

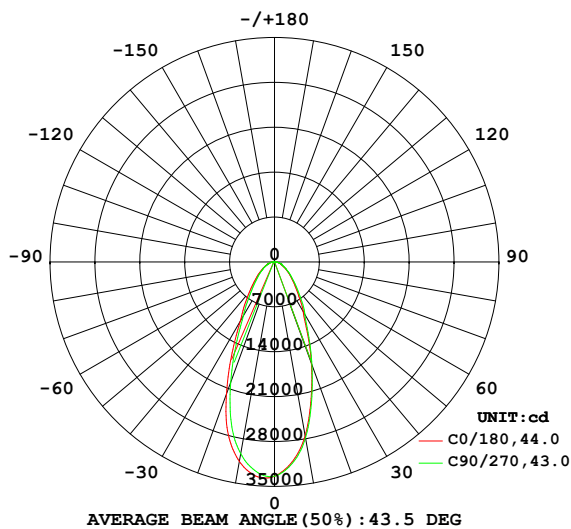
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

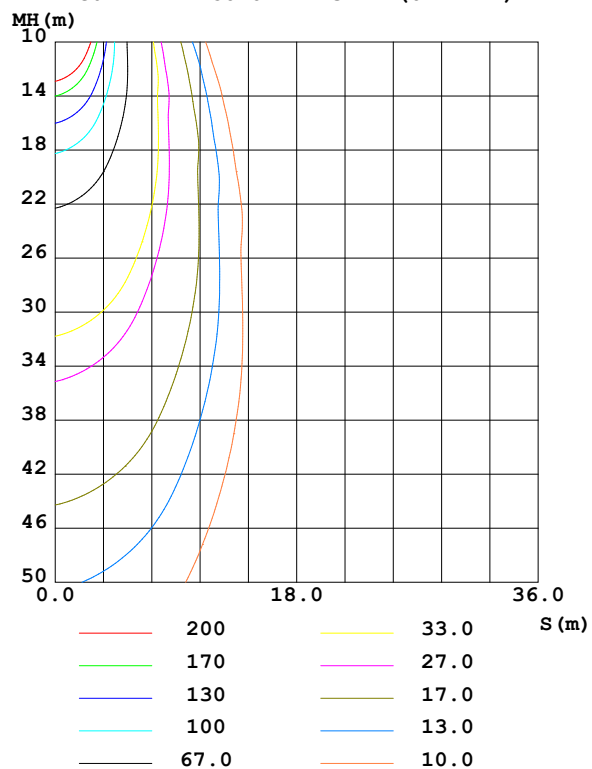
Test:U:219.8V I:0.688A P:148.8W PF:0.985 Freq:50.01Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29167.3x1 lm		
NAME: HB68-150H-5070-H00199	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 196.04 lm/W			
MODEL	/	Imax (cd)	33795	S/MH (C0/180)	0.76
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.73
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	29167	η UP,DN (C0-180)	0.0,48.5
NOMINAL FLUX (lm)	29167.3	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,51.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	0.75

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:ZZX
Test Date:2023-06-29

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	2753	2697	2786	2999	3158	3154	3036	2855	0- 10	2986	2986	10.2,10.2
20	1684	1615	1708	1974	2192	2167	1997	1745	10- 20	6730	9715	33.3,33.3
30	898.2	881.3	946.2	1069	1070	1063	976.8	936.6	20- 30	6238	15953	54.7,54.7
40	511.8	515.2	553.1	647.8	603.7	587.9	534.1	550.2	30- 40	4661	20614	70.7,70.7
50	312.0	314.5	329.1	374.0	355.8	342.7	321.5	331.3	40- 50	3327	23941	82.1,82.1
60	186.2	189.2	201.5	219.3	212.8	212.4	201.5	199.0	50- 60	2325	26266	90.1,90.1
70	107.0	109.0	111.6	121.9	119.7	117.3	111.8	111.4	60- 70	1519	27785	95.3,95.3
80	52.87	56.44	58.65	63.60	65.69	63.22	59.28	54.22	70- 80	994.5	28779	98.7,98.7
90	1.737	2.301	6.000	8.614	9.404	7.646	3.508	2.062	80- 90	387.9	29167	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): 22422 lm

%lum = 76.9%

%lamp = 76.9%

Conical surface Flux(130deg): 27120 lm

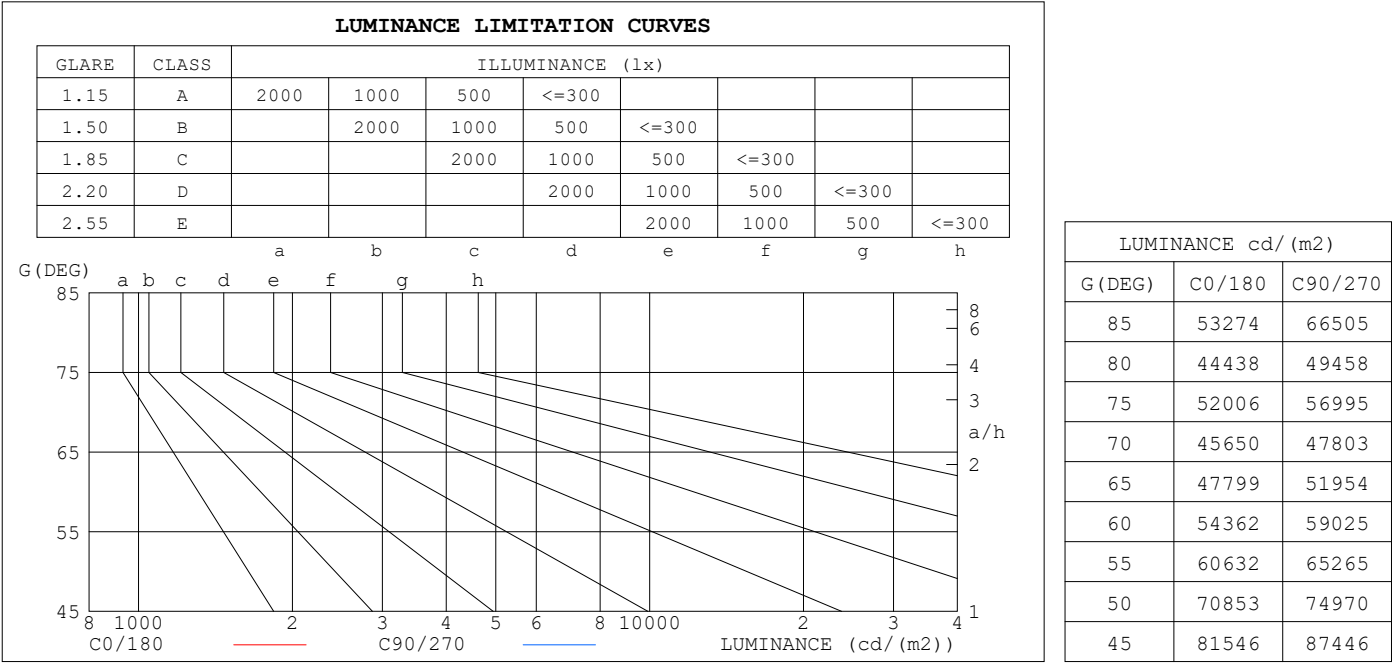
%lum = 93.0%

%lamp = 93.0%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-06-29

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



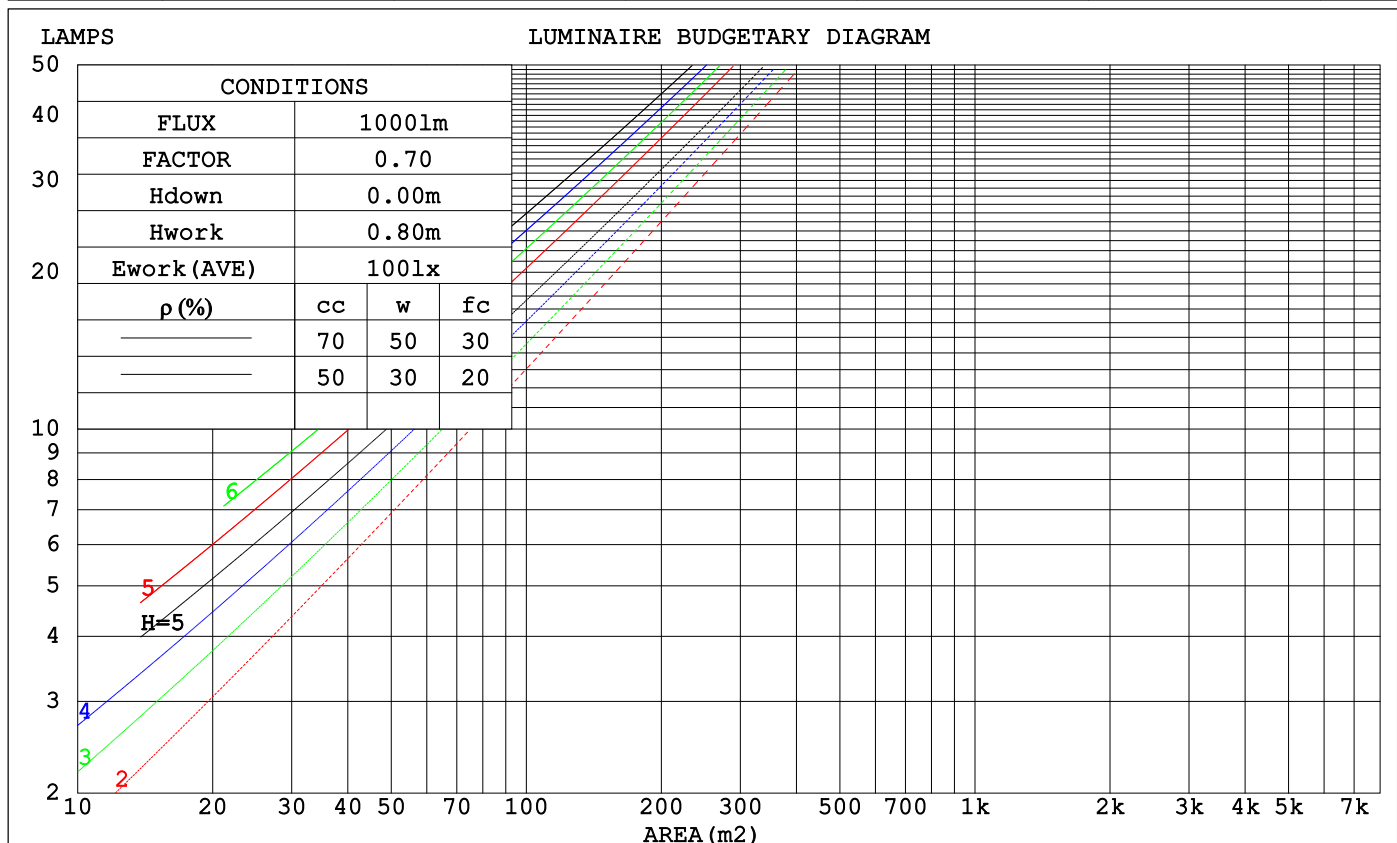
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-06-29

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	1.04	1.01	1.05	1.02	.00	1.01	.99	.97	.98	.96	.94	.94	.92	.91	.89
2.0	.98	.92	.88	.96	.91	.87	.93	.89	.85	.89	.86	.83	.87	.84	.81	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.82	.78	.75	.80	.77	.74	.72
4.0	.82	.75	.70	.81	.74	.70	.79	.73	.69	.76	.72	.68	.74	.70	.67	.65
5.0	.76	.69	.64	.75	.68	.63	.73	.67	.63	.71	.66	.62	.69	.65	.61	.60
6.0	.70	.63	.58	.70	.63	.58	.68	.62	.58	.66	.61	.57	.65	.60	.57	.55
7.0	.66	.59	.54	.65	.58	.54	.64	.58	.53	.62	.57	.53	.61	.56	.53	.51
8.0	.62	.55	.50	.61	.54	.50	.60	.54	.50	.59	.53	.49	.58	.53	.49	.47
9.0	.58	.51	.47	.57	.51	.46	.56	.50	.46	.55	.50	.46	.54	.50	.46	.44
10.0	.55	.48	.44	.54	.48	.44	.53	.47	.43	.52	.47	.43	.52	.47	.43	.42



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZK
 Test Date: 2023-06-29

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	.237	.135	.043	.230	.131	.042	.217	.125	.040	.205	.118	.038	.194	.113	.036			
2.0	.222	.122	.037	.216	.119	.037	.205	.114	.035	.195	.109	.034	.185	.105	.033			
3.0	.207	.110	.033	.202	.108	.032	.192	.104	.032	.183	.100	.031	.175	.097	.030			
4.0	.193	.100	.029	.188	.098	.029	.180	.095	.028	.172	.092	.028	.165	.090	.027			
5.0	.180	.092	.027	.176	.090	.026	.169	.088	.026	.162	.085	.025	.156	.083	.025			
6.0	.169	.085	.024	.165	.084	.024	.159	.081	.024	.153	.079	.023	.147	.077	.023			
7.0	.159	.078	.022	.156	.078	.022	.150	.076	.022	.145	.074	.022	.140	.072	.021			
8.0	.150	.073	.021	.147	.072	.020	.142	.071	.020	.137	.069	.020	.133	.068	.020			
9.0	.142	.069	.019	.139	.068	.019	.135	.067	.019	.130	.065	.019	.126	.064	.019			
10.0	.134	.064	.018	.132	.064	.018	.128	.063	.018	.124	.062	.018	.120	.061	.017			

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	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.049	.019	.017	.016	
2.0	.163	.132	.106	.140	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.152	.114	.083	.131	.098	.072	.090	.068	.051	.052	.040	.030	.017	.013	.010	
4.0	.143	.100	.067	.123	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.055	.116	.077	.048	.080	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.127	.080	.046	.109	.069	.040	.075	.048	.028	.044	.028	.017	.014	.009	.006	
7.0	.120	.072	.039	.103	.063	.034	.071	.044	.024	.042	.026	.014	.013	.008	.005	
8.0	.114	.066	.033	.098	.057	.029	.068	.040	.021	.040	.024	.012	.013	.008	.004	
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.103	.057	.026	.089	.049	.022	.062	.035	.016	.036	.020	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2023-06-29

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	23.8	25.1	24.2	25.4	25.7	23.8	25.1	24.1	25.4	25.7
3H	25.1	26.3	25.5	26.6	27.0	25.3	26.5	25.7	26.8	27.2
4H	26.1	27.2	26.5	27.6	27.9	26.3	27.4	26.8	27.8	28.2
6H	26.6	27.6	27.0	28.0	28.4	27.0	28.0	27.4	28.3	28.7
8H	26.8	27.8	27.3	28.2	28.6	27.2	28.2	27.6	28.6	29.0
12H	27.0	28.0	27.5	28.3	28.8	27.5	28.4	27.9	28.8	29.2
4H 2H	24.2	25.3	24.6	25.7	26.1	24.5	25.5	24.9	25.9	26.3
3H	26.0	27.0	26.5	27.4	27.8	26.2	27.1	26.6	27.5	27.9
4H	27.1	27.9	27.6	28.4	28.8	27.4	28.2	27.8	28.6	29.1
6H	27.7	28.5	28.2	28.9	29.4	28.2	28.9	28.6	29.3	29.8
8H	28.0	28.7	28.5	29.1	29.6	28.5	29.1	28.9	29.6	30.0
12H	28.3	28.9	28.8	29.3	29.8	28.8	29.4	29.3	29.9	30.4
8H 4H	27.5	28.1	27.9	28.6	29.0	27.8	28.5	28.3	28.9	29.4
6H	28.2	28.8	28.7	29.3	29.7	28.7	29.2	29.2	29.7	30.2
8H	28.6	29.1	29.1	29.6	30.1	29.1	29.6	29.6	30.1	30.6
12H	29.0	29.4	29.5	29.9	30.5	29.6	30.1	30.1	30.6	31.1
12H 4H	27.5	28.1	28.0	28.6	29.0	27.9	28.5	28.4	28.9	29.4
6H	28.3	28.8	28.8	29.3	29.8	28.8	29.3	29.3	29.7	30.3
8H	28.7	29.2	29.3	29.7	30.2	29.3	29.7	29.8	30.2	30.8
CIE190: 2010										

CIE190: 2010
Area: 0.06835 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-06-29

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

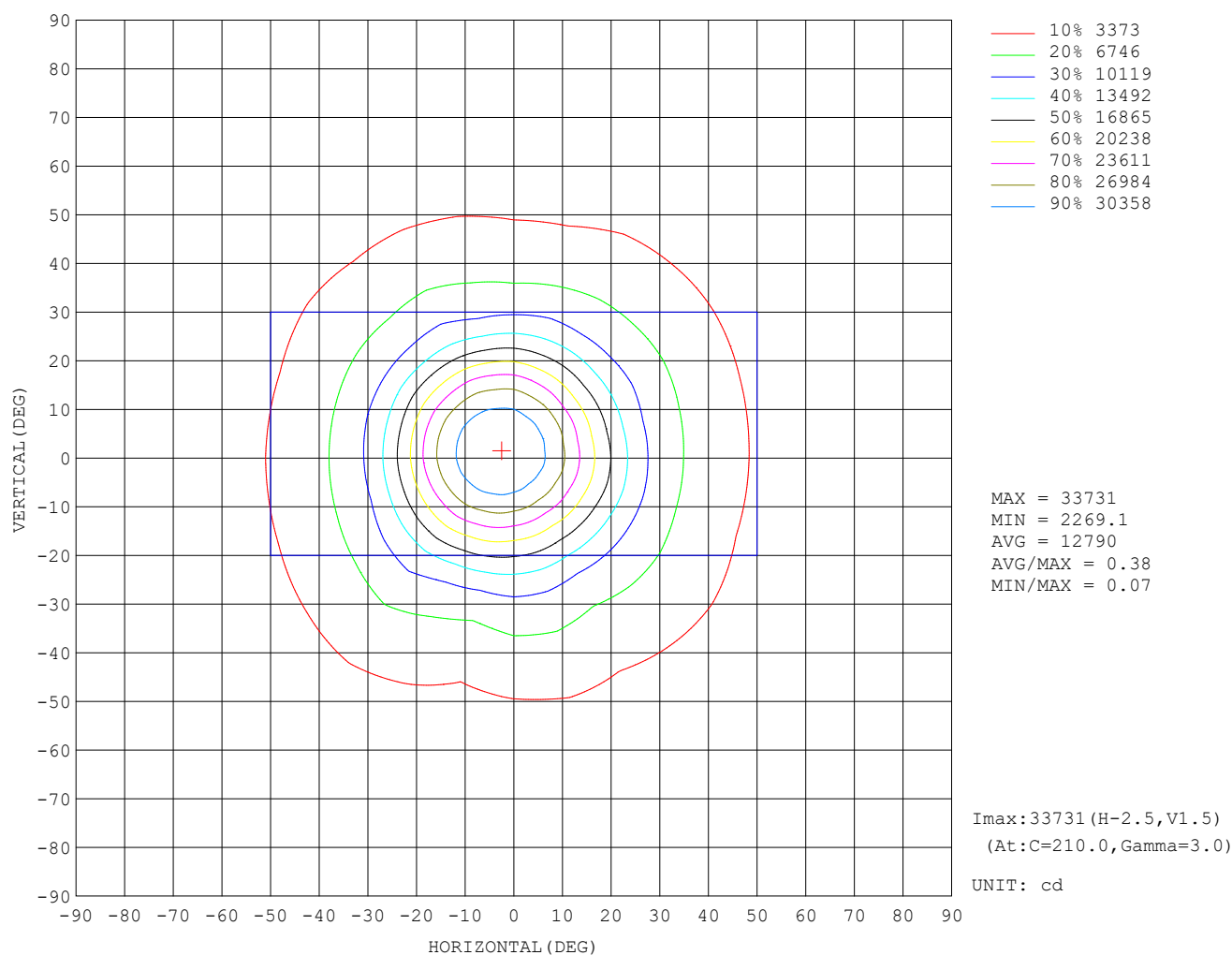
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	73	65	59	73	64	59	72	64	59	54
0.80	82	74	68	81	73	68	80	73	68	62
1.00	89	80	75	87	80	75	86	80	74	69
1.25	94	86	81	93	86	81	90	84	80	74
1.50	98	91	86	96	90	85	94	88	84	78
2.00	102	96	91	101	95	91	98	93	89	83
2.50	105	99	95	103	98	94	100	95	92	85
3.00	107	102	98	105	101	97	102	98	95	88
4.00	110	106	103	108	104	101	104	101	99	91
5.00	112	108	105	110	107	104	105	103	101	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-06-29

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:

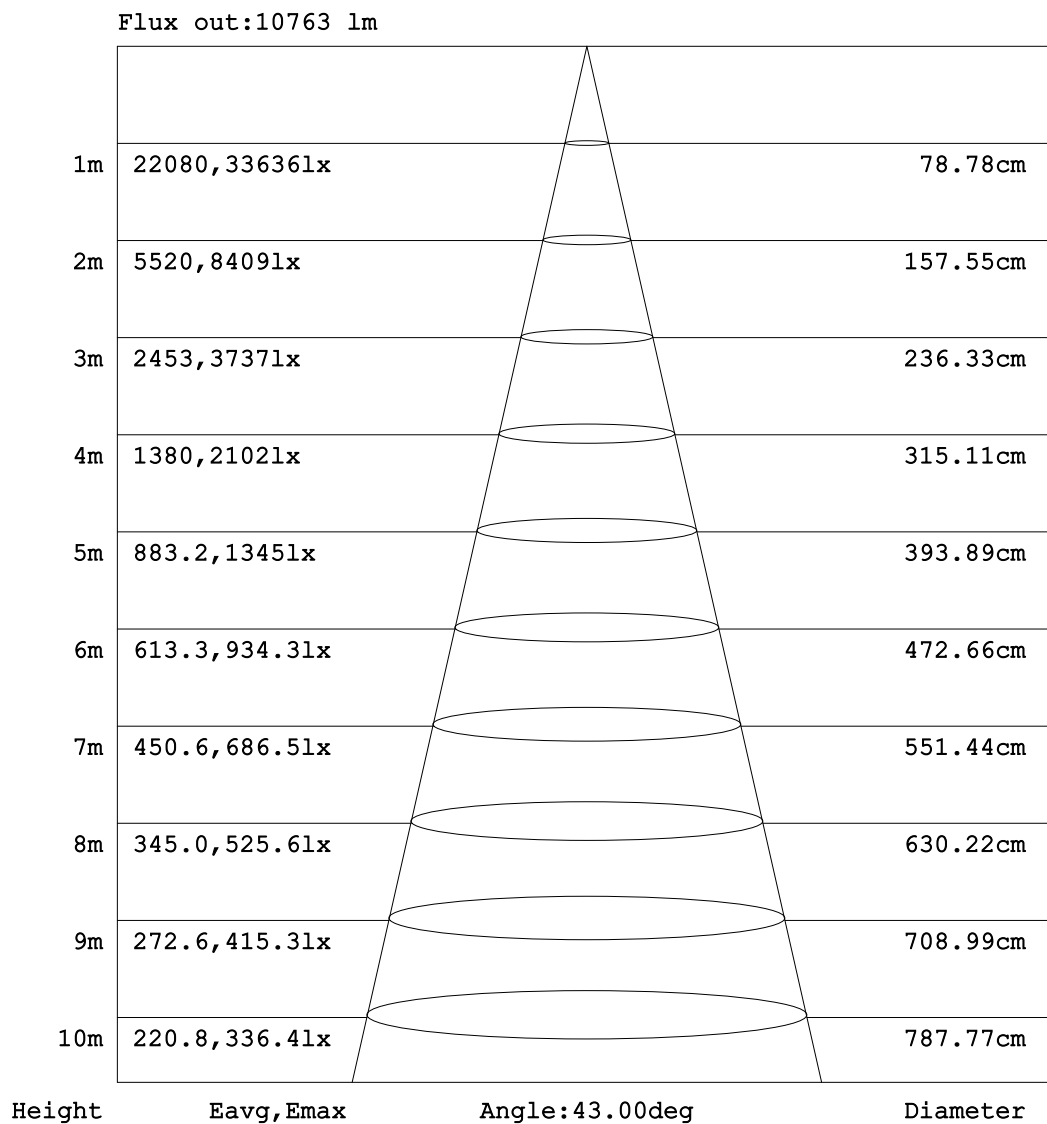
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-06-29

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:

AAI Figure



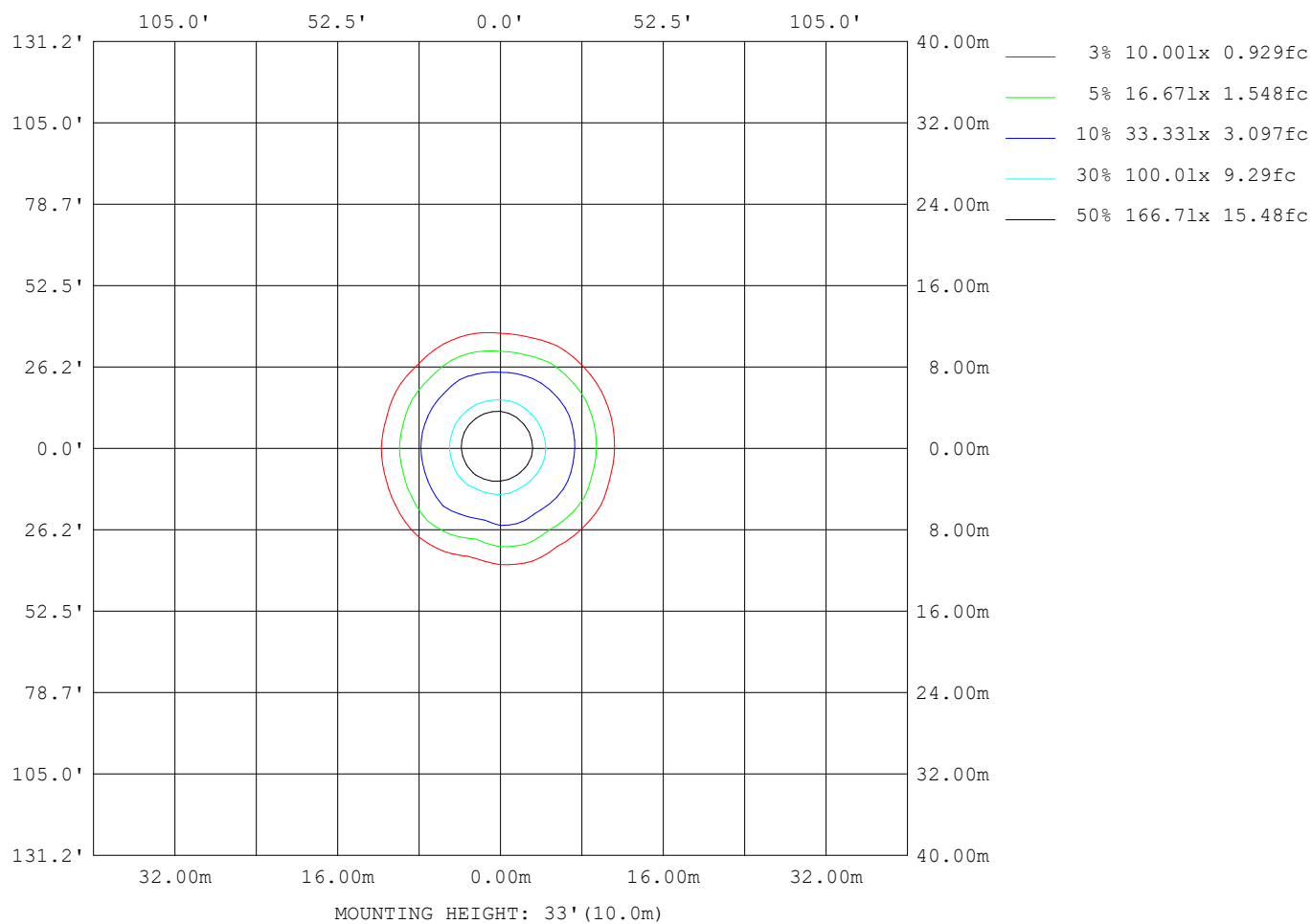
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-06-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
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: ZZX
Test Date: 2023-06-29

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

LED Avg.L Report

Test:U:219.8V I:0.688A P:148.8W PF:0.985 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29167.3x1 lm		
NAME: HB68-150H-5070-H00199	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

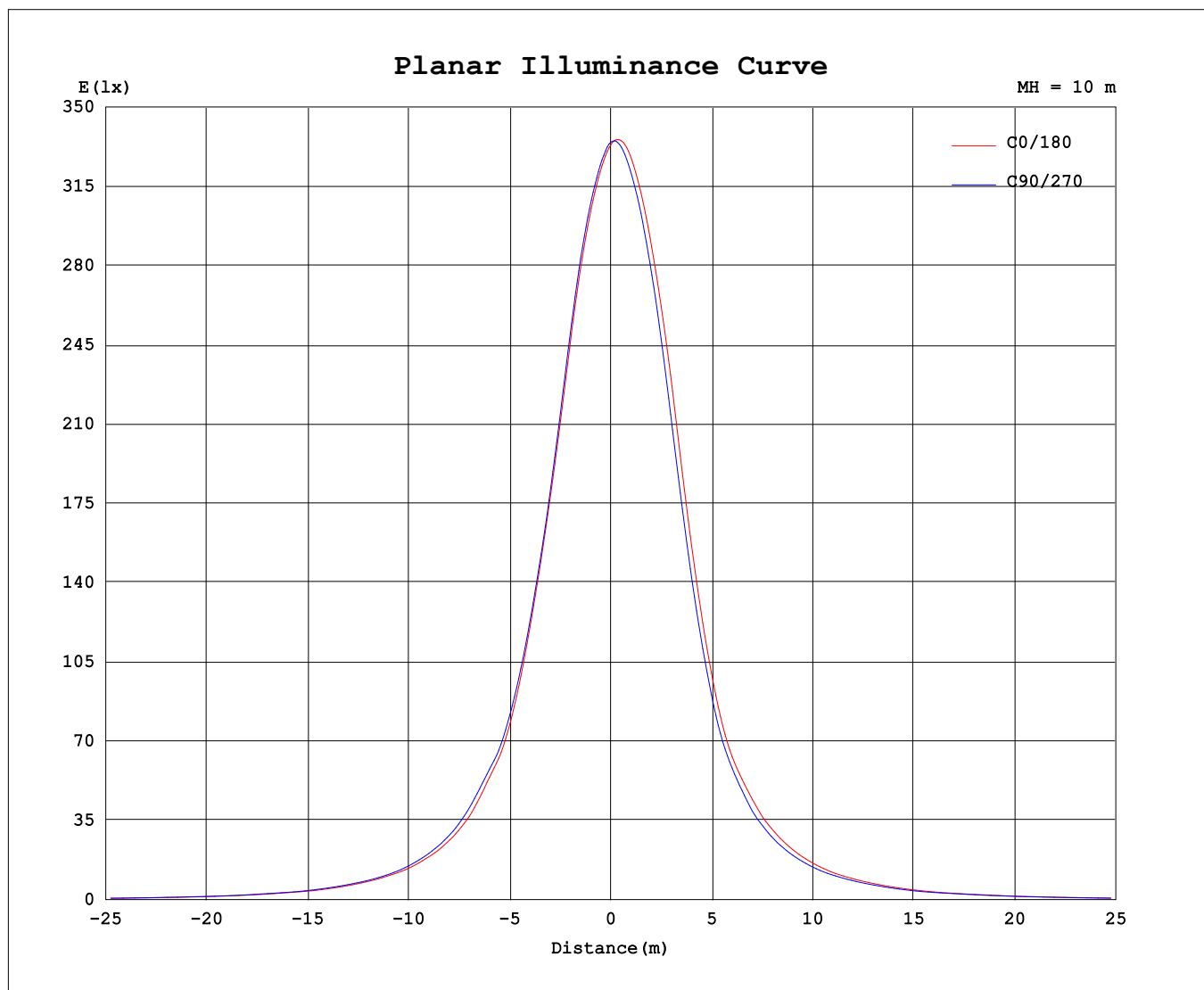
AvgL	cd/m2
L_0~180 (65) av	52080
L_0~180 (75) av	54746
L_0~180 (85) av	64941
L_90~270 (65) av	52262
L_90~270 (75) av	55179
L_90~270 (85) av	68881
L_45 (65) av	53192
L_45 (75) av	57511
L_45 (85) av	66799

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-06-29

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
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-06-29

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: