

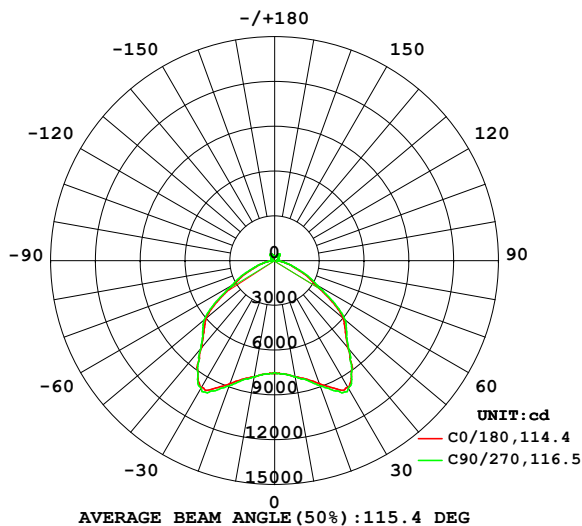
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

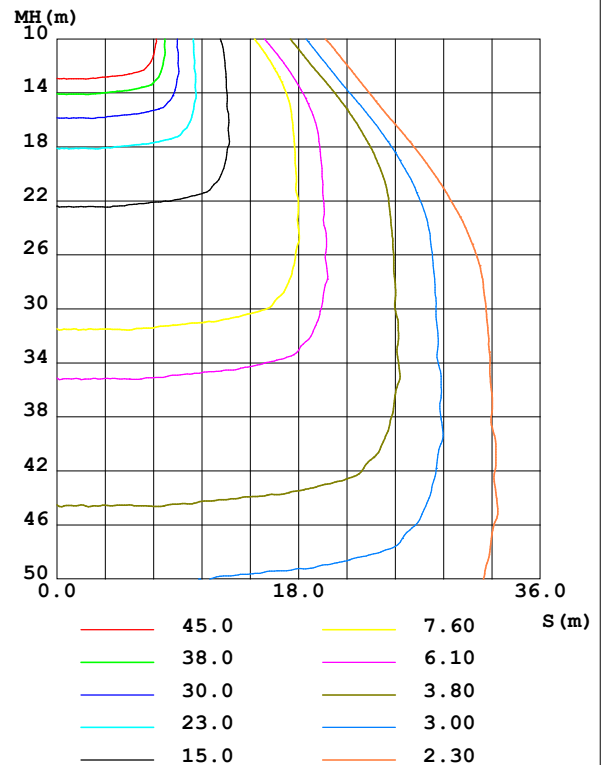
Test:U:230.0V I:0.661A P:149.7W PF:0.985 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:28160.6x1 lm		
NAME: HB68-150H-5070-H00197+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 188.06 lm/W			
MODEL	/	I _{max} (cd)	10045	S/MH(C0/180)	1.58
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.59
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	28161	η UP,DN(C0-180)	3.3,46.7
NOMINAL FLUX(lm)	28160.6	CIE CLASS	DIRECT	η UP,DN(C180-360)	3.3,46.7
LAMPS INSIDE	1	η up (%)	6.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down (%)	93.5	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	791.2	789.4	791.4	789.4	791.2	789.4	791.4	789.4	0- 10	737.1	737.1	2.62,2.62
20	875.4	880.5	892.6	880.5	875.4	880.5	892.6	880.5	10- 20	2368	3105	11,11
30	980.3	982.5	987.9	982.5	980.3	982.5	987.9	982.5	20- 30	4412	7517	26.7,26.7
40	760.6	781.2	770.2	781.2	760.6	781.2	770.2	781.2	30- 40	5592	13109	46.6,46.6
50	599.2	613.4	617.5	613.4	599.2	613.4	617.5	613.4	40- 50	5272	18382	65.3,65.3
60	307.7	315.4	331.9	315.4	307.7	315.4	331.9	315.4	50- 60	4153	22535	80,80
70	148.7	151.5	158.9	151.5	148.7	151.5	158.9	151.5	60- 70	2340	24875	88.3,88.3
80	58.93	58.01	59.95	58.01	58.93	58.01	59.95	58.01	70- 80	1077	25952	92.2,92.2
90	17.52	17.86	18.16	17.86	17.52	17.86	18.16	17.86	80- 90	374.1	26326	93.5,93.5
100	17.85	18.14	18.21	18.14	17.85	18.14	18.21	18.14	90-100	173.3	26500	94.1,94.1
110	25.58	25.72	25.99	25.72	25.58	25.72	25.99	25.72	100-110	230.0	26730	94.9,94.9
120	27.85	29.02	28.68	29.02	27.85	29.02	28.68	29.02	110-120	275.0	27005	95.9,95.9
130	28.60	29.31	29.82	29.31	28.60	29.31	29.82	29.31	120-130	258.8	27263	96.8,96.8
140	43.38	45.14	45.58	45.14	43.38	45.14	45.58	45.14	130-140	270.2	27534	97.8,97.8
150	48.62	50.00	51.19	50.00	48.62	50.00	51.19	50.00	140-150	314.9	27849	98.9,98.9
160	34.61	35.75	36.02	35.75	34.61	35.75	36.02	35.75	150-160	203.7	28052	99.6,99.6
170	24.81	24.74	25.08	24.74	24.81	24.74	25.08	24.74	160-170	84.26	28136	99.9,99.9
180	31.11	27.97	30.66	27.97	31.11	27.97	30.66	27.97	170-180	24.10	28161	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 15774 lm

%lum = 56.0%

%lamp = 56.0%

Conical surface Flux(130deg): 23893 lm

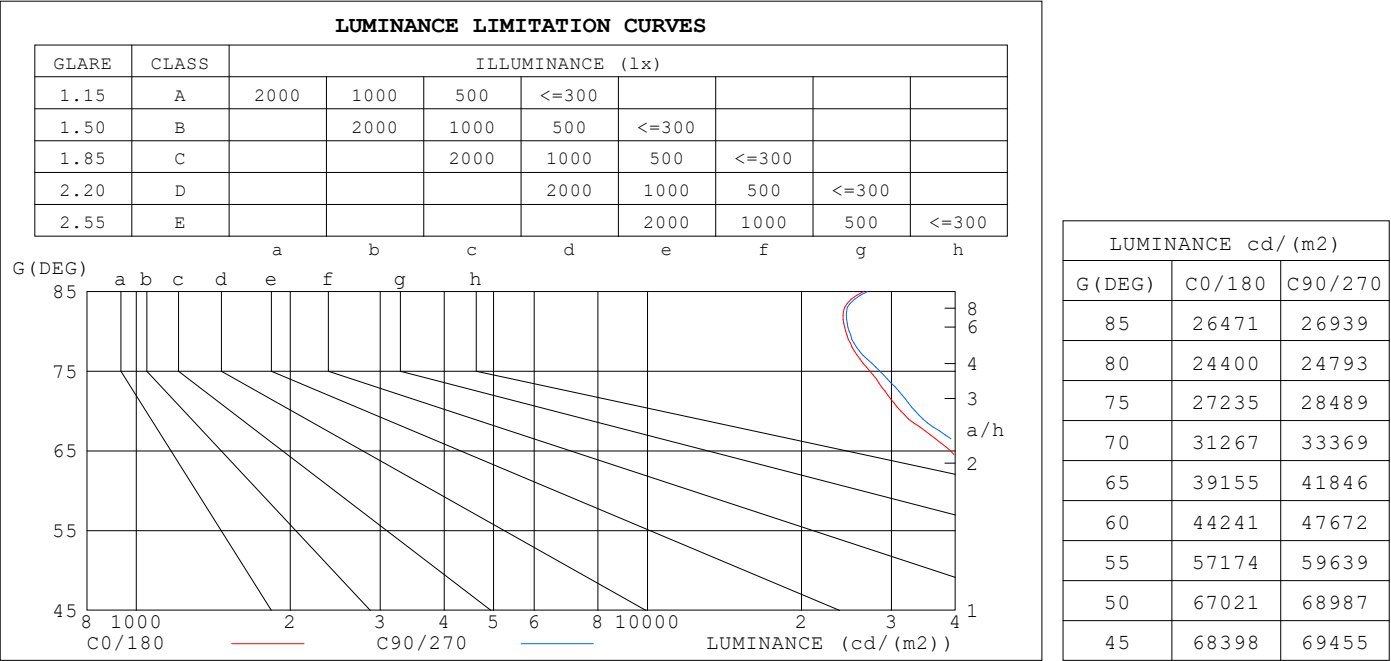
%lum = 84.8%

%lamp = 84.8%

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:

LUMINANCE LIMITATION CURVES



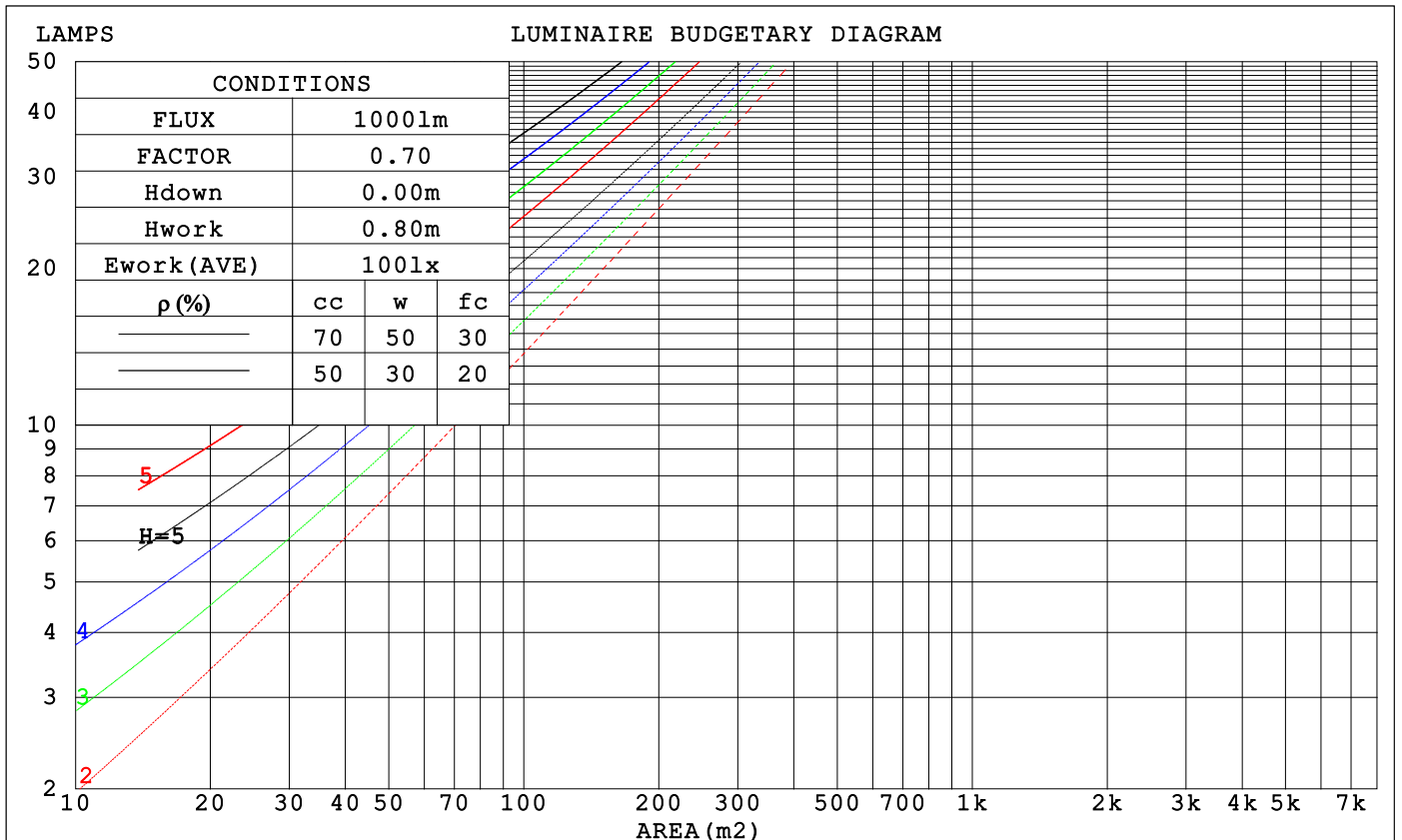
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.02	1.02	1.02	.96	.96	.96	.93
1.0	1.04	.00	.96	1.01	.97	.94	.96	.93	.90	.91	.88	.86	.86	.84	.83	.80
2.0	.91	.85	.80	.89	.83	.78	.84	.80	.76	.80	.76	.73	.76	.73	.70	.68
3.0	.81	.73	.67	.79	.72	.66	.75	.69	.64	.71	.66	.62	.68	.64	.60	.58
4.0	.72	.63	.57	.70	.62	.56	.67	.60	.55	.64	.58	.53	.61	.56	.52	.50
5.0	.64	.56	.49	.63	.55	.49	.60	.53	.48	.57	.51	.46	.55	.50	.45	.43
6.0	.58	.49	.43	.56	.48	.43	.54	.47	.42	.52	.46	.41	.50	.44	.40	.38
7.0	.52	.44	.38	.51	.43	.37	.49	.42	.37	.47	.41	.36	.45	.40	.35	.33
8.0	.48	.39	.34	.47	.39	.33	.45	.38	.33	.43	.37	.32	.41	.36	.32	.30
9.0	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.33	.29	.38	.33	.28	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.26	.36	.30	.26	.35	.30	.26	.24



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

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	.281	.160	.051	.272	.155	.049	.256	.147	.047	.240	.138	.044	.226	.131	.042	
2.0	.268	.147	.045	.260	.143	.044	.245	.136	.042	.231	.130	.041	.219	.124	.039	
3.0	.251	.134	.040	.244	.131	.039	.231	.125	.038	.218	.120	.037	.207	.115	.035	
4.0	.234	.122	.036	.228	.119	.035	.216	.115	.034	.205	.110	.033	.195	.106	.032	
5.0	.219	.111	.032	.213	.109	.032	.202	.105	.031	.192	.101	.030	.183	.098	.029	
6.0	.204	.102	.029	.199	.101	.029	.190	.097	.028	.180	.094	.028	.172	.091	.027	
7.0	.191	.095	.027	.187	.093	.027	.178	.090	.026	.170	.087	.025	.162	.084	.025	
8.0	.180	.088	.025	.175	.086	.024	.167	.084	.024	.160	.081	.023	.153	.078	.023	
9.0	.169	.082	.023	.165	.081	.023	.158	.078	.022	.151	.076	.022	.145	.073	.021	
10.0	.160	.076	.021	.156	.075	.021	.149	.073	.021	.143	.071	.020	.137	.069	.020	

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	.240	.240	.240	.205	.205	.205	.140	.140	.140	.080	.080	.080	.026	.026	.026	
1.0	.228	.206	.187	.195	.177	.161	.134	.122	.111	.077	.071	.065	.025	.023	.021	
2.0	.219	.182	.151	.188	.157	.131	.129	.109	.091	.074	.063	.053	.024	.020	.017	
3.0	.211	.165	.128	.181	.142	.111	.124	.099	.078	.072	.058	.046	.023	.019	.015	
4.0	.204	.152	.111	.175	.131	.097	.120	.091	.068	.070	.053	.040	.022	.017	.013	
5.0	.197	.141	.100	.169	.122	.087	.117	.085	.061	.068	.050	.036	.022	.016	.012	
6.0	.190	.133	.092	.164	.115	.080	.113	.081	.056	.065	.047	.034	.021	.015	.011	
7.0	.184	.126	.086	.158	.109	.075	.109	.077	.053	.064	.045	.031	.021	.015	.010	
8.0	.178	.120	.081	.153	.104	.071	.106	.073	.050	.062	.043	.030	.020	.014	.010	
9.0	.172	.116	.077	.148	.100	.067	.103	.070	.048	.060	.042	.029	.019	.014	.009	
10.0	.167	.111	.074	.144	.097	.065	.100	.068	.046	.058	.040	.028	.019	.013	.009	

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	2H	24.9	26.3	25.4	26.8	27.2	25.1	26.6	25.6	27.0	27.5
	3H	26.0	27.3	26.5	27.7	28.2	26.2	27.4	26.7	27.9	28.4
	4H	26.4	27.6	26.9	28.0	28.6	26.5	27.7	27.0	28.2	28.7
	6H	26.6	27.7	27.1	28.2	28.8	26.8	27.9	27.3	28.4	28.9
	8H	26.7	27.7	27.2	28.3	28.8	26.9	27.9	27.4	28.4	29.0
	12H	26.8	27.8	27.3	28.3	28.9	26.9	27.9	27.5	28.4	29.0
	4H	25.3	26.5	25.8	27.0	27.5	25.5	26.7	26.0	27.2	27.7
	3H	26.6	27.6	27.1	28.1	28.7	26.7	27.7	27.2	28.2	28.8
	4H	27.1	28.0	27.6	28.5	29.1	27.2	28.1	27.7	28.6	29.2
	6H	27.4	28.2	28.0	28.8	29.4	27.5	28.3	28.1	28.9	29.5
	8H	27.6	28.3	28.1	28.8	29.5	27.7	28.4	28.2	28.9	29.5
	12H	27.7	28.3	28.3	28.9	29.5	27.8	28.4	28.4	29.0	29.6
	8H	27.2	27.9	27.8	28.5	29.1	27.3	28.0	27.9	28.6	29.2
	6H	27.7	28.3	28.3	28.9	29.5	27.8	28.4	28.4	29.0	29.6
	8H	27.9	28.4	28.5	29.0	29.7	27.9	28.5	28.6	29.1	29.7
	12H	28.1	28.5	28.7	29.1	29.8	28.2	28.6	28.8	29.2	29.9
	12H	27.2	27.9	27.8	28.4	29.1	27.3	28.0	27.9	28.5	29.2
	6H	27.7	28.2	28.3	28.8	29.5	27.8	28.3	28.4	28.9	29.6
	8H	27.9	28.4	28.5	29.0	29.7	28.0	28.5	28.6	29.1	29.8
CIE190: 2010											

CIE190: 2010
Area: 0.1392 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

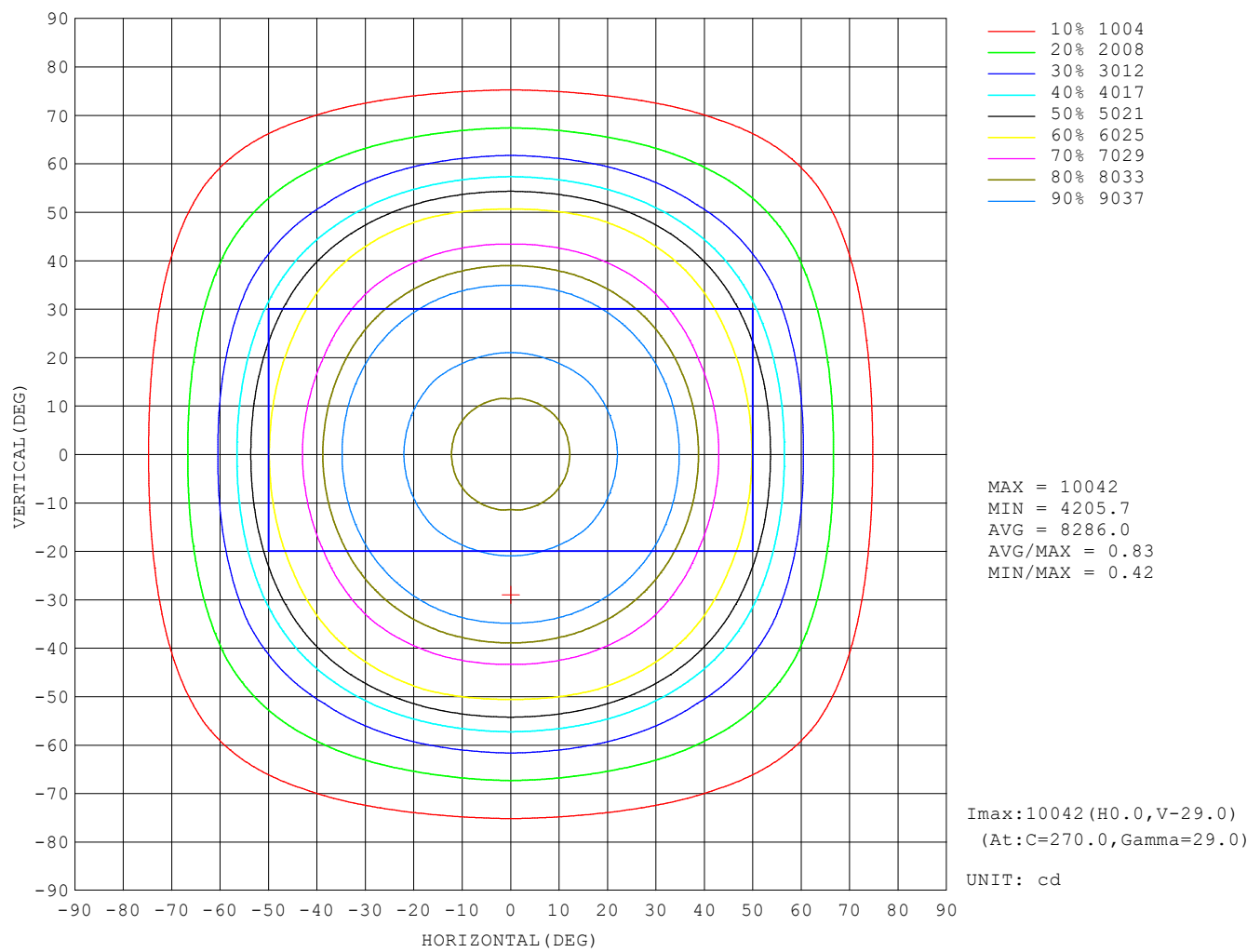
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	47	40	56	46	40	33
0.80	68	57	50	67	57	50	65	56	49	42
1.00	77	66	60	75	66	59	73	66	58	51
1.25	84	74	67	82	73	67	79	71	66	58
1.50	89	80	73	87	78	72	83	76	71	63
2.00	95	87	81	93	86	80	89	83	78	69
2.50	99	92	86	96	90	85	92	86	82	73
3.00	102	96	90	99	94	89	94	90	86	76
4.00	106	100	96	103	98	94	98	94	90	80
5.00	108	103	99	105	101	97	99	96	93	82
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:

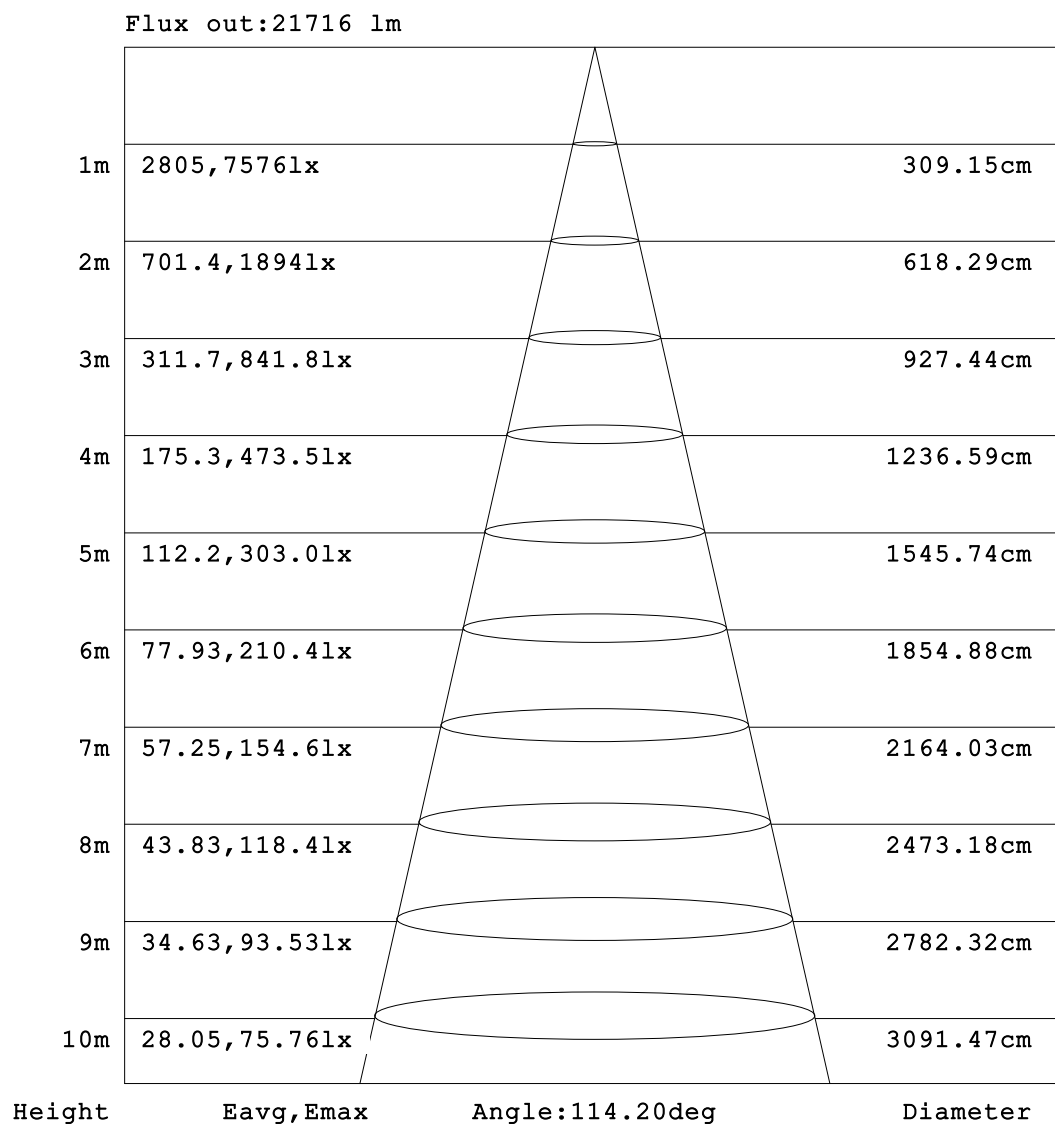
ISOCANDELA DIAGRAM



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



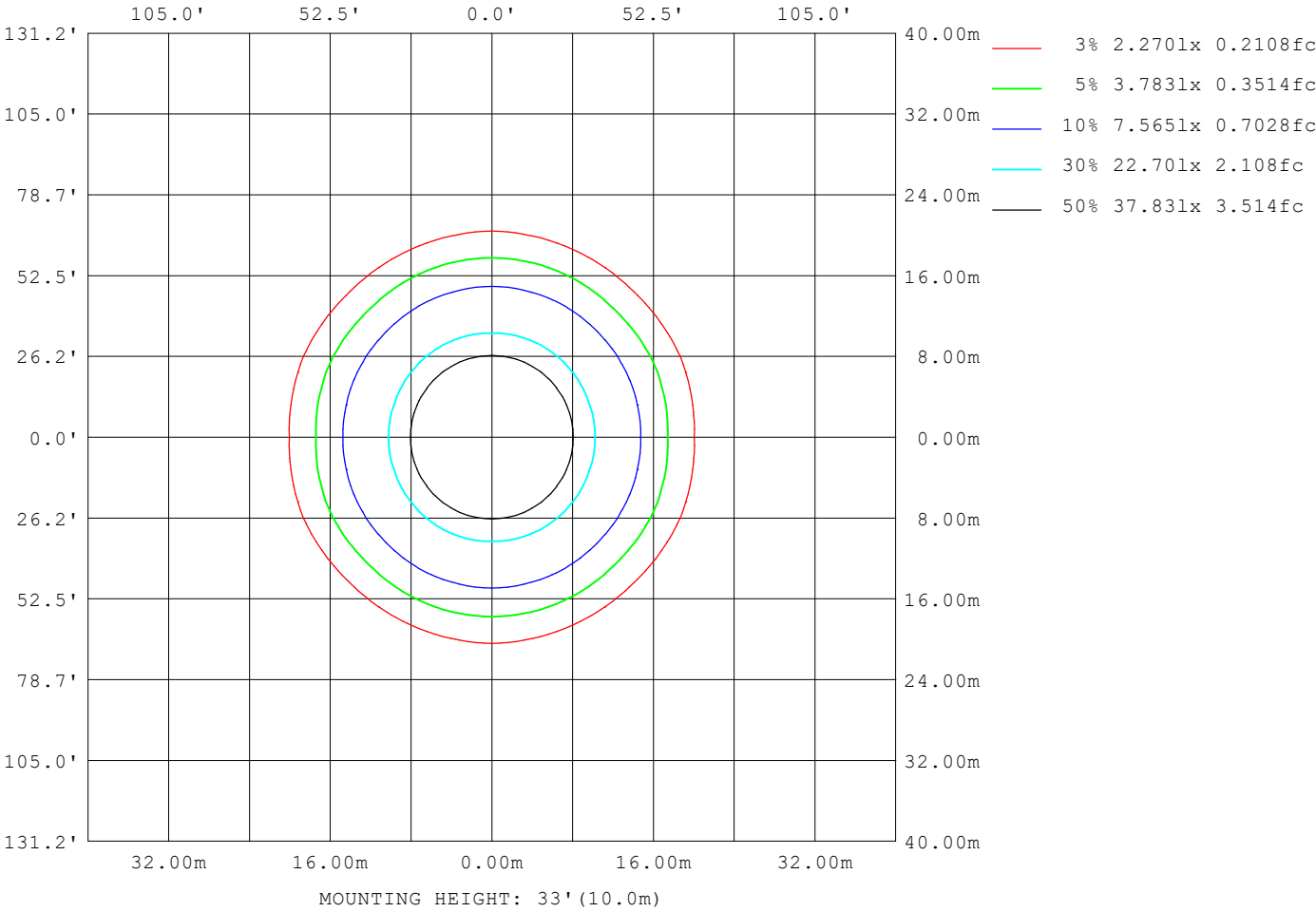
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.0V I:0.661A P:149.7W PF:0.985 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:28160.6x1 lm		
NAME: HB68-150H-5070-H00197+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

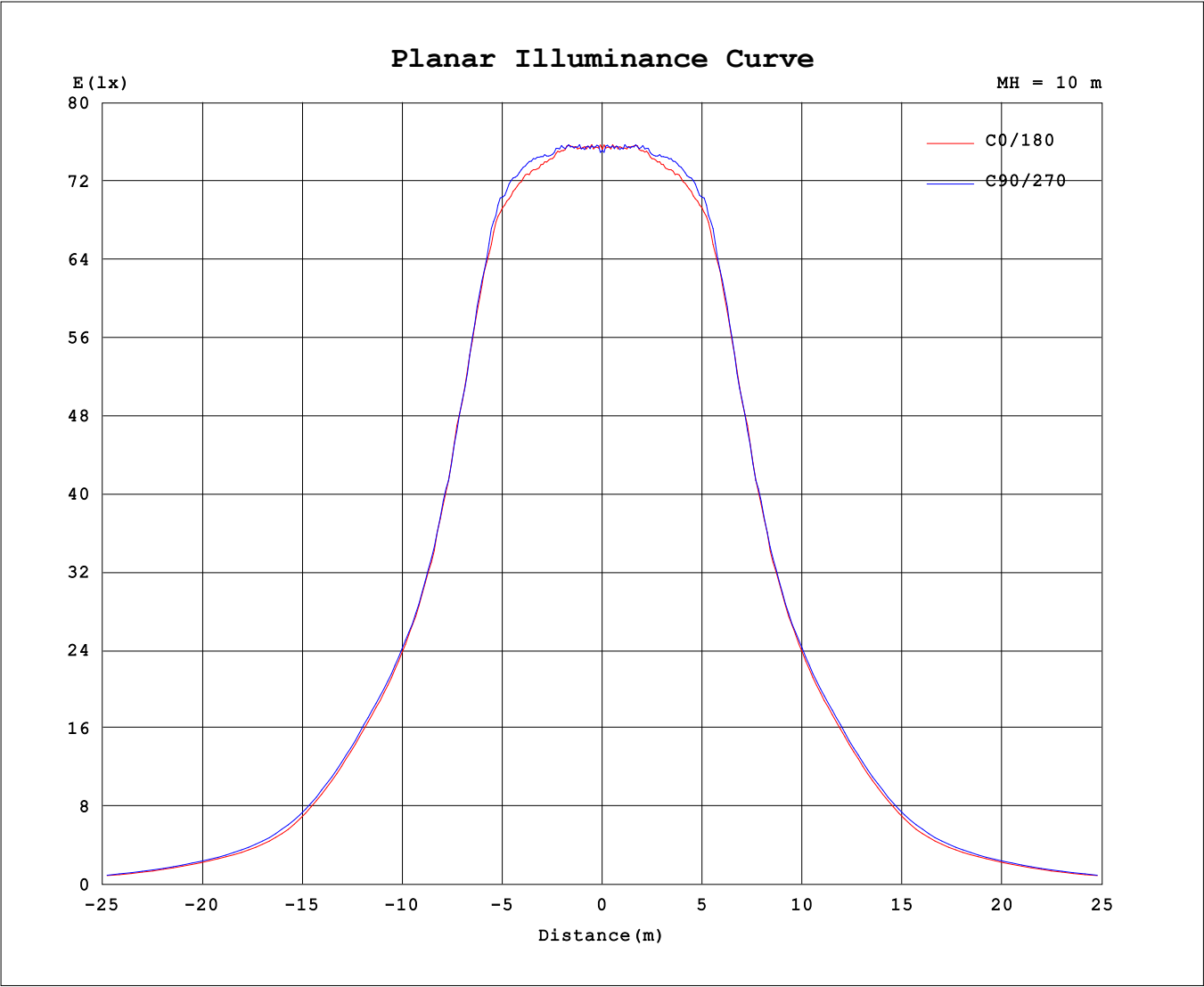
AvgL	cd/m2
L_0~180 (65) av	39124
L_0~180 (75) av	27214
L_0~180 (85) av	26450
L_90~270 (65) av	41861
L_90~270 (75) av	28499
L_90~270 (85) av	26948
L_45 (65) av	39804
L_45 (75) av	27331
L_45 (85) av	26228

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: