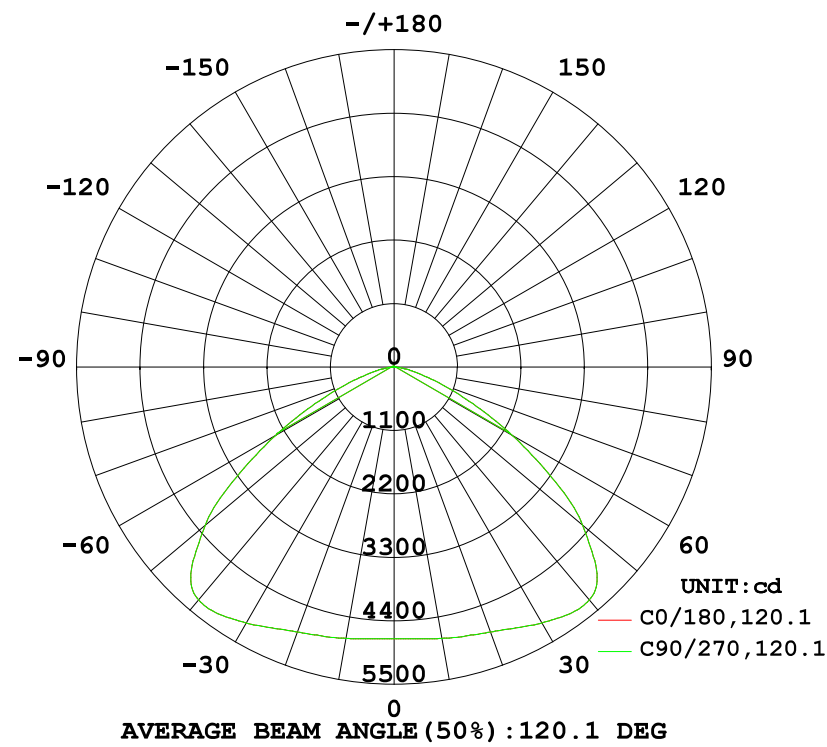


LUMINAIRE PHOTOMETRIC TEST REPORT

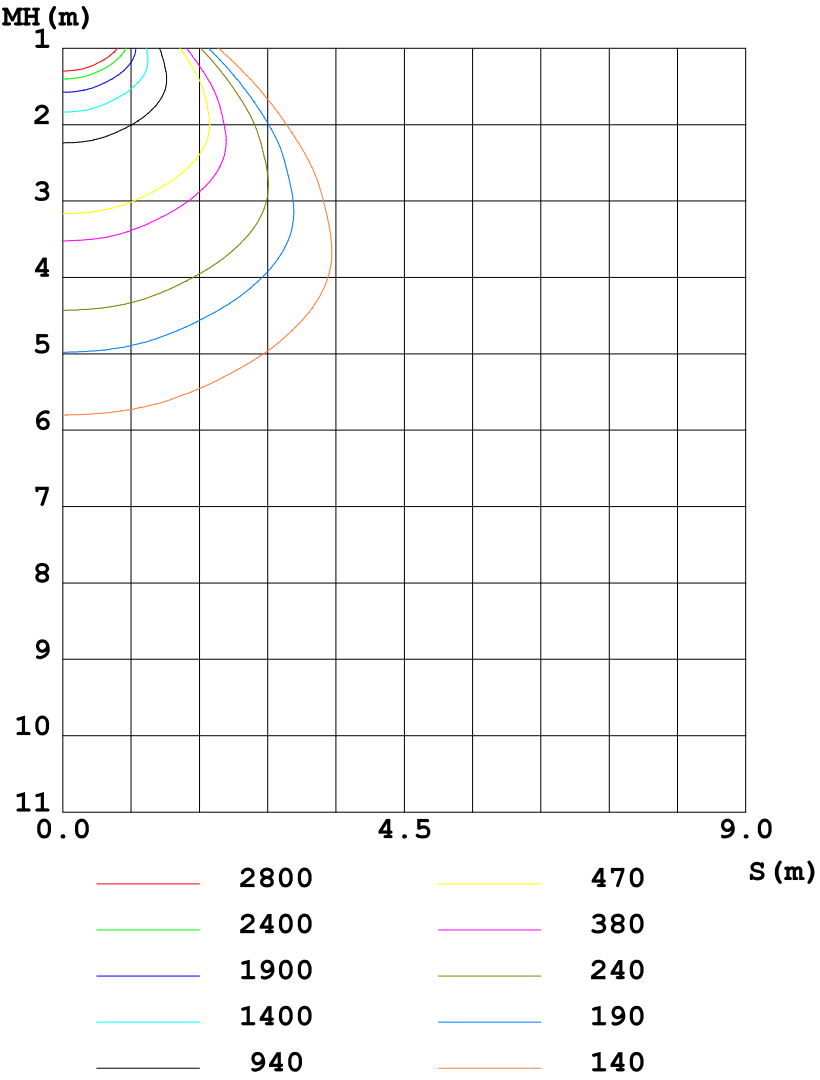
Test:U:230.0V I:0.356A P:80.0W PF:0.977 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0Lamp Flux:16308.6x1 lm		
NAME:	HB80-120W (80W)	TYPE:
SPEC.:		SERIAL No.:
MFR.:		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 203.86 lm/W
MODEL	/	I _{max} (cd)	5280	S/MH (C0/180)	1.67	
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.67	
RATED VOLTAGE (V)	/	TOTAL FLUX(lm)	16309	η UP,DN (C0-180)	0.0,50.0	
NOMINAL FLUX(lm)	16308.6	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	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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

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	4776	4776	4776	4776	4776	4776	4776	4776	0- 10	453.0	453.0	2.78,2.78
20	4890	4890	4890	4890	4890	4890	4890	4890	10- 20	1370	1823	11.2,11.2
30	5123	5123	5123	5123	5123	5123	5123	5123	20- 30	2316	4139	25.4,25.4
40	5270	5270	5270	5270	5270	5270	5270	5270	30- 40	3285	7425	45.5,45.5
50	4272	4272	4272	4272	4272	4272	4272	4272	40- 50	3775	11200	68.7,68.7
60	2363	2363	2363	2363	2363	2363	2363	2363	50- 60	2981	14181	87,87
70	880.2	880.2	880.2	880.2	880.2	880.2	880.2	880.2	60- 70	1526	15707	96.3,96.3
80	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	70- 80	512.5	16220	99.5,99.5
90	3.188	3.188	3.188	3.188	3.188	3.188	3.188	3.188	80- 90	88.64	16309	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): 9335 lm

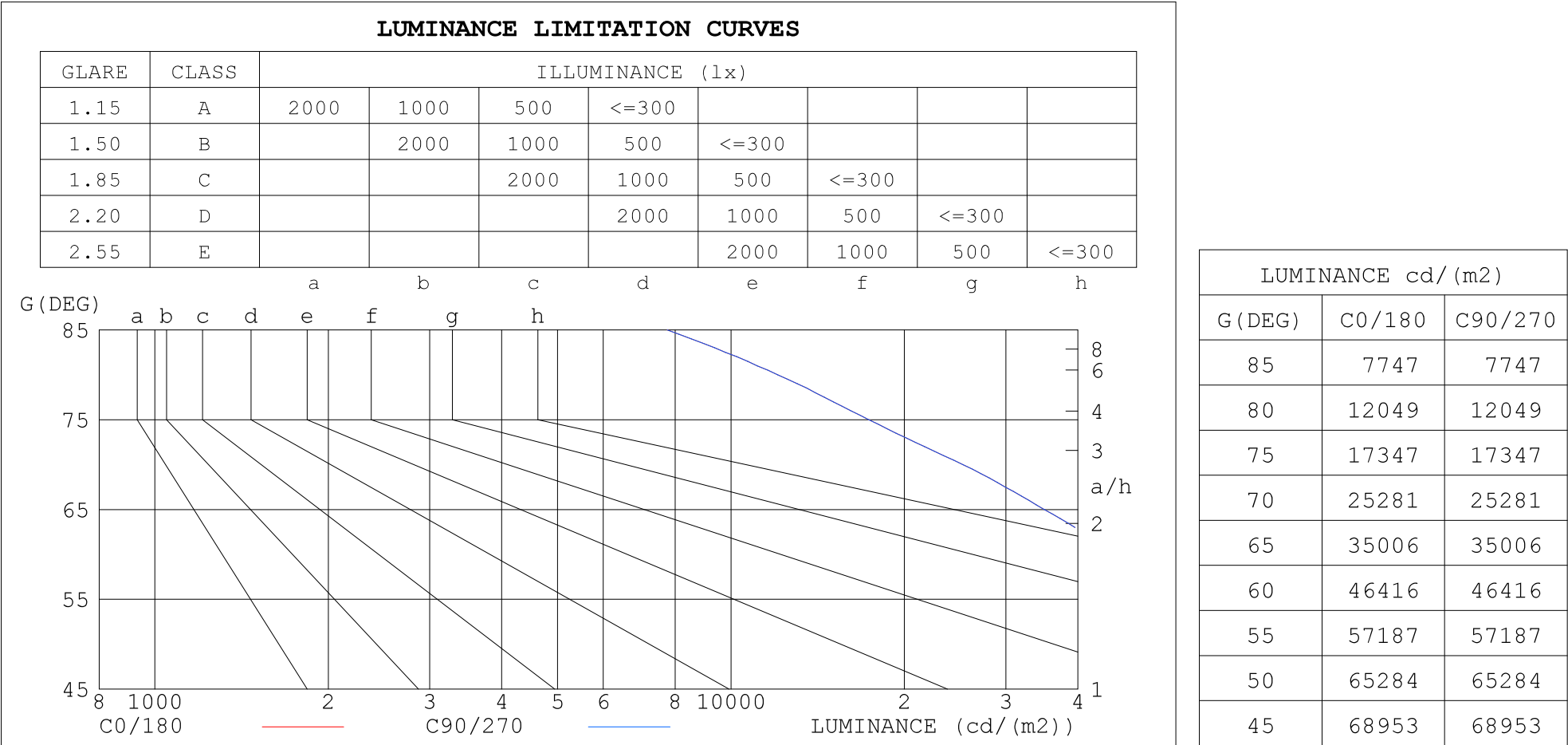
%lum = 57.2%
%lamp = 57.2%

Conical surface Flux(120deg): 14181 lm

%lum = 87.0%
%lamp = 87.0%

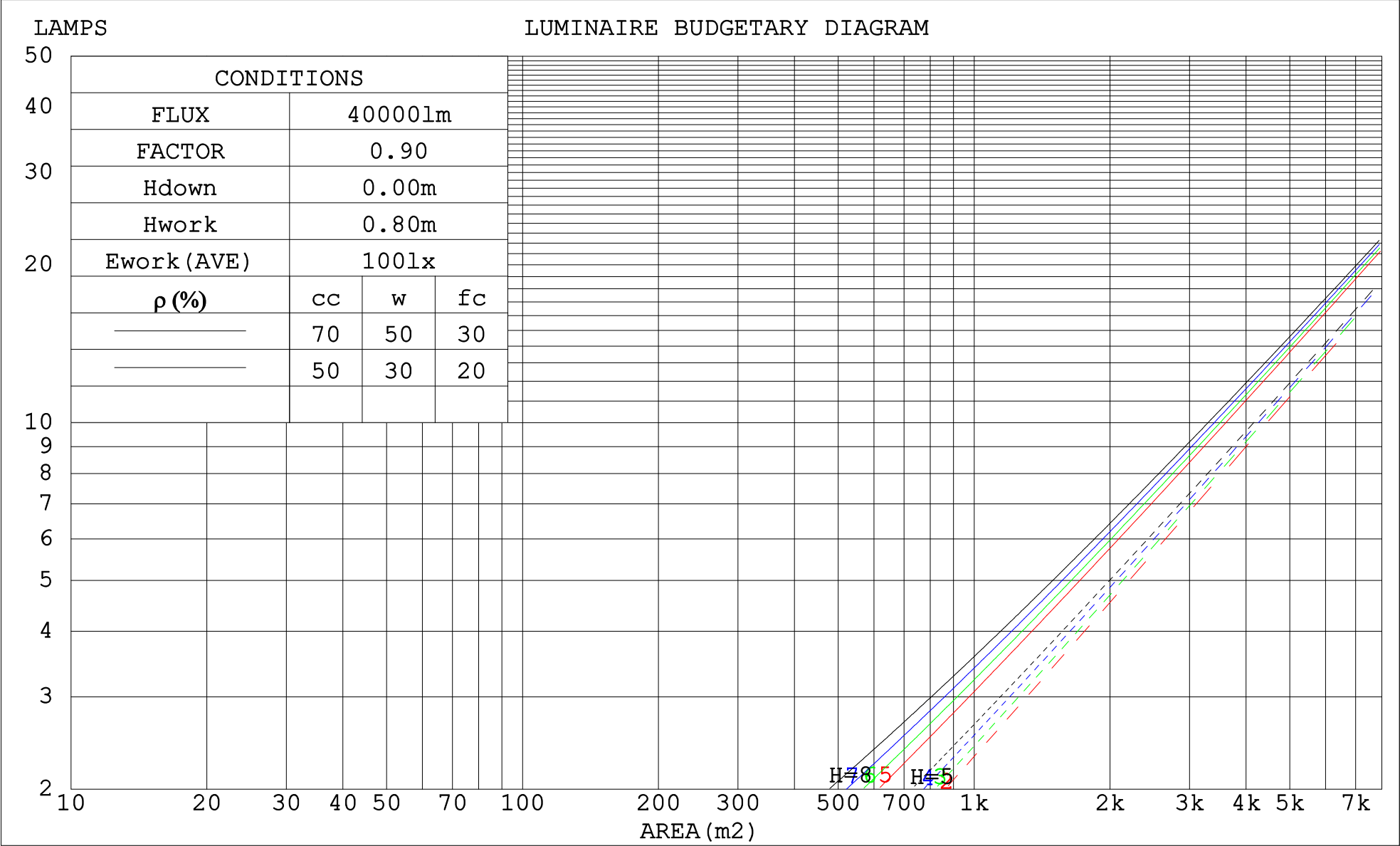
C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3℃	Humidity:65.0%
Operators:LYJ	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-07	Remarks:

LUMINANCE LIMITATION CURVES



CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.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	.75	.69	.65	.72	.68	.64	.62
4.0	.72	.64	.57	.71	.63	.57	.69	.62	.56	.66	.60	.56	.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	.49	.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	.39	.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℃

Operators:LYJ

Test Date:2023-07-07

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

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.275	.157	.050	.268	.153	.049	.255	.147	.047	.243	.140	.045	.232	.135	.043	
2.0	.269	.147	.045	.262	.145	.045	.251	.140	.043	.240	.135	.042	.231	.130	.041	
3.0	.254	.135	.041	.249	.133	.040	.239	.129	.039	.229	.126	.039	.221	.122	.038	
4.0	.239	.124	.036	.234	.122	.036	.225	.119	.036	.217	.116	.035	.209	.113	.035	
5.0	.224	.114	.033	.219	.113	.033	.211	.110	.032	.204	.108	.032	.197	.105	.032	
6.0	.209	.105	.030	.206	.104	.030	.198	.102	.030	.192	.100	.029	.185	.098	.029	
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.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	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.148	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.161	.114	.077	.138	.099	.066	.095	.068	.047	.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	.083	.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	.110	.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℃
Operators:LYJ
Test Date:2023-07-07

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	26.1	27.7	26.4	28.0	28.3	26.1	27.7	26.4	28.0	28.3
3H	26.8	28.2	27.1	28.5	28.9	26.8	28.2	27.1	28.5	28.9
4H	26.9	28.2	27.3	28.6	29.0	26.9	28.2	27.3	28.6	29.0
6H	27.0	28.2	27.4	28.6	29.0	27.0	28.2	27.4	28.6	29.0
8H	27.0	28.1	27.4	28.5	28.9	27.0	28.1	27.4	28.5	28.9
12H	26.9	28.1	27.4	28.5	28.9	26.9	28.1	27.4	28.5	28.9
4H 2H	26.4	27.7	26.8	28.0	28.4	26.4	27.7	26.8	28.0	28.4
3H	27.2	28.3	27.6	28.7	29.1	27.2	28.3	27.6	28.7	29.1
4H	27.4	28.4	27.8	28.8	29.2	27.4	28.4	27.8	28.8	29.2
6H	27.5	28.3	27.9	28.8	29.2	27.5	28.3	27.9	28.8	29.2
8H	27.5	28.3	28.0	28.7	29.2	27.5	28.3	28.0	28.7	29.2
12H	27.5	28.2	28.0	28.7	29.1	27.5	28.2	28.0	28.7	29.1
8H 4H	27.4	28.2	27.9	28.7	29.1	27.4	28.2	27.9	28.7	29.1
6H	27.5	28.2	28.0	28.7	29.2	27.5	28.2	28.0	28.7	29.2
8H	27.6	28.2	28.1	28.7	29.1	27.6	28.2	28.1	28.7	29.1
12H	27.6	28.1	28.1	28.6	29.1	27.6	28.1	28.1	28.6	29.1
12H 4H	27.4	28.1	27.9	28.6	29.1	27.4	28.1	27.9	28.6	29.1
6H	27.5	28.1	28.0	28.6	29.1	27.5	28.1	28.0	28.6	29.1
8H	27.6	28.1	28.1	28.6	29.1	27.6	28.1	28.1	28.6	29.1
CIE190: 2010										

CIE190: 2010
Area: 0.1018 m2

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

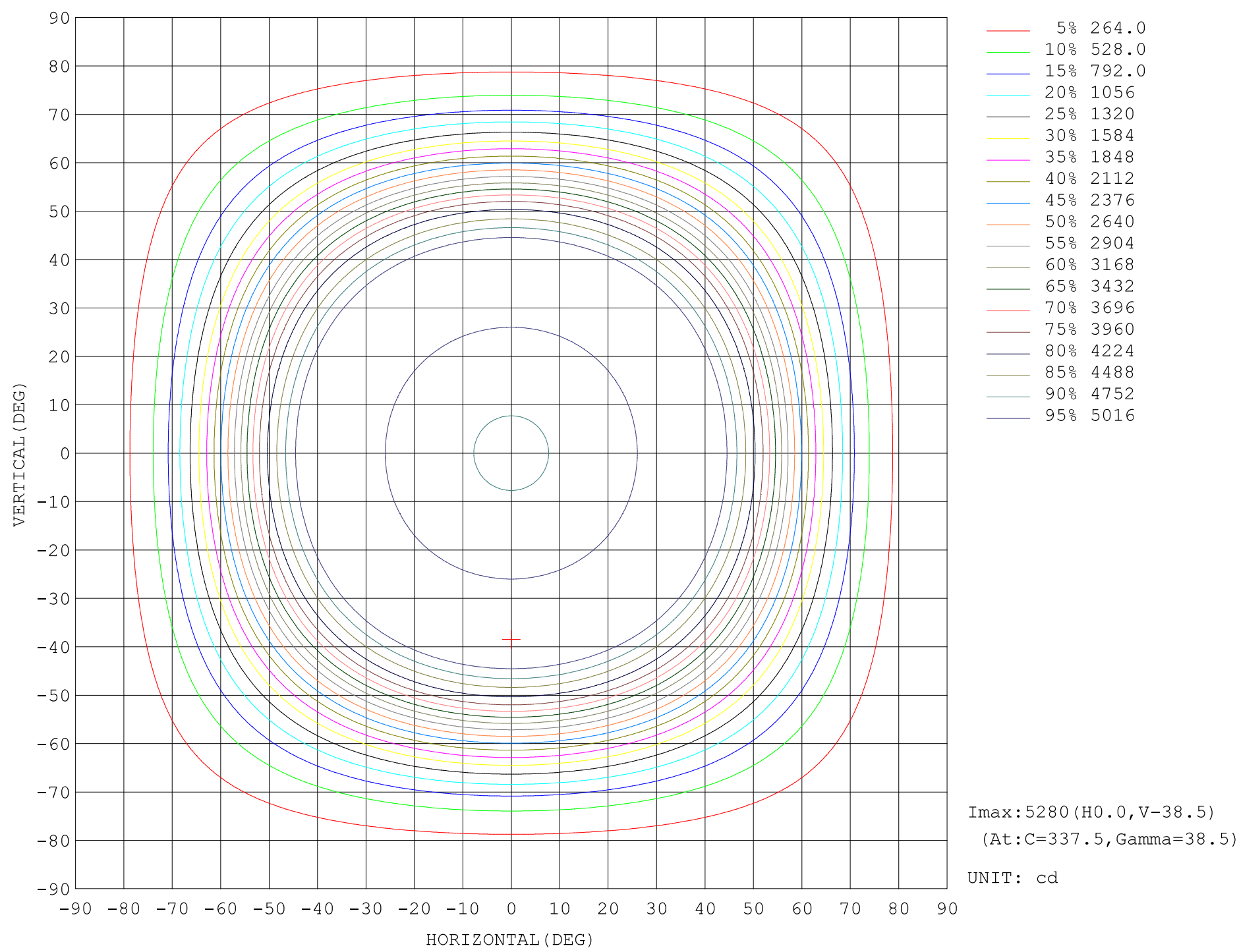
UTILIZATION FACTORS TABLE

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) x 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	75	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℃
Operators:LYJ
Test Date:2023-07-07

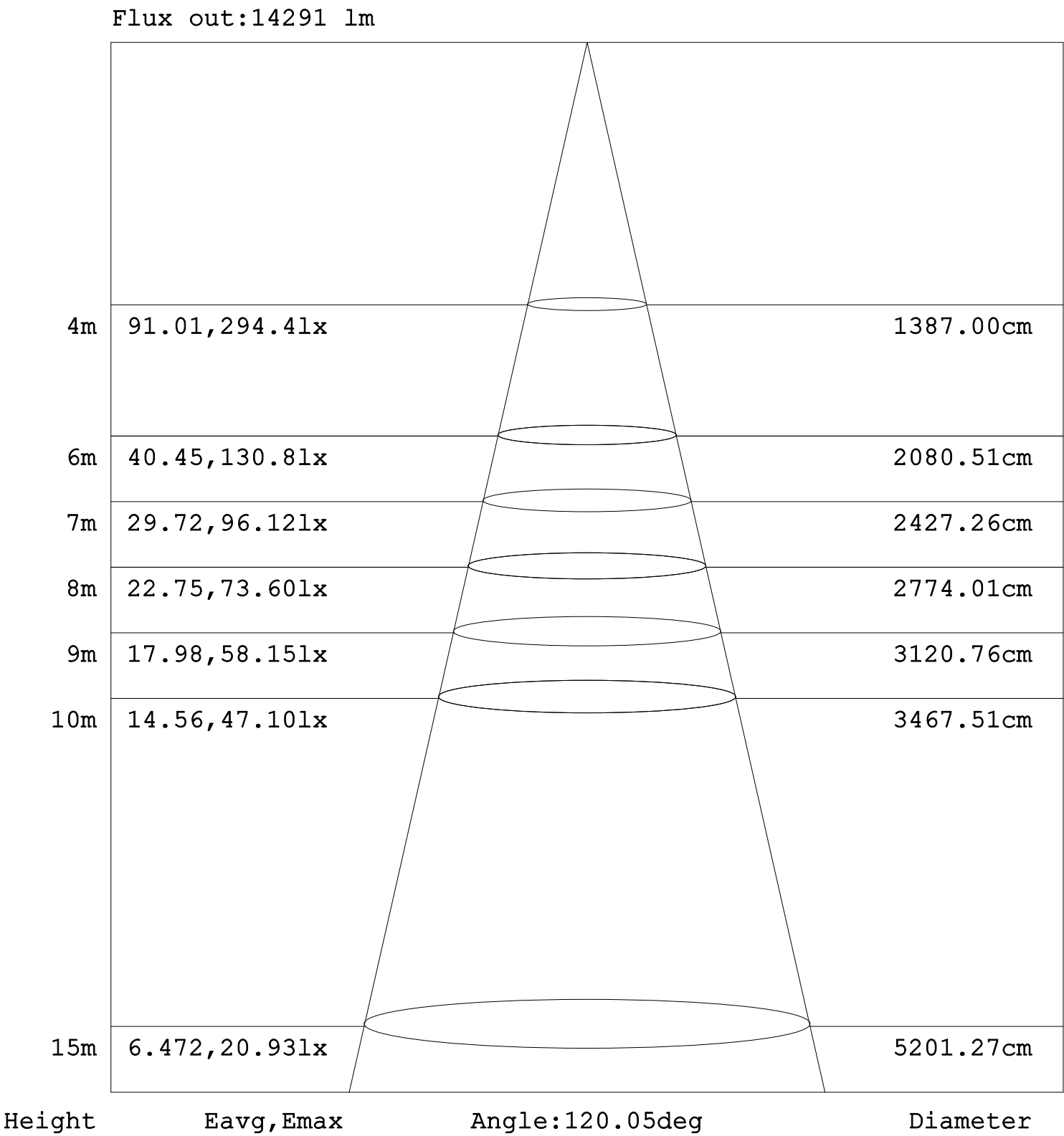
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

ISOCANDELA DIAGRAM



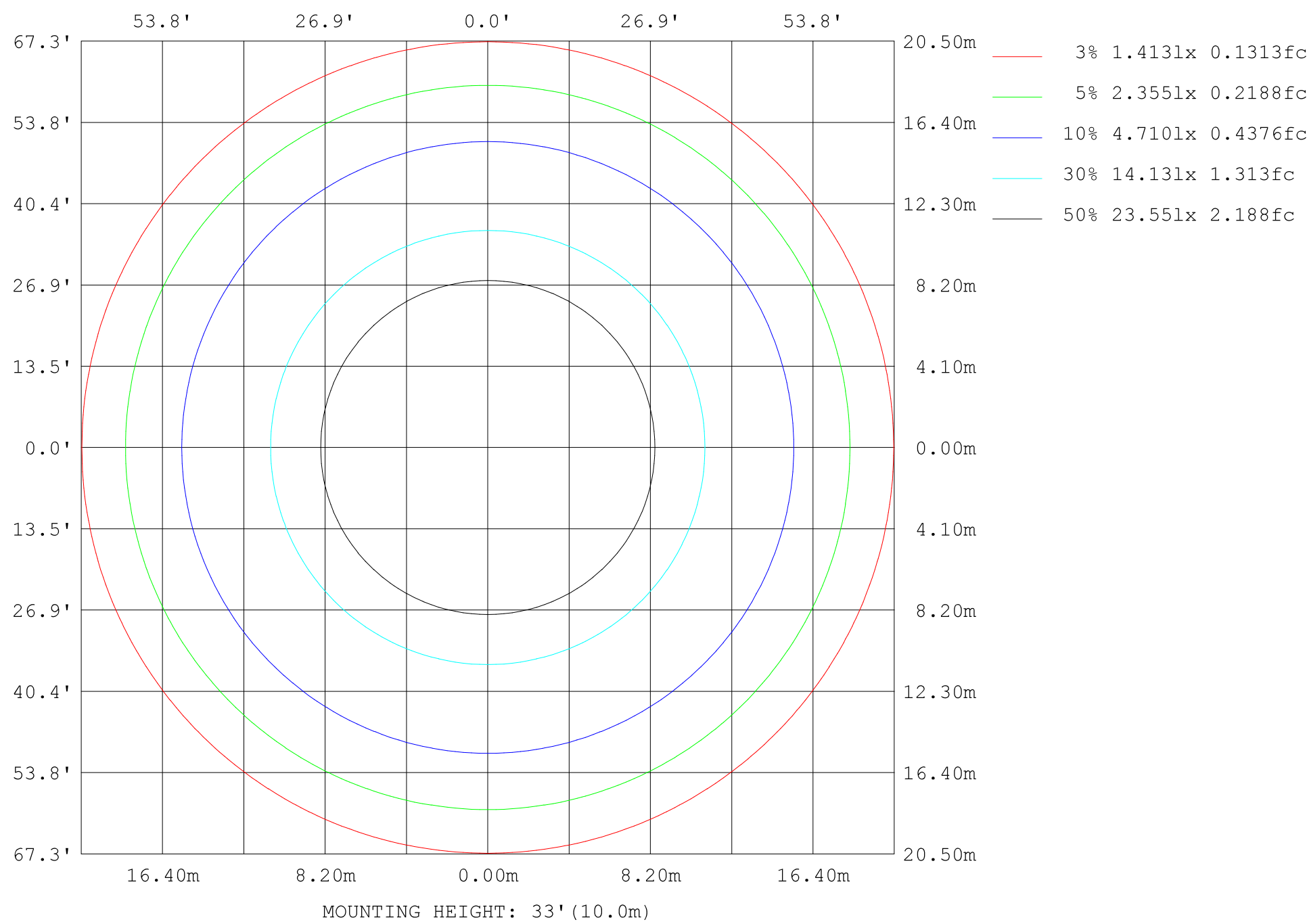
C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3℃	Humidity:65.0%
Operators:LYJ	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-07	Remarks:

AAI Figure



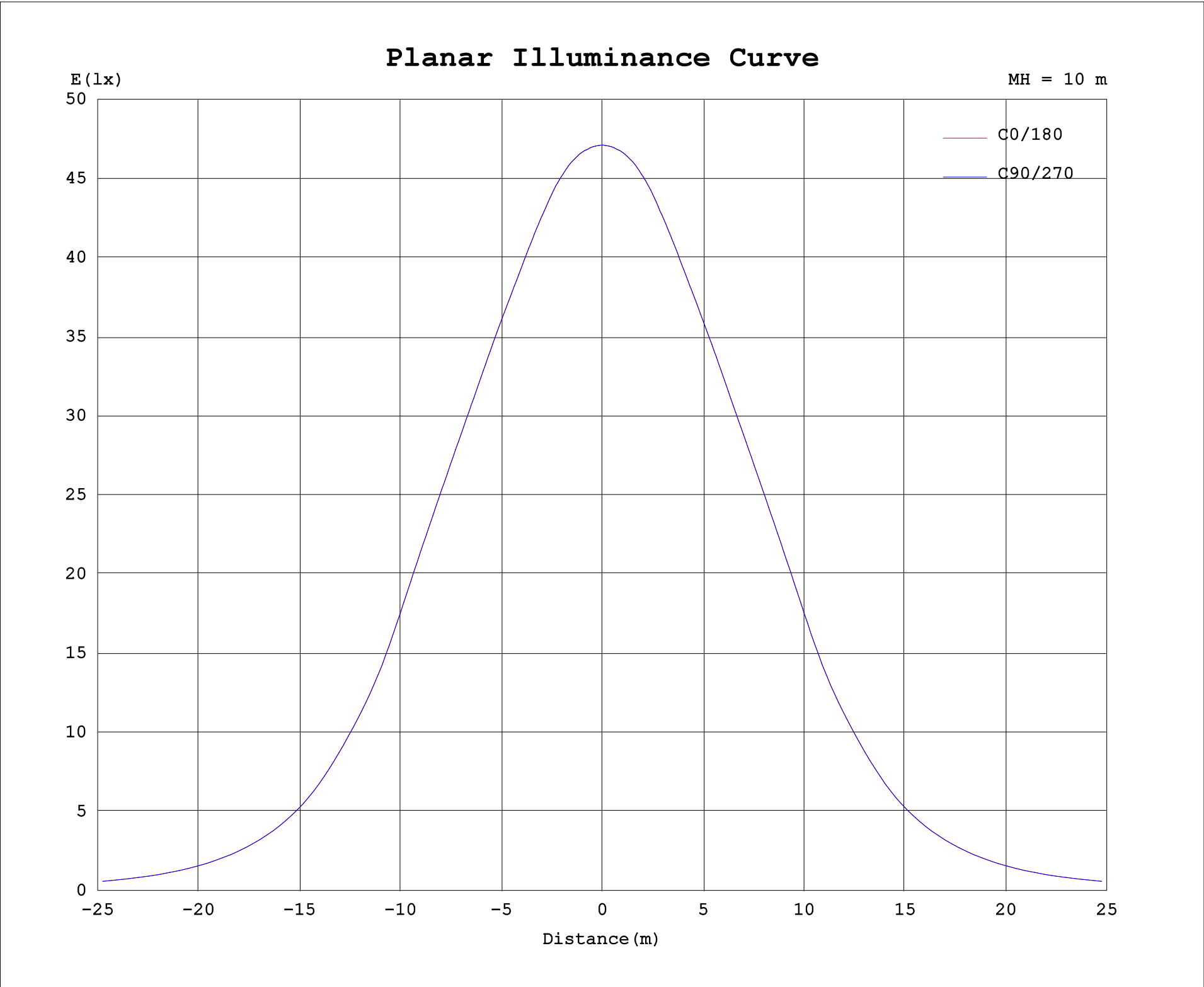
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ISOLUX DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3℃	Humidity:65.0%
Operators:LYJ	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-07	Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3℃	Humidity:65.0%
Operators:LYJ	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-07	Remarks: