

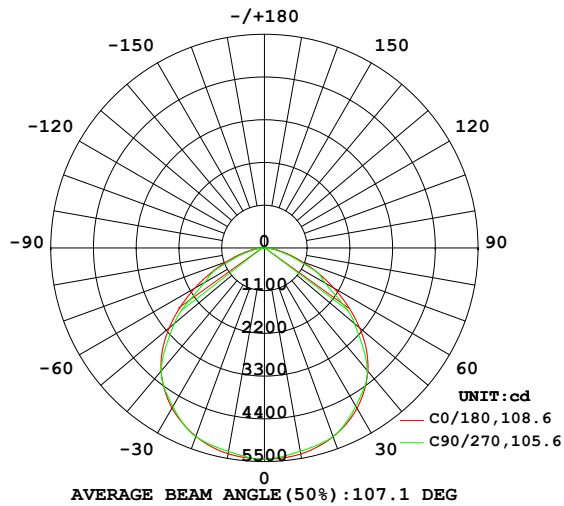
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

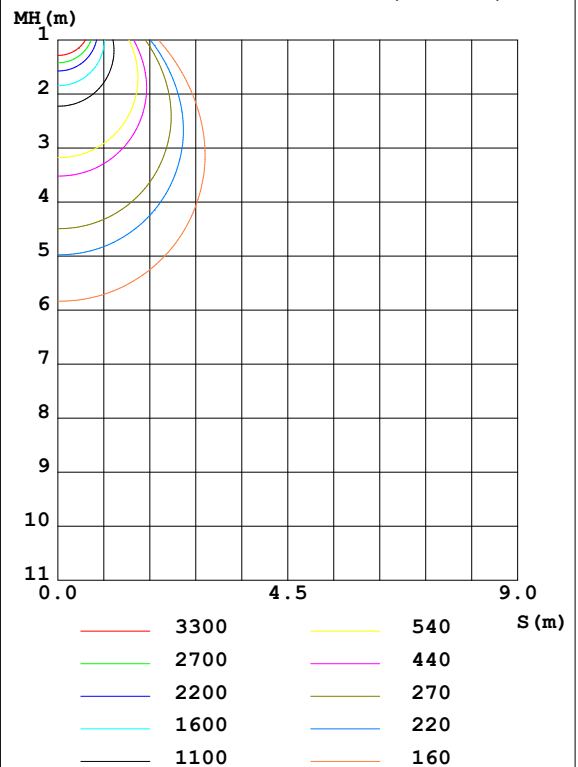
Test:U:229.8V I:0.4246A P:97.40W PF:0.9985 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:14412.8x1 lm					
NAME: LHB09-100-5070-L00404			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.98 lm/W			
MODEL	/	I <sub>max</sub> (cd)	5436	S/MH (C0/180)	1.30
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	14413	η UP, DN (C0-180)	0.0, 50.2
NOMINAL FLUX (lm)	14412.8	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.8
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: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 26.6DEG  
 Operators: LYJ  
 Test Date: 2020-11-11

γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 49.8%  
 Test Distance: 26.000m [K=0.4574]  
 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	5384	5335	5316	5331	5380	5343	5323	5325	0- 10	514.0	514.0	3.57,3.57
20	5170	5129	5164	5150	5159	5130	5166	5128	10- 20	1486	2000	13.9,13.9
30	4768	4771	4706	4790	4758	4769	4715	4744	20- 30	2292	4292	29.8,29.8
40	4143	4087	4118	4113	4135	4093	4128	4049	30- 40	2786	7078	49.1,49.1
50	3198	3145	3028	3185	3199	3163	3029	3083	40- 50	2811	9888	68.6,68.6
60	2064	1996	1807	2046	2066	2007	1782	1914	50- 60	2262	12150	84.3,84.3
70	1028	966.9	898.7	1042	1036	972.1	878.4	935.7	60- 70	1440	13591	94.3,94.3
80	364.5	350.2	282.8	365.0	372.2	371.4	285.8	289.0	70- 80	660.0	14251	98.9,98.9
90	0	0	0	0	0	0	0	0	80- 90	162.2	14413	100,100
100	0	0	0	0	0	0	0	0	90-100	0	14413	100,100
110	0	0	0	0	0	0	0	0	100-110	0	14413	100,100
120	0	0	0	0	0	0	0	0	110-120	0	14413	100,100
130	0	0	0	0	0	0	0	0	120-130	0	14413	100,100
140	0	0	0	0	0	0	0	0	130-140	0	14413	100,100
150	0	0	0	0	0	0	0	0	140-150	0	14413	100,100
160	0	0	0	0	0	0	0	0	150-160	0	14413	100,100
170	0	0	0	0	0	0	0	0	160-170	0	14413	100,100
180	0	0	0	0	0	0	0	0	170-180	0	14413	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 8519.6 lm

%lum = 59.1%

%lamp = 59.1%

Conical surface Flux(120deg): 12150 lm

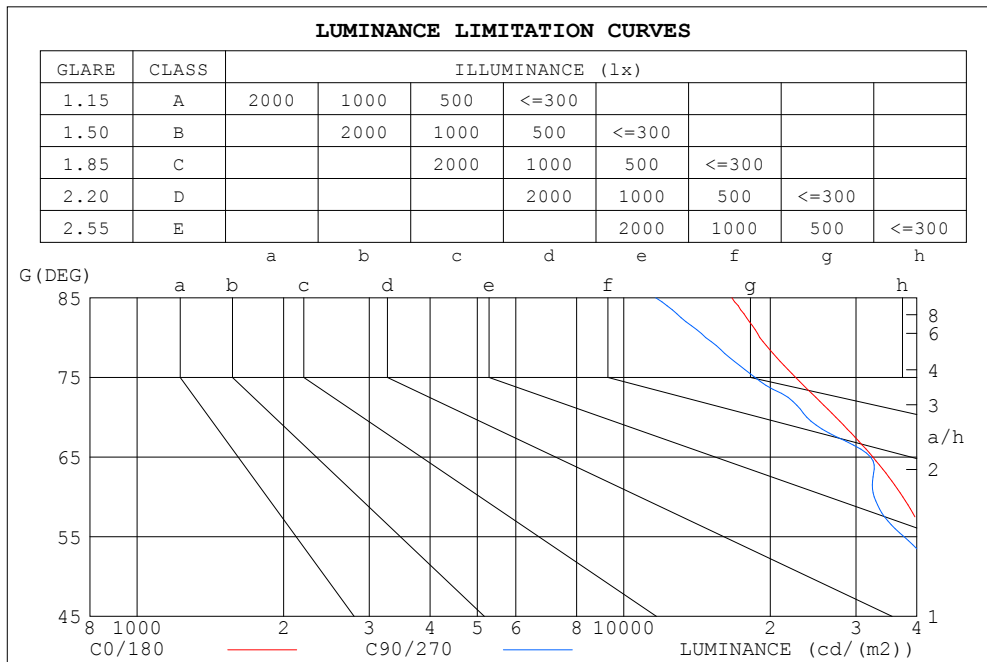
%lum = 84.3%

%lamp = 84.3%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:26.6DEG  
Operators:LYJ  
Test Date:2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
Test Distance:26.000m [K=0.4574]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16679	11632
80	19036	14733
75	22547	18606
70	27271	23772
65	32502	32145
60	37444	32698
55	41645	37651
50	45121	42617
45	47620	45723

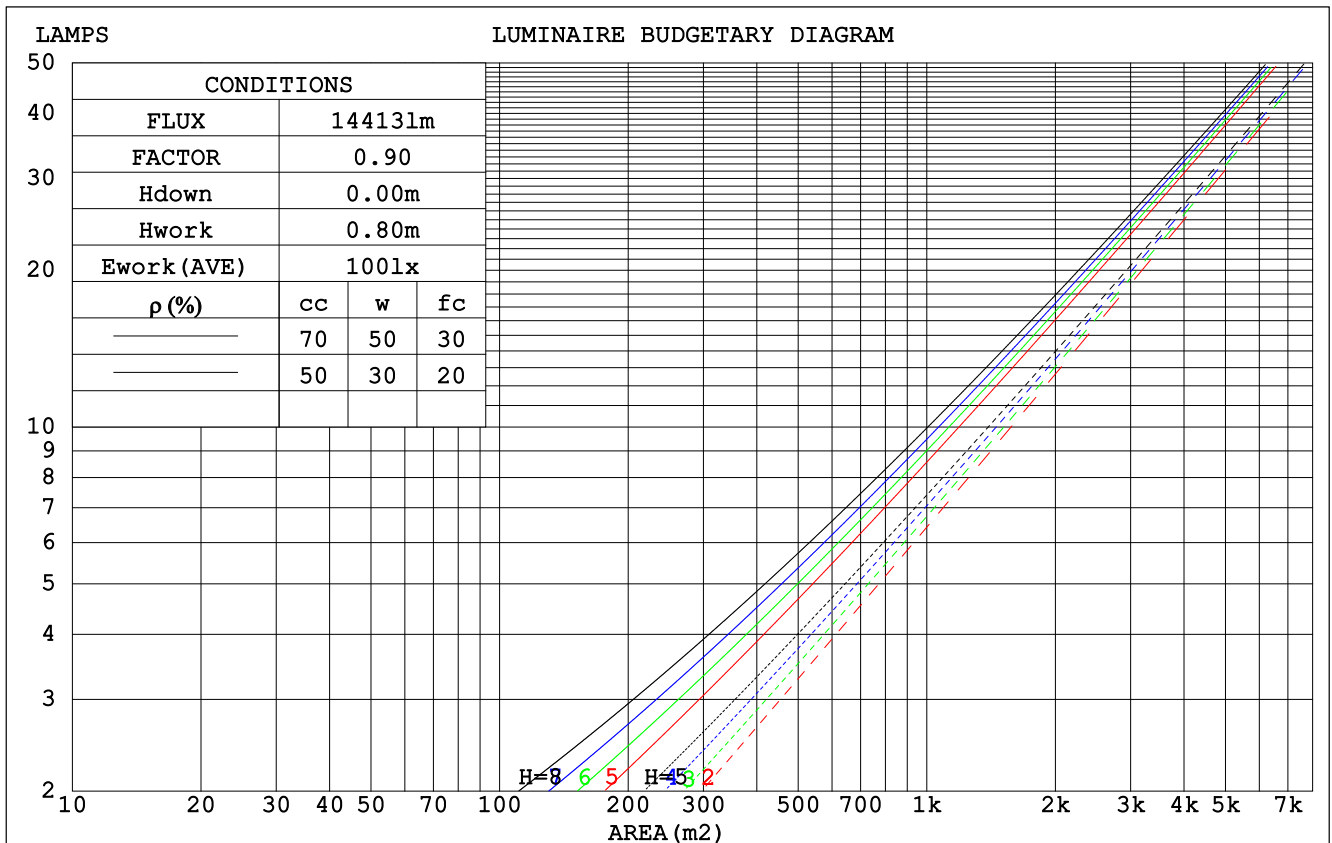
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Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
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Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks:

# 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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.75	.69	.65	.72	.68	.64	.62
4.0	.73	.64	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.43	.55	.48	.43	.53	.47	.43	.41
7.0	.53	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.48	.42	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.34	.46	.39	.34	.44	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.28	.41	.33	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



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C Interval: 15.0DEG  
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Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
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	.283	.161	.051	.276	.157	.050	.263	.151	.048	.251	.145	.046	.240	.139	.045		
2.0	.271	.148	.046	.265	.146	.045	.253	.141	.044	.243	.136	.043	.233	.132	.042		
3.0	.254	.135	.040	.249	.133	.040	.238	.129	.039	.229	.125	.038	.220	.122	.038		
4.0	.237	.123	.036	.232	.121	.036	.223	.118	.035	.215	.115	.035	.207	.112	.034		
5.0	.221	.112	.033	.216	.111	.032	.208	.108	.032	.201	.106	.032	.194	.104	.031		
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.188	.098	.029	.182	.096	.028		
7.0	.192	.095	.027	.189	.094	.027	.183	.092	.027	.177	.091	.026	.171	.089	.026		
8.0	.181	.088	.025	.178	.087	.025	.172	.086	.025	.166	.084	.024	.161	.083	.024		
9.0	.170	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.153	.077	.022		
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.145	.073	.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	.136	.153	.134	.117	.104	.092	.081	.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	.052	.036	.022	.017	.012	.007	
5.0	.147	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.115	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:26.6DEG  
 Operators:LYJ  
 Test Date:2020-11-11

γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:49.8%  
 Test Distance:26.000m [K=0.4574]  
 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	24.9	26.5	25.3	26.8	27.1	24.1	25.6	24.4	26.0	26.3
3H	26.2	27.6	26.5	27.9	28.3	25.3	26.7	25.7	27.1	27.4
4H	26.5	27.9	26.9	28.2	28.6	25.7	27.0	26.1	27.3	27.7
6H	26.8	28.0	27.2	28.4	28.8	25.9	27.1	26.3	27.5	27.8
8H	26.9	28.1	27.3	28.4	28.8	25.9	27.1	26.3	27.5	27.9
12H	26.9	28.1	27.4	28.4	28.9	25.9	27.1	26.4	27.4	27.9
4H 2H	25.3	26.6	25.7	27.0	27.4	24.6	25.9	25.0	26.3	26.7
3H	26.8	27.9	27.2	28.3	28.7	26.1	27.2	26.5	27.6	28.0
4H	27.3	28.2	27.7	28.7	29.1	26.5	27.5	26.9	27.9	28.3
6H	27.6	28.5	28.1	28.9	29.4	26.8	27.6	27.2	28.1	28.5
8H	27.7	28.6	28.2	29.0	29.5	26.9	27.7	27.3	28.1	28.6
12H	27.8	28.6	28.3	29.0	29.5	26.9	27.6	27.4	28.1	28.6
8H 4H	27.4	28.2	27.9	28.7	29.1	26.7	27.5	27.2	28.0	28.4
6H	27.9	28.6	28.4	29.0	29.5	27.1	27.8	27.6	28.3	28.7
8H	28.1	28.7	28.6	29.2	29.7	27.2	27.8	27.7	28.3	28.8
12H	28.2	28.7	28.7	29.2	29.8	27.3	27.8	27.8	28.3	28.9
12H 4H	27.4	28.1	27.9	28.6	29.1	26.7	27.5	27.2	27.9	28.4
6H	27.9	28.5	28.4	29.0	29.5	27.2	27.8	27.7	28.2	28.8
8H	28.1	28.6	28.6	29.1	29.7	27.3	27.8	27.8	28.3	28.9
CIE190: 2010										

CIE190: 2010  
Area: 0.1105 m2

C Range: 0 - 360DEG  
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Test Date:2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

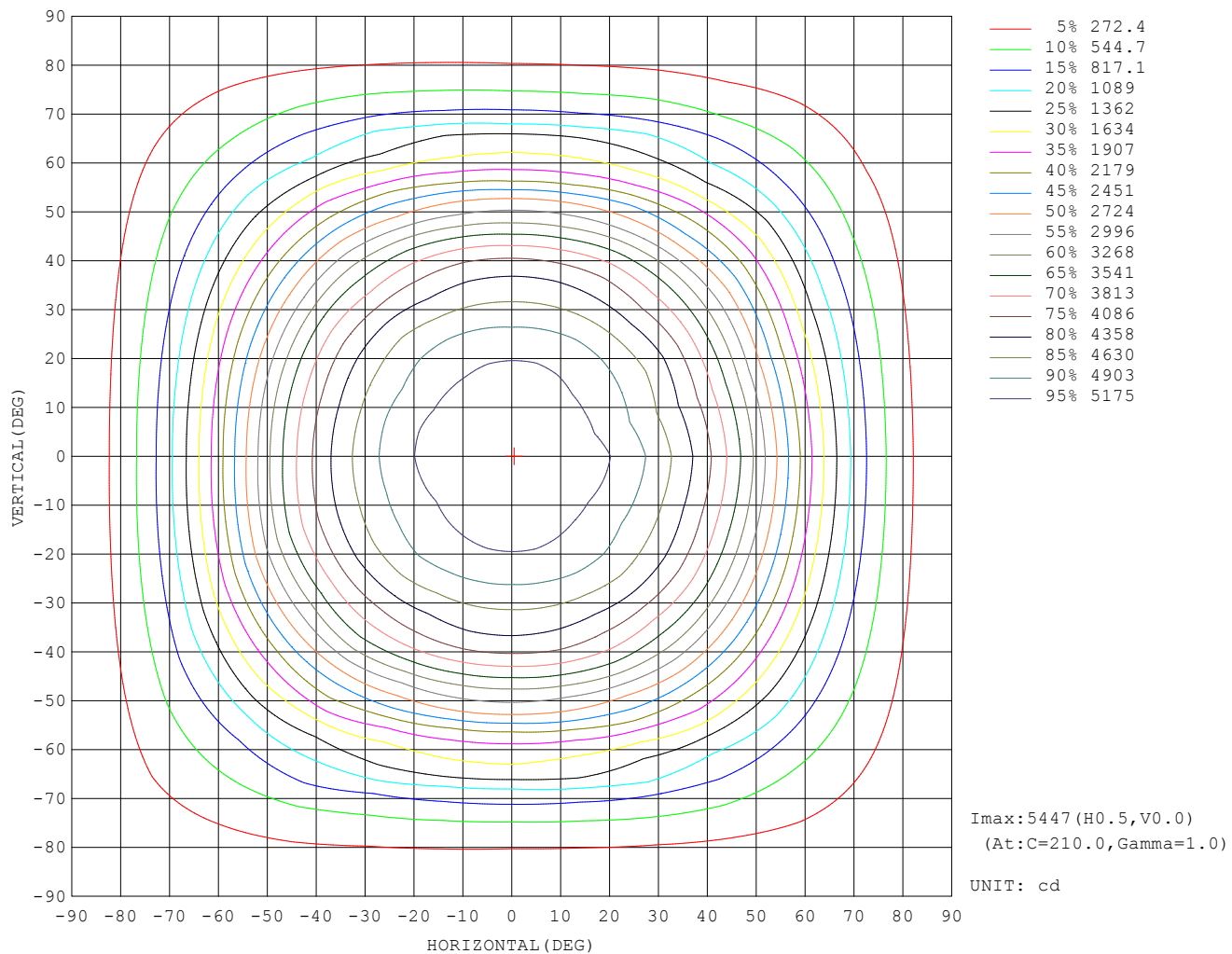
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	48	42	58	48	42	35
0.80	70	59	52	69	59	52	67	58	51	45
1.00	79	68	61	78	68	61	75	69	61	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	81	75	89	81	74	86	79	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	91	98	93	89	81
4.00	107	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

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$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 49.8%  
 Test Distance: 26.000m [K=0.4574]  
 Remarks:

ISOCANDELA DIAGRAM

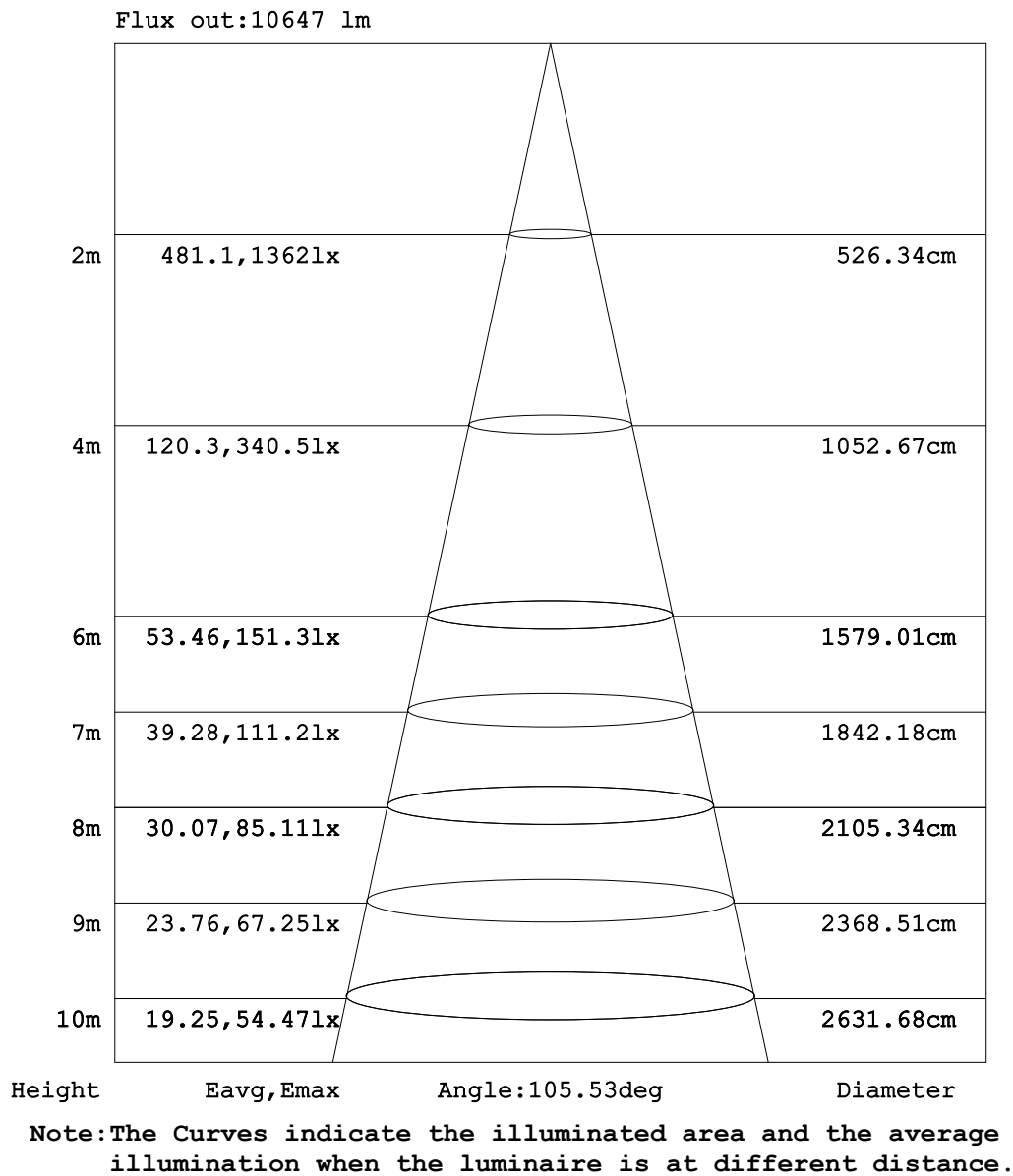


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Remarks:



### AAI Figure

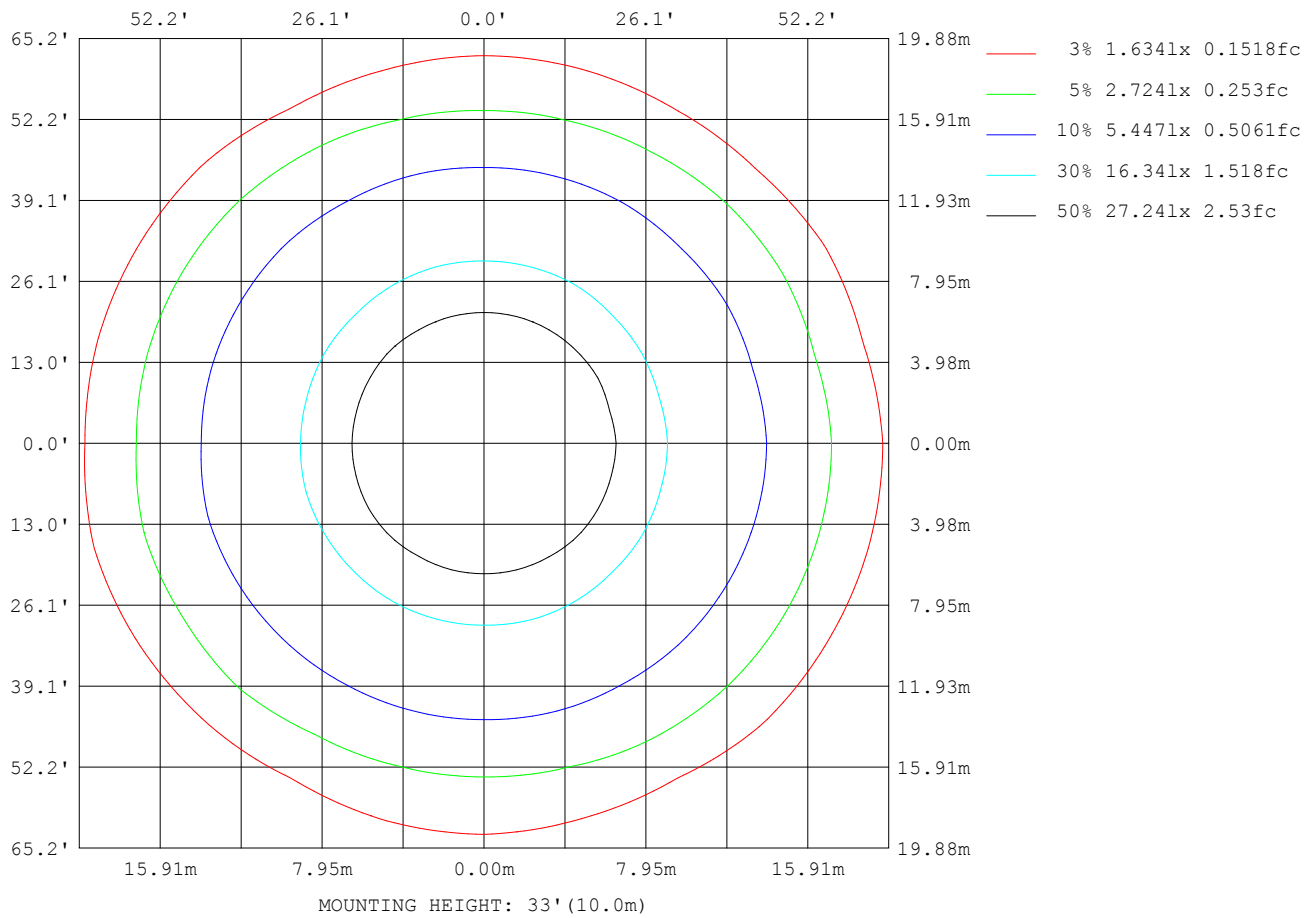


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 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
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 Test Distance:26.000m [K=0.4574]  
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# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

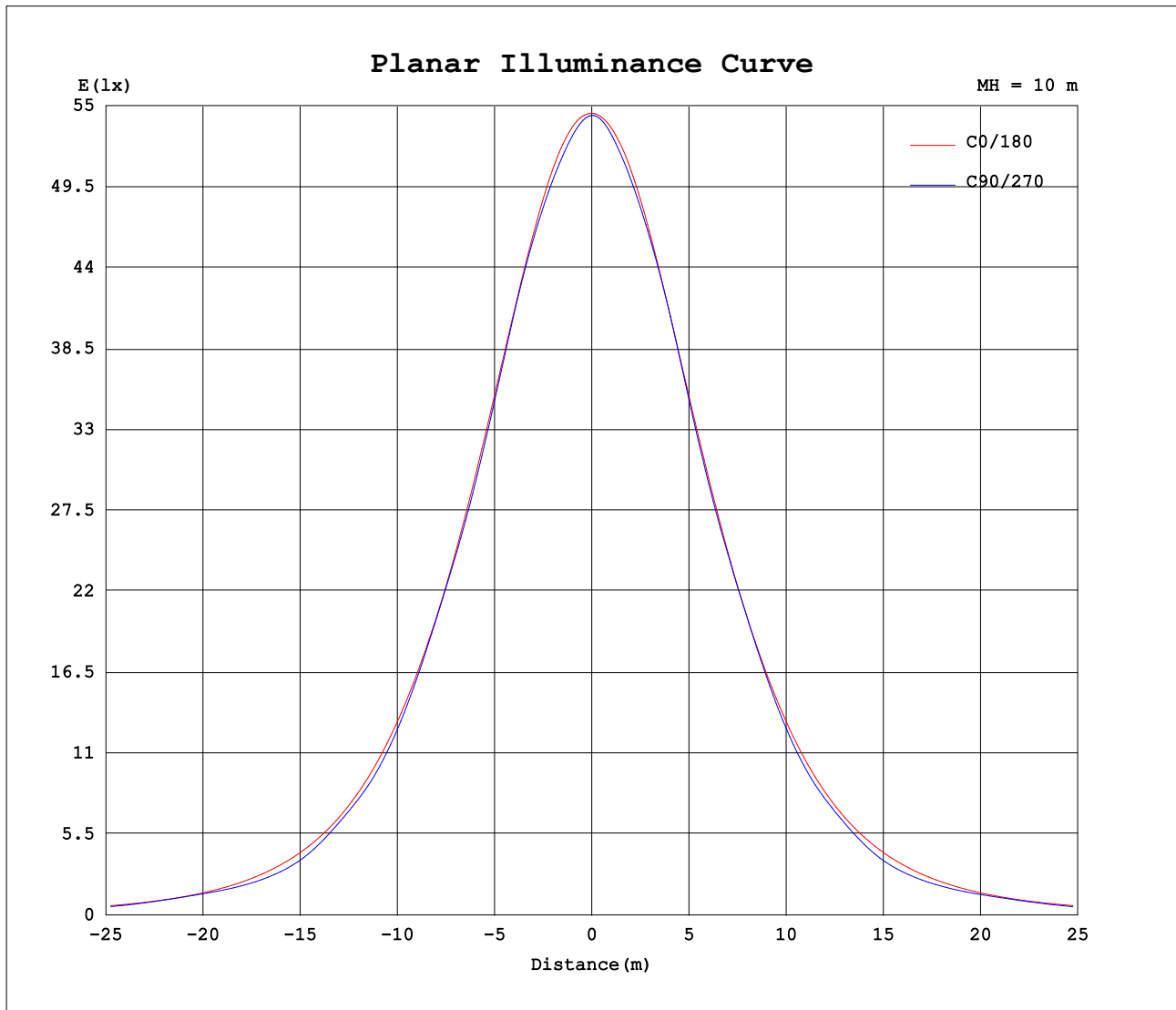
## ISOLUX DIAGRAM



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Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
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Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks: