

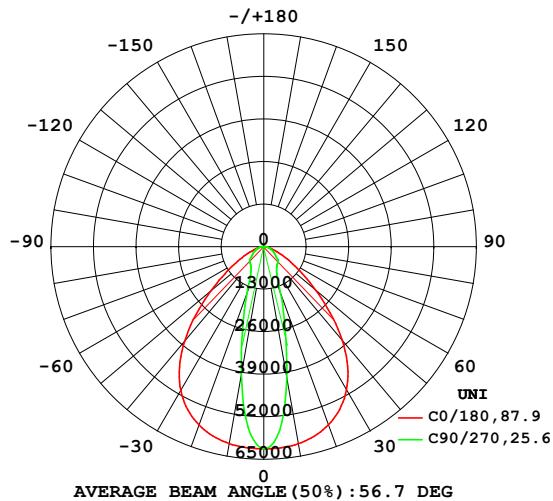
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

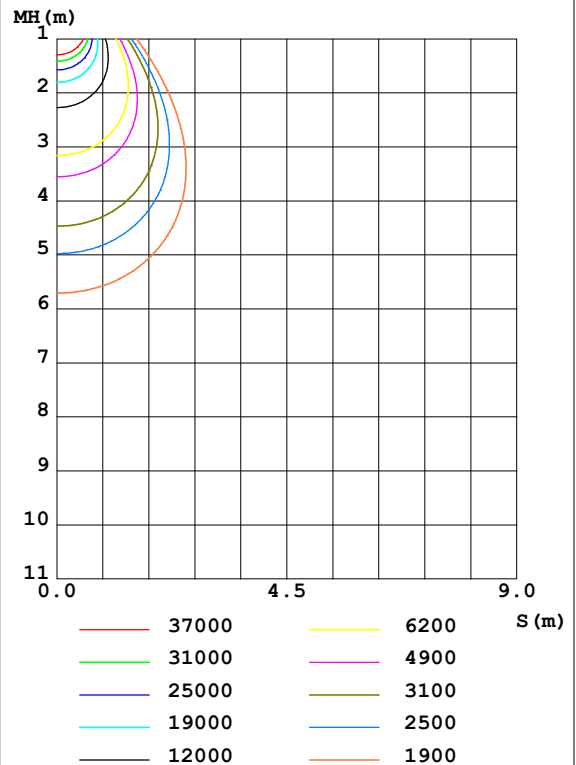
Test:U:229.6V I:1.749A P:395.9W PF:0.9856 Freq:50.00Hz Lamp Flux:58510.8x1 lm					
NAME: LHB09-400-5070-L00401			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 147.79 lm/W
MODEL	/	Imax(cd)	61811	S/MH(C0/180)	1.22	
NOMINAL POWER(W)	400	LOR(%)	100.0	S/MH(C90/270)	0.43	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	58511	η UP,DN(C0-180)	0.0,50.4	
NOMINAL FLUX(lm)	58510.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.55	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators:LI
Test Date:2020-01-05

Checker: LI

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Assessor:

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	6112	5031	4065	5100	6110	4905	3955	4872	0- 10	5327	5327	9.1,9.1
20	5792	2548	1511	2613	5798	2494	1508	2498	10- 20	11092	16419	28.1,28.1
30	5058	1085	793.3	1110	5079	1070	788.5	1079	20- 30	11180	27598	47.2,47.2
40	3735	672.2	669.6	681.3	3765	667.0	657.0	673.8	30- 40	9897	37496	64.1,64.1
50	2080	539.4	519.7	546.7	2114	536.1	503.4	538.9	40- 50	8314	45809	78.3,78.3
60	965.4	403.1	366.0	409.0	981.7	399.2	362.9	401.6	50- 60	6118	51927	88.7,88.7
70	368.2	264.1	228.7	269.4	376.5	259.2	228.2	259.8	60- 70	3958	55885	95.5,95.5
80	110.1	120.2	108.7	123.8	114.4	117.5	105.7	117.0	70- 80	2058	57943	99,99
90	0.4142	0.2565	0.2222	0.2795	0.4791	0.2964	0.2451	0.2968	80- 90	567.9	58511	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 41880 lm

%lum = 71.6%

%lamp = 71.6%

Conical surface Flux(120deg): 51927 lm

%lum = 88.7%

%lamp = 88.7%

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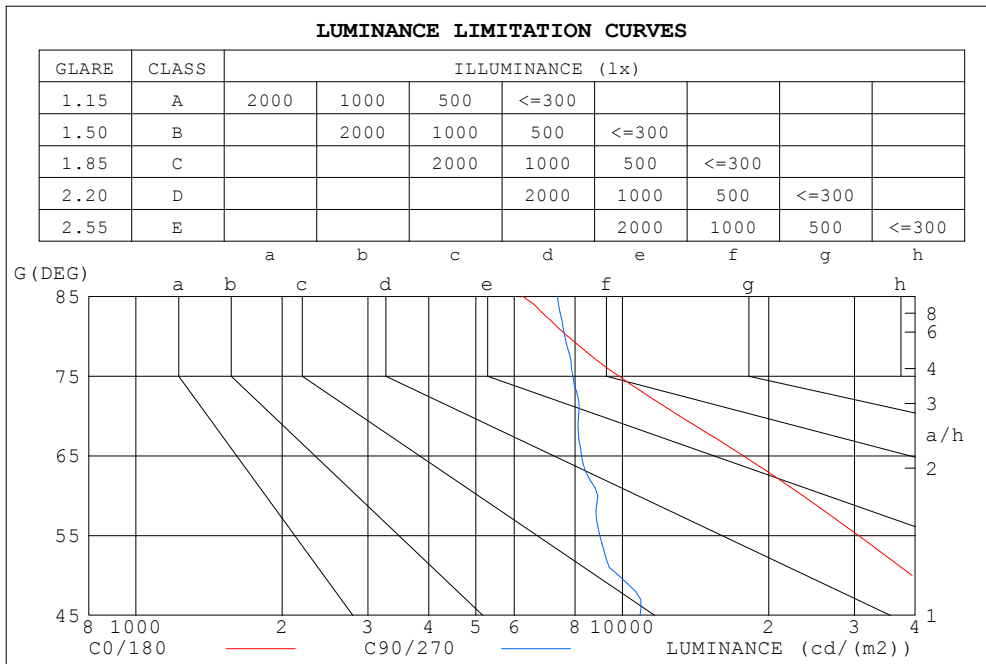
Checker: LI

γ Range: 0 - 90DEG
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LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6238	7357
80	7722	7613
75	9828	7909
70	13114	8135
65	17719	8246
60	23518	8904
55	30568	8993
50	39405	9834
45	49735	10877

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LAMPS	LUMINAIRE BUDGETARY DIAGRAM			
50	CONDITIONS			
40	FLUX	58511lm		
30	FACTOR	0.90		
	Hdown	0.00m		
	Hwork	0.80m		
20	Ework(AVE)	100lx		
	p (%)	cc	w	fc
	_____	70	50	30
	_____	50	30	20
10				
9				
8				
7				
6				
5				
4				
3				
2				
	10	20	30	40
	50	70	100	
	200	300	500	700
	1k	2k	3k	4k
	5k	7k		
	AREA (m²)			

The diagram shows several curves representing different lamp types. The curves are labeled as follows:

- H58 (solid blue line)
- H55 (dashed green line)
- H50 (dotted red line)

The curves show that for a given area, the number of lamps required increases as the lamp type changes from H58 to H55 to H50.

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	.246	.140	.044	.239	.137	.043	.226	.130	.041	.215	.124	.040	.204	.118	.038															
2.0	.234	.128	.039	.228	.126	.039	.217	.121	.037	.207	.116	.036	.197	.111	.035															
3.0	.219	.117	.035	.214	.115	.034	.204	.111	.034	.195	.107	.033	.187	.103	.032															
4.0	.204	.106	.031	.200	.105	.031	.191	.102	.030	.183	.099	.030	.176	.096	.029															
5.0	.191	.097	.028	.187	.096	.028	.180	.093	.028	.173	.091	.027	.166	.089	.027															
6.0	.179	.090	.026	.175	.089	.026	.169	.086	.025	.163	.084	.025	.157	.083	.025															
7.0	.168	.083	.024	.165	.082	.023	.159	.080	.023	.153	.079	.023	.148	.077	.023															
8.0	.158	.077	.022	.155	.077	.022	.150	.075	.021	.145	.074	.021	.141	.072	.021															
9.0	.149	.072	.020	.147	.072	.020	.142	.070	.020	.138	.069	.020	.133	.068	.020															
10.0	.141	.068	.019	.139	.067	.019	.135	.066	.019	.131	.065	.018	.127	.064	.018															

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	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.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	.125	.086	.056	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.118	.077	.046	.082	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.130	.080	.044	.112	.069	.038	.077	.049	.027	.045	.029	.016	.014	.009	.005	
7.0	.124	.073	.037	.106	.063	.033	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.118	.067	.032	.101	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.112	.062	.028	.096	.054	.025	.067	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.107	.058	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity: 61.2%
 Test Distance:26.000m [K=1.0000]
 Remarks:

Checker: LI

Assessor:

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	23.0	24.4	23.3	24.7	25.0	17.3	18.7	17.7	19.0	19.3
3H	24.3	25.6	24.7	25.9	26.2	19.0	20.3	19.4	20.6	21.0
4H	24.6	25.8	25.0	26.1	26.5	19.7	20.9	20.1	21.2	21.6
6H	24.8	25.9	25.2	26.2	26.6	20.3	21.4	20.7	21.7	22.1
8H	24.8	25.8	25.2	26.2	26.6	20.5	21.5	20.9	21.9	22.3
12H	24.8	25.8	25.3	26.2	26.6	20.6	21.6	21.1	22.0	22.4
4H 2H	23.0	24.1	23.4	24.5	24.8	18.0	19.2	18.4	19.6	19.9
3H	24.4	25.3	24.8	25.7	26.1	20.0	21.0	20.4	21.4	21.8
4H	24.8	25.7	25.2	26.1	26.5	20.9	21.7	21.3	22.1	22.6
6H	25.1	25.8	25.5	26.3	26.7	21.5	22.3	22.0	22.7	23.2
8H	25.2	25.8	25.6	26.3	26.8	21.8	22.5	22.3	22.9	23.4
12H	25.2	25.8	25.7	26.3	26.8	22.0	22.6	22.5	23.1	23.6
8H 4H	24.8	25.5	25.3	26.0	26.4	21.2	21.9	21.7	22.4	22.9
6H	25.2	25.7	25.7	26.2	26.7	22.1	22.6	22.6	23.1	23.6
8H	25.3	25.8	25.8	26.3	26.8	22.4	22.9	22.9	23.4	23.9
12H	25.4	25.8	25.9	26.3	26.9	22.7	23.1	23.2	23.6	24.2
12H 4H	24.8	25.4	25.3	25.9	26.4	21.3	21.9	21.8	22.4	22.8
6H	25.2	25.7	25.7	26.2	26.7	22.2	22.7	22.7	23.1	23.7
8H	25.3	25.8	25.8	26.3	26.8	22.5	23.0	23.1	23.5	24.1
CIE190: 2010										

CIE190: 2010
Area: 0.3315 m2

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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	60	54	69	59	54	68	59	54	48
0.80	78	69	63	78	69	63	76	68	63	57
1.00	86	77	71	85	76	71	83	77	70	64
1.25	92	83	78	90	83	77	88	81	77	71
1.50	96	88	83	94	87	82	91	85	81	75
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	100	96	101	97	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	108	105	109	106	103	105	102	100	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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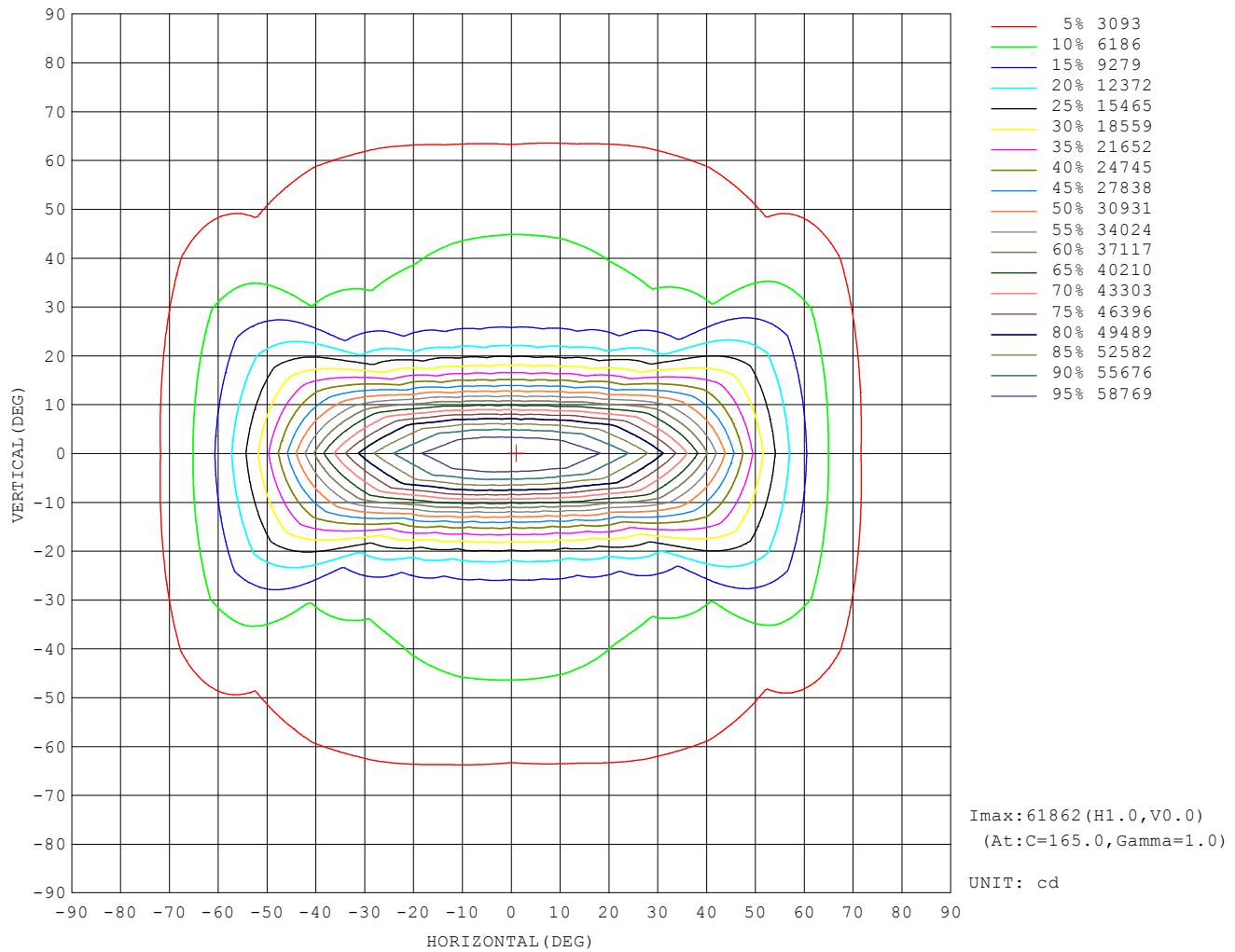
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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM



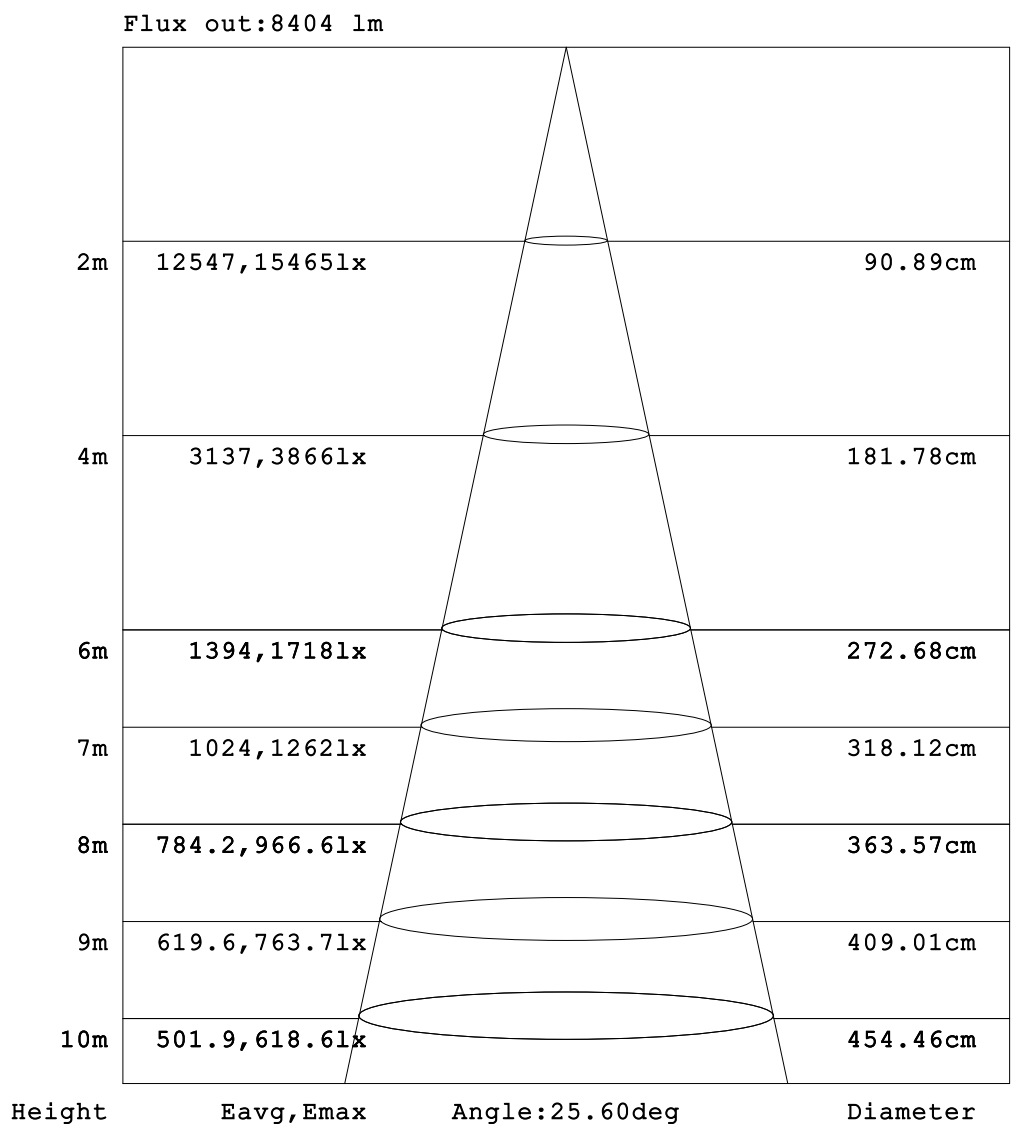
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γ Range: 0 - 90DEG
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Remarks:

Checker: LI

Assessor:

AAI Figure



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

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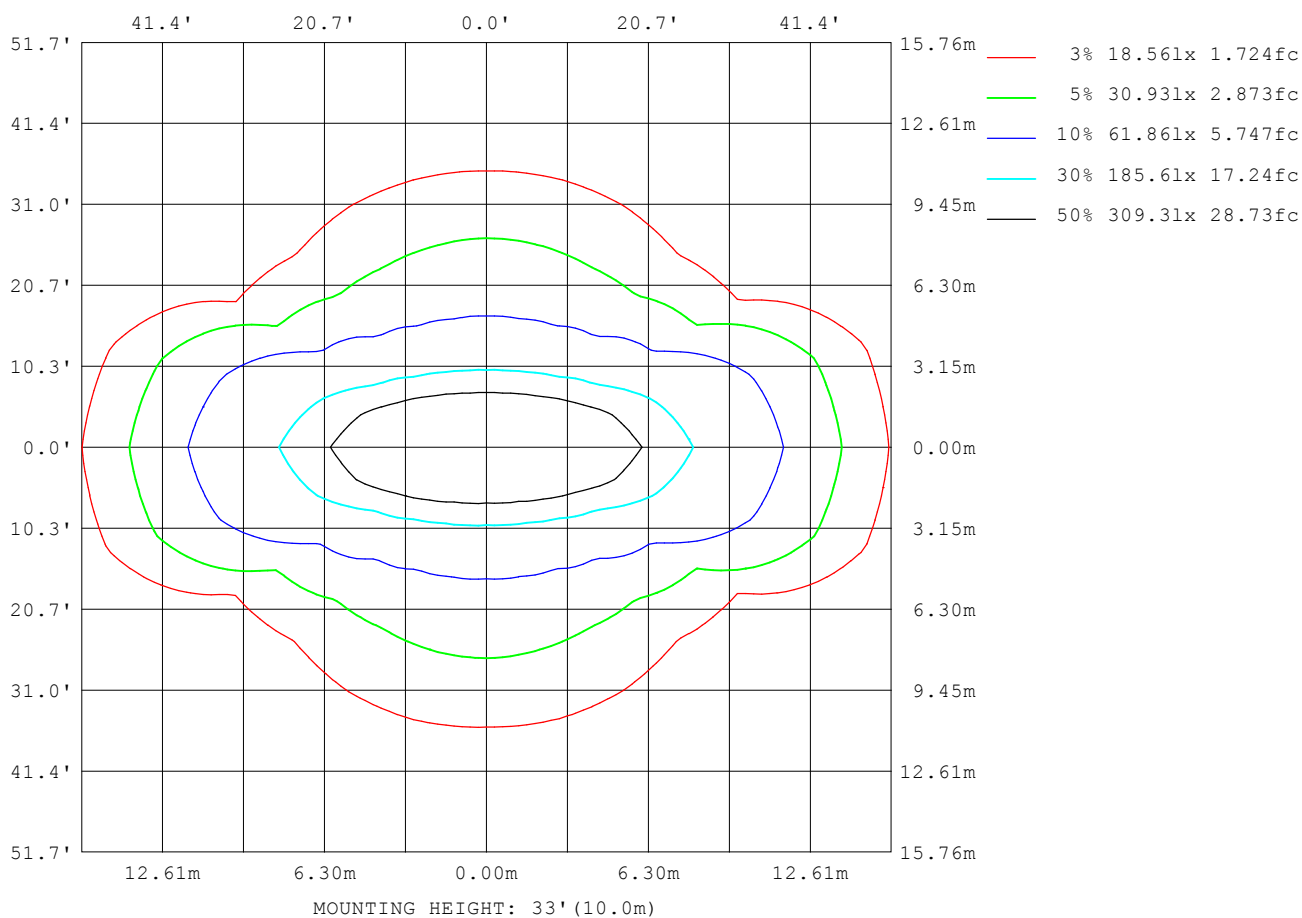
γ Range: 0 - 90DEG
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ISOLUX DIAGRAM



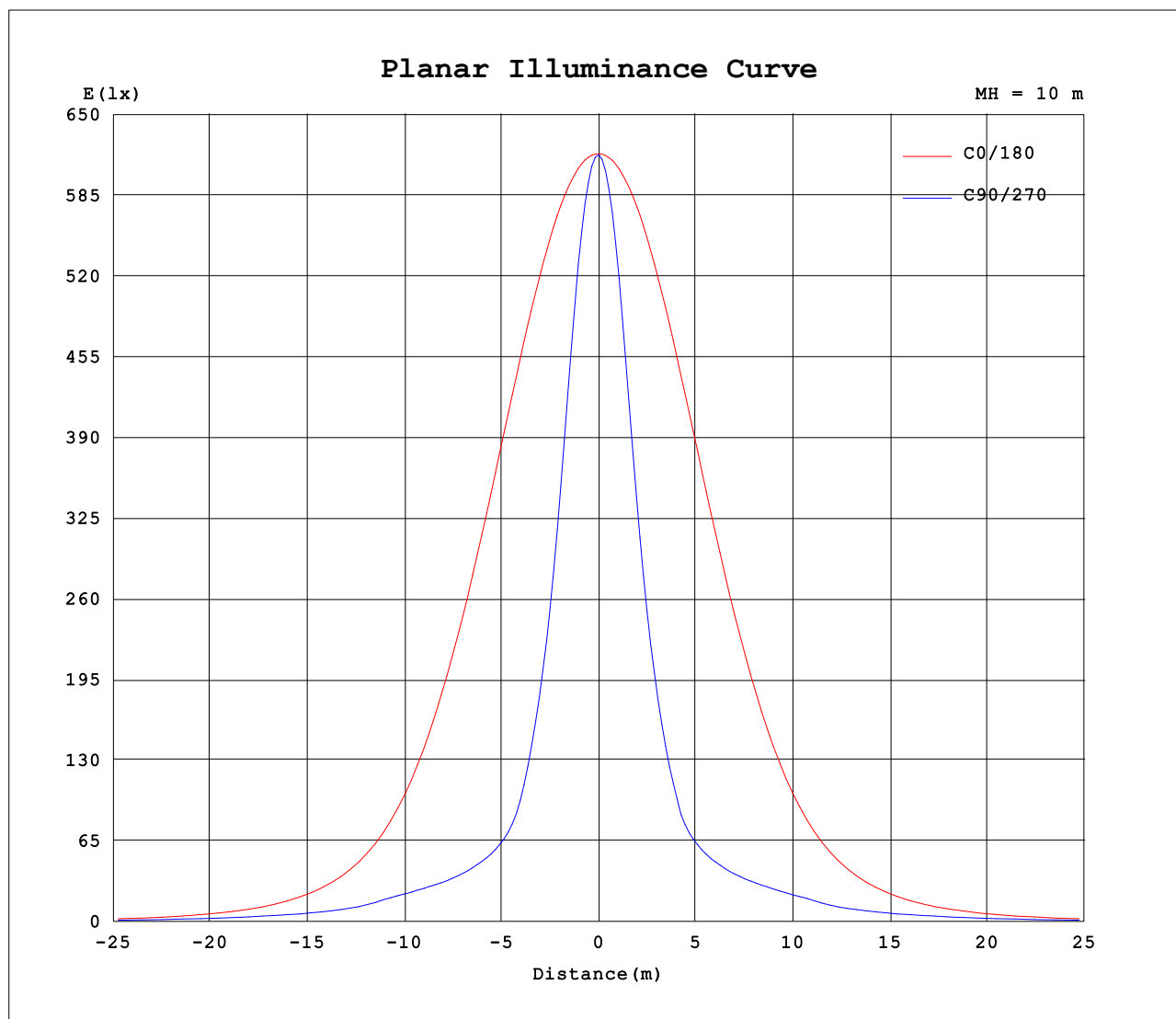
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Planar Illuminance Curve



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