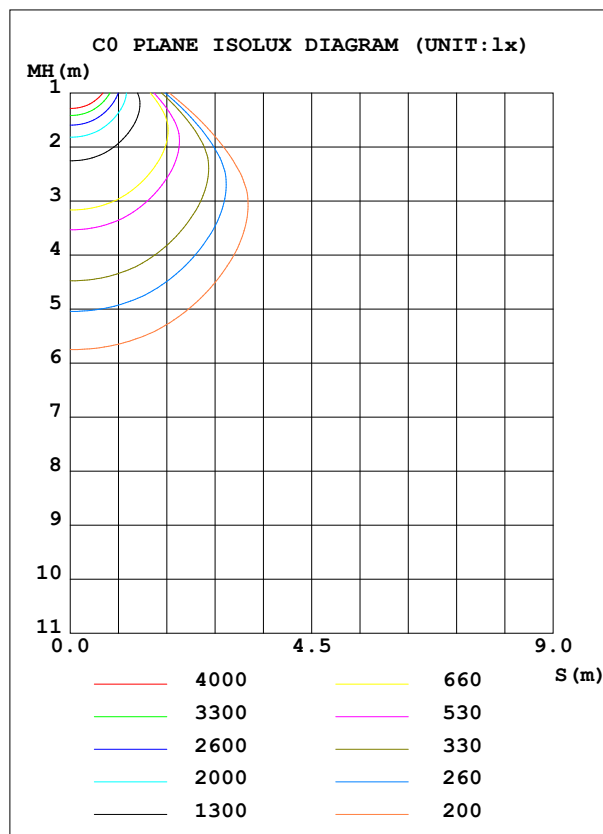
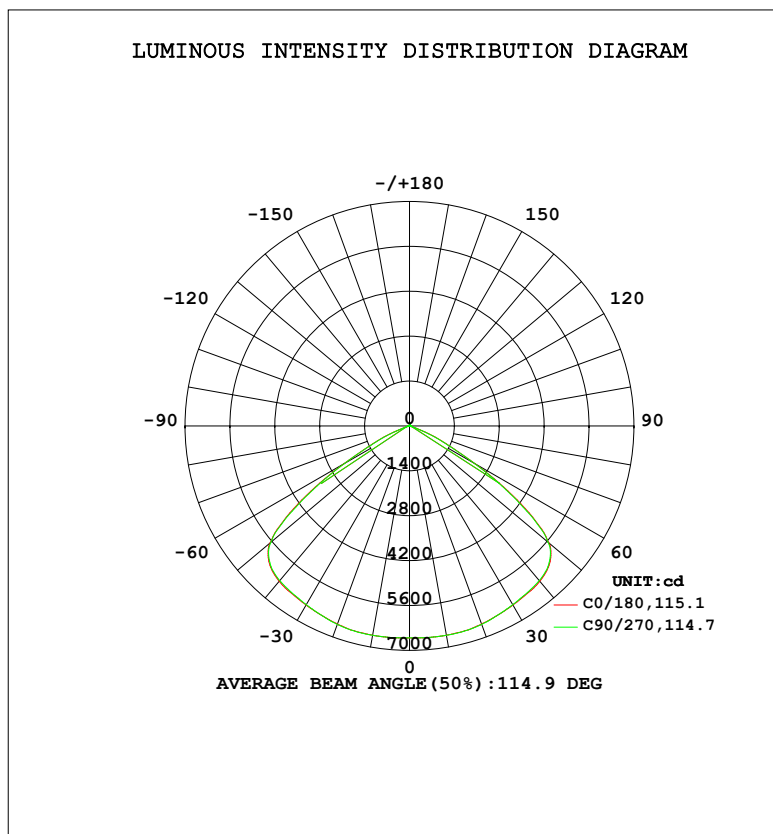


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.8V I:0.444A P:99.2W PF:0.972 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:19178.9x1 lm		
NAME: HB68-100H-5070-H00194+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP			PHOTOMETRIC DATA Eff: 193.27 lm/W			
MODEL	/		Imax (cd)	6632	S/MH (C0/180)	1.49
NOMINAL POWER (W)	/		LOR (%)	100.0	S/MH (C90/270)	1.48
RATED VOLTAGE (V)	/		TOTAL FLUX (lm)	19179	η UP, DN (C0-180)	0.1, 49.9
NOMINAL FLUX (lm)	19178.9		CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 49.9
LAMPS INSIDE	1		η up (%)	0.3	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	/		η down (%)	99.7	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

```

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:

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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	6626	6623	6628	6623	6626	6623	6628	6623	0- 10	632.2	632.2	3.3,3.3
20	6574	6581	6586	6581	6574	6581	6586	6581	10- 20	1874	2506	13.1,13.1
30	6447	6435	6438	6435	6447	6435	6438	6435	20- 30	3012	5519	28.8,28.8
40	6320	6297	6297	6297	6320	6297	6297	6297	30- 40	4004	9523	49.7,49.7
50	5674	5631	5645	5631	5674	5631	5645	5631	40- 50	4708	14230	74.2,74.2
60	2355	2220	2340	2220	2355	2220	2340	2220	50- 60	3659	17889	93.3,93.3
70	276.4	284.7	270.4	284.7	276.4	284.7	270.4	284.7	60- 70	1117	19006	99.1,99.1
80	41.85	44.61	48.61	44.61	41.85	44.61	48.61	44.61	70- 80	94.33	19101	99.6,99.6
90	1.230	1.257	1.652	1.257	1.230	1.257	1.652	1.257	80- 90	23.82	19125	99.7,99.7
100	1.124	1.065	1.092	1.065	1.124	1.065	1.092	1.065	90-100	0.5013	19125	99.7,99.7
110	4.825	4.595	4.684	4.595	4.825	4.595	4.684	4.595	100-110	2.846	19128	99.7,99.7
120	8.584	8.543	8.518	8.543	8.584	8.543	8.518	8.543	110-120	6.626	19135	99.8,99.8
130	12.92	12.81	12.75	12.81	12.92	12.81	12.75	12.81	120-130	9.545	19144	99.8,99.8
140	15.03	15.03	14.94	15.03	15.03	15.03	14.94	15.03	130-140	11.09	19155	99.9,99.9
150	15.22	15.10	15.07	15.10	15.22	15.10	15.07	15.10	140-150	9.434	19165	99.9,99.9
160	15.96	15.85	15.80	15.85	15.96	15.85	15.80	15.85	150-160	7.085	19172	100,100
170	21.10	20.95	20.92	20.95	21.10	20.95	20.92	20.95	160-170	5.063	19177	100,100
180	22.55	22.27	22.18	22.27	22.55	22.27	22.18	22.27	170-180	2.105	19179	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 11831 lm

%lum = 61.7%

%lamp = 61.7%

Conical surface Flux(120deg): 17889 lm

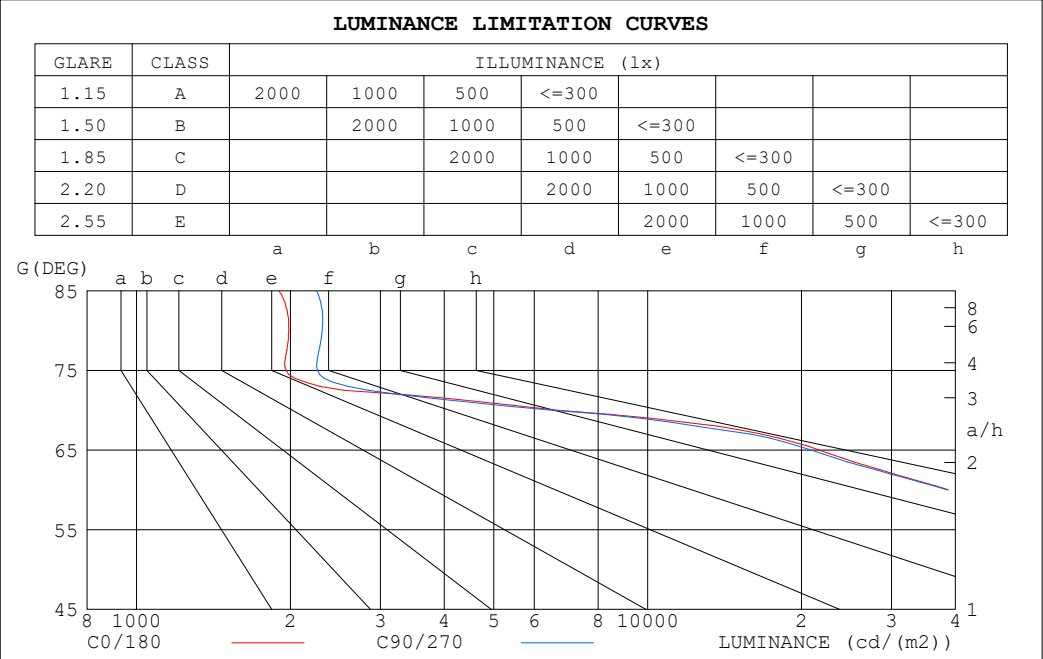
%lum = 93.3%

%lamp = 93.3%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-13

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:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1899	2249
80	1986	2308
75	1964	2261
70	6661	6516
65	21662	20907
60	38812	38573
55	60978	59856
50	72756	72400
45	71718	71481

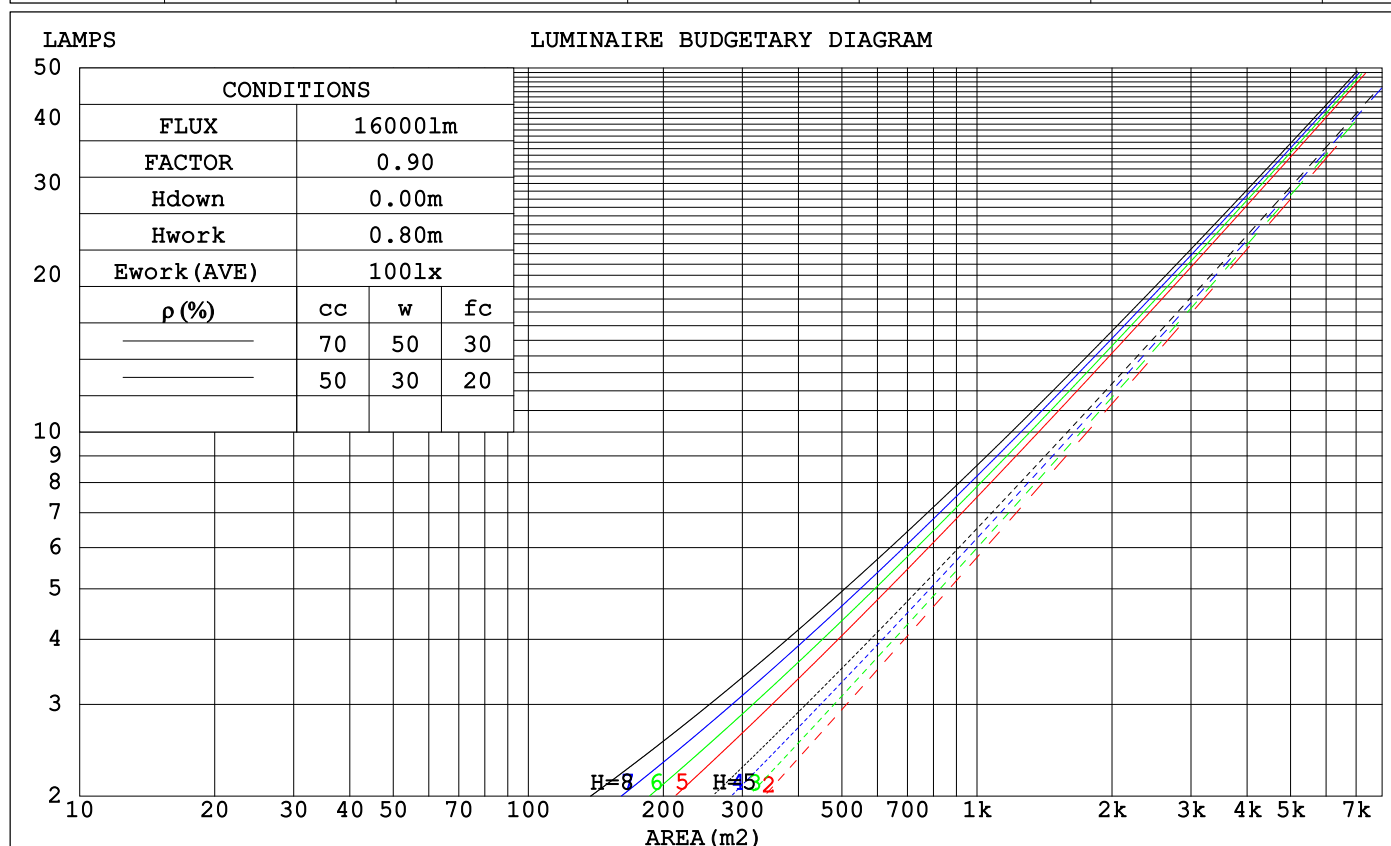
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	1.07	1.04	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.87	.83	.80	.84	.81	.78	.76
3.0	.84	.77	.71	.83	.76	.71	.80	.74	.70	.77	.72	.68	.75	.71	.67	.65
4.0	.75	.67	.61	.74	.66	.61	.71	.65	.60	.69	.64	.59	.67	.62	.58	.56
5.0	.67	.59	.53	.66	.58	.52	.64	.57	.52	.62	.56	.51	.60	.55	.51	.49
6.0	.61	.52	.46	.60	.52	.46	.58	.51	.45	.56	.50	.45	.55	.49	.45	.43
7.0	.55	.46	.40	.54	.46	.40	.52	.45	.40	.51	.45	.40	.50	.44	.39	.38
8.0	.50	.42	.36	.49	.41	.36	.48	.41	.36	.47	.40	.35	.45	.40	.35	.33
9.0	.46	.38	.32	.45	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.32	.30
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.38	.33	.28	.27



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-13

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

WEC AND CCEC

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.249	.142	.045	.242	.138	.044	.229	.131	.042	.217	.125	.040	.206	.119	.038	
2.0	.247	.135	.041	.240	.132	.041	.229	.127	.040	.218	.123	.038	.209	.118	.037	
3.0	.237	.126	.038	.232	.124	.037	.221	.120	.036	.212	.116	.036	.203	.113	.035	
4.0	.225	.117	.034	.220	.115	.034	.211	.112	.033	.203	.109	.033	.195	.106	.032	
5.0	.213	.108	.031	.208	.107	.031	.200	.104	.031	.193	.102	.030	.186	.099	.030	
6.0	.200	.100	.029	.197	.099	.029	.189	.097	.028	.183	.095	.028	.177	.093	.028	
7.0	.189	.093	.026	.185	.092	.026	.179	.091	.026	.173	.089	.026	.167	.087	.026	
8.0	.178	.087	.024	.175	.086	.024	.169	.085	.024	.164	.083	.024	.159	.082	.024	
9.0	.168	.081	.023	.165	.081	.023	.160	.079	.022	.155	.078	.022	.151	.077	.022	
10.0	.159	.076	.021	.157	.076	.021	.152	.074	.021	.147	.073	.021	.143	.072	.021	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.178	.159	.141	.153	.136	.122	.104	.094	.084	.060	.054	.049	.019	.017	.016	
2.0	.168	.134	.106	.144	.116	.091	.099	.080	.064	.057	.047	.037	.018	.015	.012	
3.0	.160	.116	.081	.137	.100	.070	.094	.070	.049	.054	.041	.029	.018	.013	.010	
4.0	.153	.103	.064	.131	.089	.056	.090	.062	.039	.052	.036	.023	.017	.012	.008	
5.0	.146	.092	.052	.126	.080	.045	.087	.056	.032	.050	.033	.019	.016	.011	.006	
6.0	.140	.084	.043	.120	.072	.038	.083	.051	.027	.048	.030	.016	.016	.010	.005	
7.0	.134	.077	.037	.115	.067	.032	.080	.047	.023	.046	.027	.014	.015	.009	.004	
8.0	.128	.071	.032	.110	.062	.028	.076	.043	.020	.044	.026	.012	.014	.008	.004	
9.0	.123	.066	.028	.106	.057	.025	.073	.040	.017	.043	.024	.010	.014	.008	.003	
10.0	.117	.062	.025	.101	.054	.022	.070	.038	.016	.041	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2023-07-13

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

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	2H	25.9	27.4	26.2	27.7	28.0	25.9	27.4	26.2	27.7	28.0
	3H	25.9	27.3	26.3	27.6	28.0	25.9	27.3	26.3	27.6	28.0
	4H	25.9	27.1	26.3	27.5	27.9	25.8	27.1	26.3	27.5	27.9
	6H	25.8	27.0	26.2	27.3	27.7	25.8	26.9	26.2	27.3	27.7
	8H	25.8	26.9	26.2	27.3	27.7	25.8	26.9	26.2	27.3	27.7
	12H	25.7	26.8	26.2	27.2	27.6	25.7	26.8	26.2	27.2	27.6
	4H	2H	25.9	27.1	26.3	27.5	27.9	25.9	27.1	26.3	27.5
	3H	25.9	27.0	26.4	27.4	27.8	25.9	27.0	26.4	27.4	27.8
	4H	25.9	26.8	26.3	27.2	27.7	25.9	26.8	26.3	27.2	27.7
	6H	25.8	26.6	26.3	27.1	27.5	25.8	26.6	26.3	27.1	27.5
	8H	25.8	26.5	26.2	27.0	27.4	25.8	26.5	26.2	27.0	27.4
	12H	25.7	26.4	26.2	26.9	27.4	25.7	26.4	26.2	26.9	27.4
8H	4H	25.8	26.5	26.2	27.0	27.4	25.8	26.5	26.2	27.0	27.4
	6H	25.7	26.3	26.2	26.8	27.3	25.7	26.3	26.2	26.8	27.3
	8H	25.6	26.2	26.2	26.7	27.2	25.6	26.2	26.2	26.7	27.2
	12H	25.6	26.1	26.1	26.6	27.2	25.6	26.1	26.1	26.6	27.2
12H	4H	25.7	26.4	26.2	26.9	27.4	25.7	26.4	26.2	26.9	27.3
	6H	25.6	26.2	26.2	26.7	27.2	25.6	26.2	26.2	26.7	27.2
	8H	25.6	26.1	26.1	26.6	27.2	25.6	26.1	26.1	26.6	27.2
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:2023-07-13

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

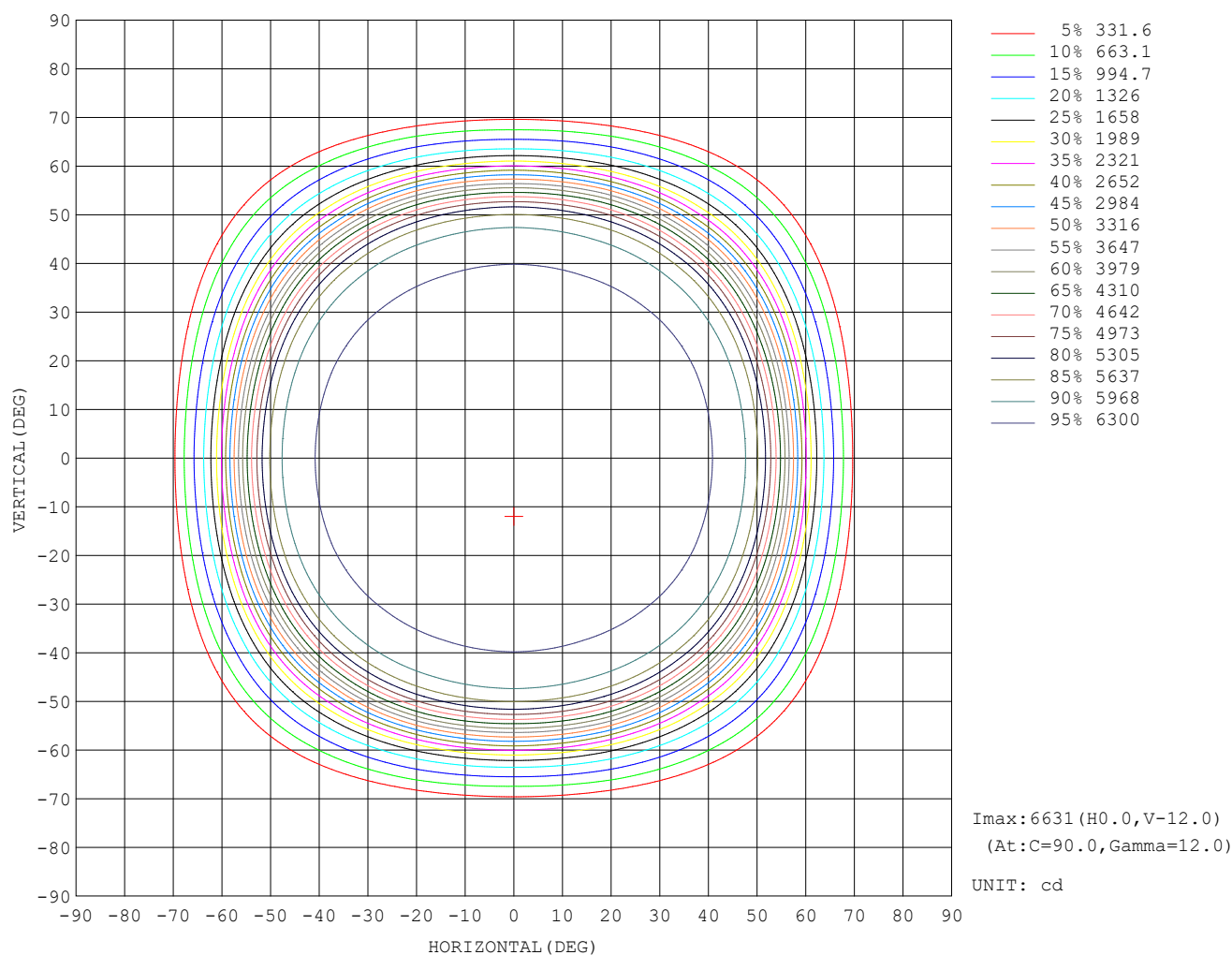
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	59	47	41	58	47	40	57	47	40	34
0.80	70	59	52	69	59	52	68	58	52	45
1.00	80	70	64	79	70	63	77	71	63	56
1.25	88	79	72	86	78	72	84	77	71	65
1.50	93	84	78	91	83	78	88	82	77	70
2.00	99	92	87	98	91	86	94	89	85	78
2.50	103	96	91	101	95	90	97	92	88	81
3.00	105	100	95	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	87
5.00	110	106	103	108	104	101	104	101	98	89
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: 2023-07-13

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:

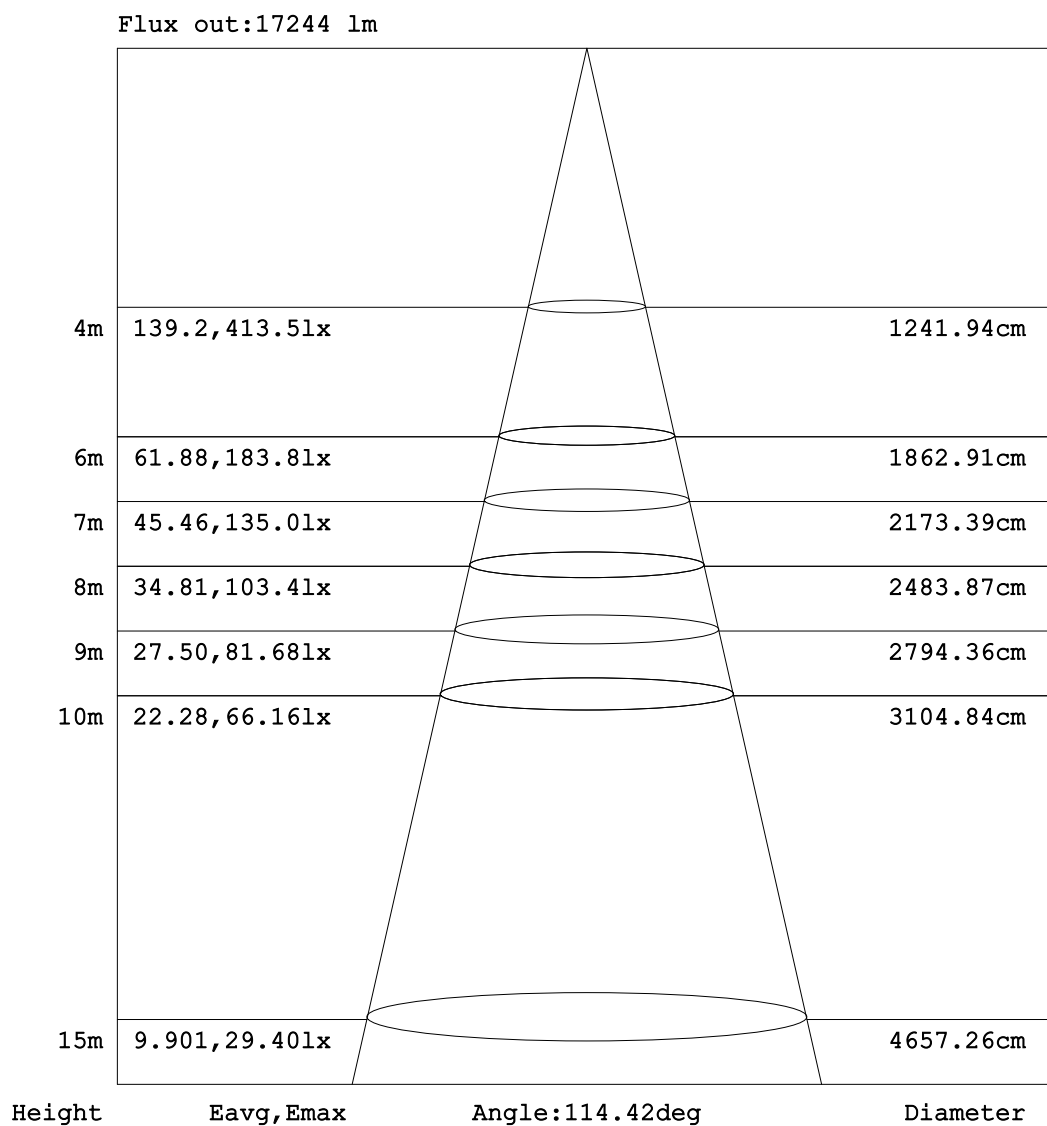
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-07-13

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:

AAI Figure



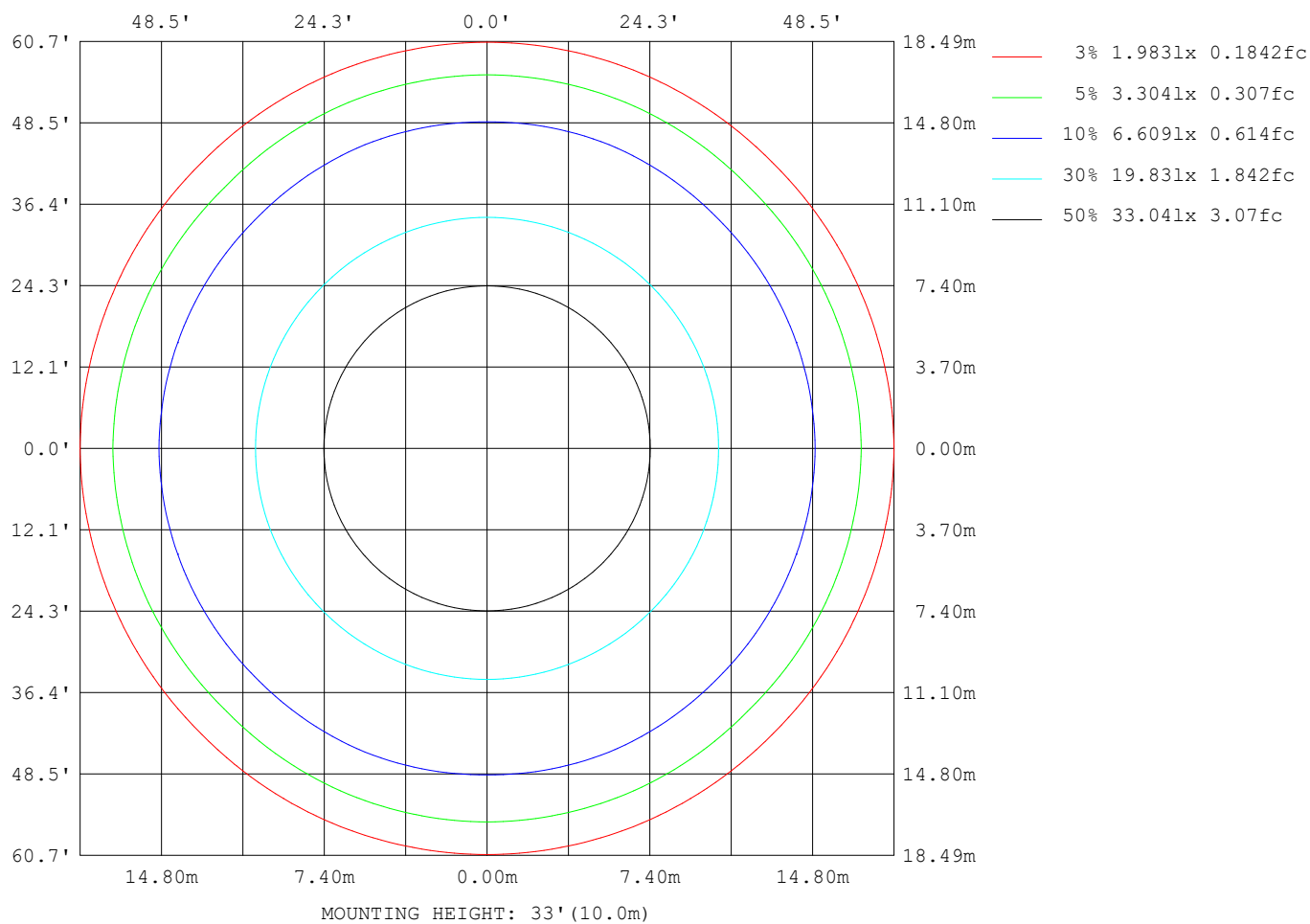
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-13

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

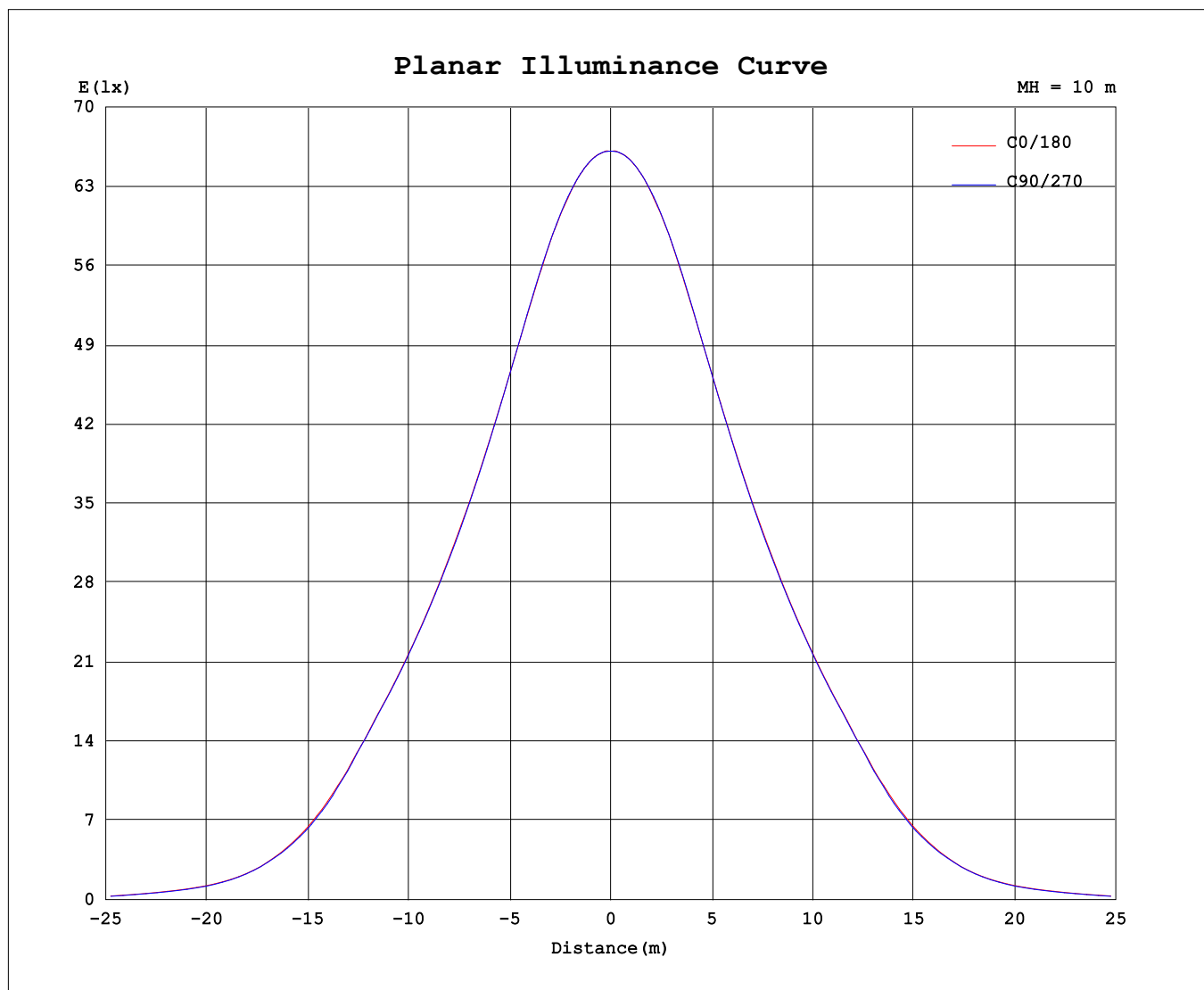
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-13

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-13

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: