

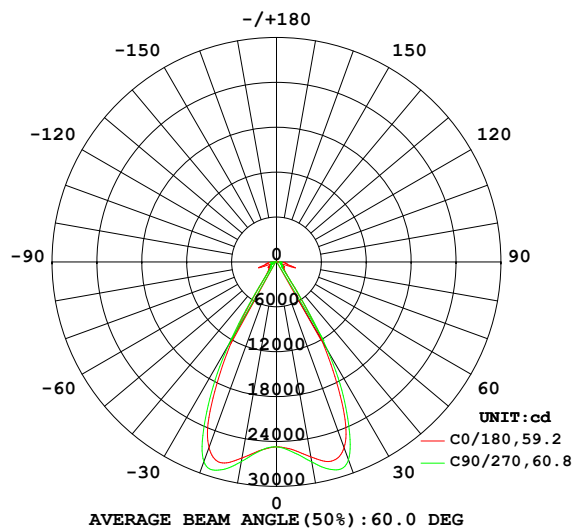
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

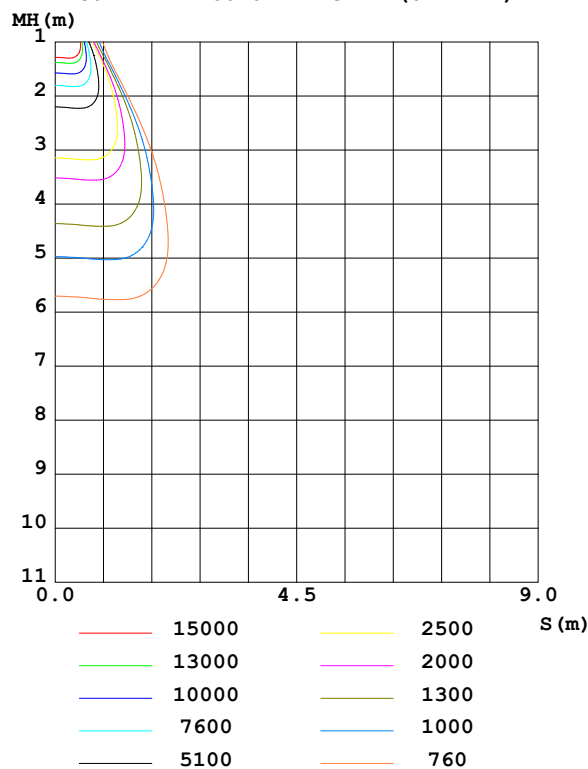
Test:U:230.0V I:0.672A P:150.0W PF:0.971 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:26739.5x1 lm		
NAME: LHB09-150H-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 178.26 lm/W			
MODEL	/	Imax (cd)	29314	S/MH (C0/180)	0.84
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	26740	η UP,DN (C0-180)	0.0,50.4
NOMINAL FLUX (lm)	26739.5	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	2645	2674	2713	2698	2660	2679	2709	2682	0- 10	2468	2468	9.23,9.23
20	2640	2855	2813	2872	2638	2860	2839	2864	10- 20	7967	10435	39,39
30	1215	1373	1367	1236	1115	1177	1277	1249	20- 30	9687	20122	75.3,75.3
40	201.7	182.8	183.1	157.6	192.0	148.4	162.6	153.4	30- 40	3037	23159	86.6,86.6
50	124.2	83.13	89.33	83.21	124.0	85.88	90.96	86.61	40- 50	831.9	23990	89.7,89.7
60	114.6	77.12	91.94	75.88	109.7	75.10	86.20	74.65	50- 60	728.3	24719	92.4,92.4
70	74.77	51.45	60.13	51.74	120.7	51.59	59.28	50.98	60- 70	610.7	25329	94.7,94.7
80	129.1	63.00	60.56	63.84	126.0	71.11	64.22	65.29	70- 80	684.9	26014	97.3,97.3
90	12.13	38.65	31.25	27.91	9.333	23.91	18.07	27.17	80- 90	725.2	26740	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): 23619 lm

%lum = 88.3%

%lamp = 88.3%

Conical surface Flux(120deg): 24719 lm

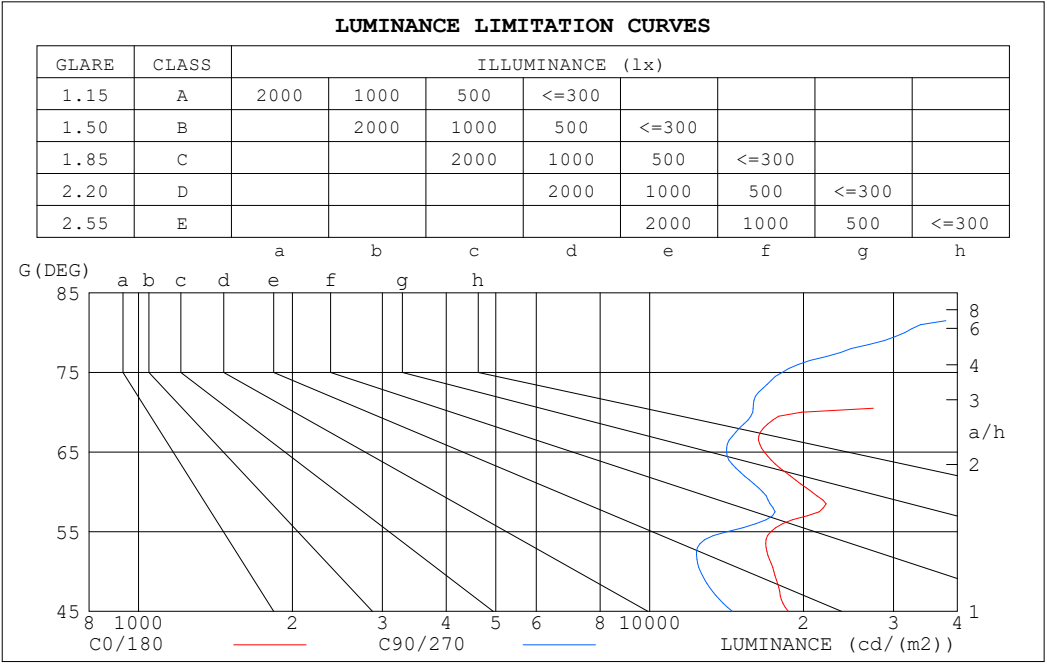
%lum = 92.4%

%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



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	104741	77947
80	67318	31562
75	66912	18170
70	19797	15911
65	16769	14141
60	20762	16640
55	17250	14176
50	17503	12576
45	18676	14518

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%

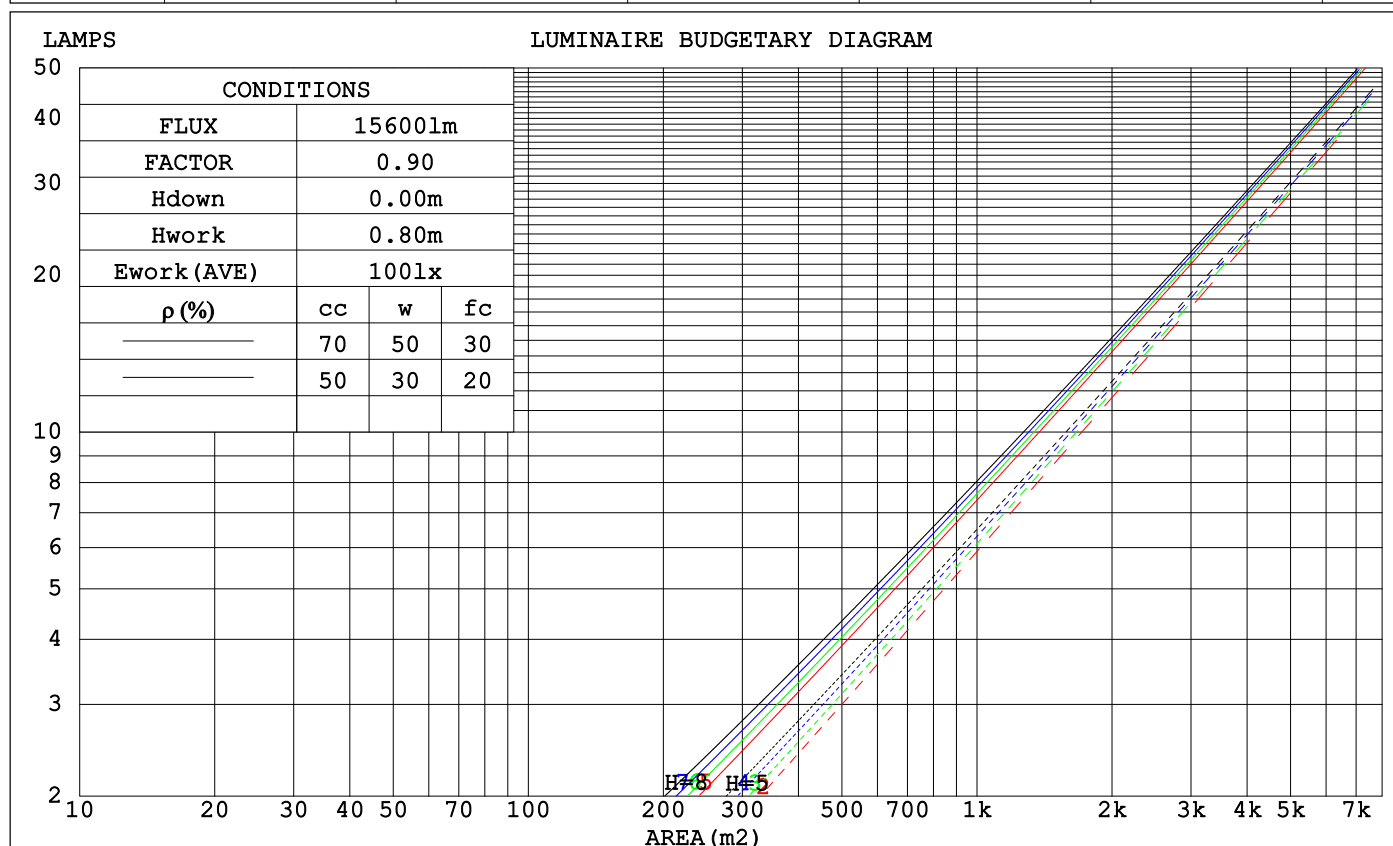
Test Distance:26.000m [K=0.4556]

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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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	15.7	16.8	16.0	17.1	17.4	14.5	15.6	14.9	16.0	16.3
3H	18.3	19.3	18.7	19.6	20.0	17.2	18.2	17.6	18.5	18.9
4H	21.9	22.9	22.4	23.2	23.6	18.6	19.5	19.0	19.9	20.3
6H	25.4	26.2	25.8	26.6	27.0	21.0	21.8	21.4	22.2	22.6
8H	26.7	27.5	27.2	27.9	28.3	22.4	23.2	22.9	23.6	24.0
12H	28.0	28.8	28.4	29.2	29.6	24.3	25.0	24.7	25.4	25.8
4H 2H	16.3	17.2	16.7	17.6	18.0	15.4	16.4	15.8	16.7	17.1
3H	19.0	19.8	19.4	20.2	20.6	18.1	18.9	18.5	19.3	19.7
4H	22.2	22.9	22.6	23.3	23.8	19.6	20.3	20.1	20.8	21.2
6H	26.2	26.8	26.6	27.2	27.7	22.4	23.0	22.9	23.5	24.0
8H	27.7	28.3	28.2	28.8	29.2	24.0	24.6	24.5	25.0	25.5
12H	29.3	29.8	29.7	30.2	30.7	25.9	26.4	26.4	26.9	27.4
8H 4H	22.5	23.1	23.0	23.5	24.0	20.4	21.0	20.9	21.4	21.9
6H	26.5	27.0	27.0	27.5	28.0	23.6	24.1	24.1	24.6	25.1
8H	28.3	28.7	28.8	29.2	29.7	25.3	25.7	25.9	26.3	26.8
12H	30.1	30.5	30.6	31.0	31.5	27.4	27.7	27.9	28.2	28.8
12H 4H	22.7	23.2	23.2	23.7	24.1	20.8	21.3	21.3	21.8	22.3
6H	26.7	27.1	27.2	27.6	28.1	24.1	24.5	24.6	25.0	25.5
8H	28.5	28.8	29.0	29.3	29.9	25.9	26.3	26.4	26.8	27.3
CIE190: 2010										

CIE190: 2010
Area: 0.1105 m2

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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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Humidity:65.0%
Test Distance:26.000m [K=0.4556]
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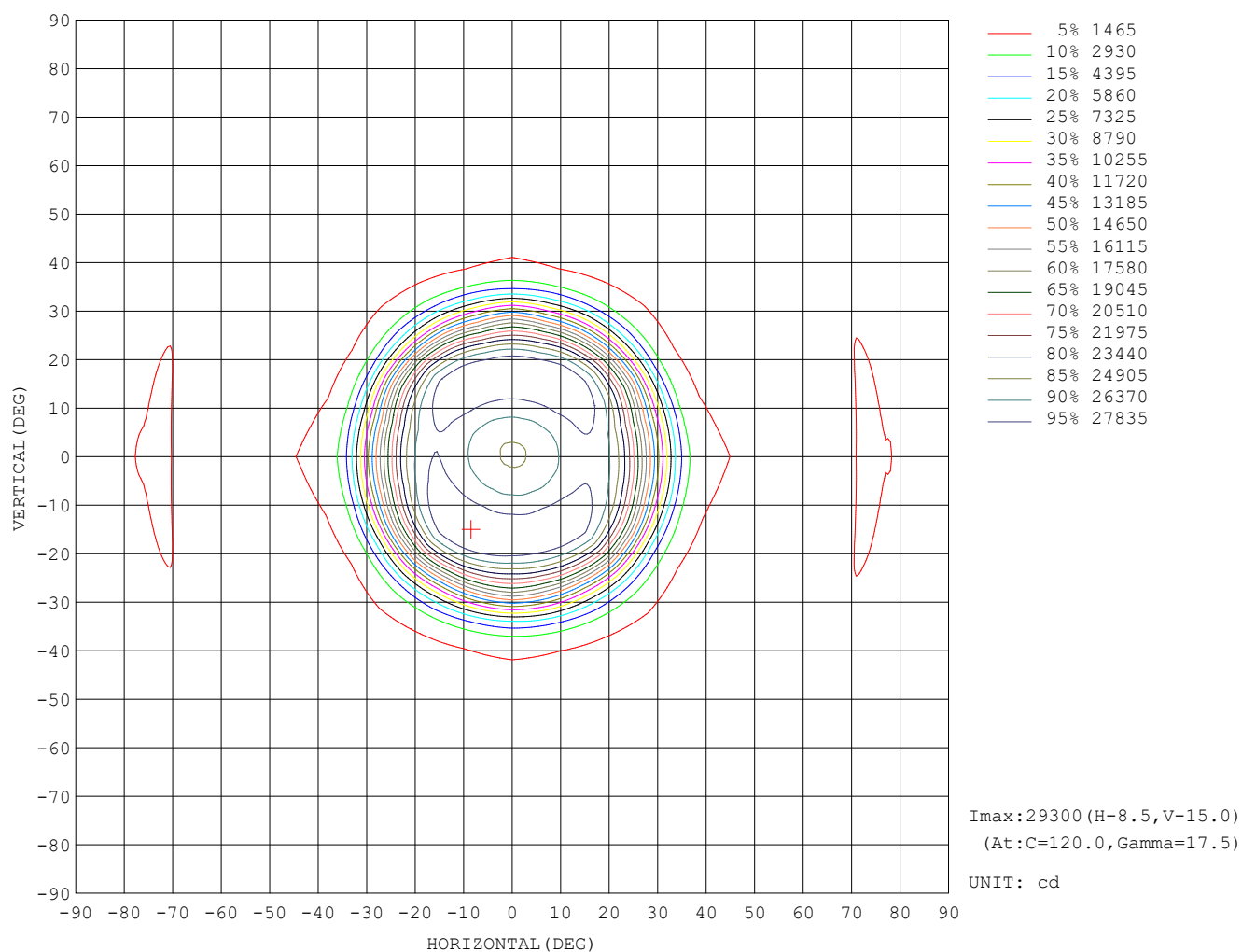
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	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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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

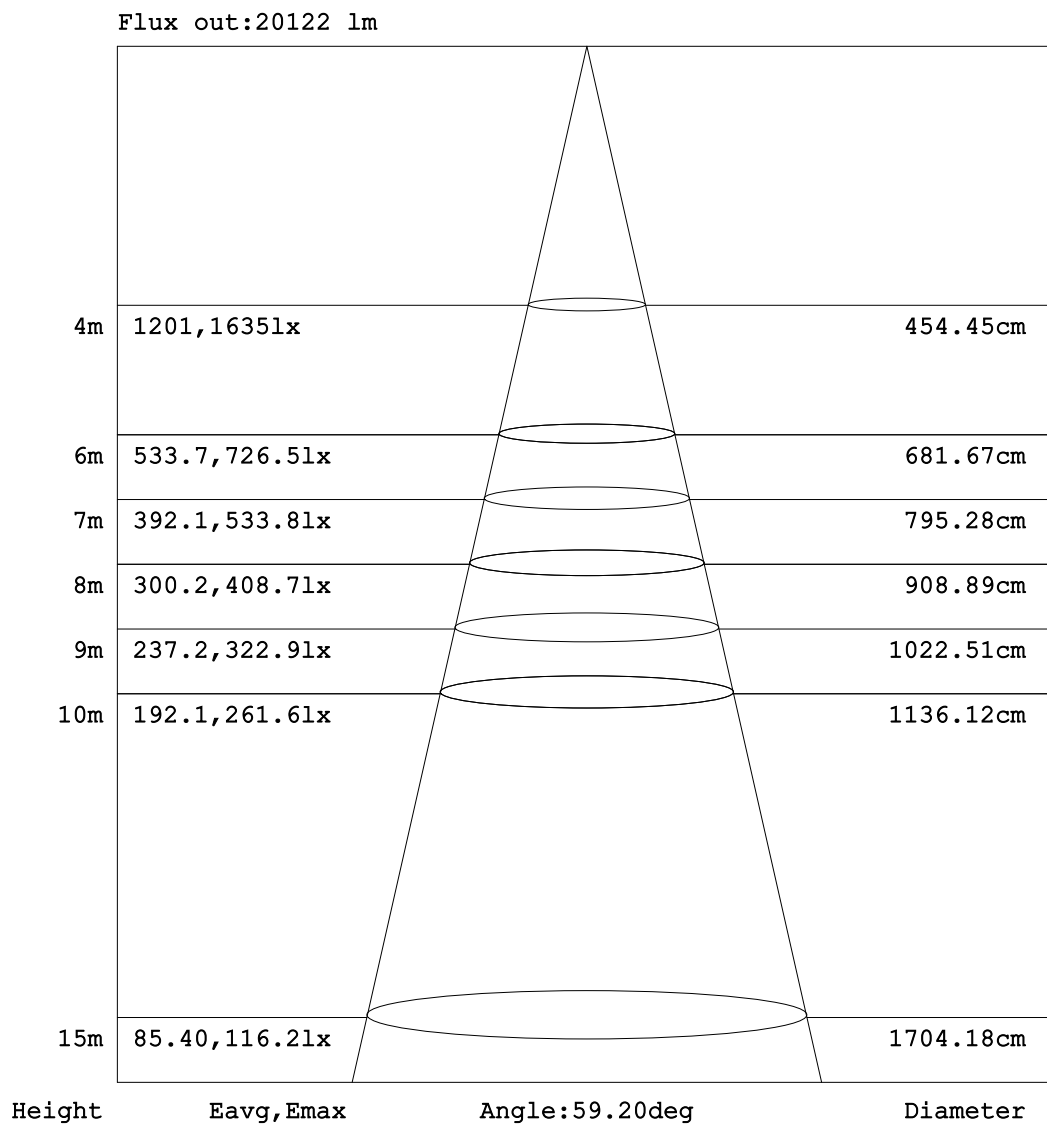
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Date:2023-03-31

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Remarks:

AAI Figure



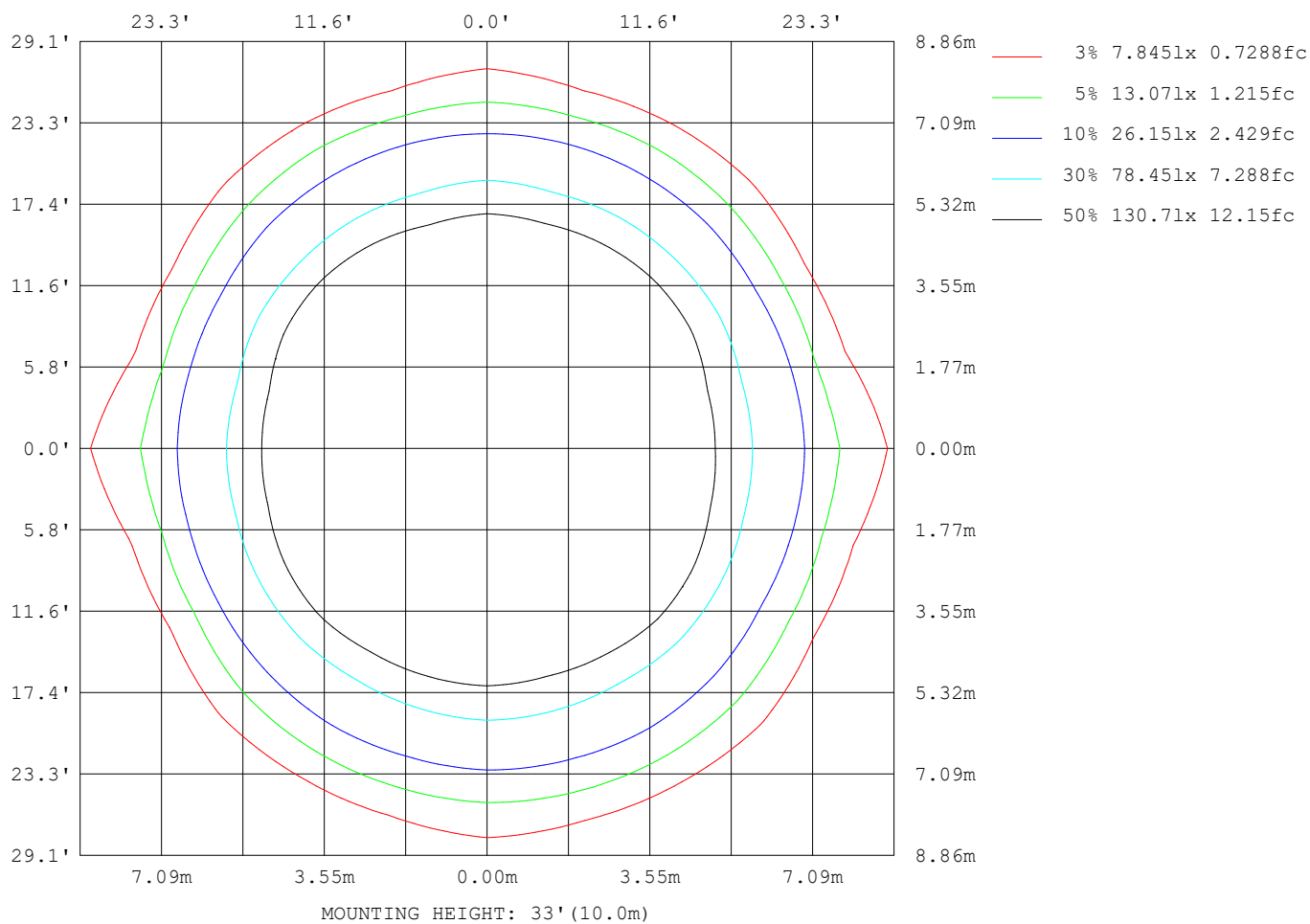
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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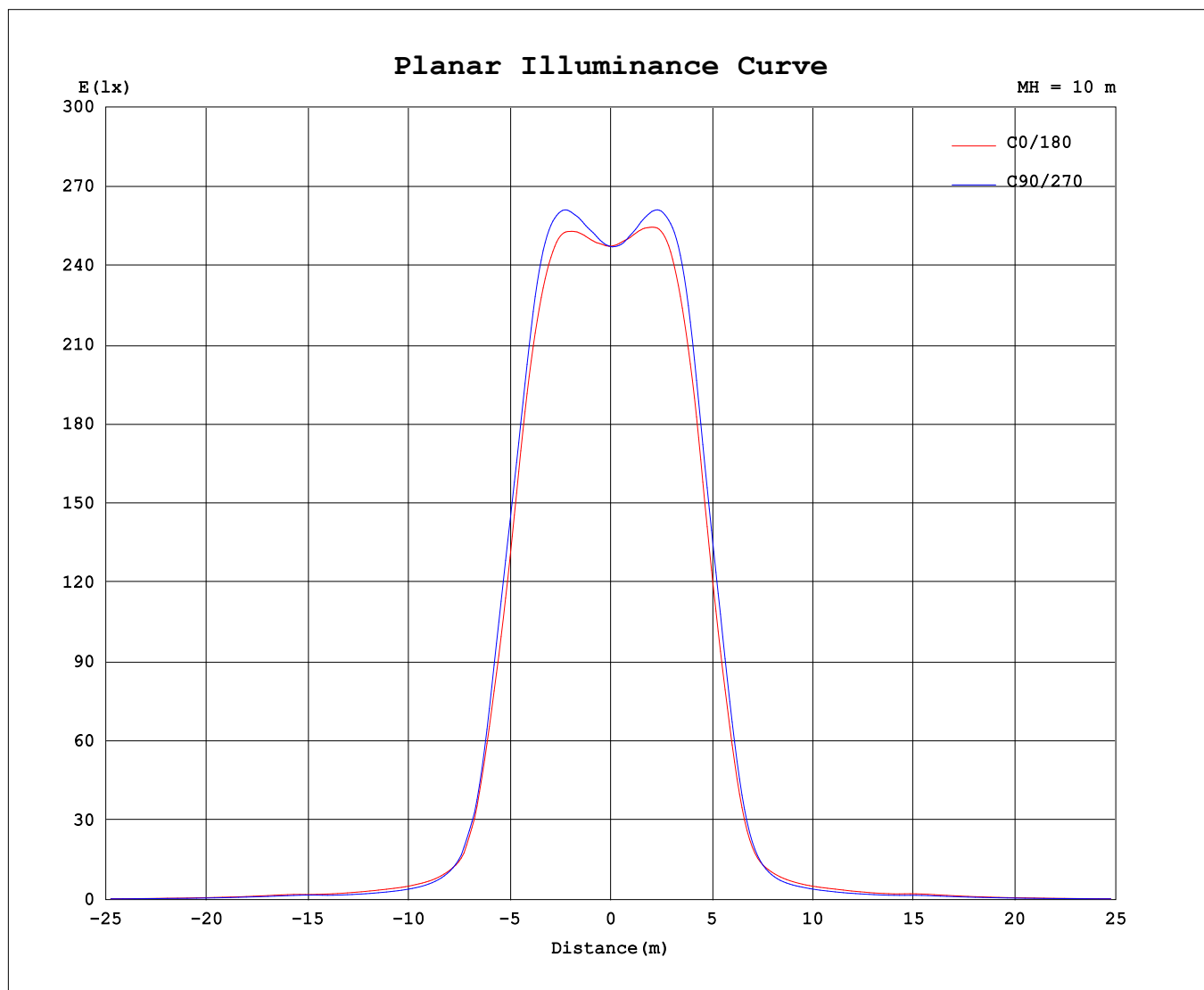
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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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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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: