

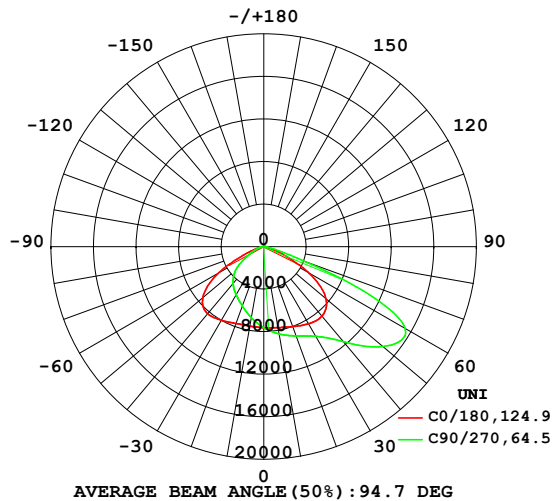
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

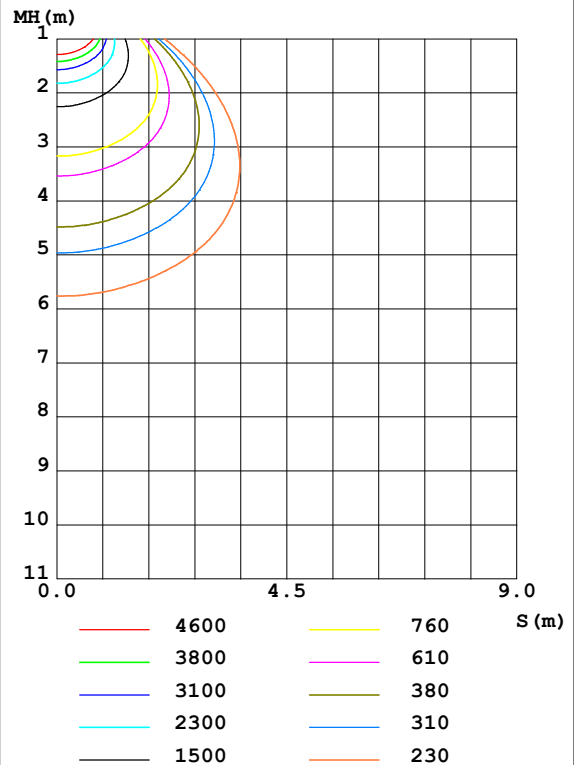
Test:U:229.7V I:0.8742A P:199.4W PF:0.9931 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:30333.2x1 lm		
NAME: FL23-200-5070-F22401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 152.09 lm/W			
MODEL	SMD283	Imax(cd)	15702	S/MH(C0/180)	1.64
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.03
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	30333	$\eta$ UP,DN(C0-180)	0.0,67.9
NOMINAL FLUX(lm)	30333.2	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,32.1
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.75

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:2020-08-13

$\gamma$  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	774.0	825.8	833.0	811.3	759.4	700.8	679.0	708.5	0- 10	727.0	727.0	2.4,2.4
20	800.0	903.1	894.2	866.5	769.8	636.2	593.9	649.1	10- 20	2159	2886	9.51,9.51
30	838.7	1008	974.0	955.8	799.6	574.5	522.1	588.8	20- 30	3572	6458	21.3,21.3
40	852.6	1152	1167	1107	823.2	508.8	450.9	522.7	30- 40	5029	11488	37.9,37.9
50	764.0	1260	1462	1255	748.0	421.1	346.0	424.2	40- 50	6468	17956	59.2,59.2
60	480.2	962.5	1533	997.2	484.0	275.4	176.4	272.2	50- 60	6857	24813	81.8,81.8
70	131.5	305.5	423.9	334.2	131.3	120.6	78.34	126.0	60- 70	4407	29219	96.3,96.3
80	21.46	31.19	33.25	31.10	18.98	19.90	23.47	21.94	70- 80	1037	30256	99.7,99.7
90	0	0	0	0	0	0	0	0	80- 90	77.20	30333	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): 14566 lm

%lum = 48.0%

%lamp = 48.0%

Conical surface Flux(120deg): 24813 lm

%lum = 81.8%

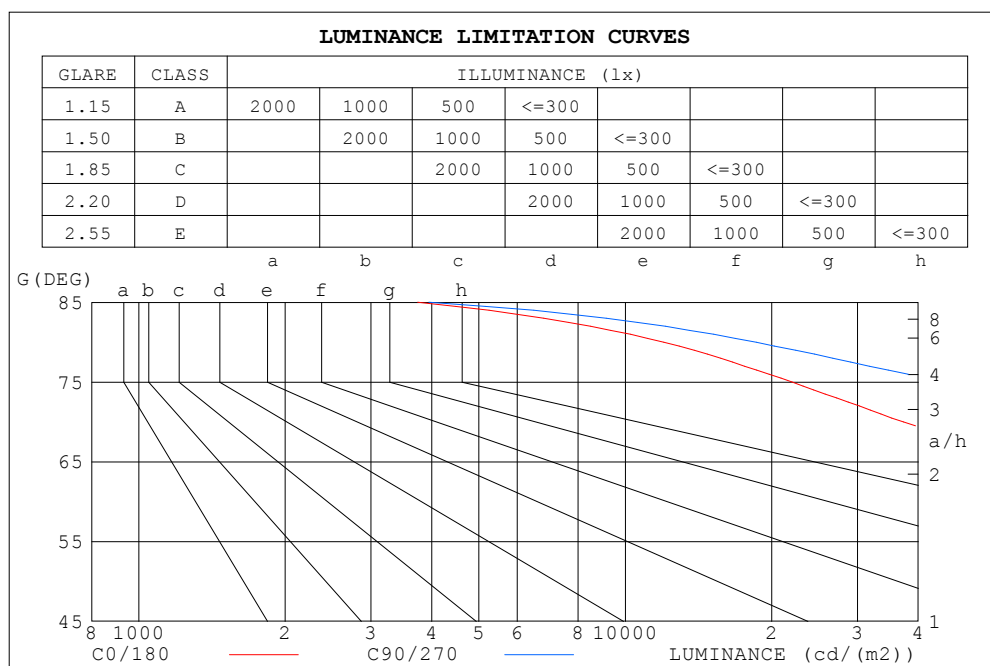
%lamp = 81.8%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-13

$\gamma$  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

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3741	3949
80	11998	18600
75	22015	45718
70	37330	120407
65	63487	265985
60	93244	297932
55	109750	263716
50	115390	220906
45	113522	181420

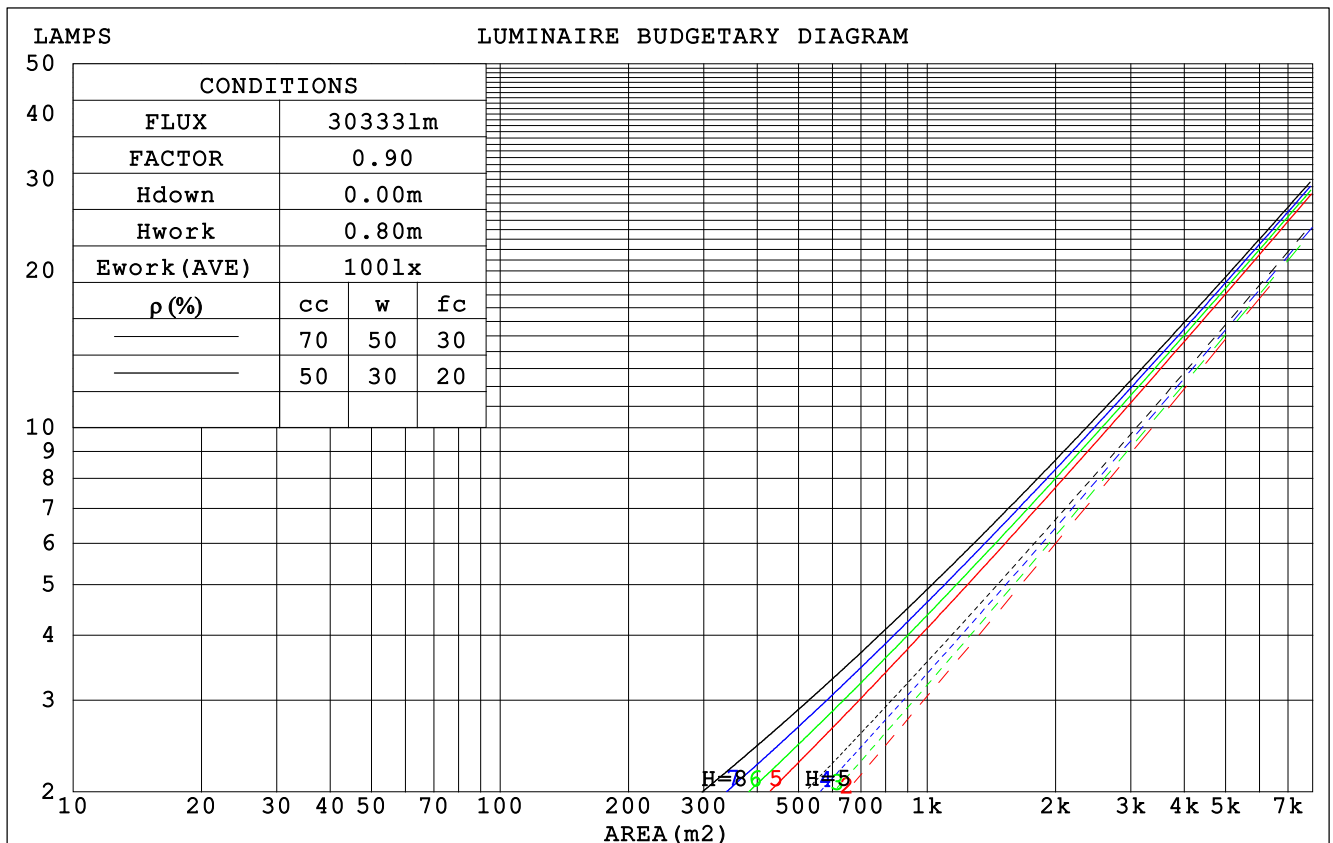
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2020-08-13

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

## 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	.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.92	.94	.92	.90	.91	.89	.87	.85
2.0	.91	.84	.79	.89	.83	.78	.86	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.79	.71	.64	.78	.70	.64	.75	.68	.63	.72	.66	.61	.69	.64	.60	.58
4.0	.69	.60	.53	.68	.60	.53	.65	.58	.52	.63	.57	.52	.61	.55	.51	.49
5.0	.61	.52	.45	.60	.51	.45	.58	.50	.44	.56	.49	.44	.54	.48	.43	.41
6.0	.54	.45	.38	.53	.45	.38	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.49	.40	.33	.48	.39	.33	.46	.39	.33	.45	.38	.33	.44	.37	.32	.30
8.0	.44	.35	.29	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.28	.26
9.0	.40	.32	.26	.40	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.23
10.0	.37	.29	.23	.36	.28	.23	.35	.28	.23	.34	.27	.23	.33	.27	.23	.21



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-13

$\gamma$  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

## 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	.292	.166	.053	.285	.162	.052	.272	.156	.050	.260	.150	.048	.248	.144	.046															
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.046	.258	.145	.045	.248	.140	.044															
3.0	.271	.144	.043	.266	.142	.043	.256	.138	.042	.246	.135	.041	.237	.131	.041															
4.0	.254	.132	.039	.249	.130	.039	.240	.127	.038	.231	.124	.037	.223	.121	.037															
5.0	.236	.121	.035	.232	.119	.035	.224	.117	.034	.216	.114	.034	.209	.112	.034															
6.0	.220	.110	.032	.216	.109	.031	.209	.107	.031	.202	.105	.031	.196	.103	.031															
7.0	.205	.102	.029	.202	.101	.029	.195	.099	.028	.189	.097	.028	.183	.095	.028															
8.0	.192	.094	.026	.189	.093	.026	.183	.091	.026	.177	.090	.026	.172	.088	.026															
9.0	.180	.087	.024	.177	.086	.024	.172	.085	.024	.167	.084	.024	.162	.082	.024															
10.0	.169	.081	.023	.167	.080	.022	.162	.079	.022	.157	.078	.022	.153	.077	.022															

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	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.172	.132	.099	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.158	.101	.058	.136	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.151	.091	.046	.130	.079	.040	.089	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.144	.083	.038	.124	.072	.033	.086	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.138	.076	.032	.119	.066	.028	.082	.046	.020	.048	.027	.012	.015	.009	.004	
8.0	.132	.070	.028	.113	.061	.024	.078	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.125	.065	.024	.108	.057	.021	.075	.040	.015	.044	.023	.009	.014	.008	.003	
10.0	.120	.061	.022	.103	.053	.019	.072	.037	.014	.042	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2020-08-13

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	30.0	31.7	30.3	32.0	32.3	35.5	37.2	35.9	37.5	37.8
3H	30.1	31.7	30.5	32.0	32.4	36.6	38.1	36.9	38.4	38.8
4H	30.1	31.6	30.5	31.9	32.3	36.6	38.0	37.0	38.4	38.7
6H	30.1	31.4	30.5	31.8	32.2	36.5	37.9	36.9	38.2	38.6
8H	30.1	31.4	30.5	31.8	32.1	36.5	37.8	36.9	38.2	38.6
12H	30.1	31.3	30.5	31.7	32.1	36.5	37.7	36.9	38.1	38.5
4H 2H	31.0	32.5	31.4	32.8	33.2	35.7	37.1	36.1	37.4	37.8
3H	31.2	32.4	31.6	32.8	33.2	36.9	38.1	37.3	38.5	38.9
4H	31.2	32.3	31.7	32.7	33.1	37.0	38.0	37.4	38.4	38.9
6H	31.2	32.1	31.7	32.6	33.0	36.9	37.9	37.4	38.3	38.8
8H	31.2	32.1	31.6	32.5	33.0	36.9	37.8	37.4	38.2	38.7
12H	31.2	31.9	31.6	32.4	32.9	36.9	37.7	37.4	38.1	38.6
8H 4H	31.4	32.3	31.9	32.7	33.2	36.9	37.8	37.4	38.2	38.7
6H	31.4	32.1	31.9	32.6	33.1	36.9	37.6	37.4	38.1	38.5
8H	31.4	32.0	31.9	32.5	33.0	36.8	37.5	37.4	38.0	38.5
12H	31.4	31.9	31.9	32.4	33.0	36.8	37.4	37.3	37.9	38.4
12H 4H	31.4	32.2	31.9	32.7	33.1	36.9	37.7	37.4	38.1	38.6
6H	31.4	32.0	31.9	32.5	33.0	36.8	37.5	37.4	37.9	38.5
8H	31.4	31.9	31.9	32.4	33.0	36.8	37.4	37.3	37.9	38.4
CIE190: 2010										

CIE190: 2010  
Area: 0.103 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-13

$\gamma$  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

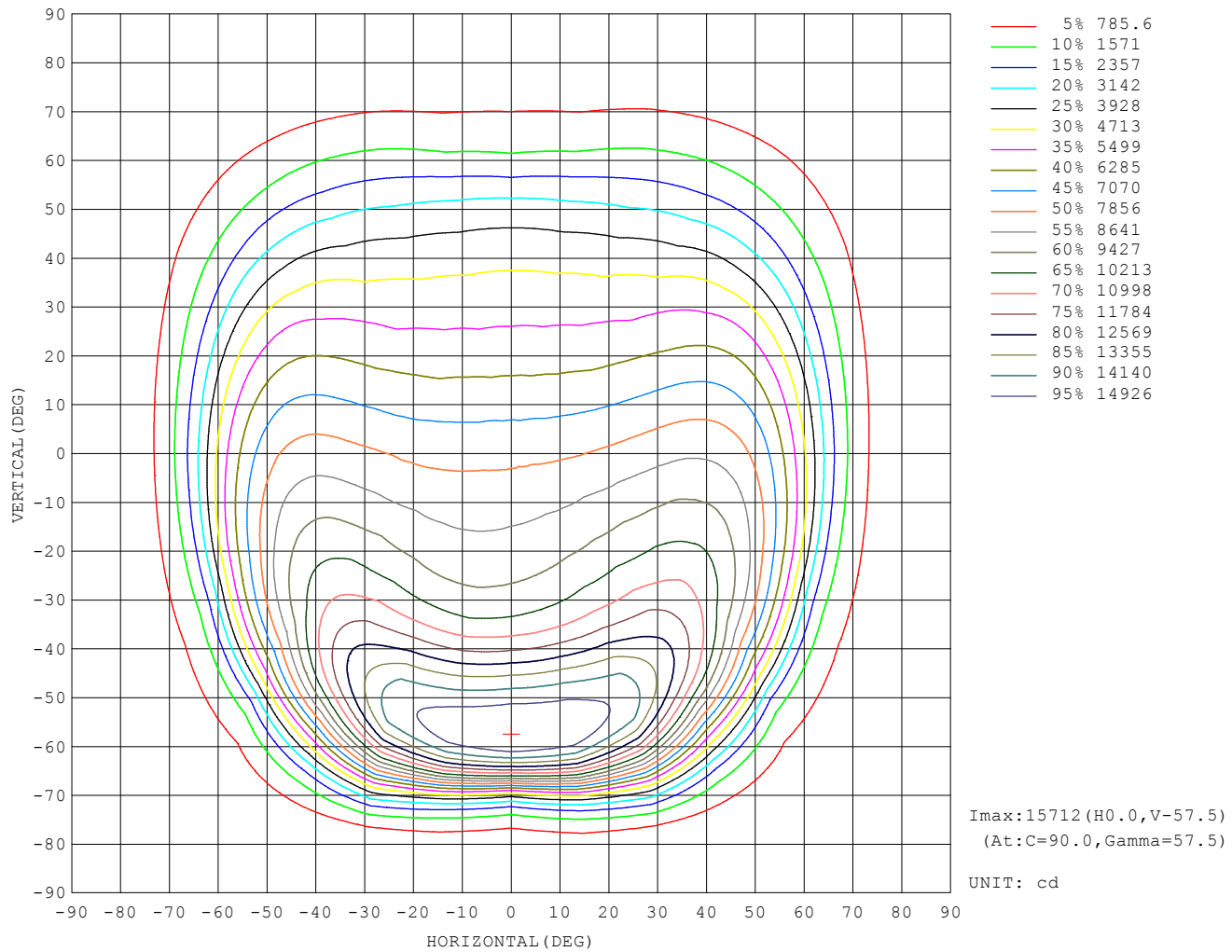
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	53	40	32	52	40	32	50	39	32	25
0.80	64	51	43	63	51	43	61	50	43	35
1.00	74	62	54	72	61	54	70	63	53	46
1.25	82	71	63	80	70	63	77	68	62	54
1.50	87	77	70	85	76	69	82	74	68	60
2.00	95	86	80	93	85	79	89	83	77	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	103	96	90	100	94	89	96	91	87	79
4.00	107	101	97	104	99	95	100	96	92	84
5.00	109	104	100	107	102	99	102	99	96	87
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  
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 Operators: LYJ  
 Test Date: 2020-08-13

$\gamma$  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

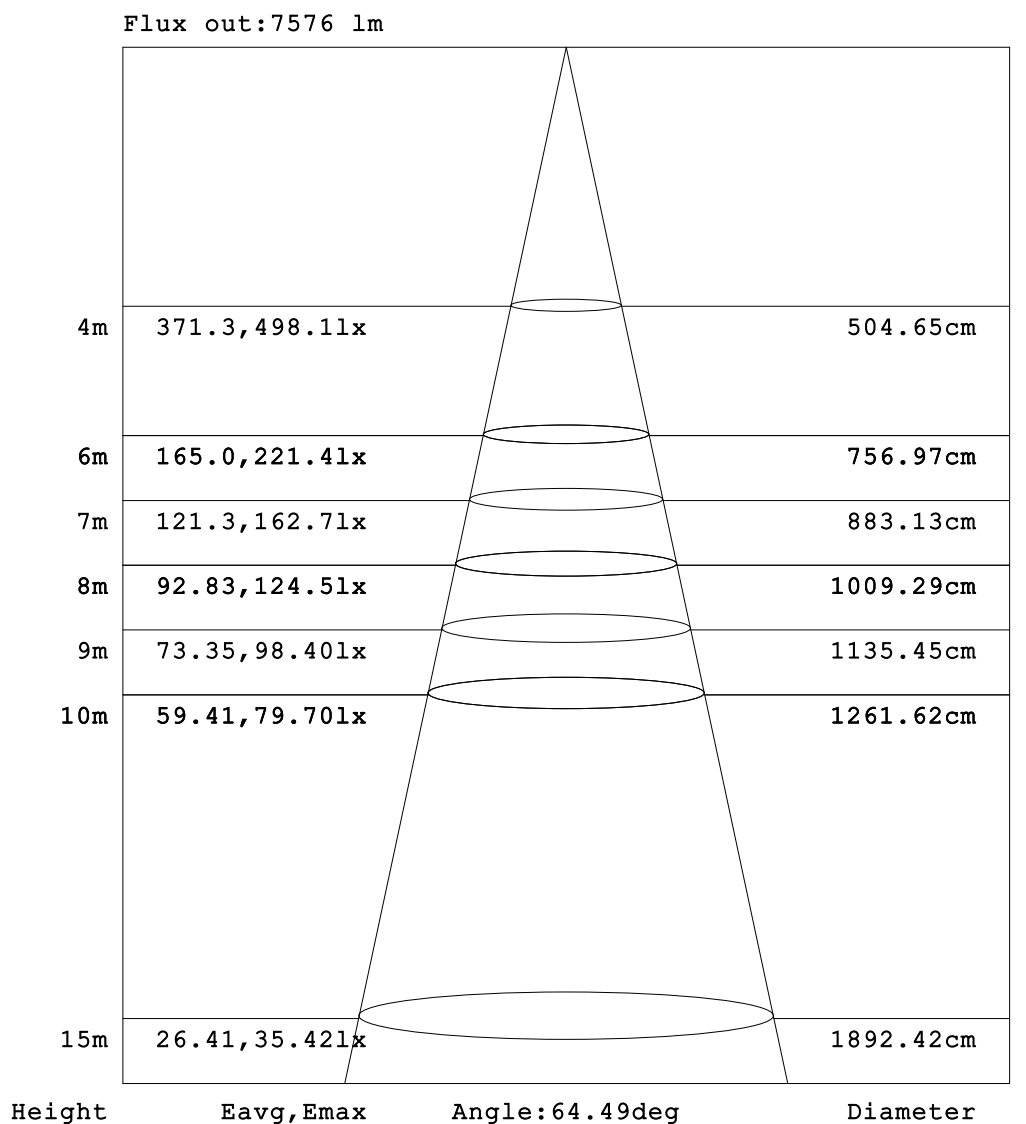
## ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-13

$\gamma$  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:

## AAI Figure



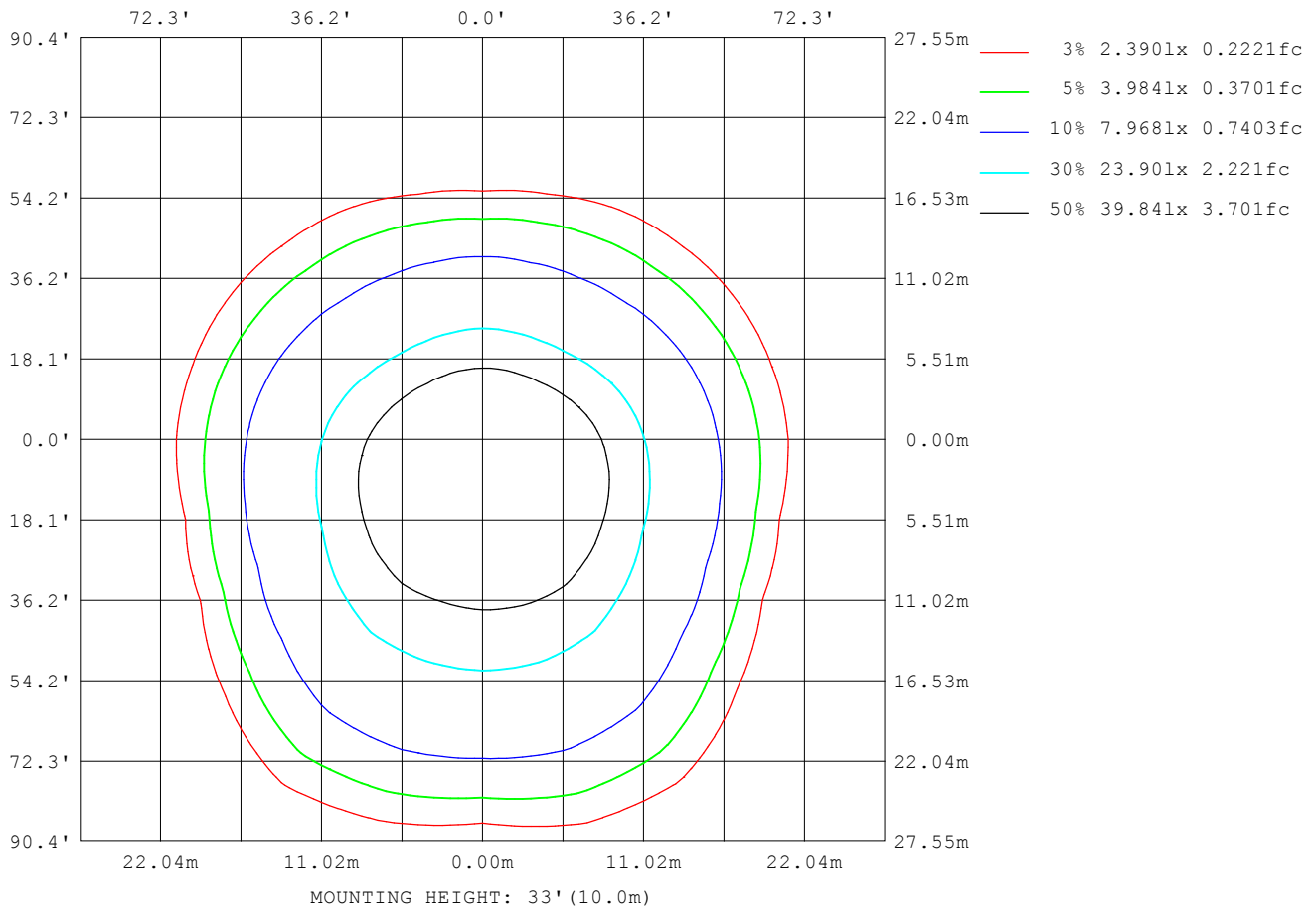
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
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Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-13

$\gamma$  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

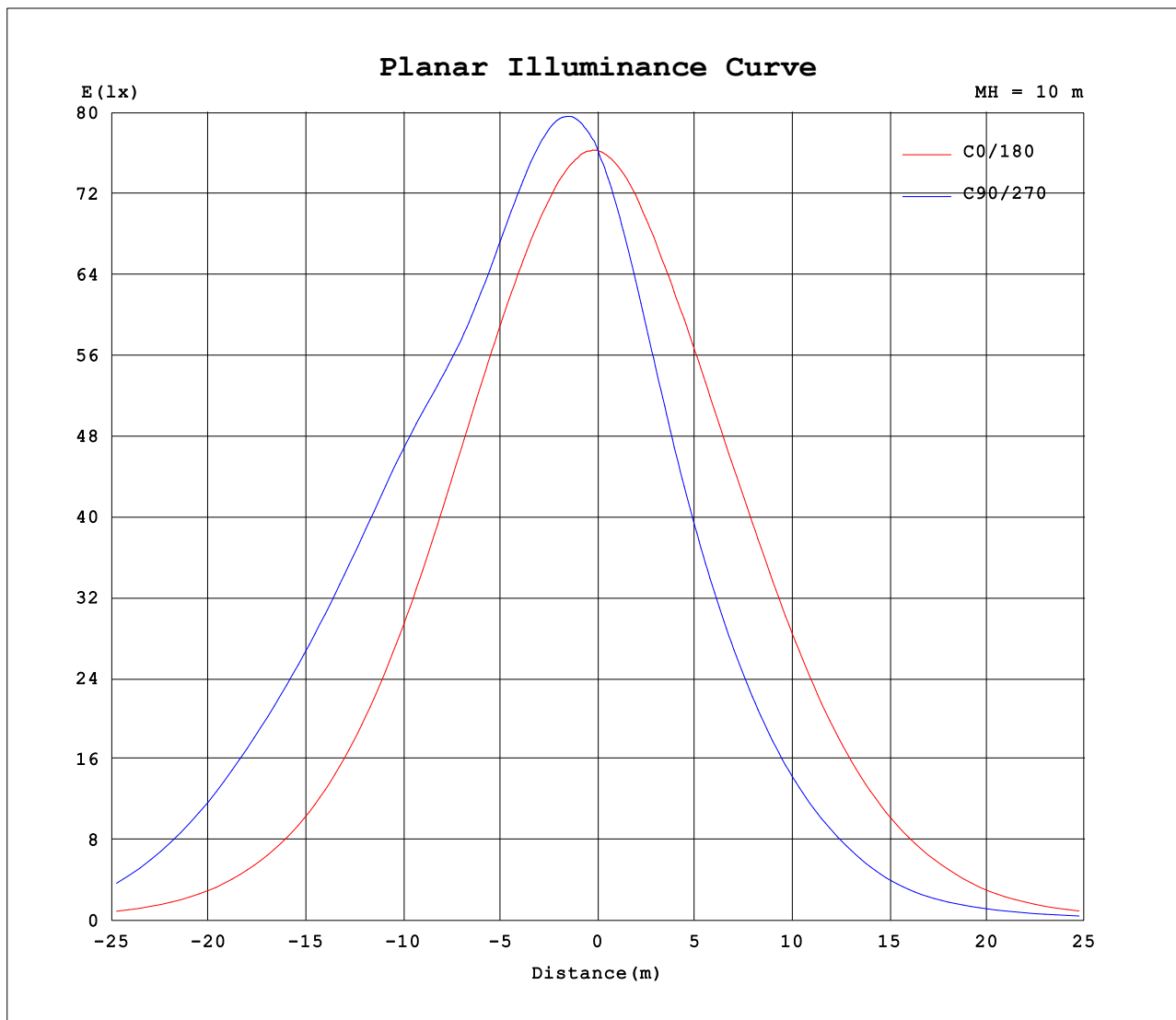
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-13

$\gamma$  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: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-13

$\gamma$  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: