

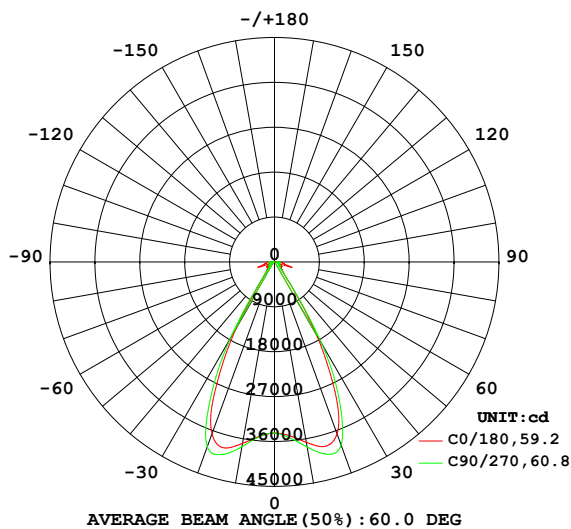
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

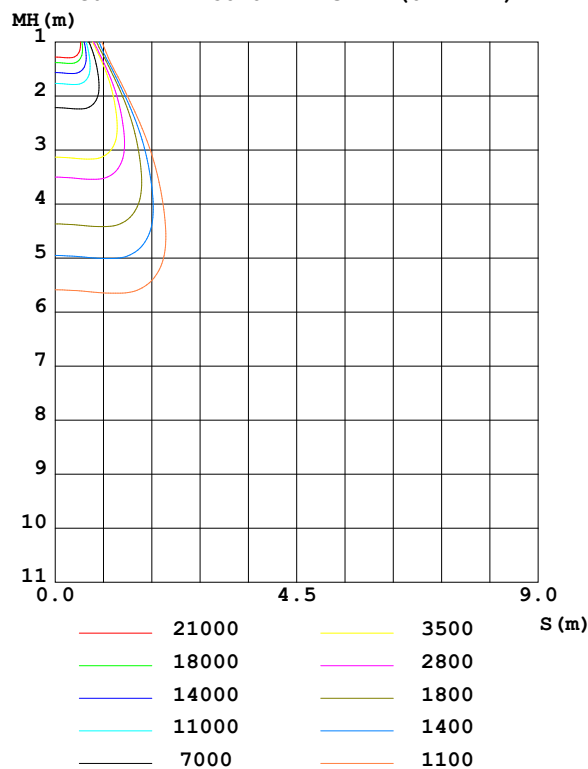
Test:U:230.0V I:0.894A P:200.0W PF:0.973 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:37114.5x1 lm		
NAME: LHB09-200H-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 185.57 lm/W			
MODEL	/	I _{max} (cd)	40688	S/MH (C0/180)	0.84
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	37114	η UP,DN (C0-180)	0.0,50.4
NOMINAL FLUX (lm)	37114.5	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)	/	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:25.3°C
Operators:LYJ
Test Date:2023-03-31

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
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	3672	3712	3766	3745	3693	3718	3760	3723	0- 10	3425	3425	9.23,9.23
20	3664	3963	3905	3986	3661	3970	3941	3976	10- 20	11058	14484	39,39
30	1686	1906	1898	1716	1548	1634	1773	1733	20- 30	13445	27929	75.3,75.3
40	279.9	253.7	254.1	218.7	266.5	206.0	225.7	212.9	30- 40	4215	32144	86.6,86.6
50	172.4	115.4	124.0	115.5	172.1	119.2	126.3	120.2	40- 50	1155	33299	89.7,89.7
60	159.1	107.0	127.6	105.3	152.3	104.2	119.6	103.6	50- 60	1011	34310	92.4,92.4
70	103.8	71.42	83.46	71.81	167.5	71.60	82.28	70.76	60- 70	847.6	35157	94.7,94.7
80	179.2	87.44	84.06	88.61	174.8	98.70	89.14	90.63	70- 80	950.7	36108	97.3,97.3
90	16.83	53.65	43.37	38.74	12.95	33.19	25.07	37.71	80- 90	1007	37114	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): 32783 lm

%lum = 88.3%

%lamp = 88.3%

Conical surface Flux(120deg): 34310 lm

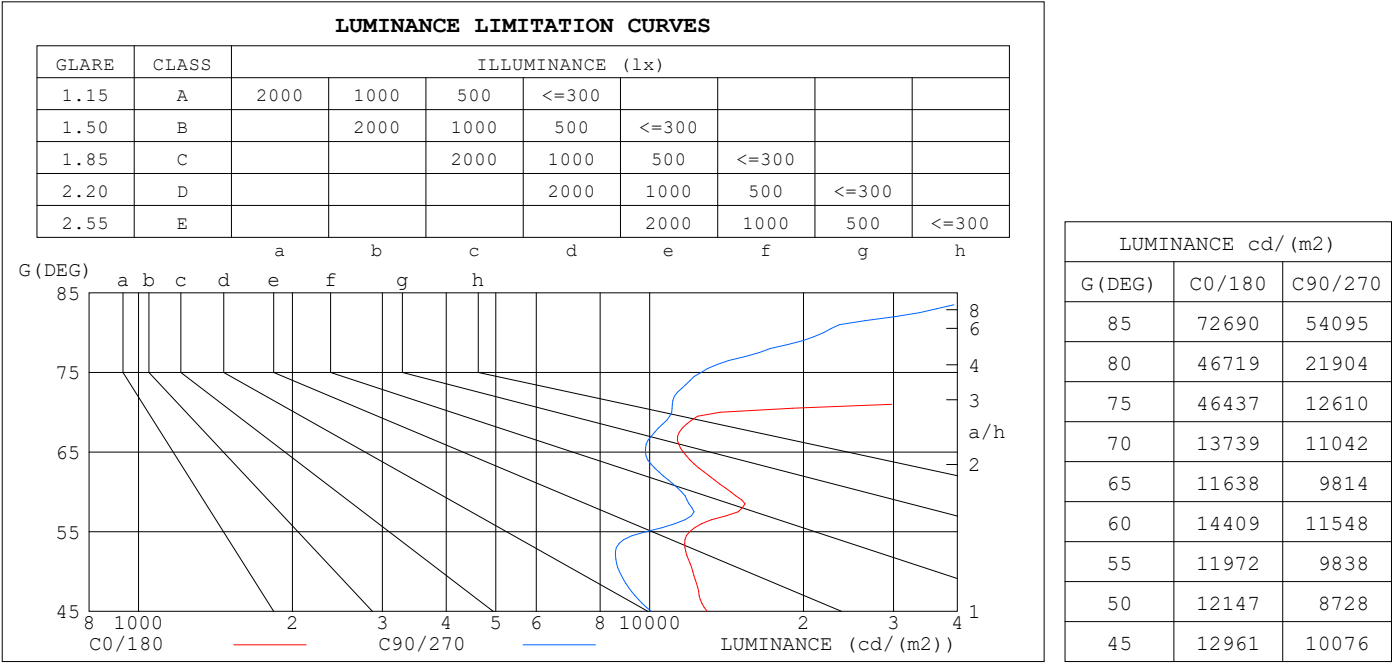
%lum = 92.4%

%lamp = 92.4%

C Range: 0 - 360DEG
C Interval: 15.0DEG
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Temperature:25.3°C
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

LUMINANCE LIMITATION CURVES



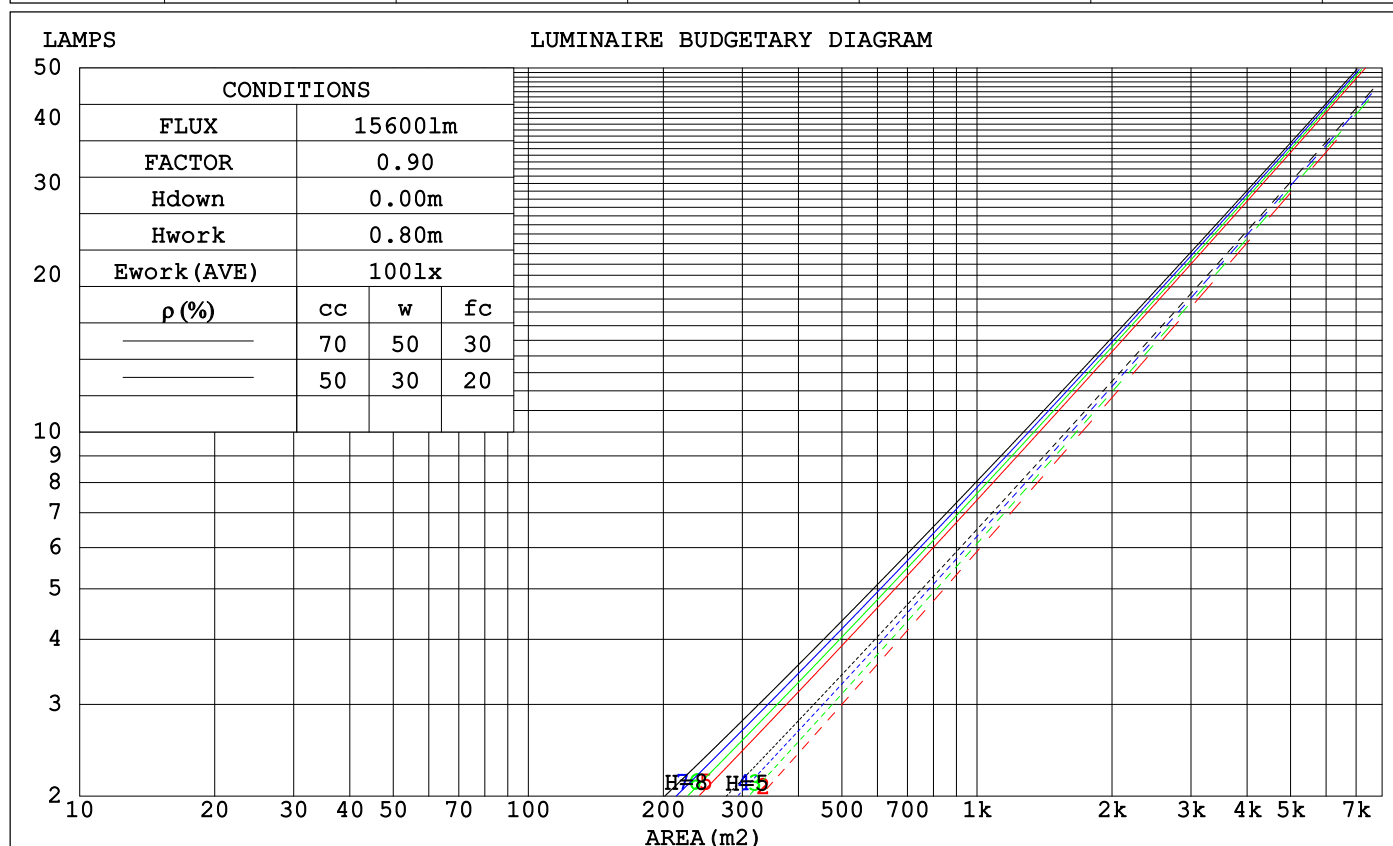
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2023-03-31

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
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	1.08	1.05	1.03	1.06	1.03	1.01	1.02	.00	.98	.98	.97	.95	.95	.93	.92	.90
2.0	1.00	.95	.91	.98	.94	.90	.95	.92	.88	.92	.89	.87	.89	.87	.85	.83
3.0	.93	.87	.83	.92	.86	.82	.89	.85	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.80	.76	.73	.72
5.0	.81	.75	.71	.80	.75	.70	.79	.74	.70	.77	.72	.69	.75	.71	.68	.67
6.0	.77	.70	.66	.76	.70	.66	.74	.69	.65	.73	.68	.65	.71	.67	.64	.63
7.0	.72	.66	.61	.71	.66	.61	.70	.65	.61	.69	.64	.61	.68	.64	.60	.59
8.0	.68	.62	.58	.68	.62	.58	.66	.61	.57	.65	.61	.57	.64	.60	.57	.55
9.0	.64	.58	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.52
10.0	.61	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.58	.54	.51	.49



C Range: 0 - 360DEG
 C Interval: 15.0DEG
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 Operators:LYJ
 Test Date:2023-03-31

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4556]
 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	.222	.126	.040	.215	.123	.039	.202	.116	.037	.191	.110	.035	.180	.104	.034	
2.0	.199	.109	.033	.193	.106	.033	.182	.101	.031	.172	.097	.030	.163	.092	.029	
3.0	.182	.097	.029	.177	.095	.029	.168	.091	.028	.160	.087	.027	.152	.084	.026	
4.0	.169	.088	.026	.165	.086	.026	.157	.083	.025	.150	.080	.024	.143	.077	.024	
5.0	.158	.081	.023	.155	.079	.023	.148	.077	.023	.141	.074	.022	.135	.072	.022	
6.0	.149	.075	.021	.146	.074	.021	.140	.072	.021	.134	.070	.020	.129	.068	.020	
7.0	.141	.070	.020	.138	.069	.020	.133	.067	.019	.128	.065	.019	.123	.064	.019	
8.0	.134	.065	.018	.131	.065	.018	.126	.063	.018	.122	.062	.018	.118	.060	.018	
9.0	.127	.062	.017	.125	.061	.017	.121	.060	.017	.117	.059	.017	.113	.057	.017	
10.0	.122	.058	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016	

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	.174	.157	.141	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.050	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.120	.078	.048	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.102	.060	.031	.088	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004	
10.0	.097	.055	.027	.084	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:LYJ
 Test Date:2023-03-31

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4556]
 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	14.4	15.5	14.8	15.8	16.1	13.3	14.4	13.6	14.7	15.0
	3H	17.0	18.0	17.4	18.4	18.7	15.9	16.9	16.3	17.2	17.6
	4H	20.7	21.6	21.1	22.0	22.3	17.3	18.3	17.7	18.6	19.0
	6H	24.1	25.0	24.5	25.3	25.7	19.7	20.5	20.1	20.9	21.3
	8H	25.5	26.3	25.9	26.7	27.1	21.2	22.0	21.6	22.4	22.8
	12H	26.7	27.5	27.2	27.9	28.3	23.0	23.8	23.4	24.1	24.6
4H	2H	15.0	16.0	15.4	16.3	16.7	14.2	15.1	14.6	15.4	15.8
	3H	17.7	18.5	18.2	18.9	19.3	16.9	17.6	17.3	18.0	18.4
	4H	20.9	21.6	21.4	22.1	22.5	18.4	19.1	18.8	19.5	19.9
	6H	24.9	25.5	25.4	26.0	26.4	21.2	21.8	21.6	22.2	22.7
	8H	26.5	27.0	26.9	27.5	28.0	22.7	23.3	23.2	23.7	24.2
	12H	28.0	28.5	28.5	29.0	29.4	24.7	25.2	25.1	25.6	26.1
8H	4H	21.2	21.8	21.7	22.2	22.7	19.2	19.7	19.6	20.2	20.6
	6H	25.3	25.7	25.8	26.2	26.7	22.4	22.8	22.9	23.3	23.8
	8H	27.0	27.4	27.5	27.9	28.4	24.1	24.5	24.6	25.0	25.5
	12H	28.8	29.2	29.3	29.7	30.3	26.1	26.5	26.6	27.0	27.5
12H	4H	21.4	21.9	21.9	22.4	22.9	19.6	20.1	20.0	20.5	21.0
	6H	25.4	25.9	26.0	26.3	26.9	22.8	23.2	23.3	23.7	24.2
	8H	27.2	27.6	27.7	28.1	28.6	24.6	25.0	25.1	25.5	26.1
CIE190: 2010											

CIE190: 2010
Area: 0.221 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

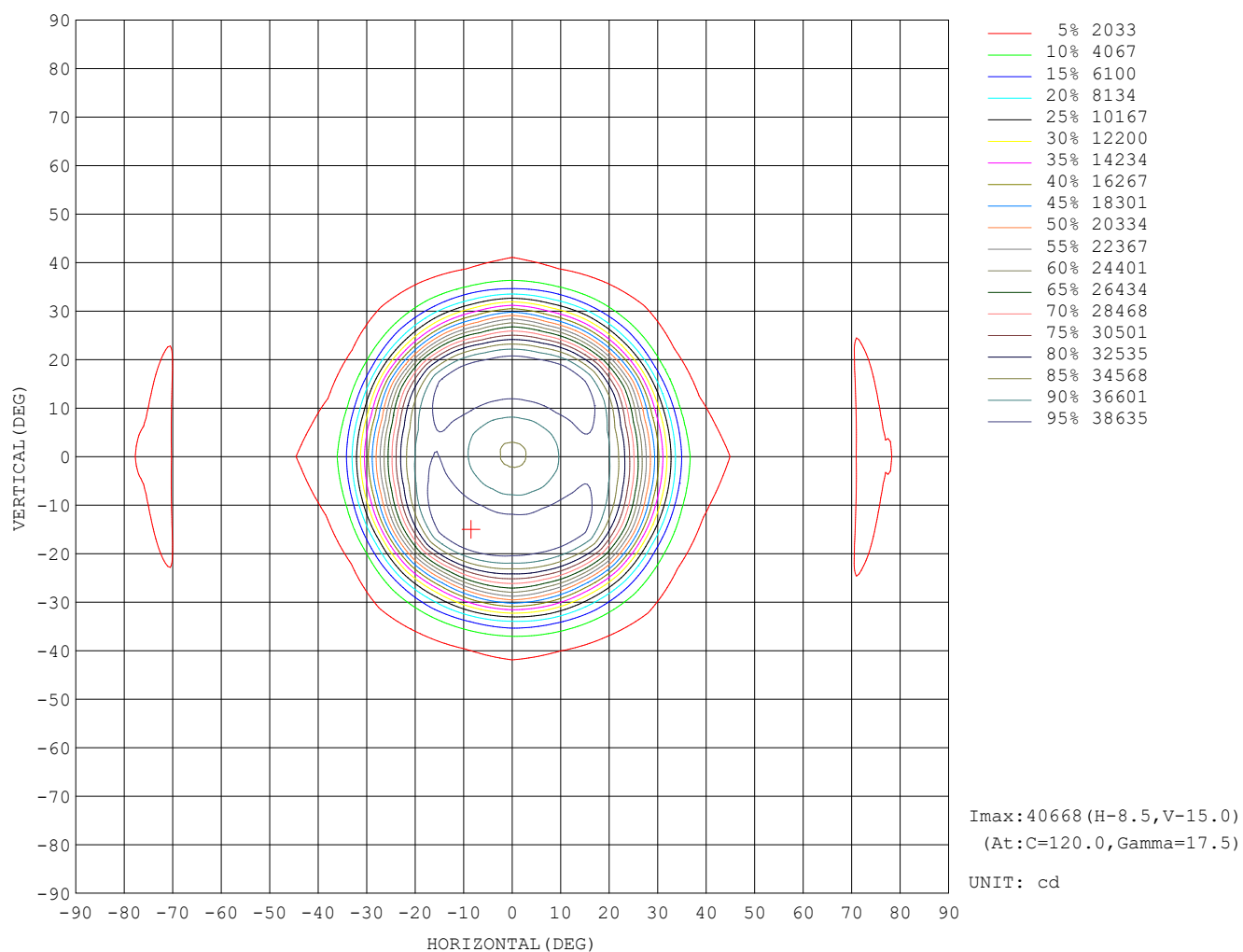
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	72	83	76	72	82	76	72	68
0.80	91	84	80	90	84	80	89	83	79	75
1.00	95	89	85	94	88	84	93	88	84	79
1.25	99	93	89	98	93	89	96	91	88	83
1.50	102	97	93	101	96	92	99	94	91	86
2.00	105	100	96	104	99	96	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	90
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	110	106	104	106	103	101	93
5.00	113	110	108	111	108	106	107	105	103	95
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
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 Operators: LYJ
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

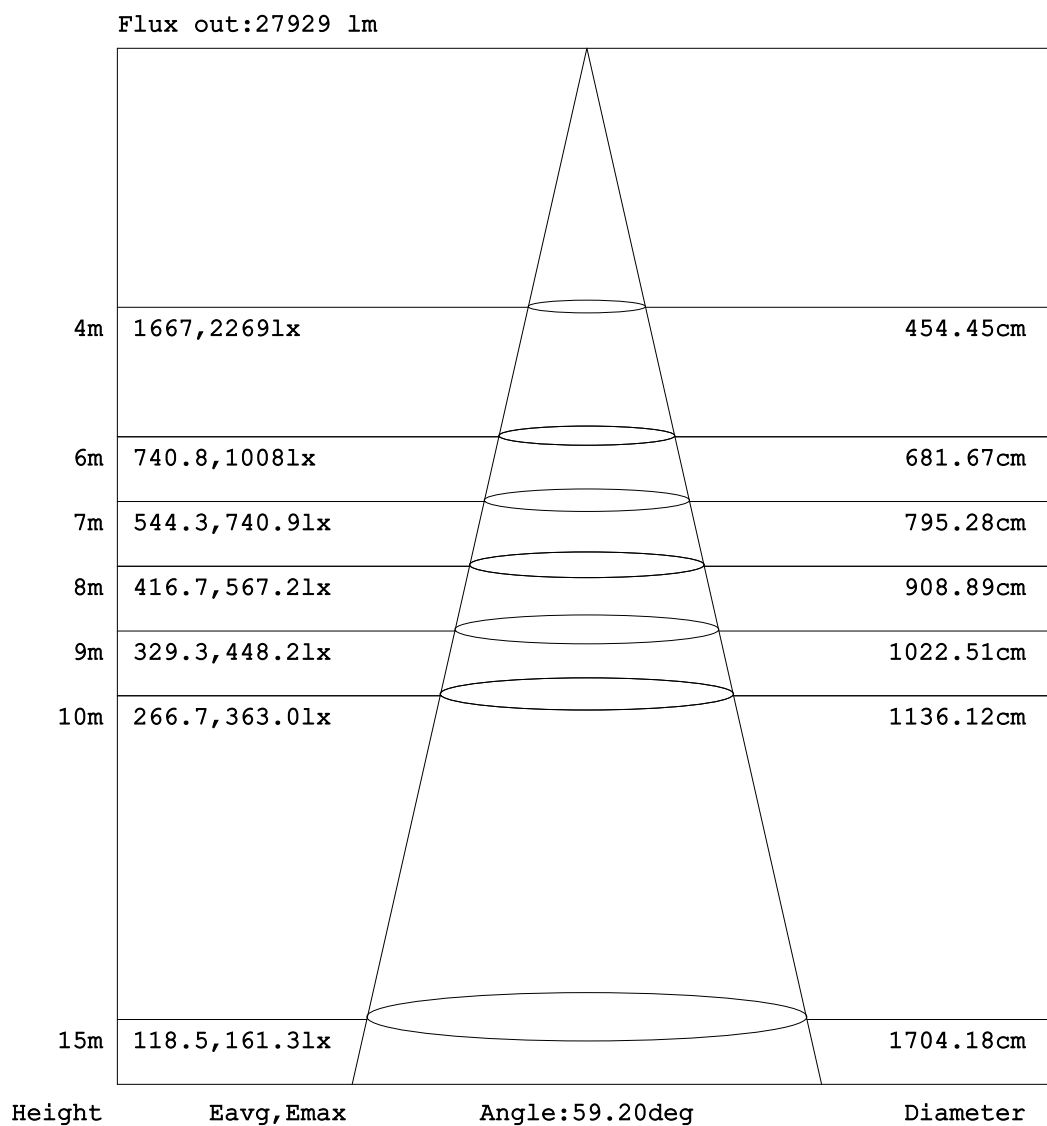
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Temperature:25.3°C
Operators:LYJ
Test Date:2023-03-31

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

AAI Figure



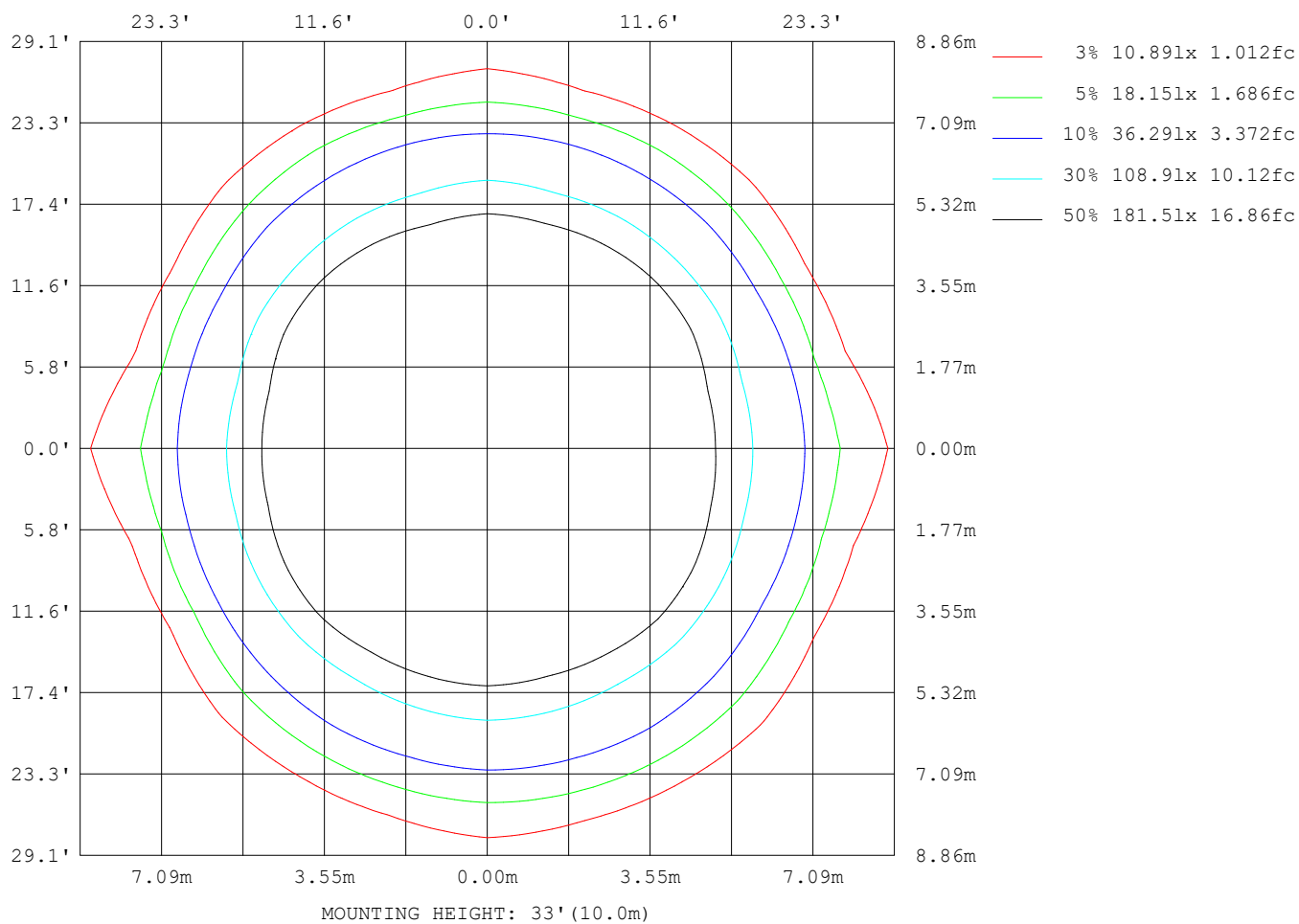
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 15.0DEG
Test Speed: HIGH
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

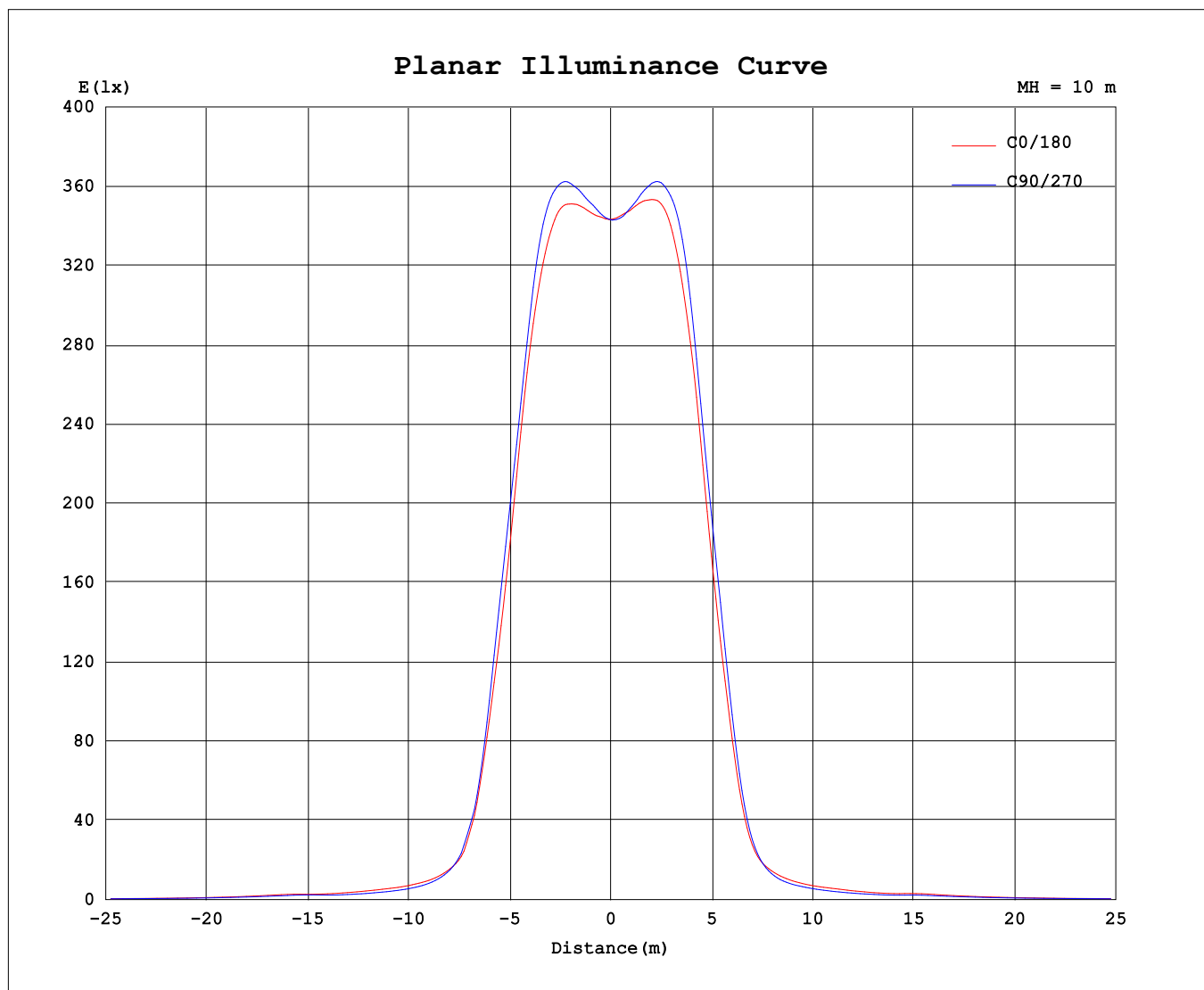
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-03-31

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4556]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-03-31

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4556]
Remarks: