

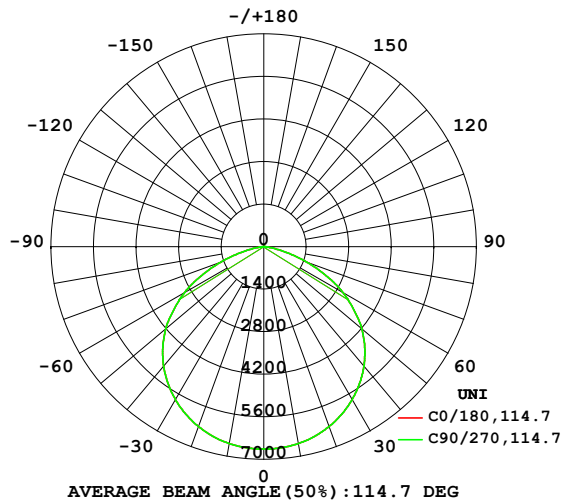
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

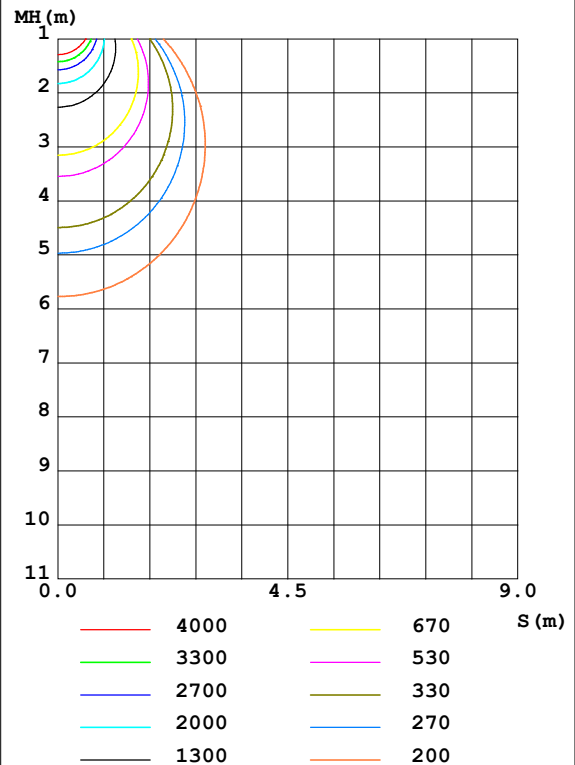
Test:U:229.7V I:0.6664A P:151.4W PF:0.9889 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:18780.8x1 lm					
NAME: FL23-150-5070-F00A23		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.07 lm/W			
MODEL	RF303	I <sub>max</sub> (cd)	6660	S/MH (C0/180)	1.30
NOMINAL POWER (W)	150	LOR (%)	100.0	S/MH (C90/270)	1.30
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	18781	η UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	18780.8	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.35

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

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

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	6580	6580	6580	6580	6580	6580	6580	6580	0- 10	632.1	632.1	3.37,3.37
20	6298	6298	6298	6298	6298	6298	6298	6298	10- 20	1825	2457	13.1,13.1
30	5817	5817	5817	5817	5817	5817	5817	5817	20- 30	2804	5262	28,28
40	5131	5131	5131	5131	5131	5131	5131	5131	30- 40	3440	8701	46.3,46.3
50	4213	4213	4213	4213	4213	4213	4213	4213	40- 50	3624	12325	65.6,65.6
60	2993	2993	2993	2993	2993	2993	2993	2993	50- 60	3236	15561	82.9,82.9
70	1519	1519	1519	1519	1519	1519	1519	1519	60- 70	2242	17803	94.8,94.8
80	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	70- 80	899.1	18702	99.6,99.6
90	1.161	1.161	1.161	1.161	1.161	1.161	1.161	1.161	80- 90	78.79	18781	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:cd									UNIT:lm		

Conical surface Flux(90deg): 10523 lm

%lum = 56.0%

%lamp = 56.0%

Conical surface Flux(120deg): 15561 lm

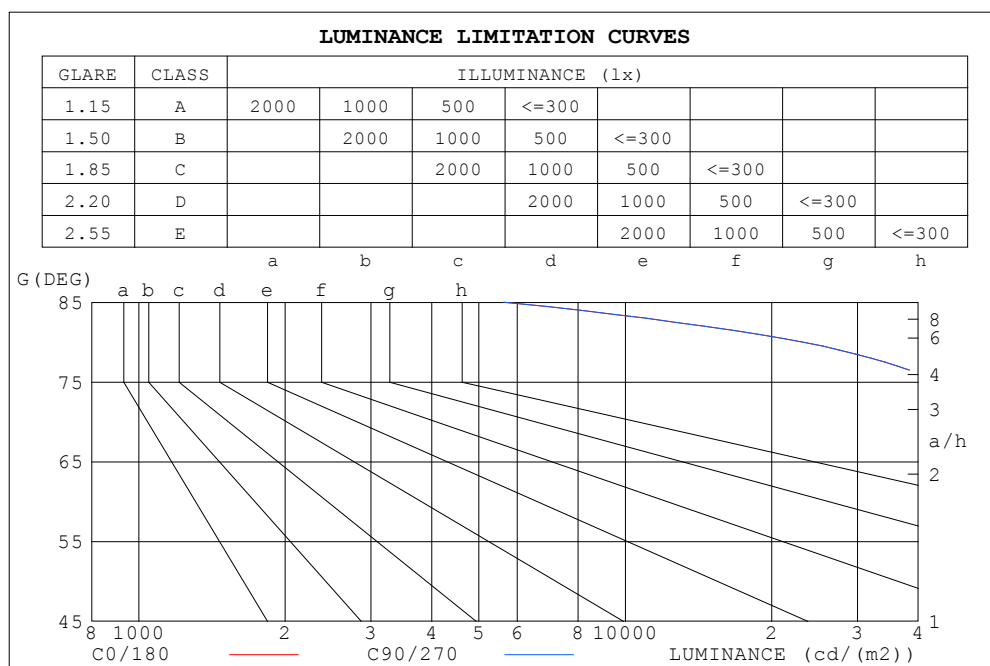
%lum = 82.9%

%lamp = 82.9%

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	5626	5626
80	23236	23236
75	45060	45060
70	62061	62061
65	75004	75004
60	83672	83672
55	88293	88293
50	91610	91610
45	92951	92951

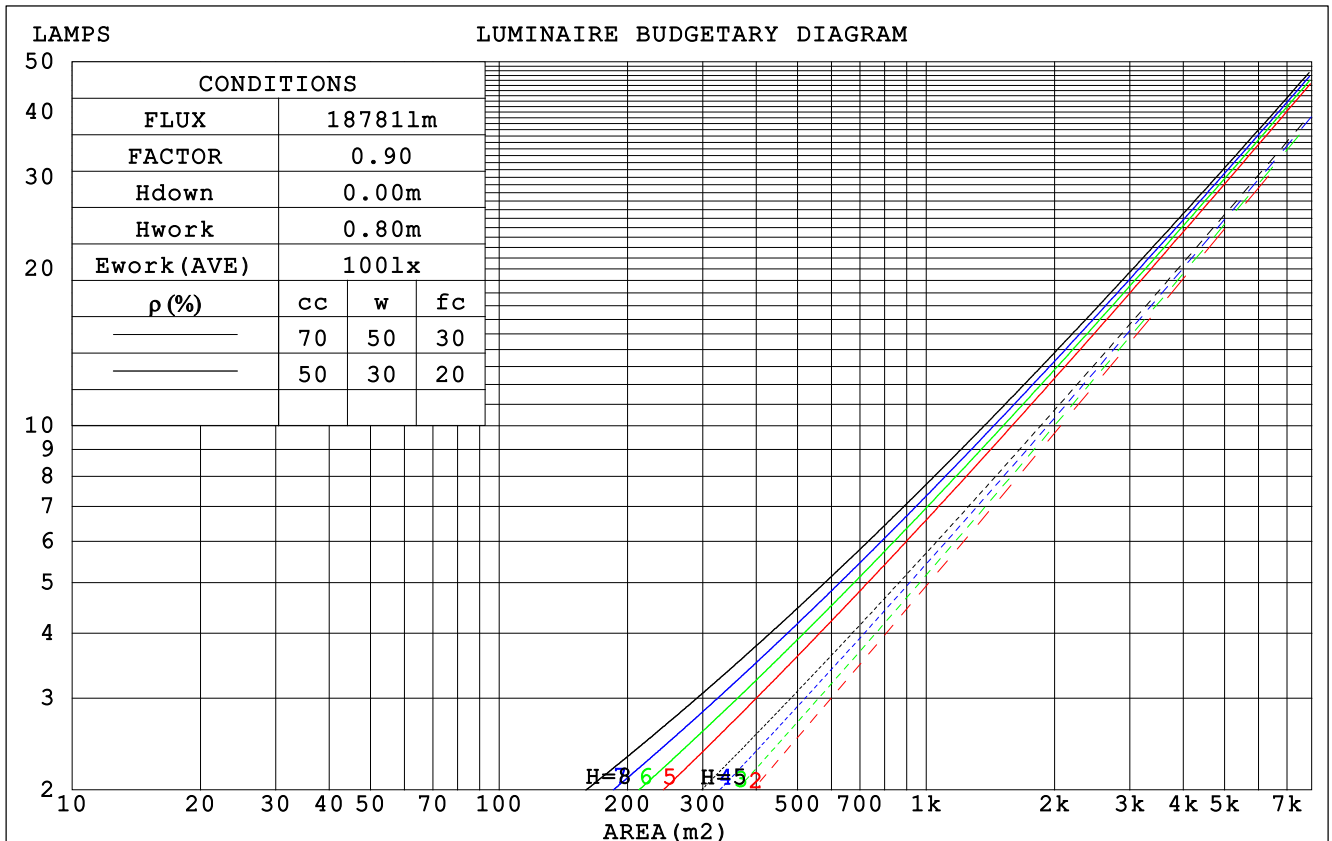
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C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-14

$\gamma$  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

$\rho_{cc}$	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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.88	.86
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.84	.79	.76	.81	.77	.74	.72
3.0	.81	.73	.67	.80	.72	.66	.77	.70	.65	.74	.68	.64	.71	.67	.63	.61
4.0	.72	.63	.57	.71	.63	.56	.68	.61	.56	.66	.60	.55	.64	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.49	.61	.54	.48	.59	.53	.47	.57	.51	.47	.45
6.0	.58	.49	.43	.57	.48	.42	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.52	.44	.38	.51	.43	.37	.50	.43	.37	.48	.42	.37	.47	.41	.37	.35
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.28
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.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

## 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	.284	.161	.051	.277	.158	.050	.264	.151	.048	.252	.145	.047	.240	.139	.045	
2.0	.275	.151	.046	.269	.148	.046	.258	.143	.044	.247	.139	.043	.237	.134	.042	
3.0	.259	.138	.041	.254	.136	.041	.243	.132	.040	.234	.128	.039	.225	.125	.039	
4.0	.242	.126	.037	.237	.124	.037	.228	.121	.036	.219	.118	.036	.211	.115	.035	
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032	
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.192	.100	.029	.186	.098	.029	
7.0	.196	.097	.027	.192	.096	.027	.186	.094	.027	.180	.092	.027	.174	.091	.027	
8.0	.183	.090	.025	.180	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.172	.083	.023	.170	.083	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.074	.021	

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	.104	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.012		
3.0	.162	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009		
4.0	.155	.101	.059	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007		
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.029	.051	.032	.017	.016	.010	.006		
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.048	.029	.015	.016	.010	.005		
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004		
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003		
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003		

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	27.9	29.5	28.3	29.8	30.2	27.9	29.5	28.3	29.8	30.2
3H	29.3	30.7	29.6	31.0	31.4	29.3	30.7	29.6	31.0	31.4
4H	29.6	31.0	30.0	31.3	31.7	29.6	31.0	30.0	31.3	31.7
6H	29.7	30.9	30.1	31.3	31.7	29.7	30.9	30.1	31.3	31.7
8H	29.7	30.9	30.1	31.3	31.7	29.7	30.9	30.1	31.3	31.7
12H	29.7	30.8	30.1	31.2	31.6	29.7	30.8	30.1	31.2	31.6
4H 2H	28.5	29.8	28.9	30.2	30.5	28.5	29.8	28.9	30.2	30.5
3H	30.0	31.1	30.4	31.5	31.9	30.0	31.1	30.4	31.5	31.9
4H	30.4	31.4	30.8	31.8	32.2	30.4	31.4	30.8	31.8	32.2
6H	30.5	31.4	31.0	31.8	32.3	30.5	31.4	31.0	31.8	32.3
8H	30.5	31.3	31.0	31.8	32.2	30.5	31.3	31.0	31.8	32.2
12H	30.5	31.2	31.0	31.7	32.2	30.5	31.2	31.0	31.7	32.2
8H 4H	30.5	31.3	30.9	31.7	32.2	30.5	31.3	30.9	31.7	32.2
6H	30.6	31.3	31.1	31.8	32.3	30.6	31.3	31.1	31.8	32.3
8H	30.6	31.2	31.1	31.7	32.2	30.6	31.2	31.1	31.7	32.2
12H	30.6	31.1	31.1	31.6	32.2	30.6	31.1	31.1	31.6	32.2
12H 4H	30.5	31.2	30.9	31.7	32.1	30.5	31.2	30.9	31.7	32.1
6H	30.6	31.2	31.1	31.7	32.2	30.6	31.2	31.1	31.7	32.2
8H	30.6	31.2	31.1	31.6	32.2	30.6	31.2	31.1	31.6	32.2
CIE190: 2010										

CIE190: 2010  
Area: 0.07155 m2

C Range: 0 - 360DEG  
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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

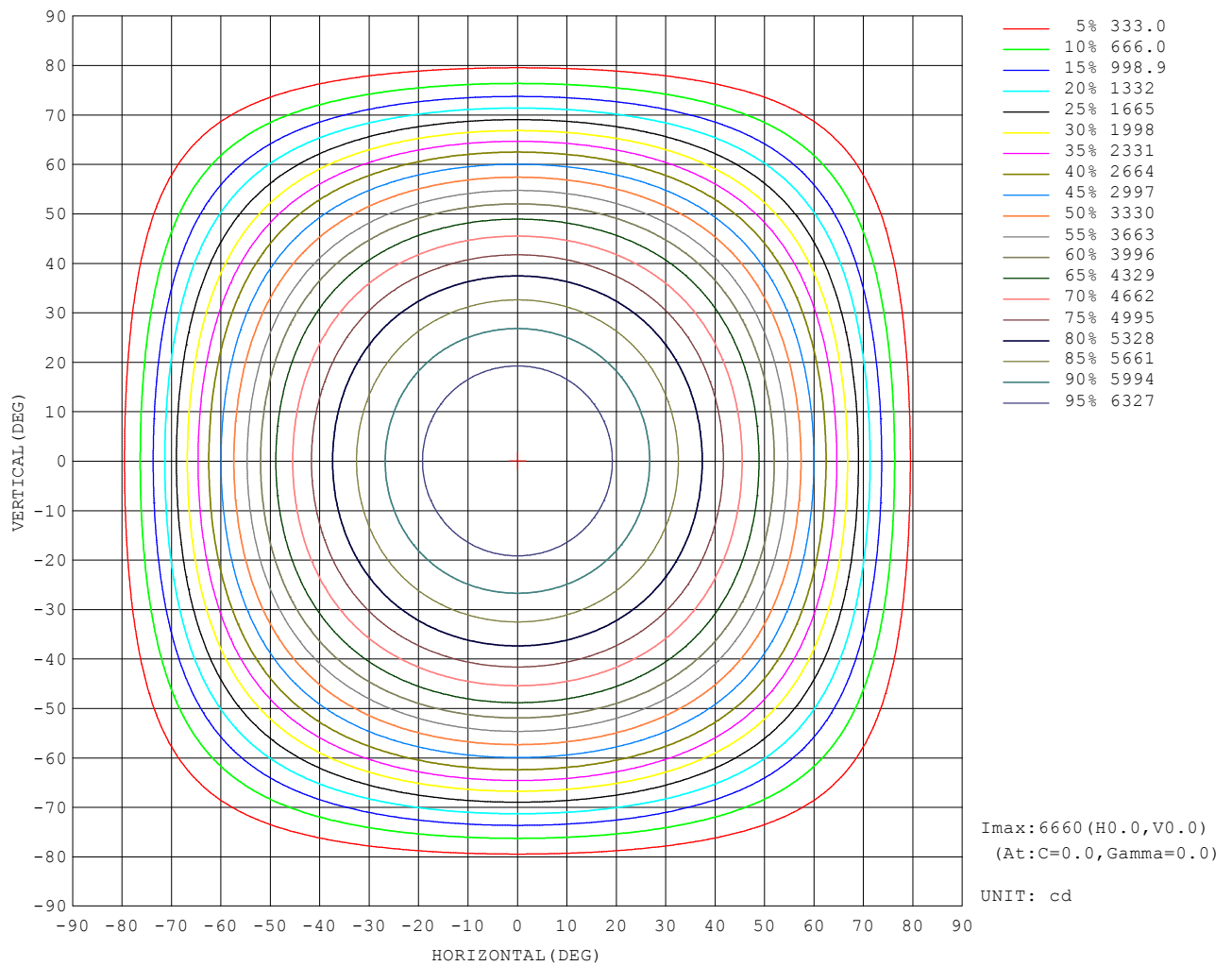
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	46	40	56	46	39	33
0.80	69	57	50	68	57	50	66	56	49	43
1.00	77	67	59	76	66	59	74	67	59	52
1.25	85	74	68	83	74	67	81	72	66	59
1.50	90	80	73	88	79	73	85	78	72	65
2.00	96	88	82	95	87	82	91	85	80	72
2.50	100	93	87	98	92	86	94	89	84	76
3.00	104	97	92	101	96	91	97	93	89	81
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	101	107	103	100	103	100	97	88
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
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 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:

ISOCANDELA DIAGRAM

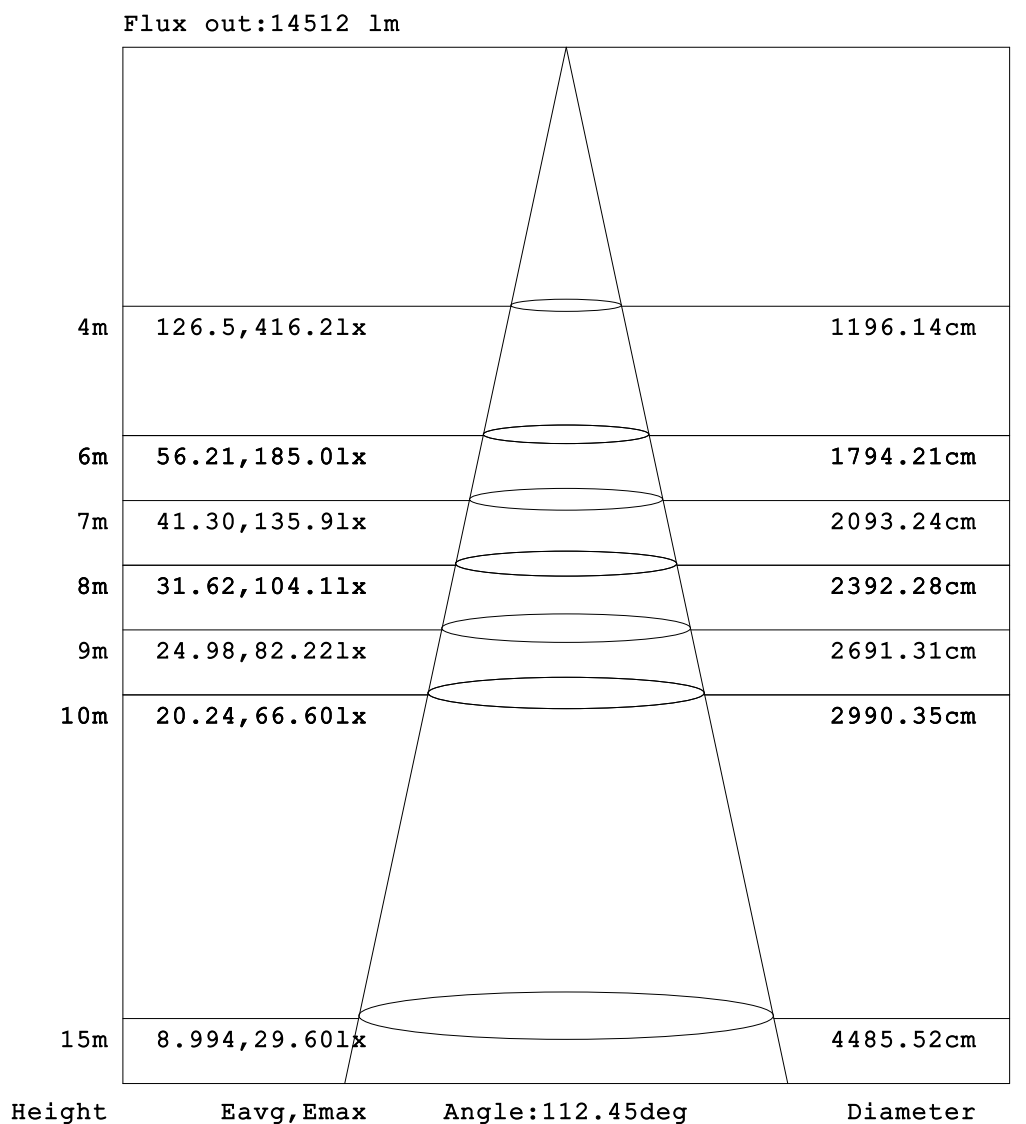


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Temperature: 25.3DEG  
Operators: LYJ  
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Test Distance: 26.000m [K=0.4589]  
Remarks:



## AAI Figure



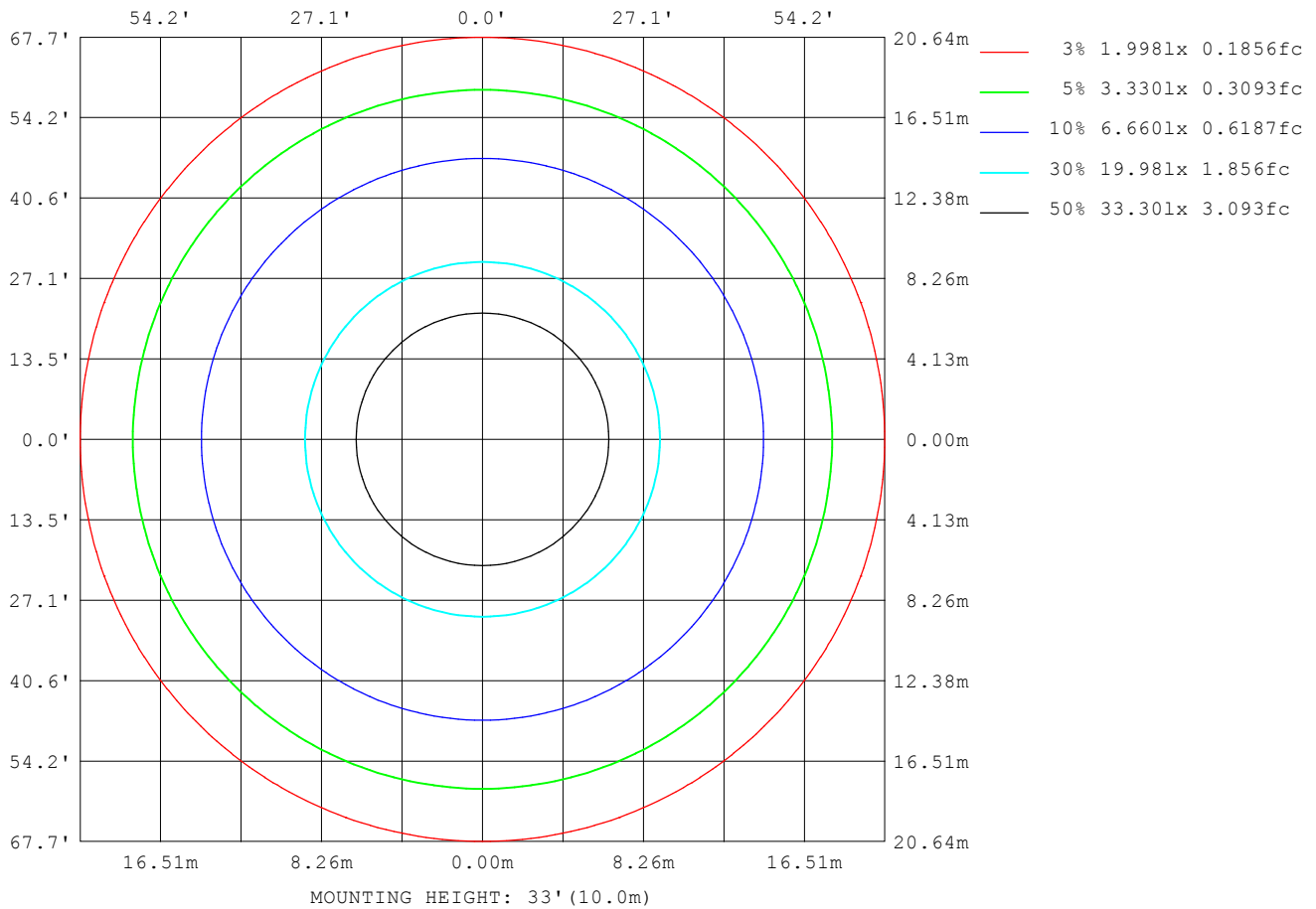
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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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:

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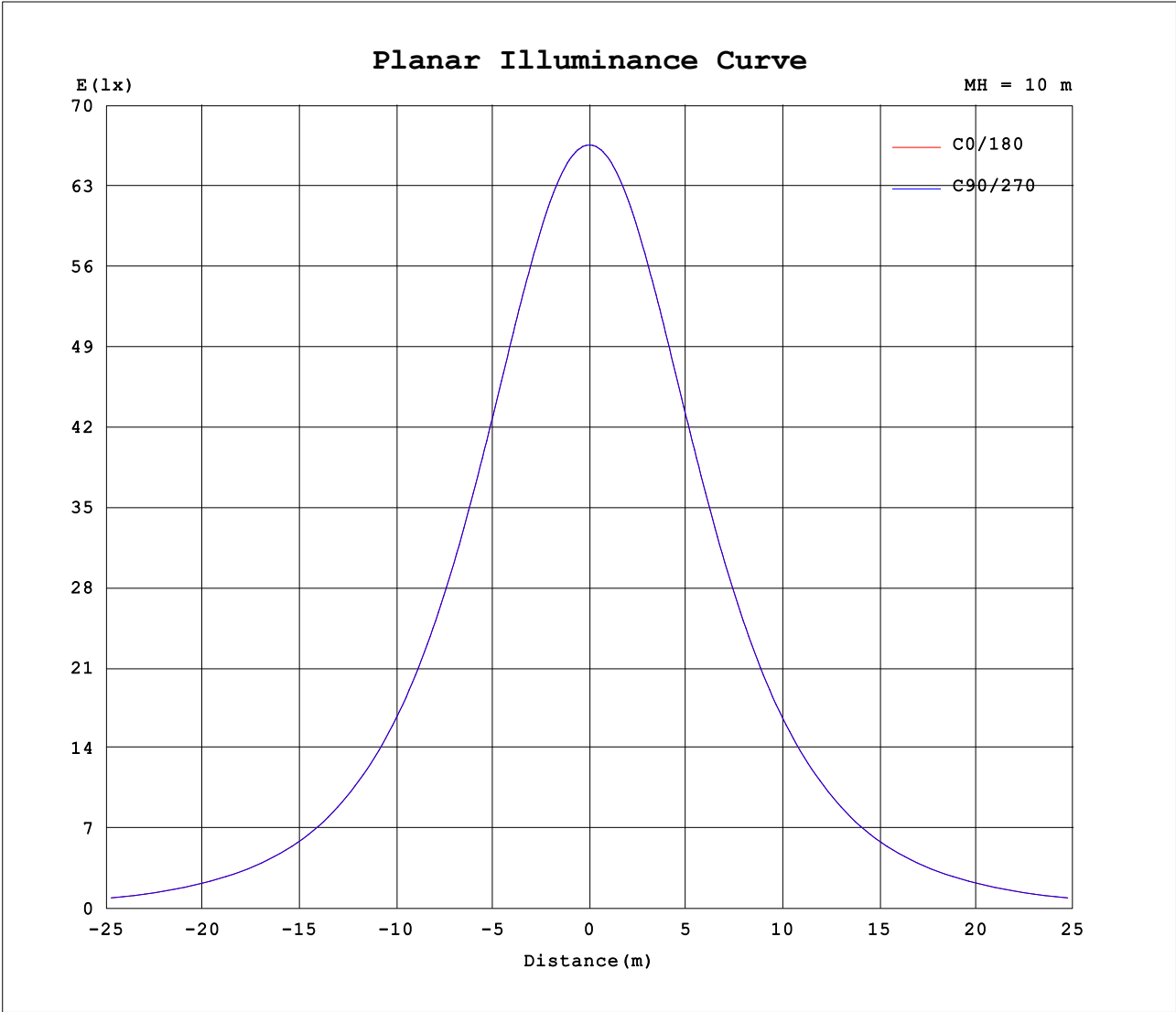
## ISOLUX DIAGRAM



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:

Planar Illuminance Curve



C Range: 0 - 360DEG  
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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: