

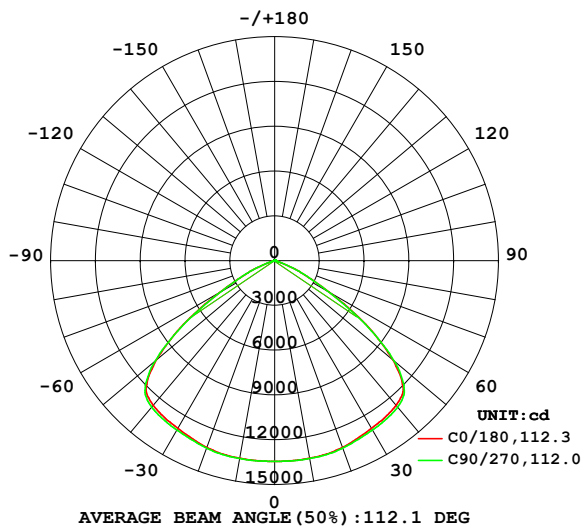
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

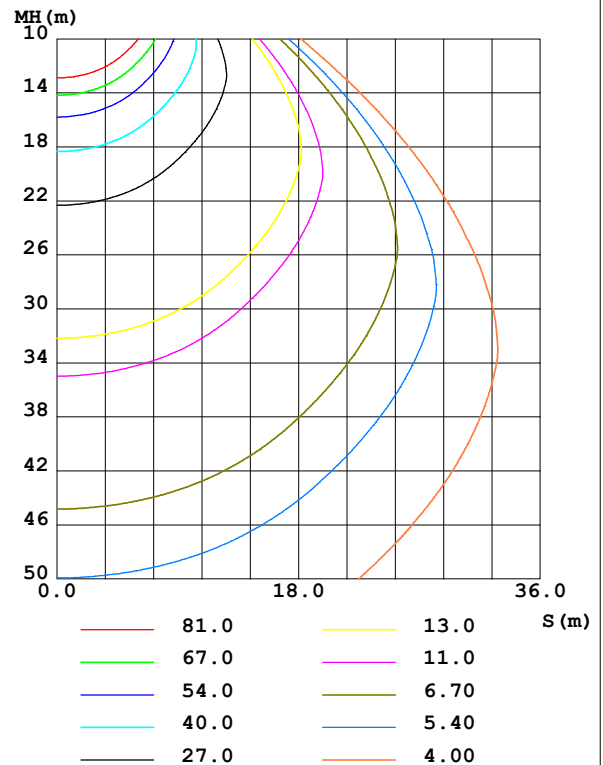
Test:U:229.3V I:0.881A P:197.9W PF:0.979 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:37718.5x1 lm		
NAME: HB68-200H-5070-H00191+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 190.64 lm/W			
MODEL	/	I _{max} (cd)	13466	S/MH(C0/180)	1.47
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.49
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	37719	η UP,DN(C0-180)	0.1,49.9
NOMINAL FLUX(lm)	37718.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,49.9
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down (%)	99.7	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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	1344	1346	1347	1346	1344	1346	1347	1346	0- 10	1284	1284	3.4,3.4
20	1331	1334	1336	1334	1331	1334	1336	1334	10- 20	3802	5086	13.5,13.5
30	1298	1304	1310	1304	1298	1304	1310	1304	20- 30	6098	11184	29.7,29.7
40	1265	1276	1281	1276	1265	1276	1281	1276	30- 40	8110	19294	51.2,51.2
50	1032	1045	1041	1045	1032	1045	1041	1045	40- 50	9270	28564	75.7,75.7
60	421.1	430.3	410.2	430.3	421.1	430.3	410.2	430.3	50- 60	6612	35175	93.3,93.3
70	54.62	56.33	55.21	56.33	54.62	56.33	55.21	56.33	60- 70	2168	37343	99,99
80	11.44	10.51	9.870	10.51	11.44	10.51	9.870	10.51	70- 80	218.6	37562	99.6,99.6
90	0.1223	0.1576	0.1641	0.1576	0.1223	0.1576	0.1641	0.1576	80- 90	52.96	37615	99.7,99.7
100	0.2053	0.2104	0.2054	0.2104	0.2053	0.2104	0.2054	0.2104	90-100	1.105	37616	99.7,99.7
110	0.8362	0.8476	0.8427	0.8476	0.8362	0.8476	0.8427	0.8476	100-110	5.188	37621	99.7,99.7
120	1.559	1.578	1.575	1.578	1.559	1.578	1.575	1.578	110-120	12.09	37633	99.8,99.8
130	2.333	2.349	2.342	2.349	2.333	2.349	2.342	2.349	120-130	17.48	37650	99.8,99.8
140	2.935	2.944	2.936	2.944	2.935	2.944	2.936	2.944	130-140	20.86	37671	99.9,99.9
150	3.036	3.024	3.034	3.024	3.036	3.024	3.034	3.024	140-150	18.73	37690	99.9,99.9
160	3.178	3.163	3.168	3.163	3.178	3.163	3.168	3.163	150-160	14.17	37704	100,100
170	4.206	4.193	4.198	4.193	4.206	4.193	4.198	4.193	160-170	10.12	37714	100,100
180	4.471	4.479	4.492	4.479	4.471	4.479	4.492	4.479	170-180	4.224	37719	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 23944 lm

%lum = 63.5%

%lamp = 63.5%

Conical surface Flux(130deg): 36656 lm

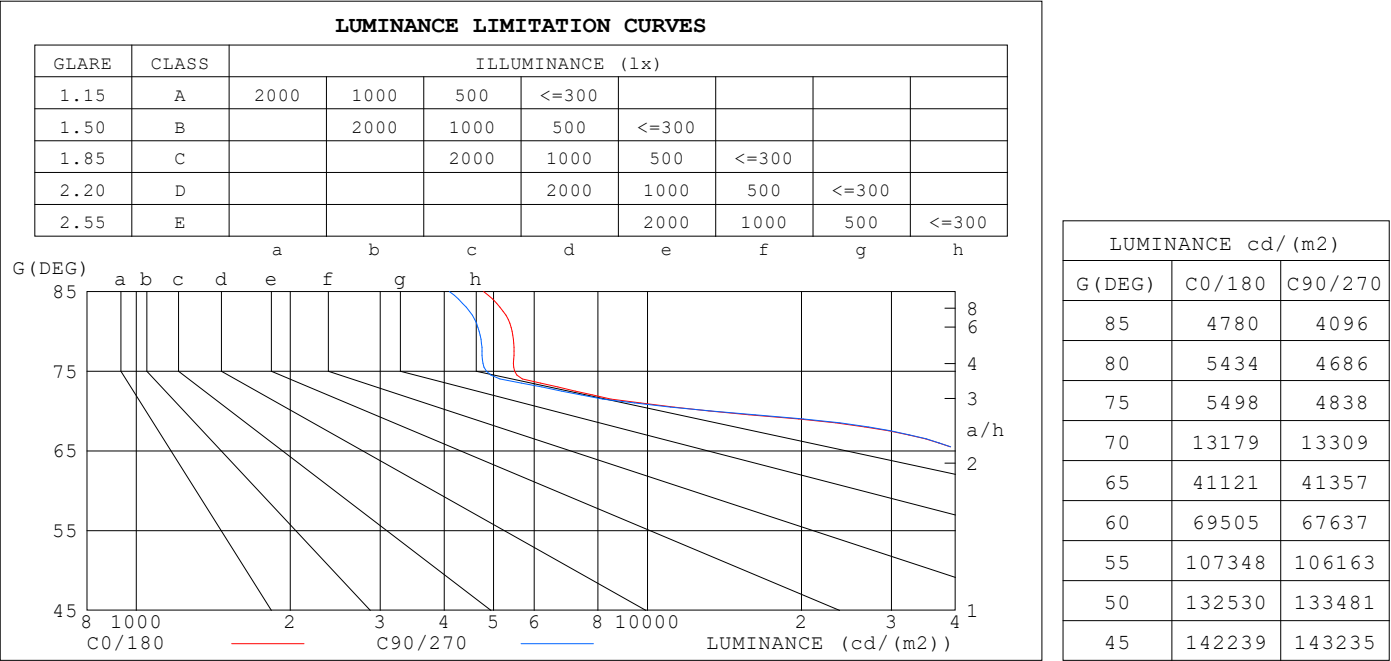
%lum = 97.2%

%lamp = 97.2%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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



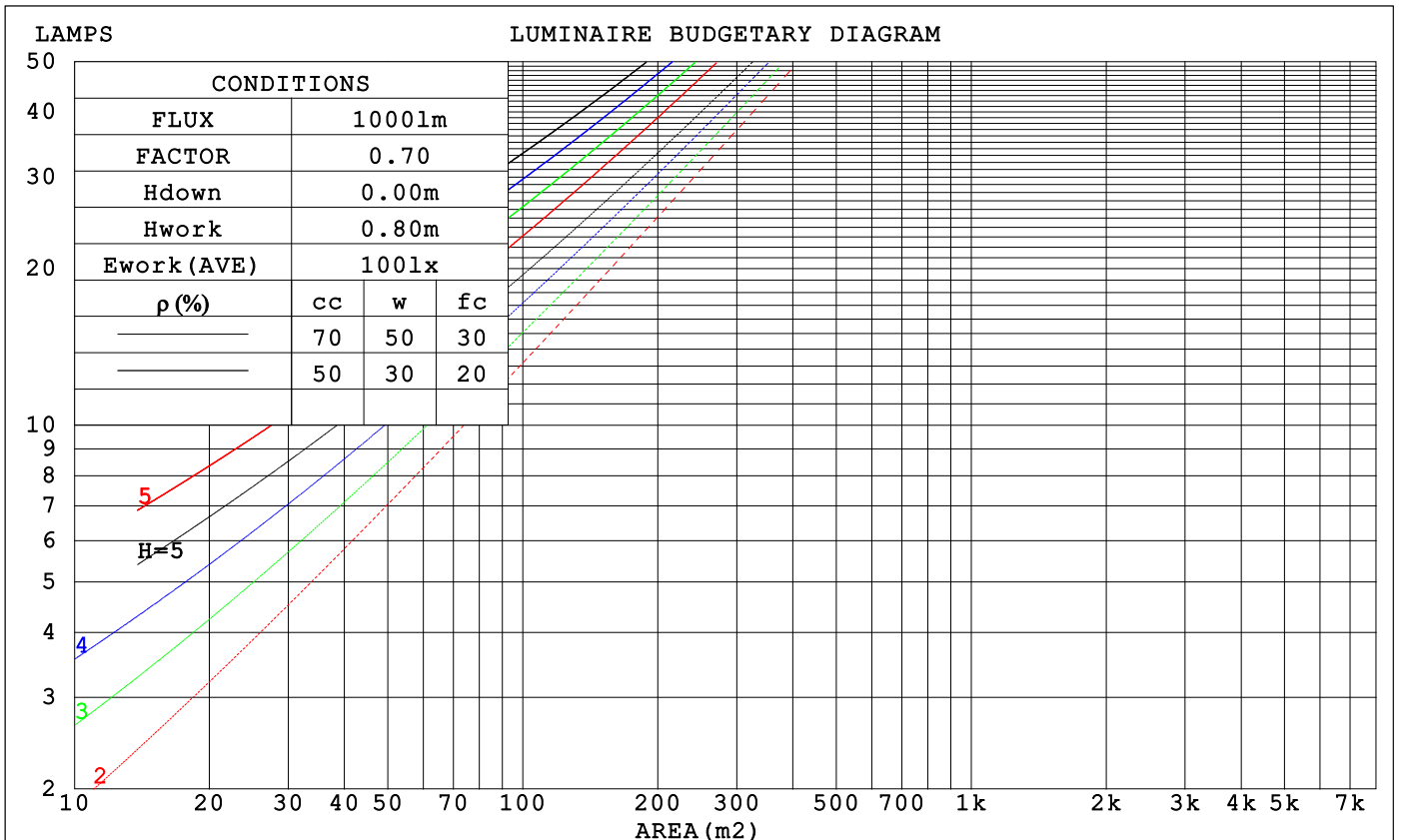
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.95	.90	.85	.93	.88	.84	.90	.86	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.71	.80	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.74	.67	.61	.72	.65	.60	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.53	.67	.59	.53	.65	.58	.53	.63	.57	.52	.61	.56	.51	.49
6.0	.61	.53	.47	.60	.52	.46	.58	.51	.46	.57	.50	.46	.55	.50	.45	.43
7.0	.55	.47	.41	.54	.47	.41	.53	.46	.41	.52	.45	.40	.50	.44	.40	.38
8.0	.50	.42	.37	.50	.42	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.42	.36	.32	.30
10.0	.42	.35	.30	.42	.34	.30	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-07-13

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

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.247	.141	.045	.240	.137	.044	.227	.130	.042	.215	.124	.040	.204	.118	.038	
2.0	.244	.134	.041	.238	.131	.040	.227	.126	.039	.216	.121	.038	.207	.117	.037	
3.0	.235	.125	.037	.229	.123	.037	.219	.119	.036	.210	.115	.035	.201	.112	.035	
4.0	.223	.116	.034	.218	.114	.034	.209	.111	.033	.201	.108	.033	.193	.105	.032	
5.0	.211	.107	.031	.206	.106	.031	.198	.103	.030	.191	.101	.030	.184	.098	.030	
6.0	.199	.100	.028	.195	.098	.028	.188	.096	.028	.181	.094	.028	.175	.092	.027	
7.0	.187	.093	.026	.184	.092	.026	.178	.090	.026	.172	.088	.026	.166	.086	.025	
8.0	.177	.086	.024	.174	.086	.024	.168	.084	.024	.163	.082	.024	.158	.081	.024	
9.0	.167	.081	.023	.164	.080	.022	.159	.079	.022	.154	.077	.022	.150	.076	.022	
10.0	.158	.076	.021	.156	.075	.021	.151	.074	.021	.146	.073	.021	.142	.072	.021	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	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	.178	.159	.141	.152	.136	.122	.104	.094	.084	.060	.054	.049	.019	.017	.016	
2.0	.168	.134	.106	.144	.116	.092	.099	.080	.064	.057	.047	.037	.018	.015	.012	
3.0	.160	.116	.081	.137	.100	.071	.094	.070	.050	.054	.041	.029	.017	.013	.010	
4.0	.153	.103	.064	.131	.089	.056	.090	.062	.039	.052	.036	.023	.017	.012	.008	
5.0	.146	.092	.052	.125	.080	.045	.086	.056	.032	.050	.033	.019	.016	.011	.006	
6.0	.139	.084	.043	.120	.072	.038	.083	.051	.027	.048	.030	.016	.015	.010	.005	
7.0	.133	.077	.037	.115	.066	.032	.079	.047	.023	.046	.027	.014	.015	.009	.004	
8.0	.127	.071	.032	.110	.061	.028	.076	.043	.020	.044	.025	.012	.014	.008	.004	
9.0	.122	.066	.028	.105	.057	.025	.073	.040	.017	.042	.024	.010	.014	.008	.003	
10.0	.117	.062	.025	.101	.054	.022	.070	.038	.016	.041	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:ZZX
 Test Date:2023-07-13

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	27.7	29.3	28.1	29.6	29.9	27.5	29.0	27.9	29.3	29.6
3H	27.8	29.2	28.2	29.5	29.9	27.6	28.9	28.0	29.3	29.6
4H	27.8	29.0	28.2	29.4	29.8	27.5	28.8	27.9	29.1	29.5
6H	27.7	28.9	28.1	29.2	29.6	27.5	28.6	27.9	29.0	29.4
8H	27.7	28.8	28.1	29.2	29.6	27.4	28.5	27.9	28.9	29.3
12H	27.6	28.7	28.1	29.1	29.5	27.4	28.4	27.8	28.8	29.3
4H 2H	27.8	29.0	28.2	29.4	29.8	27.6	28.8	28.0	29.2	29.5
3H	27.9	28.9	28.3	29.3	29.7	27.7	28.7	28.1	29.1	29.5
4H	27.8	28.7	28.3	29.2	29.6	27.6	28.5	28.0	28.9	29.4
6H	27.8	28.6	28.2	29.0	29.5	27.5	28.3	28.0	28.8	29.2
8H	27.7	28.5	28.2	28.9	29.4	27.5	28.2	28.0	28.7	29.2
12H	27.7	28.3	28.2	28.8	29.3	27.5	28.1	28.0	28.6	29.1
8H 4H	27.7	28.4	28.2	28.9	29.4	27.5	28.2	28.0	28.7	29.1
6H	27.6	28.2	28.2	28.7	29.2	27.4	28.0	27.9	28.5	29.0
8H	27.6	28.1	28.1	28.7	29.2	27.4	27.9	27.9	28.4	28.9
12H	27.6	28.0	28.1	28.5	29.1	27.3	27.8	27.8	28.3	28.9
12H 4H	27.7	28.3	28.2	28.8	29.3	27.5	28.1	27.9	28.6	29.1
6H	27.6	28.1	28.1	28.6	29.2	27.4	27.9	27.9	28.4	28.9
8H	27.6	28.0	28.1	28.5	29.1	27.3	27.8	27.8	28.3	28.9
CIE190: 2010										

CIE190: 2010
Area: 0.1213 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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

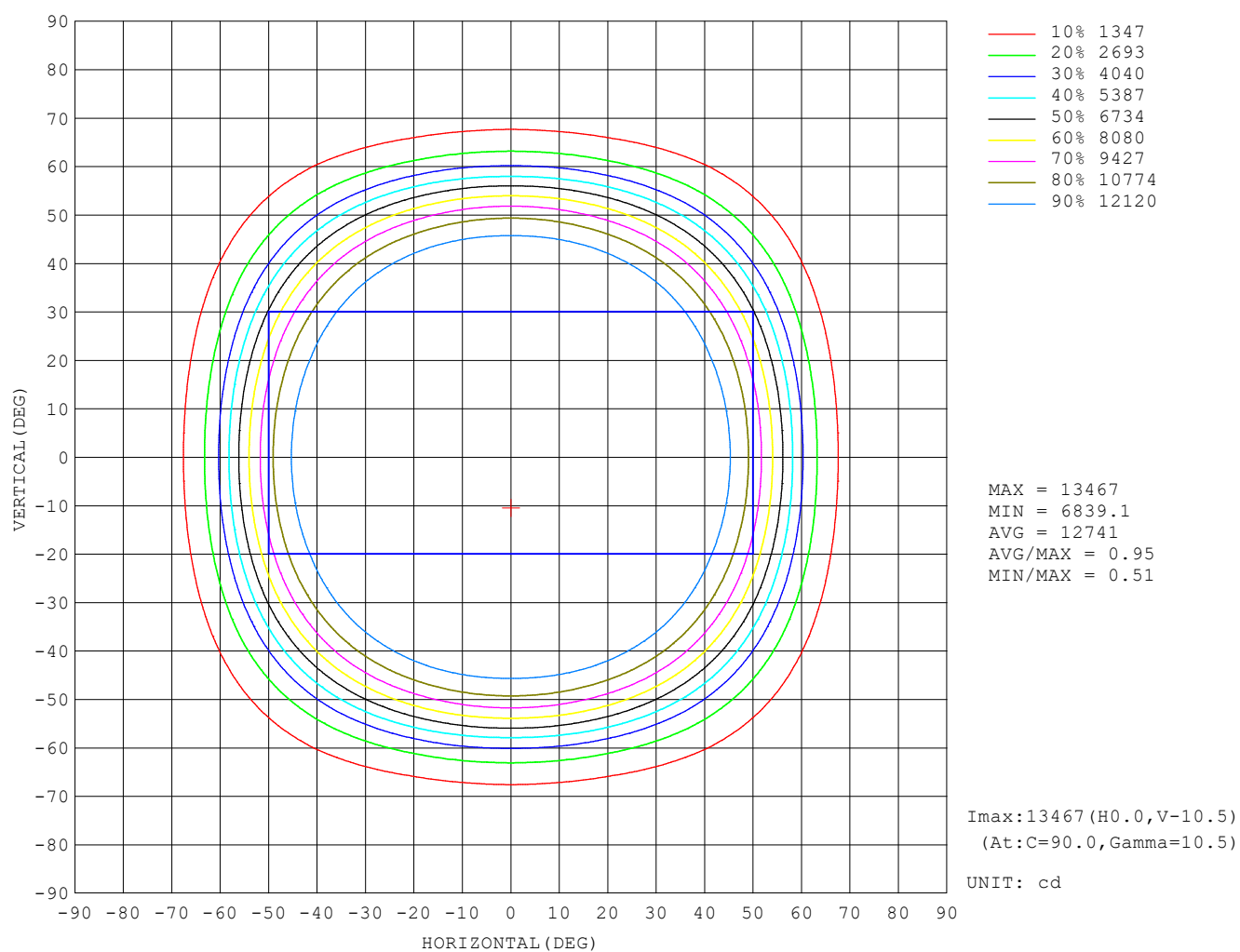
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	48	42	58	48	42	35
0.80	71	60	54	70	60	53	69	59	53	47
1.00	81	71	65	80	70	64	78	72	64	57
1.25	88	79	73	87	79	73	84	77	72	65
1.50	93	85	79	92	84	78	89	82	77	71
2.00	100	93	87	98	91	87	95	89	85	78
2.50	103	96	91	101	95	90	97	92	89	81
3.00	106	100	96	104	99	94	100	96	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	98	90
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-07-13

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:

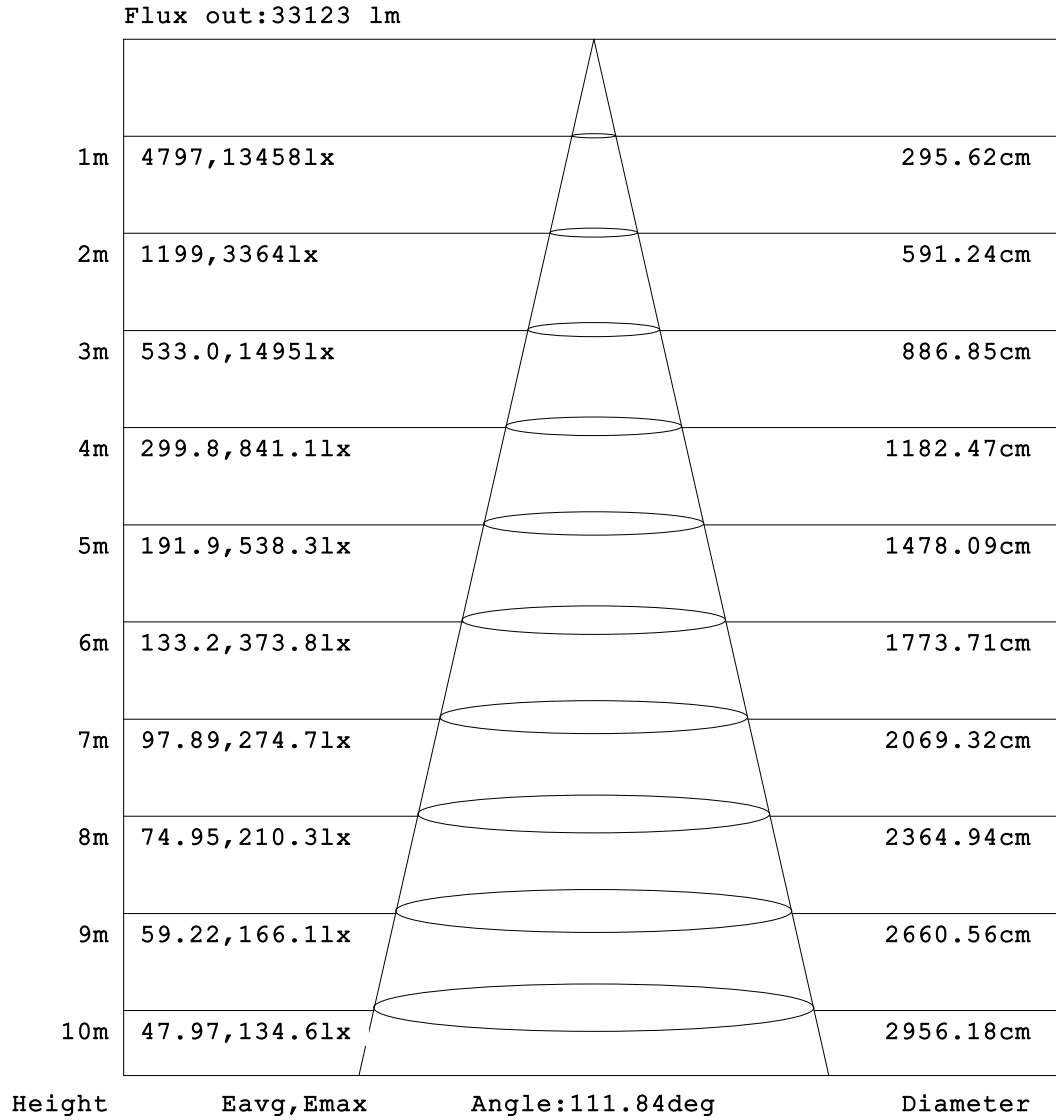
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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



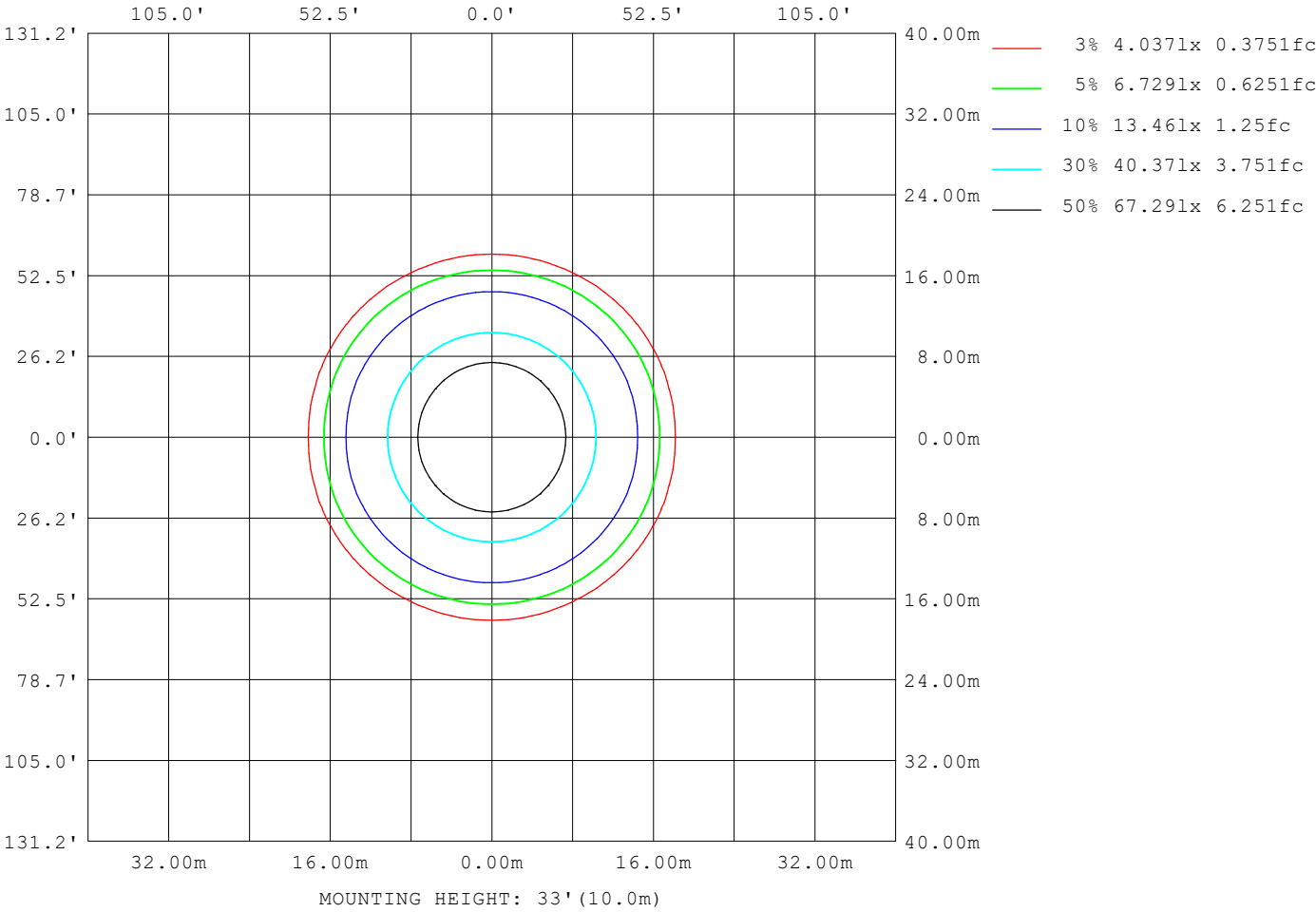
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-13

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:229.3V I:0.881A P:197.9W PF:0.979 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:37718.5x1 lm		
NAME: HB68-200H-5070-H00191+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

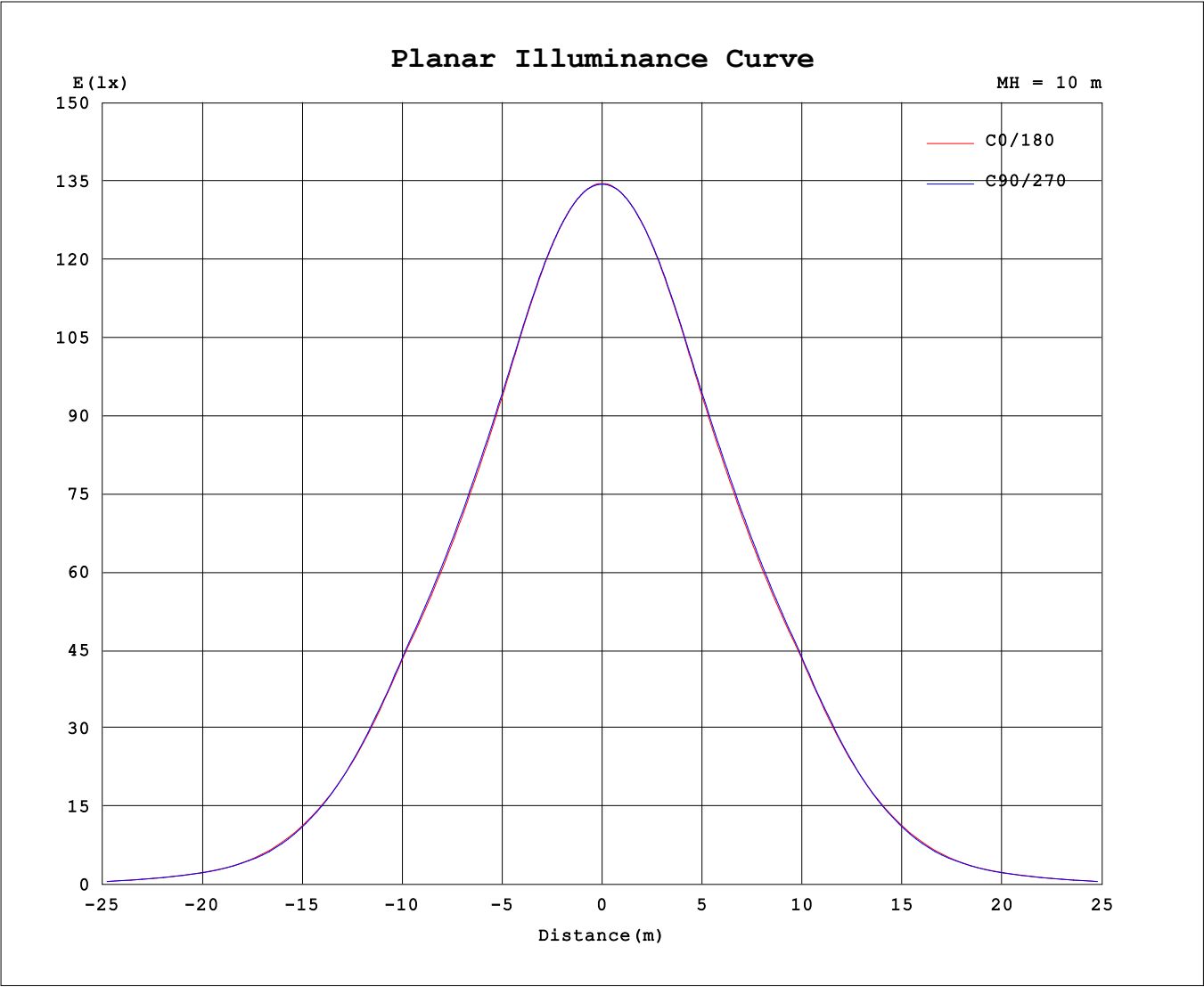
AvgL	cd/m2
L_0~180 (65) av	41079
L_0~180 (75) av	5492
L_0~180 (85) av	4775
L_90~270 (65) av	41355
L_90~270 (75) av	4838
L_90~270 (85) av	4096
L_45 (65) av	42042
L_45 (75) av	5120
L_45 (85) av	4362

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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: 22.5DEG	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:2023-07-13	Remarks: