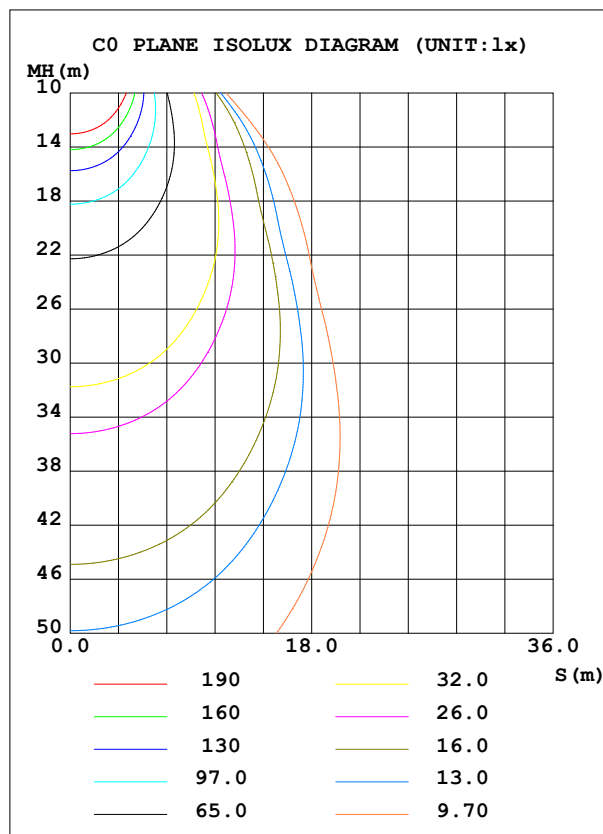
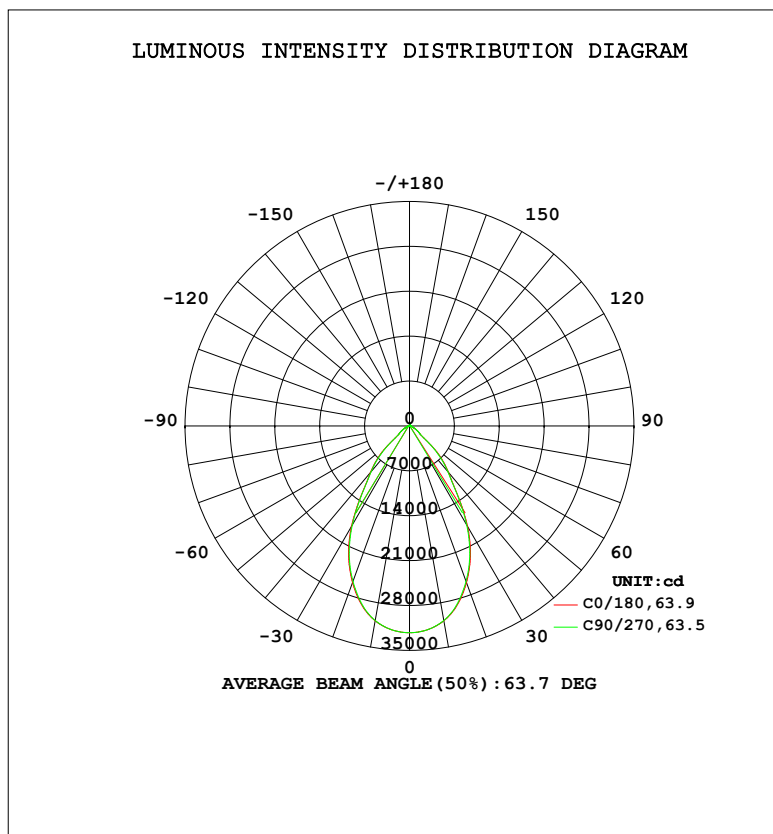


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:0.885A P:199.8W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:37499.4x1 lm		
NAME: HB68-200H-5070-H00193+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP			PHOTOMETRIC DATA Eff: 187.72 lm/W			
MODEL	/		Imax (cd)	32241	S/MH (C0/180)	0.95
NOMINAL POWER (W)	/		LOR (%)	100.0	S/MH (C90/270)	0.95
RATED VOLTAGE (V)	/		TOTAL FLUX (lm)	37499	η UP, DN (C0-180)	0.4, 49.6
NOMINAL FLUX (lm)	37499.4		CIE CLASS	DIRECT	η UP, DN (C180-360)	0.4, 49.6
LAMPS INSIDE	1		η up (%)	0.7	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	/		η down (%)	99.3	CIBSE SHR MAX	0.95



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-03

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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	3085	3085	3081	3085	3085	3085	3081	3085	0- 10	3012	3012	8.03,8.03
20	2598	2582	2579	2582	2598	2582	2579	2582	10- 20	8039	11051	29.5,29.5
30	1812	1787	1785	1787	1812	1787	1785	1787	20- 30	10147	21198	56.5,56.5
40	947.6	925.9	933.2	925.9	947.6	925.9	933.2	925.9	30- 40	8121	29319	78.2,78.2
50	298.0	291.3	293.2	291.3	298.0	291.3	293.2	291.3	40- 50	4852	34170	91.1,91.1
60	125.2	123.4	126.7	123.4	125.2	123.4	126.7	123.4	50- 60	1655	35825	95.5,95.5
70	56.01	55.35	55.66	55.35	56.01	55.35	55.66	55.35	60- 70	842.5	36668	97.8,97.8
80	24.24	24.03	24.40	24.03	24.24	24.03	24.40	24.03	70- 80	412.1	37080	98.9,98.9
90	5.861	5.771	5.556	5.771	5.861	5.771	5.556	5.771	80- 90	144.1	37224	99.3,99.3
100	2.498	2.486	2.300	2.486	2.498	2.486	2.300	2.486	90-100	36.14	37260	99.4,99.4
110	2.298	2.350	2.294	2.350	2.298	2.350	2.294	2.350	100-110	23.21	37283	99.4,99.4
120	3.332	3.498	3.411	3.498	3.332	3.498	3.411	3.498	110-120	27.10	37311	99.5,99.5
130	5.442	5.401	5.410	5.401	5.442	5.401	5.410	5.401	120-130	36.93	37347	99.6,99.6
140	5.288	5.271	5.320	5.271	5.288	5.271	5.320	5.271	130-140	44.37	37392	99.7,99.7
150	6.800	6.794	6.775	6.794	6.800	6.794	6.775	6.794	140-150	37.16	37429	99.8,99.8
160	7.954	7.934	7.928	7.934	7.954	7.934	7.928	7.934	150-160	34.42	37463	99.9,99.9
170	10.39	10.37	10.36	10.37	10.39	10.37	10.36	10.37	160-170	25.26	37489	100,100
180	11.89	11.86	11.86	11.86	11.89	11.86	11.86	11.86	170-180	10.73	37499	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 32243 lm

%lum = 86.0%

%lamp = 86.0%

Conical surface Flux(130deg): 36325 lm

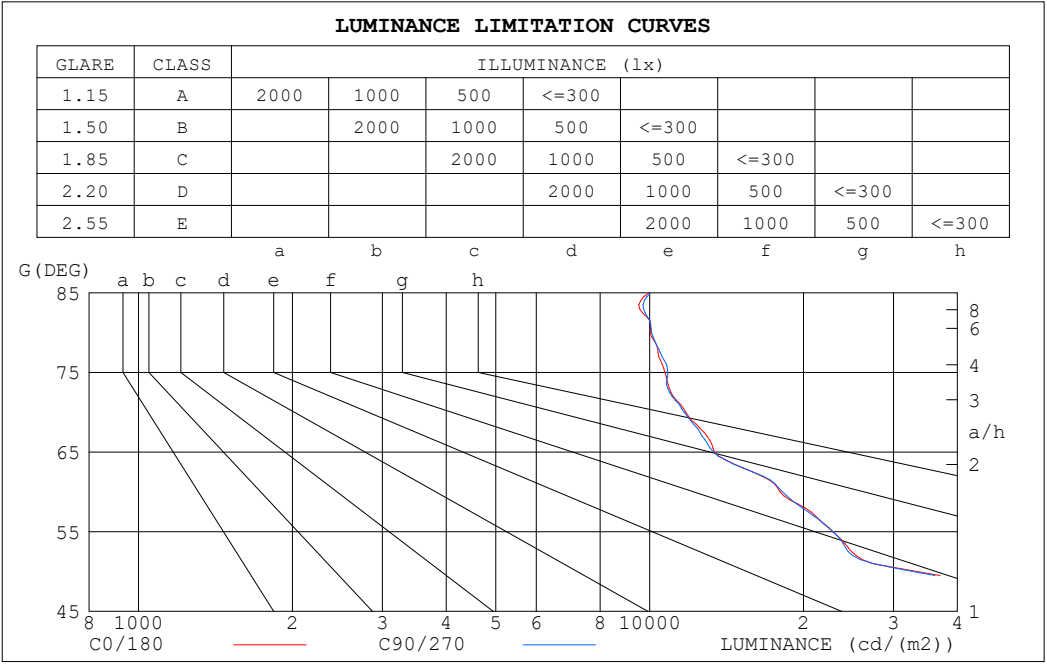
%lum = 96.9%

%lamp = 96.9%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

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

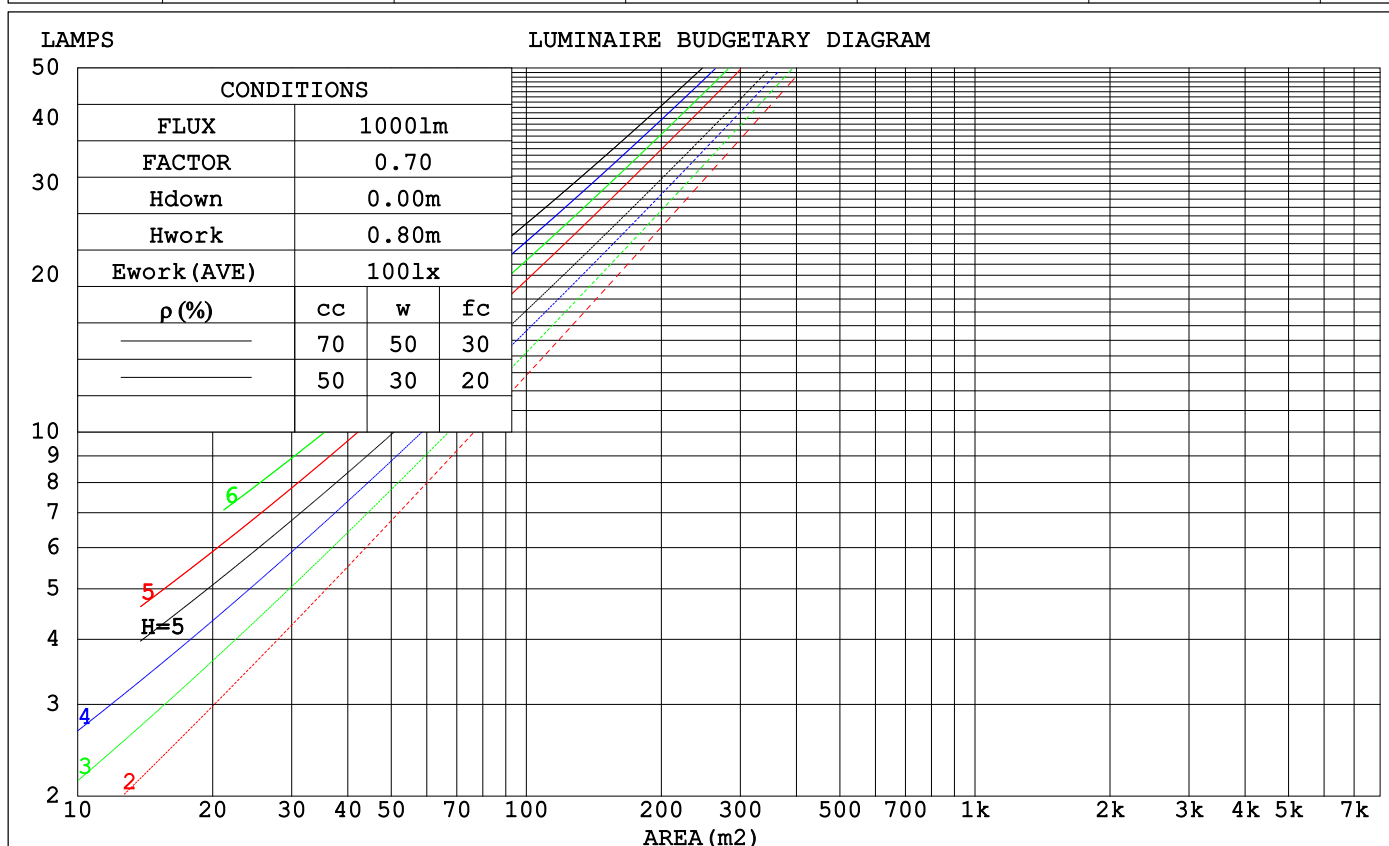


LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	9967	10044
80	10030	10090
75	10711	10851
70	11768	11684
65	13394	13342
60	17997	18198
55	22832	22850
50	33312	32750
45	69307	66121

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															



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZK
 Test Date: 2023-07-03

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	.208	.118	.037	.201	.114	.036	.187	.108	.034	.175	.101	.032	.164	.095	.031		
2.0	.199	.109	.033	.193	.106	.033	.182	.101	.031	.172	.096	.030	.162	.092	.029		
3.0	.189	.101	.030	.184	.099	.030	.174	.094	.029	.165	.091	.028	.157	.087	.027		
4.0	.179	.093	.027	.175	.091	.027	.166	.088	.026	.158	.085	.026	.151	.082	.025		
5.0	.170	.087	.025	.166	.085	.025	.158	.083	.024	.151	.080	.024	.145	.077	.023		
6.0	.161	.081	.023	.158	.080	.023	.151	.077	.023	.145	.075	.022	.139	.073	.022		
7.0	.153	.076	.021	.150	.075	.021	.144	.073	.021	.139	.071	.021	.133	.069	.020		
8.0	.146	.071	.020	.143	.070	.020	.138	.069	.020	.133	.067	.019	.128	.066	.019		
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.062	.018		
10.0	.132	.064	.018	.130	.063	.018	.126	.062	.017	.122	.060	.017	.118	.059	.017		

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	.196	.196	.196	.168	.168	.168	.114	.114	.114	.066	.066	.066	.021	.021	.021	
1.0	.179	.163	.148	.153	.140	.127	.105	.096	.088	.060	.056	.051	.019	.018	.017	
2.0	.166	.138	.115	.142	.119	.099	.097	.082	.069	.056	.048	.041	.018	.015	.013	
3.0	.155	.119	.091	.133	.103	.079	.091	.072	.056	.053	.042	.033	.017	.014	.011	
4.0	.145	.105	.074	.125	.091	.065	.086	.063	.046	.050	.037	.027	.016	.012	.009	
5.0	.137	.094	.062	.118	.081	.054	.081	.057	.038	.047	.033	.023	.015	.011	.007	
6.0	.130	.085	.052	.112	.074	.046	.077	.052	.032	.045	.030	.019	.014	.010	.006	
7.0	.124	.078	.045	.107	.067	.039	.074	.047	.028	.043	.028	.017	.014	.009	.005	
8.0	.118	.072	.040	.102	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005	
9.0	.113	.067	.035	.097	.058	.031	.067	.041	.022	.039	.024	.013	.013	.008	.004	
10.0	.108	.062	.032	.093	.054	.028	.065	.038	.020	.038	.022	.012	.012	.007	.004	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2023-07-03

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	18.4	19.6	18.8	19.9	20.2	18.4	19.6	18.8	19.9	20.2
3H	19.2	20.2	19.6	20.6	20.9	19.2	20.2	19.6	20.6	21.0
4H	19.5	20.4	19.9	20.8	21.2	19.5	20.5	19.9	20.8	21.2
6H	19.7	20.6	20.2	21.0	21.4	19.8	20.6	20.2	21.0	21.4
8H	19.8	20.7	20.3	21.1	21.5	19.9	20.7	20.3	21.1	21.5
12H	19.9	20.7	20.3	21.1	21.5	19.9	20.7	20.4	21.1	21.6
4H 2H	18.6	19.5	19.0	19.9	20.3	18.6	19.5	19.0	19.9	20.3
3H	19.5	20.3	20.0	20.7	21.2	19.6	20.4	20.0	20.8	21.2
4H	20.0	20.7	20.4	21.1	21.6	20.0	20.7	20.5	21.2	21.6
6H	20.4	21.0	20.8	21.4	21.9	20.4	21.0	20.9	21.5	21.9
8H	20.5	21.0	21.0	21.5	22.0	20.5	21.1	21.0	21.6	22.0
12H	20.6	21.1	21.1	21.6	22.1	20.6	21.1	21.1	21.6	22.1
8H 4H	20.1	20.6	20.6	21.1	21.6	20.1	20.7	20.6	21.1	21.6
6H	20.6	21.0	21.1	21.5	22.0	20.6	21.1	21.1	21.6	22.1
8H	20.8	21.2	21.3	21.7	22.2	20.8	21.2	21.4	21.8	22.3
12H	21.0	21.3	21.5	21.8	22.4	21.0	21.4	21.5	21.9	22.5
12H 4H	20.1	20.6	20.6	21.1	21.6	20.1	20.6	20.6	21.1	21.6
6H	20.6	21.0	21.1	21.5	22.0	20.6	21.0	21.2	21.5	22.1
8H	20.8	21.2	21.4	21.7	22.3	20.9	21.2	21.4	21.7	22.3
CIE190: 2010										

CIE190: 2010
Area: 0.1392 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

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

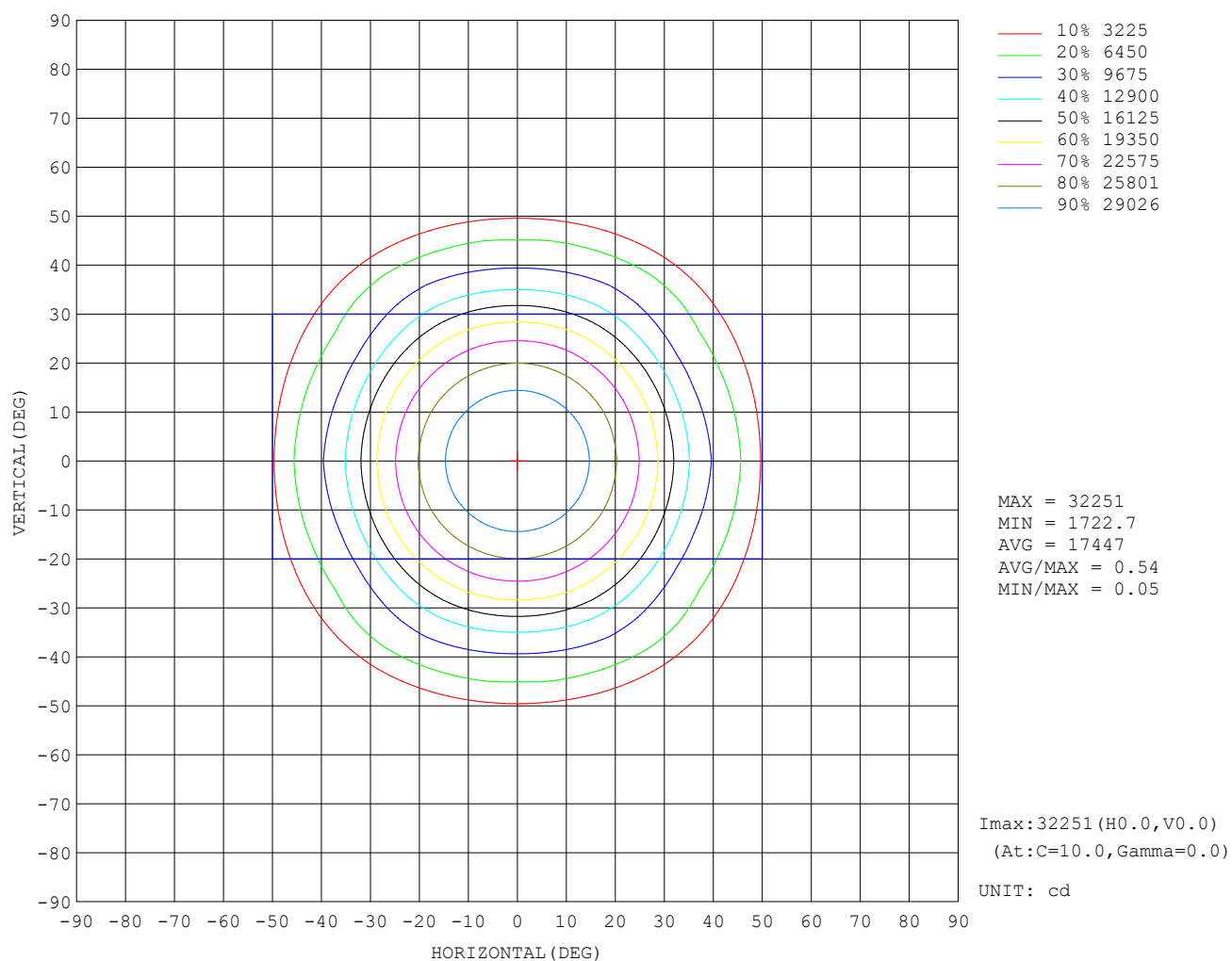
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	60
0.80	86	79	74	86	79	74	84	78	74	69
1.00	93	85	81	92	85	81	90	85	80	75
1.25	98	91	87	96	90	86	94	89	85	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	103	99	95	100	97	93	87
2.50	107	102	99	105	101	98	102	99	96	89
3.00	109	105	102	107	103	100	104	101	98	91
4.00	112	108	105	109	106	104	106	103	101	93
5.00	113	110	108	111	108	106	107	105	103	95
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-07-03

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:

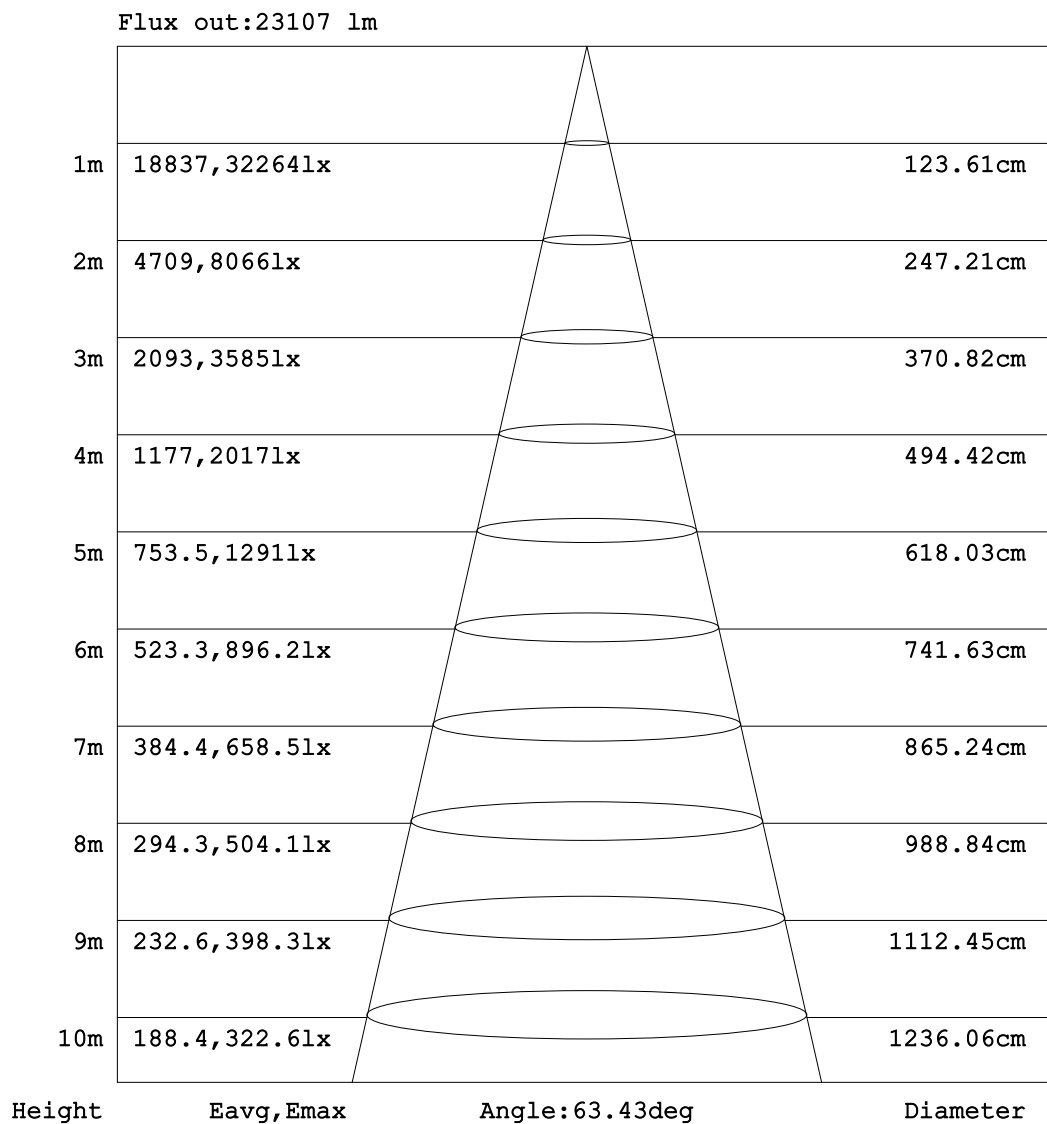
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-07-03

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



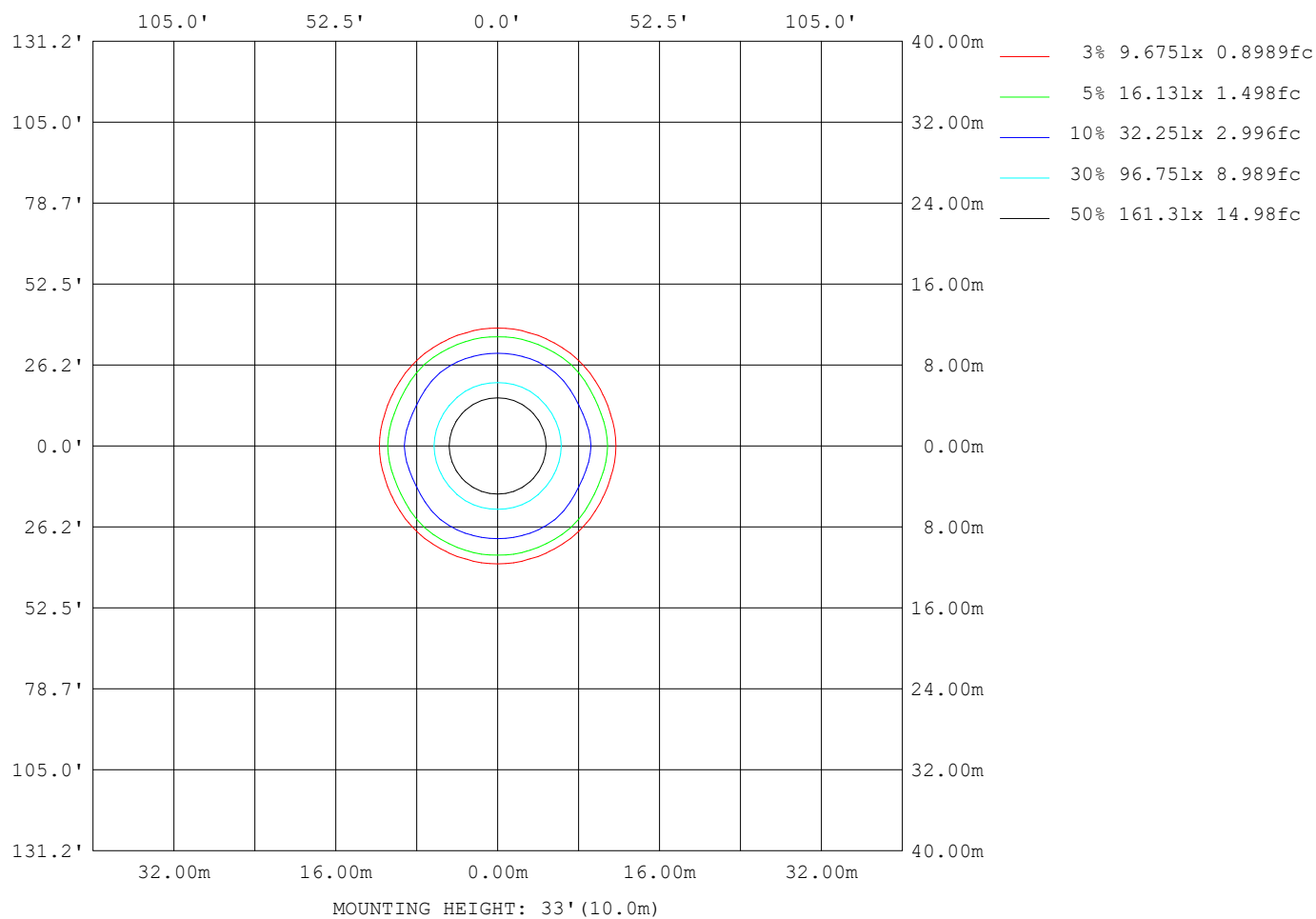
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

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: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-03

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

LED Avg.L Report

Test:U:230.0V I:0.885A P:199.8W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:37499.4x1 lm		
NAME: HB68-200H-5070-H00193+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

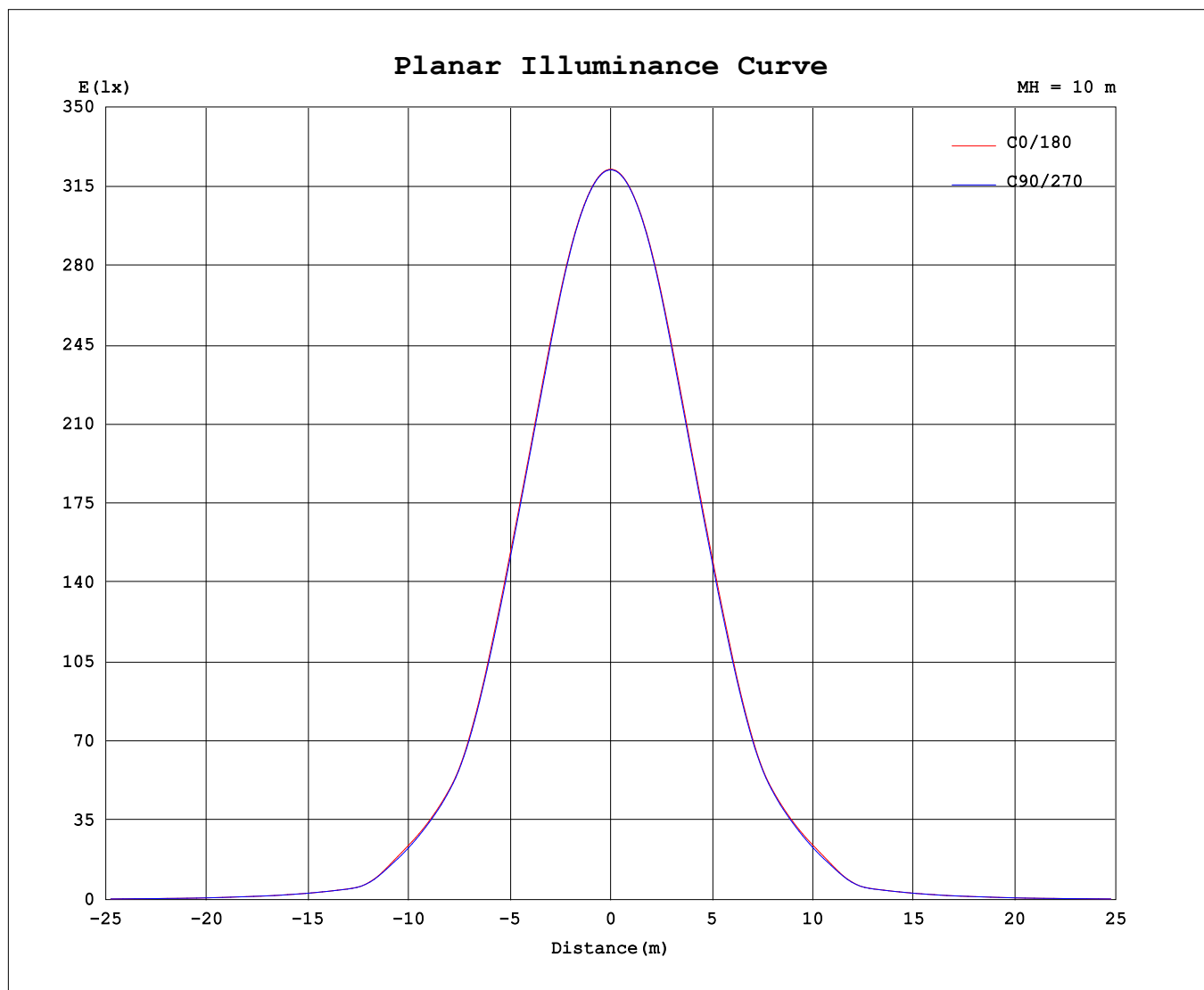
AvgL	cd/m2
L_0~180 (65) av	13390
L_0~180 (75) av	10708
L_0~180 (85) av	9964
L_90~270 (65) av	13349
L_90~270 (75) av	10857
L_90~270 (85) av	10050
L_45 (65) av	13373
L_45 (75) av	10575
L_45 (85) av	9994

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

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: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-03

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: