

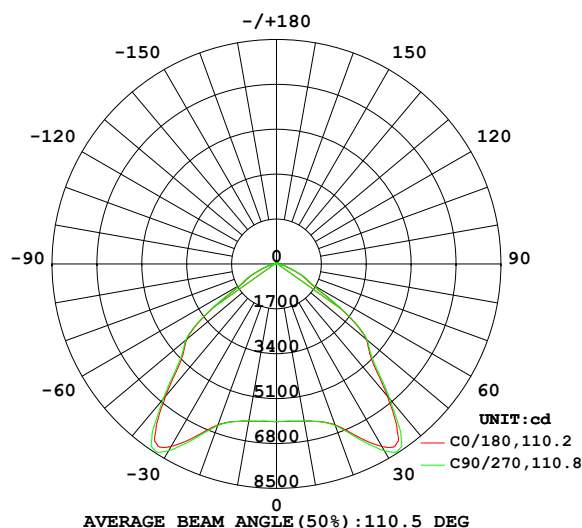
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

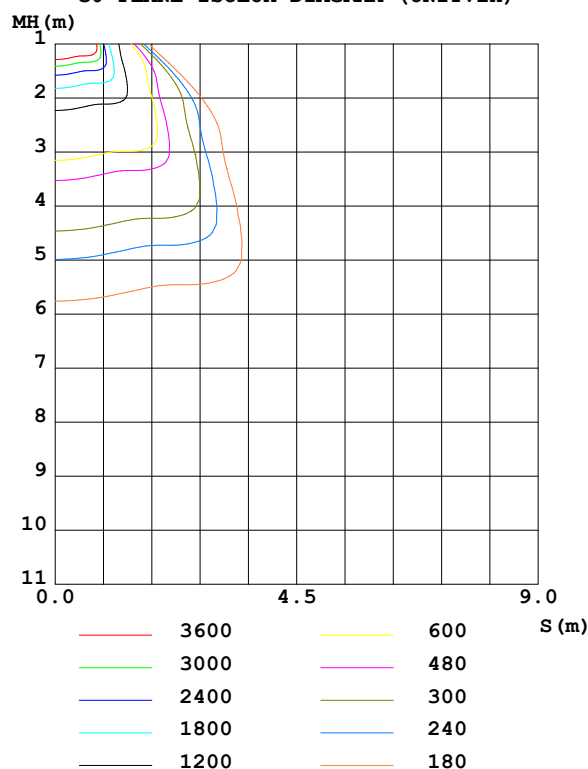
Test:U:229.8V I:0.444A P:99.2W PF:0.972 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:19294.6x1 lm		
NAME: HB68-100H-5070-H00194+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 194.43 lm/W			
MODEL	/	Imax (cd)	8526	S/MH (C0/180)	1.53
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.54
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	19295	η UP,DN (C0-180)	0.6,49.4
NOMINAL FLUX (lm)	19294.6	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.6,49.4
LAMPS INSIDE	1	η up (%)	1.2	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	/	η down (%)	98.8	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°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

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	6049	6052	6044	6052	6049	6052	6044	6052	0- 10	573.5	573.5	2.97,2.97
20	6489	6491	6516	6491	6489	6491	6516	6491	10- 20	1767	2341	12.1,12.1
30	7983	8086	8166	8086	7983	8086	8166	8086	20- 30	3383	5724	29.7,29.7
40	6544	6605	6694	6605	6544	6605	6694	6605	30- 40	4922	10645	55.2,55.2
50	4433	4502	4484	4502	4433	4502	4484	4502	40- 50	4092	14737	76.4,76.4
60	1513	1559	1597	1559	1513	1559	1597	1559	50- 60	2712	17449	90.4,90.4
70	634.9	634.8	673.7	634.8	634.9	634.8	673.7	634.8	60- 70	1093	18541	96.1,96.1
80	192.4	181.1	190.8	181.1	192.4	181.1	190.8	181.1	70- 80	412.7	18954	98.2,98.2
90	39.81	41.86	43.06	41.86	39.81	41.86	43.06	41.86	80- 90	106.6	19061	98.8,98.8
100	24.78	26.18	25.42	26.18	24.78	26.18	25.42	26.18	90-100	31.50	19092	99,99
110	26.80	26.56	26.11	26.56	26.80	26.56	26.11	26.56	100-110	26.20	19118	99.1,99.1
120	39.14	41.43	39.88	41.43	39.14	41.43	39.88	41.43	110-120	32.73	19151	99.3,99.3
130	40.73	41.97	42.31	41.97	40.73	41.97	42.31	41.97	120-130	37.64	19189	99.5,99.5
140	48.87	50.94	50.99	50.94	48.87	50.94	50.99	50.94	130-140	35.17	19224	99.6,99.6
150	47.67	48.40	48.16	48.40	47.67	48.40	48.16	48.40	140-150	31.36	19255	99.8,99.8
160	43.18	43.13	42.85	43.13	43.18	43.13	42.85	43.13	150-160	21.03	19276	99.9,99.9
170	50.11	49.82	49.90	49.82	50.11	49.82	49.90	49.82	160-170	13.12	19290	100,100
180	56.26	56.32	56.36	56.32	56.26	56.32	56.36	56.32	170-180	5.077	19295	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 12794 lm

%lum = 66.3%

%lamp = 66.3%

Conical surface Flux(120deg): 17449 lm

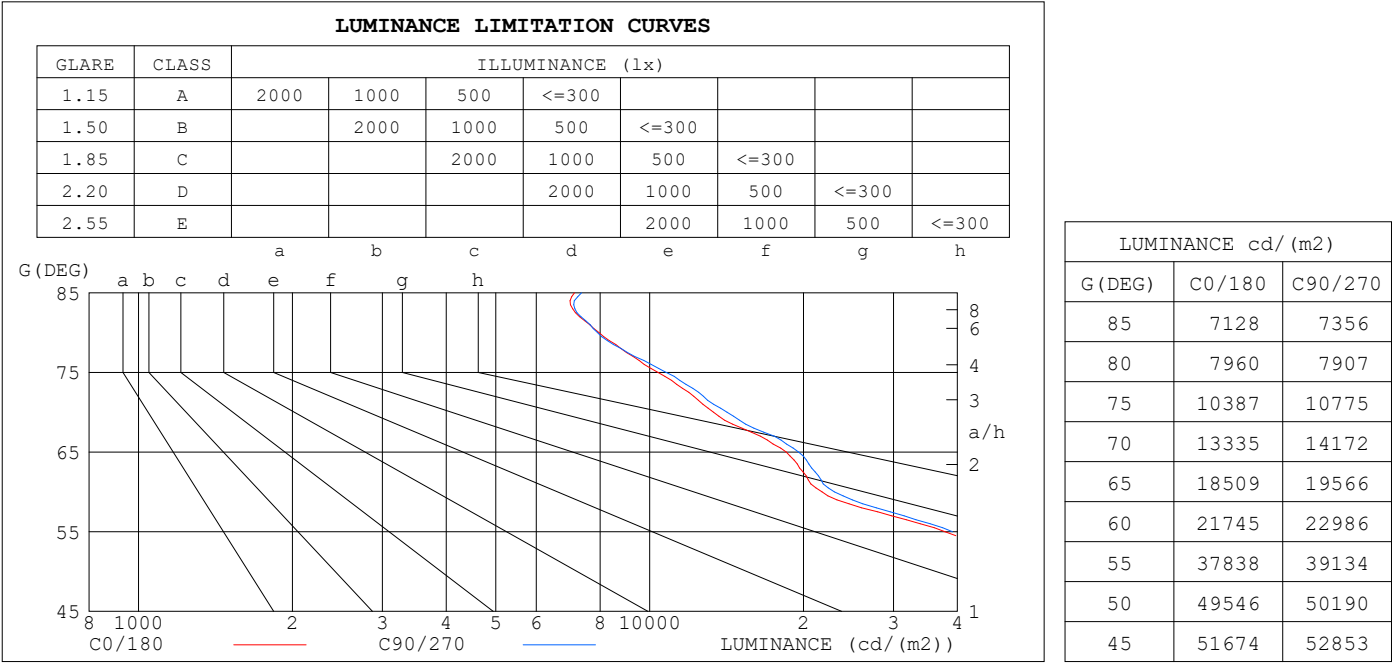
%lum = 90.4%

%lamp = 90.4%

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



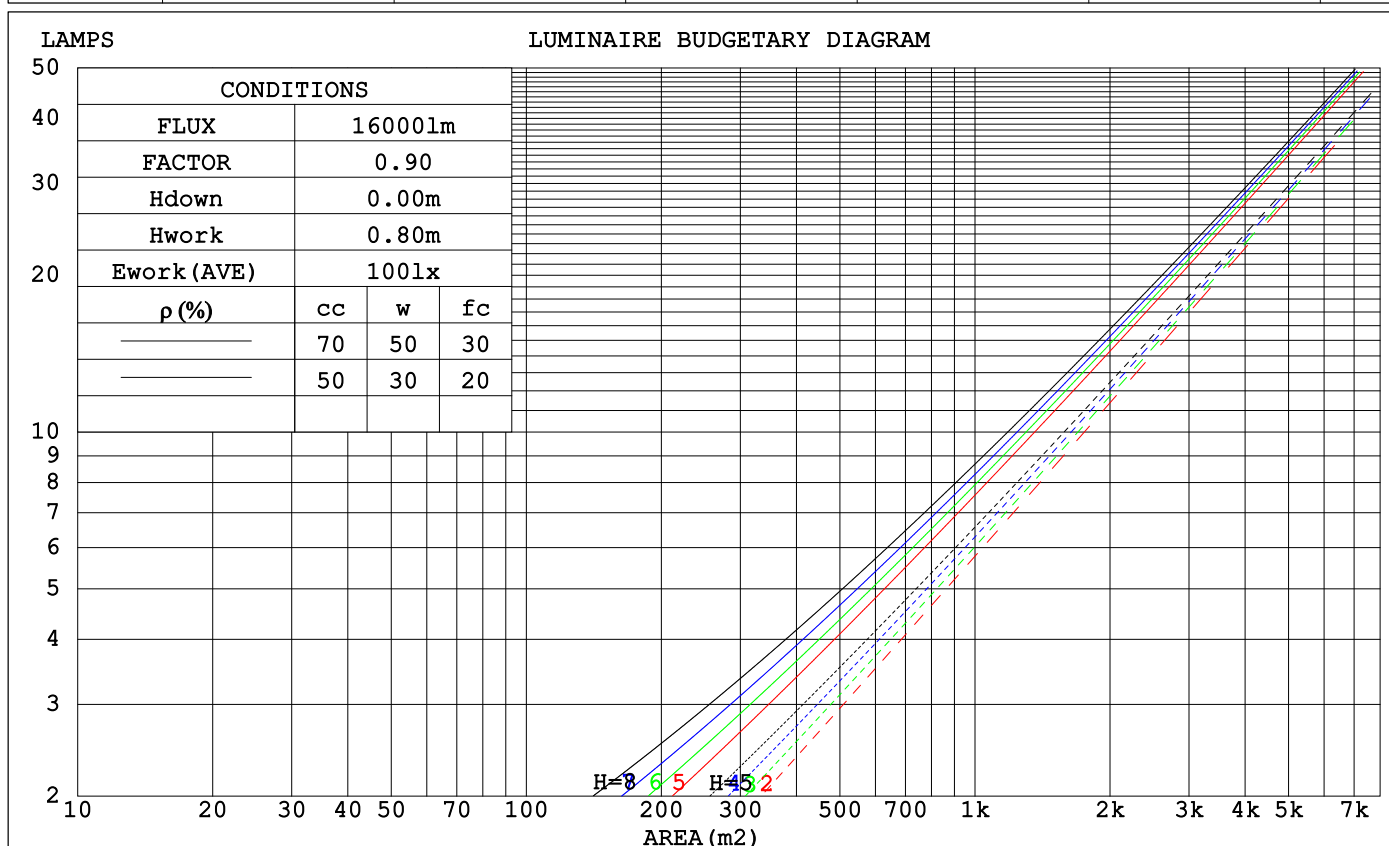
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-13

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

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	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.06	1.03	.00	1.04	1.01	.98	.00	.97	.95	.96	.94	.92	.92	.90	.89	.87
2.0	.95	.89	.84	.93	.87	.83	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.84	.77	.71	.83	.76	.71	.80	.74	.69	.77	.72	.68	.74	.70	.67	.65
4.0	.75	.68	.61	.74	.67	.61	.72	.65	.60	.69	.64	.59	.67	.62	.58	.56
5.0	.68	.60	.53	.67	.59	.53	.64	.58	.52	.62	.56	.52	.60	.55	.51	.49
6.0	.61	.53	.47	.60	.52	.47	.58	.51	.46	.57	.50	.46	.55	.49	.45	.43
7.0	.55	.47	.41	.55	.47	.41	.53	.46	.41	.51	.45	.40	.50	.44	.40	.38
8.0	.51	.42	.37	.50	.42	.37	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.46	.38	.33	.44	.38	.33	.43	.37	.32	.42	.36	.32	.30
10.0	.43	.35	.30	.42	.35	.30	.41	.34	.30	.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

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	.255	.145	.046	.248	.141	.045	.234	.134	.043	.222	.128	.041	.210	.122	.039		
2.0	.248	.136	.042	.242	.133	.041	.230	.128	.040	.219	.123	.038	.209	.118	.037		
3.0	.236	.126	.038	.230	.123	.037	.220	.119	.036	.210	.115	.035	.201	.111	.034		
4.0	.223	.116	.034	.218	.114	.034	.209	.111	.033	.200	.107	.032	.192	.104	.032		
5.0	.210	.107	.031	.205	.105	.031	.197	.103	.030	.189	.100	.030	.182	.097	.029		
6.0	.198	.099	.028	.194	.098	.028	.186	.095	.028	.179	.093	.027	.173	.091	.027		
7.0	.186	.092	.026	.183	.091	.026	.176	.089	.026	.170	.087	.025	.164	.085	.025		
8.0	.176	.086	.024	.173	.085	.024	.167	.083	.024	.161	.081	.024	.155	.080	.023		
9.0	.166	.080	.022	.163	.080	.022	.158	.078	.022	.153	.076	.022	.148	.075	.022		
10.0	.157	.075	.021	.155	.075	.021	.150	.073	.021	.145	.072	.020	.141	.071	.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	.200	.200	.200	.171	.171	.171	.116	.116	.116	.067	.067	.067	.021	.021	.021		
1.0	.186	.166	.148	.159	.142	.127	.109	.098	.088	.063	.057	.051	.020	.018	.017		
2.0	.176	.141	.113	.151	.122	.097	.103	.084	.068	.059	.049	.040	.019	.016	.013		
3.0	.167	.123	.089	.143	.107	.077	.099	.074	.054	.057	.043	.032	.018	.014	.010		
4.0	.160	.110	.072	.137	.095	.062	.094	.066	.044	.055	.039	.026	.018	.013	.009		
5.0	.153	.099	.060	.131	.086	.052	.090	.060	.037	.052	.035	.022	.017	.011	.007		
6.0	.146	.091	.051	.126	.079	.044	.087	.055	.031	.050	.032	.019	.016	.011	.006		
7.0	.140	.084	.044	.121	.073	.039	.083	.051	.027	.048	.030	.016	.016	.010	.005		
8.0	.134	.078	.040	.116	.068	.034	.080	.048	.024	.047	.028	.015	.015	.009	.005		
9.0	.129	.073	.036	.111	.064	.031	.077	.045	.022	.045	.026	.013	.015	.009	.004		
10.0	.124	.069	.033	.107	.060	.029	.074	.042	.020	.043	.025	.012	.014	.008	.004		

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

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	22.5	23.9	22.9	24.3	24.6	22.7	24.1	23.1	24.5	24.8
	3H	23.2	24.5	23.6	24.8	25.2	23.3	24.6	23.7	25.0	25.4
	4H	23.3	24.5	23.8	24.9	25.3	23.5	24.7	23.9	25.1	25.5
	6H	23.4	24.5	23.9	24.9	25.4	23.6	24.7	24.0	25.1	25.5
	8H	23.4	24.5	23.9	24.9	25.3	23.6	24.6	24.0	25.0	25.5
	12H	23.4	24.4	23.9	24.9	25.3	23.6	24.6	24.0	25.0	25.4
4H	2H	22.7	23.9	23.1	24.3	24.7	22.9	24.1	23.3	24.5	24.9
	3H	23.6	24.5	24.0	25.0	25.4	23.7	24.7	24.1	25.1	25.5
	4H	23.8	24.7	24.3	25.1	25.6	23.9	24.8	24.4	25.2	25.7
	6H	24.0	24.7	24.4	25.2	25.7	24.0	24.8	24.5	25.3	25.7
	8H	24.0	24.7	24.5	25.2	25.7	24.1	24.8	24.5	25.2	25.7
	12H	24.0	24.6	24.5	25.1	25.6	24.1	24.7	24.6	25.2	25.7
8H	4H	23.8	24.5	24.3	25.0	25.5	23.9	24.6	24.4	25.1	25.6
	6H	24.0	24.6	24.5	25.1	25.6	24.1	24.7	24.6	25.2	25.7
	8H	24.1	24.6	24.6	25.1	25.7	24.1	24.7	24.7	25.2	25.7
	12H	24.1	24.6	24.7	25.1	25.7	24.2	24.7	24.7	25.2	25.8
12H	4H	23.8	24.4	24.3	24.9	25.4	23.9	24.5	24.4	25.0	25.5
	6H	24.0	24.5	24.5	25.0	25.6	24.1	24.6	24.6	25.1	25.7
	8H	24.1	24.5	24.6	25.1	25.7	24.1	24.6	24.7	25.1	25.7
CIE190: 2010											

CIE190: 2010
Area: 0.1392 m2

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

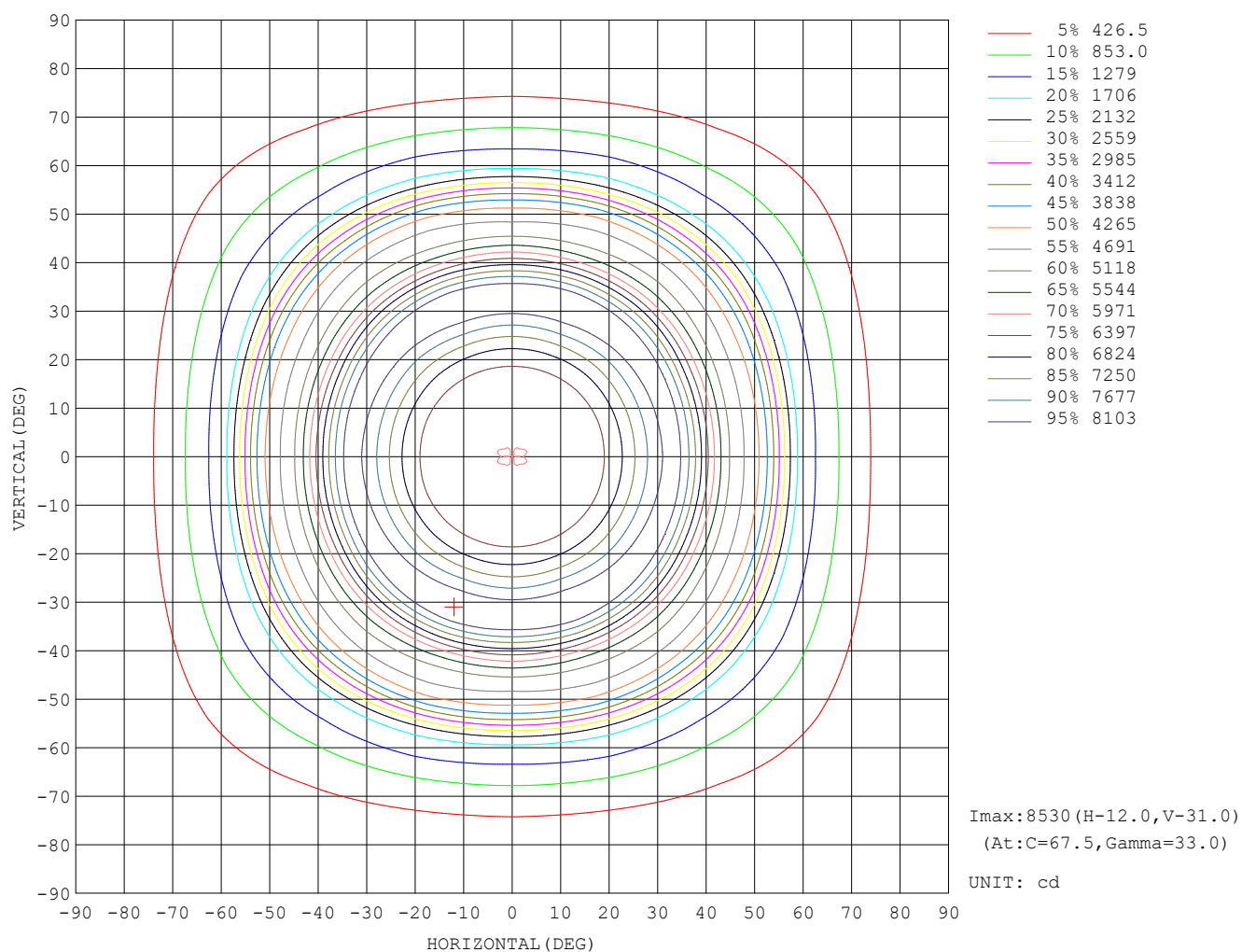
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	52	46	40
0.80	74	63	57	73	63	57	71	62	56	50
1.00	82	73	66	81	72	66	79	73	65	59
1.25	89	80	74	88	79	74	85	78	73	66
1.50	94	85	80	92	85	79	89	83	78	71
2.00	100	93	87	98	91	87	94	89	85	78
2.50	103	96	91	101	95	90	97	92	88	81
3.00	105	100	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	99	102	99	96	87
5.00	110	106	103	108	104	101	103	101	98	89
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:

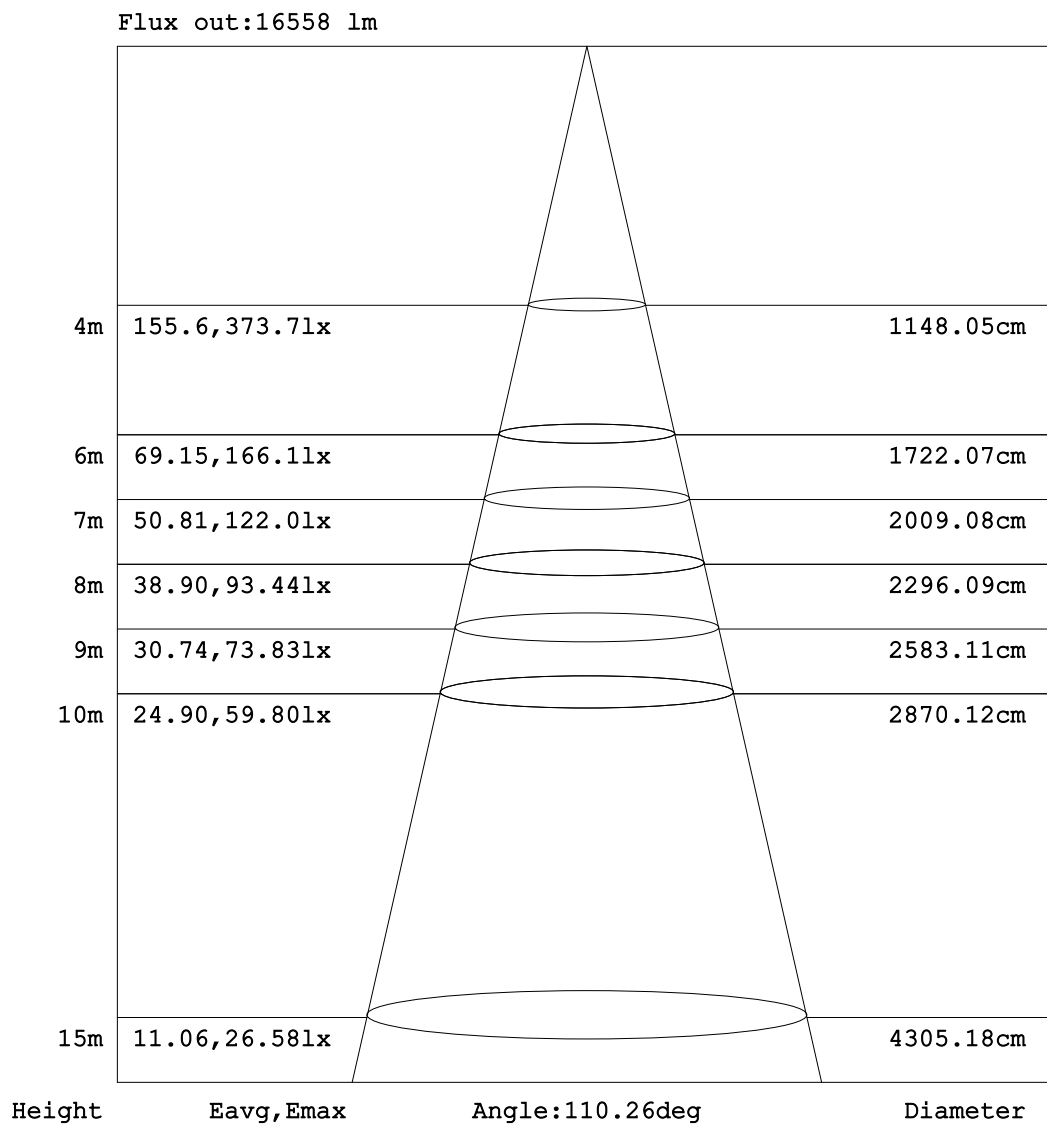
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°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:

AAI Figure



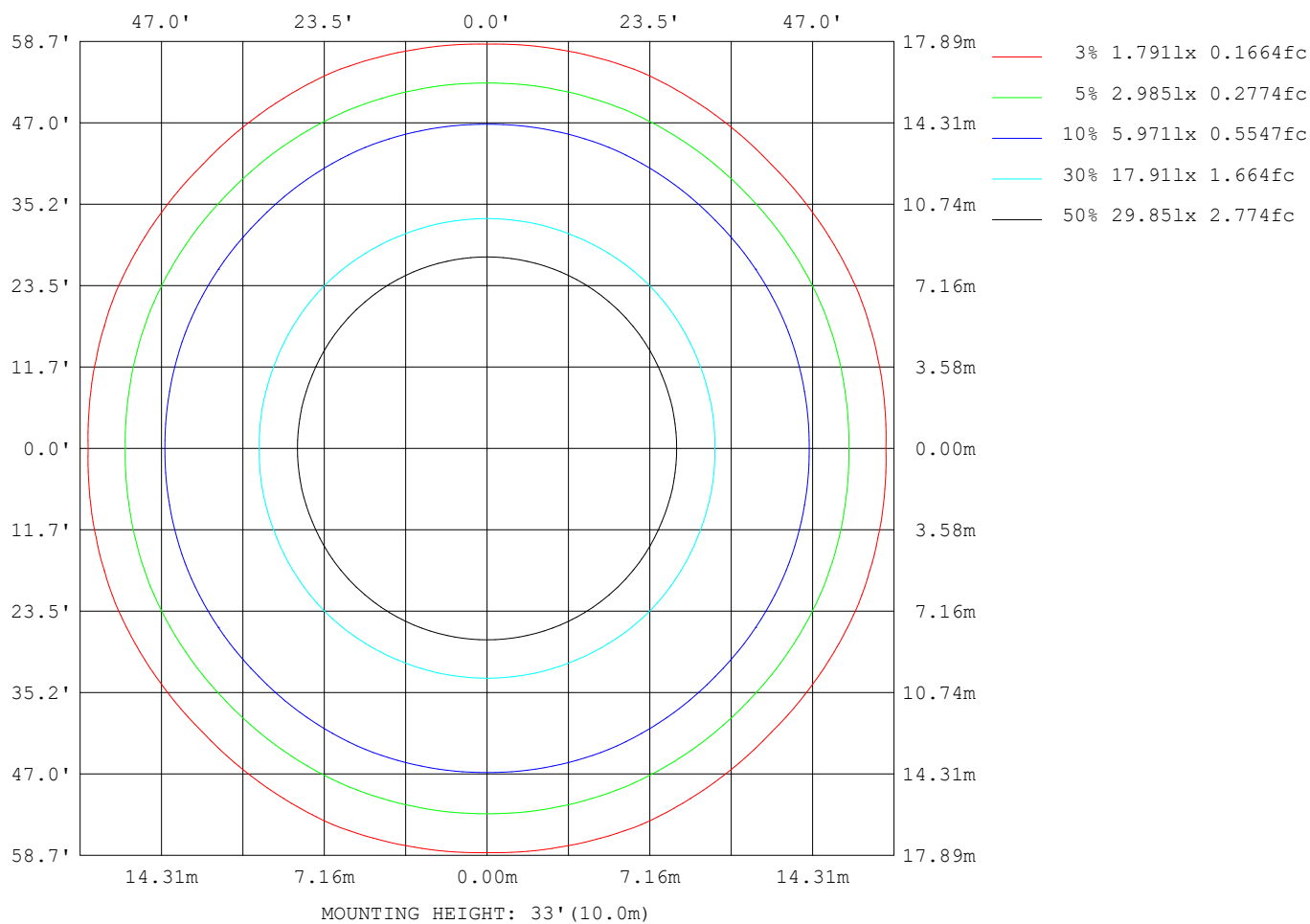
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°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

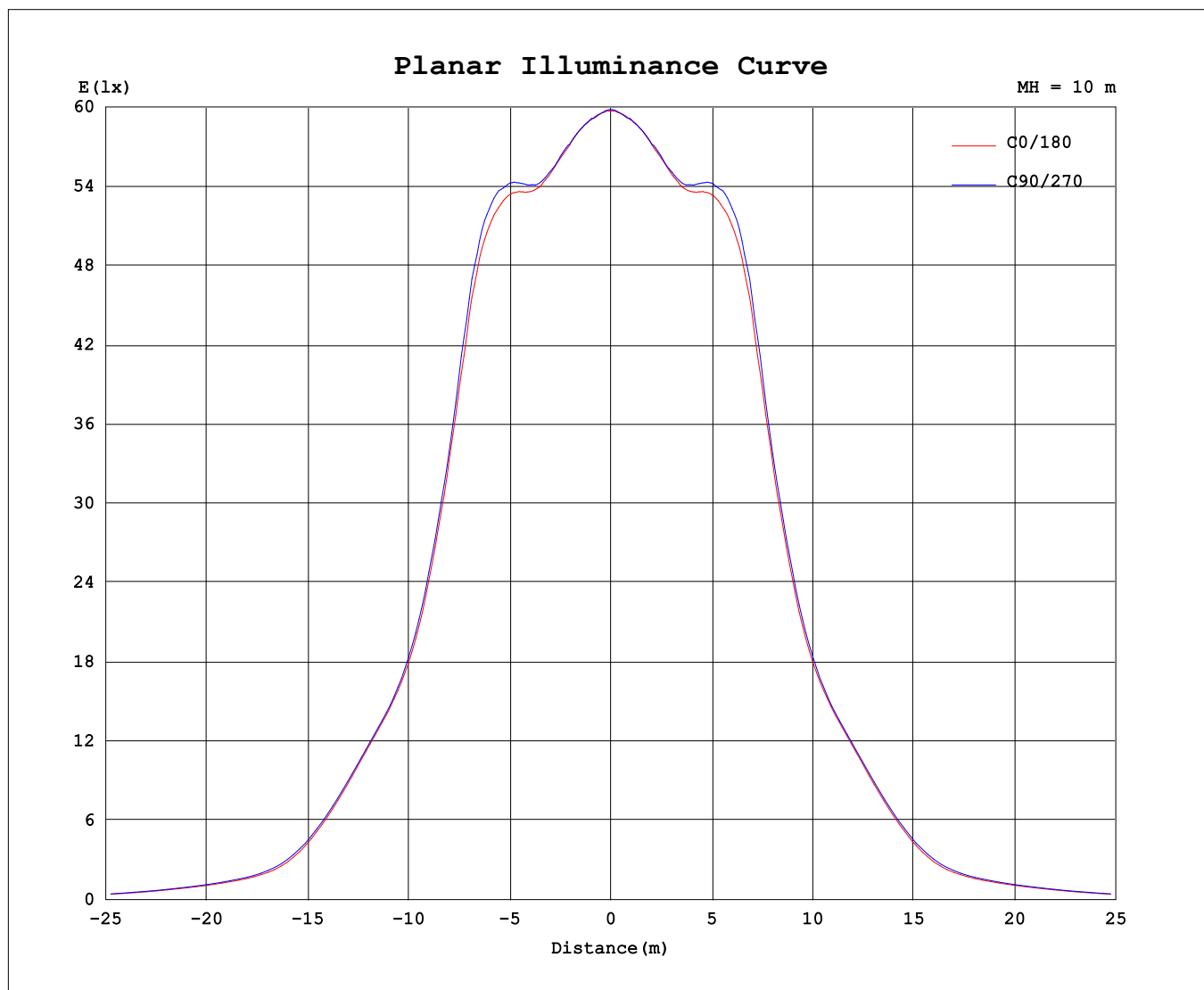
ISOLUX DIAGRAM



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:

Planar Illuminance Curve



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: