

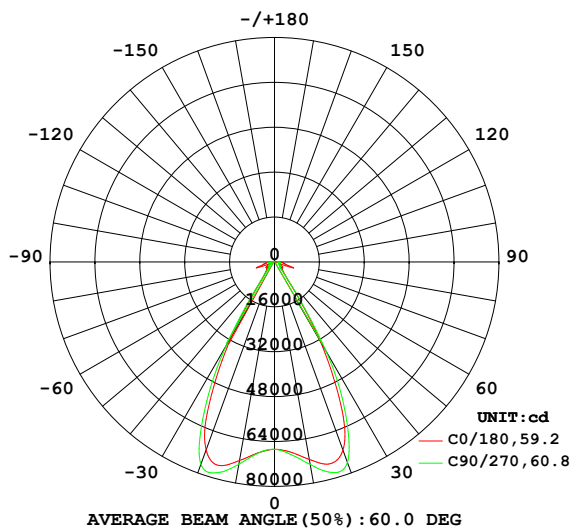
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

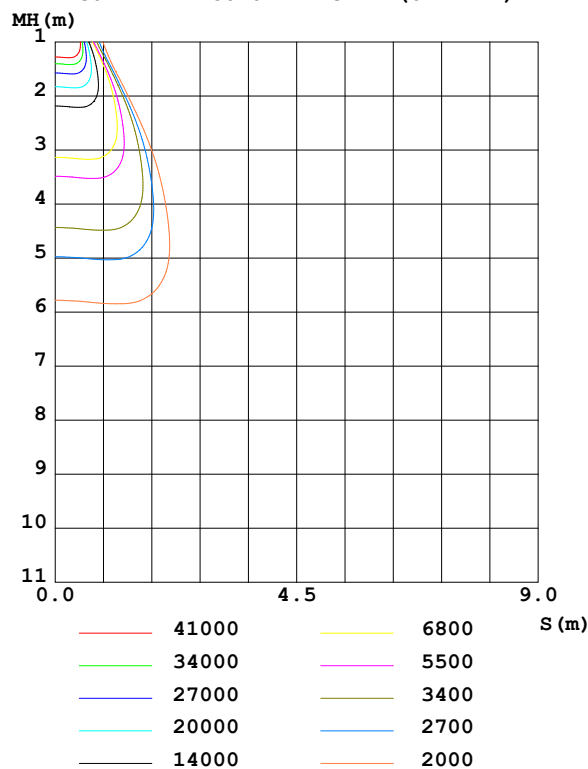
Test:U:230.0V I:1.787A P:400.0W PF:0.973 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:72236x1 lm		
NAME: LHB09-400H-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 180.59 lm/W			
MODEL	/	I _{max} (cd)	79190	S/MH (C0/180)	0.84
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	72236	η UP,DN (C0-180)	0.0,50.4
NOMINAL FLUX (lm)	72236	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	7147	7225	7330	7290	7187	7236	7317	7246	0- 10	6667	6667	9.23,9.23
20	7132	7713	7600	7759	7126	7727	7670	7738	10- 20	21523	28190	39,39
30	3282	3710	3694	3340	3013	3180	3450	3374	20- 30	26169	54358	75.3,75.3
40	544.8	493.8	494.6	425.7	518.7	400.9	439.2	414.3	30- 40	8204	62562	86.6,86.6
50	335.6	224.6	241.3	224.8	334.9	232.0	245.7	234.0	40- 50	2247	64809	89.7,89.7
60	309.7	208.3	248.4	205.0	296.5	202.9	232.9	201.7	50- 60	1967	66777	92.4,92.4
70	202.0	139.0	162.4	139.8	326.0	139.4	160.1	137.7	60- 70	1650	68427	94.7,94.7
80	348.7	170.2	163.6	172.5	340.3	192.1	173.5	176.4	70- 80	1850	70277	97.3,97.3
90	32.76	104.4	84.42	75.41	25.21	64.59	48.80	73.39	80- 90	1959	72236	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): 63806 lm

%lum = 88.3%

%lamp = 88.3%

Conical surface Flux(120deg): 66777 lm

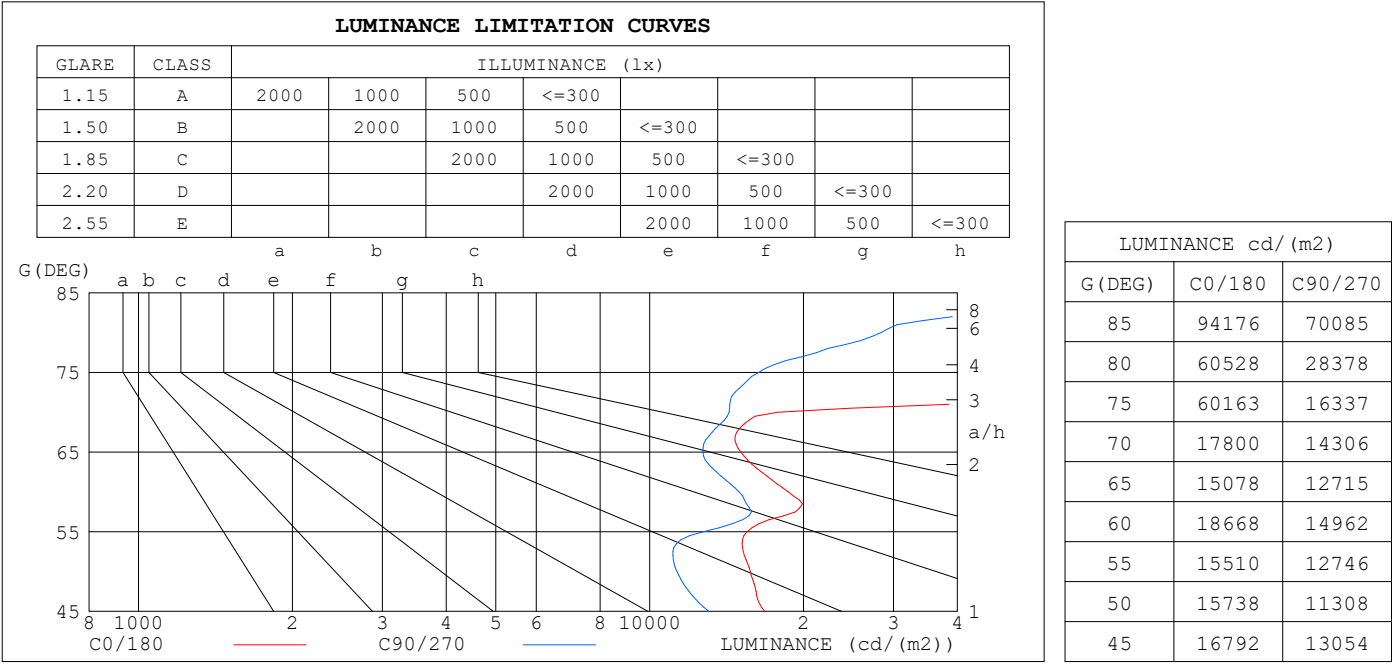
%lum = 92.4%

%lamp = 92.4%

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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



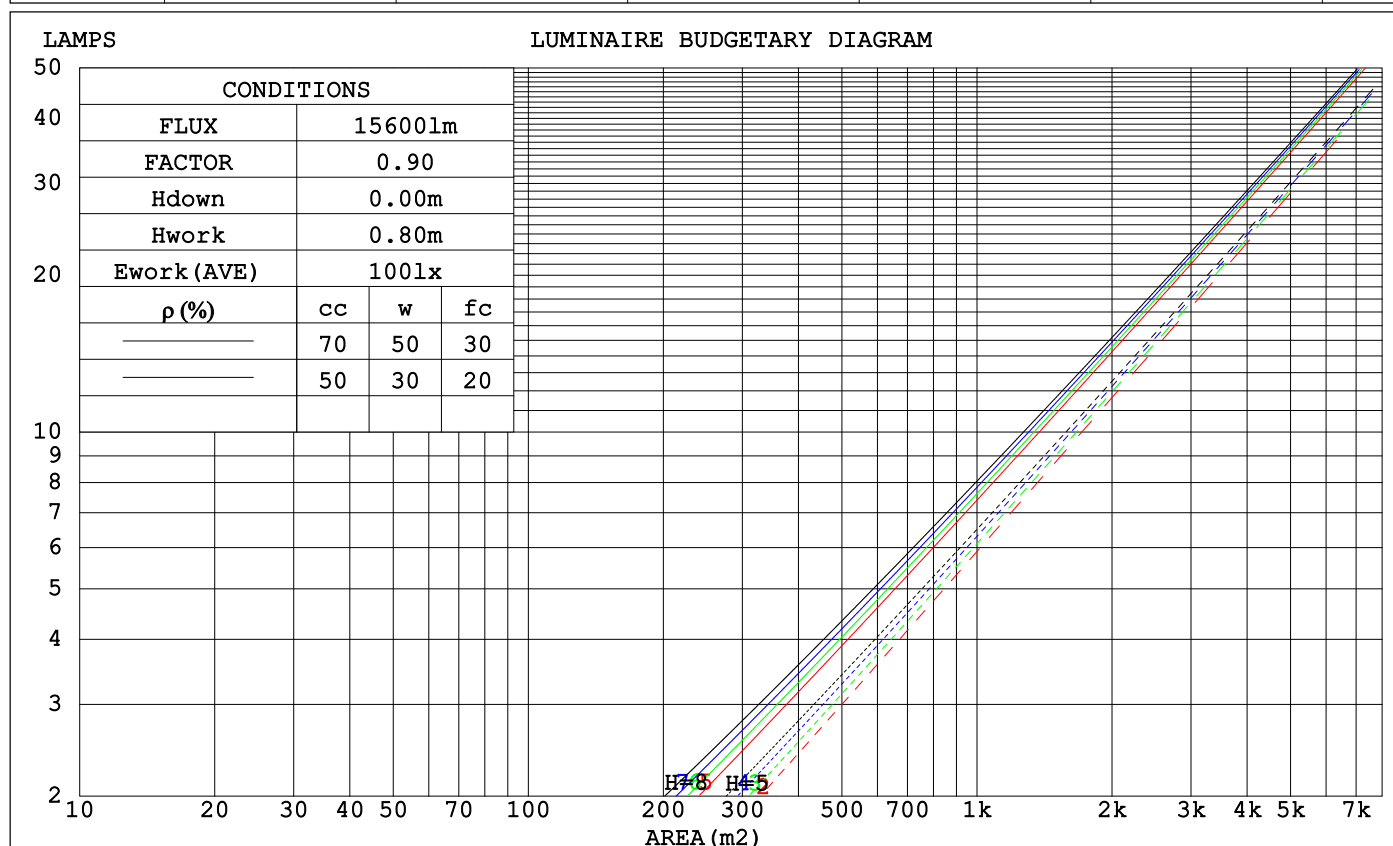
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2023-03-31

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
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 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	15.3	16.4	15.7	16.7	17.0	14.9	15.3	14.9	15.6	15.9
3H	17.9	18.9	18.3	19.3	19.6	16.8	17.8	17.2	18.1	18.5
4H	21.6	22.5	22.0	22.9	23.2	18.2	19.2	18.6	19.5	19.9
6H	25.0	25.9	25.4	26.2	26.6	20.6	21.4	21.0	21.8	22.2
8H	26.4	27.2	26.8	27.6	28.0	22.1	22.9	22.5	23.3	23.7
12H	27.6	28.4	28.1	28.8	29.2	23.9	24.7	24.3	25.0	25.5
4H 2H	15.9	16.9	16.3	17.2	17.6	15.1	16.0	15.5	16.3	16.7
3H	18.6	19.4	19.1	19.8	20.2	17.8	18.5	18.2	18.9	19.3
4H	21.8	22.5	22.3	23.0	23.4	19.3	20.0	19.7	20.4	20.8
6H	25.8	26.4	26.3	26.9	27.3	22.1	22.7	22.5	23.1	23.6
8H	27.4	27.9	27.8	28.4	28.9	23.6	24.2	24.1	24.6	25.1
12H	28.9	29.4	29.4	29.9	30.3	25.6	26.1	26.0	26.5	27.0
8H 4H	22.1	22.7	22.6	23.1	23.6	20.1	20.6	20.5	21.1	21.5
6H	26.2	26.6	26.7	27.1	27.6	23.3	23.7	23.8	24.2	24.7
8H	27.9	28.3	28.4	28.8	29.3	25.0	25.4	25.5	25.9	26.4
12H	29.7	30.1	30.2	30.6	31.2	27.0	27.4	27.5	27.9	28.4
12H 4H	22.3	22.8	22.8	23.3	23.8	20.5	21.0	20.9	21.4	21.9
6H	26.3	26.8	26.9	27.2	27.8	23.7	24.1	24.2	24.6	25.1
8H	28.1	28.5	28.6	29.0	29.5	25.5	25.9	26.0	26.4	27.0
CIE190: 2010										

CIE190: 2010
Area: 0.332 m2

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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

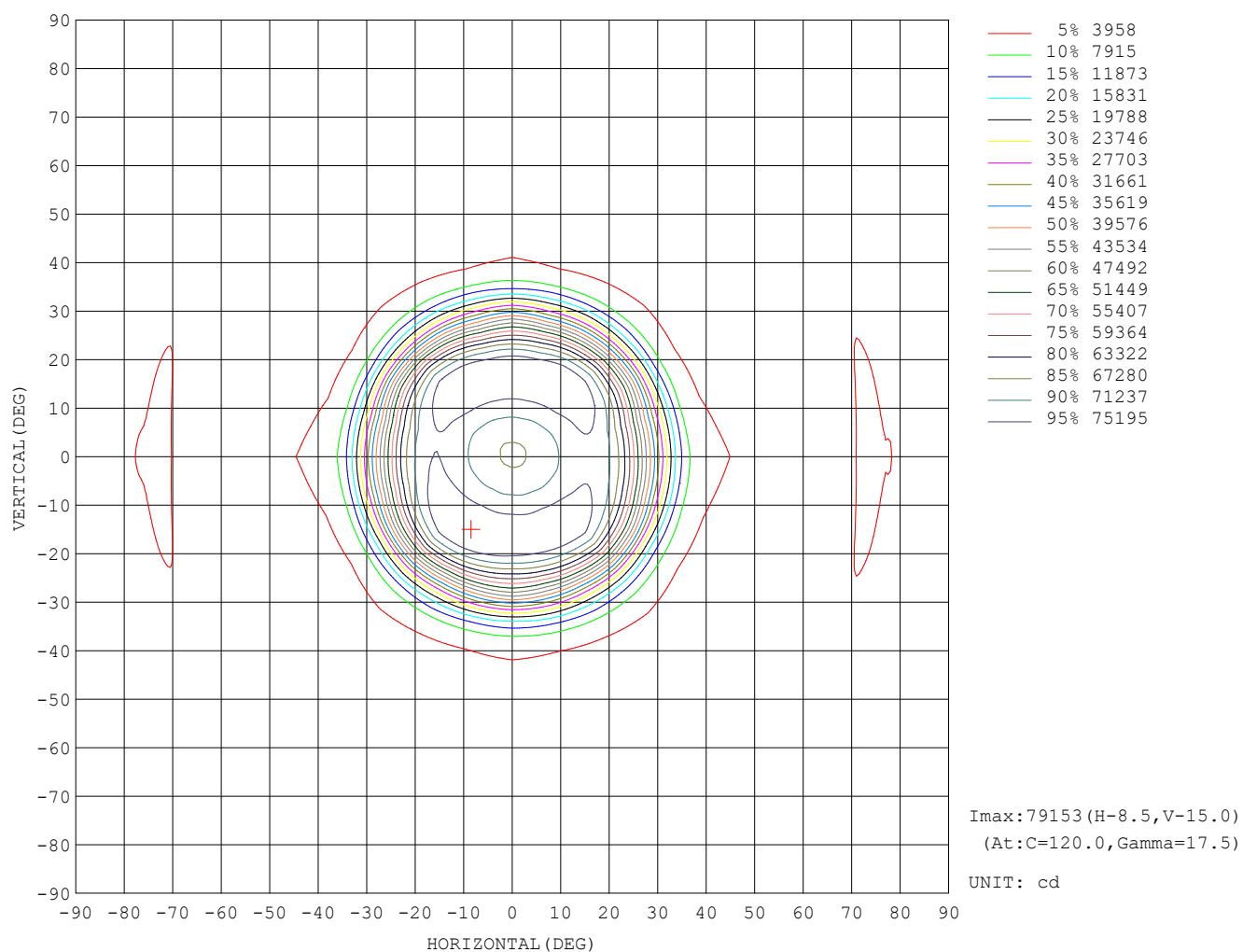
UTILIZATION FACTORS TABLE

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	

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 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:

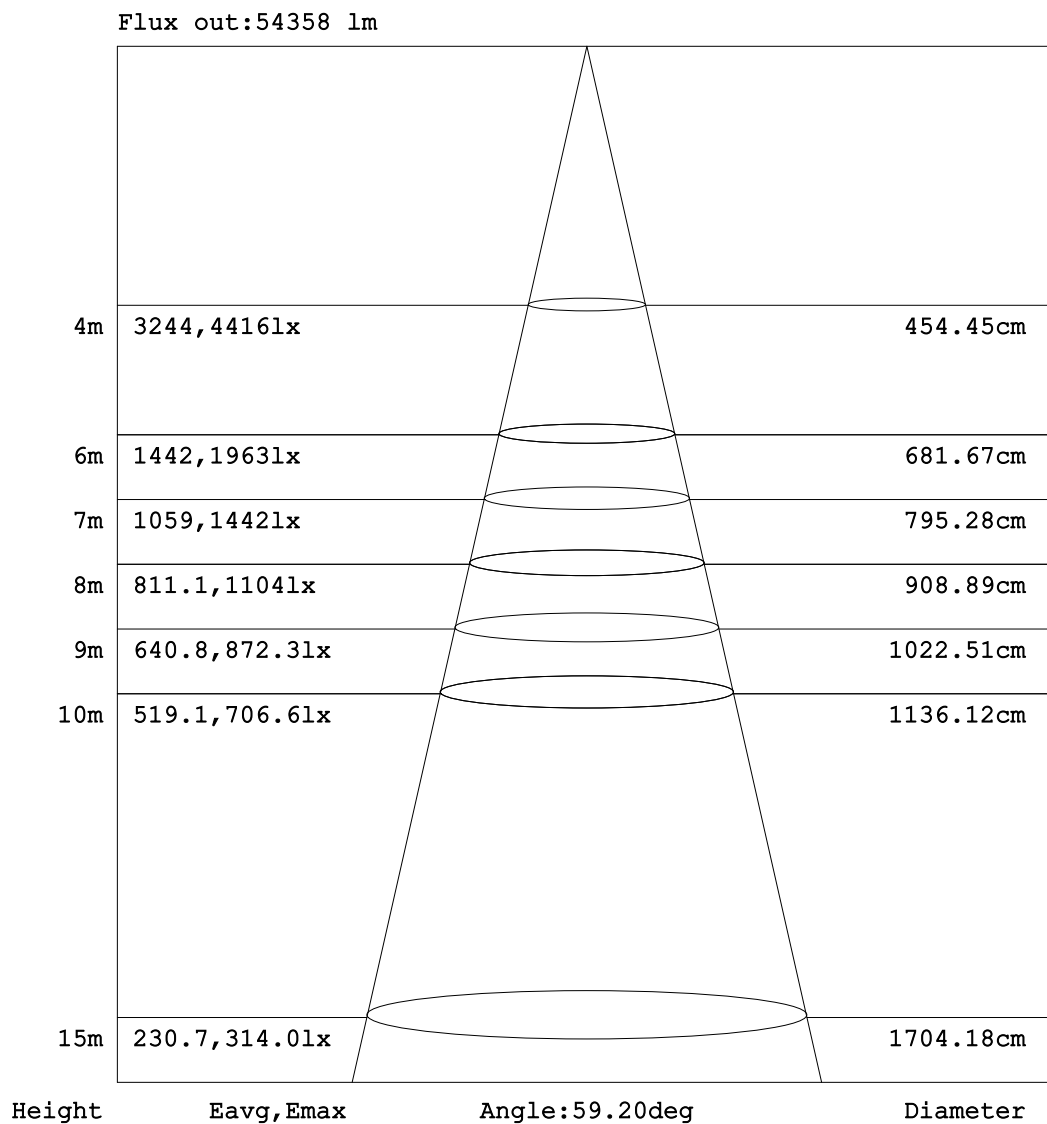
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
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



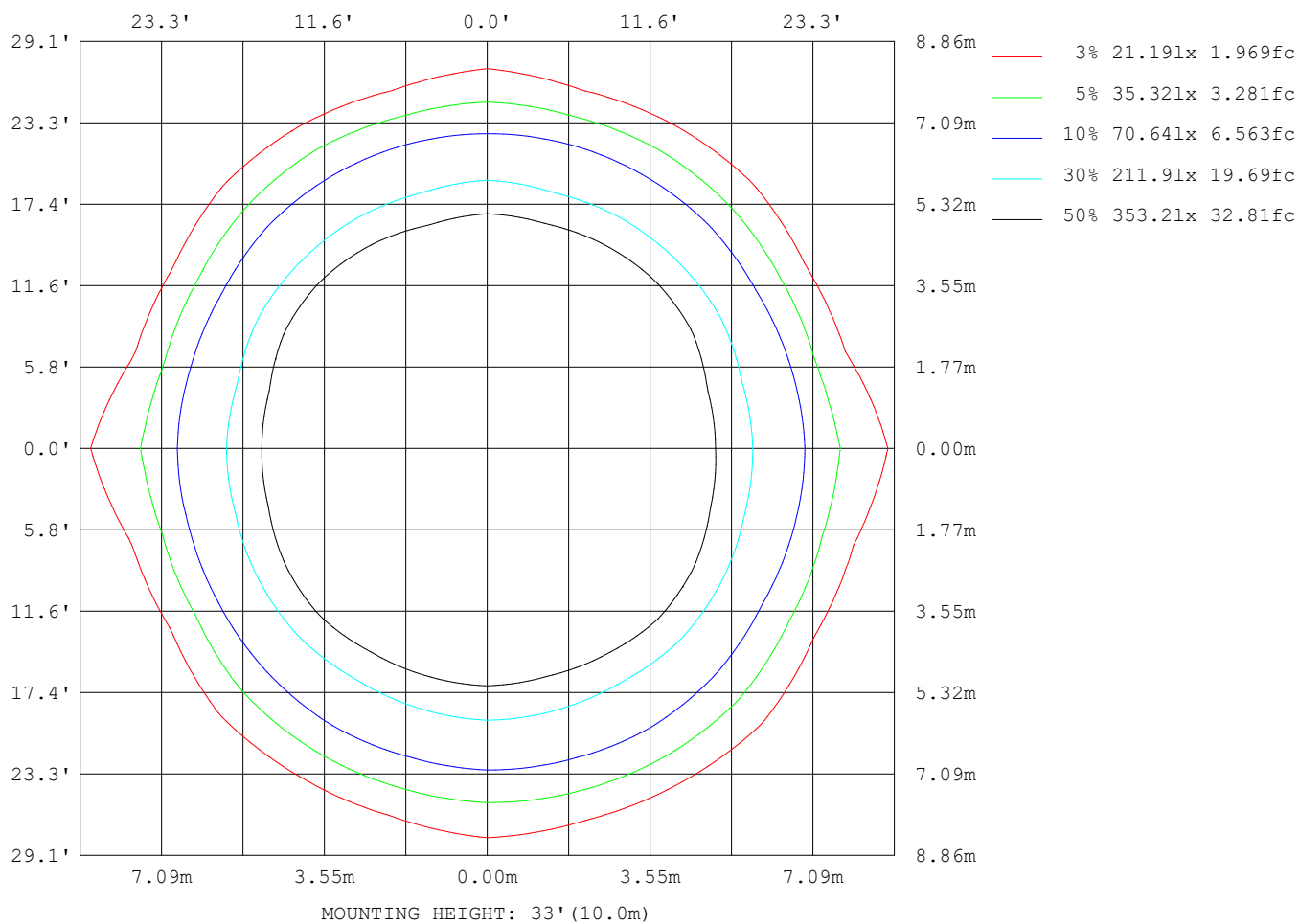
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 15.0DEG
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Humidity:65.0%
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

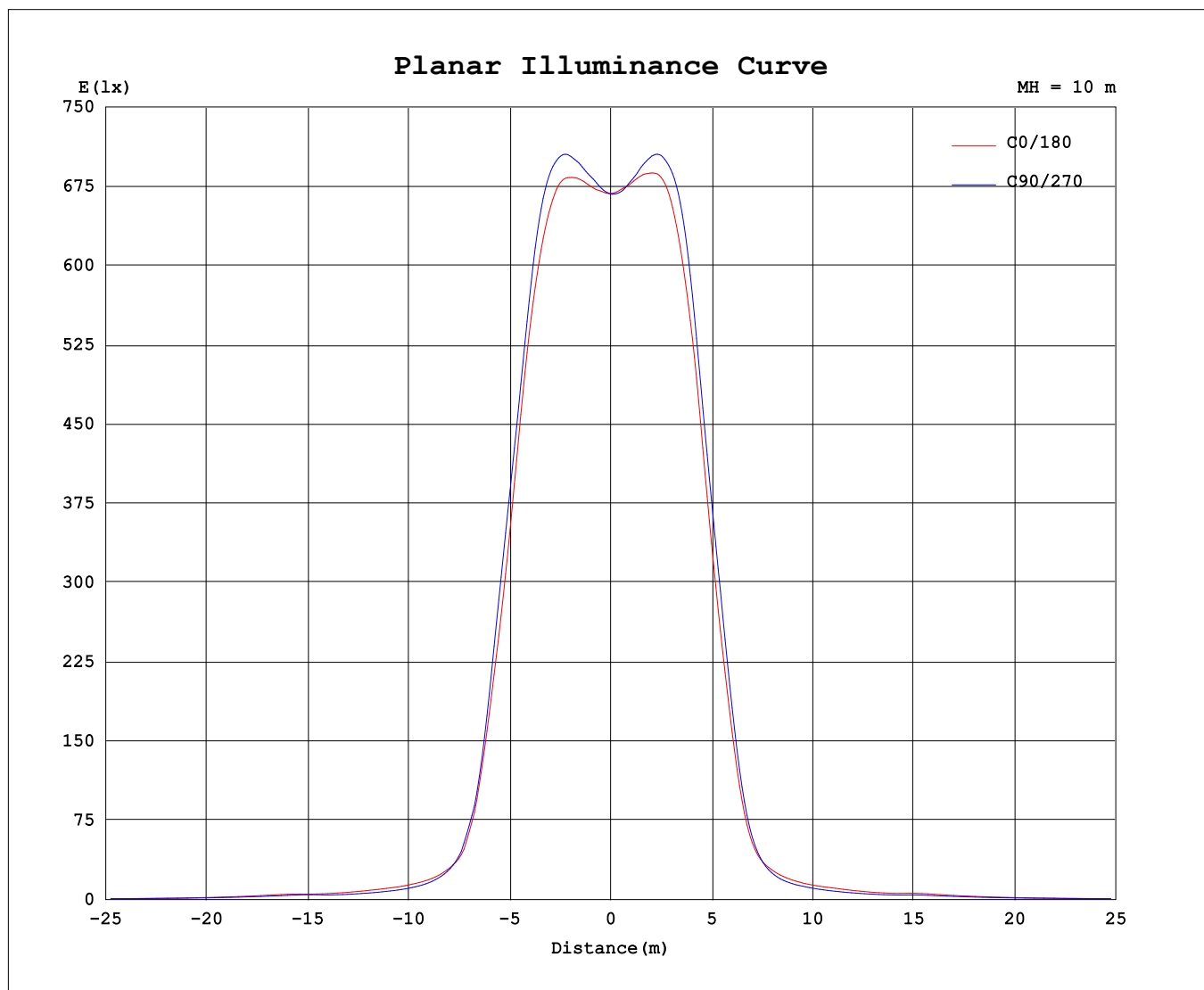
ISOLUX DIAGRAM



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



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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: