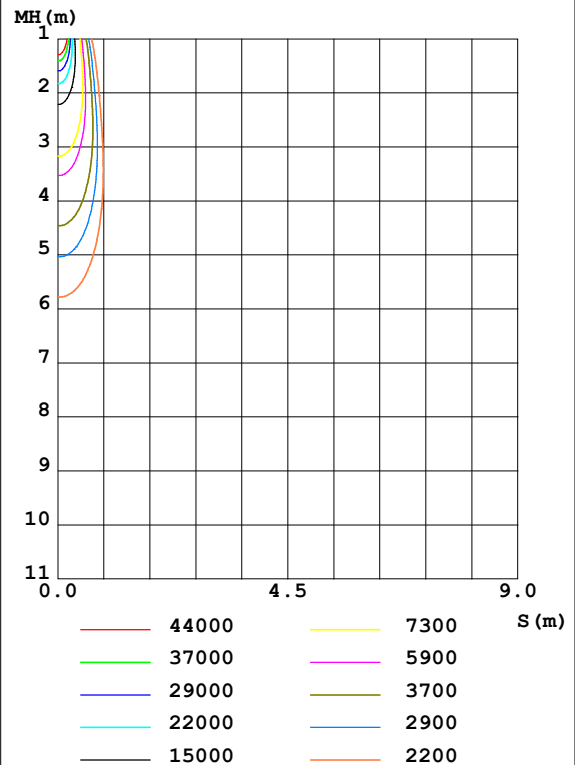
Test:U:229.7V I:0.6669A P:151.4W PF:0.9889 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:23412.6x1 lm		
NAME: FL23-150-5070-F19204	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.59 lm/W			
MODEL	-	Imax(cd)	73104	S/MH(C0/180)	0.41
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.44
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	23413	$\eta$ UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	23412.6	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.00

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:2020-07-14

$\gamma$  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=0.4589]  
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	4722	4834	4893	4689	4585	4790	4959	4909	0- 10	5715	5715	24.4,24.4
20	1373	1527	1663	1468	1370	1469	1549	1443	10- 20	7738	13453	57.5,57.5
30	502.4	569.1	638.2	550.5	510.6	538.9	563.8	516.0	20- 30	4111	17564	75,75
40	232.7	259.0	284.0	256.4	240.3	248.7	250.9	236.9	30- 40	2311	19875	84.9,84.9
50	136.5	144.8	150.7	144.8	139.5	144.0	143.5	140.1	40- 50	1450	21325	91.1,91.1
60	90.28	89.44	89.99	88.98	91.10	92.58	94.40	91.25	50- 60	1025	22350	95.5,95.5
70	51.85	46.43	44.98	45.74	51.94	51.96	54.96	51.73	60- 70	691.5	23042	98.4,98.4
80	15.33	10.78	8.560	10.47	15.00	16.10	18.06	16.25	70- 80	325.1	23367	99.8,99.8
90	0.0475	0.0433	0.0450	0.0437	0.0503	0.0519	0.0595	0.0408	80- 90	45.84	23413	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): 20670 lm

%lum = 88.3%

%lamp = 88.3%

Conical surface Flux(120deg): 22350 lm

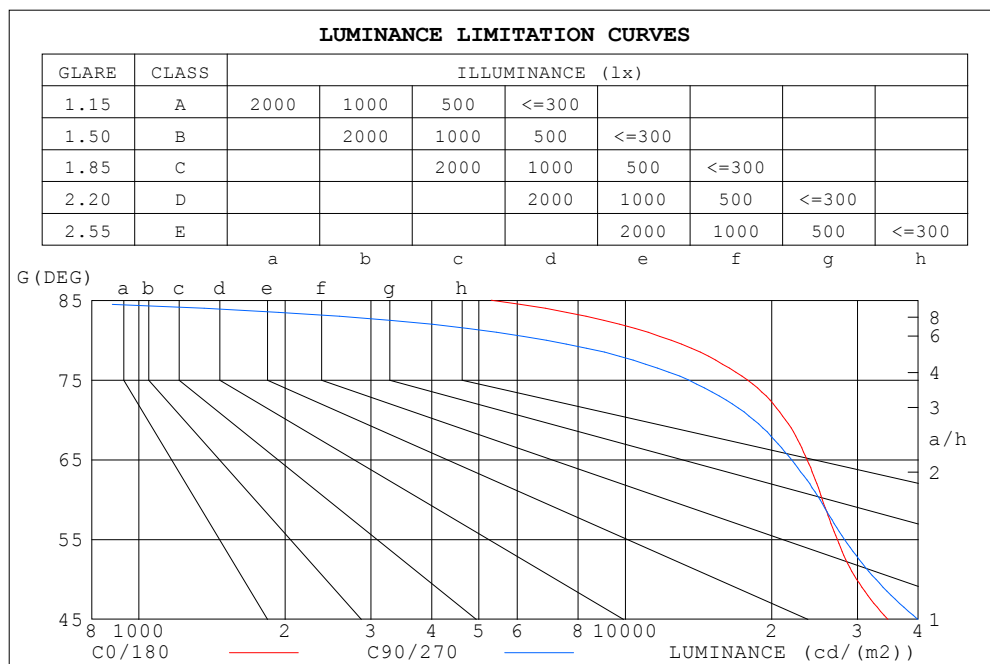
%lum = 95.5%

%lamp = 95.5%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-14

$\gamma$  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=0.4589]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	5306	504
80	12423	6884
75	17826	13491
70	21340	18367
65	23625	21962
60	25415	25133
55	27285	28219
50	29898	32751
45	34651	39927

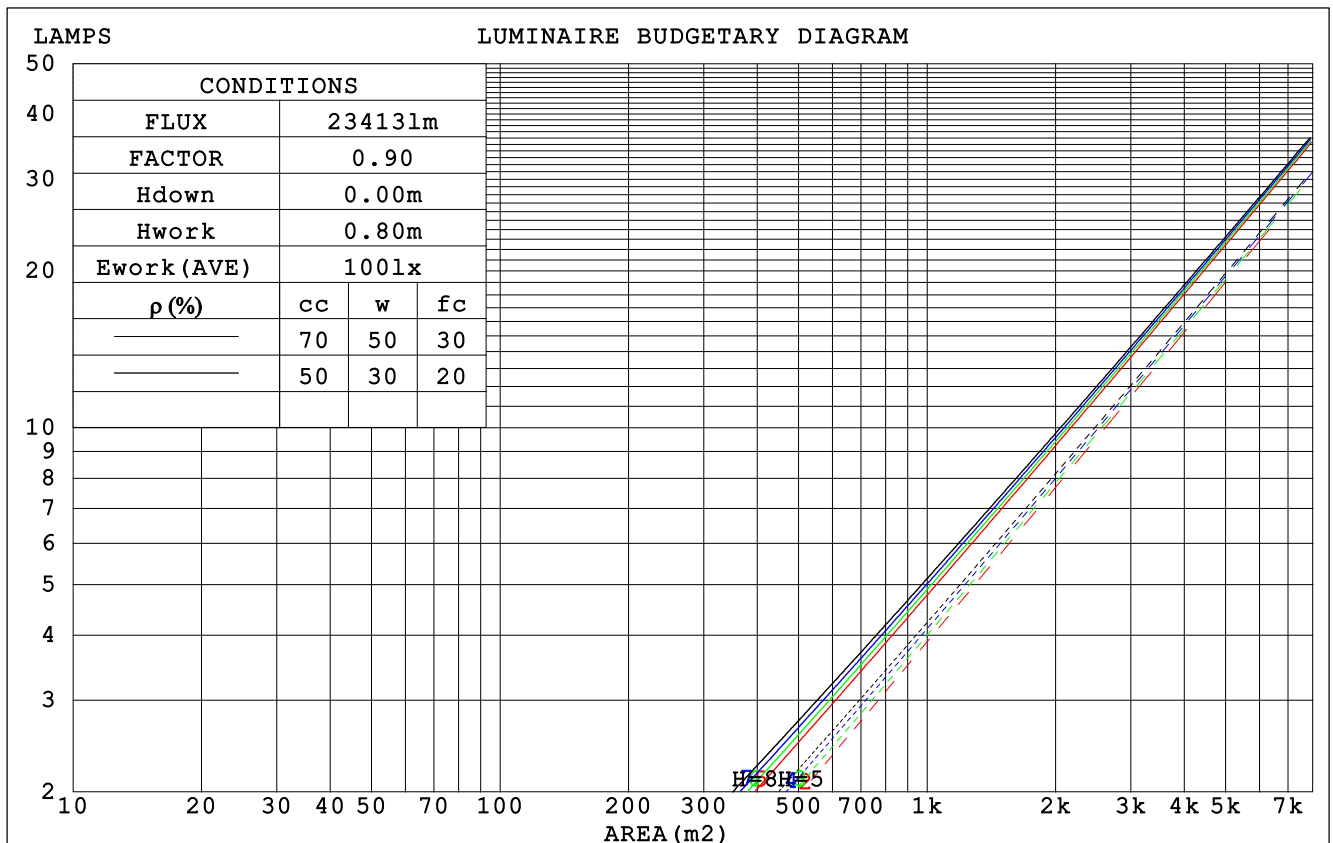
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-14

$\gamma$  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=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	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	.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	1.03	.99	.96	1.01	.98	.95	.98	.95	.93	.95	.93	.91	.92	.90	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.84	.88	.85	.83	.82
4.0	.91	.86	.82	.90	.85	.81	.88	.84	.80	.86	.82	.79	.84	.81	.78	.77
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.82	.76	.72	.81	.76	.72	.80	.75	.72	.78	.74	.71	.77	.73	.71	.69
7.0	.78	.72	.69	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.66
8.0	.75	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.64	.63
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.69	.64	.60	.68	.63	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.58



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-14

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=0.4589]  
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	.170	.093	.029	.164	.091	.028	.154	.086	.027	.144	.081	.025	.135	.076	.024		
3.0	.159	.085	.025	.155	.083	.025	.146	.079	.024	.137	.075	.023	.129	.072	.022		
4.0	.149	.078	.023	.145	.076	.022	.137	.073	.022	.130	.070	.021	.124	.067	.020		
5.0	.140	.071	.021	.137	.070	.020	.130	.068	.020	.124	.065	.019	.118	.063	.019		
6.0	.132	.066	.019	.129	.065	.019	.123	.063	.018	.118	.061	.018	.112	.059	.018		
7.0	.125	.062	.017	.122	.061	.017	.117	.059	.017	.112	.057	.017	.107	.056	.016		
8.0	.118	.058	.016	.116	.057	.016	.111	.056	.016	.107	.054	.016	.103	.053	.015		
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.099	.050	.014		
10.0	.107	.051	.014	.105	.051	.014	.101	.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	.156	.132	.113	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.098	.067	.044	.068	.047	.031	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.032	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.090	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2020-07-14

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=0.4589]  
 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	19.5	20.6	19.9	20.9	21.2	19.5	20.6	19.9	20.9	21.2
3H	21.0	22.0	21.4	22.3	22.7	20.7	21.7	21.1	22.0	22.4
4H	21.5	22.4	21.9	22.7	23.1	21.0	21.9	21.4	22.2	22.6
6H	21.7	22.5	22.1	22.9	23.3	21.0	21.9	21.4	22.2	22.6
8H	21.7	22.5	22.1	22.9	23.3	21.0	21.8	21.4	22.2	22.6
12H	21.7	22.4	22.1	22.8	23.2	20.9	21.7	21.4	22.1	22.5
4H 2H	19.9	20.8	20.3	21.2	21.6	19.9	20.8	20.3	21.1	21.5
3H	21.6	22.3	22.0	22.7	23.1	21.2	22.0	21.6	22.4	22.8
4H	22.1	22.8	22.6	23.2	23.7	21.6	22.2	22.0	22.7	23.1
6H	22.4	23.0	22.9	23.4	23.9	21.7	22.2	22.1	22.7	23.2
8H	22.4	23.0	22.9	23.4	23.9	21.6	22.2	22.1	22.6	23.1
12H	22.4	22.9	22.9	23.4	23.8	21.6	22.0	22.1	22.5	23.0
8H 4H	22.2	22.7	22.6	23.1	23.6	21.6	22.2	22.1	22.6	23.1
6H	22.5	22.9	23.0	23.4	23.9	21.8	22.2	22.3	22.7	23.2
8H	22.5	22.9	23.1	23.4	23.9	21.7	22.1	22.3	22.6	23.1
12H	22.5	22.9	23.1	23.4	23.9	21.7	22.0	22.2	22.5	23.1
12H 4H	22.1	22.6	22.6	23.1	23.5	21.6	22.1	22.1	22.6	23.0
6H	22.5	22.8	23.0	23.3	23.8	21.7	22.1	22.3	22.6	23.1
8H	22.5	22.8	23.0	23.3	23.9	21.7	22.0	22.2	22.5	23.1
CIE190: 2010										

CIE190: 2010  
Area: 0.07155 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-14

$\gamma$  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=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

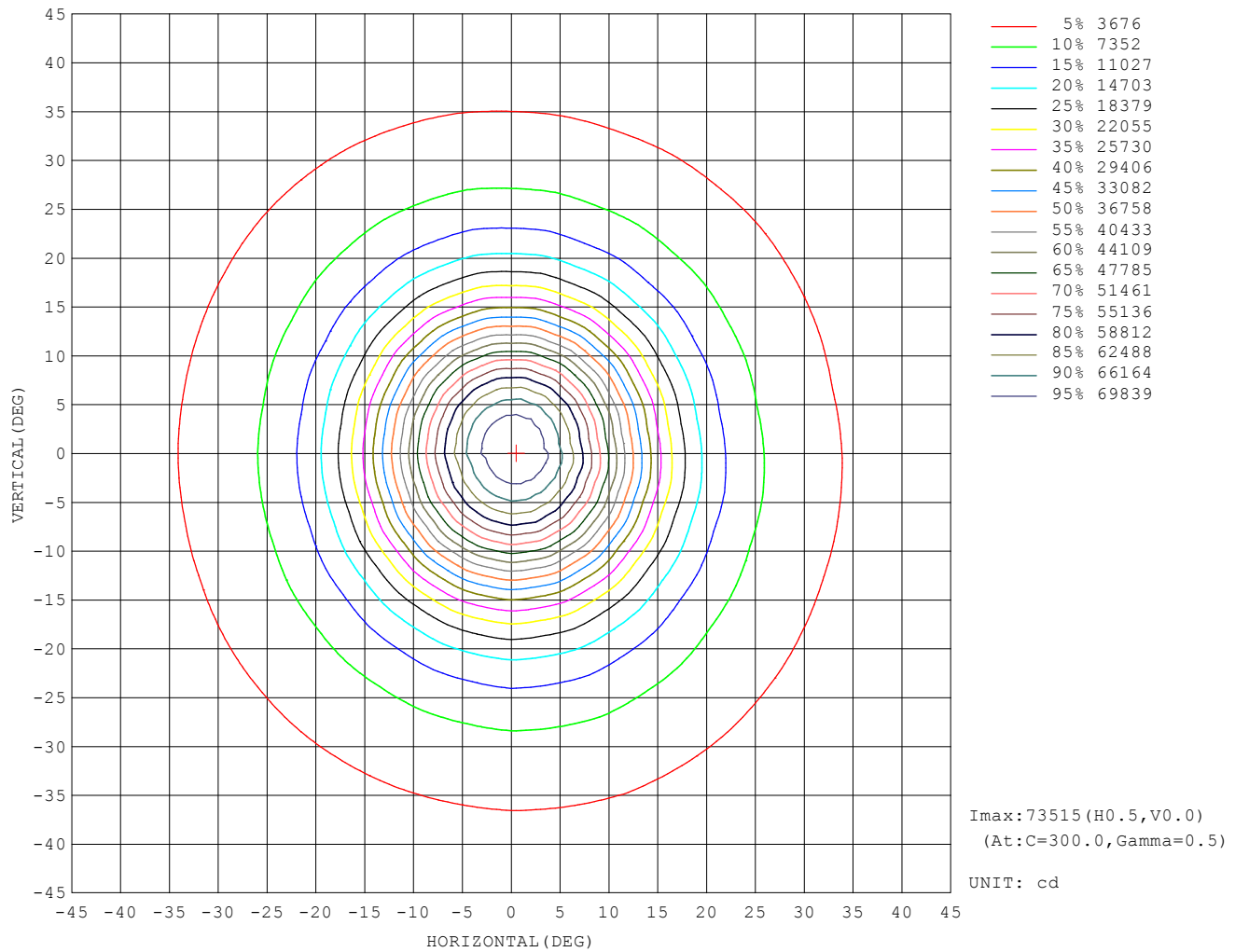
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	70	81	74	70	66
0.80	90	83	79	89	83	79	88	82	78	74
1.00	95	89	84	94	88	84	93	88	84	79
1.25	100	94	90	99	93	89	97	92	88	84
1.50	103	97	93	102	96	93	99	95	92	87
2.00	106	101	98	105	100	97	102	98	95	90
2.50	108	104	100	107	103	99	103	100	98	91
3.00	110	106	103	108	105	102	105	102	100	93
4.00	113	109	107	110	108	105	107	105	103	95
5.00	114	111	109	112	110	108	108	106	104	97
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: 2020-07-14

$\gamma$  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=0.4589]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

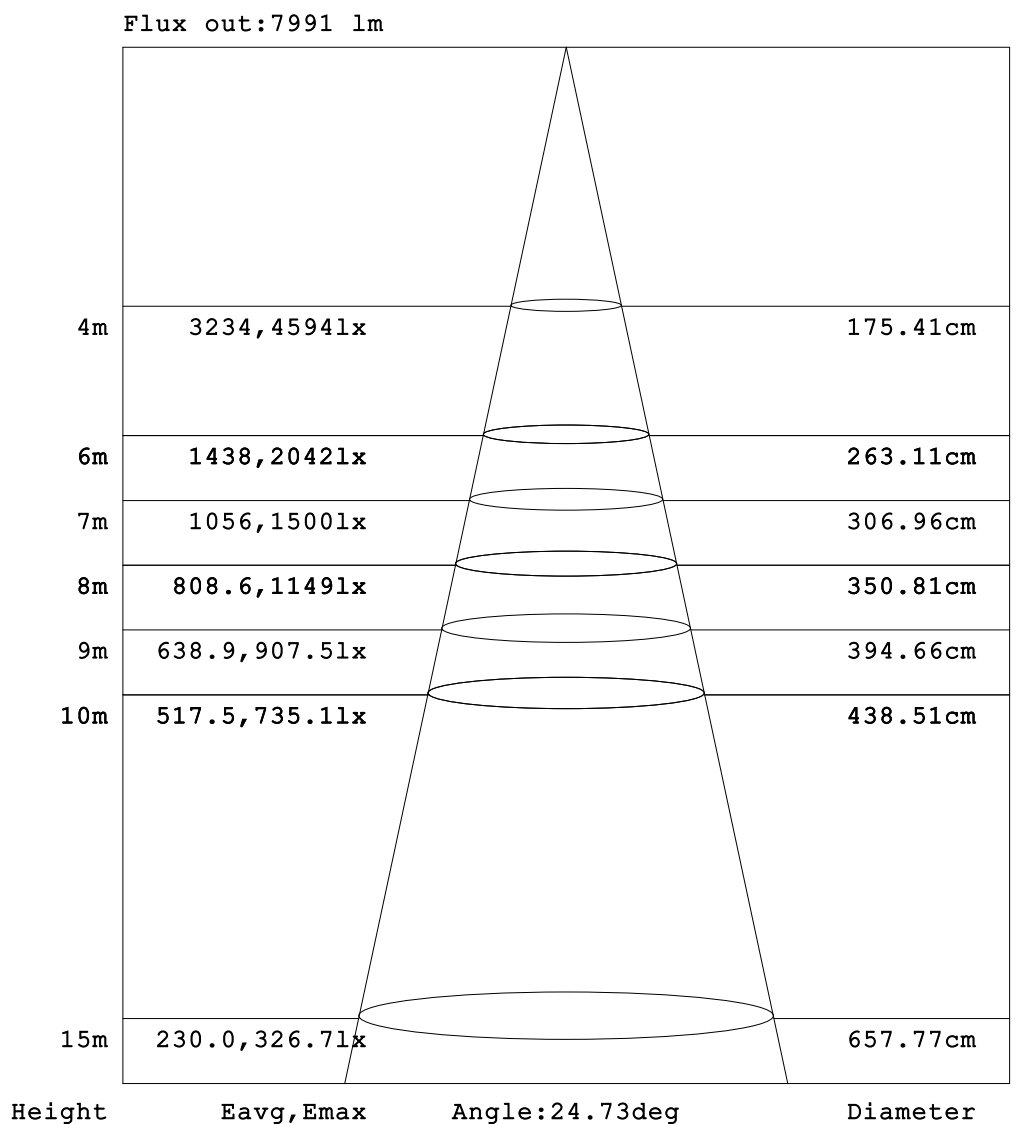


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
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$\gamma$  Range: 0 - 90DEG  
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Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4589]  
Remarks:



## AAI Figure



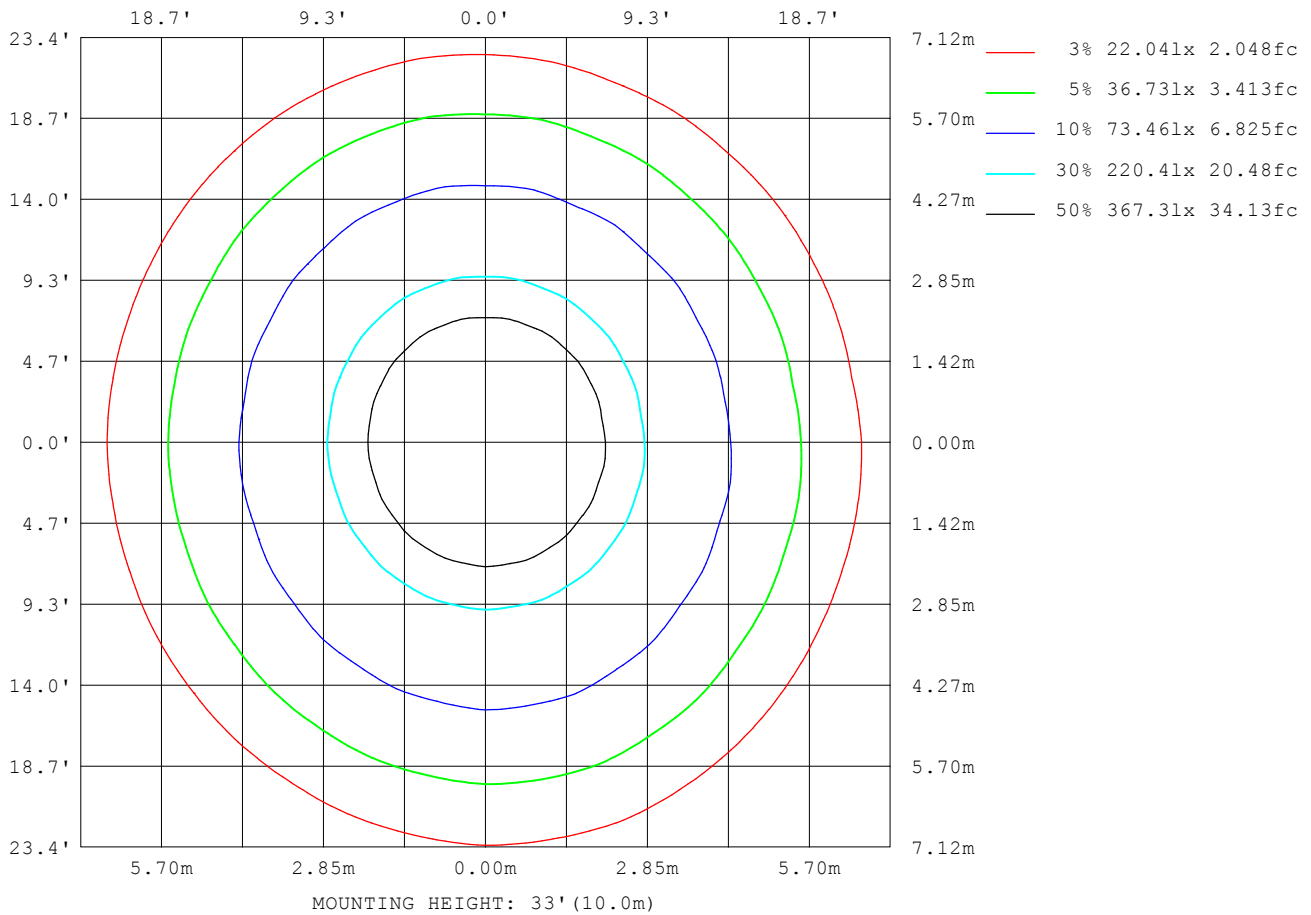
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-14

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=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

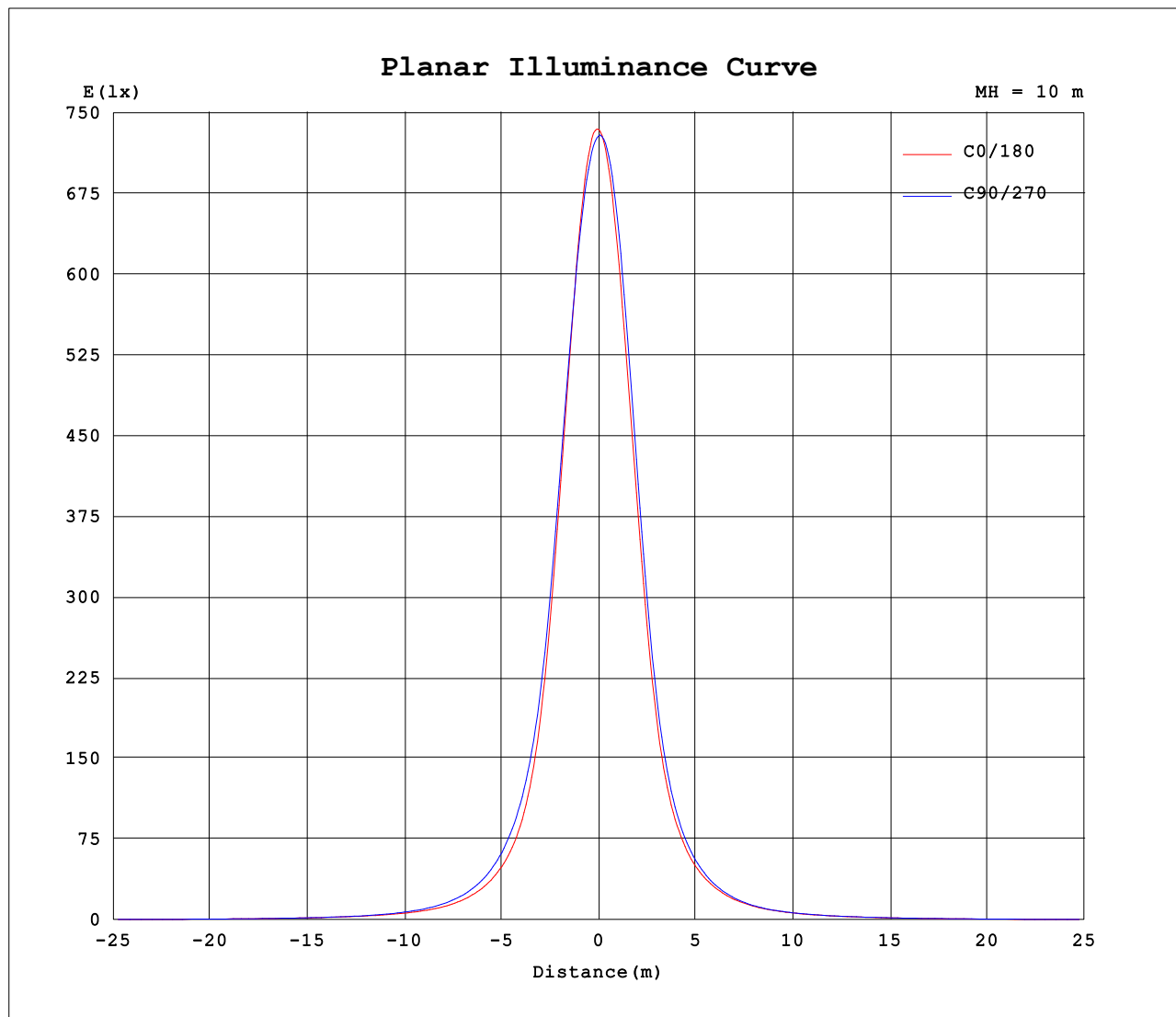
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-14

$\gamma$  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=0.4589]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-14

$\gamma$  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=0.4589]  
Remarks: