

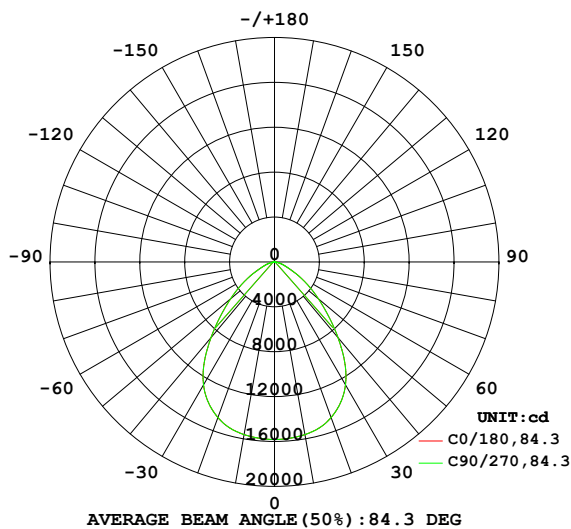
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

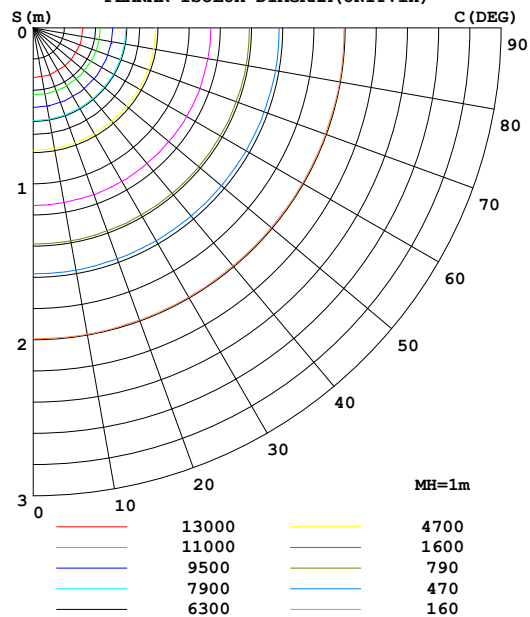
Test:U:230.0V I:0.659A P:150.0W PF:0.990 Freq:50.01Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29850.1x1 lm		
NAME: HB74-150H-5080-H00217	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 199.00 lm/W			
MODEL	/	Imax (cd)	15822	S/MH (C0/180)	1.19
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.19
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	29850	$\eta$ UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	29850.1	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	/	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.25

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
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	1562	1562	1562	1562	1562	1562	1562	1562	0- 10	1500	1500	5.03,5.03
20	1475	1475	1475	1475	1475	1475	1475	1475	10- 20	4318	5818	19.5,19.5
30	1265	1265	1265	1265	1265	1265	1265	1265	20- 30	6368	12186	40.8,40.8
40	880.8	880.8	880.8	880.8	880.8	880.8	880.8	880.8	30- 40	6764	18950	63.5,63.5
50	511.7	511.7	511.7	511.7	511.7	511.7	511.7	511.7	40- 50	5267	24217	81.1,81.1
60	249.0	249.0	249.0	249.0	249.0	249.0	249.0	249.0	50- 60	3329	27546	92.3,92.3
70	93.38	93.38	93.38	93.38	93.38	93.38	93.38	93.38	60- 70	1553	29099	97.5,97.5
80	30.56	30.56	30.56	30.56	30.56	30.56	30.56	30.56	70- 80	613.5	29713	99.5,99.5
90	0.2158	0.2158	0.2158	0.2158	0.2158	0.2158	0.2158	0.2158	80- 90	137.6	29850	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 21827 lm

%lum = 73.1%

%lamp = 73.1%

Conical surface Flux(120deg): 27546 lm

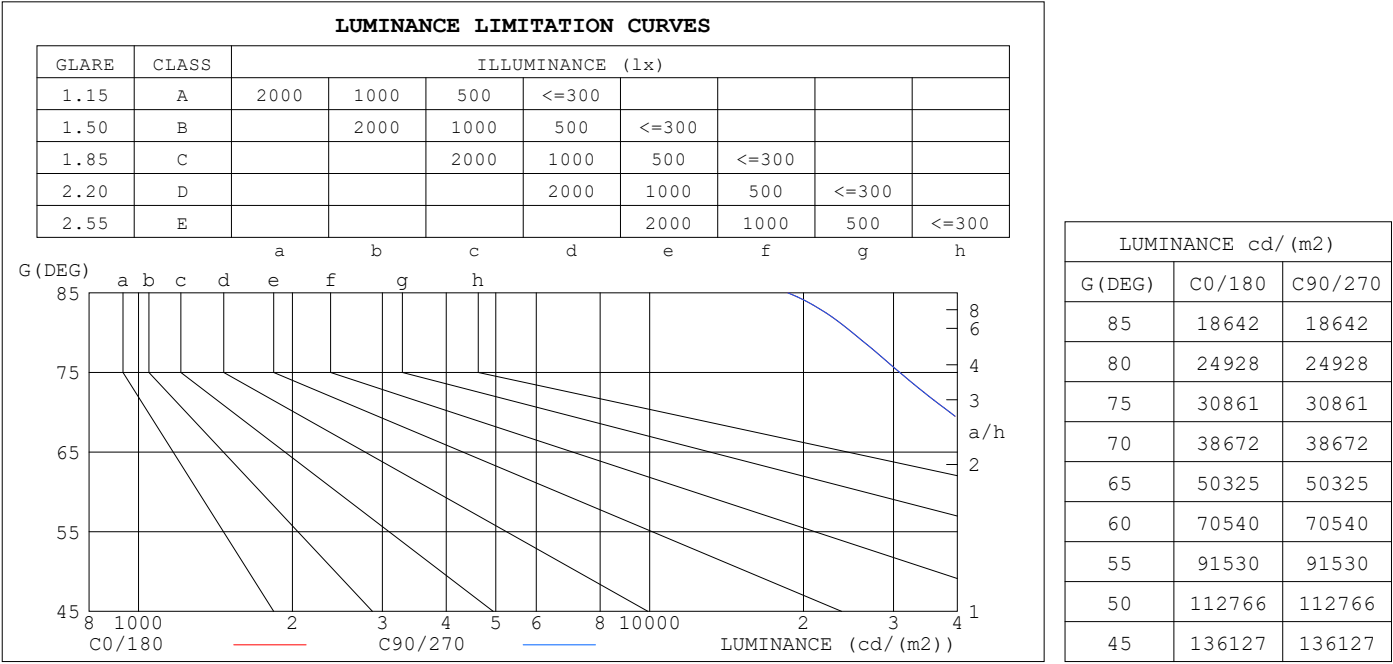
%lum = 92.3%

%lamp = 92.3%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
Remarks:

LUMINANCE LIMITATION CURVES



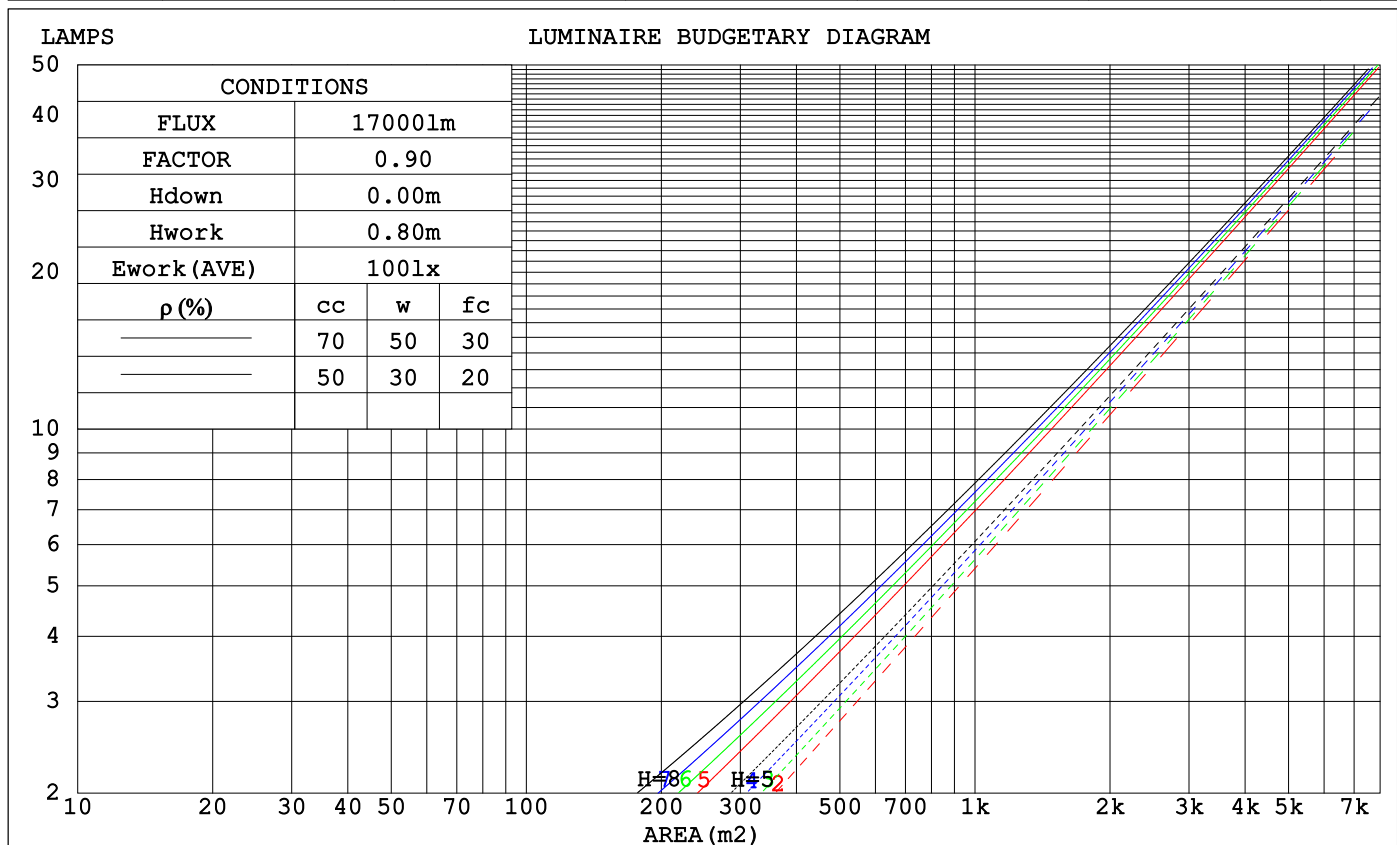
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:ZZX  
Test Date:2023-09-22

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
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	1.08	1.04	1.01	1.05	1.02	.00	1.01	.99	.96	.97	.95	.94	.94	.92	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.91	.87	.84	.88	.85	.82	.85	.83	.80	.78
3.0	.87	.80	.75	.86	.79	.74	.83	.77	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.79	.71	.66	.78	.71	.65	.75	.69	.64	.73	.68	.64	.71	.67	.63	.61
5.0	.72	.64	.58	.71	.63	.58	.69	.62	.57	.67	.61	.57	.65	.60	.56	.54
6.0	.65	.58	.52	.65	.57	.52	.63	.56	.51	.61	.55	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.46	.56	.51	.46	.55	.50	.46	.44
8.0	.55	.48	.42	.55	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.44	.39	.51	.43	.39	.50	.43	.38	.48	.43	.38	.48	.42	.38	.36
10.0	.48	.40	.36	.47	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

$\rho_{cc}$	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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.240	.136	.043	.233	.133	.042	.220	.126	.040	.208	.120	.039	.197	.114	.037	
2.0	.232	.127	.039	.226	.125	.038	.215	.120	.037	.205	.115	.036	.195	.111	.035	
3.0	.221	.117	.035	.215	.115	.035	.206	.111	.034	.197	.108	.033	.188	.104	.032	
4.0	.208	.108	.032	.204	.107	.031	.195	.103	.031	.187	.100	.030	.180	.098	.030	
5.0	.196	.100	.029	.192	.099	.029	.185	.096	.028	.177	.094	.028	.171	.091	.027	
6.0	.185	.093	.027	.181	.092	.026	.175	.089	.026	.168	.087	.026	.162	.085	.025	
7.0	.174	.086	.024	.171	.085	.024	.165	.084	.024	.160	.082	.024	.154	.080	.024	
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.075	.022	
9.0	.156	.076	.021	.154	.075	.021	.149	.074	.021	.144	.072	.021	.140	.071	.021	
10.0	.148	.071	.020	.146	.070	.020	.141	.069	.020	.137	.068	.019	.133	.067	.019	

$\rho_{cc}$	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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.175	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.081	.133	.098	.070	.091	.068	.049	.053	.040	.029	.017	.013	.010	
4.0	.147	.100	.064	.126	.086	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008	
5.0	.139	.089	.052	.120	.077	.045	.082	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005	
7.0	.126	.073	.037	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.013	.008	.004	
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ZZX  
 Test Date:2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4559]  
 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	26.0	27.4	26.4	27.7	28.1	26.0	27.4	26.4	27.7	28.1
3H	26.7	27.9	27.0	28.2	28.6	26.7	27.9	27.0	28.2	28.6
4H	26.8	28.0	27.2	28.3	28.7	26.8	28.0	27.2	28.3	28.7
6H	26.9	28.0	27.3	28.4	28.7	26.9	28.0	27.3	28.4	28.7
8H	26.9	27.9	27.4	28.3	28.7	26.9	27.9	27.4	28.3	28.7
12H	26.9	27.9	27.4	28.3	28.7	26.9	27.9	27.4	28.3	28.7
4H 2H	26.2	27.4	26.6	27.7	28.1	26.2	27.4	26.6	27.7	28.1
3H	27.0	27.9	27.4	28.3	28.7	27.0	27.9	27.4	28.3	28.7
4H	27.2	28.1	27.7	28.5	28.9	27.2	28.1	27.7	28.5	28.9
6H	27.4	28.1	27.9	28.6	29.1	27.4	28.1	27.9	28.6	29.1
8H	27.5	28.1	27.9	28.6	29.0	27.5	28.1	27.9	28.6	29.0
12H	27.5	28.1	28.0	28.5	29.0	27.5	28.1	28.0	28.5	29.0
8H 4H	27.3	28.0	27.8	28.4	28.9	27.3	28.0	27.8	28.4	28.9
6H	27.5	28.1	28.0	28.6	29.0	27.5	28.1	28.0	28.6	29.0
8H	27.6	28.1	28.1	28.6	29.1	27.6	28.1	28.1	28.6	29.1
12H	27.6	28.1	28.1	28.6	29.1	27.6	28.1	28.1	28.6	29.1
12H 4H	27.3	27.9	27.7	28.3	28.8	27.3	27.9	27.7	28.3	28.8
6H	27.5	28.0	28.0	28.5	29.0	27.5	28.0	28.0	28.5	29.0
8H	27.6	28.0	28.1	28.5	29.1	27.6	28.0	28.1	28.5	29.1
CIE190: 2010										

CIE190: 2010  
Area: 0.0706 m2

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Operators:ZZX  
Test Date:2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

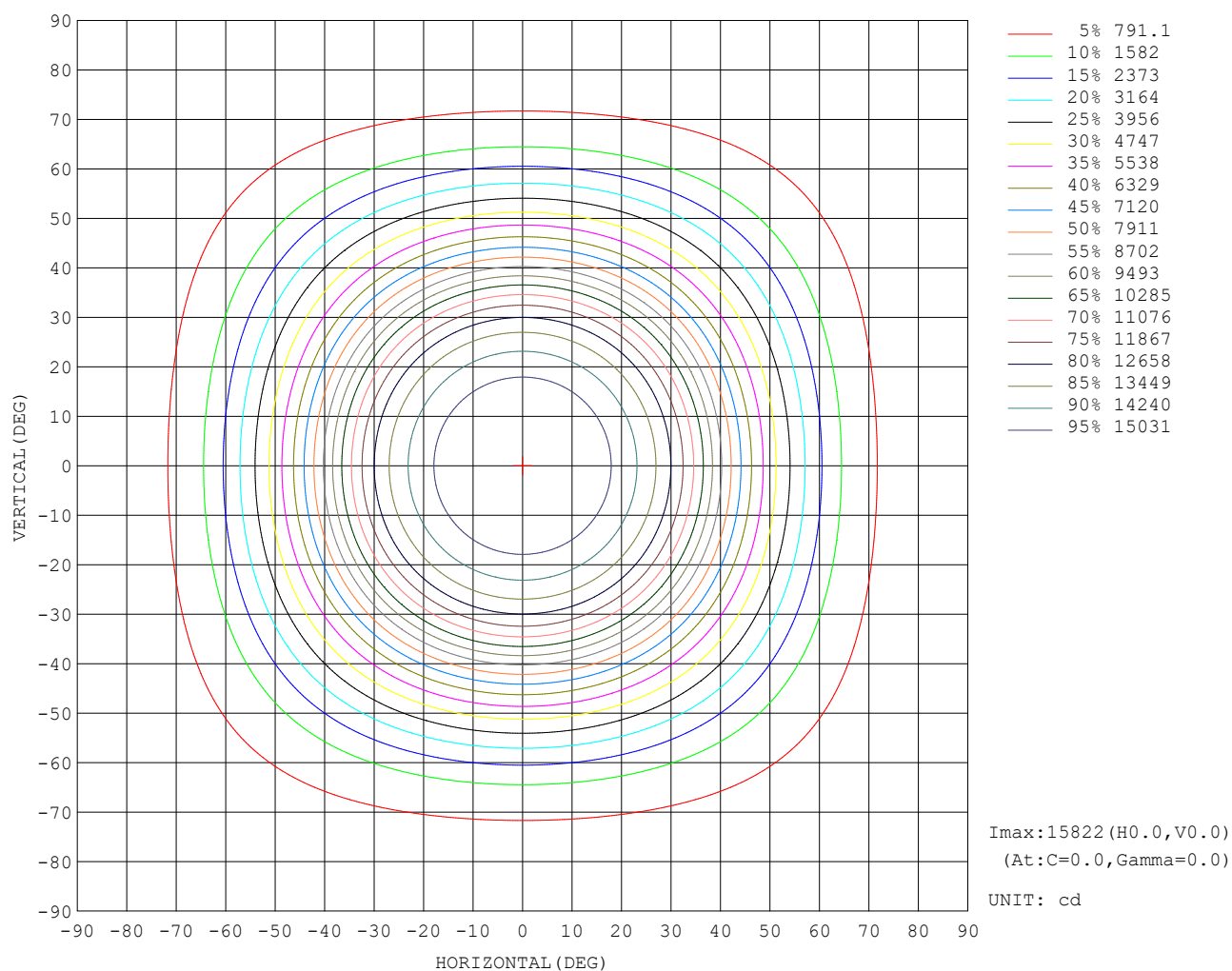
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	68	59	53	68	58	53	67	58	53	47
0.80	78	69	63	77	68	63	76	68	62	57
1.00	86	77	71	85	77	71	83	77	71	65
1.25	92	84	79	91	83	78	89	82	77	71
1.50	96	89	84	95	88	83	92	86	82	76
2.00	102	95	90	100	94	90	97	92	88	82
2.50	104	99	94	103	97	93	99	95	91	84
3.00	107	102	98	105	100	97	101	98	94	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	109	106	103	105	103	100	92
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: ZZX  
 Test Date: 2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4559]  
 Remarks:

## ISOCANDELA DIAGRAM

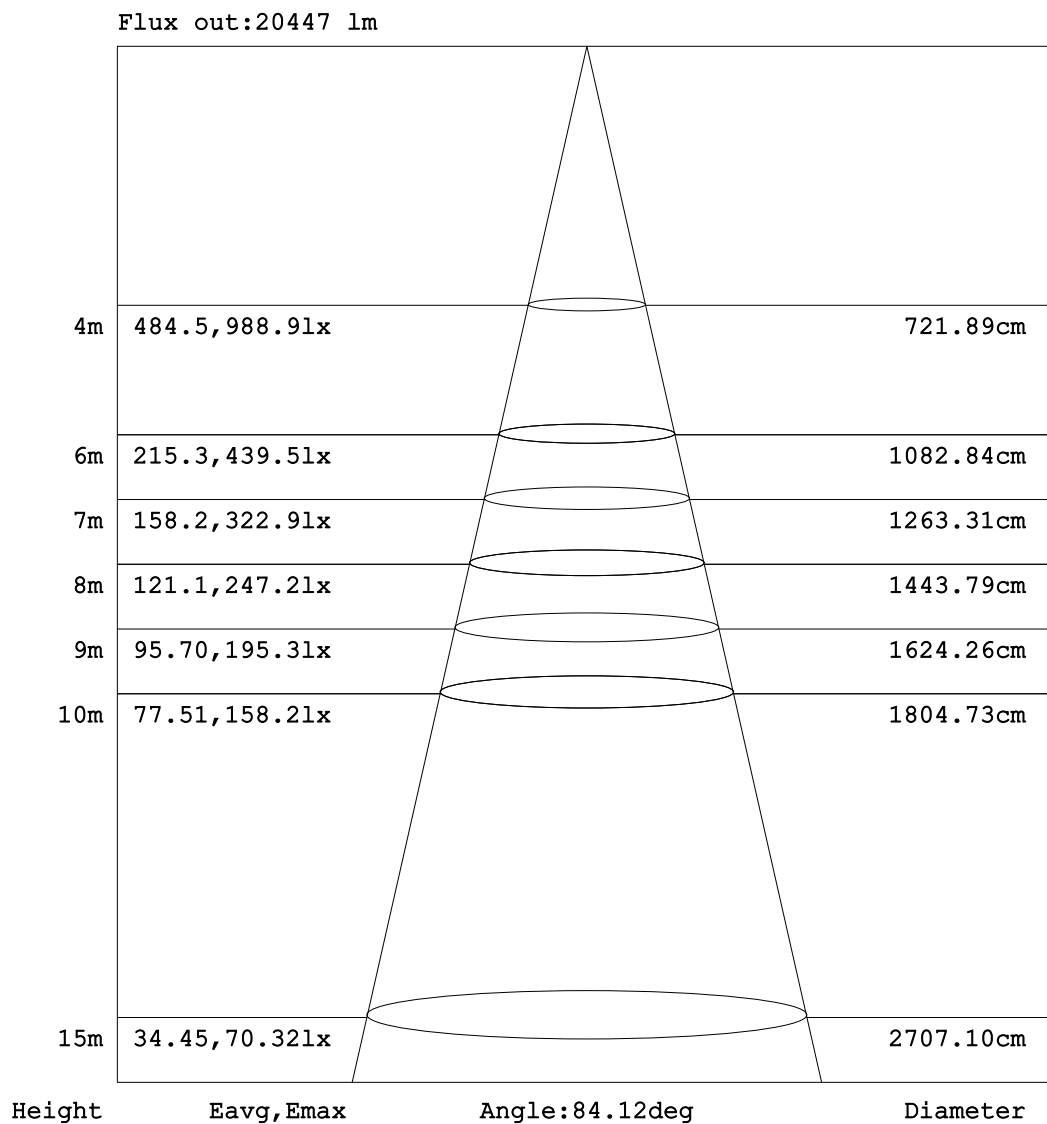


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C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-09-22

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Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
Remarks:



## AAI Figure



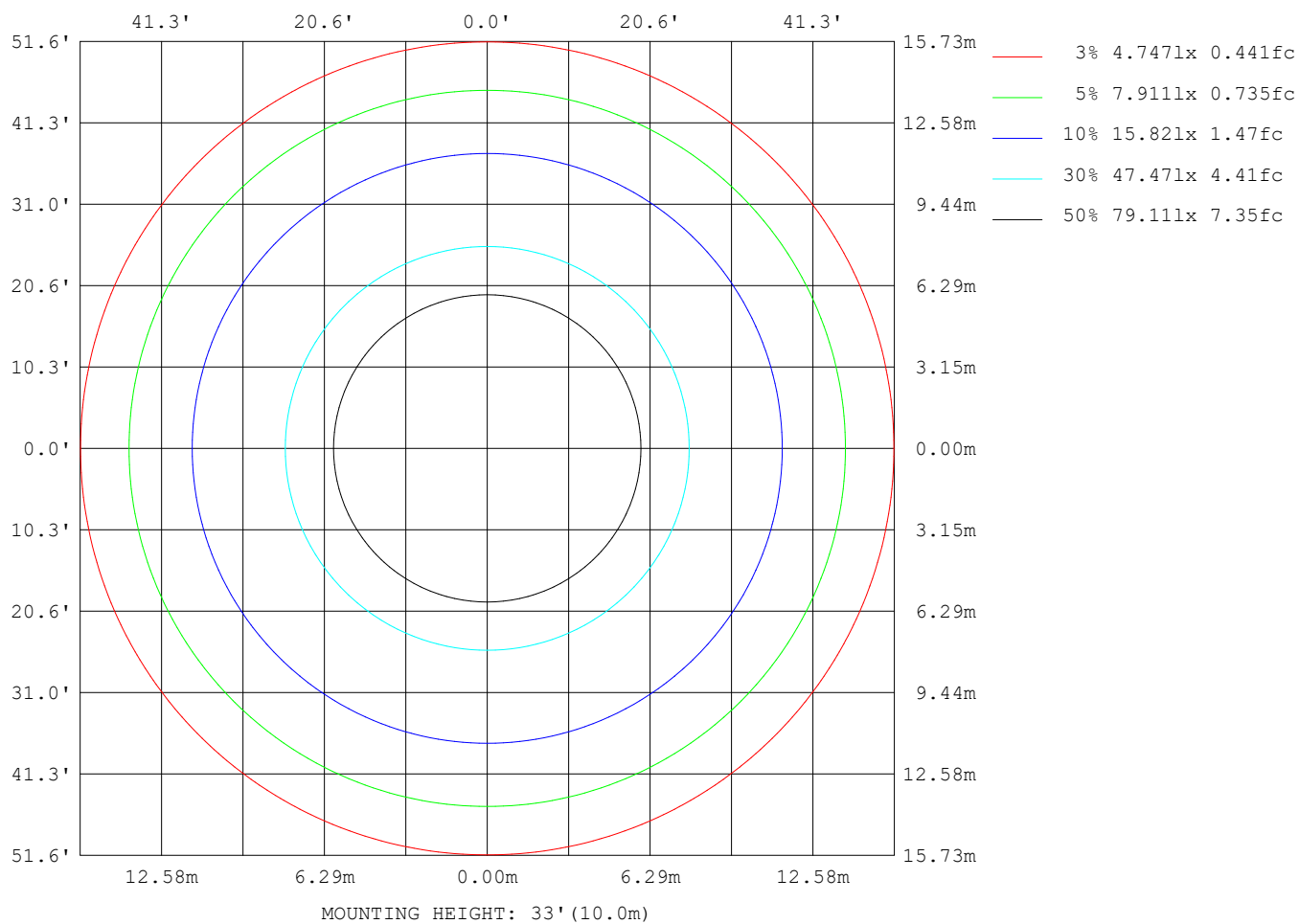
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 22.5DEG  
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Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-09-22

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 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4559]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

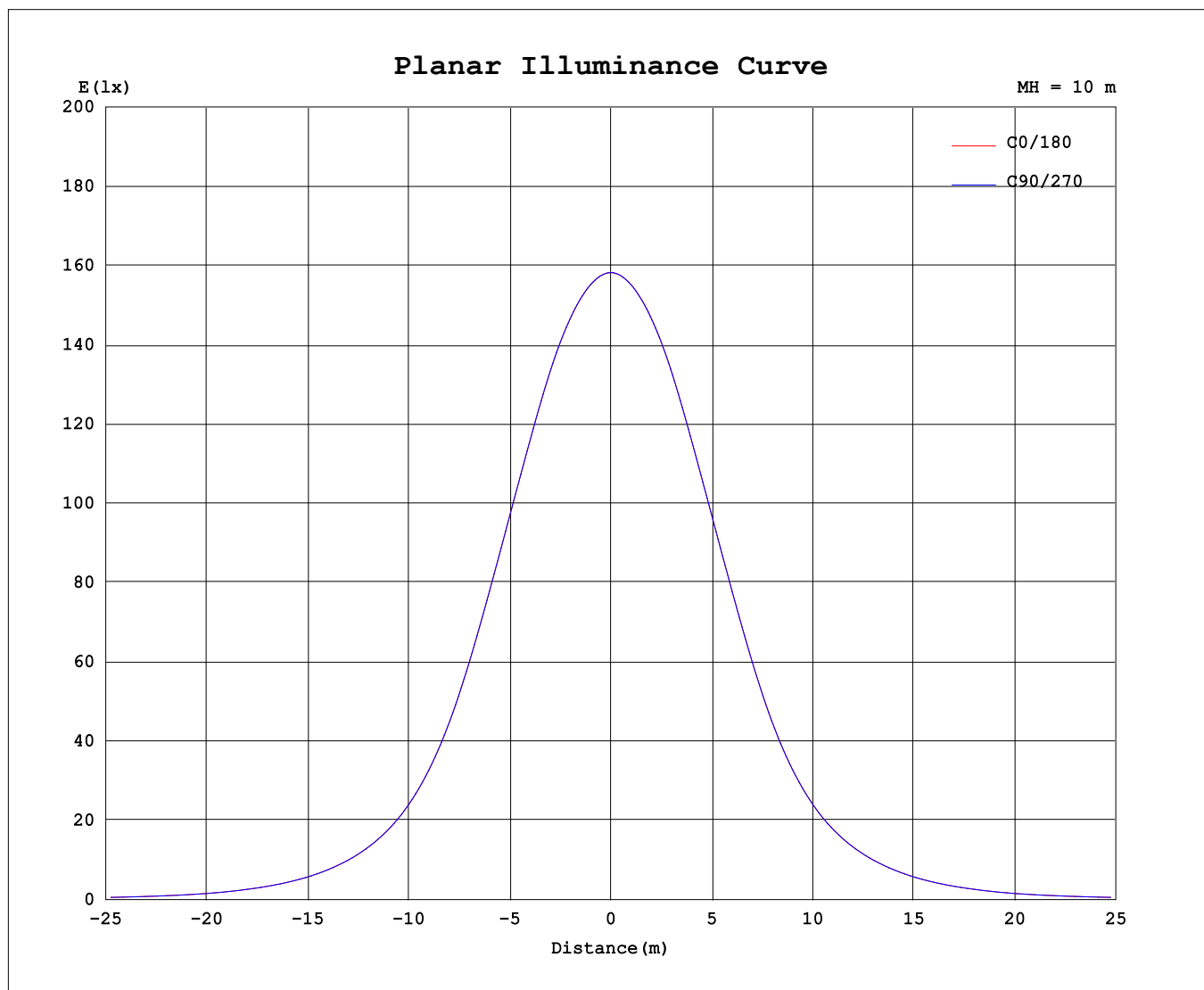
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-09-22

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4559]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-09-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4559]  
Remarks:

# LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-09-22

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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
Remarks:

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