

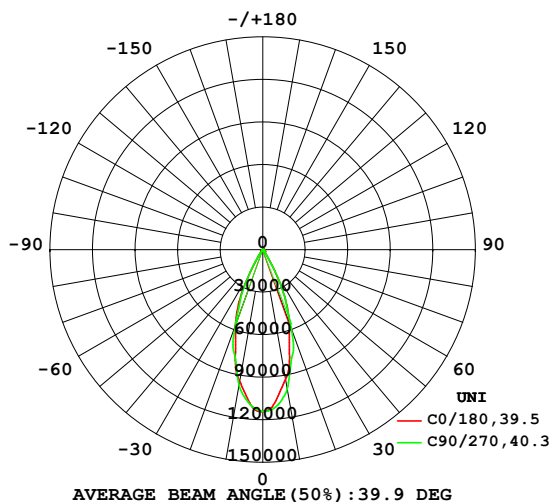
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

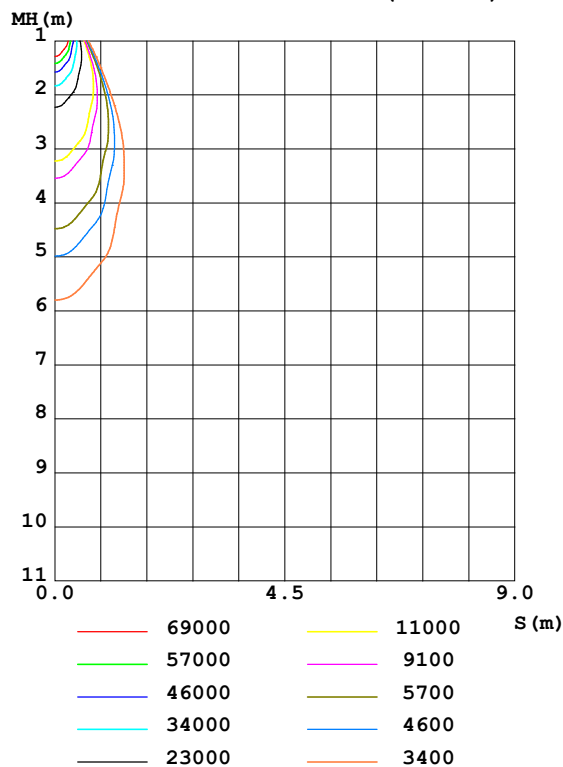
Test:U:230.00V I:1.7468A P:400.20W PF:0.9961 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:50015.4x1 lm		
NAME: LHB09-400-5070-L03901+GRID	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 124.98 lm/W
MODEL	/	I <sub>max</sub> (cd)	114195	S/MH (C0/180)	0.62	
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	0.64	
RATED VOLTAGE(V)	/	TOTAL FLUX (lm)	50015	η UP,DN (C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	50015.4	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.65	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-04-05

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4557]  
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	929.1	954.9	998.1	965.1	944.1	939.7	970.9	931.2	0- 10	9965	9965	19.9,19.9
20	556.0	515.8	589.3	517.1	569.9	499.8	571.6	484.8	10- 20	20829	30794	61.6,61.6
30	154.4	125.2	159.4	126.3	161.8	123.9	158.2	117.8	20- 30	14768	45562	91.1,91.1
40	18.69	14.67	11.91	13.76	18.67	15.16	11.85	13.76	30- 40	3274	48836	97.6,97.6
50	10.95	4.298	4.325	4.248	10.82	4.346	4.707	4.344	40- 50	637.0	49473	98.9,98.9
60	6.002	1.858	1.502	1.880	5.880	1.973	1.782	2.065	50- 60	338.0	49811	99.6,99.6
70	1.792	0.5925	0.5861	0.6000	1.714	0.6644	0.7430	0.7162	60- 70	153.5	49965	99.9,99.9
80	0.2887	0.1242	0.0931	0.1268	0.2824	0.1436	0.1052	0.1496	70- 80	45.61	50010	100,100
90	0.0014	0.0005	0.0009	0.0005	0.0009	0	0	0.0005	80- 90	5.275	50016	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:×100cd									UNIT:lm		

Conical surface Flux(90deg): 49211 lm

%lum = 98.4%

%lamp = 98.4%

Conical surface Flux(120deg): 49811 lm

%lum = 99.6%

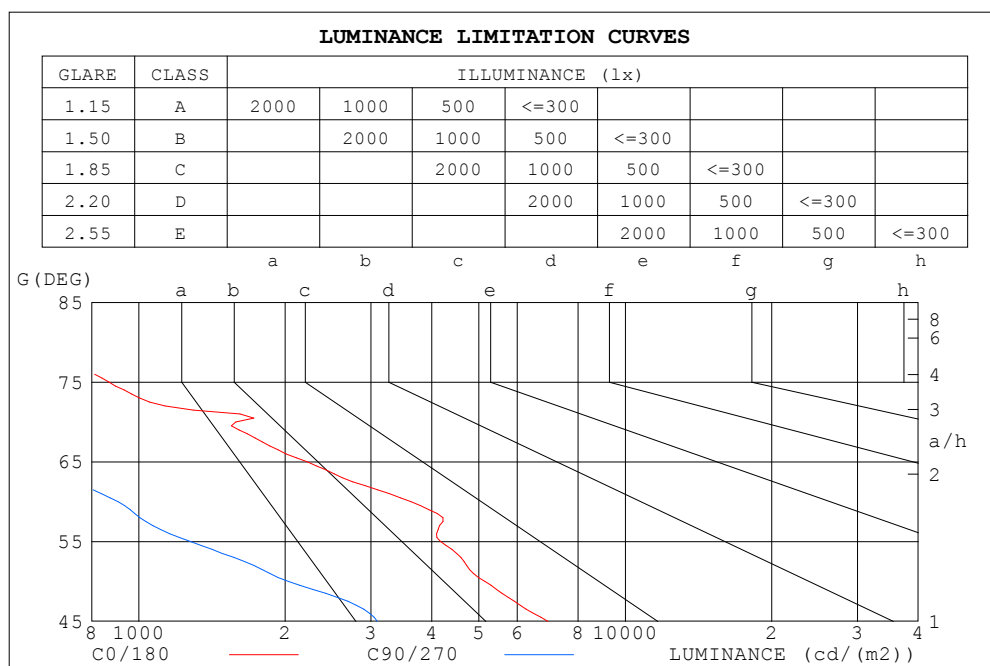
%lamp = 99.6%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4557]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	253	91
80	502	162
75	868	348
70	1583	517
65	2218	622
60	3628	906
55	4171	1275
50	5149	2029
45	6939	3093

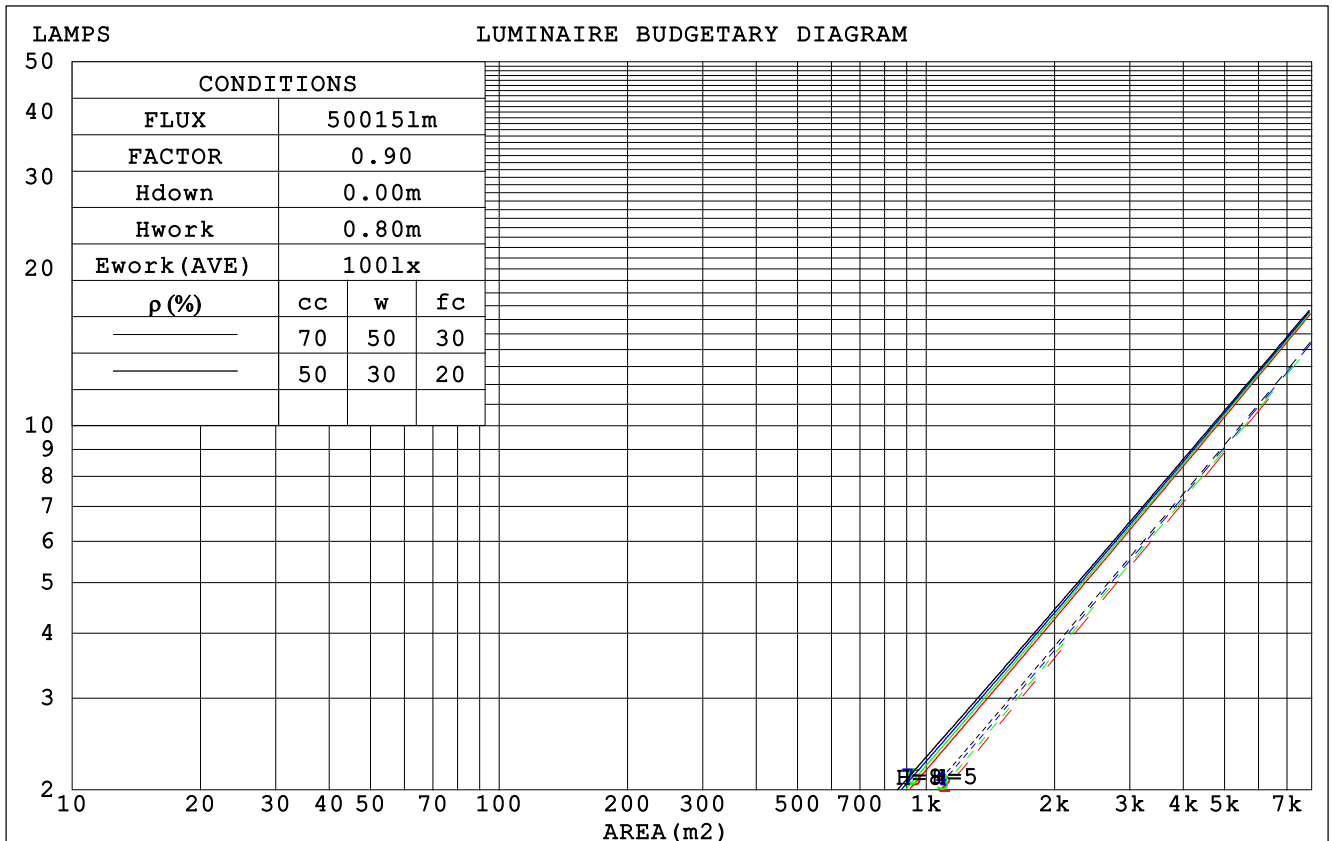
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-04-05

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4557]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.90	.94	.91	.89	.92	.90	.88	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.88	.86	.84	.82
5.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.78	.86	.81	.78	.84	.80	.77	.83	.80	.77	.82	.79	.76	.75
7.0	.83	.78	.74	.82	.77	.74	.81	.77	.74	.80	.76	.73	.79	.76	.73	.72
8.0	.79	.74	.71	.79	.74	.71	.78	.74	.71	.77	.73	.70	.76	.73	.70	.69
9.0	.76	.71	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.73	.70	.67	.66
10.0	.73	.68	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.71	.67	.65	.63



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-04-05

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4557]  
 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	.154	.088	.028	.148	.084	.027	.135	.078	.025	.124	.071	.023	.113	.066	.021															
2.0	.145	.080	.024	.140	.077	.024	.129	.072	.022	.120	.067	.021	.111	.063	.020															
3.0	.137	.073	.022	.132	.071	.021	.123	.067	.020	.115	.063	.019	.108	.060	.018															
4.0	.129	.067	.020	.125	.066	.019	.118	.063	.019	.111	.060	.018	.105	.057	.017															
5.0	.123	.063	.018	.119	.061	.018	.113	.059	.017	.107	.056	.017	.101	.054	.016															
6.0	.117	.059	.017	.114	.058	.017	.108	.056	.016	.103	.054	.016	.098	.052	.015															
7.0	.112	.055	.016	.109	.054	.015	.104	.053	.015	.100	.051	.015	.095	.049	.015															
8.0	.107	.052	.015	.105	.051	.015	.100	.050	.014	.096	.049	.014	.092	.047	.014															
9.0	.102	.050	.014	.100	.049	.014	.097	.048	.014	.093	.047	.013	.089	.045	.013															
10.0	.098	.047	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.087	.044	.013															

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	.170	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.109	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.096	.062	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.079	.049	.029	.054	.035	.021	.032	.020	.012	.010	.007	.004	
10.0	.086	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2021-04-05

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4557]  
 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	5.2	6.1	5.5	6.4	6.7	0.0	0.3	0.0	0.6	0.9
3H	5.9	6.7	6.3	7.1	7.4	0.0	0.7	0.3	1.1	1.4
4H	6.0	6.7	6.4	7.1	7.5	0.0	0.8	0.5	1.1	1.5
6H	6.0	6.7	6.4	7.0	7.4	0.0	0.7	0.4	1.0	1.4
8H	6.0	6.6	6.4	7.0	7.4	0.0	0.6	0.4	1.0	1.4
12H	5.9	6.5	6.3	6.9	7.3	0.0	0.5	0.3	0.9	1.3
4H 2H	5.0	5.7	5.4	6.1	6.5	0.0	0.5	0.1	0.8	1.2
3H	5.8	6.4	6.2	6.8	7.2	0.3	0.9	0.7	1.3	1.7
4H	5.9	6.4	6.3	6.9	7.3	0.5	1.0	0.9	1.4	1.9
6H	5.9	6.4	6.4	6.8	7.3	0.4	0.9	0.9	1.3	1.8
8H	5.9	6.3	6.4	6.8	7.2	0.4	0.8	0.8	1.2	1.7
12H	5.8	6.2	6.3	6.7	7.2	0.3	0.7	0.8	1.2	1.6
8H 4H	5.7	6.2	6.2	6.6	7.1	0.4	0.9	0.9	1.3	1.8
6H	5.8	6.1	6.3	6.6	7.1	0.4	0.8	0.9	1.3	1.8
8H	5.7	6.0	6.3	6.5	7.0	0.4	0.7	0.9	1.2	1.7
12H	5.7	5.9	6.2	6.4	7.0	0.3	0.6	0.9	1.1	1.7
12H 4H	5.7	6.0	6.2	6.5	7.0	0.4	0.8	0.9	1.3	1.7
6H	5.7	6.0	6.2	6.5	7.0	0.4	0.7	0.9	1.2	1.7
8H	5.7	5.9	6.2	6.4	7.0	0.4	0.6	0.9	1.1	1.7
CIE190: 2010										

CIE190: 2010  
Area: 0.3315 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4557]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

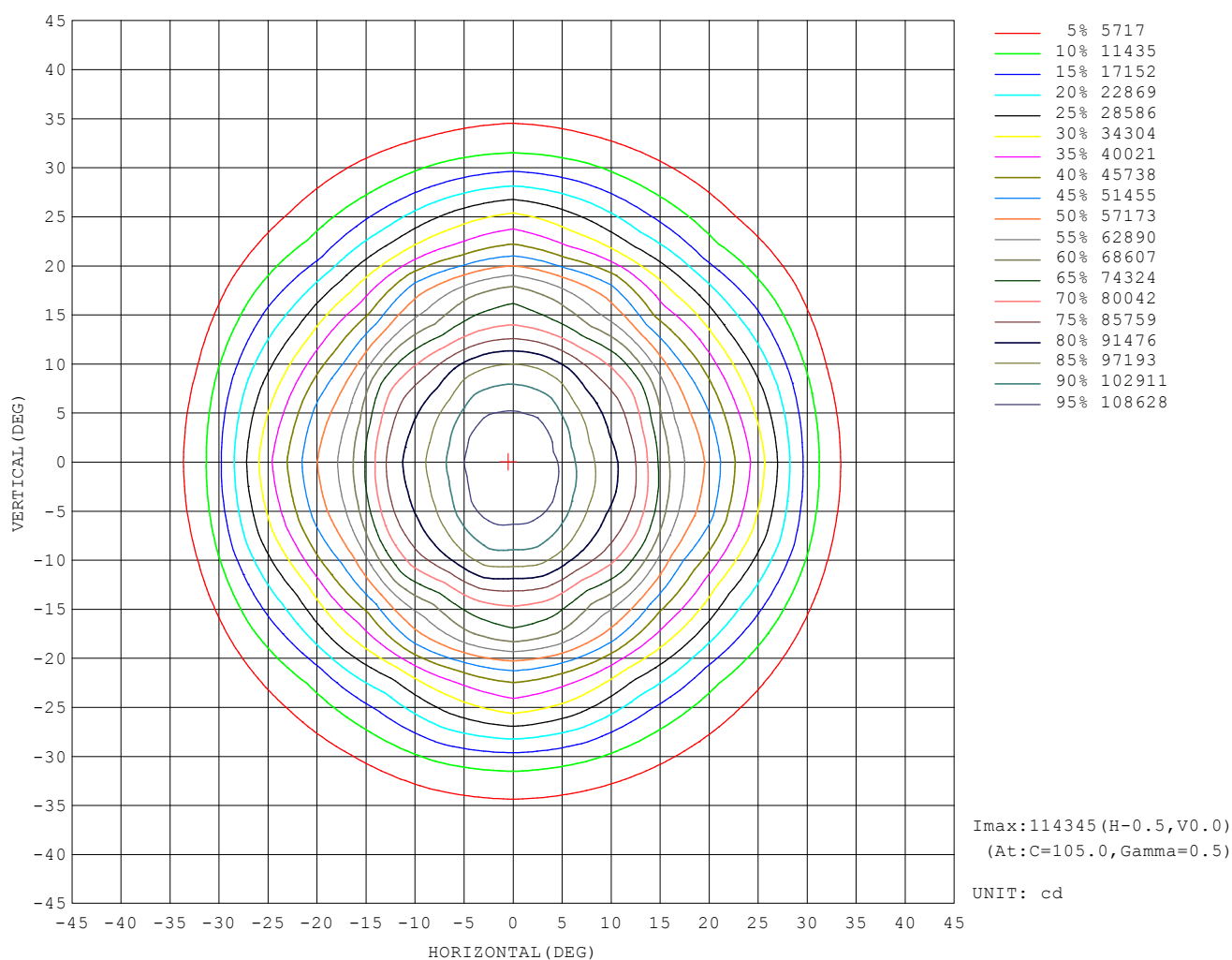
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	81	77
0.80	97	92	88	97	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	108	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	113	112	113	112	110	110	108	107	100
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
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 Test Date: 2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4557]  
 Remarks:

## ISOCANDELA DIAGRAM

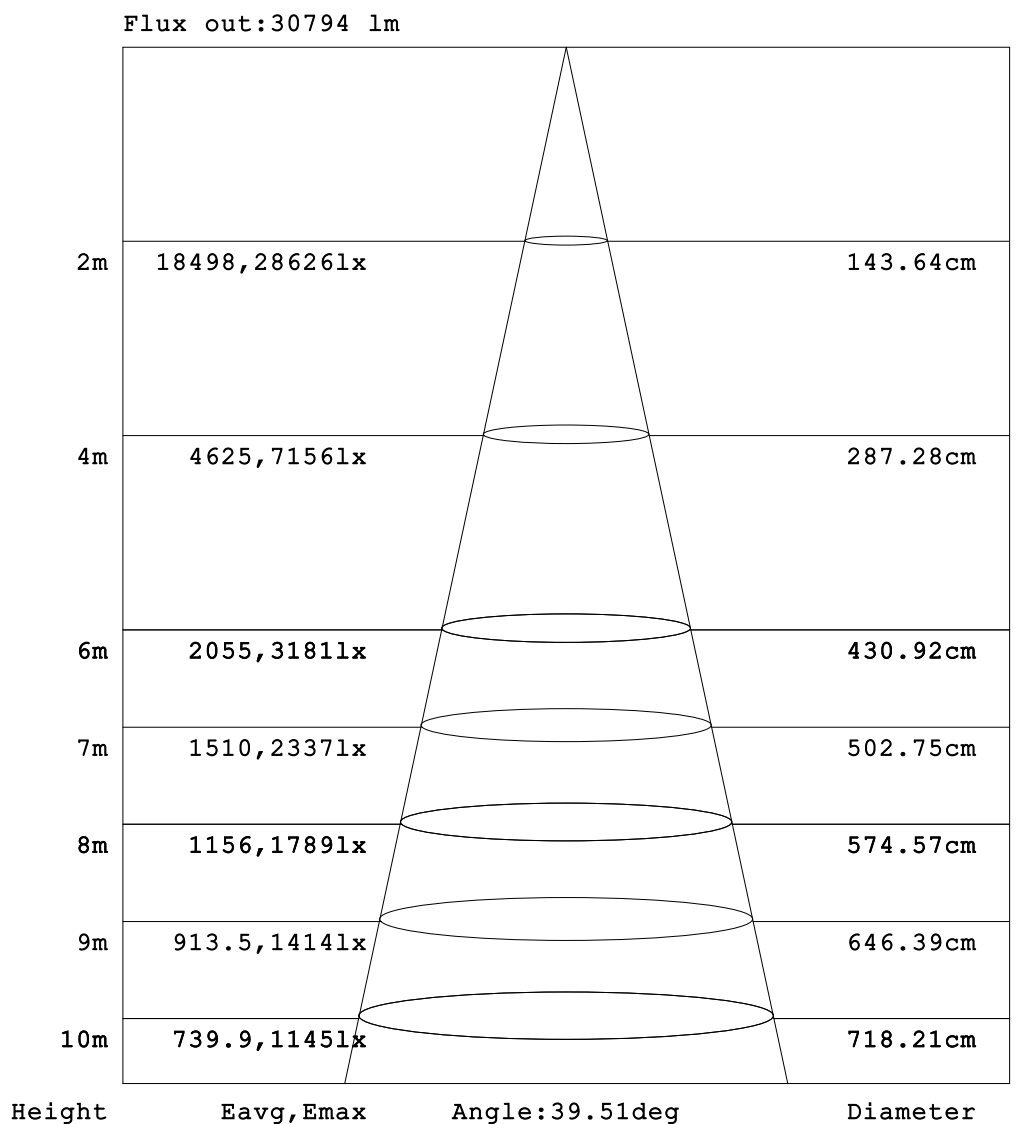


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4557]  
Remarks:



## AAI Figure



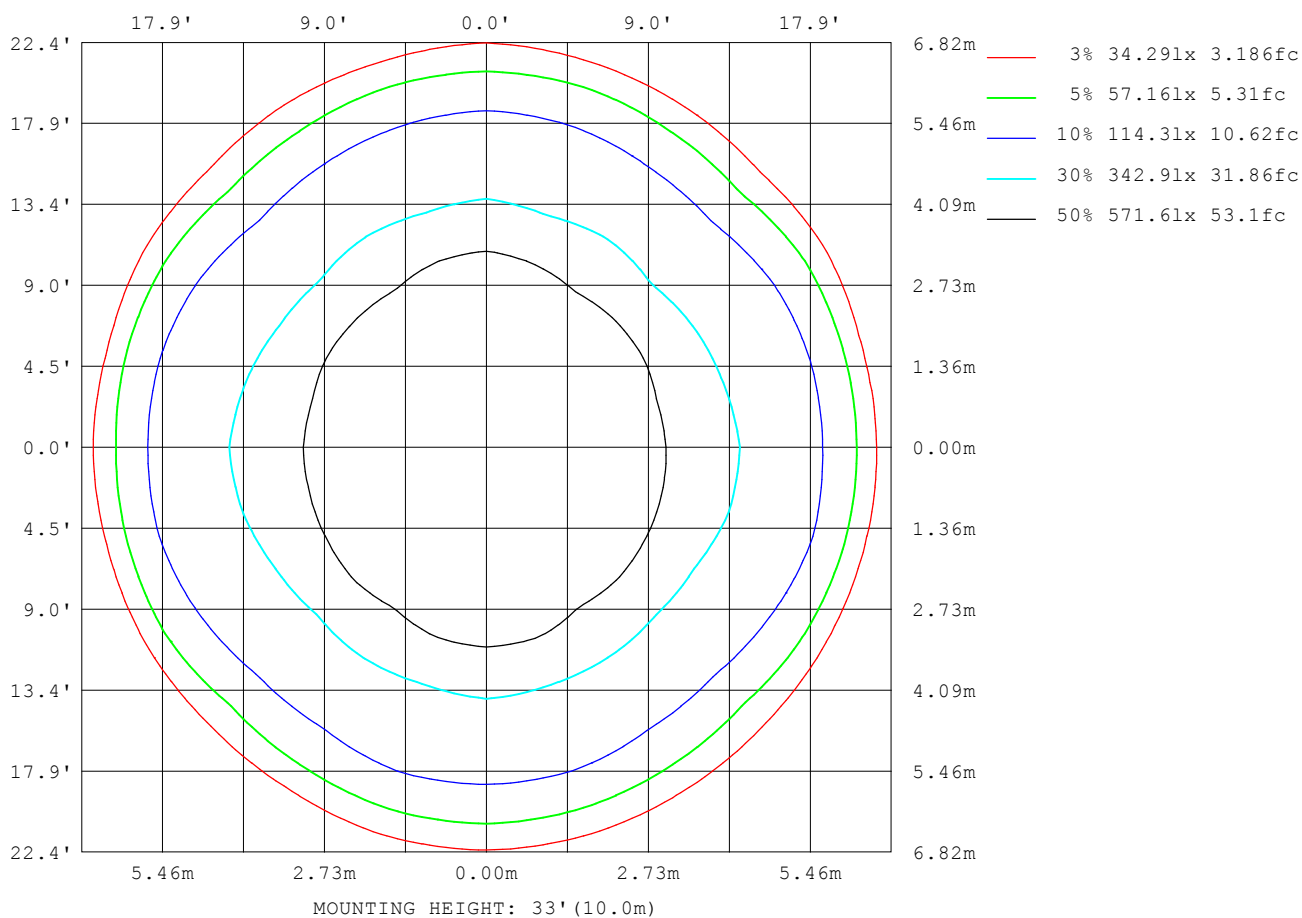
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4557]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

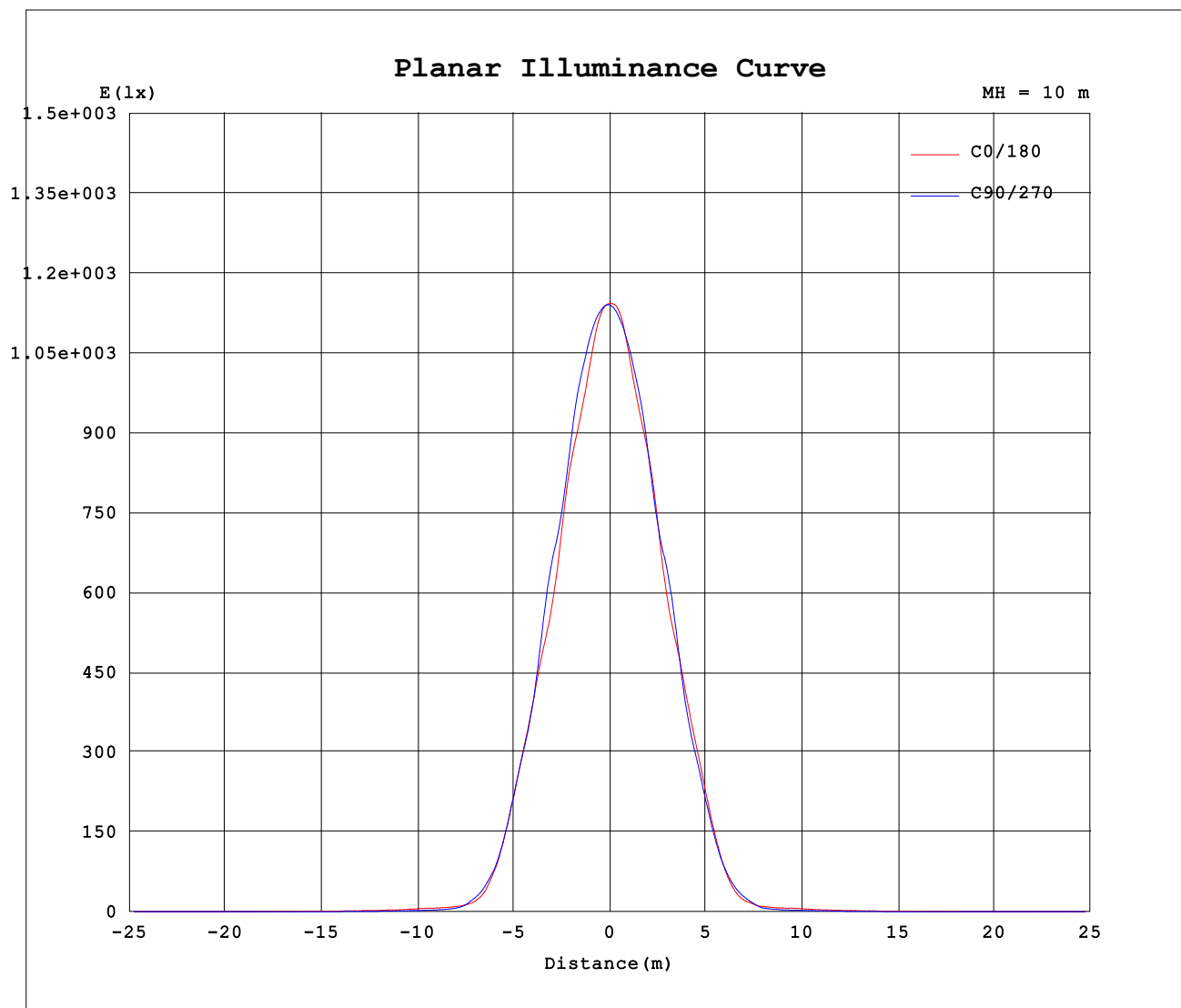
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4557]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-04-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4557]  
Remarks: