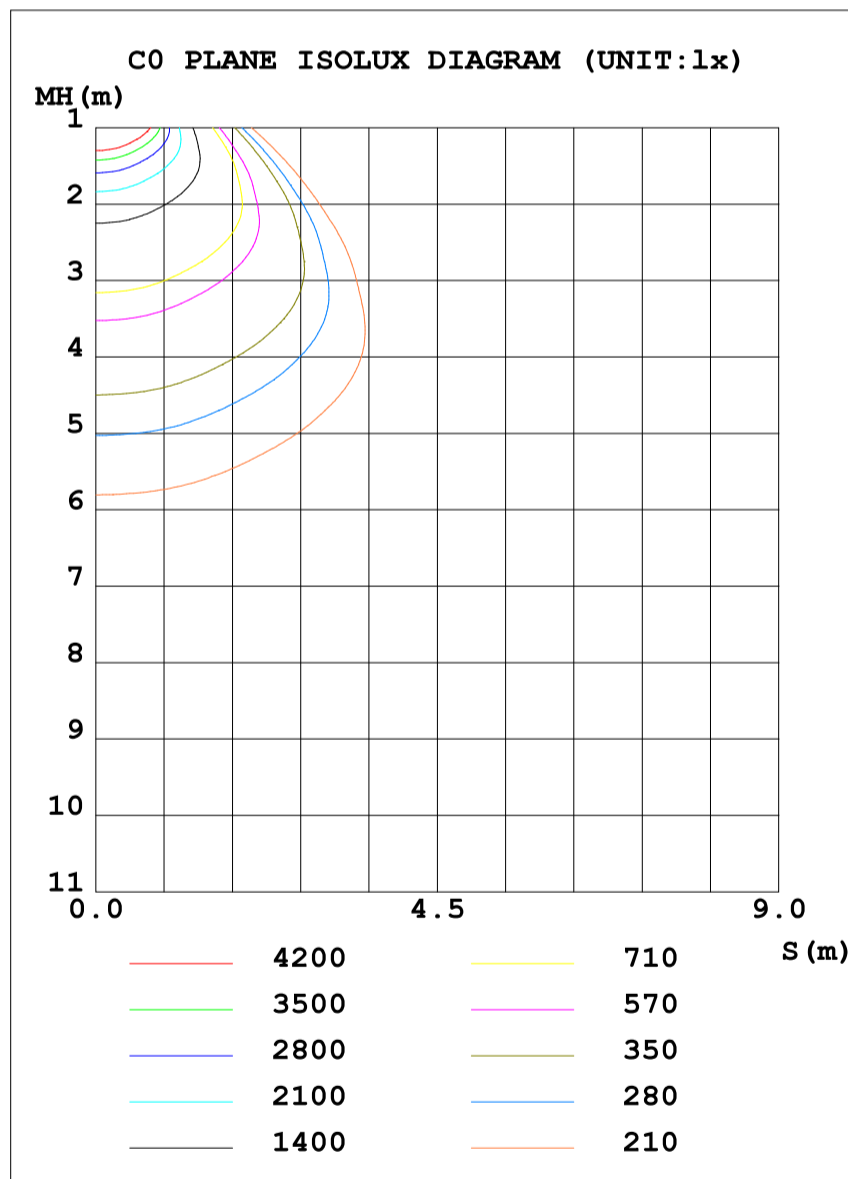
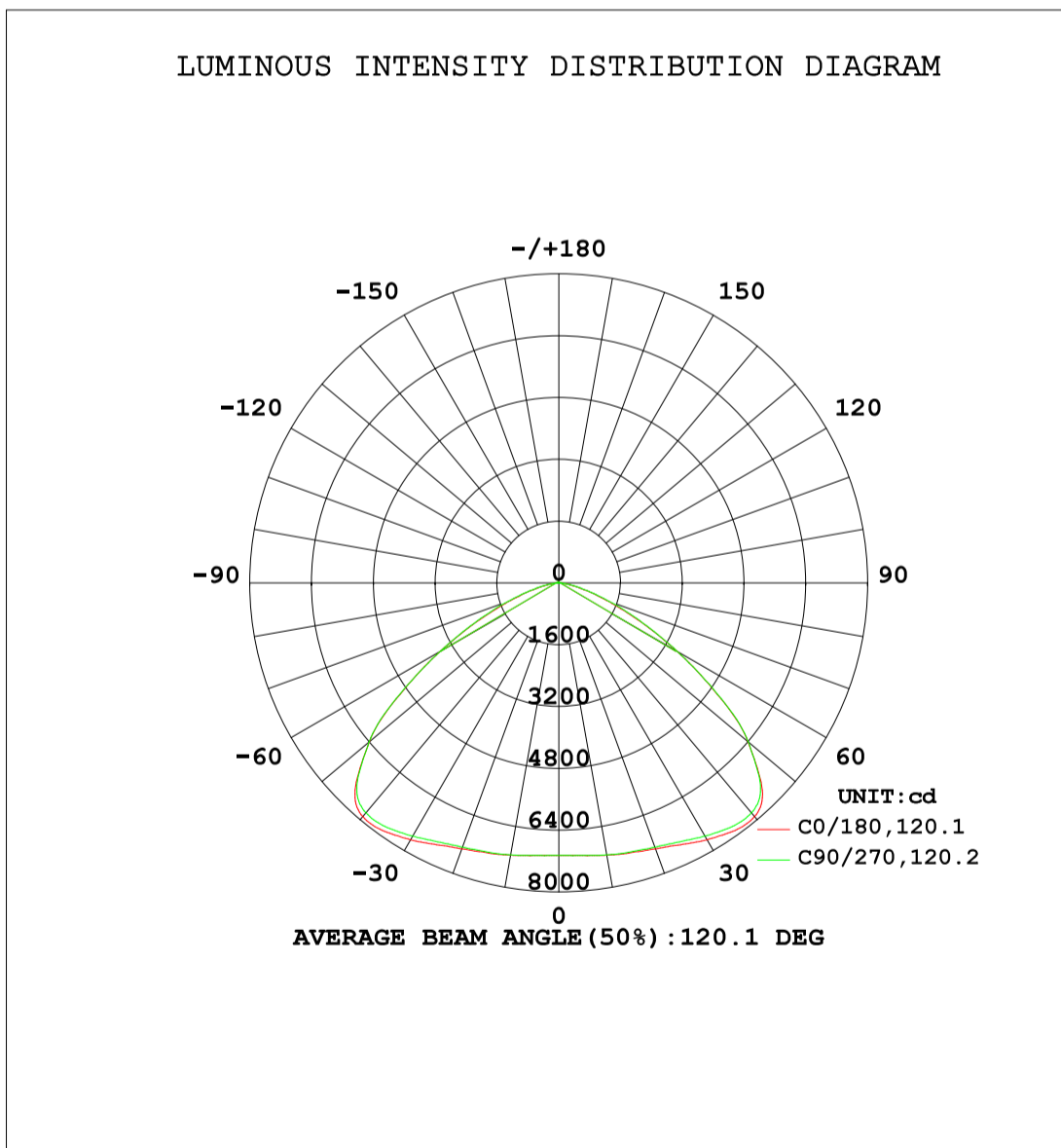


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:0.535A P:120.0W PF:0.975 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:24341.2x1 lm		
NAME:	HB120-200W (120W)	TYPE:
SPEC.:		WEIGHT:
MFR.:		DIM.:
		SUR.:
		SERIAL No.:
		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	/	I _{max} (cd)	7911	S/MH (C0/180)	1.67
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.67
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	24341	η UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	24341.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	1.75



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 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	7156	7157	7147	7157	7156	7157	7147	7157	0- 10	678.7	678.7	2.79, 2.79
20	7326	7307	7279	7307	7326	7307	7279	7307	10- 20	2051	2729	11.2, 11.2
30	7676	7625	7569	7625	7676	7625	7569	7625	20- 30	3453	6182	25.4, 25.4
40	7895	7793	7767	7793	7895	7793	7767	7793	30- 40	4882	11064	45.5, 45.5
50	6400	6317	6404	6317	6400	6317	6404	6317	40- 50	5605	16669	68.5, 68.5
60	3540	3505	3550	3505	3540	3505	3550	3505	50- 60	4435	21104	86.7, 86.7
70	1319	1361	1392	1361	1319	1361	1392	1361	60- 70	2306	23411	96.2, 96.2
80	319.1	332.4	336.3	332.4	319.1	332.4	336.3	332.4	70- 80	793.8	24204	99.4, 99.4
90	4.776	3.514	2.478	3.514	4.776	3.514	2.478	3.514	80- 90	136.7	24341	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:cd									UNIT:lm		

Conical surface Flux(90deg): 13896 lm

%lum = 57.1%

%lamp = 57.1%

Conical surface Flux(120deg): 21104 lm

%lum = 86.7%

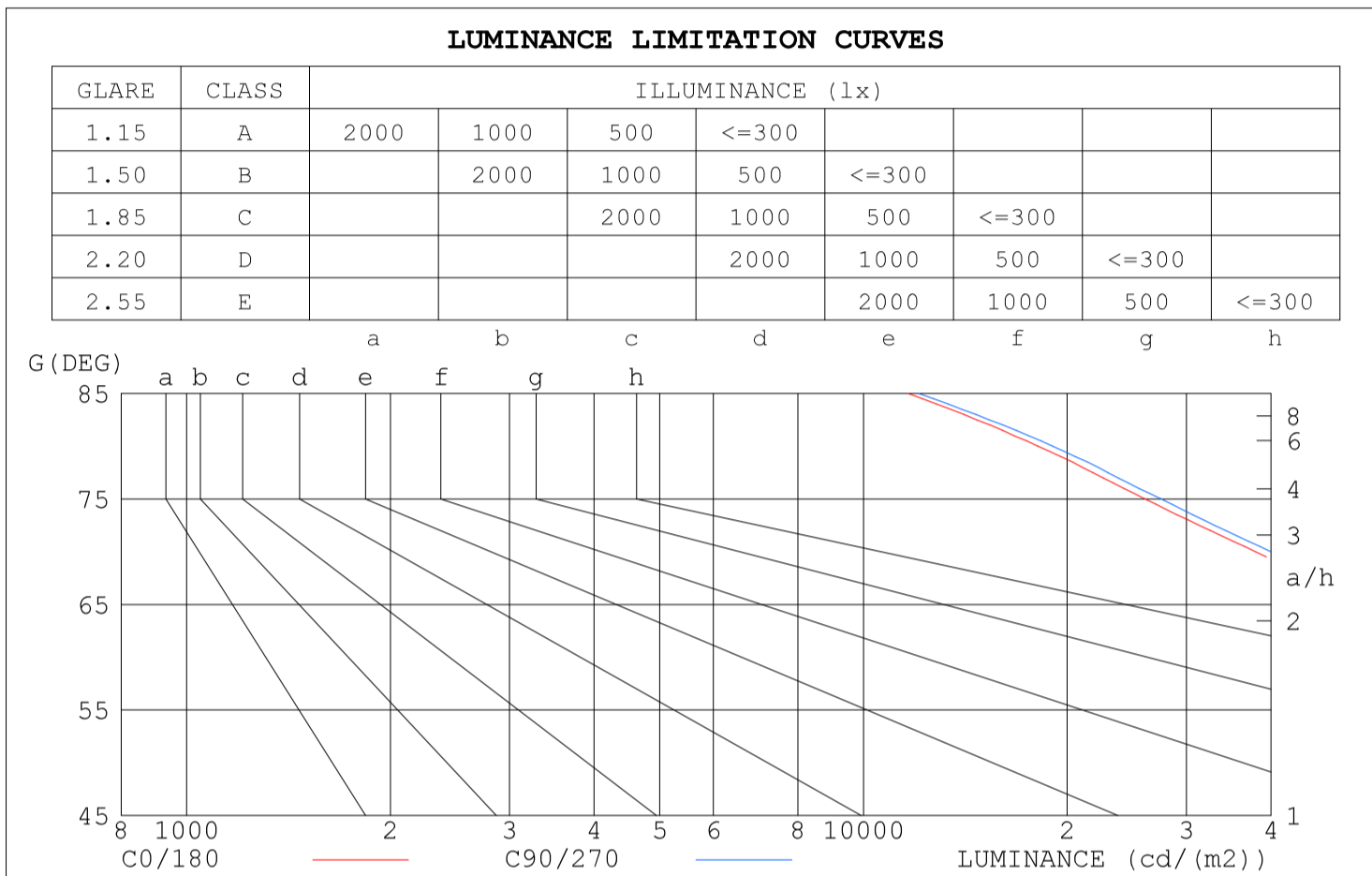
%lamp = 86.7%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	11639	12069
80	18102	19028
75	26061	27529
70	37981	39980
65	52592	53971
60	69733	69753
55	85916	85986
50	98080	97896
45	103593	102621

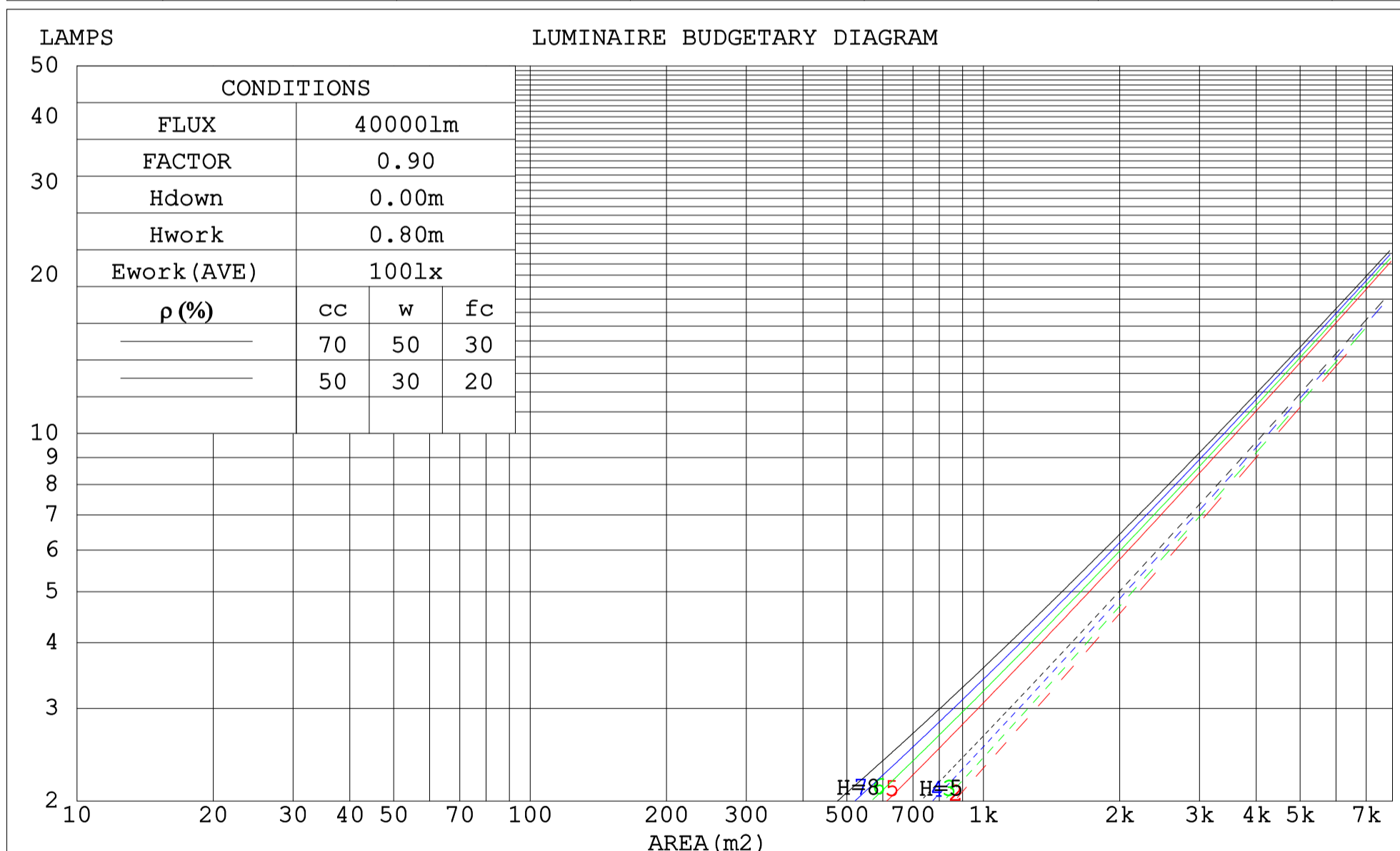
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 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	1.00
1.0	1.06	1.02	.98	1.03	.90	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.83	.78	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.74	.69	.65	.72	.68	.64	.62
4.0	.72	.64	.57	.71	.63	.57	.69	.62	.56	.66	.60	.55	.64	.59	.55	.53
5.0	.64	.56	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.49	.43	.57	.48	.42	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.29	.43	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 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	.276	.157	.050	.269	.154	.049	.256	.147	.047	.244	.141	.045	.233	.135	.044	
2.0	.269	.148	.045	.263	.145	.045	.252	.140	.043	.241	.135	.042	.231	.131	.041	
3.0	.255	.136	.041	.250	.134	.040	.239	.130	.039	.230	.126	.039	.221	.122	.038	
4.0	.239	.124	.037	.234	.123	.036	.225	.120	.036	.217	.117	.035	.209	.114	.035	
5.0	.224	.114	.033	.220	.113	.033	.212	.110	.032	.204	.108	.032	.197	.105	.032	
6.0	.209	.105	.030	.206	.104	.030	.198	.102	.030	.192	.100	.029	.186	.098	.029	
7.0	.196	.097	.028	.193	.096	.027	.186	.094	.027	.180	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.171	.083	.023	.165	.082	.023	.161	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.148	.074	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.123	.064	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 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	27.4	29.0	27.7	29.3	29.6	27.5	29.1	27.8	29.4	29.7
3H	28.1	29.5	28.5	29.9	30.2	28.3	29.7	28.6	30.0	30.4
4H	28.3	29.6	28.7	30.0	30.3	28.4	29.8	28.8	30.1	30.5
6H	28.3	29.6	28.7	29.9	30.3	28.5	29.7	28.9	30.1	30.5
8H	28.3	29.5	28.7	29.9	30.3	28.5	29.7	28.9	30.0	30.4
12H	28.3	29.4	28.7	29.8	30.2	28.5	29.6	28.9	30.0	30.4
4H 2H	27.7	29.0	28.1	29.4	29.8	27.8	29.1	28.2	29.5	29.9
3H	28.6	29.7	29.0	30.1	30.5	28.7	29.8	29.1	30.2	30.6
4H	28.8	29.8	29.2	30.2	30.6	28.9	29.9	29.3	30.3	30.7
6H	28.9	29.7	29.3	30.2	30.6	29.0	29.9	29.5	30.3	30.8
8H	28.9	29.7	29.3	30.1	30.6	29.0	29.8	29.5	30.3	30.7
12H	28.9	29.6	29.4	30.1	30.5	29.0	29.7	29.5	30.2	30.7
8H 4H	28.8	29.6	29.3	30.1	30.5	28.9	29.7	29.4	30.2	30.7
6H	28.9	29.6	29.4	30.1	30.6	29.1	29.7	29.6	30.2	30.7
8H	29.0	29.6	29.5	30.1	30.6	29.1	29.7	29.6	30.2	30.7
12H	29.0	29.5	29.5	30.0	30.6	29.1	29.6	29.6	30.1	30.7
12H 4H	28.8	29.5	29.3	30.0	30.5	28.9	29.6	29.4	30.1	30.6
6H	28.9	29.5	29.4	30.0	30.5	29.1	29.7	29.6	30.1	30.7
8H	29.0	29.5	29.5	30.0	30.5	29.1	29.6	29.6	30.1	30.7
CIE190: 2010										

CIE190: 2010
 Area: 0.1018 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

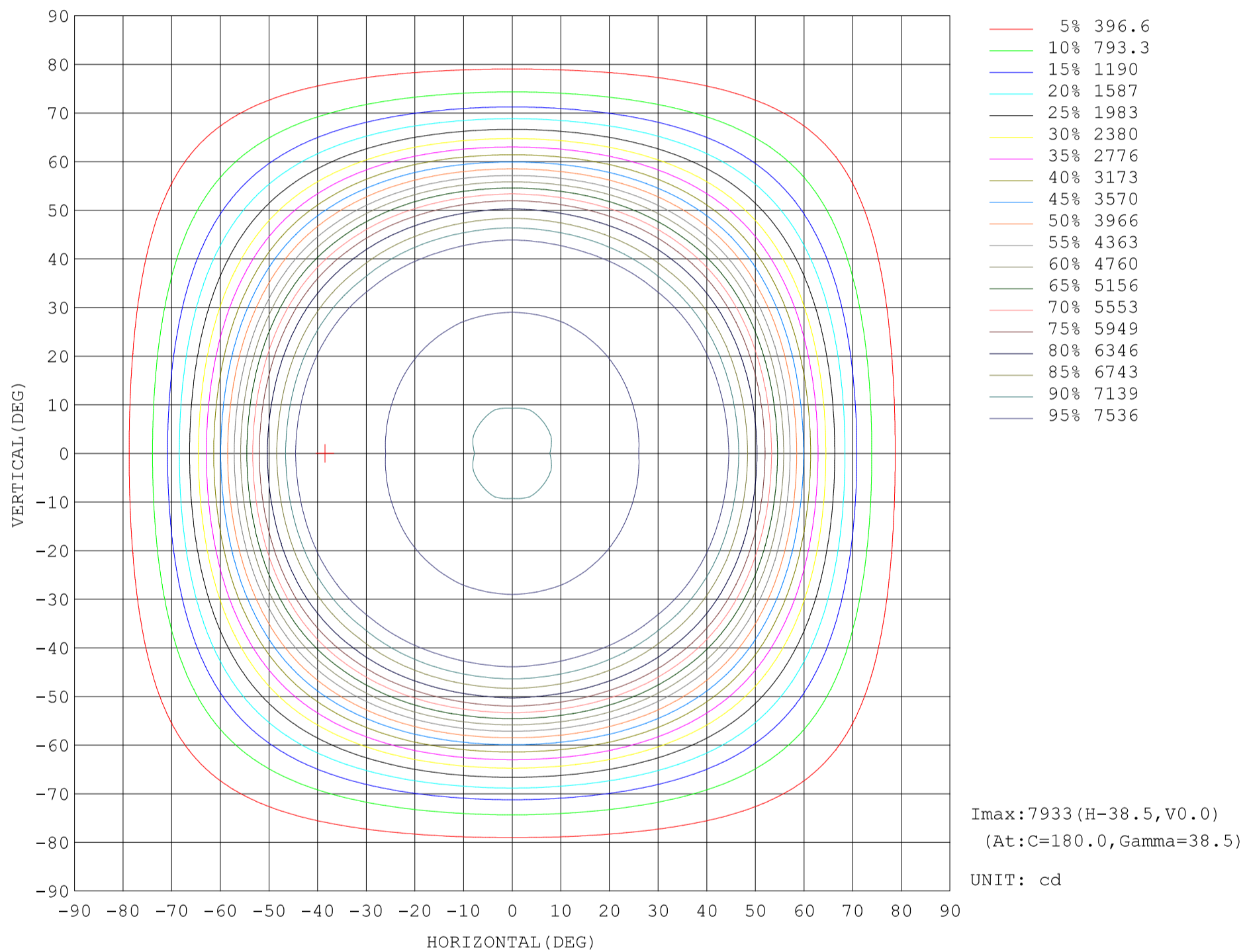
UTILIZATION FACTORS TABLE

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	57	45	38	56	45	38	55	45	38	32
0.80	68	57	49	67	56	49	65	55	49	42
1.00	78	67	60	76	66	60	74	68	59	52
1.25	85	75	68	84	74	68	81	73	67	60
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	89	83	95	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	85	77
3.00	104	98	93	102	96	92	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	85
5.00	110	105	101	107	103	100	103	100	97	88
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: LYJ
 Test Date: 2023-05-03

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=0.4556]
 Remarks:

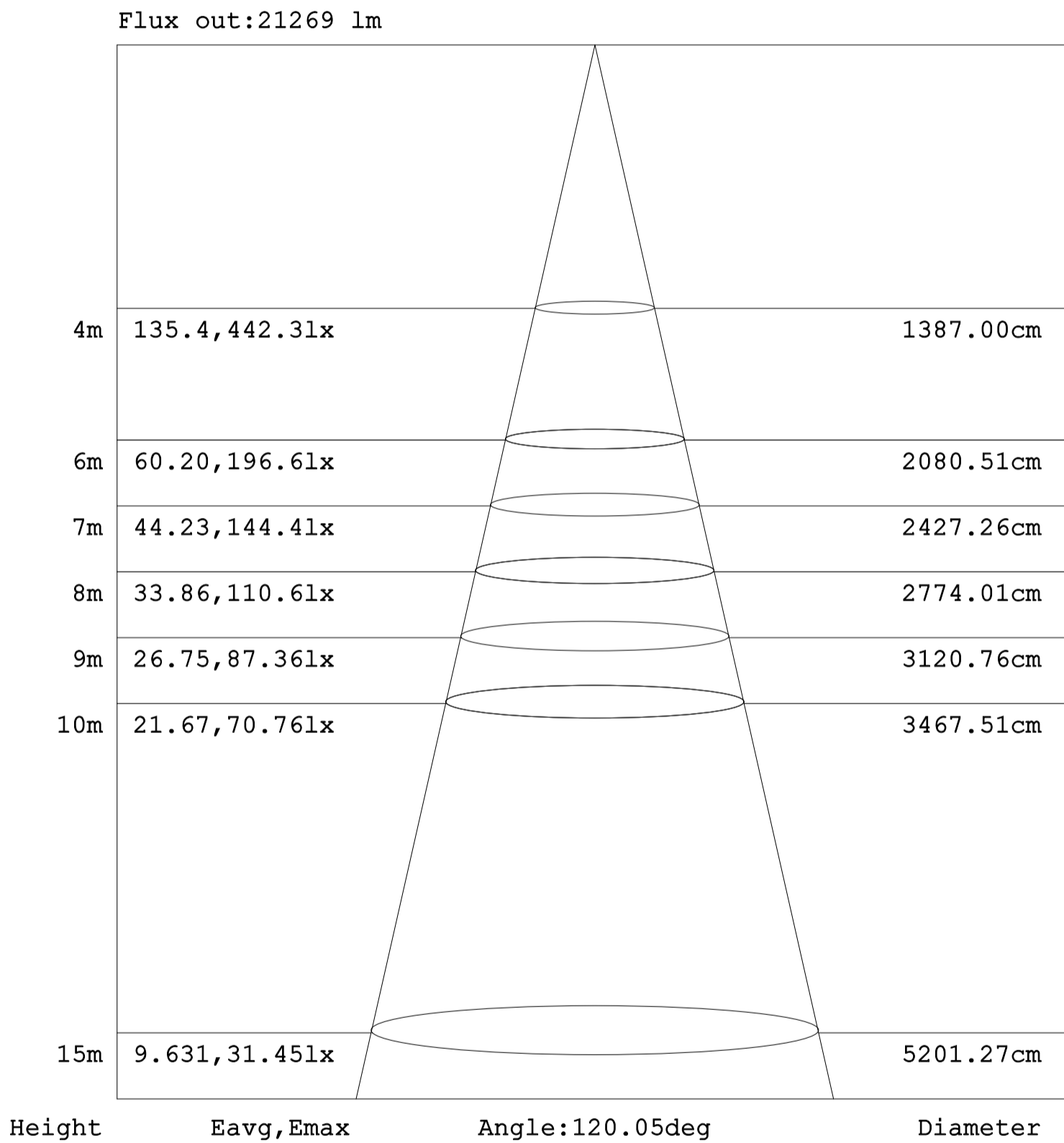
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 Remarks:

AAI Figure

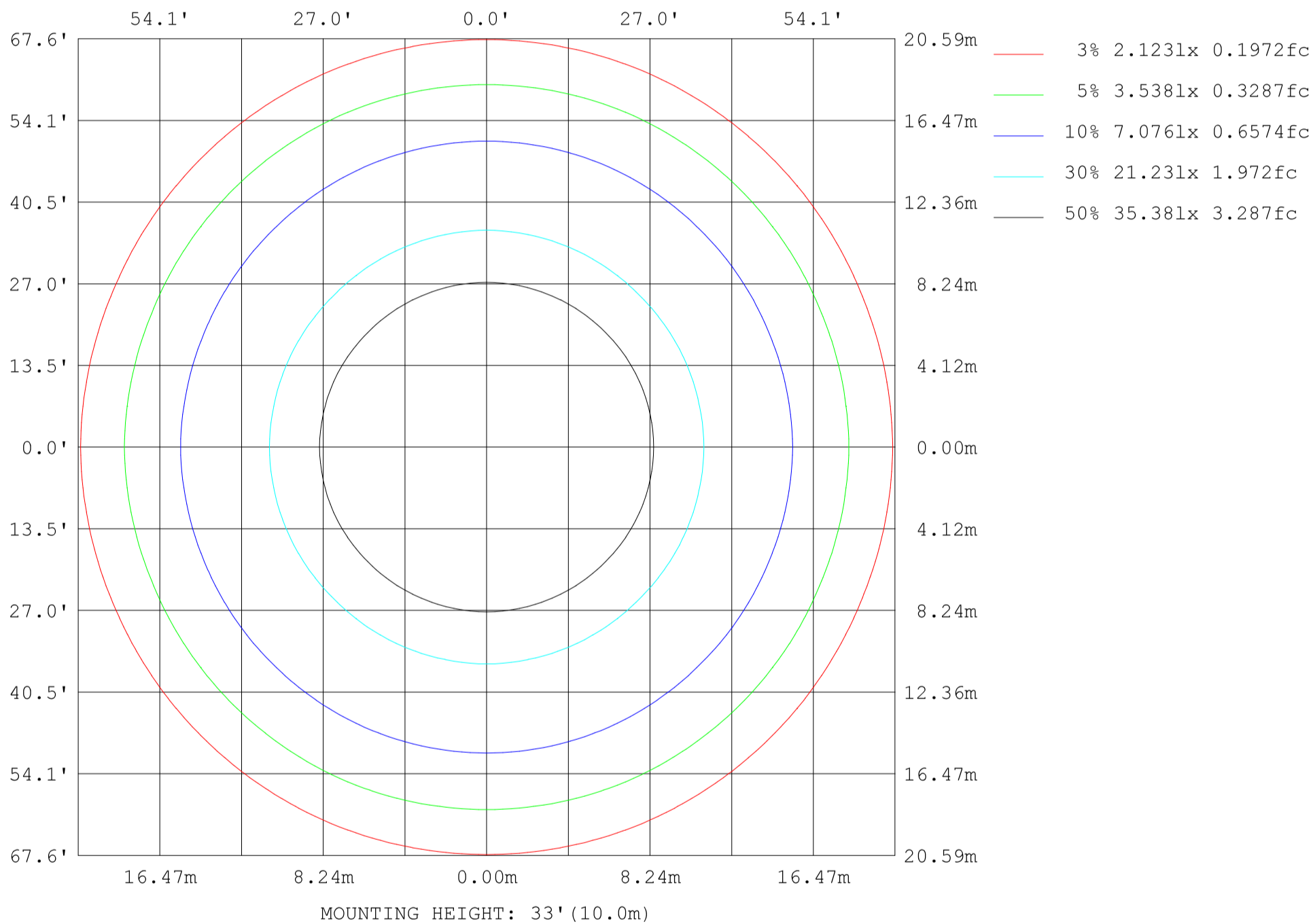


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:LYJ
 Test Date:2023-05-03

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=0.4556]
 Remarks:

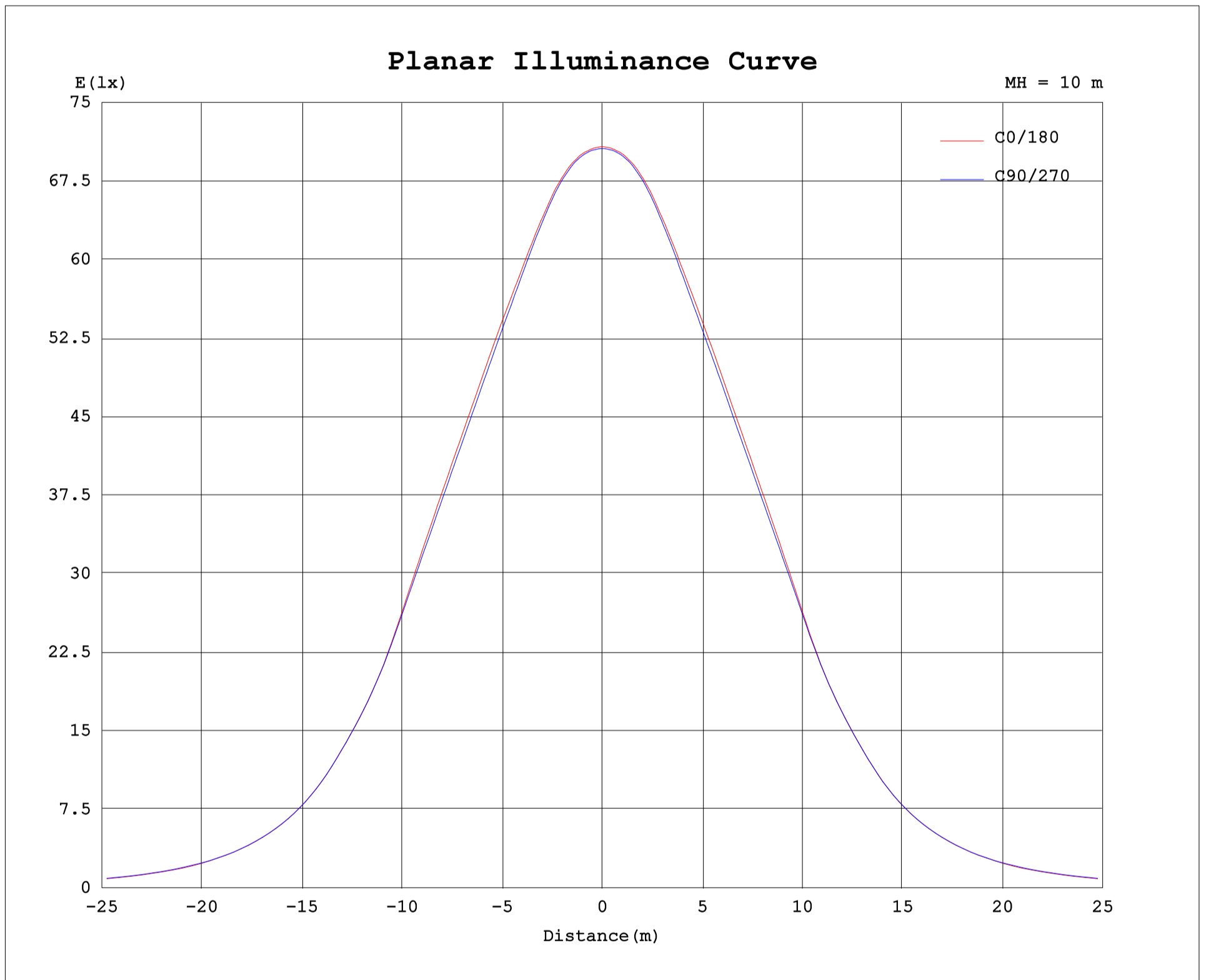
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-05-03

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=0.4556]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-05-03

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=0.4556]
Remarks: