

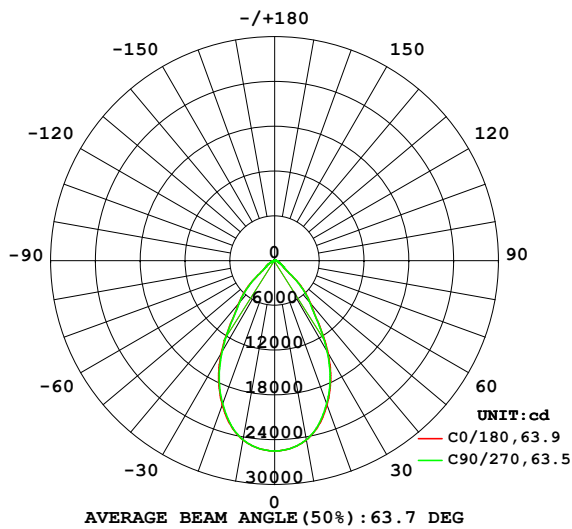
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

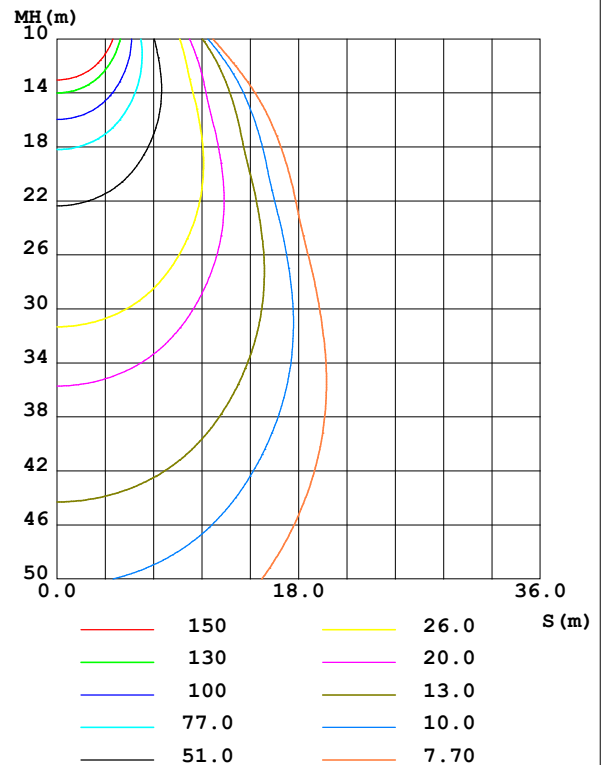
Test:U:229.8V I:0.656A P:148.1W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29660.2x1 lm		
NAME: HB68-150H-5070-H00199+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 200.31 lm/W			
MODEL	/	I _{max} (cd)	25501	S/MH(C0/180)	0.95
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.95
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	29660	η UP,DN(C0-180)	0.4,49.6
NOMINAL FLUX(lm)	29660.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,49.6
LAMPS INSIDE	1	η up (%)	0.7	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	/	η down (%)	99.3	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	2440	2440	2437	2440	2440	2440	2437	2440	0- 10	2382	2382	8.03,8.03
20	2055	2042	2040	2042	2055	2042	2040	2042	10- 20	6358	8741	29.5,29.5
30	1433	1414	1412	1414	1433	1414	1412	1414	20- 30	8026	16767	56.5,56.5
40	749.5	732.4	738.1	732.4	749.5	732.4	738.1	732.4	30- 40	6423	23190	78.2,78.2
50	235.7	230.4	231.9	230.4	235.7	230.4	231.9	230.4	40- 50	3837	27027	91.1,91.1
60	99.05	97.59	100.2	97.59	99.05	97.59	100.2	97.59	50- 60	1309	28336	95.5,95.5
70	44.30	43.78	44.02	43.78	44.30	43.78	44.02	43.78	60- 70	666.4	29003	97.8,97.8
80	19.17	19.01	19.30	19.01	19.17	19.01	19.30	19.01	70- 80	326.0	29328	98.9,98.9
90	4.636	4.565	4.395	4.565	4.636	4.565	4.395	4.565	80- 90	114.0	29442	99.3,99.3
100	1.975	1.967	1.819	1.967	1.975	1.967	1.819	1.967	90-100	28.58	29471	99.4,99.4
110	1.818	1.858	1.815	1.858	1.818	1.858	1.815	1.858	100-110	18.36	29489	99.4,99.4
120	2.635	2.767	2.698	2.767	2.635	2.767	2.698	2.767	110-120	21.44	29511	99.5,99.5
130	4.304	4.272	4.279	4.272	4.304	4.272	4.279	4.272	120-130	29.21	29540	99.6,99.6
140	4.183	4.169	4.208	4.169	4.183	4.169	4.208	4.169	130-140	35.10	29575	99.7,99.7
150	5.378	5.373	5.359	5.373	5.378	5.373	5.359	5.373	140-150	29.39	29605	99.8,99.8
160	6.291	6.275	6.271	6.275	6.291	6.275	6.271	6.275	150-160	27.23	29632	99.9,99.9
170	8.219	8.202	8.198	8.202	8.219	8.202	8.198	8.202	160-170	19.98	29652	100,100
180	9.408	9.383	9.378	9.383	9.408	9.383	9.378	9.383	170-180	8.486	29660	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 25503 lm

%lum = 86.0%

%lamp = 86.0%

Conical surface Flux(130deg): 28731 lm

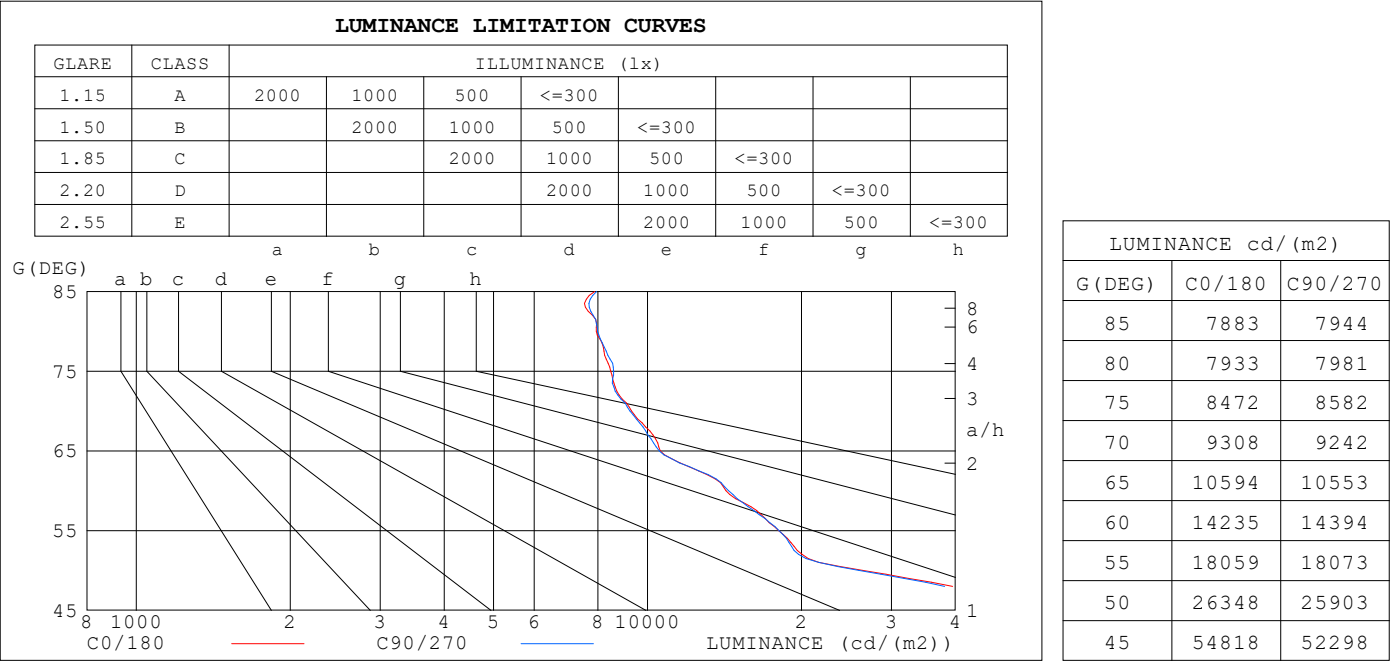
%lum = 96.9%

%lamp = 96.9%

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



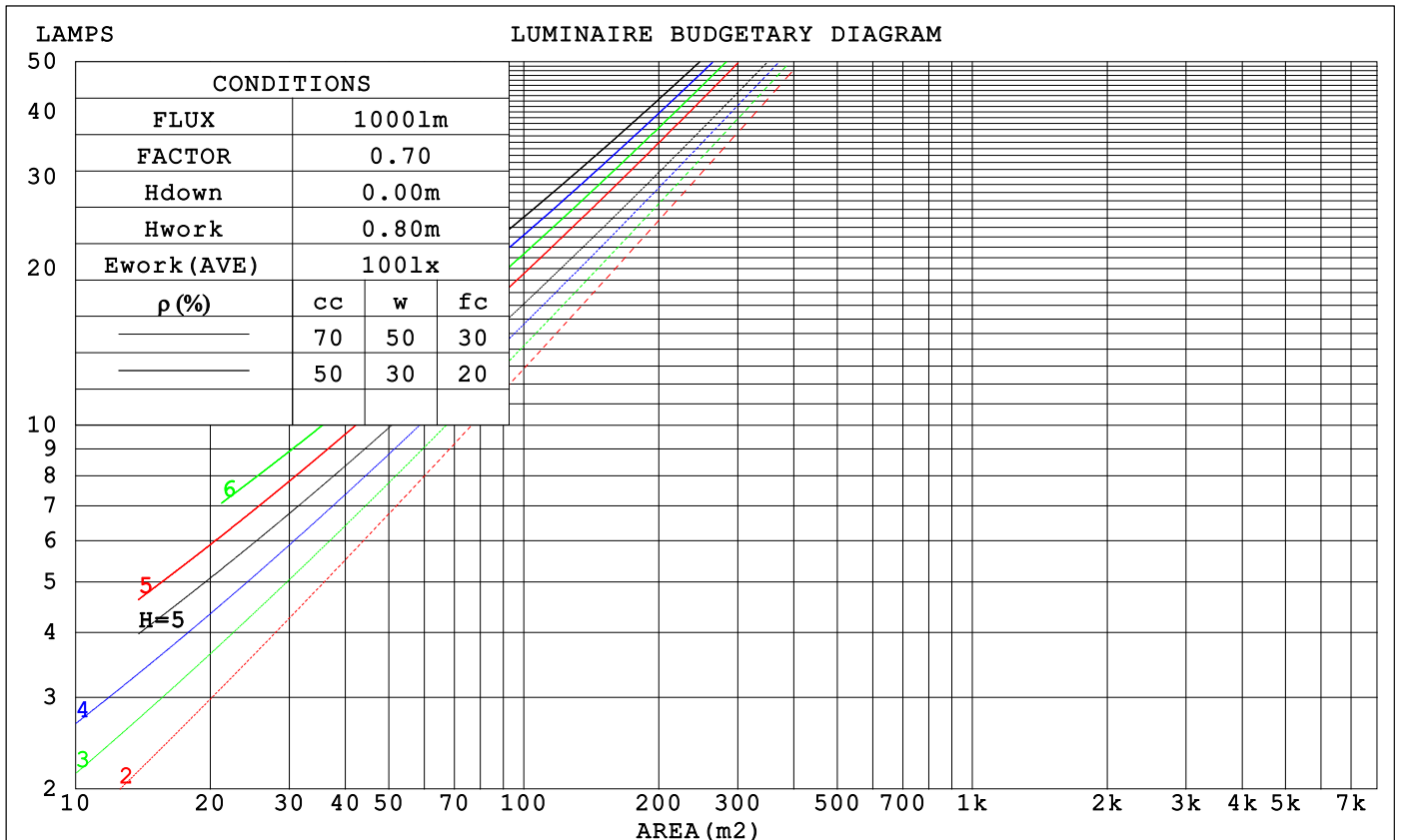
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C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

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	1.01	1.01	1.01	.99
1.0	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.00	.99	.99	.97	.95	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.91	.89	.86	.89	.86	.84	.82
3.0	.92	.86	.81	.90	.85	.81	.87	.83	.79	.85	.81	.78	.82	.79	.77	.75
4.0	.85	.78	.73	.83	.77	.73	.81	.76	.72	.79	.74	.71	.77	.73	.70	.68
5.0	.78	.72	.67	.77	.71	.66	.75	.70	.66	.73	.69	.65	.72	.68	.64	.63
6.0	.73	.66	.61	.72	.65	.61	.70	.64	.60	.68	.63	.60	.67	.63	.59	.58
7.0	.68	.61	.56	.67	.60	.56	.65	.60	.55	.64	.59	.55	.63	.58	.55	.53
8.0	.63	.56	.52	.62	.56	.52	.61	.55	.51	.60	.55	.51	.59	.54	.51	.49
9.0	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.47	.55	.51	.47	.46
10.0	.55	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.52	.48	.44	.43



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	.208	.118	.037	.201	.114	.036	.187	.108	.034	.175	.101	.032	.164	.095	.031	
2.0	.199	.109	.033	.193	.106	.033	.182	.101	.031	.172	.096	.030	.162	.092	.029	
3.0	.189	.101	.030	.184	.099	.030	.174	.094	.029	.165	.091	.028	.157	.087	.027	
4.0	.179	.093	.027	.175	.091	.027	.166	.088	.026	.158	.085	.026	.151	.082	.025	
5.0	.170	.087	.025	.166	.085	.025	.158	.083	.024	.151	.080	.024	.145	.077	.023	
6.0	.161	.081	.023	.158	.080	.023	.151	.077	.023	.145	.075	.022	.139	.073	.022	
7.0	.153	.076	.021	.150	.075	.021	.144	.073	.021	.139	.071	.021	.133	.069	.020	
8.0	.146	.071	.020	.143	.070	.020	.138	.069	.020	.133	.067	.019	.128	.066	.019	
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.062	.018	
10.0	.132	.064	.018	.130	.063	.018	.126	.062	.017	.122	.060	.017	.118	.059	.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	.196	.196	.196	.168	.168	.168	.114	.114	.114	.066	.066	.066	.021	.021	.021	
1.0	.179	.163	.148	.153	.140	.127	.105	.096	.088	.060	.056	.051	.019	.018	.017	
2.0	.166	.138	.115	.142	.119	.099	.097	.082	.069	.056	.048	.041	.018	.015	.013	
3.0	.155	.119	.091	.133	.103	.079	.091	.072	.056	.053	.042	.033	.017	.014	.011	
4.0	.145	.105	.074	.125	.091	.065	.086	.063	.046	.050	.037	.027	.016	.012	.009	
5.0	.137	.094	.062	.118	.081	.054	.081	.057	.038	.047	.033	.023	.015	.011	.007	
6.0	.130	.085	.052	.112	.074	.046	.077	.052	.032	.045	.030	.019	.014	.010	.006	
7.0	.124	.078	.045	.107	.067	.039	.074	.047	.028	.043	.028	.017	.014	.009	.005	
8.0	.118	.072	.040	.102	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005	
9.0	.113	.067	.035	.097	.058	.031	.067	.041	.022	.039	.024	.013	.013	.008	.004	
10.0	.108	.062	.032	.093	.054	.028	.065	.038	.020	.038	.022	.012	.012	.007	.004	

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		17.6	18.7	18.0	19.1	19.4	17.6	18.8	18.0	19.1	19.4
	3H	18.4	19.4	18.8	19.7	20.1	18.4	19.4	18.8	19.8	20.2
	4H	18.7	19.6	19.1	20.0	20.4	18.7	19.7	19.1	20.0	20.4
	6H	18.9	19.8	19.4	20.2	20.6	19.0	19.8	19.4	20.2	20.6
	8H	19.0	19.8	19.5	20.2	20.7	19.0	19.9	19.5	20.3	20.7
	12H	19.1	19.9	19.5	20.3	20.7	19.1	19.9	19.5	20.3	20.7
4H	2H	17.7	18.7	18.2	19.1	19.5	17.8	18.7	18.2	19.1	19.5
	3H	18.7	19.5	19.2	19.9	20.4	18.8	19.6	19.2	20.0	20.4
	4H	19.2	19.9	19.6	20.3	20.8	19.2	19.9	19.7	20.3	20.8
	6H	19.5	20.1	20.0	20.6	21.1	19.6	20.2	20.1	20.6	21.1
	8H	19.7	20.2	20.2	20.7	21.2	19.7	20.3	20.2	20.7	21.2
	12H	19.8	20.3	20.3	20.8	21.3	19.8	20.3	20.3	20.8	21.3
8H	4H	19.3	19.8	19.8	20.3	20.8	19.3	19.9	19.8	20.3	20.8
	6H	19.8	20.2	20.3	20.7	21.2	19.8	20.3	20.3	20.8	21.3
	8H	20.0	20.4	20.5	20.9	21.4	20.0	20.4	20.5	20.9	21.5
	12H	20.2	20.5	20.7	21.0	21.6	20.2	20.5	20.7	21.1	21.6
12H	4H	19.3	19.7	19.8	20.2	20.7	19.3	19.8	19.8	20.3	20.8
	6H	19.8	20.2	20.3	20.7	21.2	19.8	20.2	20.4	20.7	21.3
	8H	20.0	20.4	20.6	20.9	21.5	20.1	20.4	20.6	20.9	21.5
CIE190: 2010											

CIE190: 2010
Area: 0.1392 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

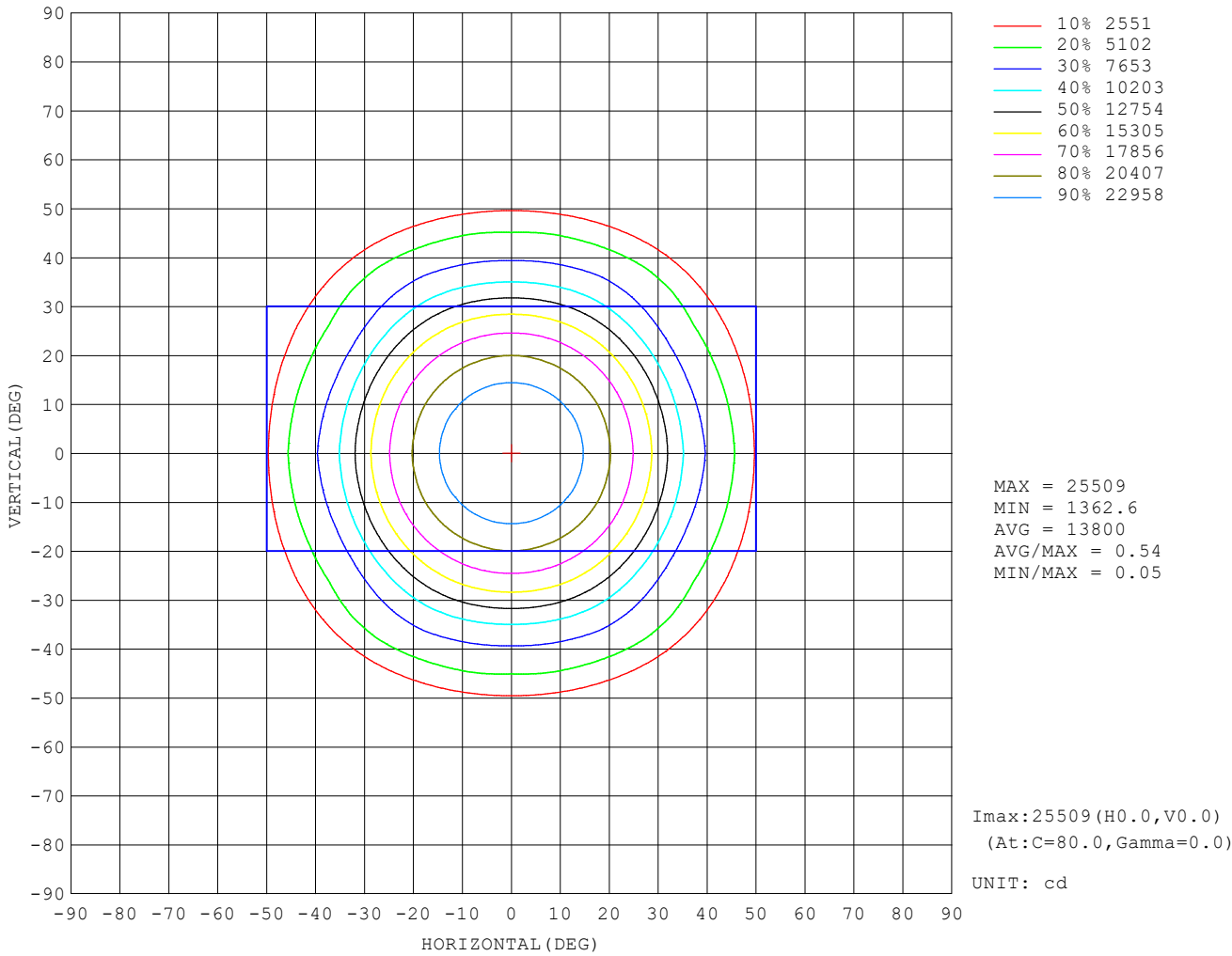
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	60
0.80	86	79	74	86	79	74	84	78	74	69
1.00	93	85	81	92	85	81	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	103	99	95	100	97	93	87
2.50	107	102	99	105	101	98	102	99	96	89
3.00	109	105	102	107	103	100	104	101	98	91
4.00	112	108	105	109	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
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-07-03

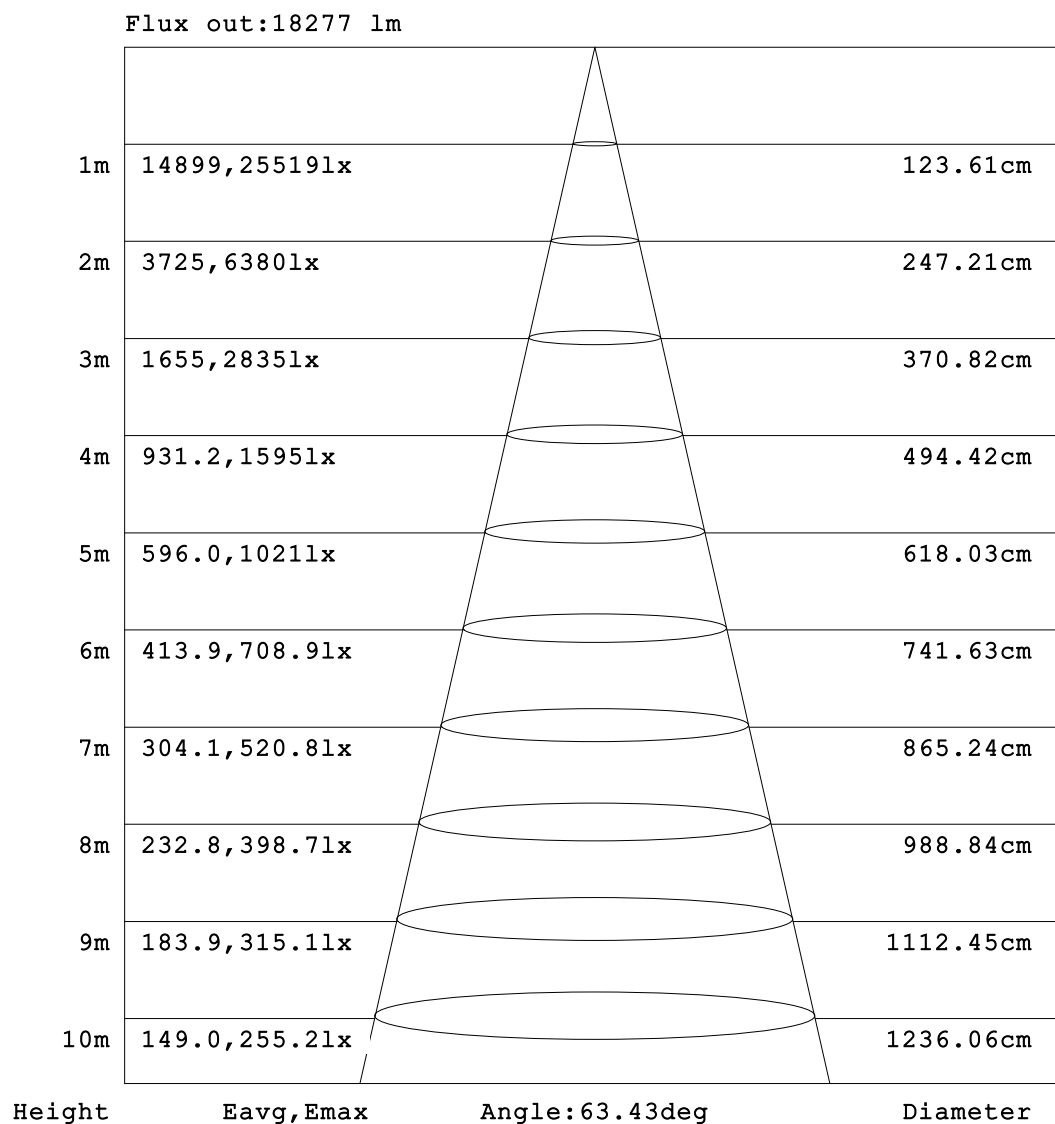
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 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	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°C	Humidity:65.0%
Operators:ZZX	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-03	Remarks:

AAI Figure



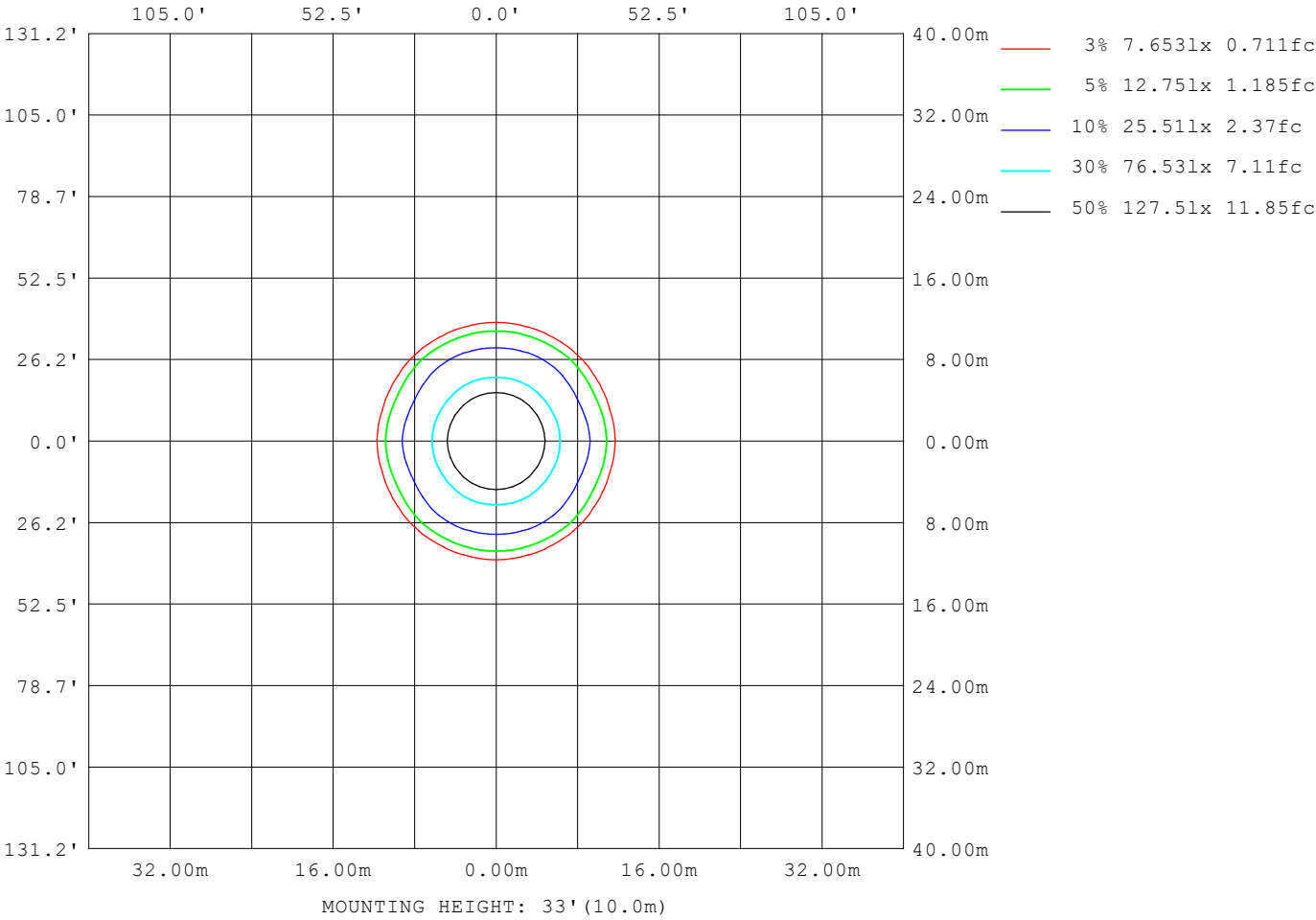
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:229.8V I:0.656A P:148.1W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29660.2x1 lm		
NAME: HB68-150H-5070-H00199+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

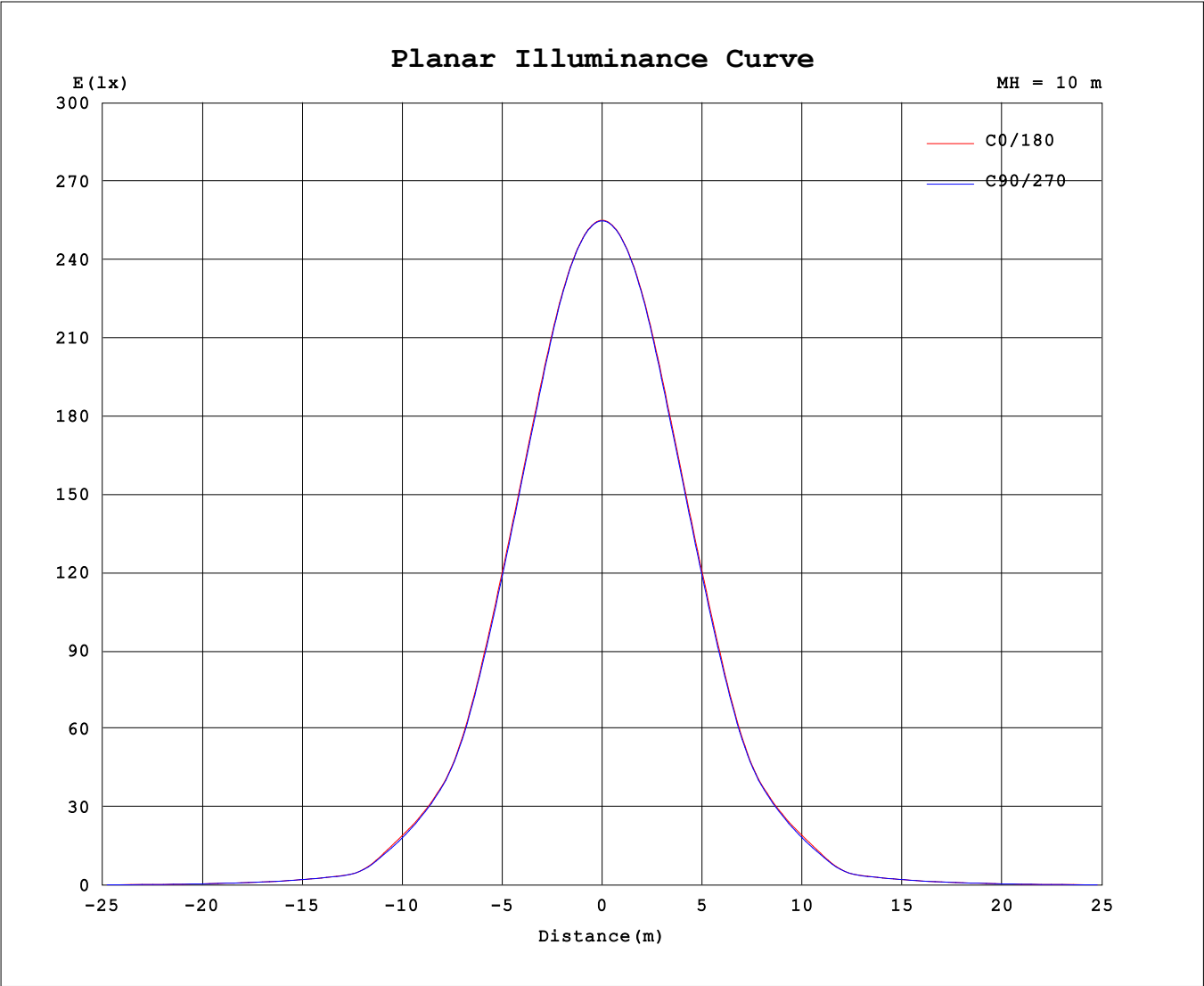
AvgL	cd/m2
L_0~180 (65) av	10591
L_0~180 (75) av	8470
L_0~180 (85) av	7881
L_90~270 (65) av	10559
L_90~270 (75) av	8587
L_90~270 (85) av	7949
L_45 (65) av	10577
L_45 (75) av	8364
L_45 (85) av	7905

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

γ Range: 0 - 180DEG
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