

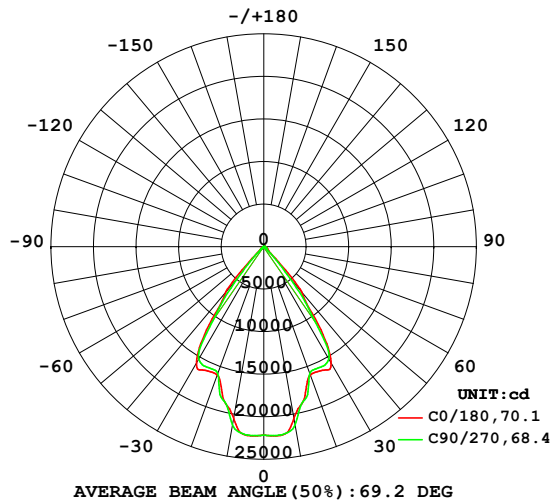
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

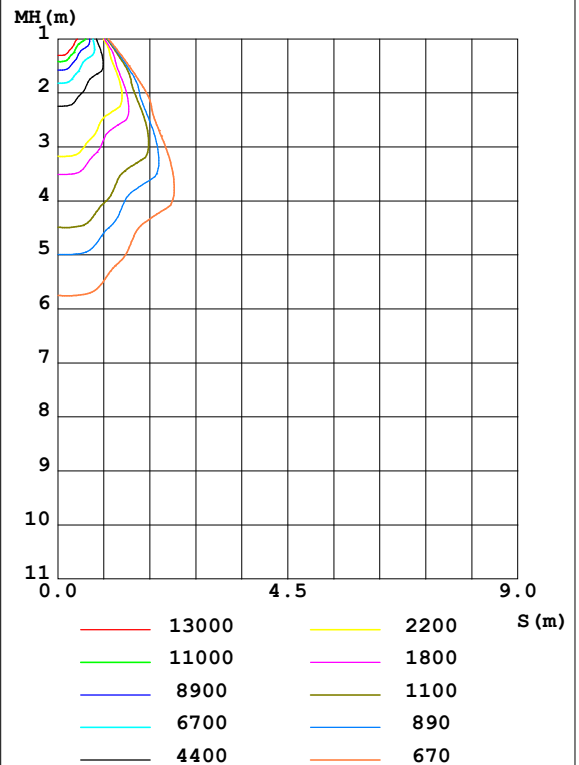
Test:U:230.0V I:0.8738A P:200.40W PF:0.9971 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:22160.7x1 lm		
NAME: LHB09-200-5070-L03902+GRID38	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110.58 lm/W			
MODEL	/	I _{max} (cd)	22318	S/MH(C0/180)	1.01
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.99
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	22161	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	22160.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.05

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-12

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4538]
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	2050	2187	2125	2187	2050	2187	2125	2187	0- 10	2105	2105	9.5,9.5
20	1606	1587	1587	1587	1606	1587	1587	1587	10- 20	5240	7345	33.1,33.1
30	1586	1185	1527	1185	1586	1185	1527	1185	20- 30	6861	14206	64.1,64.1
40	691.4	530.4	428.0	530.4	691.4	530.4	428.0	530.4	30- 40	6248	20454	92.3,92.3
50	49.54	39.26	36.82	39.26	49.54	39.26	36.82	39.26	40- 50	1362	21816	98.4,98.4
60	24.22	12.90	12.06	12.90	24.22	12.90	12.06	12.90	50- 60	224.8	22041	99.5,99.5
70	6.743	3.809	3.973	3.809	6.743	3.809	3.973	3.809	60- 70	86.99	22128	99.9,99.9
80	2.114	1.273	1.126	1.273	2.114	1.273	1.126	1.273	70- 80	26.44	22154	100,100
90	0.0375	0.0455	0.0303	0.0455	0.0375	0.0455	0.0303	0.0455	80- 90	6.588	22161	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 21560 lm

%lum = 97.3%

%lamp = 97.3%

Conical surface Flux(120deg): 22041 lm

%lum = 99.5%

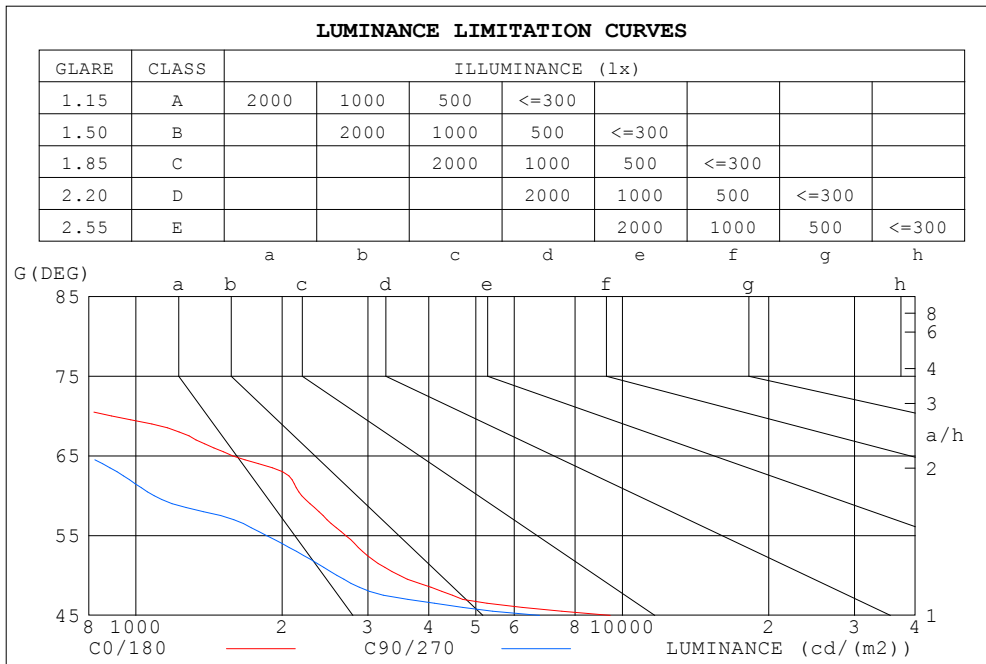
%lamp = 99.5%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4538]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	457	266
80	551	293
75	557	381
70	892	526
65	1583	794
60	2192	1091
55	2705	1858
50	3488	2592
45	9441	6755

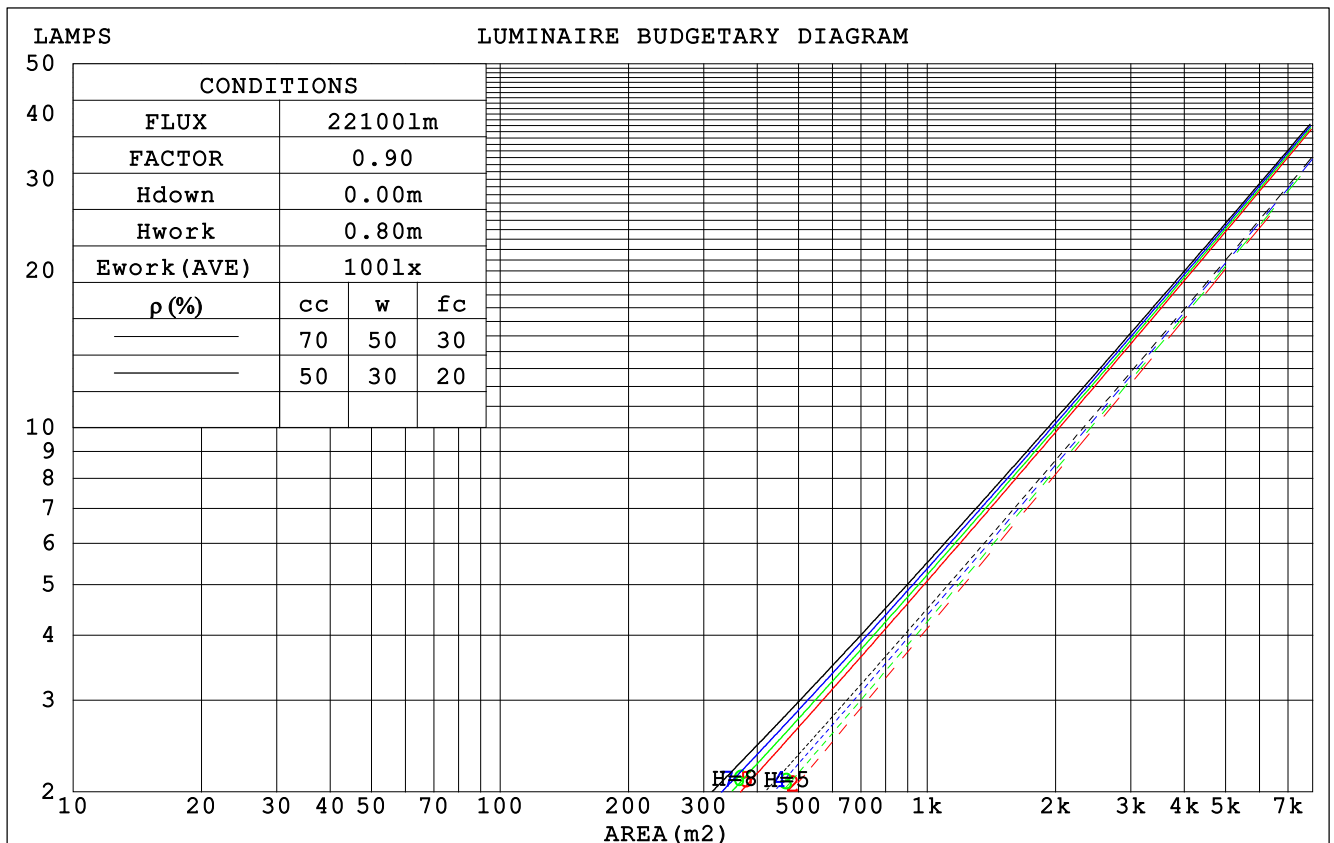
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4538]
 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	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.95	1.01	.97	.94	.97	.94	.92	.94	.92	.90	.92	.90	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.85	.83	.86	.84	.81	.80
4.0	.89	.83	.78	.87	.82	.78	.85	.81	.77	.83	.79	.76	.81	.78	.75	.74
5.0	.83	.77	.72	.82	.76	.72	.80	.75	.71	.78	.74	.70	.77	.73	.70	.68
6.0	.77	.71	.66	.76	.70	.66	.75	.70	.66	.73	.69	.65	.72	.68	.65	.63
7.0	.72	.66	.62	.71	.66	.61	.70	.65	.61	.69	.64	.61	.68	.64	.60	.59
8.0	.68	.61	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.57	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.51
10.0	.60	.54	.50	.59	.54	.50	.59	.53	.50	.58	.53	.50	.57	.53	.49	.48



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 26.000m [K=0.4538]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0														
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
pfc	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.183	.104	.033	.176	.101	.032	.164	.094	.030	.152	.088	.028	.141	.082	.026															
2.0	.176	.097	.030	.171	.094	.029	.160	.089	.028	.150	.084	.026	.141	.080	.025															
3.0	.169	.090	.027	.164	.088	.026	.155	.084	.025	.146	.080	.025	.138	.077	.024															
4.0	.161	.084	.025	.157	.082	.024	.149	.079	.024	.142	.076	.023	.135	.073	.022															
5.0	.154	.078	.023	.150	.077	.022	.143	.075	.022	.137	.072	.021	.131	.070	.021															
6.0	.147	.074	.021	.144	.073	.021	.138	.071	.021	.132	.069	.020	.127	.067	.020															
7.0	.141	.070	.020	.138	.069	.020	.133	.067	.019	.127	.065	.019	.123	.064	.019															
8.0	.135	.066	.019	.132	.065	.018	.127	.064	.018	.123	.062	.018	.119	.061	.018															
9.0	.129	.063	.017	.127	.062	.017	.123	.061	.017	.118	.059	.017	.115	.058	.017															
10.0	.124	.059	.017	.122	.059	.016	.118	.058	.016	.114	.057	.016	.111	.056	.016															

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	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	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008		
5.0	.127	.088	.059	.109	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007		
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006		
7.0	.114	.071	.041	.098	.061	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.030	.089	.052	.027	.061	.036	.019	.036	.022	.011	.012	.007	.004		
10.0	.099	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4538]
 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	5.4	6.3	5.7	6.6	7.0	3.2	4.2	3.6	4.5	4.8
3H	5.9	6.8	6.3	7.1	7.5	3.5	4.4	3.9	4.7	5.1
4H	5.9	6.7	6.3	7.1	7.5	3.5	4.3	3.9	4.7	5.1
6H	5.9	6.7	6.4	7.0	7.4	3.5	4.2	3.9	4.6	5.0
8H	5.9	6.6	6.4	7.0	7.4	3.5	4.2	3.9	4.6	5.0
12H	5.9	6.6	6.3	6.9	7.4	3.5	4.1	3.9	4.5	4.9
4H 2H	5.3	6.1	5.7	6.4	6.8	3.3	4.1	3.7	4.4	4.8
3H	5.8	6.5	6.3	6.9	7.3	3.6	4.3	4.0	4.7	5.1
4H	5.9	6.5	6.3	6.9	7.3	3.7	4.3	4.1	4.7	5.1
6H	6.0	6.4	6.4	6.9	7.4	3.7	4.2	4.2	4.6	5.1
8H	6.0	6.4	6.4	6.9	7.3	3.7	4.1	4.2	4.6	5.1
12H	6.0	6.3	6.4	6.8	7.3	3.7	4.1	4.2	4.5	5.0
8H 4H	5.8	6.2	6.3	6.7	7.2	3.6	4.1	4.1	4.5	5.0
6H	5.9	6.2	6.4	6.7	7.2	3.7	4.0	4.2	4.5	5.0
8H	5.9	6.2	6.4	6.7	7.2	3.7	4.0	4.2	4.5	5.0
12H	5.9	6.2	6.4	6.7	7.3	3.7	4.0	4.2	4.5	5.0
12H 4H	5.7	6.1	6.2	6.6	7.1	3.6	4.0	4.1	4.5	4.9
6H	5.8	6.1	6.3	6.6	7.1	3.6	3.9	4.2	4.4	5.0
8H	5.9	6.1	6.4	6.6	7.2	3.7	3.9	4.2	4.4	5.0
CIE190: 2010										

CIE190: 2010
Area: 0.221 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4538]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

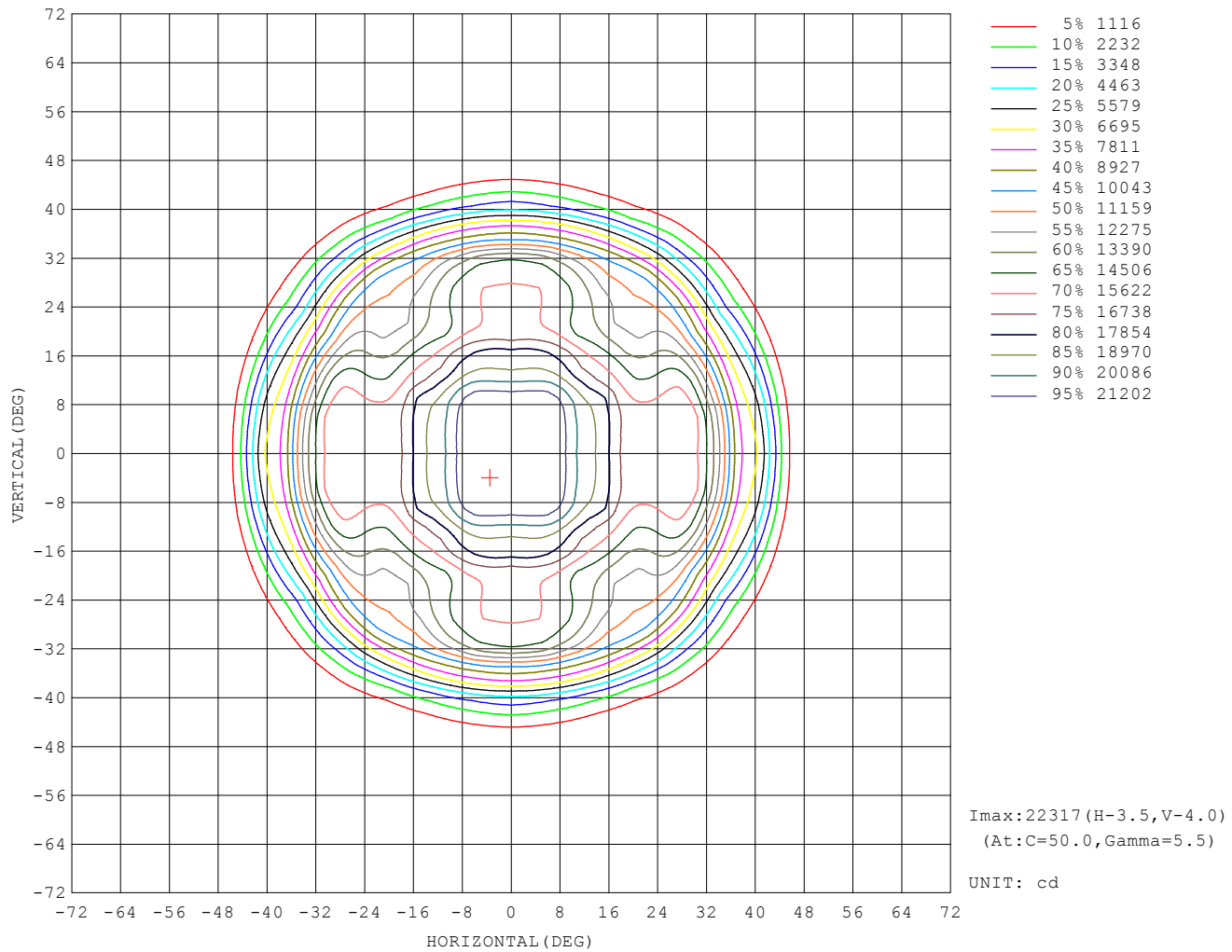
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	76	86	80	76	85	80	76	73
0.80	94	88	85	94	88	84	92	87	84	80
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	102	105	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	99
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: 25.3DEG
 Operators: LYJ
 Test Date: 2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4538]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

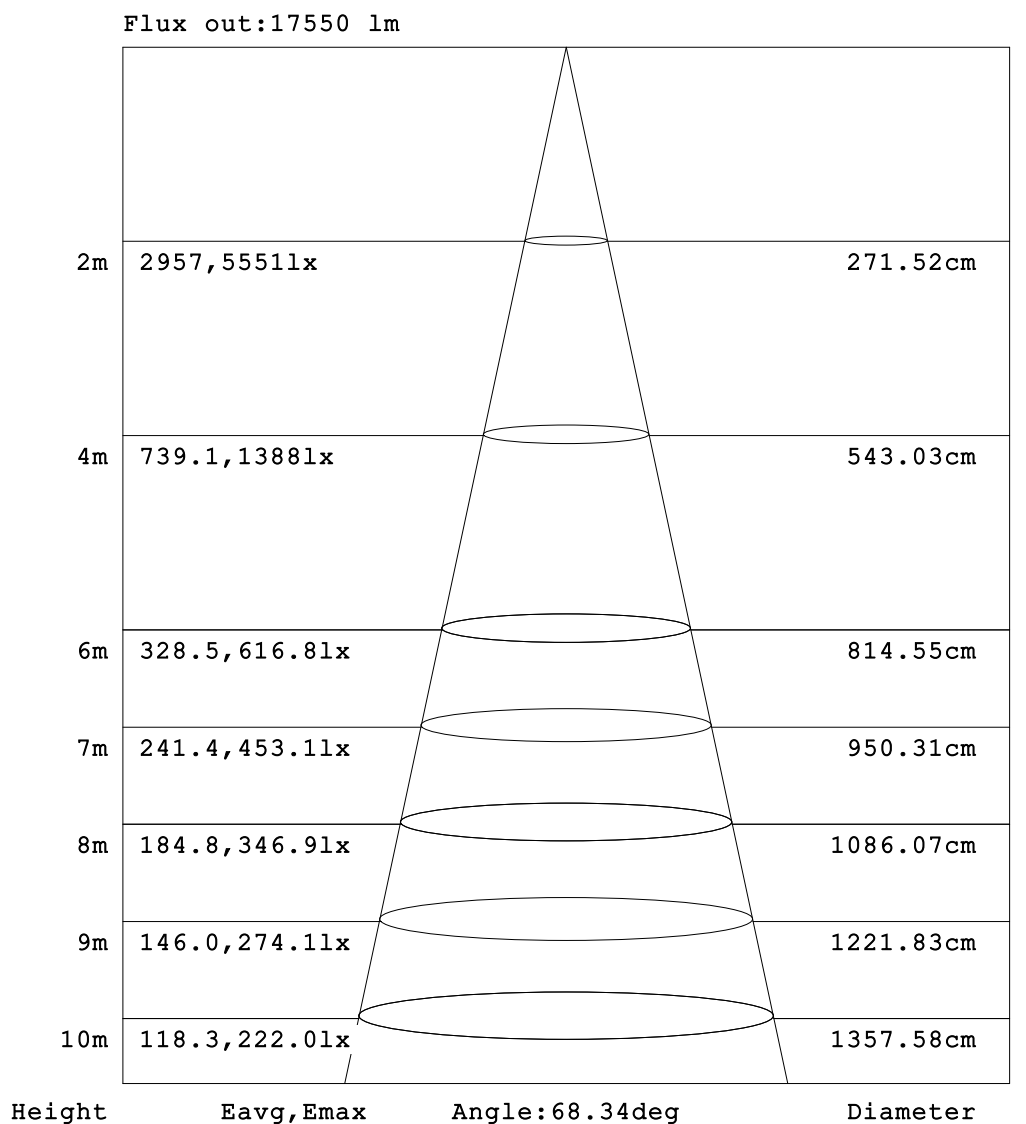
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4538]
Remarks:

AAI Figure



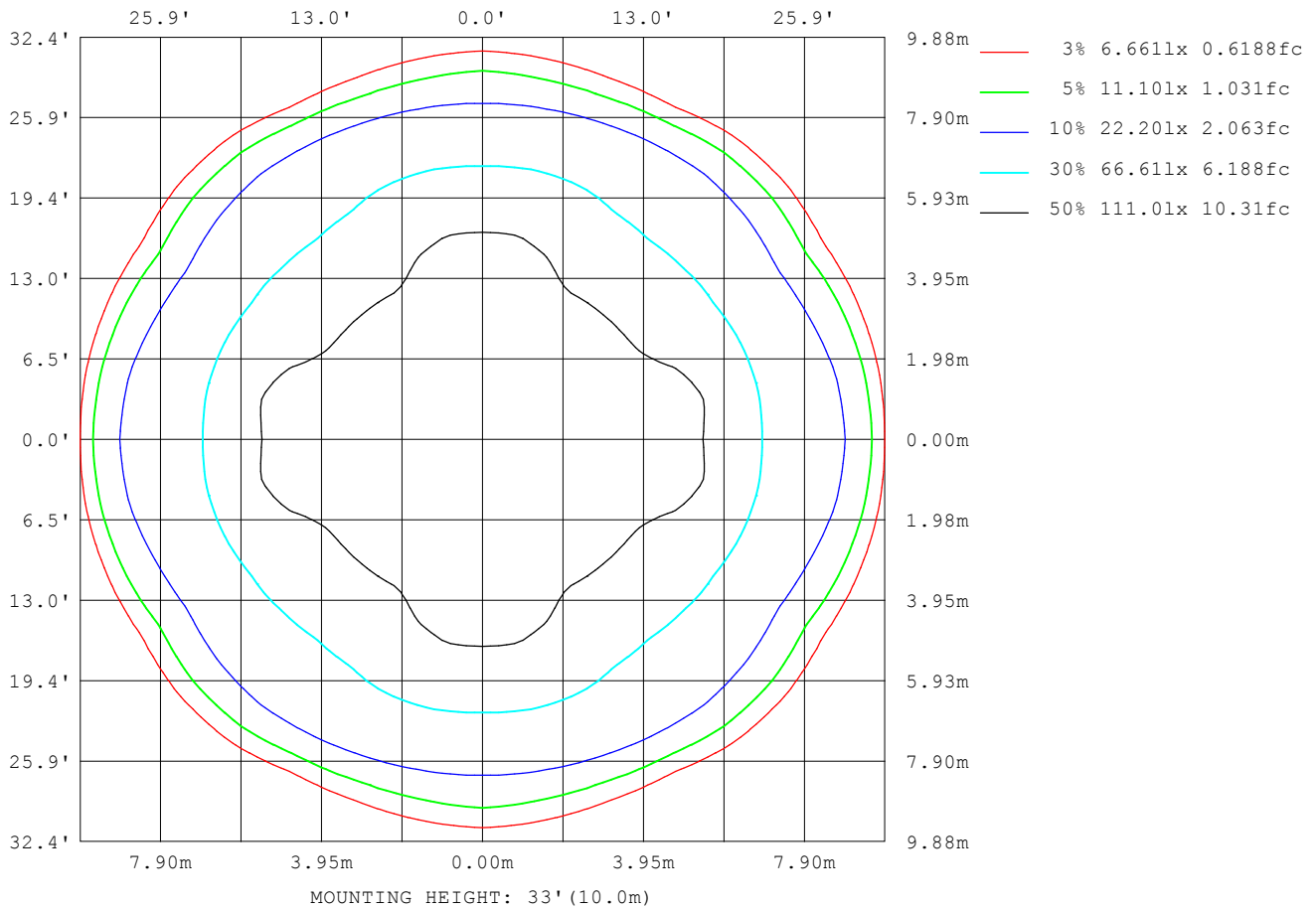
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4538]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

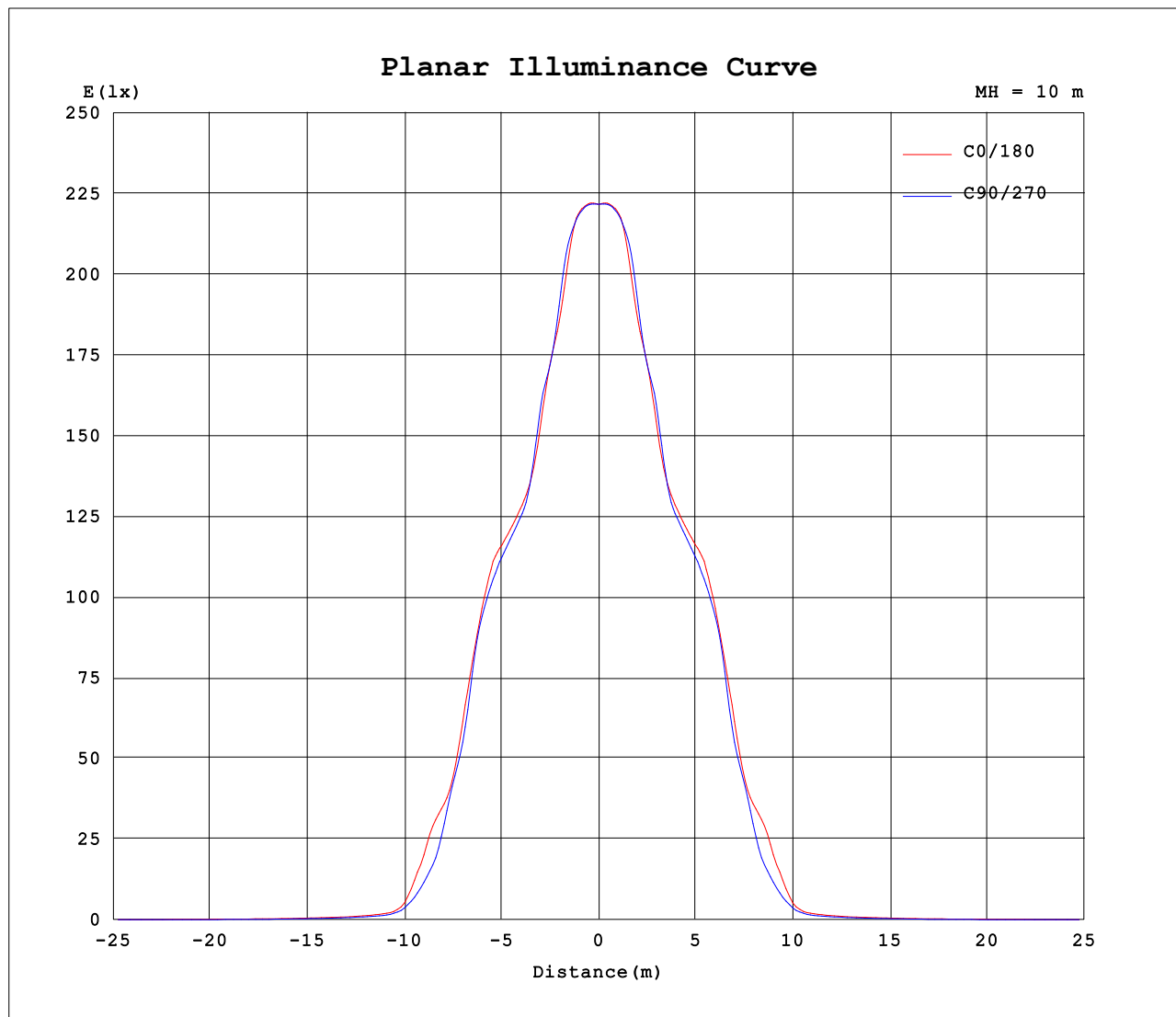
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 26.000m [K=0.4538]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-10-12

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 26.000m [K=0.4538]
Remarks: