

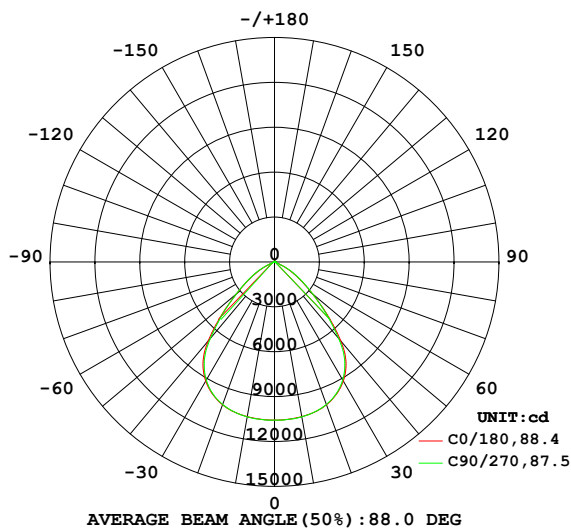
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

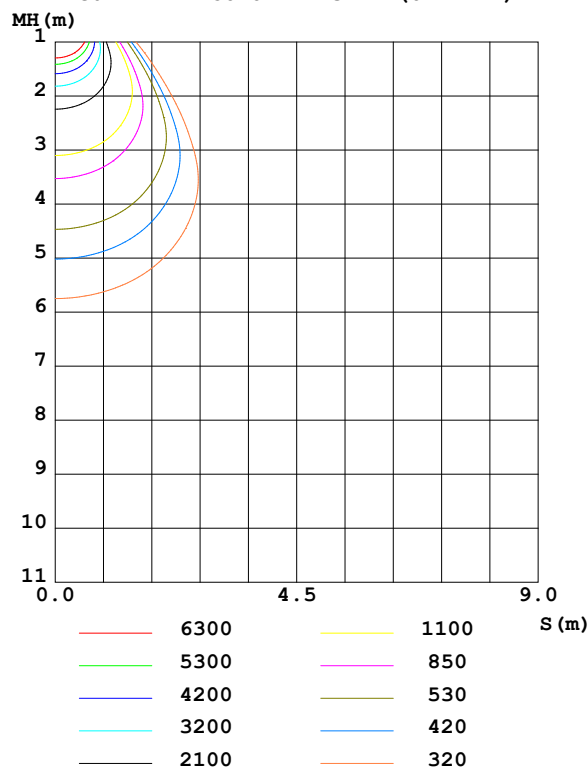
Test:U:230.0V I:0.446A P:99.8W PF:0.973 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:19958.5x1 lm		
NAME: HB68-100H-5070-H00195+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 199.90 lm/W			
MODEL	/	Imax (cd)	10580	S/MH (C0/180)	1.26
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	19958	$\eta$ UP,DN (C0-180)	0.1,49.9
NOMINAL FLUX (lm)	19958.5	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.1,49.9
LAMPS INSIDE	1	$\eta$ up (%)	0.3	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	/	$\eta$ down (%)	99.7	CIBSE SHR MAX	1.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4556]  
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	1050	1050	1051	1050	1050	1050	1051	1050	0- 10	1006	1006	5.04,5.04
20	1016	1015	1014	1015	1016	1015	1014	1015	10- 20	2932	3938	19.7,19.7
30	919.2	915.8	911.5	915.8	919.2	915.8	911.5	915.8	20- 30	4484	8422	42.2,42.2
40	689.5	679.8	667.3	679.8	689.5	679.8	667.3	679.8	30- 40	5104	13525	67.8,67.8
50	331.4	331.8	333.8	331.8	331.4	331.8	333.8	331.8	40- 50	3811	17336	86.9,86.9
60	129.1	135.4	137.2	135.4	129.1	135.4	137.2	135.4	50- 60	1977	19314	96.8,96.8
70	8.248	8.462	8.974	8.462	8.248	8.462	8.974	8.462	60- 70	540.4	19854	99.5,99.5
80	1.688	1.790	1.946	1.790	1.688	1.790	1.946	1.790	70- 80	38.21	19892	99.7,99.7
90	0.0725	0.0423	0.0494	0.0423	0.0725	0.0423	0.0494	0.0423	80- 90	9.316	19902	99.7,99.7
100	0.0553	0.0589	0.0588	0.0589	0.0553	0.0589	0.0588	0.0589	90-100	0.2620	19902	99.7,99.7
110	0.2465	0.2494	0.2480	0.2494	0.2465	0.2494	0.2480	0.2494	100-110	1.464	19903	99.7,99.7
120	0.6208	0.6195	0.6081	0.6195	0.6208	0.6195	0.6081	0.6195	110-120	4.124	19908	99.7,99.7
130	1.144	1.140	1.132	1.140	1.144	1.140	1.132	1.140	120-130	7.809	19915	99.8,99.8
140	1.647	1.659	1.653	1.659	1.647	1.659	1.653	1.659	130-140	10.80	19926	99.8,99.8
150	2.055	2.079	2.077	2.079	2.055	2.079	2.077	2.079	140-150	11.71	19938	99.9,99.9
160	2.244	2.280	2.282	2.280	2.244	2.280	2.282	2.280	150-160	10.06	19948	99.9,99.9
170	3.062	3.112	3.120	3.112	3.062	3.112	3.120	3.112	160-170	7.354	19955	100,100
180	3.312	3.346	3.347	3.346	3.312	3.346	3.347	3.346	170-180	3.142	19958	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 15679 lm

%lum = 78.6%

%lamp = 78.6%

Conical surface Flux(120deg): 19314 lm

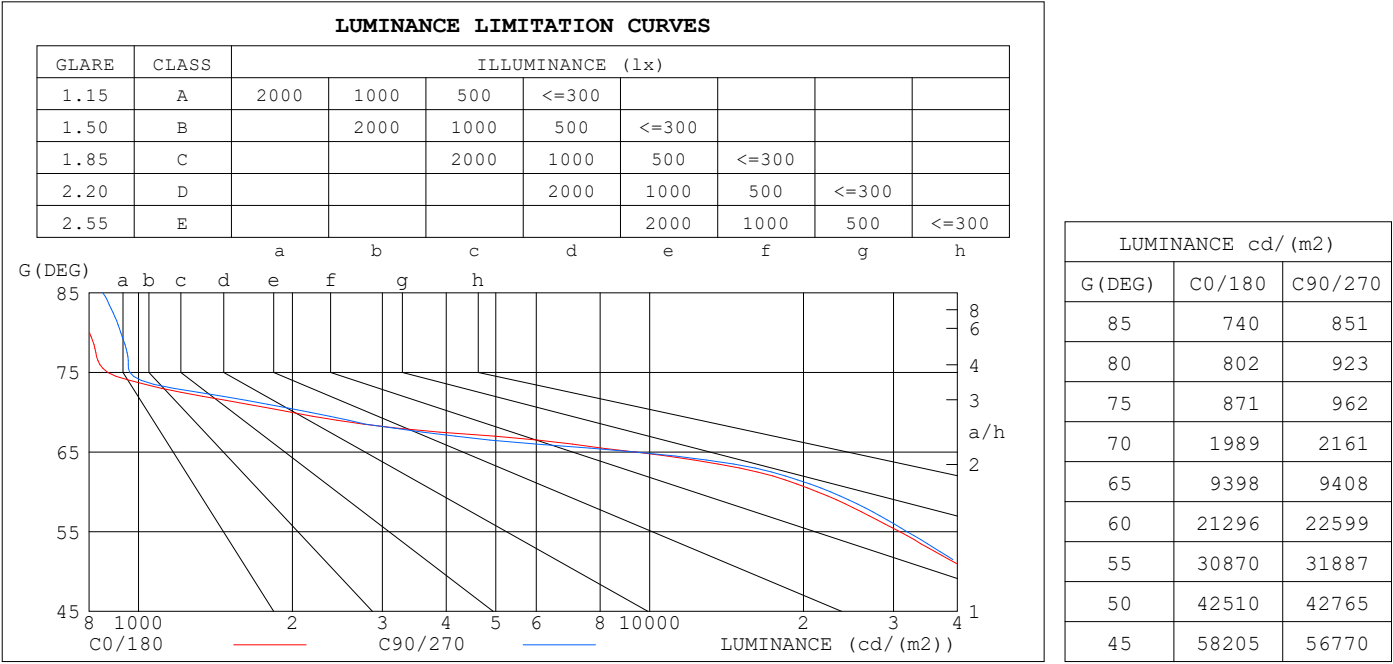
%lum = 96.8%

%lamp = 96.8%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4556]  
Remarks:

LUMINANCE LIMITATION CURVES



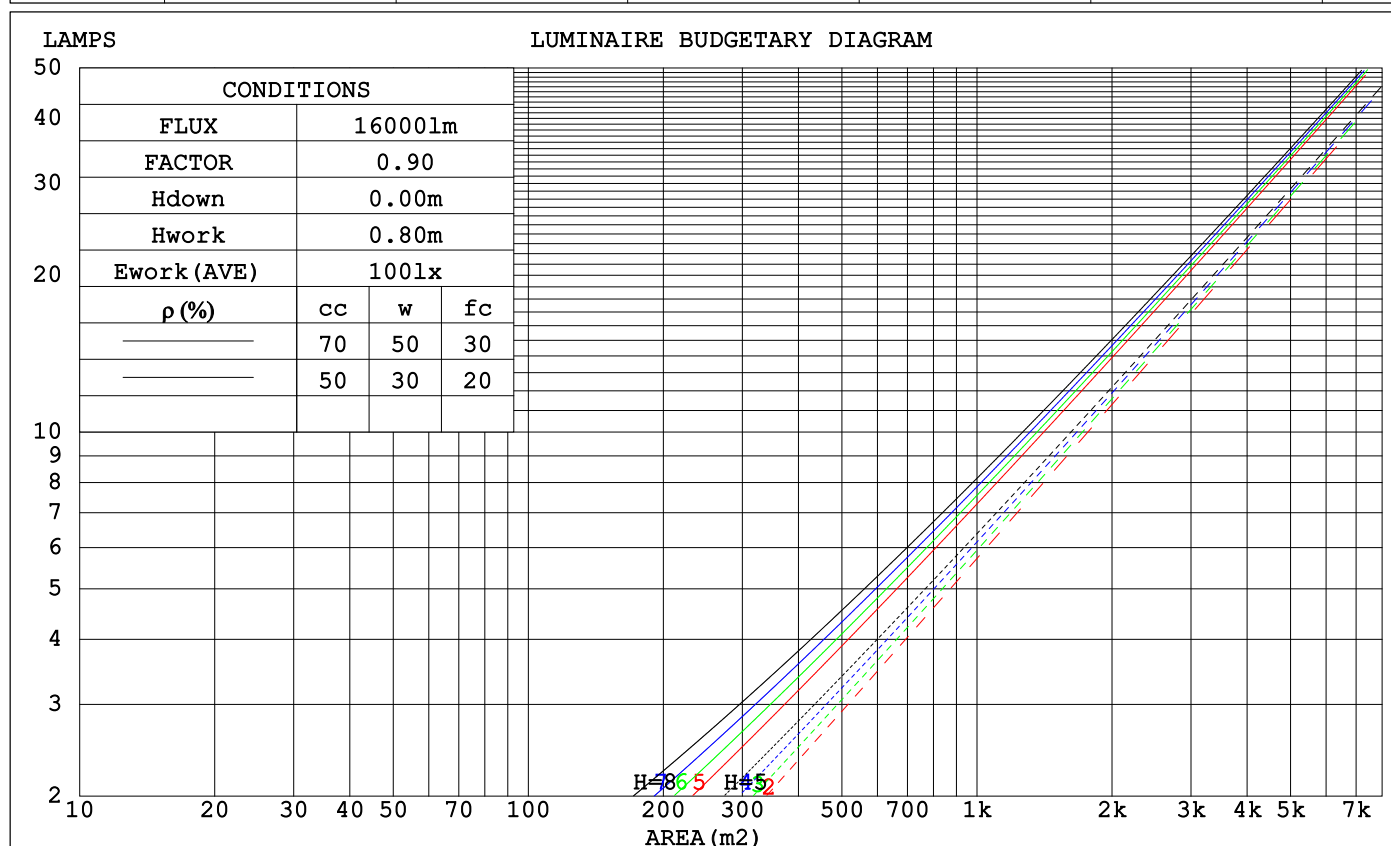
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-07-17

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4556]  
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															



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ZZX  
 Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4556]  
 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	.219	.125	.039	.212	.121	.038	.199	.114	.037	.187	.108	.035	.176	.102	.033	
2.0	.215	.118	.036	.209	.115	.036	.198	.110	.034	.188	.105	.033	.178	.101	.032	
3.0	.207	.110	.033	.202	.108	.033	.192	.104	.032	.183	.100	.031	.175	.097	.030	
4.0	.198	.103	.030	.193	.101	.030	.184	.098	.029	.176	.095	.029	.169	.092	.028	
5.0	.188	.096	.028	.184	.094	.027	.176	.092	.027	.169	.089	.027	.162	.087	.026	
6.0	.178	.089	.026	.175	.088	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024	
7.0	.169	.084	.024	.166	.083	.024	.160	.081	.023	.154	.079	.023	.149	.077	.023	
8.0	.161	.078	.022	.158	.078	.022	.152	.076	.022	.147	.075	.022	.142	.073	.021	
9.0	.153	.074	.021	.150	.073	.021	.145	.072	.020	.141	.070	.020	.136	.069	.020	
10.0	.145	.070	.019	.143	.069	.019	.139	.068	.019	.134	.067	.019	.130	.066	.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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.176	.159	.144	.151	.137	.124	.103	.094	.086	.059	.054	.050	.019	.018	.016	
2.0	.164	.134	.109	.141	.116	.095	.096	.080	.066	.056	.047	.039	.018	.015	.013	
3.0	.155	.116	.085	.133	.100	.074	.091	.070	.052	.053	.041	.031	.017	.013	.010	
4.0	.146	.102	.068	.126	.088	.059	.086	.061	.042	.050	.036	.025	.016	.012	.008	
5.0	.139	.091	.056	.119	.079	.048	.082	.055	.034	.048	.032	.020	.015	.011	.007	
6.0	.132	.082	.046	.114	.071	.040	.079	.050	.029	.046	.029	.017	.015	.010	.006	
7.0	.126	.075	.039	.109	.065	.034	.075	.046	.024	.044	.027	.015	.014	.009	.005	
8.0	.121	.069	.034	.104	.060	.030	.072	.042	.021	.042	.025	.013	.014	.008	.004	
9.0	.116	.065	.030	.100	.056	.026	.069	.039	.019	.040	.023	.011	.013	.008	.004	
10.0	.111	.060	.027	.096	.052	.023	.066	.037	.017	.039	.022	.010	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ZZX  
 Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4556]  
 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	21.7	23.0	22.1	23.3	23.7	21.3	22.6	21.7	22.9	23.2
3H	21.6	22.7	22.0	23.1	23.5	21.2	22.3	21.6	22.7	23.0
4H	21.5	22.6	21.9	22.9	23.3	21.1	22.2	21.5	22.5	22.9
6H	21.4	22.4	21.9	22.8	23.2	21.0	22.0	21.4	22.4	22.8
8H	21.4	22.3	21.8	22.7	23.1	21.0	21.9	21.4	22.3	22.7
12H	21.4	22.2	21.8	22.6	23.1	20.9	21.8	21.4	22.2	22.6
4H 2H	21.6	22.7	22.1	23.1	23.5	21.2	22.3	21.6	22.7	23.1
3H	21.5	22.4	22.0	22.8	23.2	21.1	22.0	21.6	22.4	22.8
4H	21.5	22.2	21.9	22.6	23.1	21.1	21.8	21.5	22.2	22.7
6H	21.4	22.0	21.8	22.5	23.0	21.0	21.6	21.4	22.1	22.6
8H	21.3	21.9	21.8	22.4	22.9	20.9	21.5	21.4	22.0	22.5
12H	21.3	21.8	21.8	22.3	22.8	20.9	21.4	21.4	21.9	22.4
8H 4H	21.3	21.9	21.8	22.4	22.9	20.9	21.5	21.4	22.0	22.5
6H	21.2	21.7	21.7	22.2	22.7	20.8	21.3	21.3	21.8	22.3
8H	21.1	21.6	21.7	22.1	22.6	20.8	21.2	21.3	21.7	22.2
12H	21.1	21.5	21.6	22.0	22.6	20.7	21.1	21.2	21.6	22.2
12H 4H	21.3	21.8	21.8	22.3	22.8	20.9	21.4	21.4	21.9	22.4
6H	21.1	21.6	21.7	22.1	22.6	20.8	21.2	21.3	21.7	22.2
8H	21.1	21.5	21.6	22.0	22.6	20.7	21.1	21.2	21.6	22.2
CIE190: 2010										

CIE190: 2010  
Area: 0.1213 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity:65.0%  
Test Distance:26.000m [K=0.4556]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

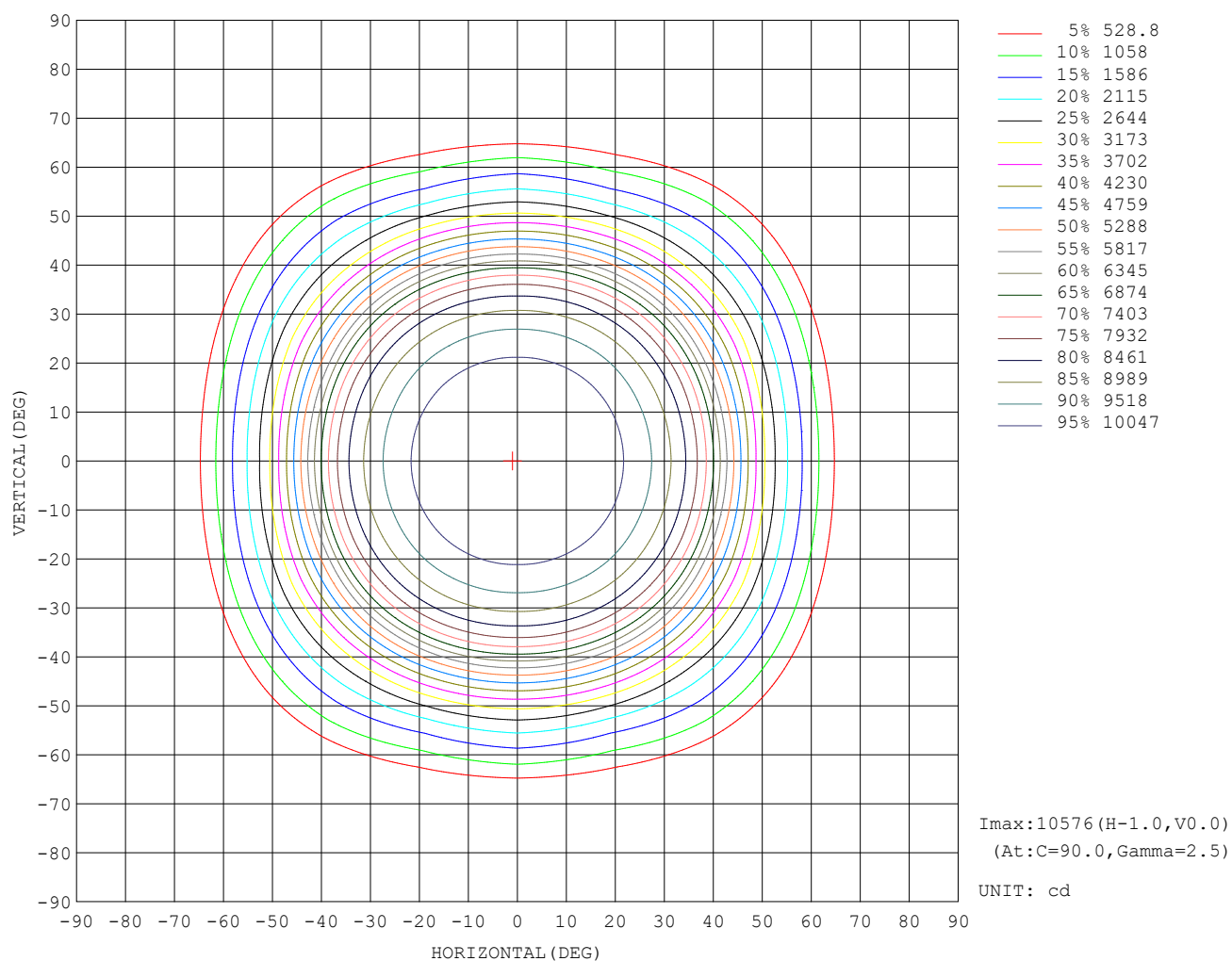
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	71	61	56	70	61	56	69	61	56	50
0.80	81	72	66	80	71	66	78	71	66	60
1.00	88	80	75	87	80	75	86	80	74	69
1.25	95	87	82	93	86	82	91	85	81	75
1.50	99	92	87	97	91	86	95	89	85	80
2.00	103	98	93	102	97	93	99	94	91	85
2.50	106	101	97	104	99	96	101	97	94	87
3.00	108	104	100	106	102	99	103	99	97	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	93
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ZZX  
 Test Date: 2023-07-17

γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4556]  
 Remarks:

## ISOCANDELA DIAGRAM

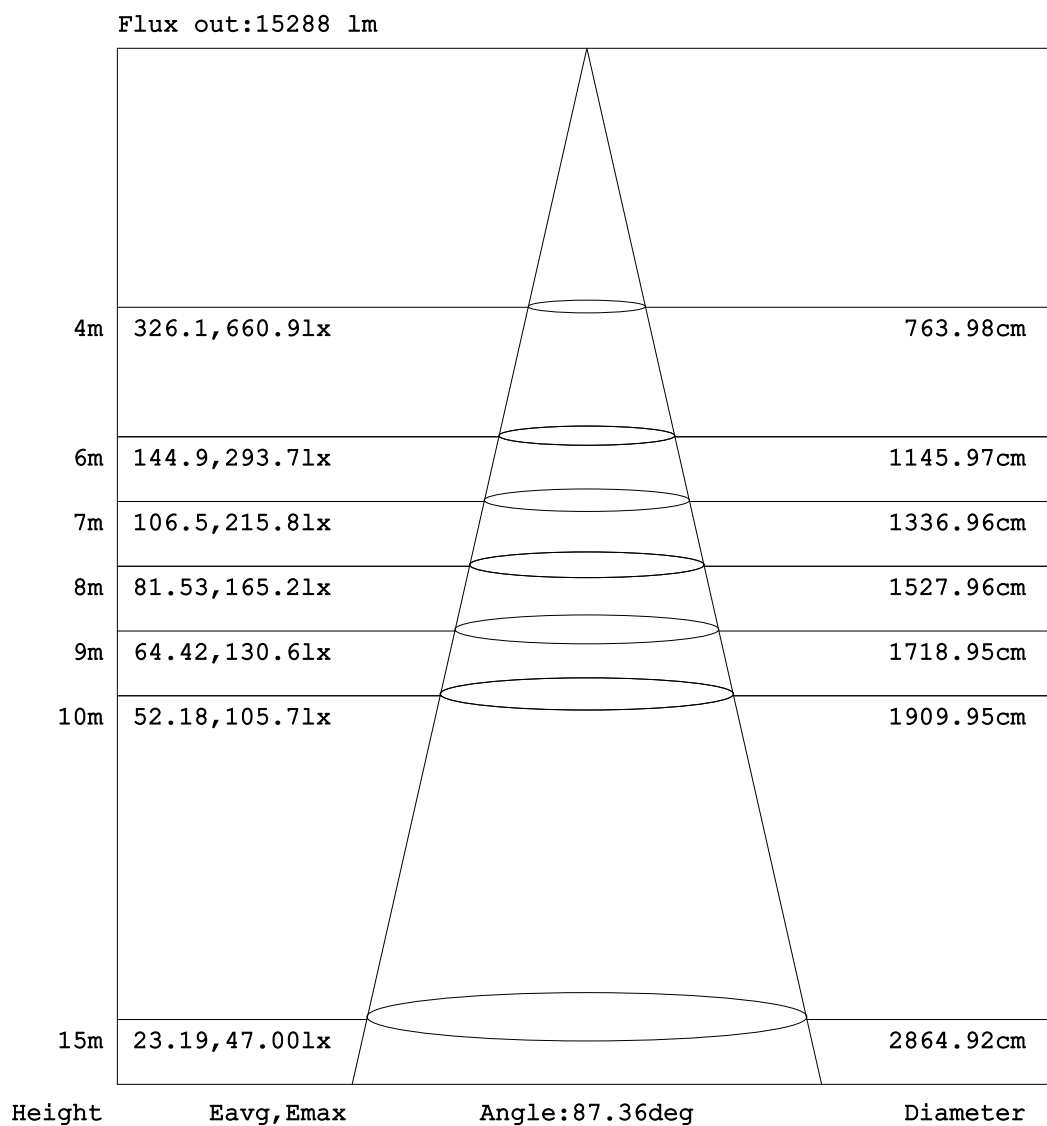


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZK  
Test Date: 2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4556]  
Remarks:



## AAI Figure



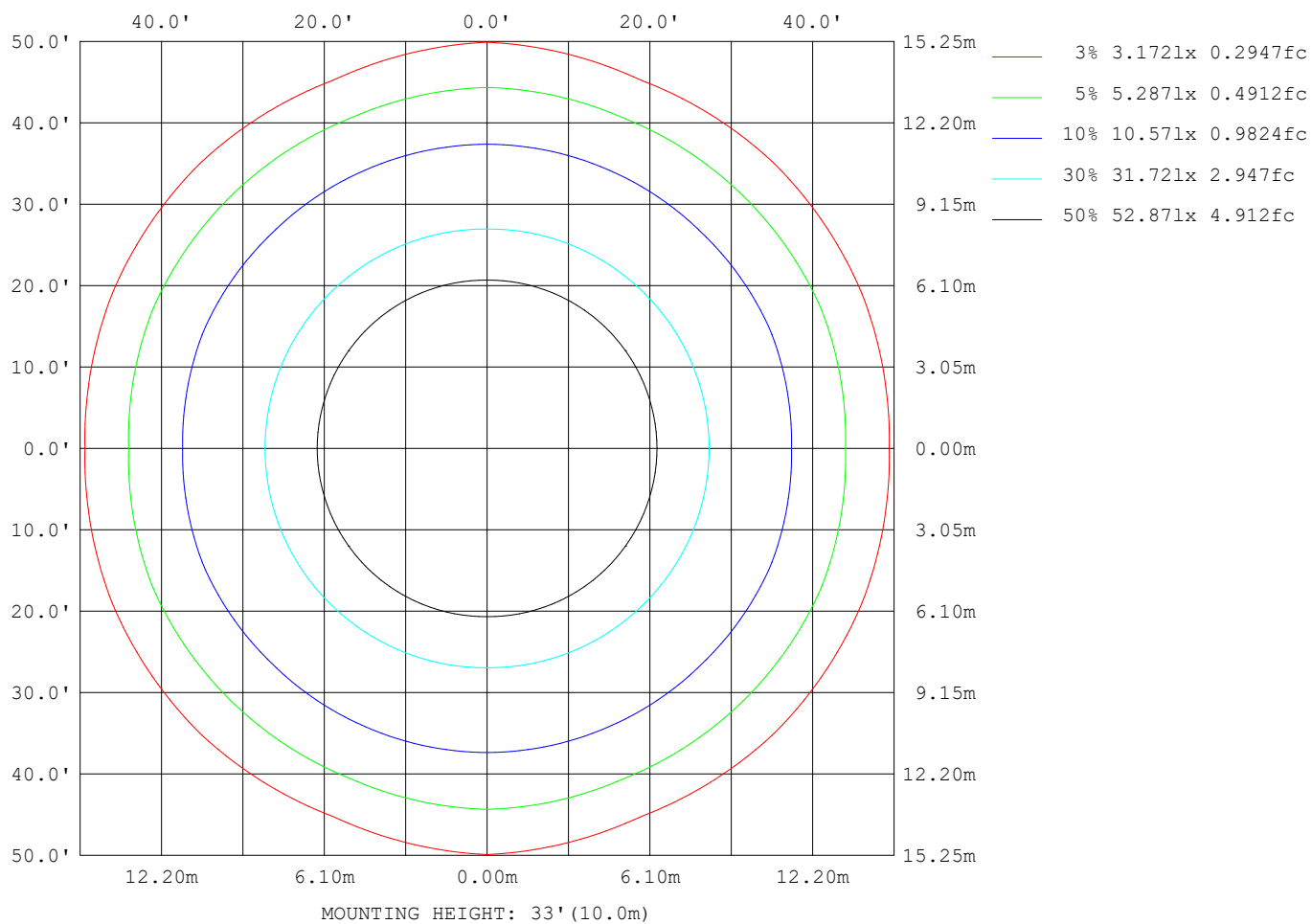
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
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Temperature:25.3°C  
Operators:ZZX  
Test Date:2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
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Test Distance:26.000m [K=0.4556]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

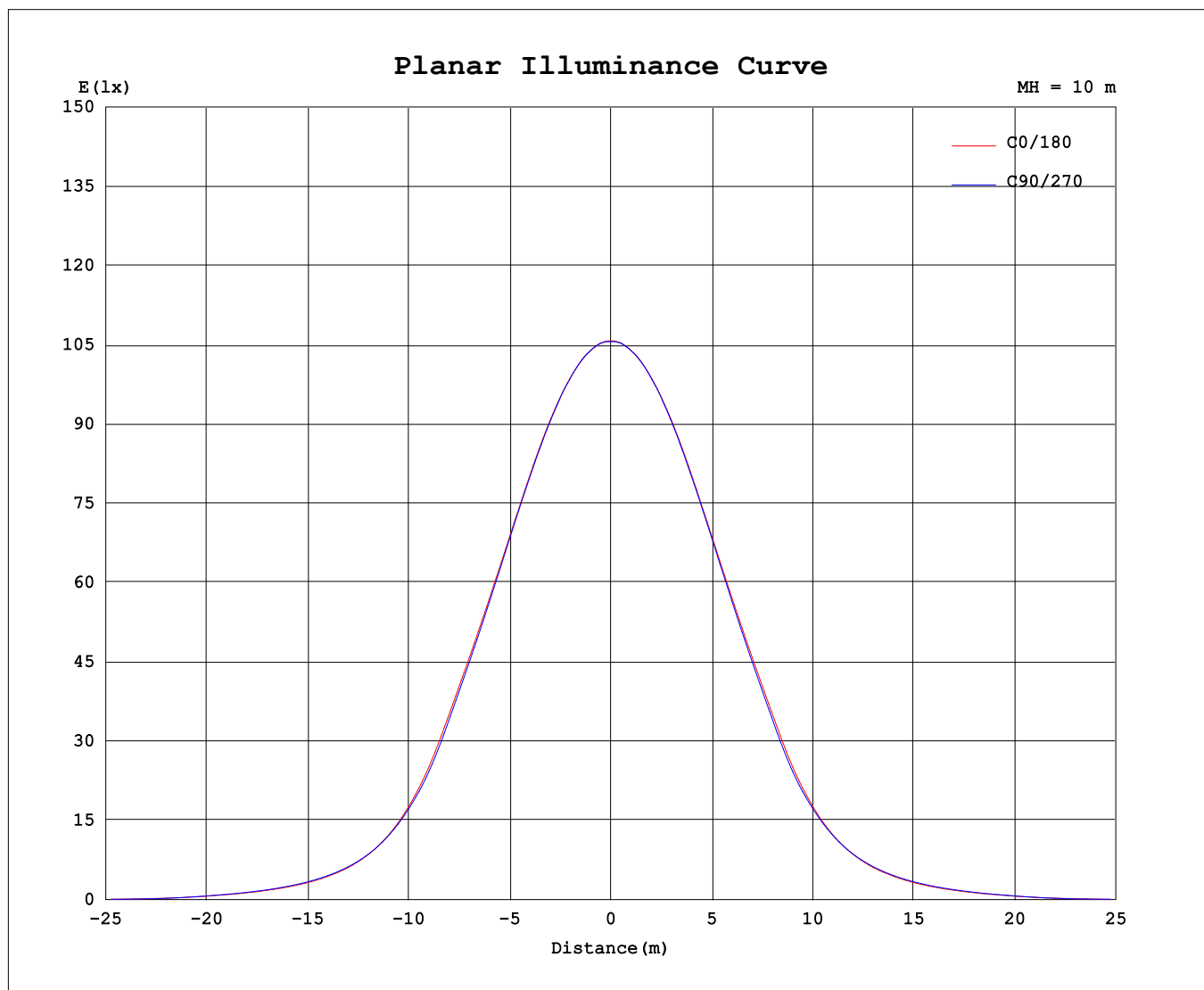
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4556]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: ZZX  
Test Date: 2023-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.465  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4556]  
Remarks: