

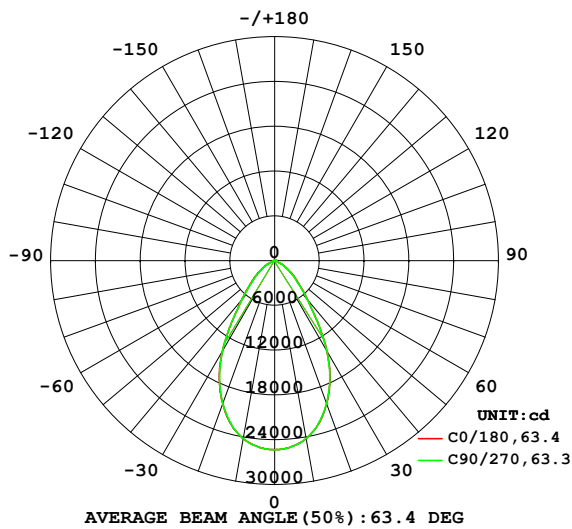
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

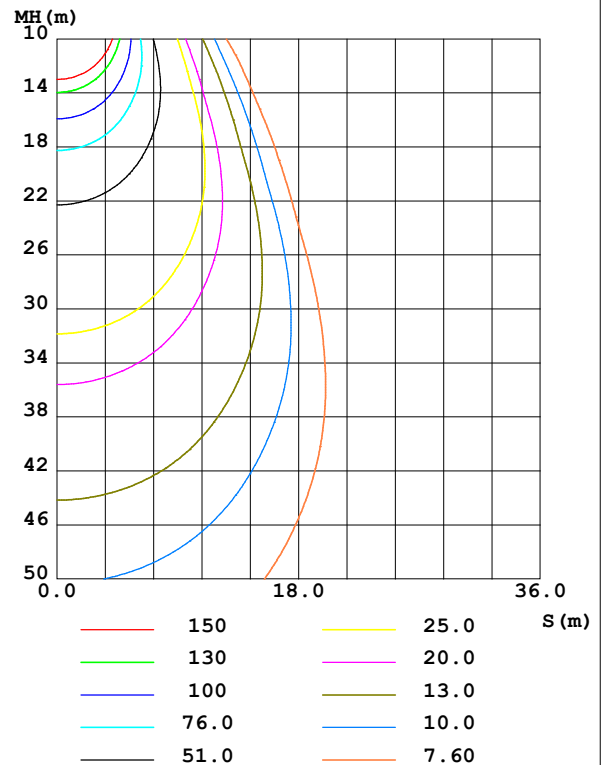
Test:U:229.9V I:0.656A P:148.1W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29601.1x1 lm		
NAME: HB68-150H-5070-H00199+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 199.85 lm/W			
MODEL	/	I _{max} (cd)	25337	S/MH(C0/180)	0.95
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.95
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	29601	η UP,DN(C0-180)	0.2,49.8
NOMINAL FLUX(lm)	29601.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,49.8
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	/	η down (%)	99.7	CIBSE SHR MAX	0.95

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:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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	2422	2423	2419	2423	2422	2423	2419	2423	0- 10	2366	2366	7.99,7.99
20	2041	2033	2035	2033	2041	2033	2035	2033	10- 20	6325	8691	29.4,29.4
30	1403	1394	1398	1394	1403	1394	1398	1394	20- 30	7959	16650	56.2,56.2
40	690.0	676.5	683.2	676.5	690.0	676.5	683.2	676.5	30- 40	6252	22902	77.4,77.4
50	355.5	347.1	341.3	347.1	355.5	347.1	341.3	347.1	40- 50	3706	26608	89.9,89.9
60	152.5	149.0	145.8	149.0	152.5	149.0	145.8	149.0	50- 60	2089	28697	96.9,96.9
70	20.50	20.62	20.81	20.62	20.50	20.62	20.81	20.62	60- 70	724.1	29421	99.4,99.4
80	2.314	2.435	2.488	2.435	2.314	2.435	2.488	2.435	70- 80	76.21	29497	99.6,99.6
90	0.0415	0.0527	0.0719	0.0527	0.0415	0.0527	0.0719	0.0527	80- 90	11.81	29509	99.7,99.7
100	0.1055	0.1063	0.1075	0.1063	0.1055	0.1063	0.1075	0.1063	90-100	0.5729	29509	99.7,99.7
110	0.3195	0.3183	0.3225	0.3183	0.3195	0.3183	0.3225	0.3183	100-110	2.086	29511	99.7,99.7
120	0.7115	0.7233	0.7383	0.7233	0.7115	0.7233	0.7383	0.7233	110-120	4.829	29516	99.7,99.7
130	1.522	1.551	1.574	1.551	1.522	1.551	1.574	1.551	120-130	9.856	29526	99.7,99.7
140	2.589	2.615	2.645	2.615	2.589	2.615	2.645	2.615	130-140	15.95	29542	99.8,99.8
150	3.689	3.703	3.723	3.703	3.689	3.703	3.723	3.703	140-150	19.67	29562	99.9,99.9
160	4.547	4.554	4.574	4.554	4.547	4.554	4.574	4.554	150-160	19.24	29581	99.9,99.9
170	5.929	5.926	5.947	5.926	5.929	5.926	5.947	5.926	160-170	14.19	29595	100,100
180	6.695	6.705	6.728	6.705	6.695	6.705	6.728	6.705	170-180	6.096	29601	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 24995 lm

%lum = 84.4%

%lamp = 84.4%

Conical surface Flux(130deg): 29229 lm

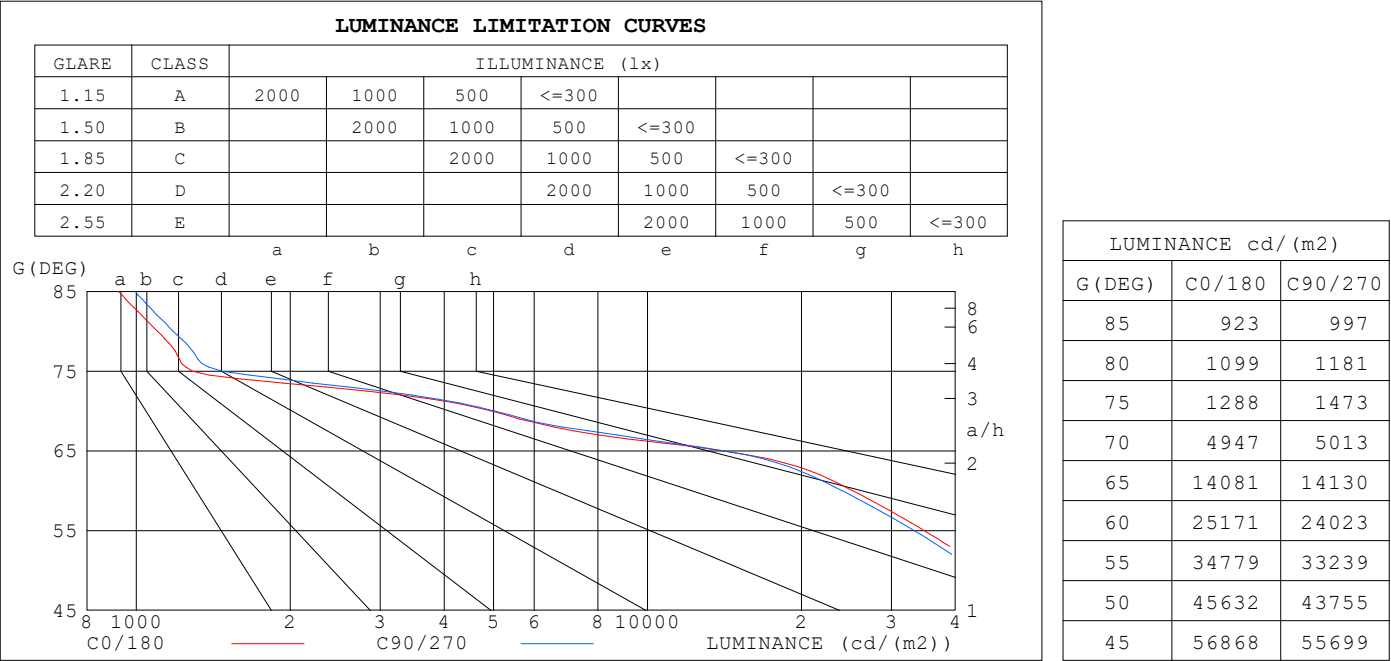
%lum = 98.7%

%lamp = 98.7%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
 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



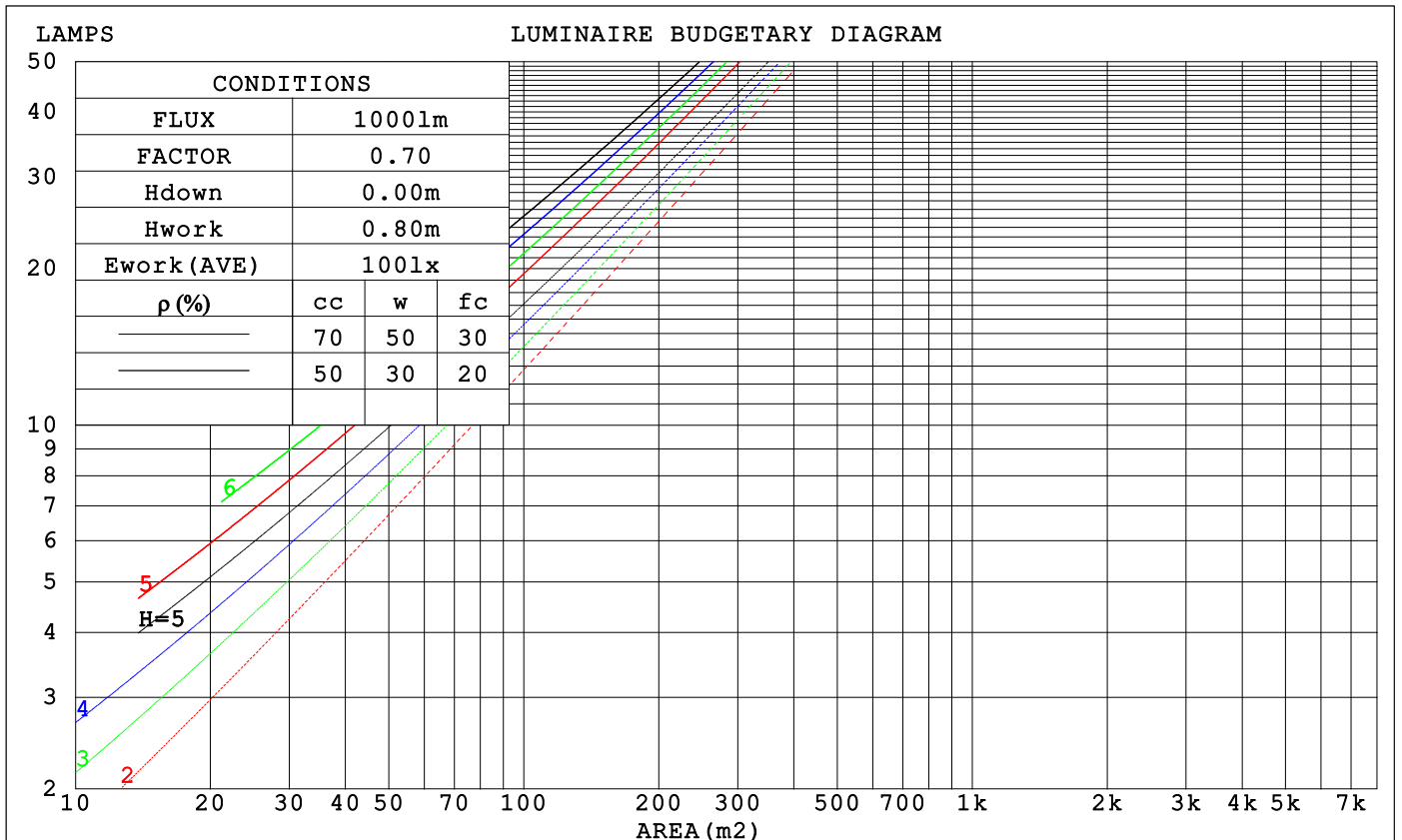
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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	.00
1.0	1.09	1.07	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.94	.93	.91
2.0	1.00	.96	.92	.98	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.86	.82	.90	.85	.81	.88	.83	.80	.85	.81	.78	.83	.80	.77	.75
4.0	.85	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.68
5.0	.78	.71	.66	.77	.71	.66	.75	.70	.65	.73	.69	.65	.72	.68	.64	.63
6.0	.72	.66	.61	.72	.65	.60	.70	.64	.60	.68	.63	.59	.67	.63	.59	.57
7.0	.67	.60	.56	.67	.60	.55	.65	.59	.55	.64	.59	.55	.63	.58	.54	.53
8.0	.63	.56	.51	.62	.56	.51	.61	.55	.51	.60	.55	.51	.59	.54	.50	.49
9.0	.59	.52	.48	.58	.52	.48	.57	.51	.47	.56	.51	.47	.55	.50	.47	.45
10.0	.55	.49	.44	.55	.48	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
 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	.203	.115	.037	.196	.112	.036	.183	.105	.034	.171	.099	.032	.160	.093	.030	
2.0	.197	.108	.033	.191	.105	.032	.180	.100	.031	.170	.096	.030	.161	.091	.029	
3.0	.189	.101	.030	.184	.098	.030	.174	.094	.029	.165	.091	.028	.157	.087	.027	
4.0	.180	.093	.027	.175	.092	.027	.167	.089	.026	.159	.086	.026	.152	.083	.025	
5.0	.171	.087	.025	.167	.086	.025	.160	.083	.024	.153	.081	.024	.146	.078	.023	
6.0	.162	.081	.023	.159	.080	.023	.152	.078	.023	.146	.076	.022	.140	.074	.022	
7.0	.154	.076	.022	.151	.075	.021	.145	.073	.021	.140	.072	.021	.135	.070	.021	
8.0	.147	.072	.020	.144	.071	.020	.139	.069	.020	.134	.068	.020	.129	.066	.019	
9.0	.140	.068	.019	.137	.067	.019	.133	.066	.019	.128	.064	.018	.124	.063	.018	
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.175	.159	.145	.150	.137	.125	.103	.094	.086	.059	.054	.050	.019	.018	.016	
2.0	.162	.135	.112	.139	.116	.097	.095	.080	.067	.055	.047	.040	.018	.015	.013	
3.0	.151	.116	.088	.130	.100	.076	.089	.070	.054	.051	.041	.032	.017	.013	.010	
4.0	.142	.102	.071	.122	.088	.062	.084	.061	.043	.049	.036	.026	.016	.012	.008	
5.0	.134	.091	.058	.115	.078	.051	.079	.055	.036	.046	.032	.021	.015	.010	.007	
6.0	.127	.082	.049	.109	.071	.043	.075	.050	.030	.044	.029	.018	.014	.010	.006	
7.0	.121	.074	.042	.104	.064	.036	.072	.045	.026	.042	.027	.015	.013	.009	.005	
8.0	.115	.068	.036	.099	.059	.032	.069	.042	.022	.040	.025	.013	.013	.008	.004	
9.0	.110	.063	.032	.095	.055	.028	.066	.039	.020	.038	.023	.012	.012	.007	.004	
10.0	.105	.059	.028	.091	.051	.025	.063	.036	.017	.037	.021	.010	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:ZZX
 Test Date:2023-07-03

γ Range: 0 - 180DEG
 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	20.5	21.7	20.8	22.0	22.3	21.1	22.3	21.5	22.6	22.9
3H	20.5	21.5	20.8	21.8	22.2	21.1	22.1	21.4	22.4	22.8
4H	20.4	21.3	20.8	21.7	22.1	21.0	21.9	21.4	22.3	22.7
6H	20.3	21.2	20.7	21.6	22.0	20.9	21.8	21.3	22.2	22.6
8H	20.2	21.1	20.7	21.5	21.9	20.8	21.7	21.3	22.1	22.5
12H	20.2	21.0	20.6	21.4	21.8	20.8	21.6	21.2	22.0	22.4
4H 2H	20.5	21.5	20.9	21.9	22.2	21.1	22.1	21.5	22.4	22.8
3H	20.5	21.3	21.0	21.7	22.1	21.1	21.9	21.5	22.3	22.7
4H	20.4	21.1	20.9	21.6	22.0	21.0	21.7	21.4	22.1	22.6
6H	20.4	20.9	20.8	21.4	21.9	20.9	21.5	21.4	22.0	22.4
8H	20.3	20.8	20.8	21.3	21.8	20.8	21.4	21.3	21.8	22.3
12H	20.2	20.7	20.7	21.2	21.7	20.8	21.3	21.3	21.8	22.2
8H 4H	20.3	20.8	20.8	21.3	21.8	20.8	21.4	21.3	21.8	22.3
6H	20.2	20.6	20.7	21.1	21.6	20.7	21.2	21.2	21.7	22.2
8H	20.1	20.5	20.7	21.0	21.5	20.7	21.1	21.2	21.6	22.1
12H	20.1	20.4	20.6	20.9	21.5	20.6	21.0	21.1	21.5	22.1
12H 4H	20.2	20.7	20.7	21.2	21.7	20.8	21.3	21.3	21.8	22.2
6H	20.1	20.5	20.7	21.0	21.6	20.7	21.1	21.2	21.5	22.1
8H	20.1	20.4	20.6	20.9	21.5	20.6	21.0	21.1	21.5	22.1
CIE190: 2010										

CIE190: 2010
Area: 0.1213 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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

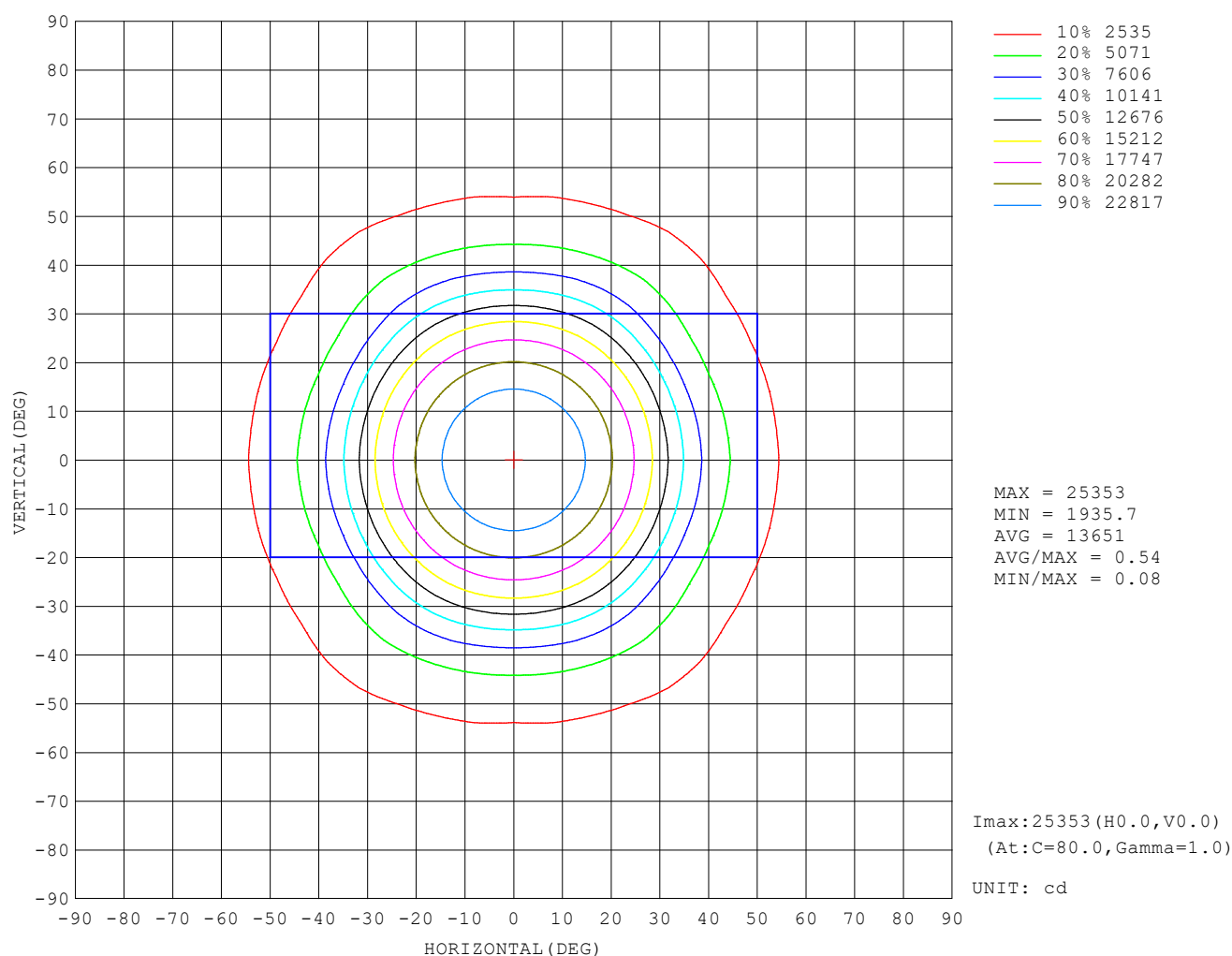
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	77	69	64	76	69	64	75	68	64	59
0.80	86	78	73	85	78	73	84	77	73	68
1.00	92	85	80	91	85	80	90	85	80	75
1.25	98	91	87	96	90	86	94	89	85	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	90
3.00	109	105	102	108	104	101	104	101	99	92
4.00	112	108	106	110	107	104	106	104	102	94
5.00	113	110	108	111	109	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
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-07-03

γ Range: 0 - 180DEG
 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:

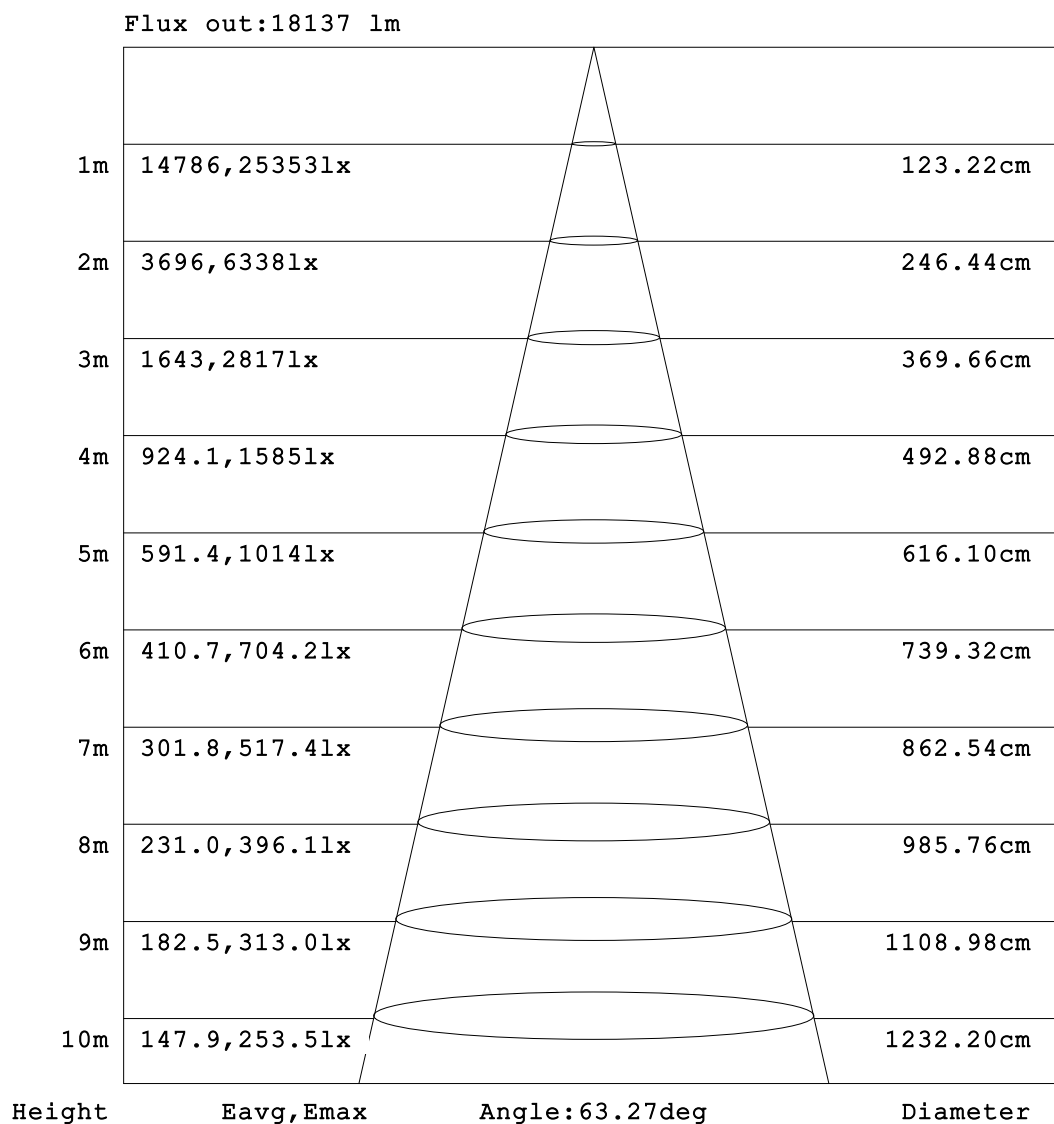
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
 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



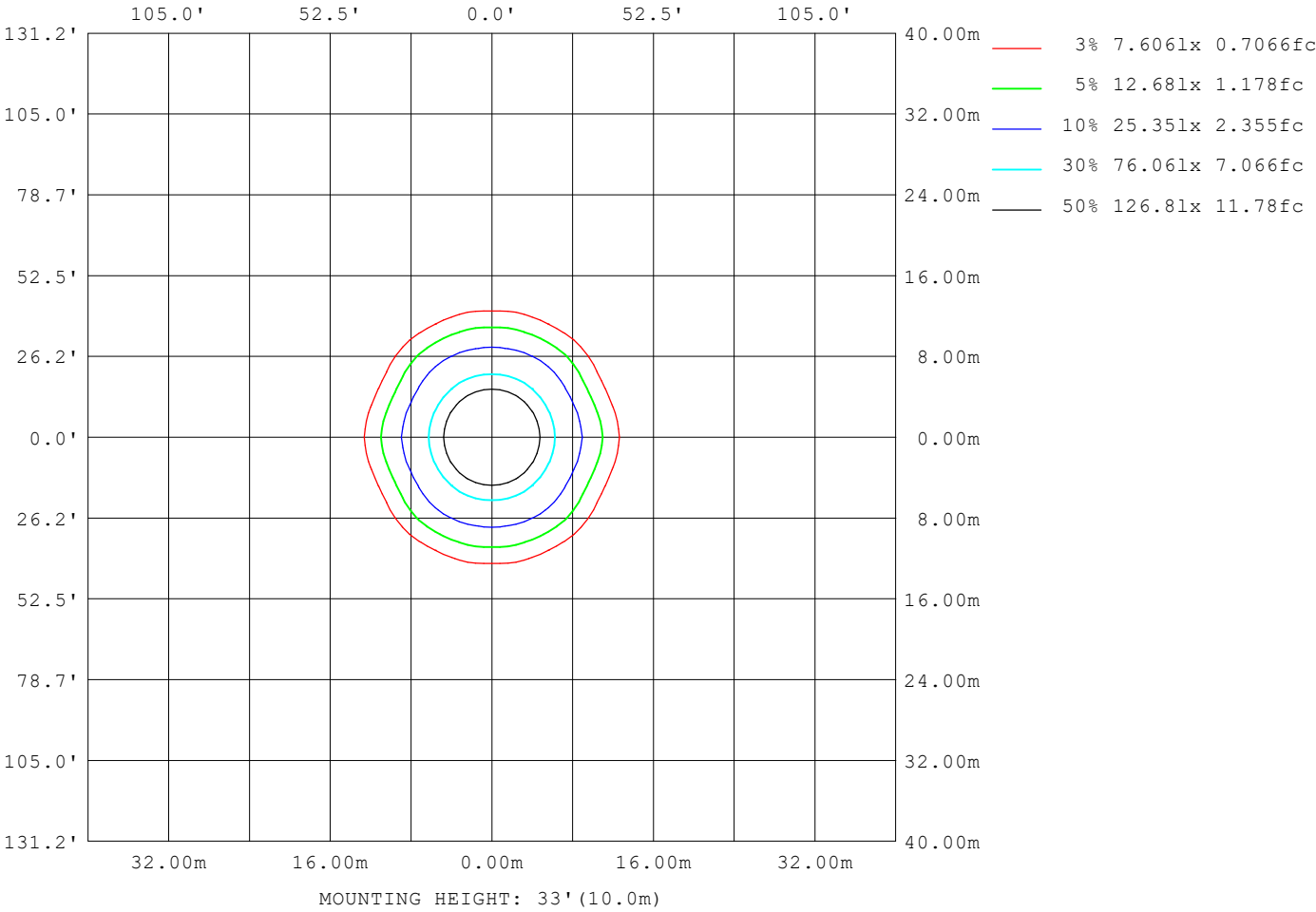
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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:229.9V I:0.656A P:148.1W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29601.1x1 lm		
NAME: HB68-150H-5070-H00199+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

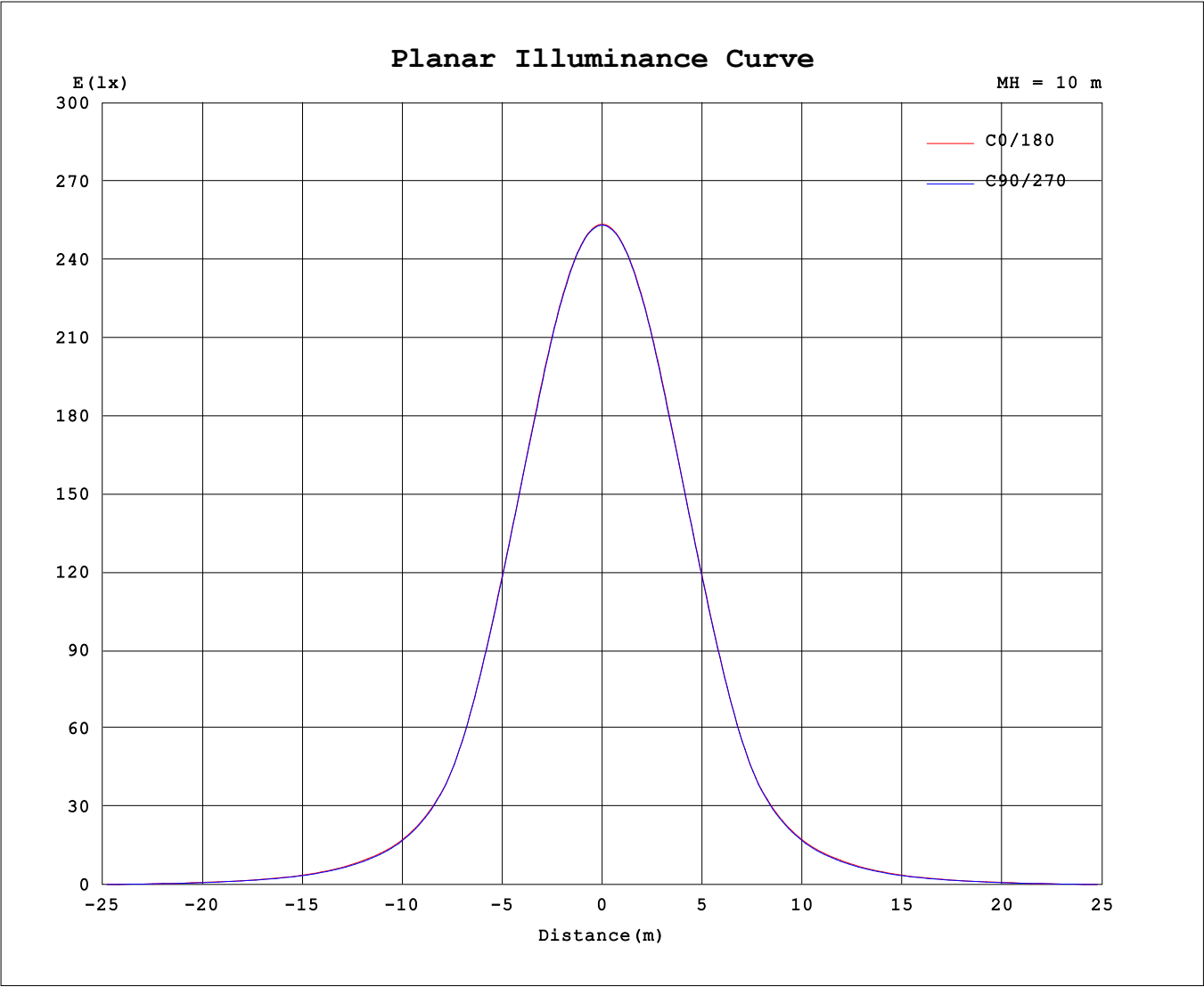
AvgL	cd/m2
L_0~180 (65) av	14069
L_0~180 (75) av	1287
L_0~180 (85) av	923
L_90~270 (65) av	14137
L_90~270 (75) av	1474
L_90~270 (85) av	997
L_45 (65) av	13956
L_45 (75) av	1365
L_45 (85) av	973

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

γ Range: 0 - 180DEG
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	γ Range: 0 - 180DEG
C Interval: 10.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3℃	Humidity:65.0%
Operators:ZZX	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-03	Remarks: