

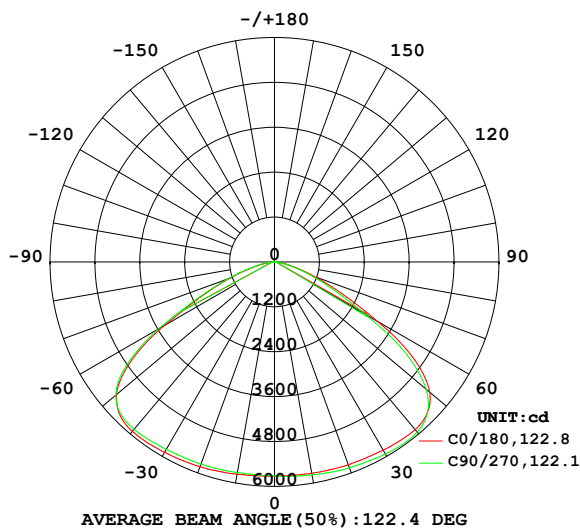
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

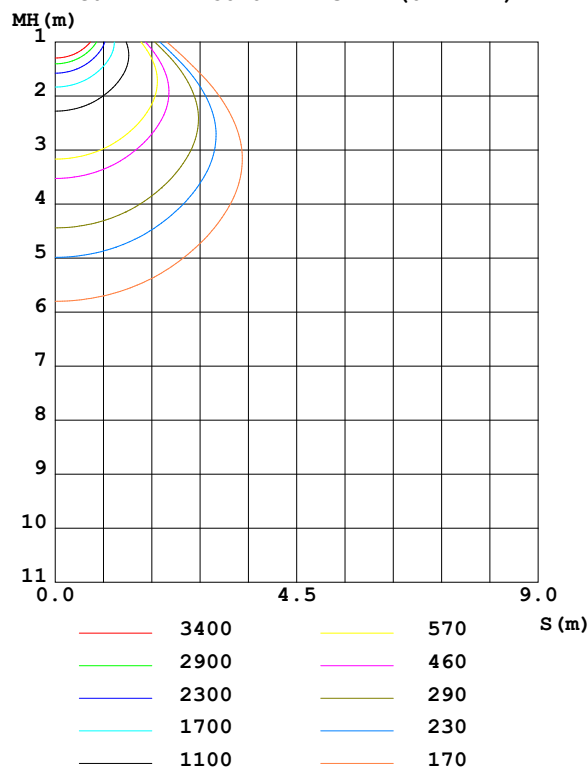
Test:U:230.0V I:0.445A P:99.6W PF:0.973 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:19948x1 lm		
NAME: HB68-100H-5070-H00194	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 200.38 lm/W			
MODEL	/	Imax (cd)	5959	S/MH (C0/180)	1.58
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.56
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	19948	η UP, DN (C0-180)	0.0, 49.0
NOMINAL FLUX (lm)	19948	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.0
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°C
Operators: LYJ
Test Date: 2023-06-02

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	5736	5755	5780	5778	5763	5732	5718	5710	0- 10	547.4	547.4	2.74,2.74
20	5769	5819	5856	5844	5825	5779	5752	5732	10- 20	1637	2184	10.9,10.9
30	5809	5879	5926	5909	5876	5840	5788	5772	20- 30	2695	4879	24.5,24.5
40	5850	5893	5933	5916	5912	5898	5840	5818	30- 40	3693	8572	43,43
50	5415	5334	5288	5375	5512	5616	5535	5499	40- 50	4446	13018	65.3,65.3
60	3179	2993	2792	3065	3397	3719	3579	3531	50- 60	4068	17087	85.7,85.7
70	1139	1064	999.6	1124	1278	1400	1328	1294	60- 70	2061	19148	96,96
80	259.6	220.5	217.8	246.6	305.7	342.3	340.6	299.0	70- 80	689.7	19838	99.4,99.4
90	2.449	1.824	1.791	2.386	4.643	11.49	9.792	4.342	80- 90	110.3	19948	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): 10738 lm

%lum = 53.8%

%lamp = 53.8%

Conical surface Flux(120deg): 17087 lm

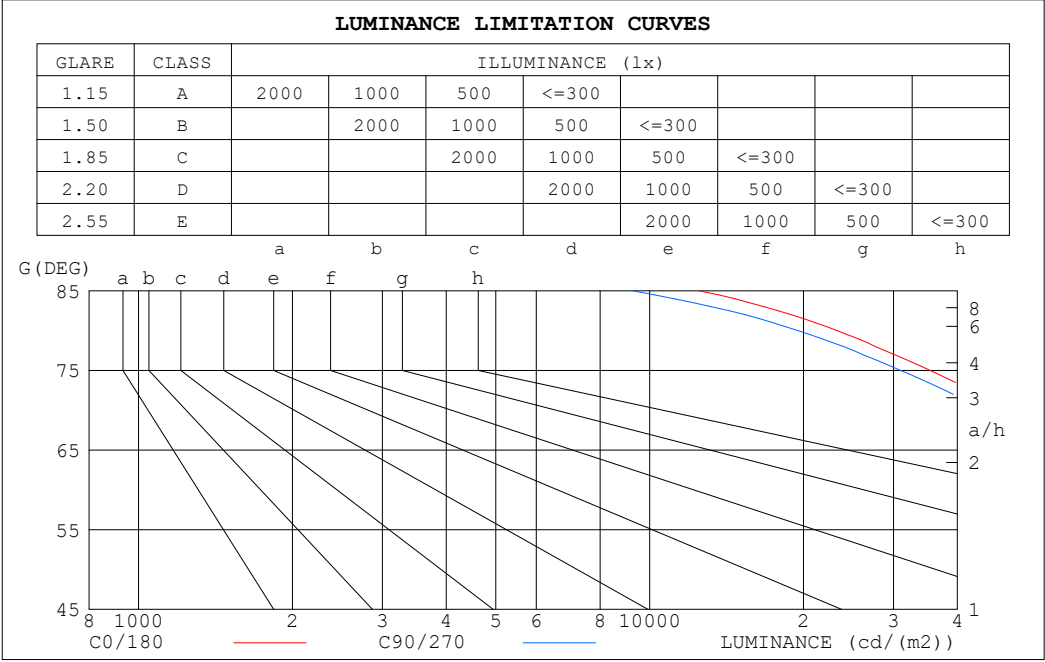
%lum = 85.7%

%lamp = 85.7%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:LYJ
Test Date:2023-06-02

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:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12489	9264
80	23274	19514
75	35395	30967
70	51830	45467
65	71720	62636
60	98984	86859
55	124342	116806
50	131150	127984
45	126742	126839

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:LYJ

Test Date:2023-06-02

γ Range: 0 - 90DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465

Humidity:65.0%

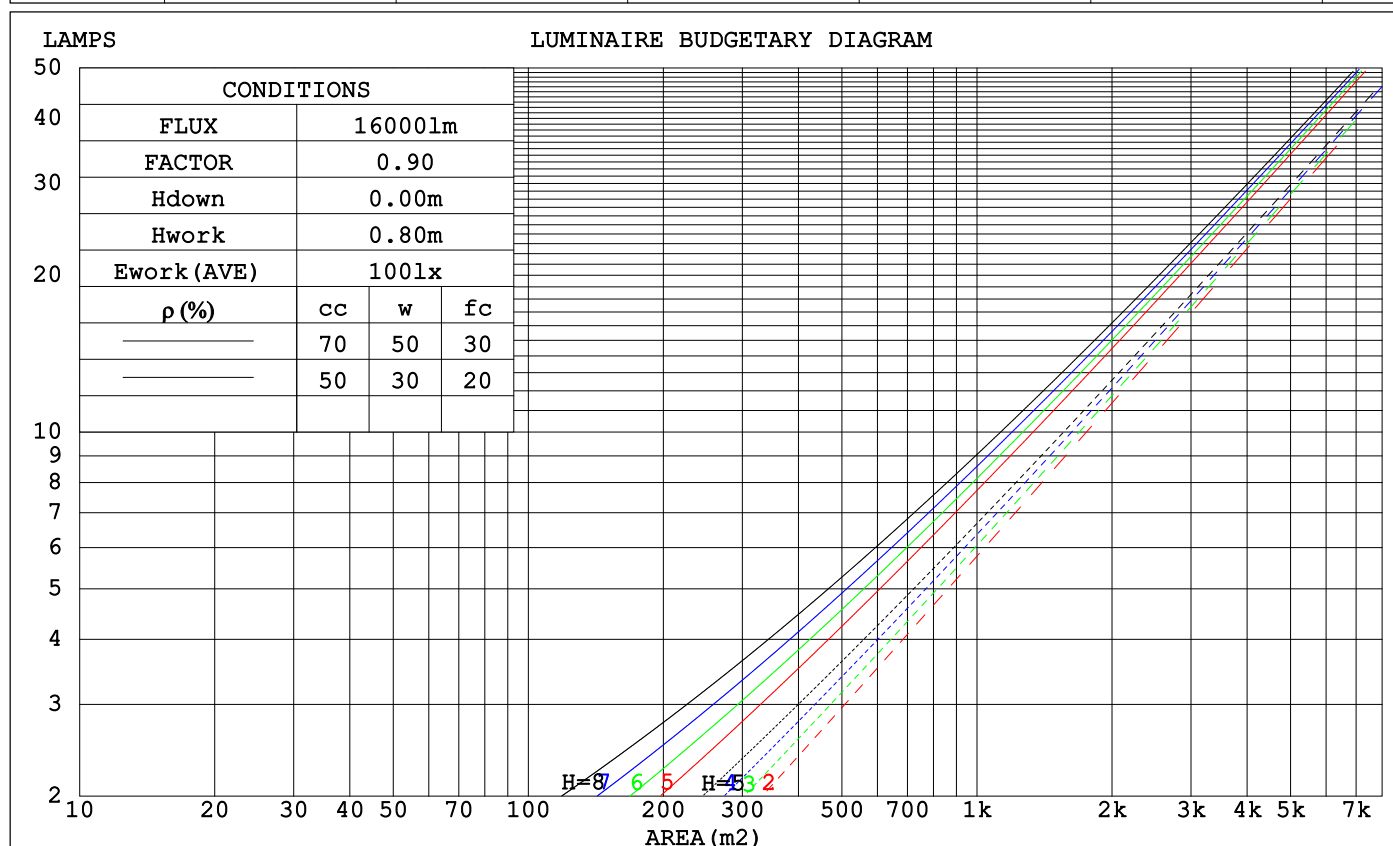
Test Distance:26.000m [K=0.4556]

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	1.05	1.01	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.90	.91	.90	.88	.86
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.78	.84	.79	.76	.81	.77	.74	.72
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.74	.68	.64	.71	.67	.63	.61
4.0	.71	.63	.56	.70	.62	.56	.68	.61	.55	.65	.59	.54	.63	.58	.54	.51
5.0	.63	.55	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.46	.44
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.41	.35	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.41	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.25	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LYJ
 Test Date: 2023-06-02

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	.282	.160	.051	.275	.157	.050	.262	.150	.048	.249	.144	.046	.238	.138	.045	
2.0	.275	.151	.046	.269	.148	.046	.257	.143	.044	.246	.138	.043	.236	.134	.042	
3.0	.260	.138	.041	.254	.136	.041	.244	.132	.040	.235	.129	.039	.226	.125	.039	
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.221	.119	.036	.213	.116	.035	
5.0	.228	.116	.034	.223	.115	.033	.215	.112	.033	.208	.110	.033	.201	.107	.032	
6.0	.213	.107	.031	.209	.105	.030	.202	.103	.030	.195	.101	.030	.188	.099	.029	
7.0	.199	.098	.028	.196	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.022	

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	.153	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.087	.100	.079	.060	.058	.046	.035	.018	.015	.012	
3.0	.163	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.090	.048	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.102	.052	.019	.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:2023-06-02

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	29.1	30.7	29.4	31.0	31.3	28.8	30.4	29.2	30.7	31.1
3H	29.6	31.1	30.0	31.4	31.8	29.3	30.8	29.7	31.1	31.5
4H	29.7	31.1	30.1	31.4	31.8	29.5	30.8	29.9	31.2	31.6
6H	29.8	31.0	30.2	31.4	31.8	29.5	30.7	29.9	31.1	31.5
8H	29.7	31.0	30.2	31.3	31.7	29.5	30.7	29.9	31.1	31.5
12H	29.7	30.9	30.2	31.3	31.7	29.4	30.6	29.9	31.0	31.4
4H 2H	29.3	30.7	29.7	31.0	31.4	29.1	30.4	29.5	30.8	31.2
3H	29.9	31.1	30.3	31.5	31.9	29.8	30.9	30.2	31.3	31.7
4H	30.1	31.1	30.5	31.5	32.0	29.9	30.9	30.3	31.3	31.8
6H	30.2	31.0	30.6	31.5	31.9	30.0	30.9	30.4	31.3	31.8
8H	30.2	31.0	30.6	31.4	31.9	30.0	30.8	30.4	31.2	31.7
12H	30.1	30.9	30.6	31.4	31.8	29.9	30.7	30.4	31.2	31.6
8H 4H	30.1	30.9	30.6	31.4	31.8	29.9	30.8	30.4	31.2	31.7
6H	30.2	30.9	30.7	31.4	31.8	30.0	30.7	30.5	31.2	31.7
8H	30.2	30.8	30.7	31.3	31.8	30.0	30.6	30.5	31.1	31.6
12H	30.2	30.7	30.7	31.2	31.8	30.0	30.5	30.5	31.0	31.6
12H 4H	30.1	30.8	30.6	31.3	31.8	29.9	30.7	30.4	31.1	31.6
6H	30.2	30.8	30.7	31.2	31.8	30.0	30.6	30.5	31.1	31.6
8H	30.2	30.7	30.7	31.2	31.8	30.0	30.6	30.5	31.0	31.6
CIE190: 2010										

CIE190: 2010
Area: 0.0642 m2

C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2023-06-02

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

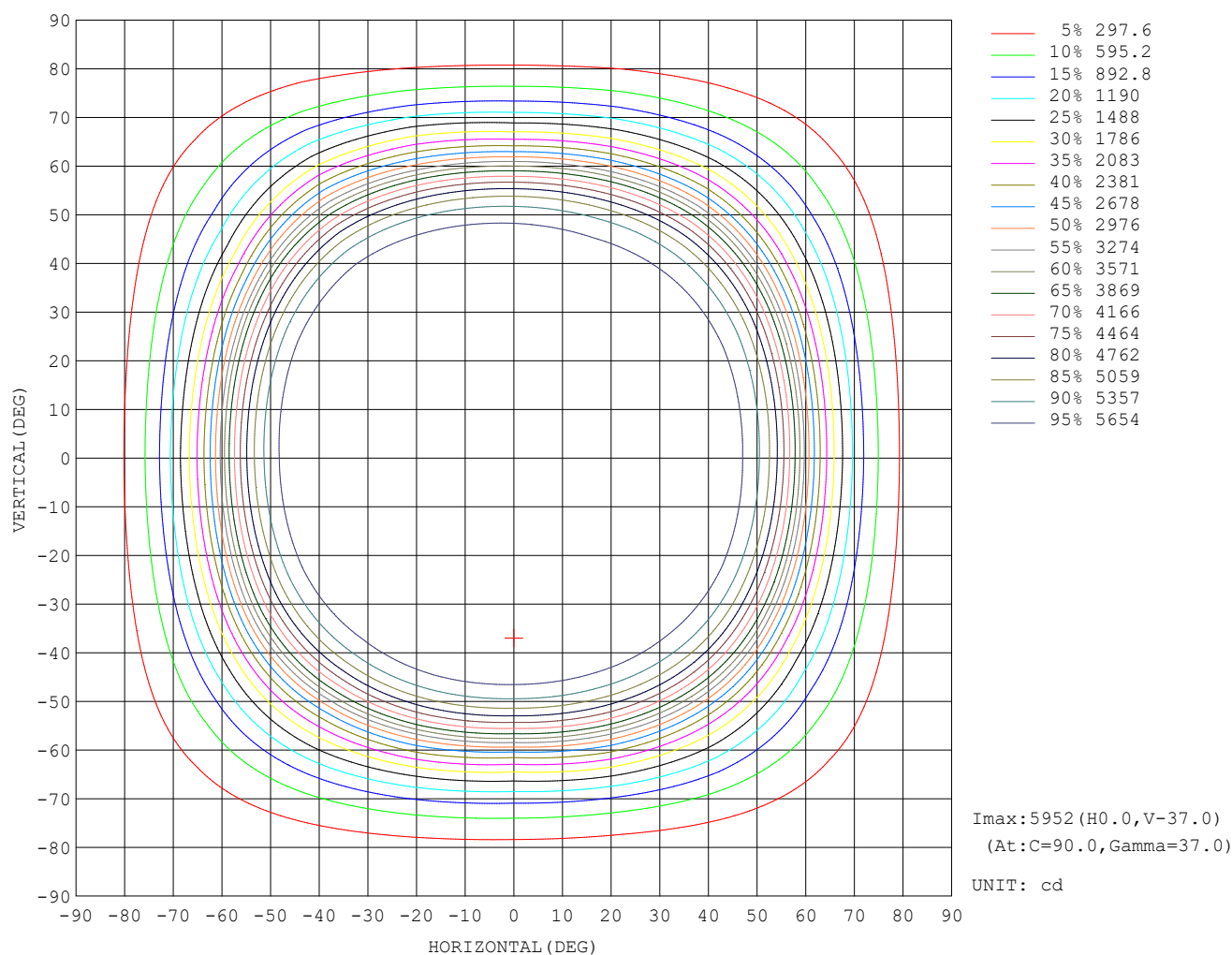
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	36	55	43	36	53	43	36	29
0.80	67	55	47	66	54	47	64	54	47	40
1.00	76	65	58	75	65	58	73	66	57	50
1.25	84	74	67	83	73	66	80	72	66	58
1.50	89	80	73	88	79	72	85	77	71	64
2.00	96	88	82	95	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	93	89	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
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 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:

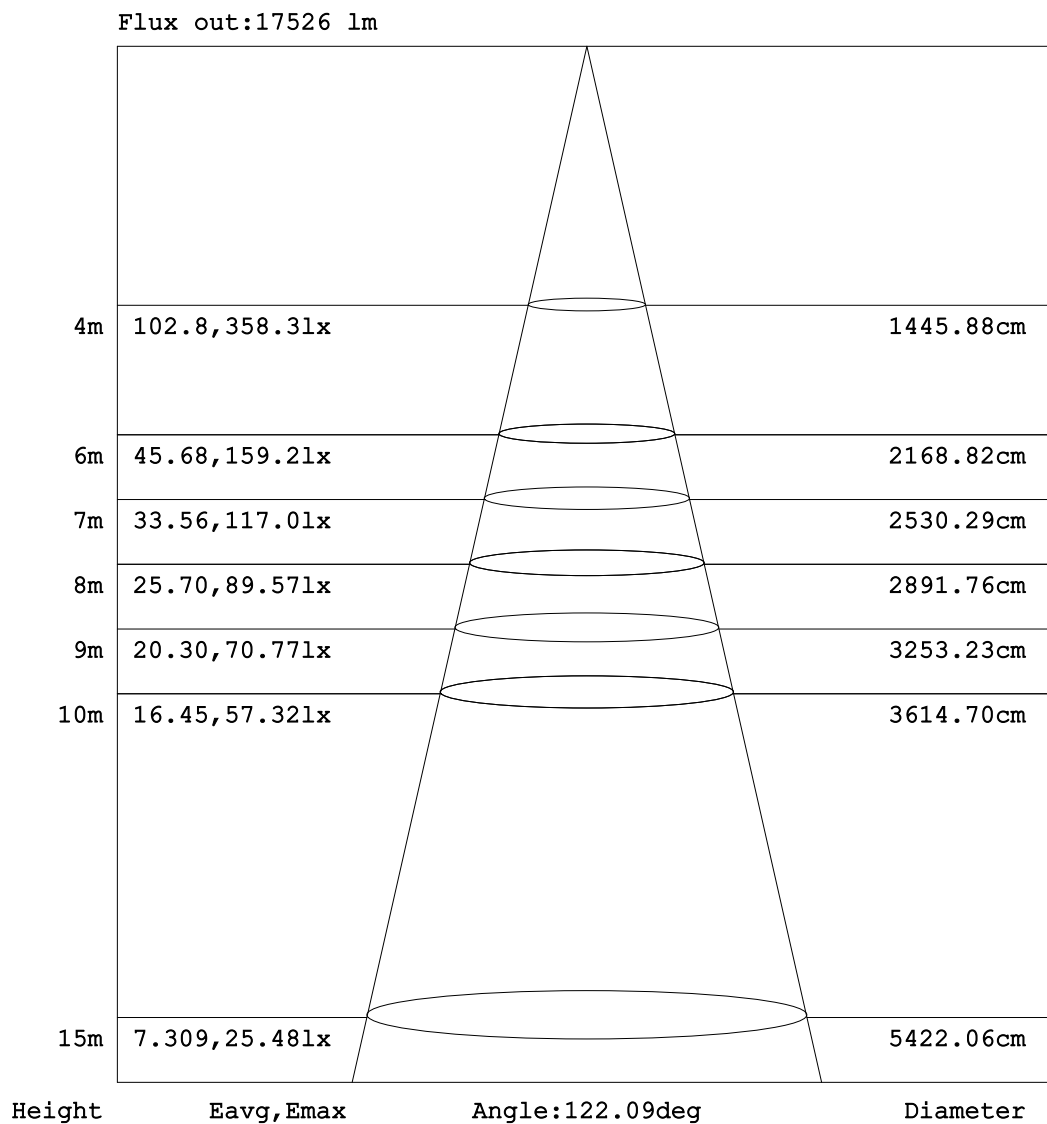
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-06-02

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



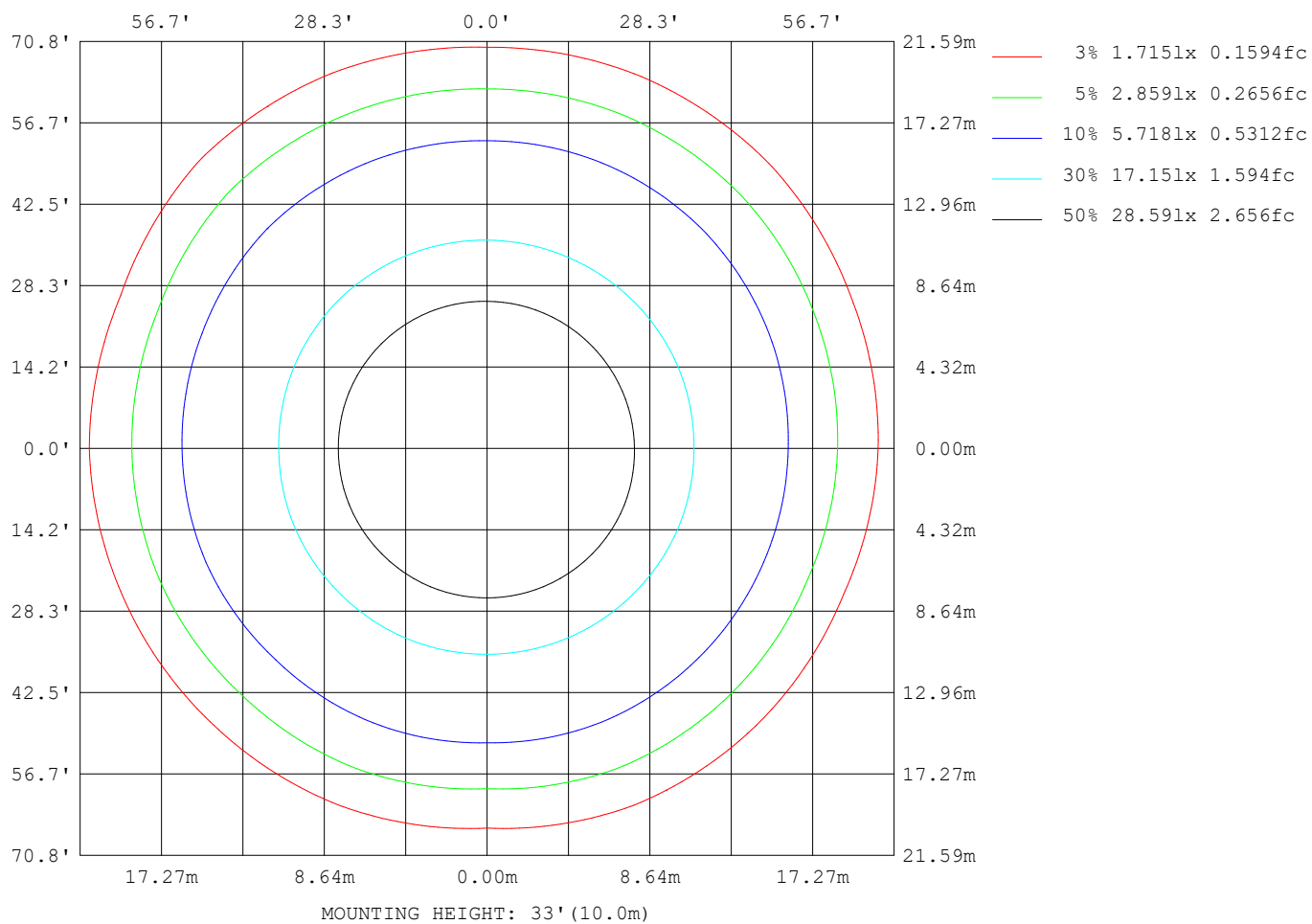
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
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Operators:LYJ
Test Date:2023-06-02

γ Range: 0 - 90DEG
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

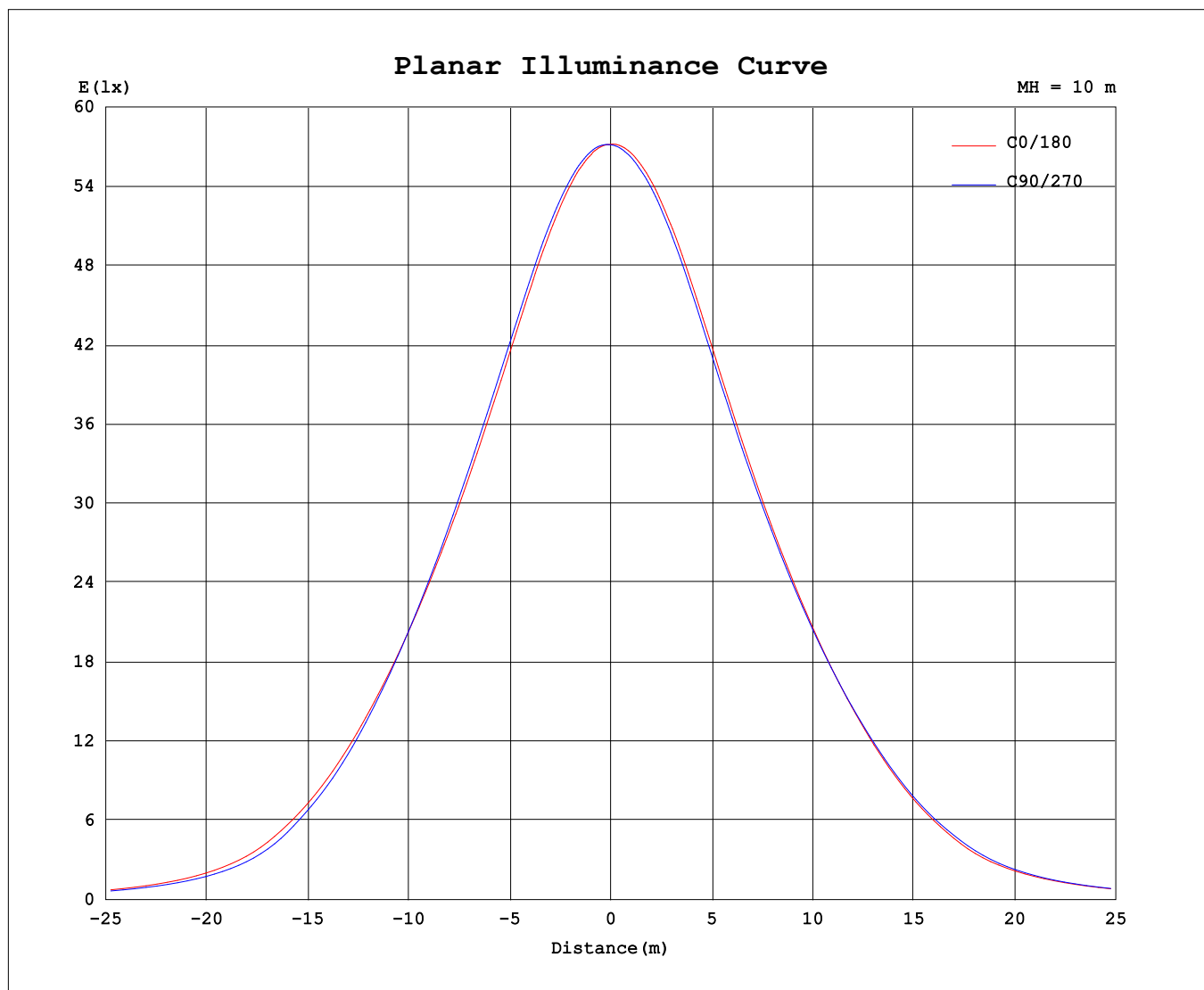
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-06-02

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: 2023-06-02

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: