

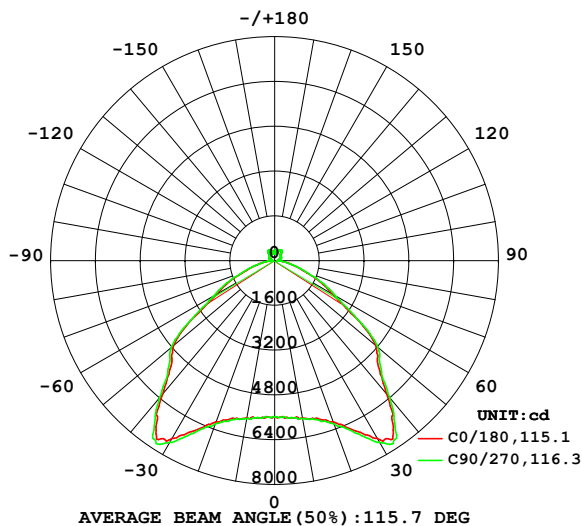
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

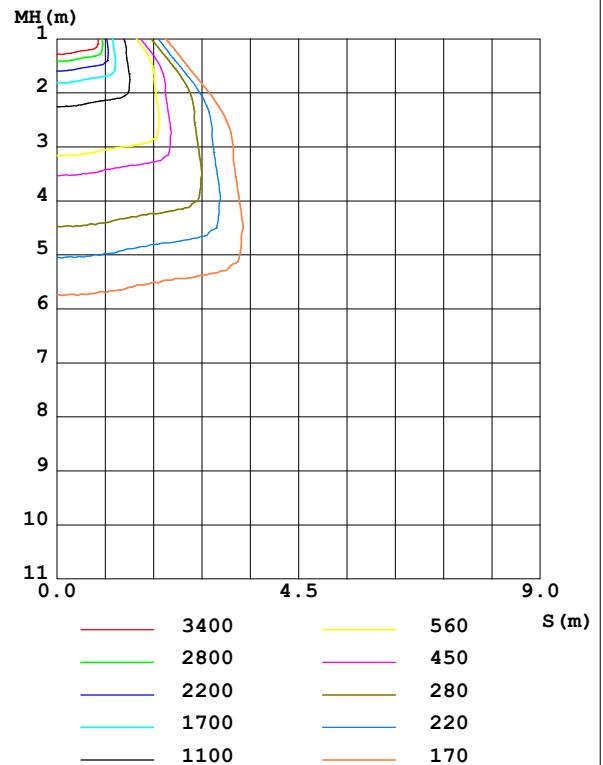
Test:U:230.0V I:0.536A P:120.2W PF:0.975 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:21692.9x1 lm		
NAME: HB68-120H-5070-H00194+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 180.50 lm/W			
MODEL	/	I _{max} (cd)	7845	S/MH(C0/180)	1.62
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.63
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	21693	η UP,DN(C0-180)	3.5,46.5
NOMINAL FLUX(lm)	21692.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	3.5,46.5
LAMPS INSIDE	1	η up(%)	7.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down(%)	93.0	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	5699	5741	5734	5741	5699	5741	5734	5741	0- 10	540.6	540.6	2.49,2.49
20	6128	6161	6211	6161	6128	6161	6211	6161	10- 20	1681	2222	10.2,10.2
30	7330	7466	7486	7466	7330	7466	7486	7466	20- 30	3147	5369	24.8,24.8
40	6230	6264	6404	6264	6230	6264	6404	6264	30- 40	4557	9926	45.8,45.8
50	4722	4803	4814	4803	4722	4803	4814	4803	40- 50	4167	14093	65,65
60	2382	2432	2487	2432	2382	2432	2487	2432	50- 60	3197	17290	79.7,79.7
70	1150	1151	1204	1151	1150	1151	1204	1151	60- 70	1802	19092	88,88
80	431.8	420.9	437.4	420.9	431.8	420.9	437.4	420.9	70- 80	811.1	19903	91.8,91.8
90	123.2	126.0	128.5	126.0	123.2	126.0	128.5	126.0	80- 90	269.7	20173	93,93
100	133.8	135.6	134.7	135.6	133.8	135.6	134.7	135.6	90-100	124.9	20298	93.6,93.6
110	200.1	202.0	205.5	202.0	200.1	202.0	205.5	202.0	100-110	176.5	20474	94.4,94.4
120	232.1	236.1	240.4	236.1	232.1	236.1	240.4	236.1	110-120	220.9	20695	95.4,95.4
130	243.4	244.5	252.9	244.5	243.4	244.5	252.9	244.5	120-130	216.7	20912	96.4,96.4
140	350.2	363.2	367.8	363.2	350.2	363.2	367.8	363.2	130-140	223.0	21135	97.4,97.4
150	420.4	429.4	437.0	429.4	420.4	429.4	437.0	429.4	140-150	259.7	21395	98.6,98.6
160	345.1	359.4	363.3	359.4	345.1	359.4	363.3	359.4	150-160	188.6	21583	99.5,99.5
170	261.3	260.9	247.3	260.9	261.3	260.9	247.3	260.9	160-170	83.04	21666	99.9,99.9
180	396.8	384.7	399.0	384.7	396.8	384.7	399.0	384.7	170-180	26.62	21693	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 12047 lm

%lum = 55.5%

%lamp = 55.5%

Conical surface Flux(120deg): 17290 lm

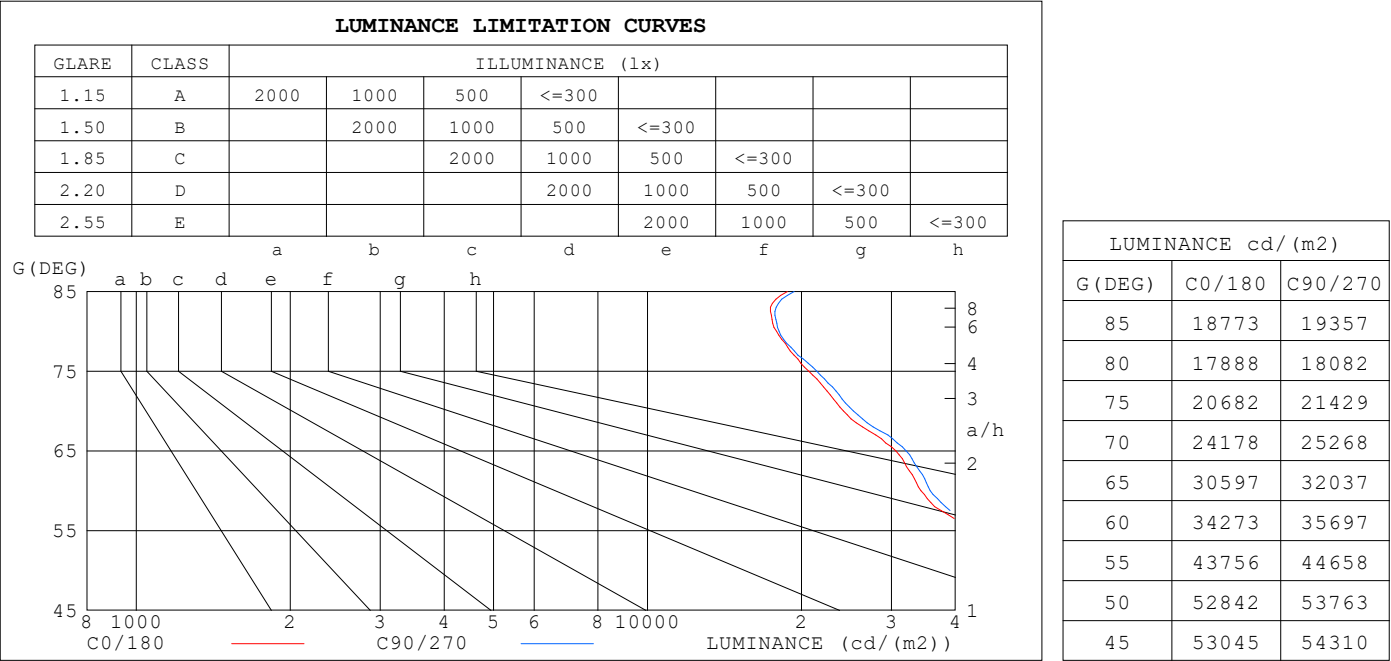
%lum = 79.7%

%lamp = 79.7%

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



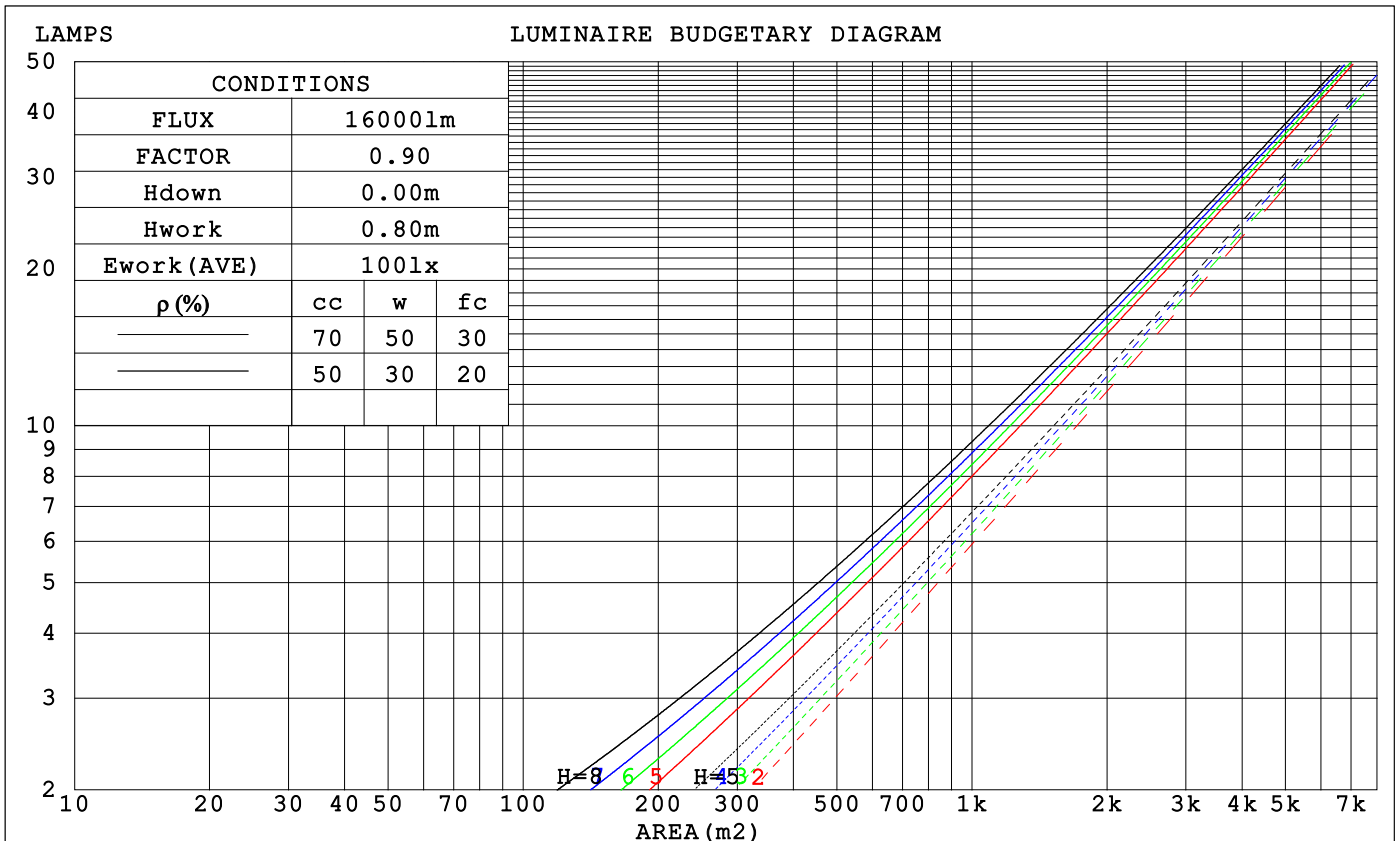
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

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	1.01	1.01	1.01	.96	.96	.96	.93
1.0	1.04	.00	.96	1.01	.97	.94	.95	.92	.90	.90	.88	.86	.86	.84	.82	.80
2.0	.91	.85	.80	.89	.83	.78	.84	.79	.75	.80	.76	.72	.76	.73	.70	.67
3.0	.80	.73	.67	.78	.71	.66	.74	.69	.64	.71	.66	.62	.67	.63	.60	.57
4.0	.71	.63	.57	.70	.62	.56	.66	.60	.54	.63	.58	.53	.60	.56	.52	.49
5.0	.64	.55	.49	.62	.54	.48	.59	.52	.47	.57	.51	.46	.54	.49	.45	.43
6.0	.57	.49	.42	.56	.48	.42	.54	.46	.41	.51	.45	.40	.49	.44	.39	.37
7.0	.52	.43	.37	.51	.43	.37	.48	.41	.36	.46	.40	.35	.45	.39	.35	.33
8.0	.47	.39	.33	.46	.38	.33	.44	.37	.32	.42	.36	.31	.41	.35	.31	.29
9.0	.43	.35	.29	.42	.34	.29	.40	.34	.29	.39	.33	.28	.37	.32	.28	.26
10.0	.39	.32	.26	.39	.31	.26	.37	.30	.26	.36	.30	.25	.35	.29	.25	.23



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	.255	.146	.047	.240	.138	.044	.225	.130	.042	
2.0	.269	.147	.045	.261	.143	.044	.245	.136	.042	.231	.130	.041	.218	.124	.039	
3.0	.252	.134	.040	.245	.131	.039	.231	.125	.038	.219	.120	.037	.207	.115	.035	
4.0	.235	.122	.036	.229	.120	.035	.217	.115	.034	.205	.110	.033	.195	.106	.032	
5.0	.220	.112	.032	.214	.110	.032	.203	.106	.031	.193	.102	.030	.183	.098	.029	
6.0	.205	.103	.029	.200	.101	.029	.190	.098	.028	.181	.094	.028	.172	.091	.027	
7.0	.192	.095	.027	.188	.093	.027	.179	.090	.026	.170	.087	.025	.162	.084	.025	
8.0	.181	.088	.025	.176	.087	.025	.168	.084	.024	.160	.081	.023	.153	.079	.023	
9.0	.170	.082	.023	.166	.081	.023	.159	.078	.022	.152	.076	.022	.145	.074	.021	
10.0	.160	.077	.021	.157	.076	.021	.150	.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	.244	.244	.244	.208	.208	.208	.142	.142	.142	.082	.082	.082	.026	.026	.026	
1.0	.232	.210	.190	.199	.180	.164	.136	.124	.113	.078	.072	.066	.025	.023	.021	
2.0	.223	.186	.155	.191	.160	.134	.131	.111	.093	.076	.065	.055	.024	.021	.018	
3.0	.215	.169	.131	.185	.145	.114	.127	.101	.080	.073	.059	.047	.024	.019	.015	
4.0	.208	.155	.115	.179	.134	.100	.123	.094	.070	.071	.055	.042	.023	.018	.014	
5.0	.201	.145	.104	.173	.126	.090	.119	.088	.064	.069	.051	.038	.022	.017	.012	
6.0	.195	.137	.095	.167	.118	.083	.115	.083	.059	.067	.049	.035	.022	.016	.012	
7.0	.188	.130	.089	.162	.113	.078	.112	.079	.055	.065	.047	.033	.021	.015	.011	
8.0	.182	.124	.085	.157	.108	.074	.109	.076	.052	.063	.045	.031	.020	.015	.010	
9.0	.177	.120	.081	.152	.104	.071	.105	.073	.050	.061	.043	.030	.020	.014	.010	
10.0	.171	.115	.078	.148	.100	.068	.102	.070	.049	.060	.042	.029	.019	.014	.010	

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	23.8	25.3	24.3	25.7	26.2	24.1	25.5	24.5	25.9	26.4
3H	25.0	26.2	25.5	26.7	27.2	25.1	26.4	25.6	26.9	27.4
4H	25.3	26.5	25.8	27.0	27.5	25.5	26.7	26.0	27.2	27.7
6H	25.6	26.7	26.1	27.2	27.7	25.7	26.8	26.2	27.3	27.9
8H	25.7	26.7	26.2	27.2	27.8	25.8	26.8	26.3	27.4	27.9
12H	25.7	26.7	26.3	27.2	27.8	25.9	26.9	26.4	27.4	28.0
4H 2H	24.3	25.5	24.8	25.9	26.5	24.5	25.7	25.0	26.1	26.7
3H	25.6	26.6	26.1	27.1	27.7	25.7	26.7	26.2	27.2	27.8
4H	26.0	26.9	26.6	27.5	28.1	26.1	27.0	26.7	27.6	28.2
6H	26.4	27.2	27.0	27.7	28.3	26.5	27.2	27.0	27.8	28.4
8H	26.5	27.2	27.1	27.8	28.4	26.6	27.3	27.2	27.9	28.5
12H	26.6	27.3	27.2	27.9	28.5	26.7	27.3	27.3	27.9	28.6
8H 4H	26.2	26.9	26.7	27.5	28.1	26.3	27.0	26.8	27.6	28.2
6H	26.6	27.2	27.2	27.8	28.5	26.7	27.3	27.3	27.9	28.5
8H	26.8	27.3	27.4	28.0	28.6	26.9	27.4	27.5	28.0	28.7
12H	27.0	27.5	27.6	28.1	28.8	27.1	27.5	27.7	28.1	28.9
12H 4H	26.2	26.8	26.8	27.4	28.0	26.3	26.9	26.9	27.5	28.1
6H	26.6	27.2	27.3	27.8	28.4	26.7	27.3	27.3	27.8	28.5
8H	26.9	27.3	27.5	27.9	28.7	26.9	27.4	27.5	28.0	28.7
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

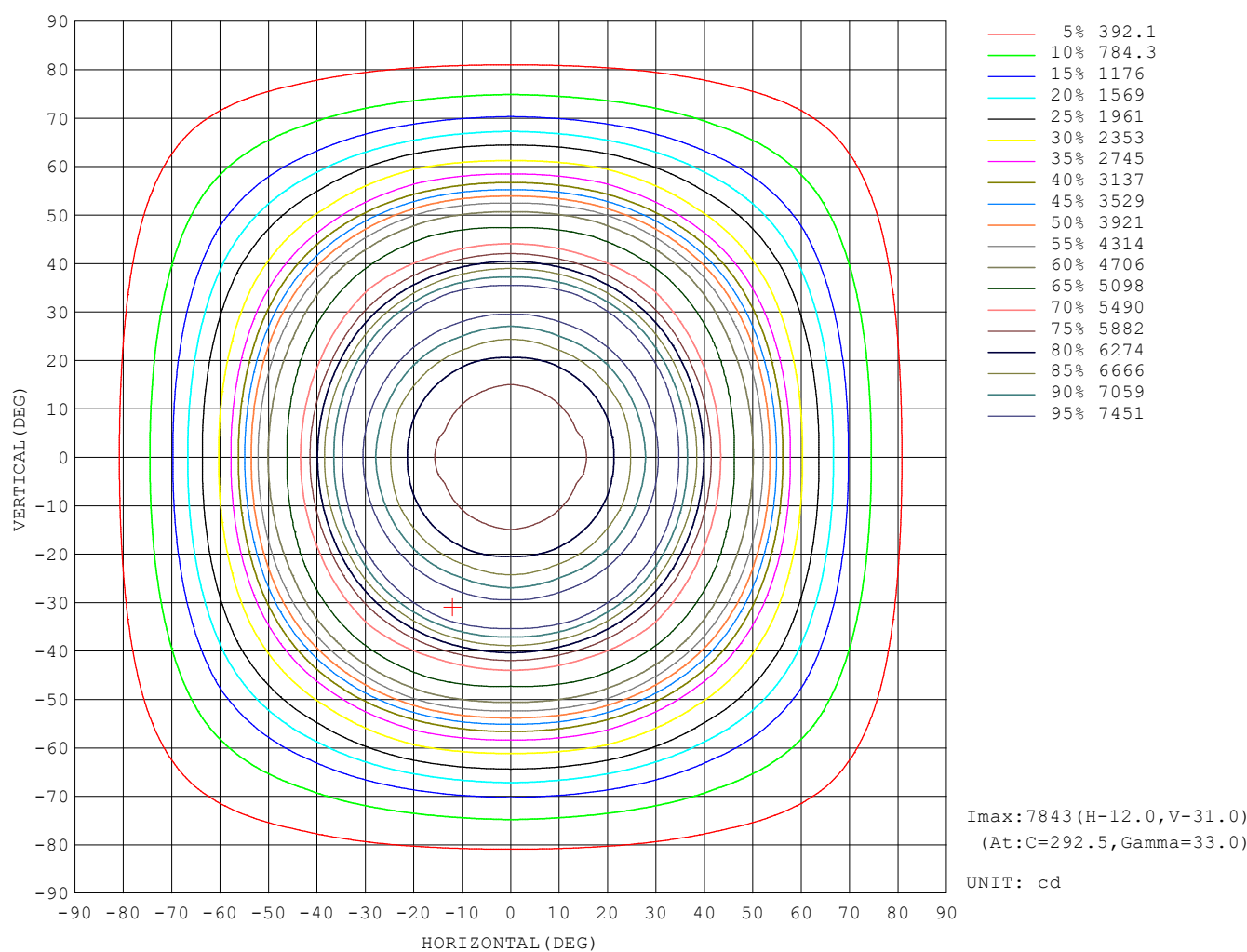
UTILIZATION FACTORS TABLE

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	46	40	57	46	39	55	45	39	33
0.80	68	57	50	67	56	49	64	55	49	42
1.00	77	66	59	75	65	59	72	66	58	50
1.25	84	74	67	82	73	66	79	71	65	57
1.50	89	79	73	87	78	72	83	76	70	62
2.00	95	87	81	93	86	80	89	83	78	69
2.50	99	91	86	96	90	84	91	86	82	72
3.00	102	95	90	99	93	89	94	90	86	76
4.00	105	100	96	103	98	94	97	93	90	79
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:

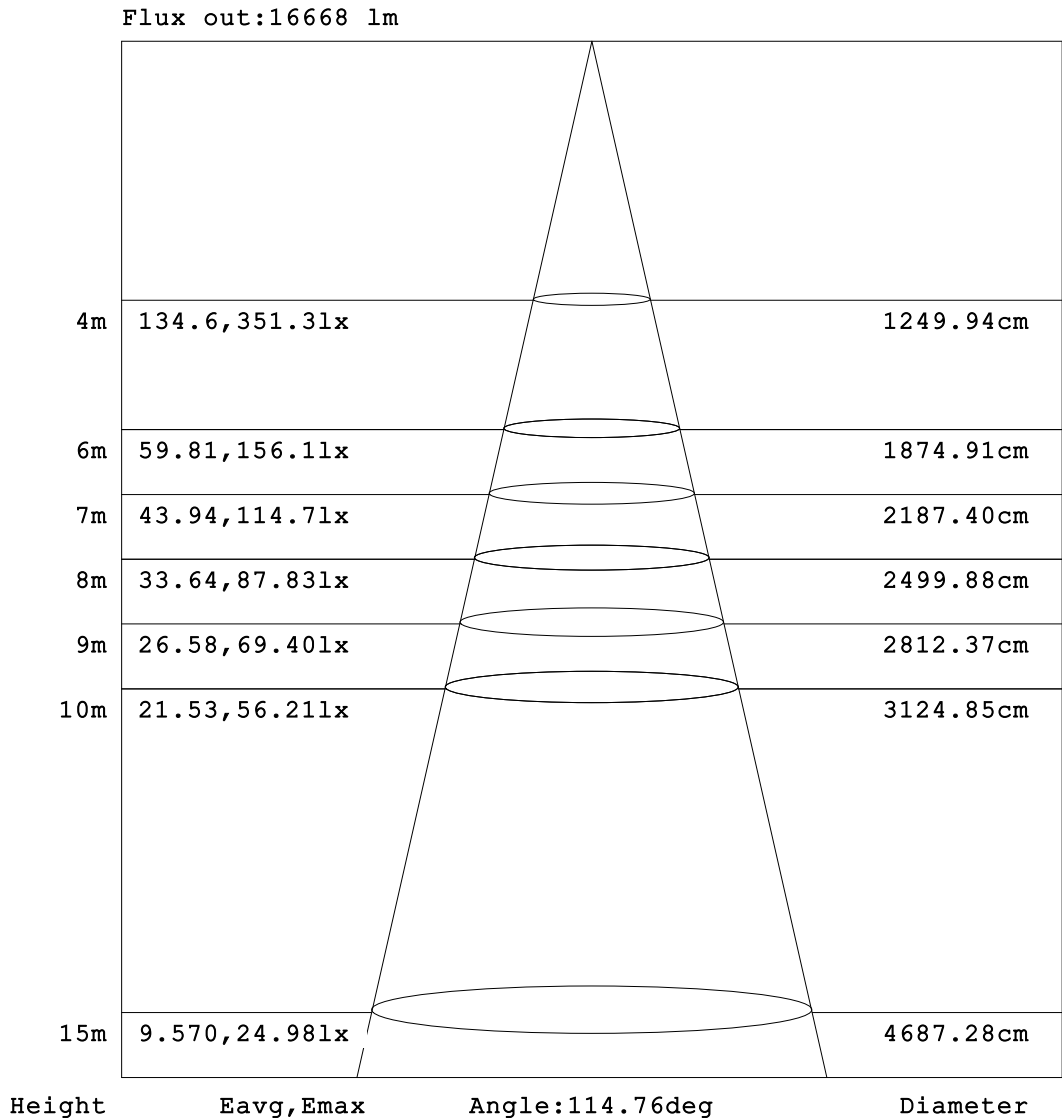
ISOCANDELA DIAGRAM



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

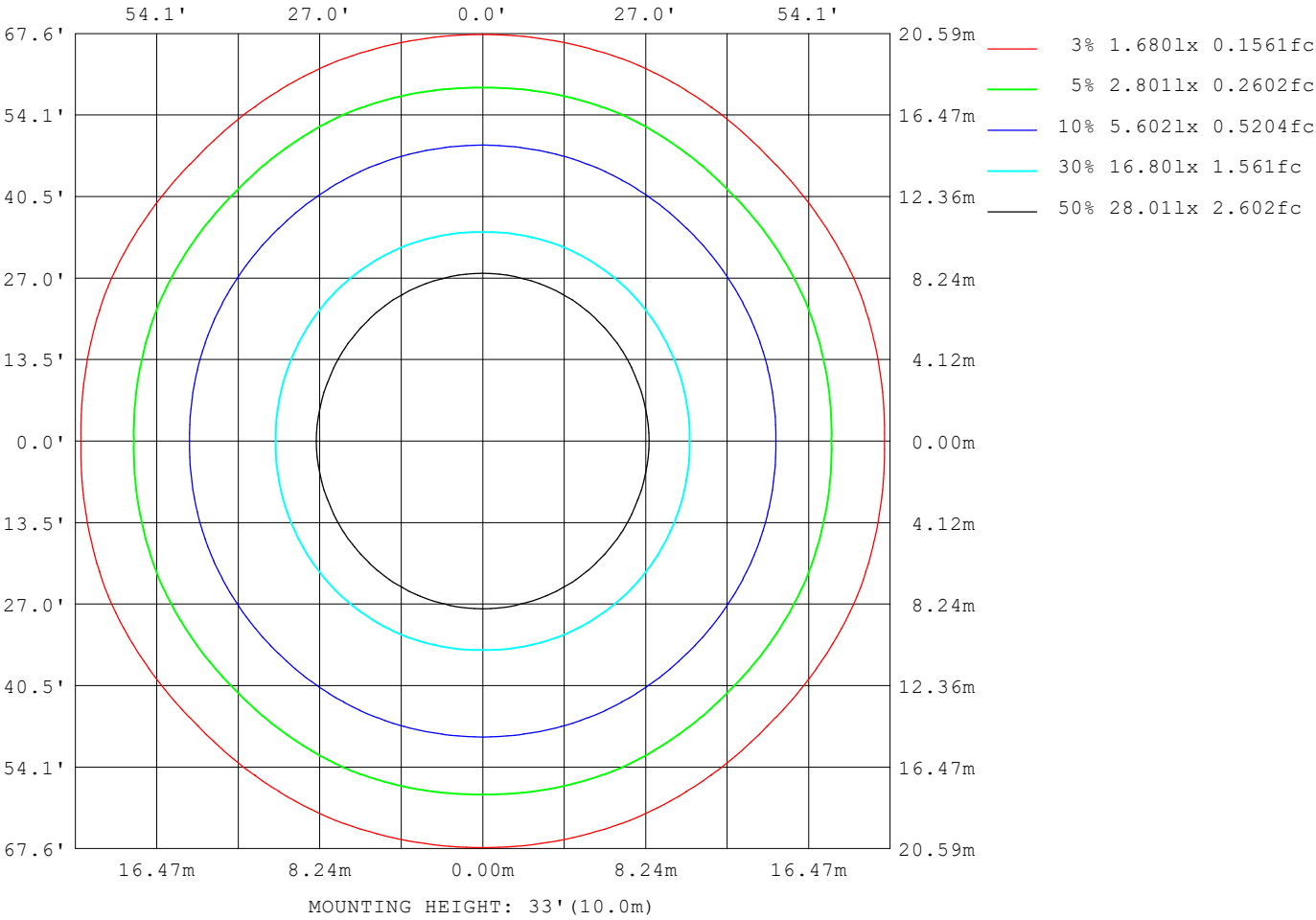
AAI Figure



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

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

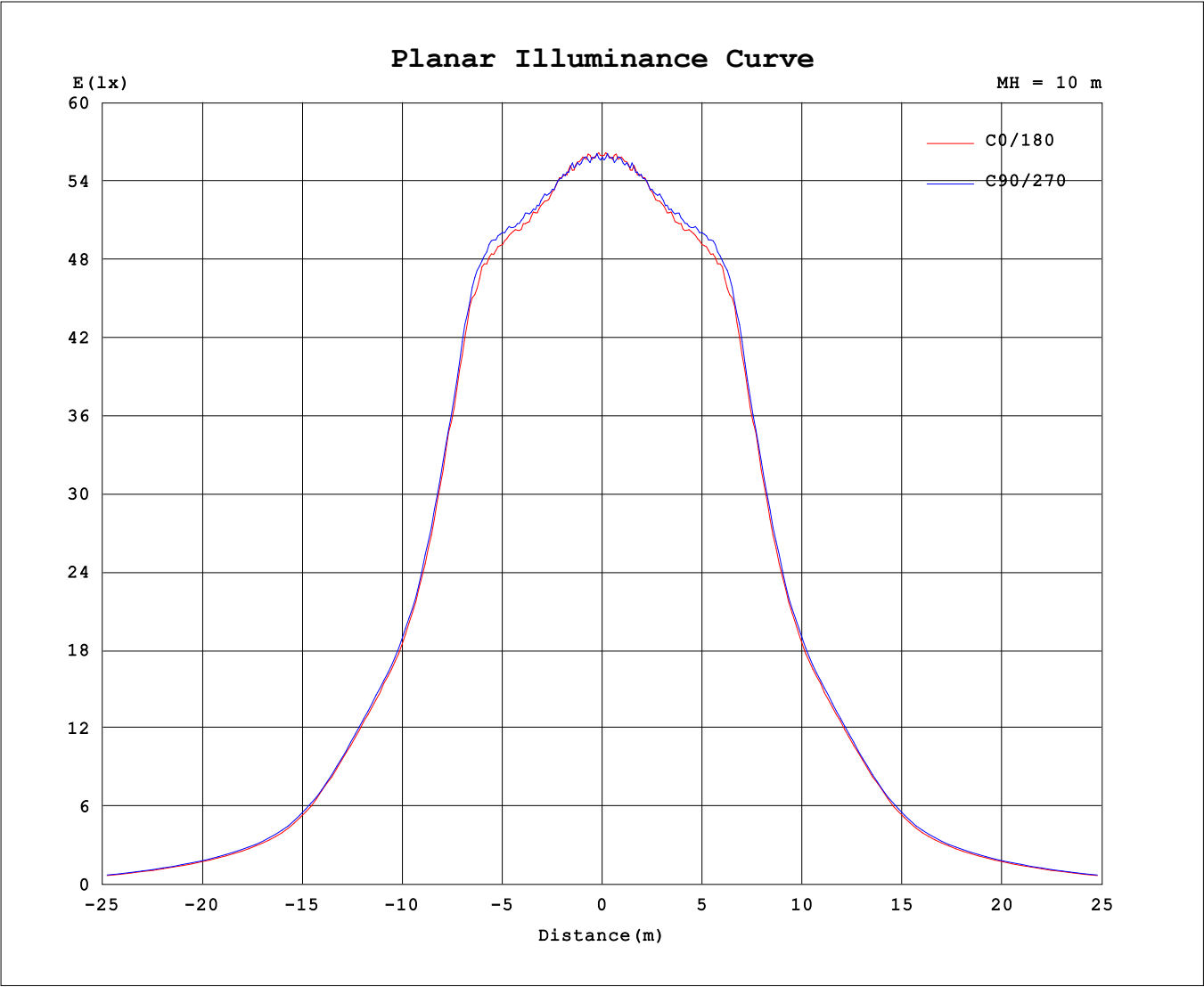
ISOLUX DIAGRAM



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:

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: