

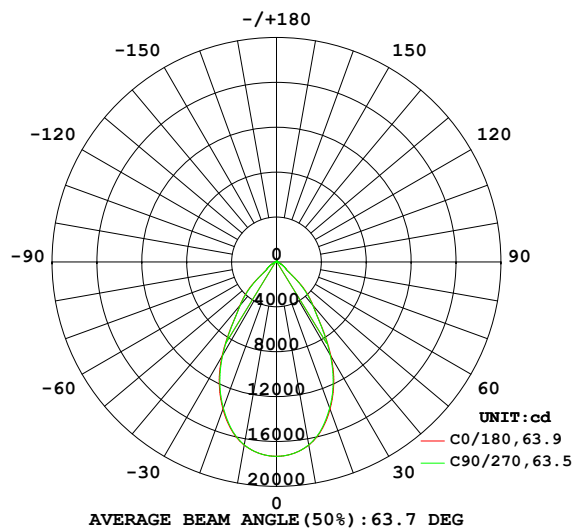
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

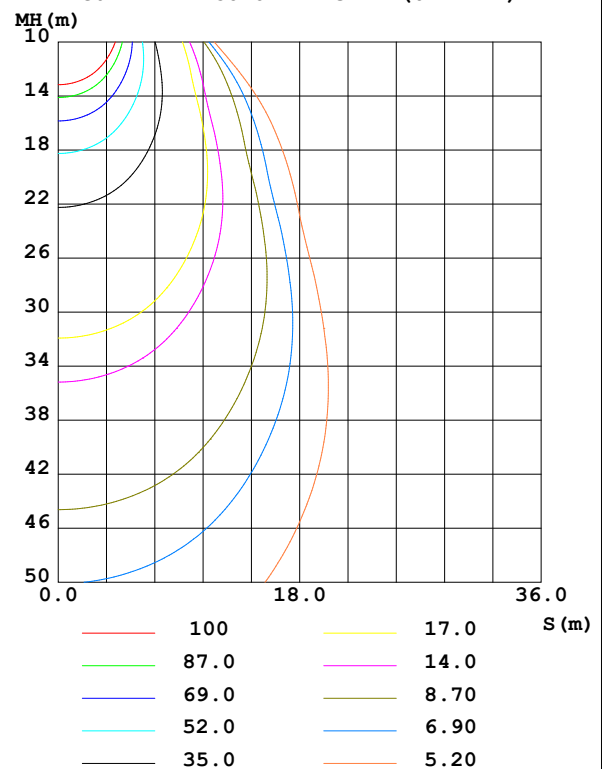
Test:U:230.0V I:0.449A P:100.4W PF:0.973 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:20142.2x1 lm		
NAME: HB68-100H-5070-H00196+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 200.52 lm/W			
MODEL	/	I _{max} (cd)	17318	S/MH (C0/180)	0.95
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.95
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	20142	η UP,DN (C0-180)	0.4,49.6
NOMINAL FLUX (lm)	20142.2	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

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1657	1657	1655	1657	1657	1657	1655	1657	0- 10	1618	1618	8.03,8.03
20	1396	1387	1385	1387	1396	1387	1385	1387	10- 20	4318	5936	29.5,29.5
30	973.3	960.1	958.8	960.1	973.3	960.1	958.8	960.1	20- 30	5450	11386	56.5,56.5
40	509.0	497.3	501.3	497.3	509.0	497.3	501.3	497.3	30- 40	4362	15748	78.2,78.2
50	160.1	156.5	157.5	156.5	160.1	156.5	157.5	156.5	40- 50	2606	18354	91.1,91.1
60	67.26	66.27	68.07	66.27	67.26	66.27	68.07	66.27	50- 60	889.0	19243	95.5,95.5
70	30.09	29.73	29.90	29.73	30.09	29.73	29.90	29.73	60- 70	452.5	19696	97.8,97.8
80	13.02	12.91	13.11	12.91	13.02	12.91	13.11	12.91	70- 80	221.4	19917	98.9,98.9
90	3.148	3.100	2.984	3.100	3.148	3.100	2.984	3.100	80- 90	77.40	19994	99.3,99.3
100	1.342	1.336	1.235	1.336	1.342	1.336	1.235	1.336	90-100	19.41	20014	99.4,99.4
110	1.235	1.262	1.232	1.262	1.235	1.262	1.232	1.262	100-110	12.47	20026	99.4,99.4
120	1.790	1.879	1.832	1.879	1.790	1.879	1.832	1.879	110-120	14.56	20041	99.5,99.5
130	2.923	2.901	2.906	2.901	2.923	2.901	2.906	2.901	120-130	19.84	20061	99.6,99.6
140	2.841	2.831	2.858	2.831	2.841	2.831	2.858	2.831	130-140	23.83	20084	99.7,99.7
150	3.653	3.649	3.639	3.649	3.653	3.649	3.639	3.649	140-150	19.96	20104	99.8,99.8
160	4.272	4.262	4.259	4.262	4.272	4.262	4.259	4.262	150-160	18.49	20123	99.9,99.9
170	5.582	5.570	5.567	5.570	5.582	5.570	5.567	5.570	160-170	13.57	20136	100,100
180	6.389	6.372	6.369	6.372	6.389	6.372	6.369	6.372	170-180	5.763	20142	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 17319 lm

%lum = 86.0%

%lamp = 86.0%

Conical surface Flux(130deg): 19511 lm

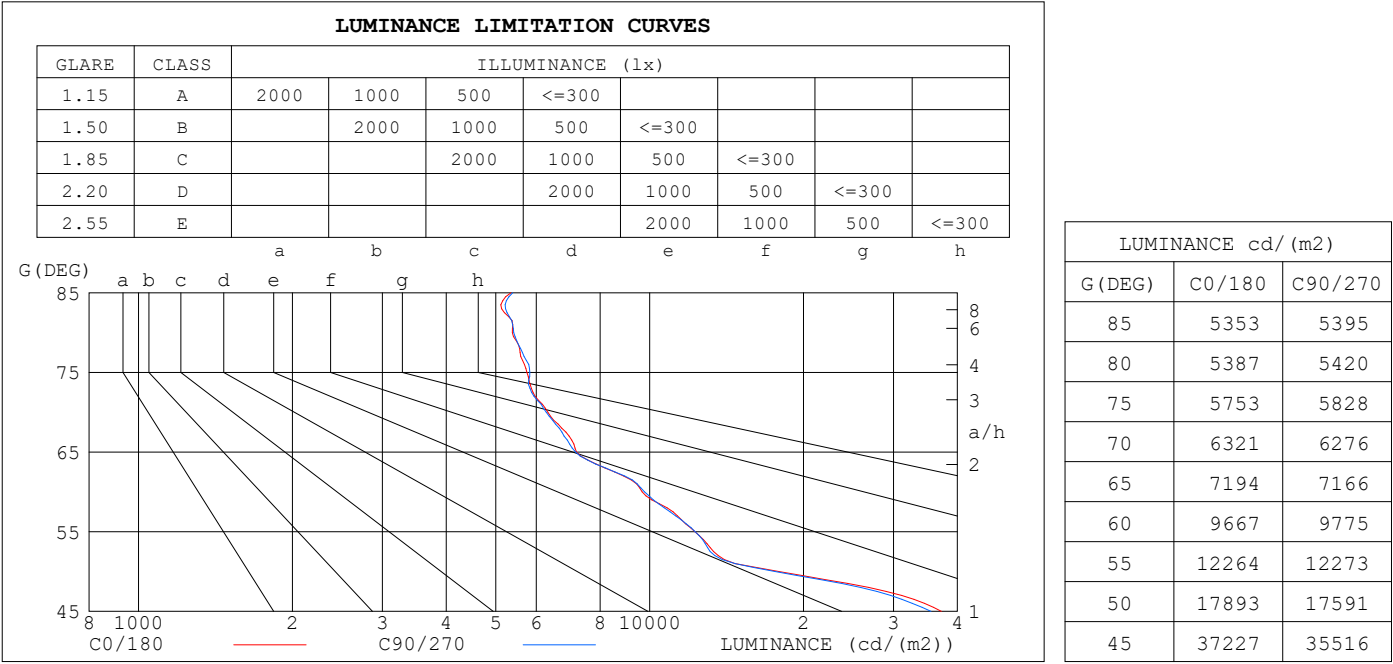
%lum = 96.9%

%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



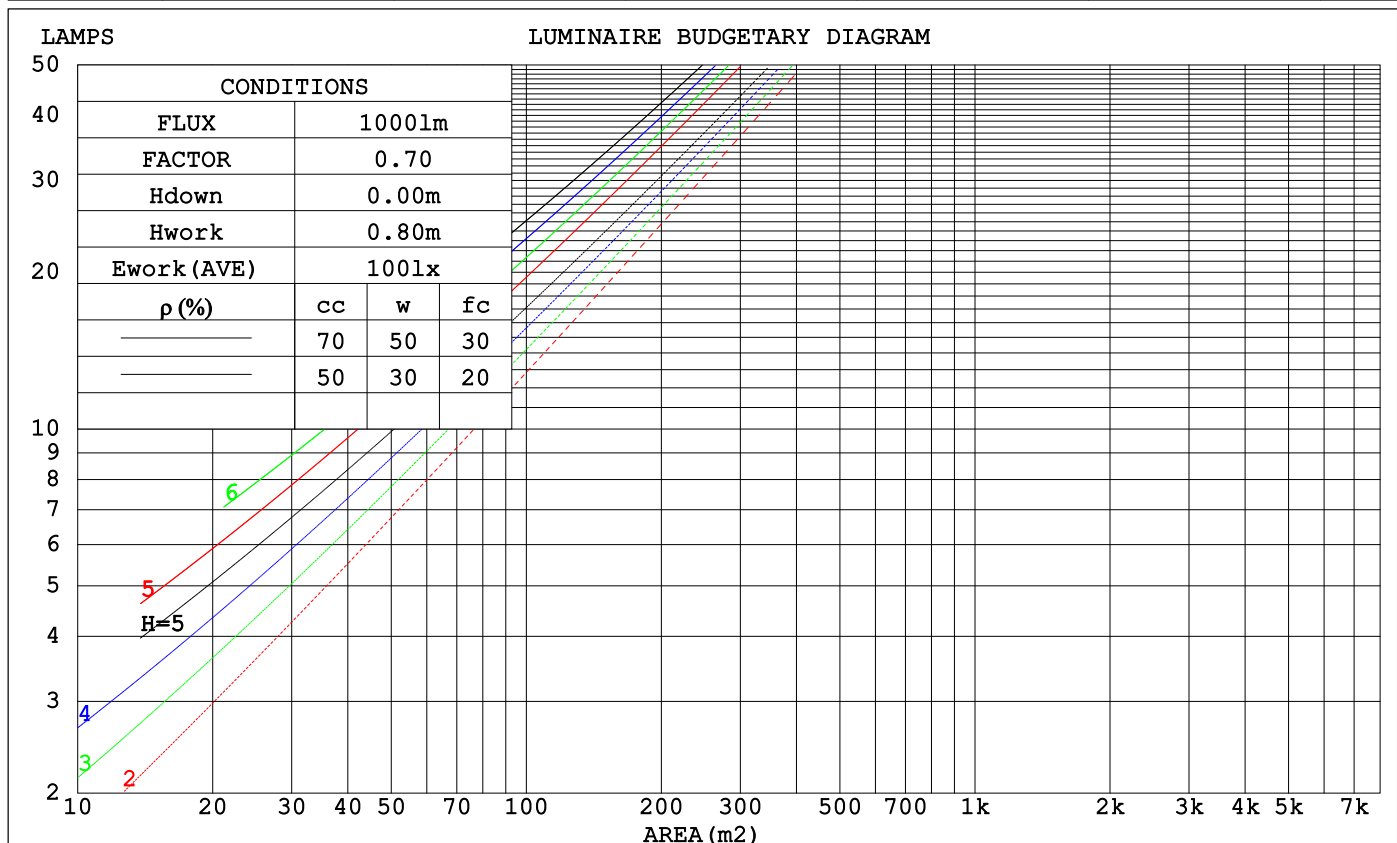
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

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

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	1.01	1.01	1.01	.99
1.0	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.00	.99	.99	.97	.95	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.91	.89	.86	.89	.86	.84	.82
3.0	.92	.86	.81	.90	.85	.81	.87	.83	.79	.85	.81	.78	.82	.79	.77	.75
4.0	.85	.78	.73	.83	.77	.73	.81	.76	.72	.79	.74	.71	.77	.73	.70	.68
5.0	.78	.72	.67	.77	.71	.66	.75	.70	.66	.73	.69	.65	.72	.68	.64	.63
6.0	.73	.66	.61	.72	.65	.61	.70	.64	.60	.68	.63	.60	.67	.63	.59	.58
7.0	.68	.61	.56	.67	.60	.56	.65	.60	.55	.64	.59	.55	.63	.58	.55	.53
8.0	.63	.56	.52	.62	.56	.52	.61	.55	.51	.60	.55	.51	.59	.54	.51	.49
9.0	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.47	.55	.51	.47	.46
10.0	.55	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.52	.48	.44	.43



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	2H	16.2	17.4	16.6	17.7	18.1	16.2	17.4	16.6	17.7	18.1
	3H	17.0	18.1	17.4	18.4	18.8	17.0	18.1	17.4	18.4	18.8
	4H	17.3	18.3	17.7	18.7	19.1	17.4	18.3	17.8	18.7	19.1
	6H	17.6	18.5	18.0	18.8	19.3	17.6	18.5	18.0	18.9	19.3
	8H	17.7	18.5	18.1	18.9	19.3	17.7	18.5	18.1	18.9	19.4
	12H	17.7	18.5	18.2	18.9	19.4	17.8	18.5	18.2	18.9	19.4
4H	2H	16.4	17.3	16.8	17.7	18.1	16.4	17.4	16.8	17.7	18.1
	3H	17.4	18.2	17.8	18.6	19.0	17.4	18.2	17.9	18.6	19.1
	4H	17.8	18.5	18.3	18.9	19.4	17.9	18.6	18.3	19.0	19.5
	6H	18.2	18.8	18.7	19.3	19.7	18.2	18.8	18.7	19.3	19.8
	8H	18.3	18.9	18.8	19.3	19.8	18.4	18.9	18.9	19.4	19.9
	12H	18.4	18.9	18.9	19.4	19.9	18.5	19.0	19.0	19.5	20.0
8H	4H	17.9	18.5	18.4	18.9	19.4	18.0	18.5	18.5	19.0	19.5
	6H	18.4	18.9	18.9	19.4	19.9	18.5	18.9	19.0	19.4	19.9
	8H	18.6	19.0	19.2	19.6	20.1	18.7	19.1	19.2	19.6	20.1
	12H	18.8	19.2	19.3	19.7	20.3	18.8	19.2	19.4	19.7	20.3
12H	4H	17.9	18.4	18.4	18.9	19.4	18.0	18.4	18.5	18.9	19.4
	6H	18.4	18.8	19.0	19.3	19.9	18.5	18.9	19.0	19.4	19.9
	8H	18.7	19.0	19.2	19.6	20.1	18.7	19.1	19.3	19.6	20.2
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

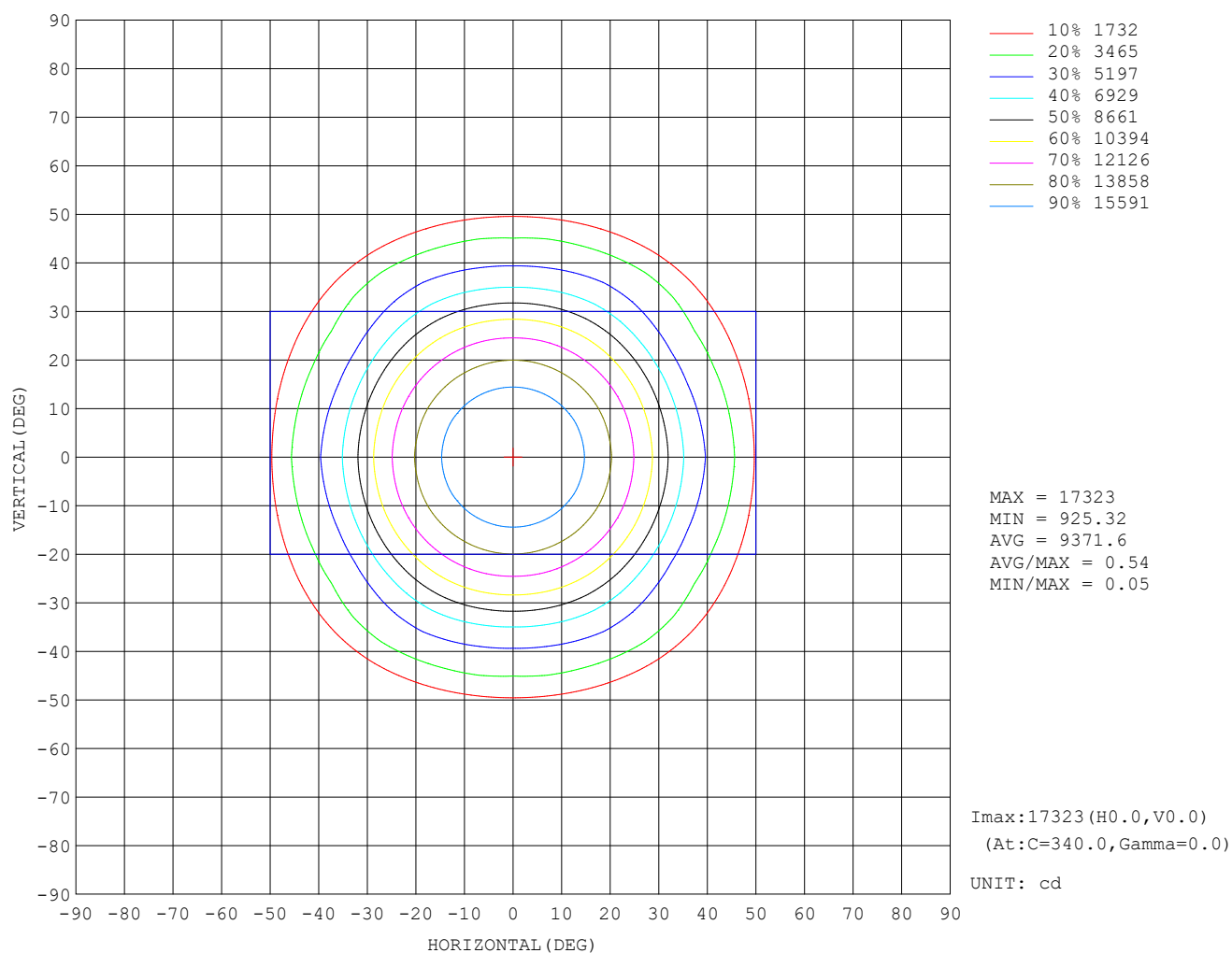
UTILIZATION FACTORS TABLE

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:

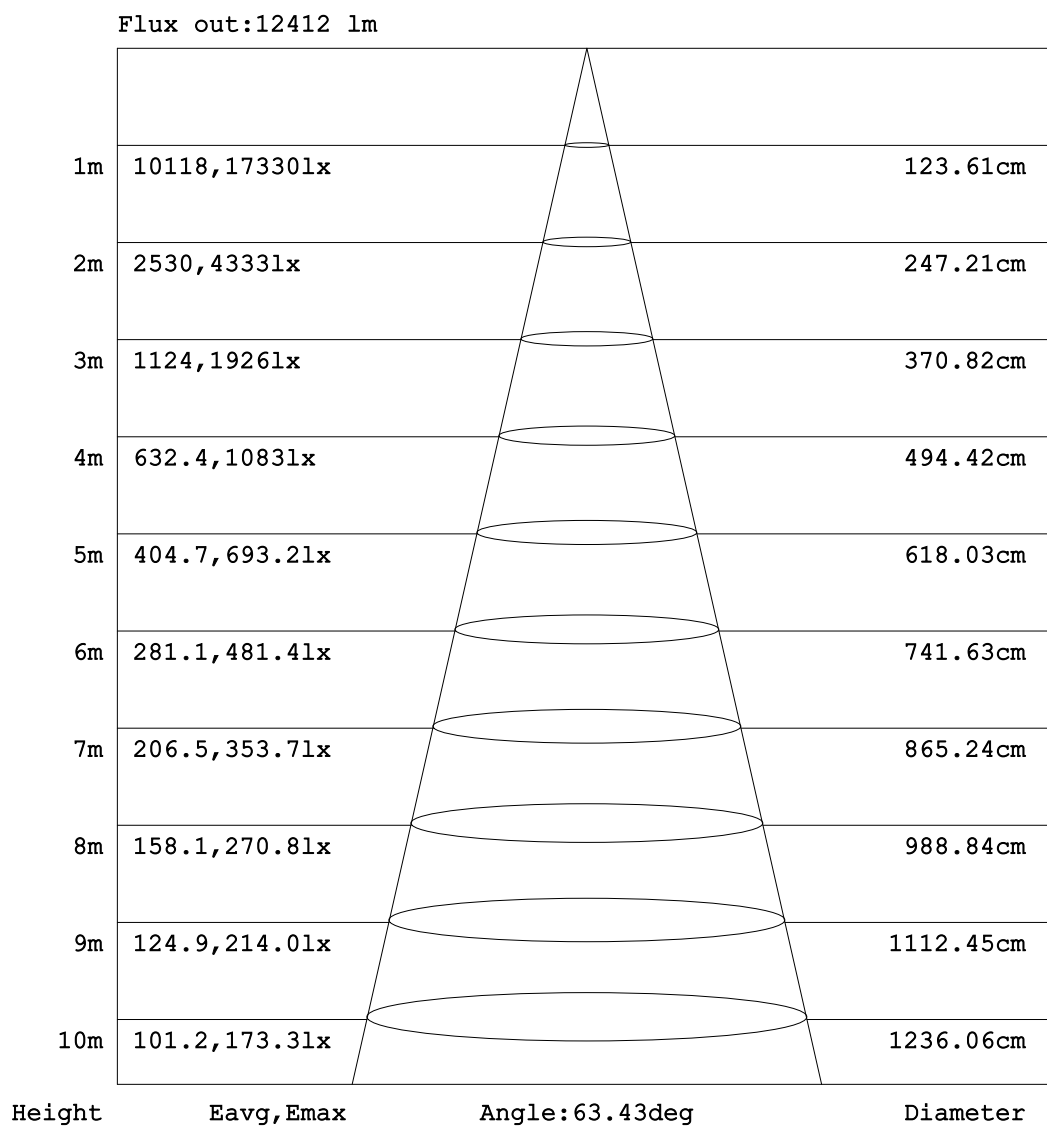
ISOCANDELA DIAGRAM



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



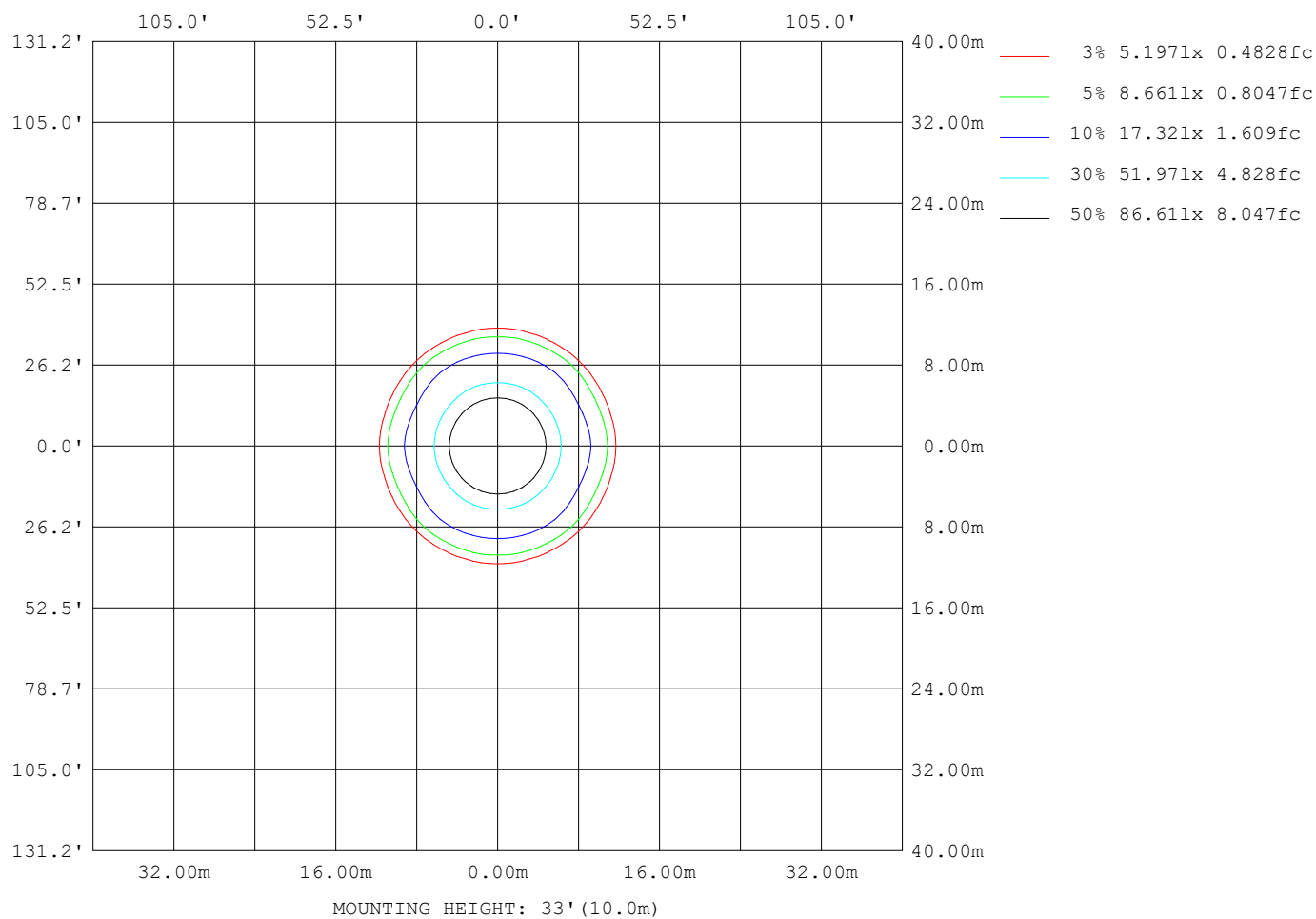
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.449A P:100.4W PF:0.973 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:20142.2x1 lm		
NAME: HB68-100H-5070-H00196+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

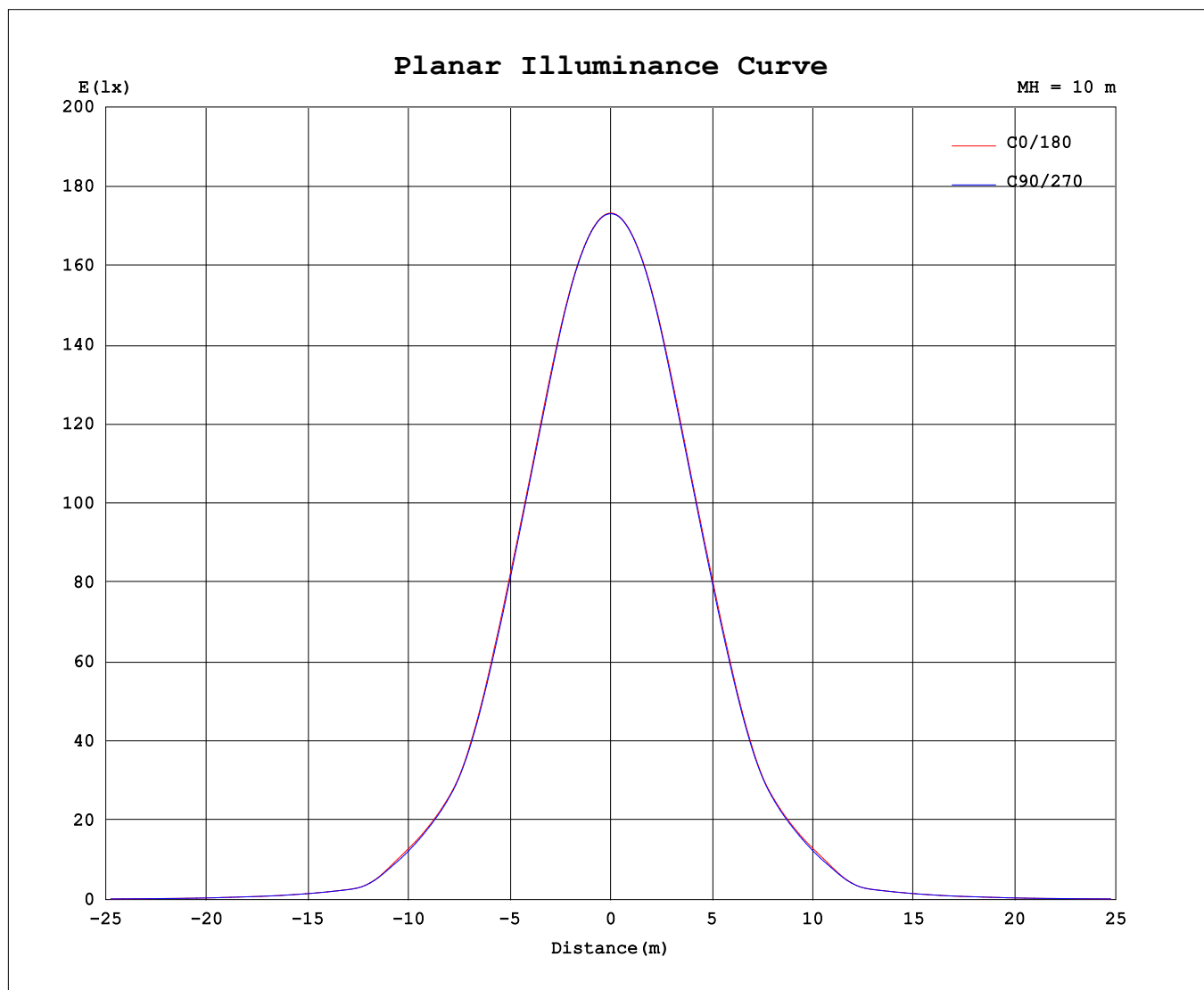
AvgL	cd/m2
L_0~180 (65) av	7192
L_0~180 (75) av	5752
L_0~180 (85) av	5352
L_90~270 (65) av	7170
L_90~270 (75) av	5832
L_90~270 (85) av	5398
L_45 (65) av	7183
L_45 (75) av	5680
L_45 (85) av	5368

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
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