

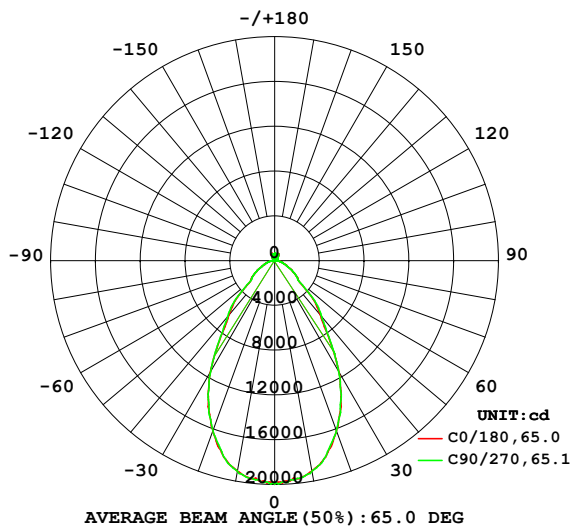
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

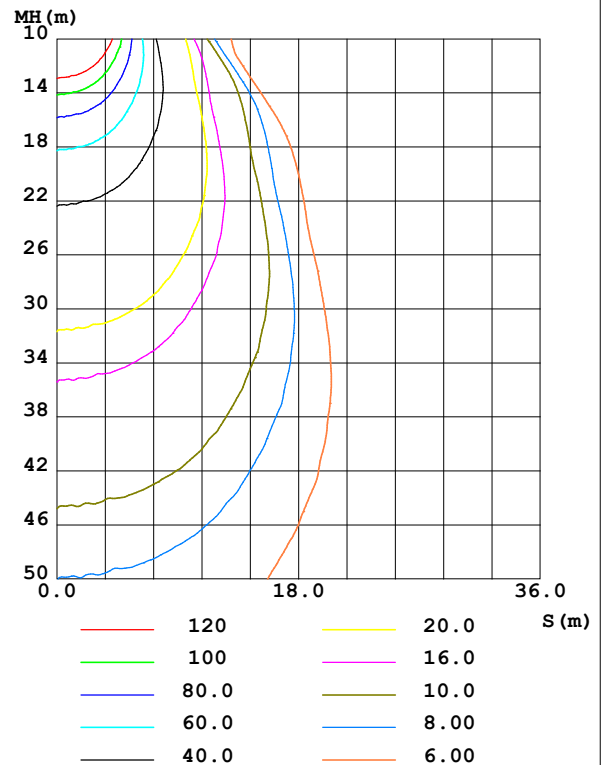
Test:U:229.9V I:0.657A P:148.3W PF:0.982 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:28353.7x1 lm		
NAME: HB68-150H-5070-H00199+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 191.23 lm/W			
MODEL	/	I _{max} (cd)	19964	S/MH(C0/180)	0.97
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.97
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	28354	η UP,DN(C0-180)	2.9,47.1
NOMINAL FLUX(lm)	28353.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	2.9,47.1
LAMPS INSIDE	1	η up (%)	5.8	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	/	η down (%)	94.2	CIBSE SHR MAX	1.00

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	1910	1919	1912	1919	1910	1919	1912	1919	0- 10	1865	1865	6.58,6.58
20	1615	1619	1613	1619	1615	1619	1613	1619	10- 20	5020	6884	24.3,24.3
30	1153	1146	1145	1146	1153	1146	1145	1146	20- 30	6394	13279	46.8,46.8
40	636.8	658.5	655.2	658.5	636.8	658.5	655.2	658.5	30- 40	5403	18681	65.9,65.9
50	281.5	282.2	281.0	282.2	281.5	282.2	281.0	282.2	40- 50	3633	22314	78.7,78.7
60	181.9	180.7	182.7	180.7	181.9	180.7	182.7	180.7	50- 60	2065	24379	86,86
70	97.62	95.94	95.74	95.94	97.62	95.94	95.74	95.94	60- 70	1325	25704	90.7,90.7
80	45.95	44.71	44.48	44.71	45.95	44.71	44.48	44.71	70- 80	733.6	26438	93.2,93.2
90	12.31	11.94	11.81	11.94	12.31	11.94	11.81	11.94	80- 90	283.6	26721	94.2,94.2
100	13.05	12.88	12.90	12.88	13.05	12.88	12.90	12.88	90-100	116.8	26838	94.7,94.7
110	18.47	18.27	18.48	18.27	18.47	18.27	18.48	18.27	100-110	167.2	27005	95.2,95.2
120	21.05	20.82	20.63	20.82	21.05	20.82	20.63	20.82	110-120	196.5	27202	95.9,95.9
130	23.33	23.06	22.92	23.06	23.33	23.06	22.92	23.06	120-130	193.8	27396	96.6,96.6
140	30.68	29.86	29.85	29.86	30.68	29.86	29.85	29.86	130-140	199.4	27595	97.3,97.3
150	57.36	55.59	55.17	55.59	57.36	55.59	55.17	55.59	140-150	264.3	27859	98.3,98.3
160	65.11	64.62	62.35	64.62	65.11	64.62	62.35	64.62	150-160	295.1	28154	99.3,99.3
170	47.82	45.30	46.07	45.30	47.82	45.30	46.07	45.30	160-170	154.8	28309	99.8,99.8
180	64.59	67.52	68.40	67.52	64.59	67.52	68.40	67.52	170-180	44.58	28354	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 20796 lm

%lum = 73.3%

%lamp = 73.3%

Conical surface Flux(130deg): 25133 lm

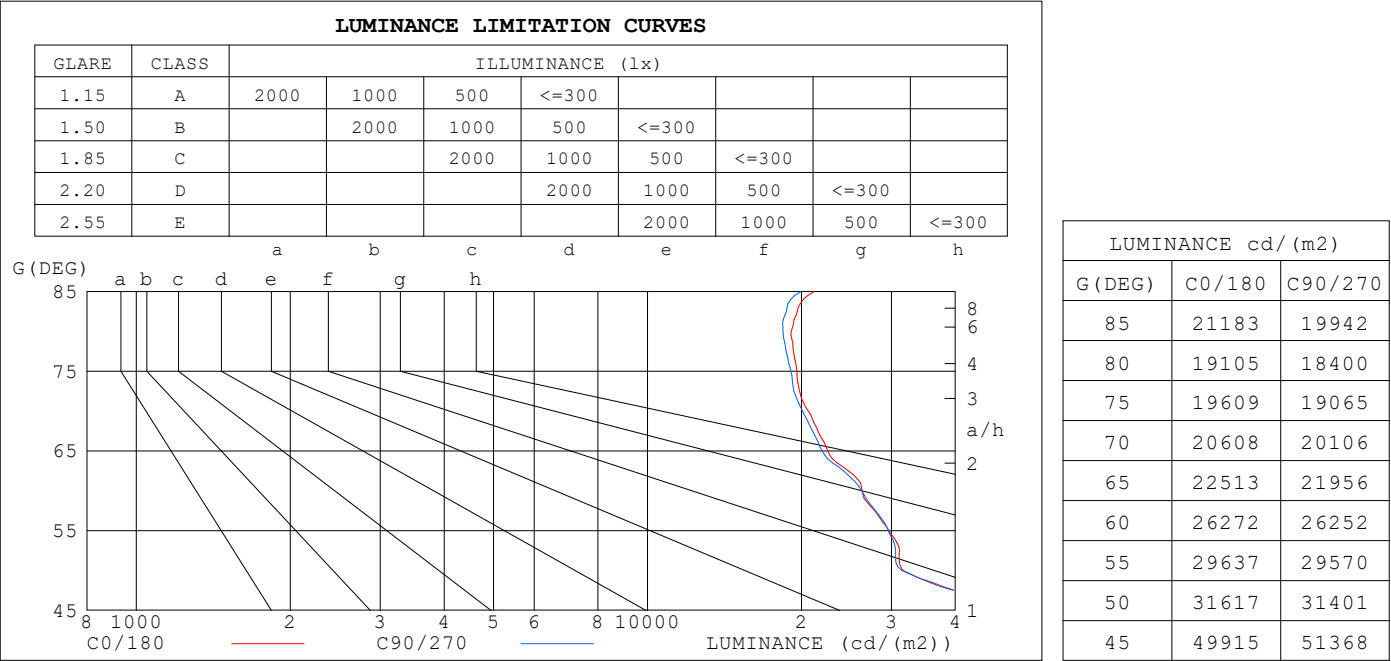
%lum = 88.6%

%lamp = 88.6%

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:

LUMINANCE LIMITATION CURVES



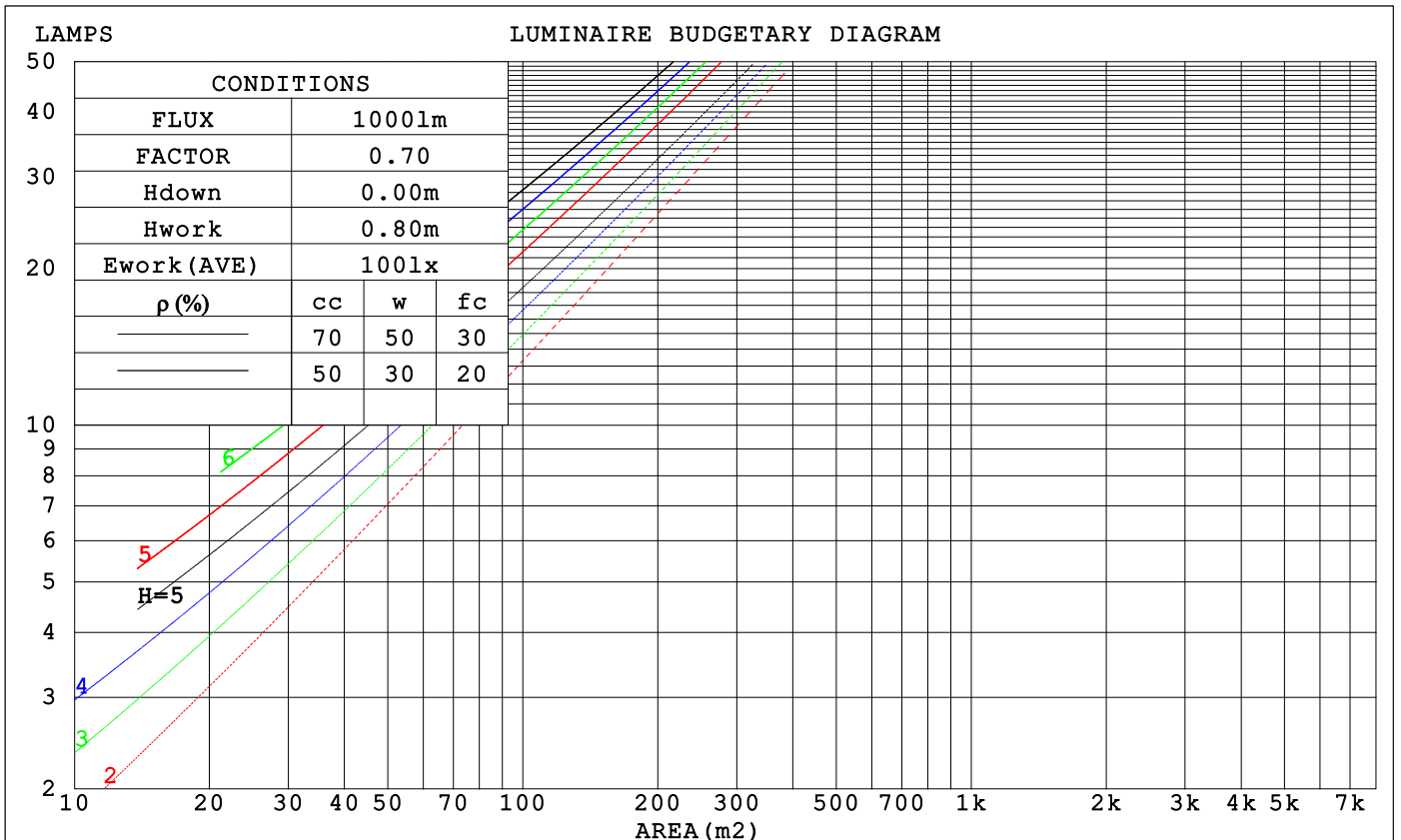
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-03

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	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.94
1.0	1.06	1.03	.00	1.03	1.00	.98	.98	.96	.94	.93	.92	.90	.89	.88	.86	.84
2.0	.96	.91	.86	.94	.89	.85	.89	.85	.82	.85	.82	.79	.82	.79	.77	.75
3.0	.87	.81	.76	.85	.79	.75	.82	.77	.73	.78	.74	.71	.75	.72	.69	.67
4.0	.79	.72	.67	.78	.71	.66	.75	.69	.65	.72	.67	.63	.69	.65	.62	.60
5.0	.73	.66	.60	.71	.65	.60	.69	.63	.59	.66	.61	.57	.64	.60	.56	.54
6.0	.67	.60	.54	.66	.59	.54	.64	.58	.53	.62	.56	.52	.60	.55	.51	.50
7.0	.62	.55	.50	.61	.54	.49	.59	.53	.49	.57	.52	.48	.56	.51	.47	.45
8.0	.58	.50	.46	.57	.50	.45	.55	.49	.45	.53	.48	.44	.52	.47	.44	.42
9.0	.54	.47	.42	.53	.46	.42	.51	.45	.41	.50	.45	.41	.49	.44	.40	.39
10.0	.50	.43	.39	.50	.43	.39	.48	.42	.38	.47	.42	.38	.46	.41	.38	.36



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	.238	.136	.043	.230	.131	.042	.214	.122	.039	.199	.115	.037	.185	.107	.035	
2.0	.225	.124	.038	.218	.120	.037	.204	.113	.035	.191	.107	.033	.179	.101	.032	
3.0	.211	.112	.034	.205	.110	.033	.192	.104	.032	.181	.099	.030	.170	.094	.029	
4.0	.198	.103	.030	.192	.101	.030	.181	.096	.029	.171	.092	.028	.161	.088	.027	
5.0	.186	.095	.027	.181	.093	.027	.171	.089	.026	.162	.085	.025	.153	.082	.025	
6.0	.175	.088	.025	.170	.086	.025	.161	.083	.024	.153	.079	.023	.145	.076	.023	
7.0	.165	.081	.023	.161	.080	.023	.153	.077	.022	.145	.074	.022	.138	.072	.021	
8.0	.156	.076	.021	.152	.075	.021	.145	.072	.021	.138	.070	.020	.131	.067	.020	
9.0	.148	.071	.020	.144	.070	.020	.137	.068	.019	.131	.066	.019	.125	.064	.018	
10.0	.140	.067	.019	.137	.066	.018	.131	.064	.018	.125	.062	.018	.120	.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	.234	.234	.234	.200	.200	.200	.137	.137	.137	.079	.079	.079	.025	.025	.025	
1.0	.220	.201	.184	.188	.173	.159	.129	.119	.110	.074	.069	.064	.024	.022	.021	
2.0	.208	.177	.151	.178	.152	.130	.122	.105	.091	.070	.061	.053	.023	.020	.017	
3.0	.198	.159	.127	.170	.137	.110	.117	.095	.077	.067	.056	.046	.022	.018	.015	
4.0	.189	.145	.111	.162	.125	.096	.112	.087	.068	.065	.051	.040	.021	.017	.013	
5.0	.181	.134	.099	.156	.116	.086	.107	.081	.061	.062	.048	.036	.020	.016	.012	
6.0	.174	.125	.090	.150	.108	.078	.103	.076	.055	.060	.045	.033	.019	.015	.011	
7.0	.168	.118	.083	.144	.102	.073	.100	.072	.051	.058	.042	.031	.019	.014	.010	
8.0	.162	.112	.078	.140	.097	.068	.097	.068	.048	.056	.040	.029	.018	.013	.010	
9.0	.157	.107	.074	.135	.093	.064	.094	.065	.046	.054	.039	.027	.018	.013	.009	
10.0	.152	.103	.071	.131	.089	.062	.091	.063	.044	.053	.037	.026	.017	.012	.009	

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	21.0	22.2	21.4	22.6	23.1	21.0	22.2	21.5	22.6	23.1
3H	22.3	23.4	22.8	23.8	24.3	22.3	23.3	22.8	23.8	24.3
4H	22.8	23.8	23.3	24.3	24.8	22.8	23.8	23.3	24.3	24.8
6H	23.3	24.2	23.8	24.7	25.2	23.2	24.1	23.7	24.6	25.2
8H	23.4	24.3	24.0	24.8	25.4	23.4	24.3	23.9	24.8	25.3
12H	23.6	24.4	24.1	24.9	25.5	23.5	24.4	24.1	24.9	25.4
4H 2H	21.4	22.4	21.9	22.8	23.3	21.4	22.4	21.9	22.8	23.4
3H	22.9	23.7	23.4	24.2	24.8	22.9	23.7	23.4	24.2	24.8
4H	23.5	24.3	24.1	24.8	25.4	23.5	24.3	24.1	24.8	25.4
6H	24.1	24.8	24.7	25.3	25.9	24.1	24.8	24.7	25.3	25.9
8H	24.4	25.0	24.9	25.5	26.1	24.3	24.9	24.9	25.5	26.1
12H	24.6	25.1	25.2	25.7	26.3	24.5	25.1	25.1	25.6	26.3
8H 4H	23.8	24.4	24.3	24.9	25.5	23.8	24.4	24.3	24.9	25.5
6H	24.5	25.0	25.1	25.6	26.2	24.5	25.0	25.1	25.6	26.2
8H	24.8	25.3	25.5	25.9	26.5	24.8	25.2	25.4	25.8	26.5
12H	25.2	25.6	25.8	26.1	26.8	25.1	25.5	25.7	26.1	26.8
12H 4H	23.8	24.3	24.4	24.9	25.5	23.8	24.3	24.3	24.9	25.5
6H	24.6	25.0	25.2	25.6	26.2	24.5	25.0	25.1	25.5	26.2
8H	24.9	25.3	25.6	25.9	26.6	24.9	25.3	25.5	25.9	26.6
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

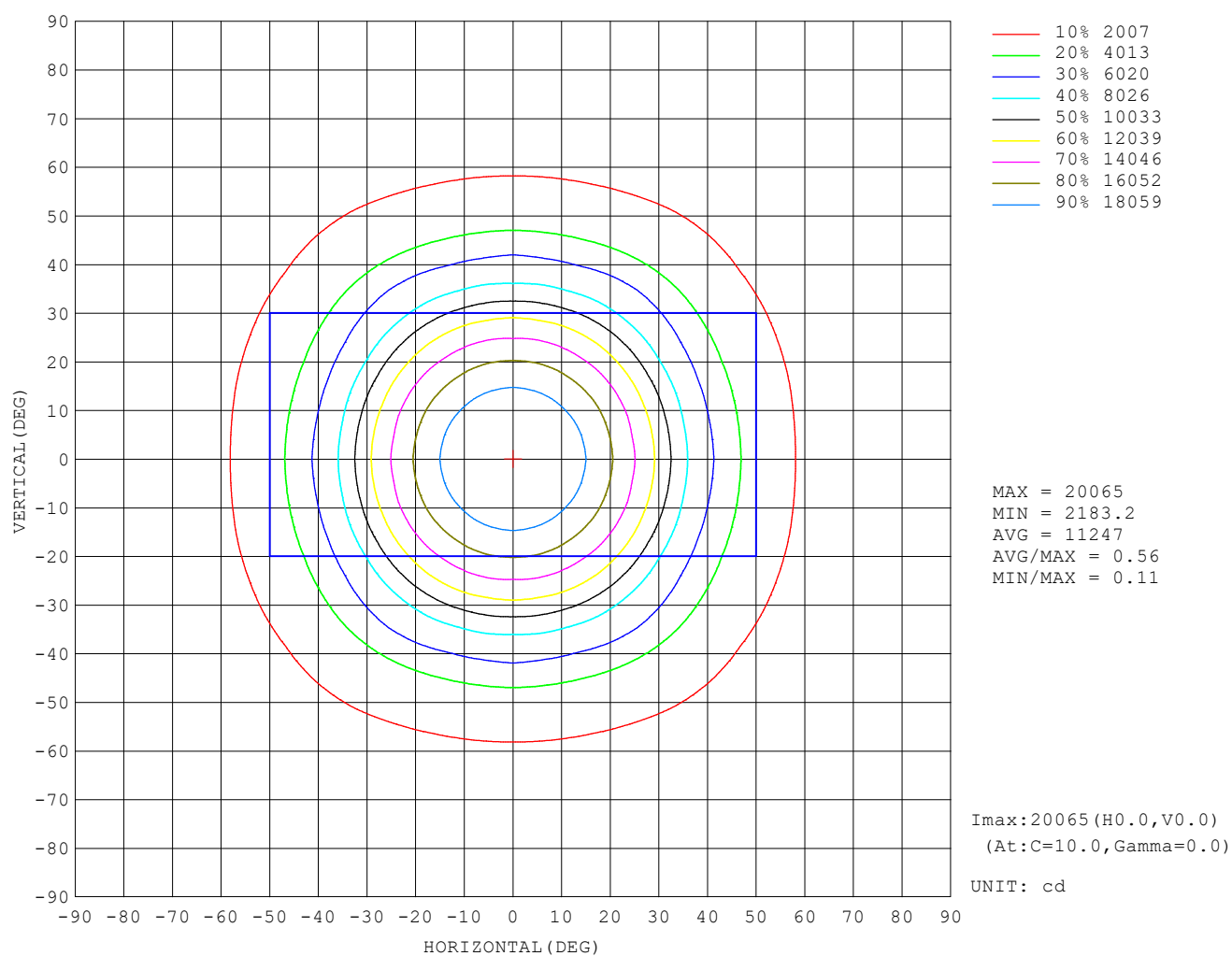
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	61	56	70	61	56	68	60	55	50
0.80	79	71	65	78	70	65	76	69	64	58
1.00	86	78	72	85	77	72	82	77	71	65
1.25	92	84	78	90	83	78	87	81	77	70
1.50	95	88	83	94	87	82	90	85	81	74
2.00	100	94	89	98	92	88	94	90	86	78
2.50	103	97	93	101	96	91	96	92	89	80
3.00	106	100	96	103	98	95	98	95	92	83
4.00	108	104	101	106	102	99	101	98	95	86
5.00	110	107	104	107	104	102	102	100	98	87
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:

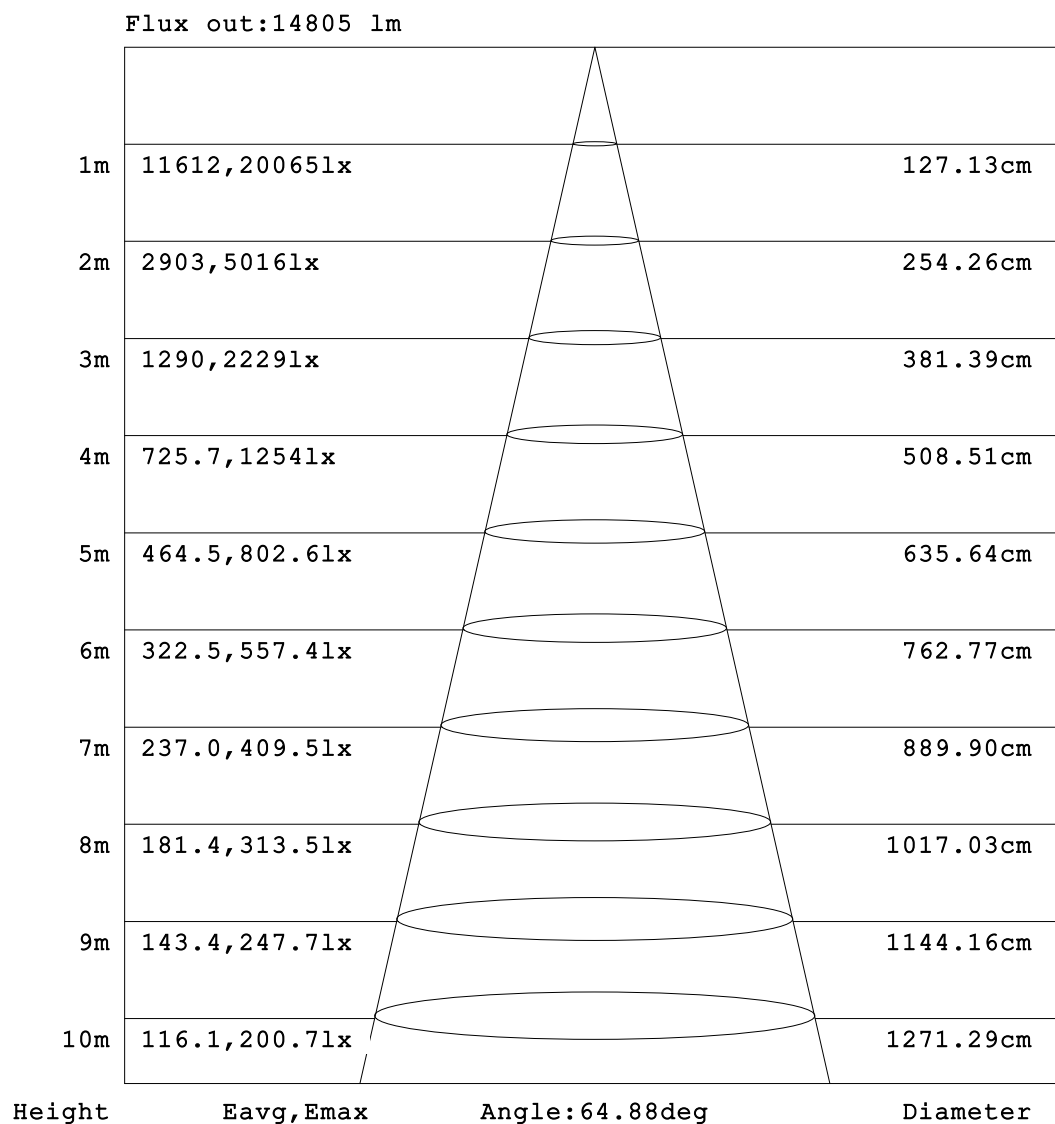
ISOCANDELA DIAGRAM



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



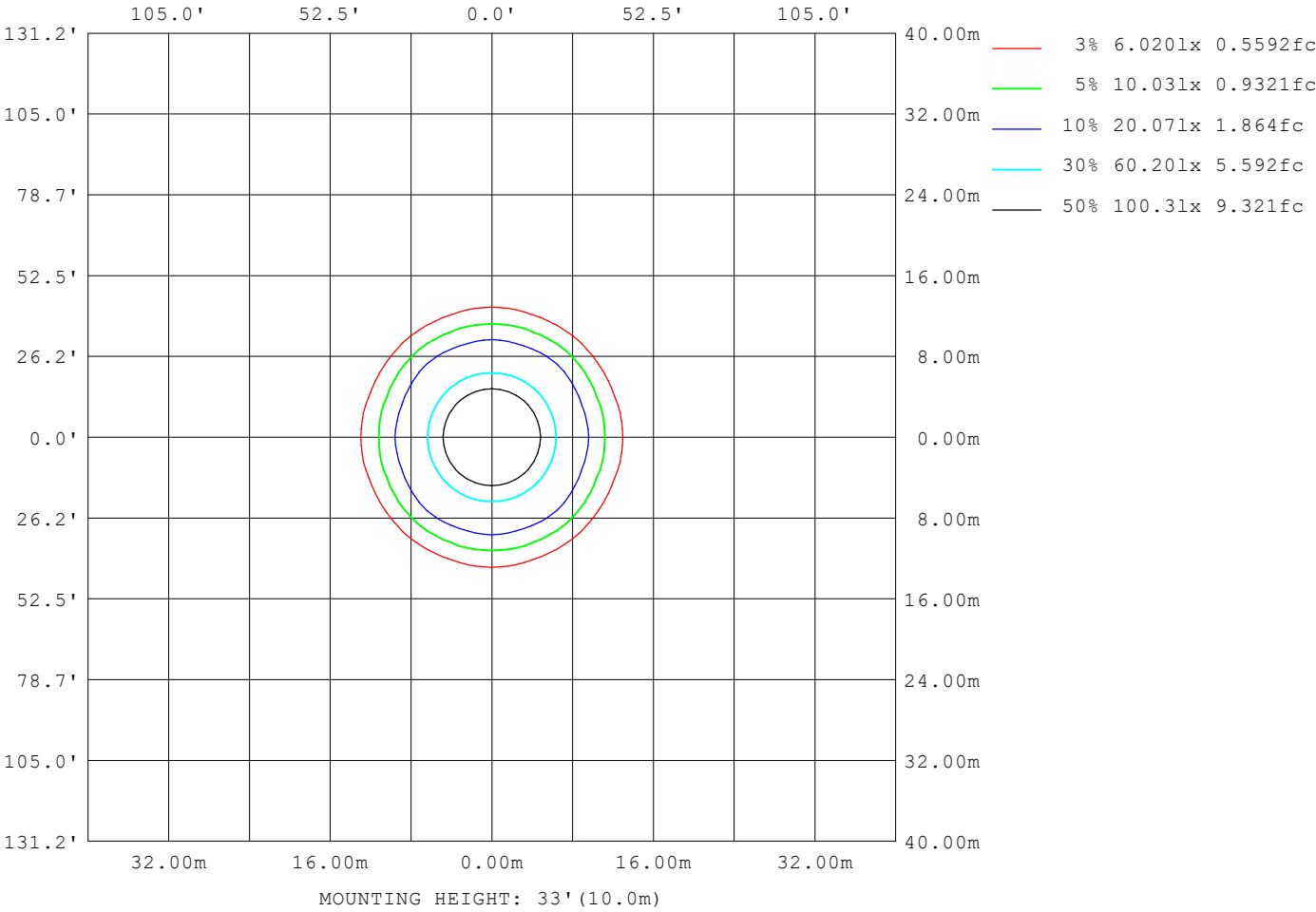
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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	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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LED Avg.L Report

Test:U:229.9V I:0.657A P:148.3W PF:0.982 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:28353.7x1 lm		
NAME: HB68-150H-5070-H00199+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

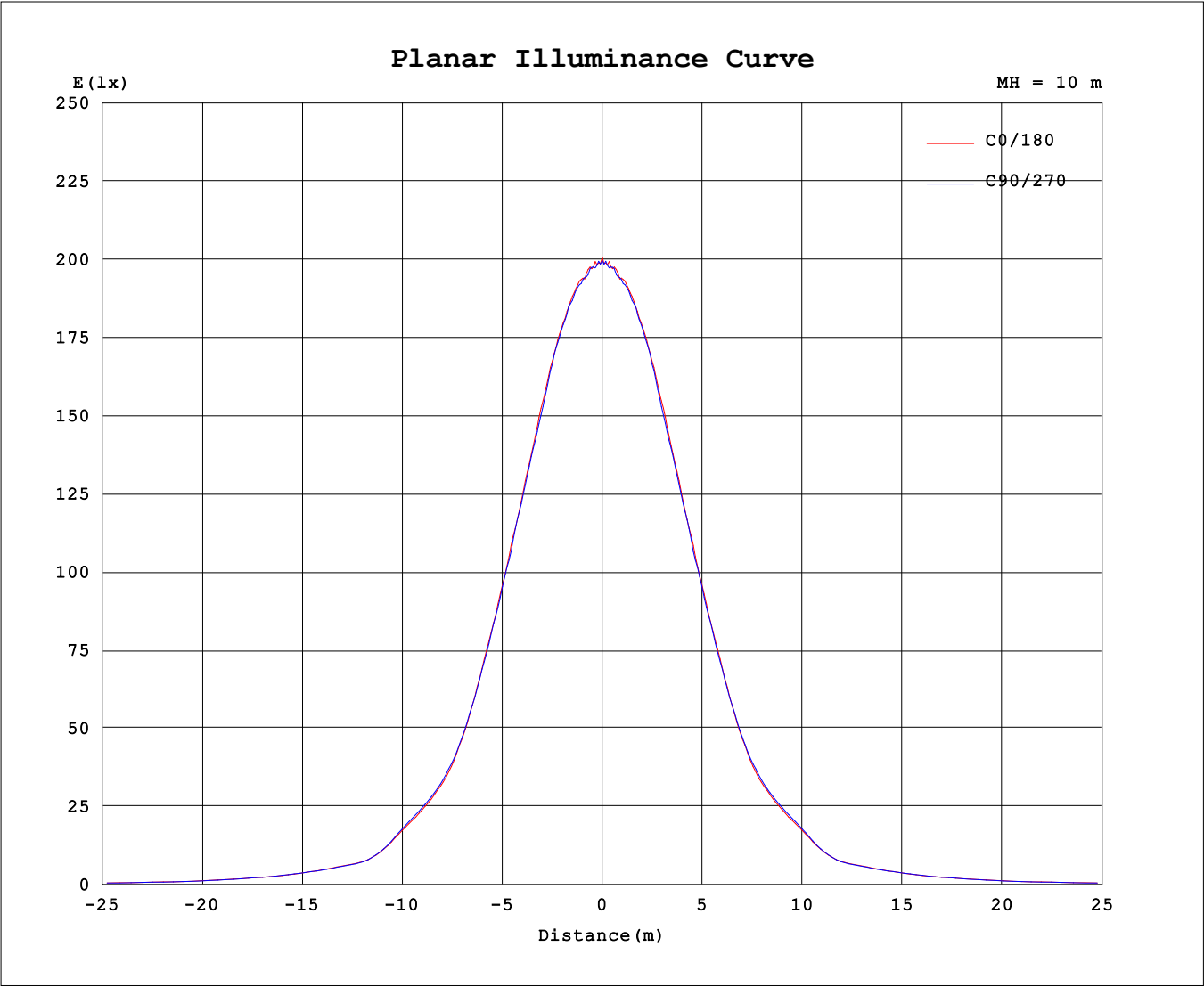
AvgL	cd/m2
L_0~180 (65) av	22399
L_0~180 (75) av	19509
L_0~180 (85) av	21075
L_90~270 (65) av	21959
L_90~270 (75) av	19068
L_90~270 (85) av	19945
L_45 (65) av	21987
L_45 (75) av	19185
L_45 (85) av	20231

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: