

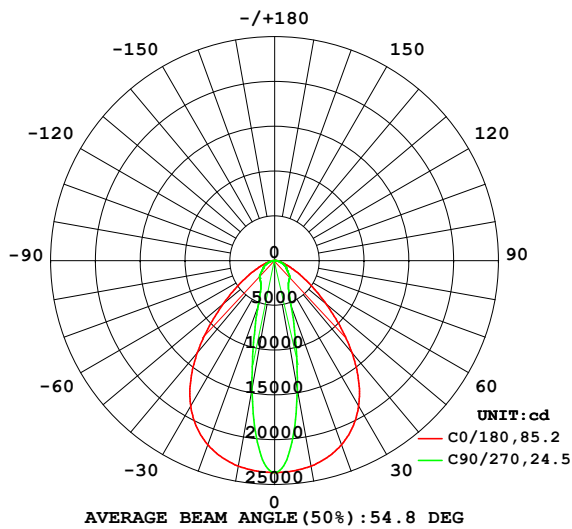
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

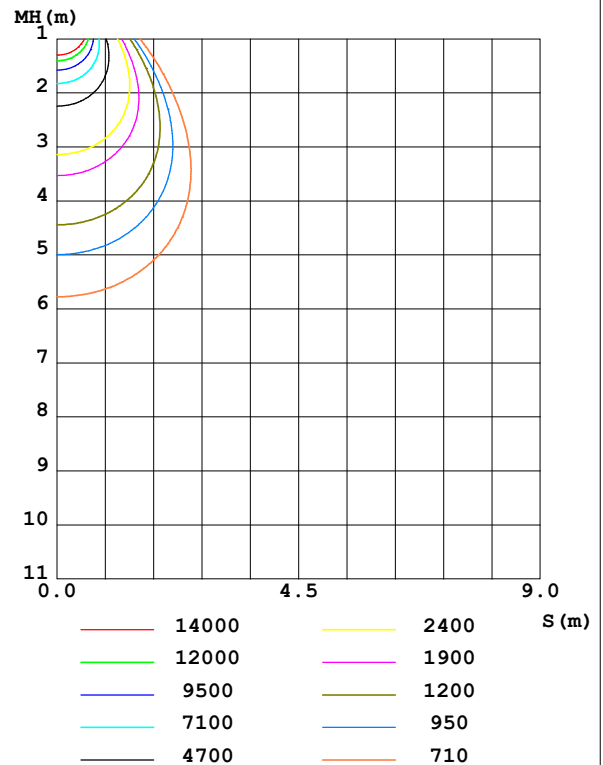
Test:U:230.0V I:0.535A P:120.0W PF:0.975 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:21540.2x1 lm		
NAME: LHB09-120H-5070-L00401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 179.50 lm/W			
MODEL	/	I _{max} (cd)	23660	S/MH(C0/180)	1.18
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.41
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	21540	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	21540.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	/	η down (%)	100.0	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-08-02

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=0.4548]
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	2330	1834	1462	1834	2330	1834	1462	1834	0- 10	2003	2003	9.3,9.3
20	2186	921.2	550.9	921.2	2186	921.2	550.9	921.2	10- 20	4074	6077	28.2,28.2
30	1876	425.3	310.0	425.3	1876	425.3	310.0	425.3	20- 30	4102	10180	47.3,47.3
40	1345	269.5	260.6	269.5	1345	269.5	260.6	269.5	30- 40	3655	13834	64.2,64.2
50	748.1	213.6	192.6	213.6	748.1	213.6	192.6	213.6	40- 50	3052	16886	78.4,78.4
60	351.1	155.1	145.0	155.1	351.1	155.1	145.0	155.1	50- 60	2251	19136	88.8,88.8
70	138.6	101.1	87.47	101.1	138.6	101.1	87.47	101.1	60- 70	1476	20612	95.7,95.7
80	43.75	40.59	31.46	40.59	43.75	40.59	31.46	40.59	70- 80	759.1	21371	99.2,99.2
90	0.4352	0.4387	0.8084	0.4387	0.4352	0.4387	0.8084	0.4387	80- 90	168.8	21540	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): 15450 lm

%lum = 71.7%

%lamp = 71.7%

Conical surface Flux(120deg): 19136 lm

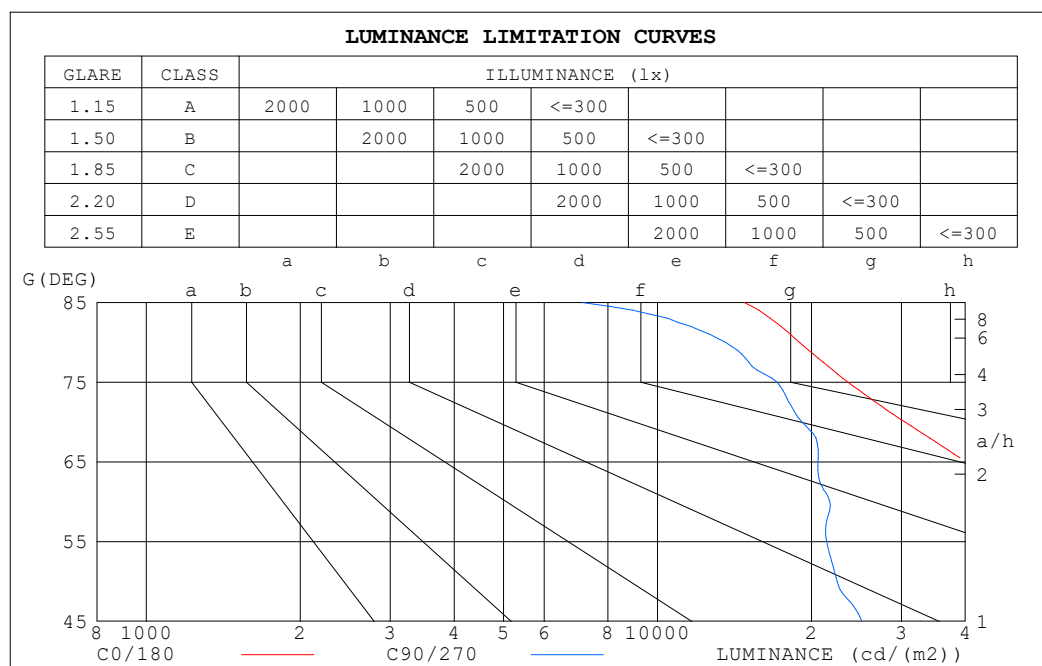
%lum = 88.8%

%lamp = 88.8%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-08-02

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=0.4548]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	14788	7133
80	18937	13580
75	23581	17142
70	30463	19169
65	40196	20604
60	52781	21733
55	68356	21427
50	87475	22457
45	109799	25073

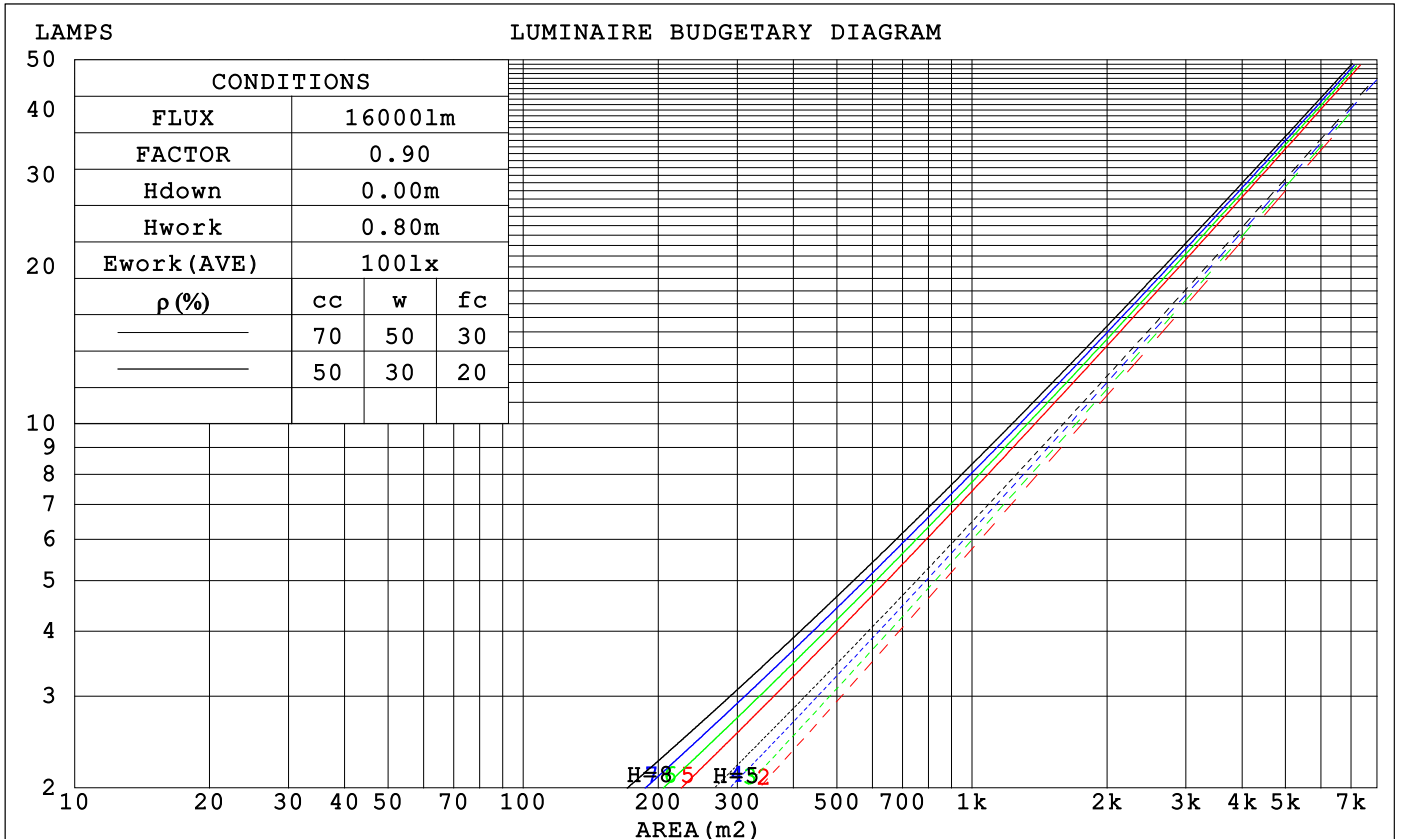
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2022-08-02

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=0.4548]
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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.89
2.0	.97	.91	.86	.95	.90	.85	.91	.87	.84	.88	.85	.82	.85	.82	.80	.78
3.0	.87	.81	.75	.86	.80	.75	.83	.78	.74	.81	.76	.72	.78	.74	.71	.69
4.0	.80	.72	.67	.78	.72	.66	.76	.70	.66	.74	.69	.65	.72	.68	.64	.62
5.0	.73	.66	.60	.72	.65	.60	.70	.64	.59	.68	.63	.59	.66	.62	.58	.56
6.0	.67	.60	.54	.66	.59	.54	.65	.58	.54	.63	.58	.53	.62	.57	.53	.51
7.0	.62	.55	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.58	.53	.49	.47
8.0	.58	.51	.46	.58	.51	.46	.56	.50	.46	.55	.49	.45	.54	.49	.45	.43
9.0	.54	.47	.43	.54	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.39	.49	.43	.39	.48	.43	.39	.38



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-08-02

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=0.4548]
Remarks:

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	.244	.139	.044	.237	.135	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038	
2.0	.233	.128	.039	.227	.125	.039	.216	.120	.037	.206	.115	.036	.196	.111	.035	
3.0	.218	.116	.035	.213	.114	.034	.203	.110	.034	.194	.107	.033	.186	.103	.032	
4.0	.204	.106	.031	.199	.104	.031	.191	.101	.030	.183	.098	.030	.176	.095	.029	
5.0	.191	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.166	.089	.027	
6.0	.179	.090	.026	.175	.088	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024	
7.0	.168	.083	.024	.165	.082	.023	.159	.080	.023	.153	.079	.023	.148	.077	.023	
8.0	.158	.077	.022	.155	.076	.022	.150	.075	.021	.145	.073	.021	.140	.072	.021	
9.0	.149	.072	.020	.147	.071	.020	.142	.070	.020	.137	.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	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.082	.132	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.118	.077	.046	.081	.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	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:LYJ
 Test Date:2022-08-02

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=0.4548]
 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	24.6	26.0	25.0	26.3	26.6	20.4	21.8	20.8	22.1	22.5
3H	26.2	27.4	26.6	27.8	28.1	22.3	23.5	22.7	23.9	24.2
4H	26.6	27.7	27.0	28.1	28.5	22.9	24.0	23.3	24.4	24.8
6H	26.8	27.9	27.2	28.3	28.6	23.2	24.3	23.6	24.7	25.1
8H	26.9	27.9	27.3	28.3	28.7	23.3	24.3	23.7	24.7	25.1
12H	26.9	27.9	27.3	28.2	28.7	23.3	24.3	23.7	24.7	25.1
4H 2H	24.7	25.9	25.1	26.2	26.6	21.2	22.3	21.6	22.7	23.1
3H	26.4	27.3	26.8	27.7	28.1	23.3	24.2	23.7	24.6	25.0
4H	26.9	27.8	27.4	28.2	28.6	23.9	24.8	24.4	25.2	25.7
6H	27.3	28.0	27.8	28.5	29.0	24.4	25.1	24.8	25.6	26.0
8H	27.4	28.1	27.9	28.5	29.0	24.5	25.2	24.9	25.6	26.1
12H	27.5	28.1	27.9	28.6	29.0	24.5	25.1	25.0	25.6	26.1
8H 4H	27.0	27.7	27.5	28.1	28.6	24.3	25.0	24.8	25.4	25.9
6H	27.5	28.0	28.0	28.5	29.0	24.8	25.4	25.3	25.9	26.4
8H	27.6	28.1	28.1	28.6	29.1	25.0	25.5	25.5	26.0	26.5
12H	27.7	28.2	28.3	28.7	29.3	25.0	25.5	25.5	26.0	26.5
12H 4H	27.0	27.6	27.5	28.1	28.6	24.3	24.9	24.8	25.4	25.9
6H	27.5	28.0	28.0	28.4	29.0	24.9	25.4	25.4	25.9	26.4
8H	27.7	28.1	28.2	28.6	29.2	25.1	25.5	25.6	26.0	26.6
CIE190: 2010										

CIE190: 2010
Area: 0.13323 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
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Temperature:25.3℃
Operators:LYJ
Test Date:2022-08-02

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=0.4548]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

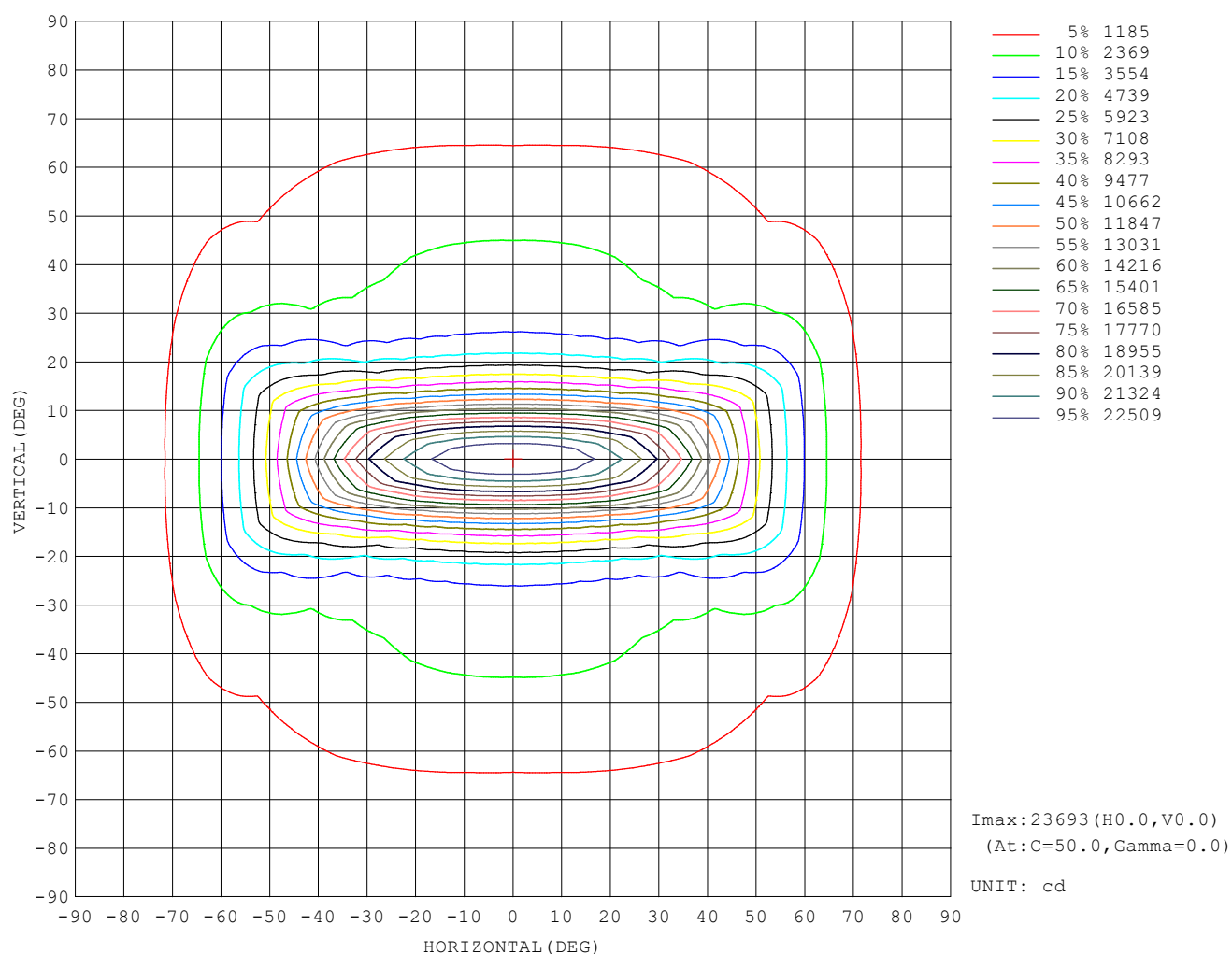
UTILIZATION FACTORS TABLE

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	60	54	69	60	54	68	59	54	48
0.80	79	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	92	86	81	75
2.00	101	94	89	99	93	89	96	91	87	80
2.50	104	98	93	102	97	92	99	94	90	83
3.00	106	101	97	104	100	96	101	97	94	86
4.00	110	105	102	107	103	100	103	100	98	89
5.00	111	108	105	109	106	103	105	102	100	92
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
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 Operators: LYJ
 Test Date: 2022-08-02

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=0.4548]
 Remarks:

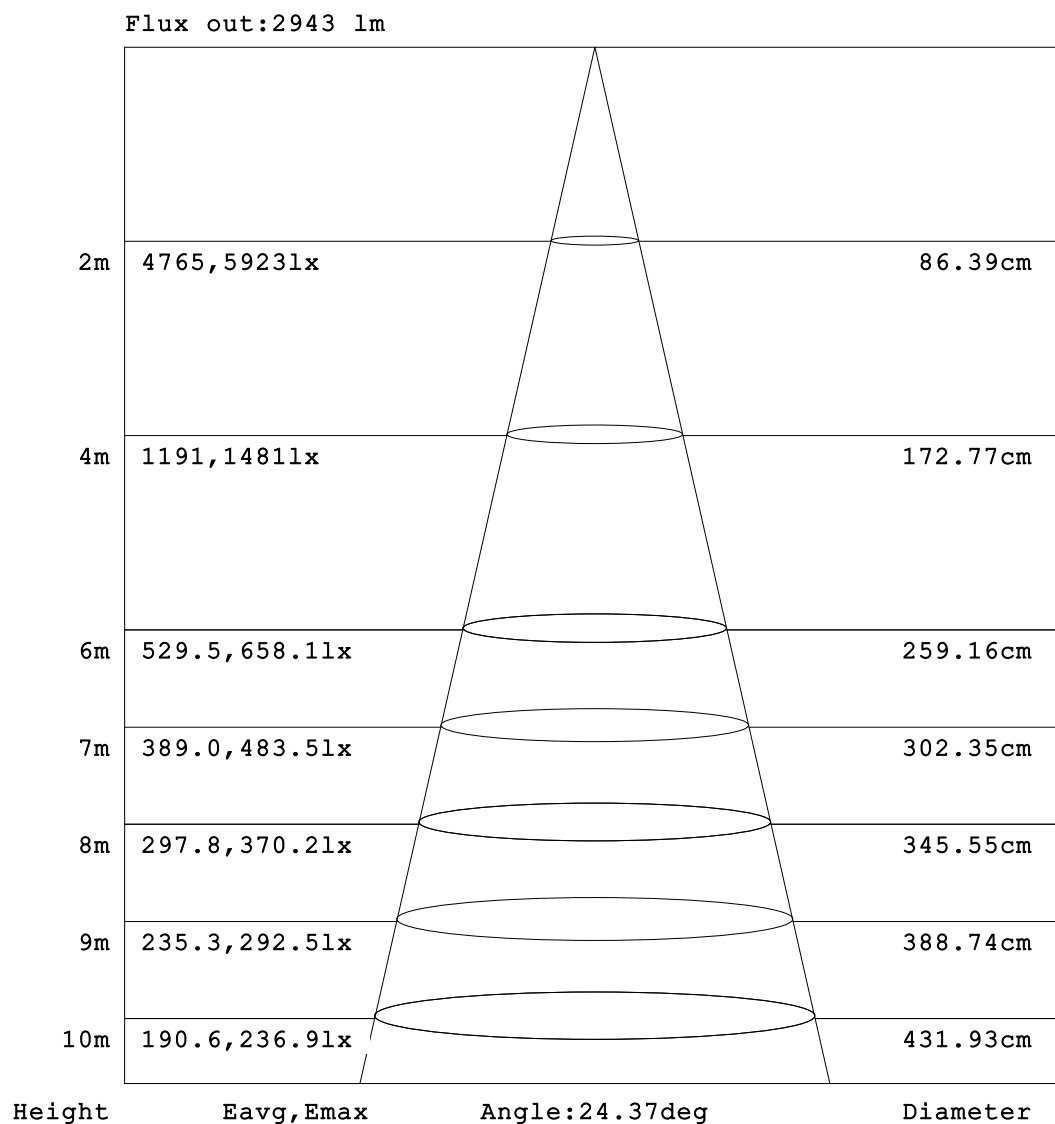
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2022-08-02

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=0.4548]
Remarks:

AAI Figure



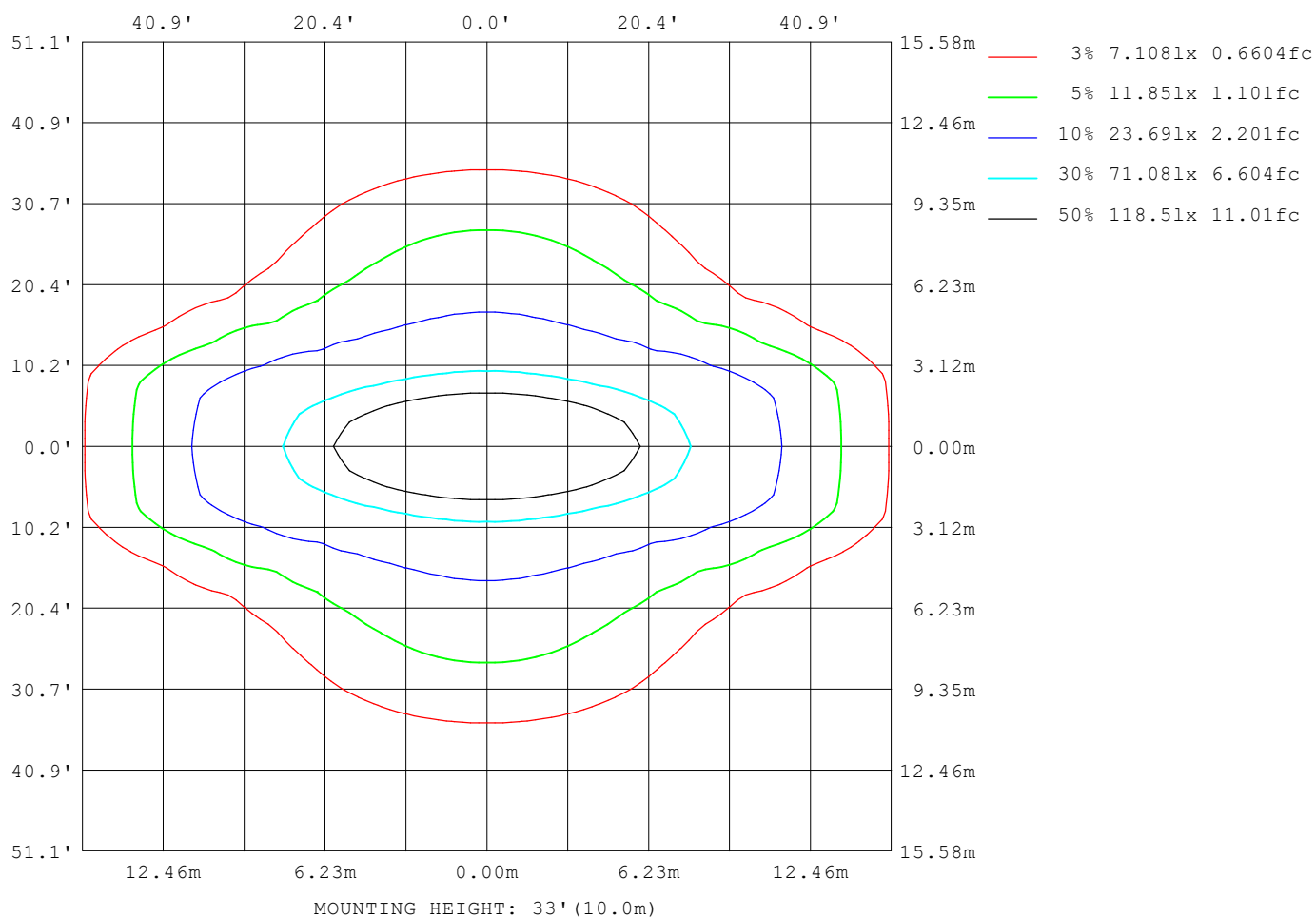
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-08-02

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

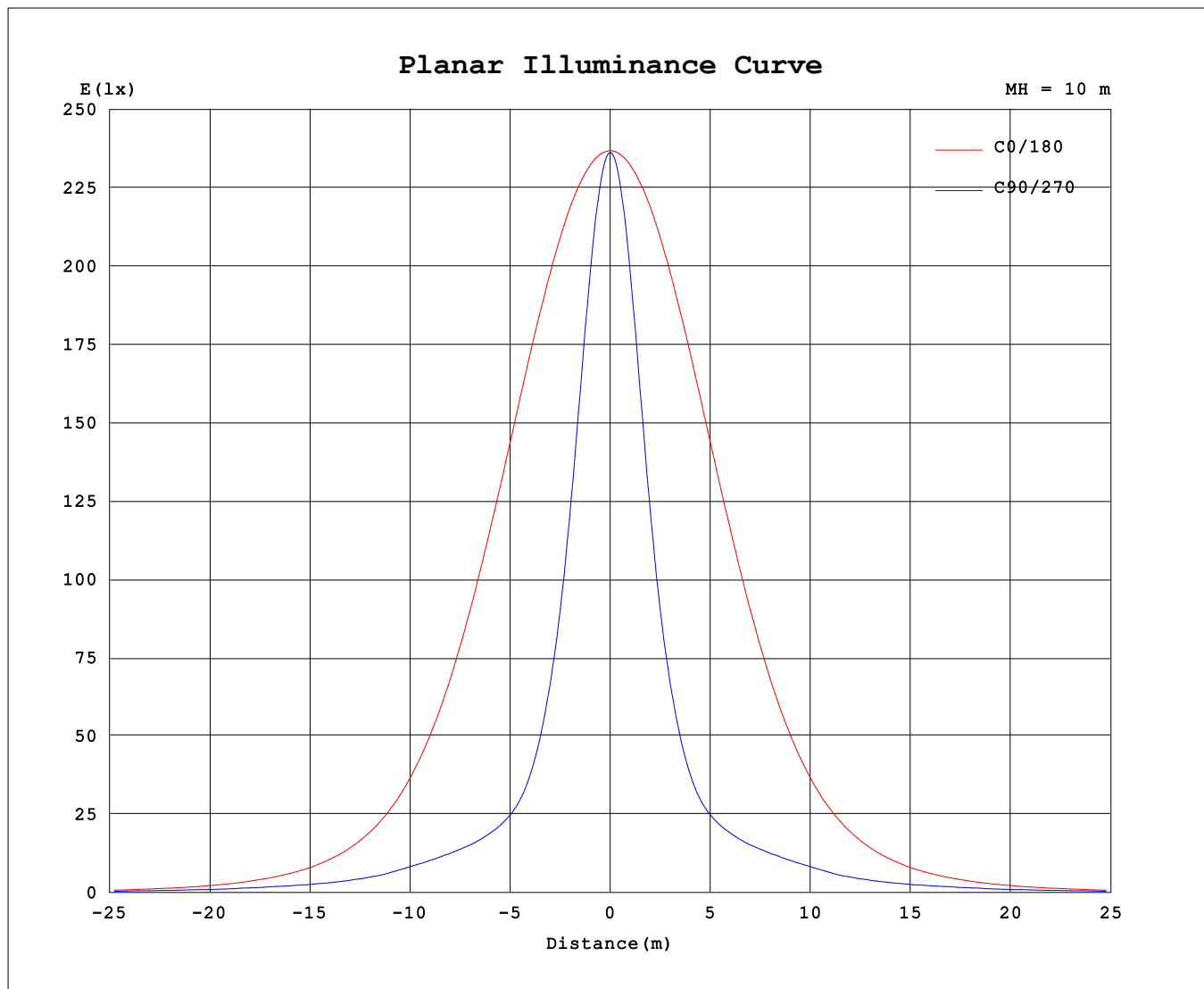
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2022-08-02

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=0.4548]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2022-08-02

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=0.4548]
Remarks:

UNIT: X10cd

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 10.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Temperature: 25.3℃	Humidity: 65.0%
Operators: LYJ	Test Distance: 26.000m [K=0.4548]
Test Date: 2022-08-02	Remarks:

UNIT: X10cd

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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=0.4548]
Remarks:

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