

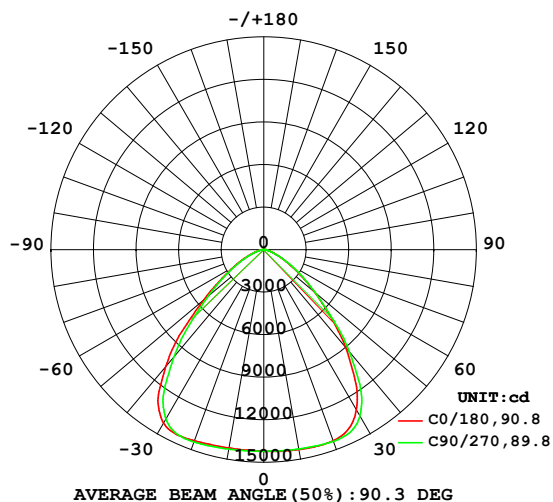
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

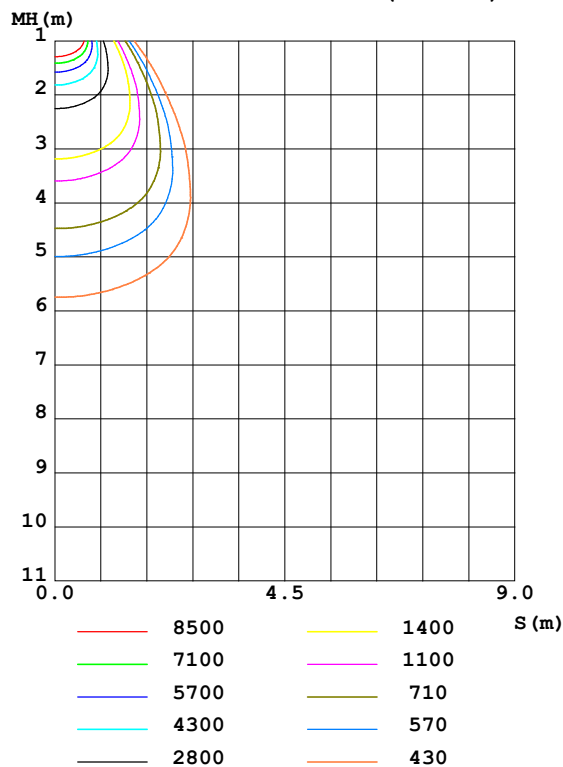
Test:U:229.8V I:0.8232A P:186.17W PF:0.9841 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:30167.3x1 lm		
NAME: HB44-200-3080+5080-H00108	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 162.04 lm/W			
MODEL	/	I <sub>max</sub> (cd)	14450	S/MH(C0/180)	1.33
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	30167	η UP,DN(C0-180)	0.0,49.2
NOMINAL FLUX(lm)	30167.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:1.900m [K=0.6091]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	1431	1430	1428	1423	1420	1423	1428	1432	0- 10	1360	1360	4.51,4.51
20	1434	1434	1438	1437	1434	1438	1443	1442	10- 20	4062	5422	18,18
30	1306	1318	1355	1391	1413	1416	1379	1340	20- 30	6558	11980	39.7,39.7
40	897.2	918.4	939.6	1002	1074	1059	984.8	930.5	30- 40	7459	19439	64.4,64.4
50	471.2	472.6	475.9	503.9	555.2	543.2	513.6	457.1	40- 50	5593	25031	83,83
60	213.0	212.0	220.2	228.7	247.3	246.1	233.4	204.1	50- 60	3096	28127	93.2,93.2
70	76.91	74.87	79.49	87.45	94.81	92.69	85.65	74.63	60- 70	1423	29550	98,98
80	21.92	21.55	22.90	25.39	26.90	26.73	24.72	21.75	70- 80	508.6	30059	99.6,99.6
90	0.0506	0.0508	0.0501	0.0525	0.1030	0.0572	0.0504	0.0498	80- 90	108.7	30167	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): 22592 lm

%lum = 74.9%

%lamp = 74.9%

Conical surface Flux(120deg): 28127 lm

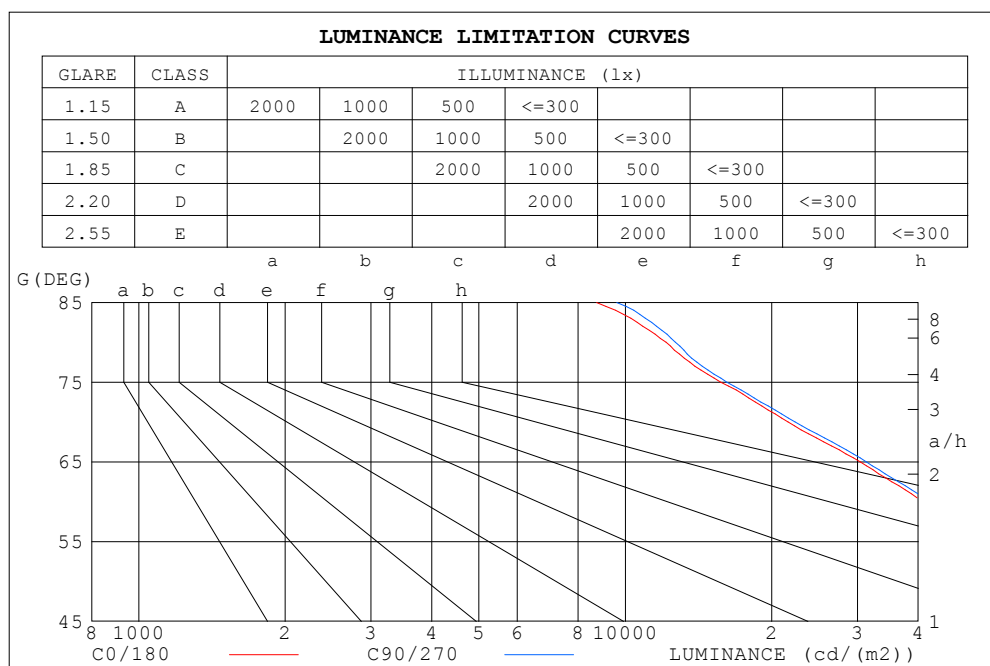
%lum = 93.2%

%lamp = 93.2%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:1.900m [K=0.6091]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8733	9609
80	12128	12682
75	15717	16182
70	21600	22352
65	30433	31336
60	40914	42349
55	54230	55897
50	70417	71214
45	90319	92223

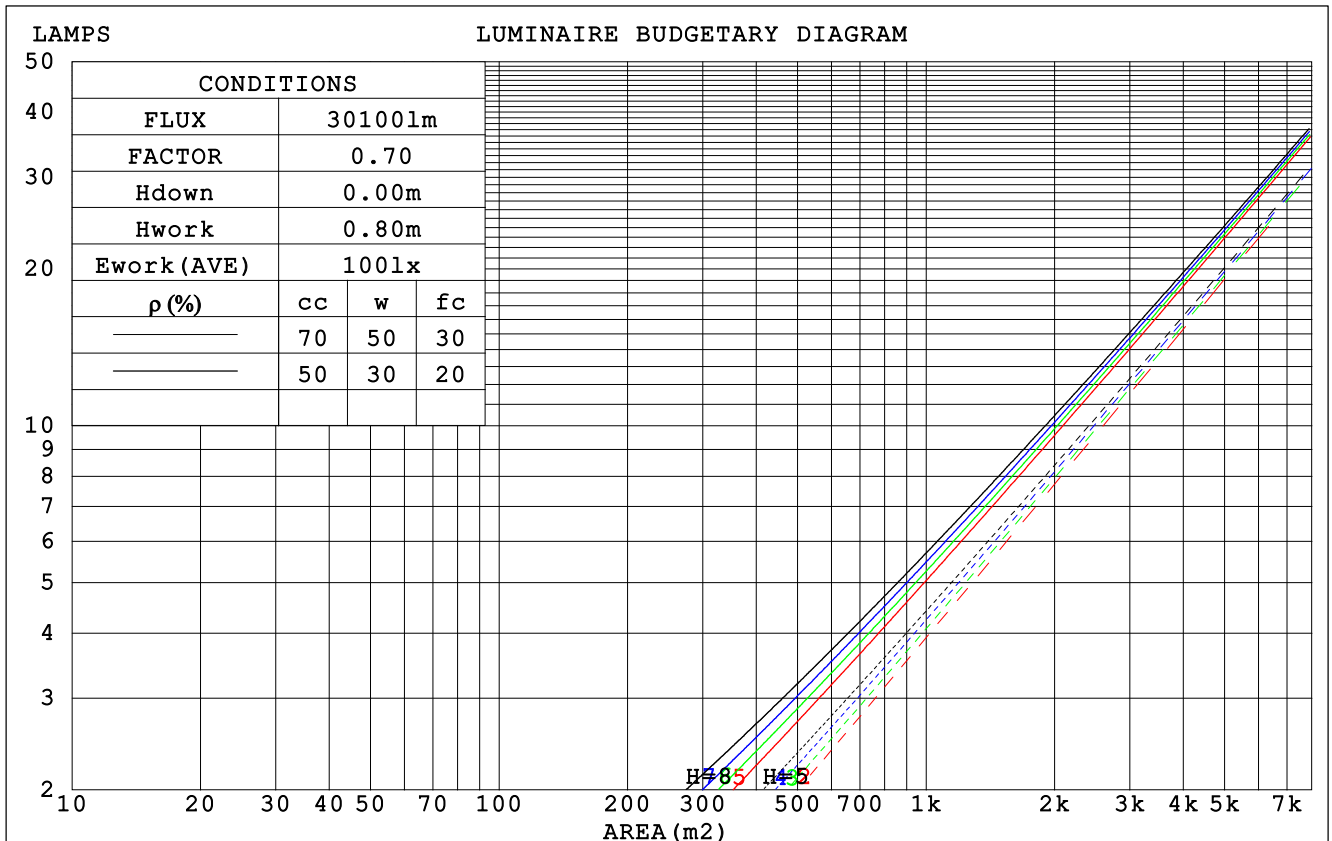
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			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	1.08	1.04	1.01	1.05	1.03	.00	1.01	.99	.97	.98	.96	.94	.94	.92	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.92	.88	.84	.89	.85	.82	.86	.83	.80	.78
3.0	.87	.81	.75	.86	.80	.75	.83	.78	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.79	.72	.66	.78	.71	.66	.75	.69	.65	.73	.68	.64	.71	.67	.63	.61
5.0	.72	.64	.58	.71	.63	.58	.69	.62	.58	.67	.61	.57	.65	.60	.56	.55
6.0	.65	.58	.52	.65	.57	.52	.63	.56	.51	.61	.55	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8.0	.55	.48	.42	.54	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.43	.38	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10.0	.47	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.35	.44	.39	.35	.33



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
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	.237	.134	.043	.230	.131	.042	.217	.124	.040	.205	.118	.038	.194	.112	.036		
2.0	.230	.126	.039	.224	.123	.038	.213	.118	.037	.203	.114	.036	.193	.109	.034		
3.0	.219	.117	.035	.214	.114	.034	.204	.111	.034	.195	.107	.033	.187	.103	.032		
4.0	.207	.108	.032	.203	.106	.031	.194	.103	.031	.186	.100	.030	.179	.097	.030		
5.0	.196	.100	.029	.192	.098	.029	.184	.096	.028	.177	.093	.028	.170	.091	.027		
6.0	.185	.093	.027	.181	.092	.026	.174	.089	.026	.168	.087	.026	.162	.085	.025		
7.0	.175	.086	.024	.171	.085	.024	.165	.084	.024	.160	.082	.024	.154	.080	.024		
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.076	.022		
9.0	.157	.076	.021	.154	.075	.021	.149	.074	.021	.145	.072	.021	.140	.071	.021		
10.0	.149	.071	.020	.146	.071	.020	.142	.070	.020	.138	.068	.019	.134	.067	.019		

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	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.049	.019	.017	.016		
2.0	.164	.132	.105	.140	.114	.091	.096	.079	.064	.056	.046	.037	.018	.015	.012		
3.0	.155	.114	.082	.133	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010		
4.0	.146	.100	.065	.126	.086	.056	.086	.060	.040	.050	.035	.023	.016	.011	.008		
5.0	.139	.089	.052	.120	.077	.046	.082	.054	.032	.048	.032	.019	.015	.010	.006		
6.0	.132	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005		
7.0	.126	.073	.037	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004		
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.014	.008	.004		
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003		
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-11-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:1.900m [K=0.6091]  
 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	23.4	24.8	23.8	25.1	25.4	23.3	24.7	23.7	25.0	25.3
3H	24.0	25.2	24.4	25.5	25.9	24.0	25.2	24.4	25.5	25.9
4H	24.1	25.2	24.5	25.6	26.0	24.1	25.3	24.5	25.6	26.0
6H	24.2	25.2	24.6	25.6	26.0	24.2	25.2	24.6	25.6	26.0
8H	24.2	25.1	24.6	25.5	25.9	24.2	25.2	24.6	25.6	26.0
12H	24.1	25.1	24.6	25.5	25.9	24.2	25.1	24.6	25.5	25.9
4H 2H	23.7	24.8	24.1	25.1	25.5	23.7	24.8	24.1	25.1	25.5
3H	24.3	25.2	24.7	25.6	26.0	24.5	25.4	24.9	25.8	26.2
4H	24.5	25.3	24.9	25.7	26.2	24.7	25.5	25.1	25.9	26.3
6H	24.6	25.3	25.1	25.7	26.2	24.8	25.5	25.2	25.9	26.4
8H	24.6	25.3	25.1	25.7	26.2	24.8	25.5	25.3	25.9	26.4
12H	24.6	25.2	25.1	25.7	26.1	24.8	25.4	25.3	25.9	26.3
8H 4H	24.5	25.2	25.0	25.6	26.1	24.7	25.4	25.2	25.8	26.3
6H	24.6	25.2	25.1	25.7	26.2	24.9	25.4	25.4	25.9	26.4
8H	24.7	25.2	25.2	25.7	26.2	24.9	25.4	25.4	25.9	26.4
12H	24.7	25.1	25.2	25.6	26.2	24.9	25.4	25.5	25.9	26.4
12H 4H	24.5	25.1	25.0	25.5	26.0	24.7	25.3	25.2	25.8	26.2
6H	24.6	25.1	25.1	25.6	26.1	24.9	25.3	25.4	25.8	26.4
8H	24.7	25.1	25.2	25.6	26.2	24.9	25.4	25.4	25.9	26.4
CIE190: 2010										

CIE190: 2010  
Area: 0.104 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

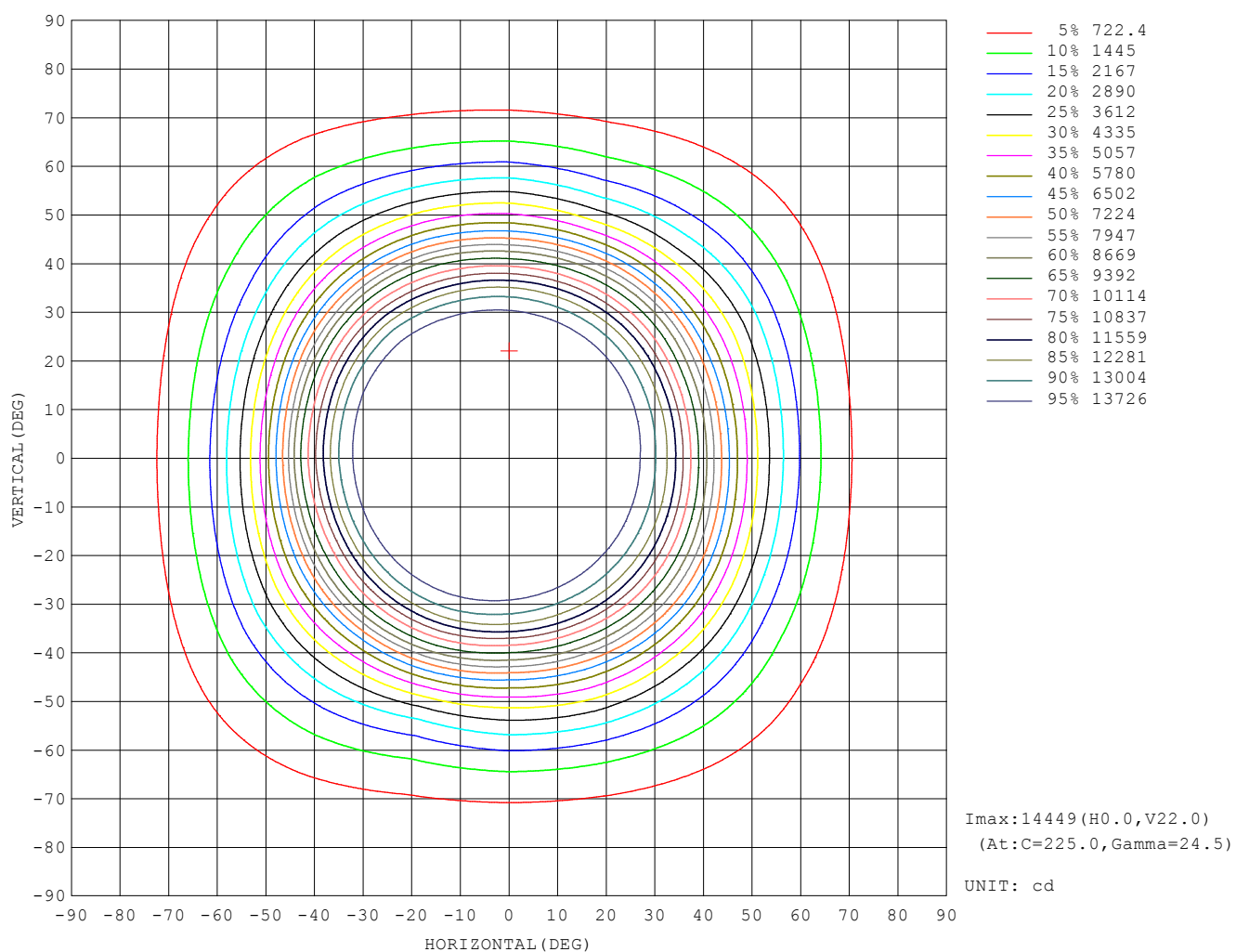
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	69	59	54	68	59	54	67	59	53	48
0.80	79	70	64	78	69	64	76	68	63	58
1.00	87	78	72	85	77	72	84	78	71	66
1.25	93	85	79	91	84	79	89	83	78	72
1.50	97	89	84	95	89	84	93	87	83	77
2.00	102	96	91	100	95	90	97	93	89	82
2.50	105	99	95	103	98	94	100	95	92	85
3.00	107	102	98	105	101	97	102	98	95	88
4.00	110	106	103	108	104	101	104	101	98	91
5.00	112	108	105	110	106	104	105	103	101	92
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: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 1.900m [K=0.6091]  
 Remarks:

## ISOCANDELA DIAGRAM

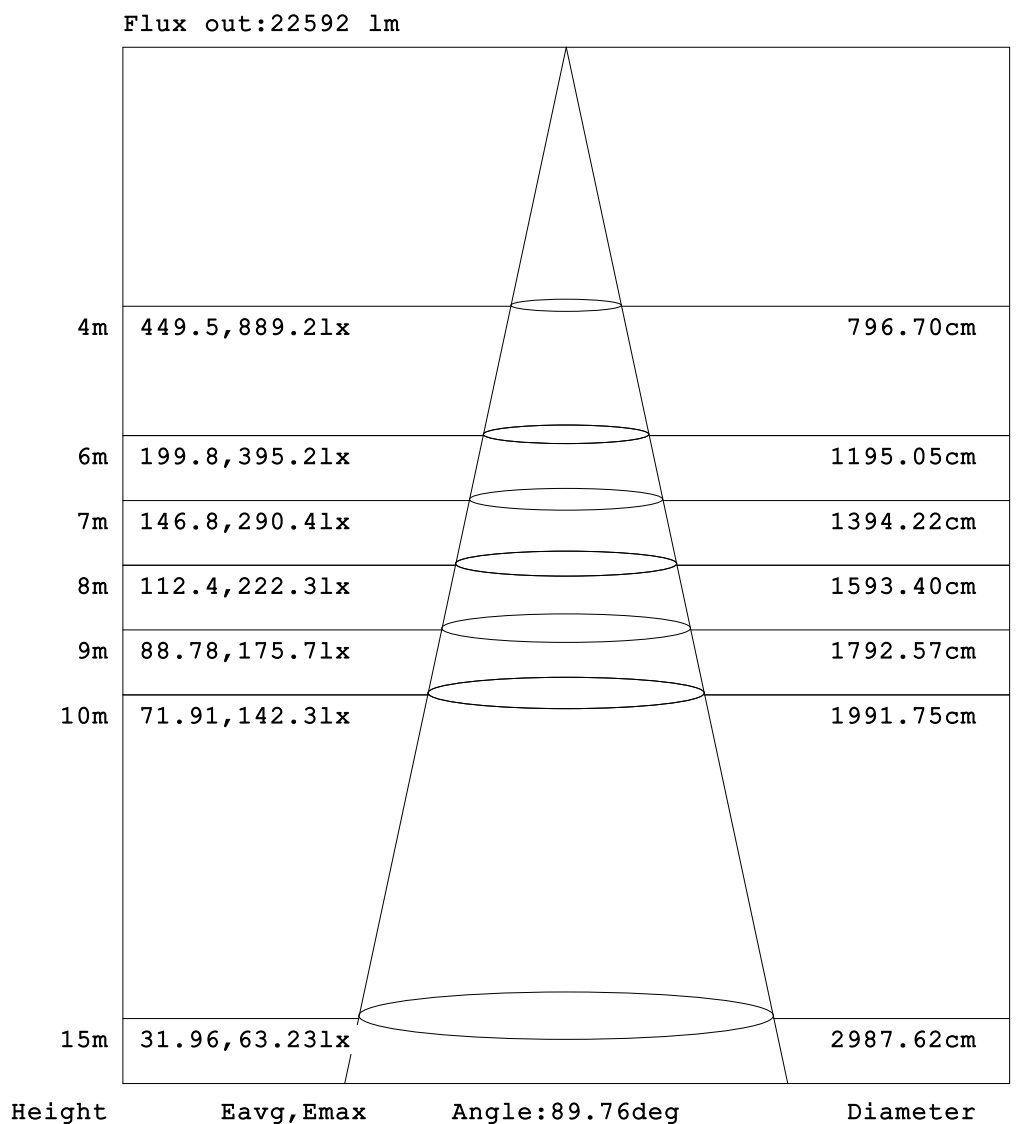


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:1.900m [K=0.6091]  
Remarks:



## AAI Figure



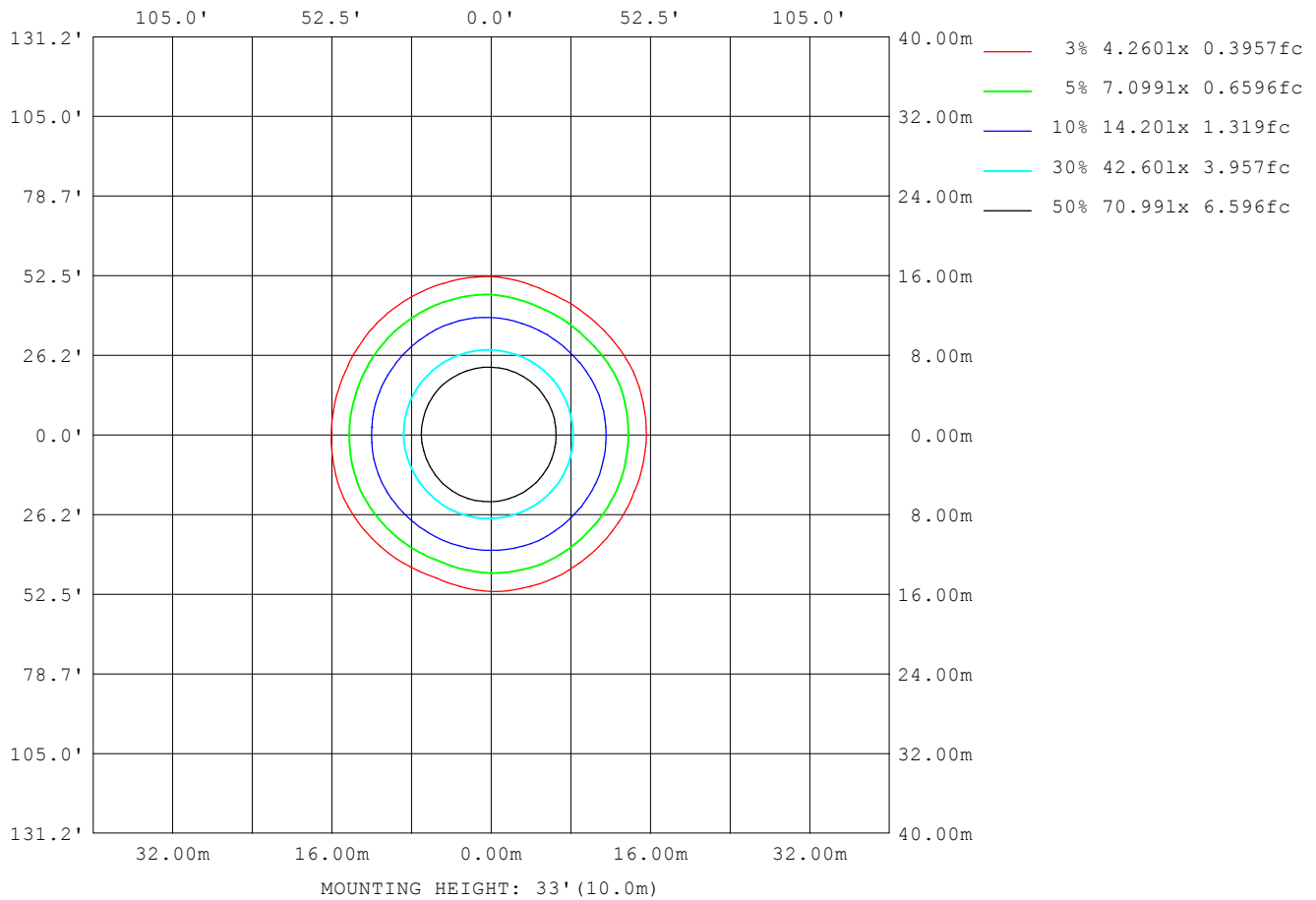
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

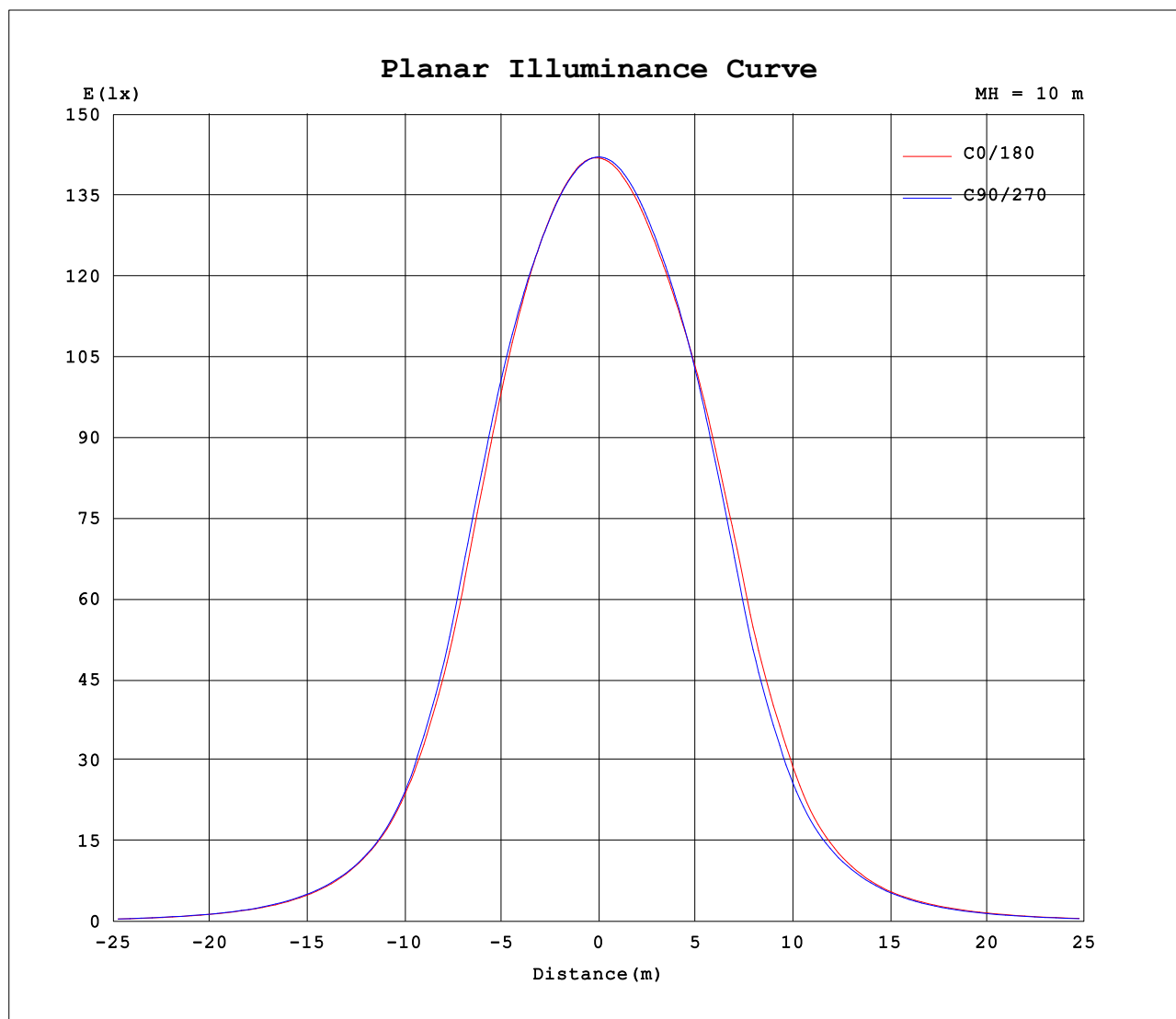
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 1.900m [K=0.6091]  
Remarks: