

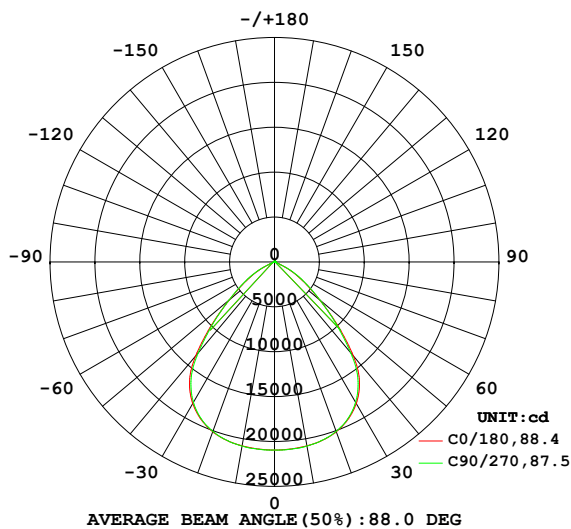
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

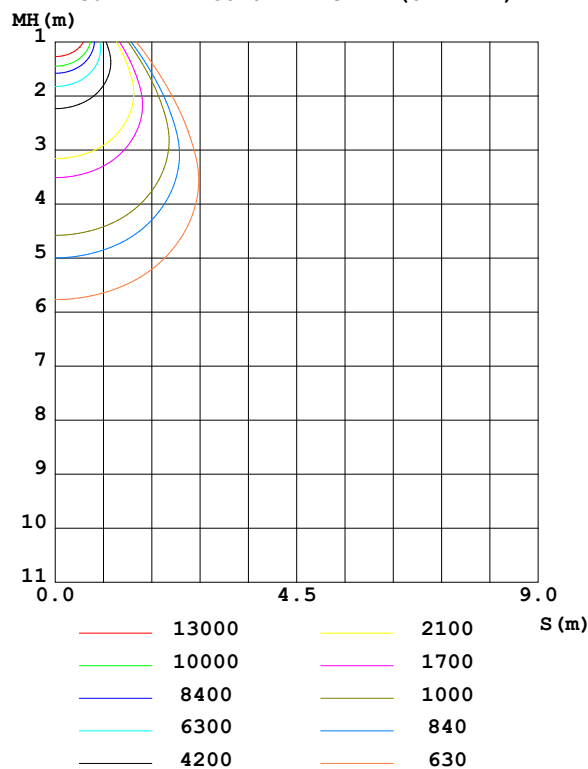
Test:U:230.0V I:0.881A P:198.9W PF:0.982 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:39546.1x1 lm		
NAME: HB68-200H-5070-H00192+H00D02	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 198.87 lm/W			
MODEL	/	Imax (cd)	20964	S/MH (C0/180)	1.26
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	39546	η UP,DN (C0-180)	0.1,49.9
NOMINAL FLUX (lm)	39546.1	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.1,49.9
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	/	η down (%)	99.7	CIBSE SHR MAX	1.30

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:2023-07-17

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	2080	2080	2082	2080	2080	2080	2082	2080	0- 10	1993	1993	5.04,5.04
20	2013	2011	2009	2011	2013	2011	2009	2011	10- 20	5809	7802	19.7,19.7
30	1821	1815	1806	1815	1821	1815	1806	1815	20- 30	8885	16687	42.2,42.2
40	1366	1347	1322	1347	1366	1347	1322	1347	30- 40	10113	26799	67.8,67.8
50	656.5	657.4	661.4	657.4	656.5	657.4	661.4	657.4	40- 50	7552	34351	86.9,86.9
60	255.8	268.2	271.9	268.2	255.8	268.2	271.9	268.2	50- 60	3918	38269	96.8,96.8
70	16.34	16.77	17.78	16.77	16.34	16.77	17.78	16.77	60- 70	1071	39339	99.5,99.5
80	3.344	3.547	3.857	3.547	3.344	3.547	3.857	3.547	70- 80	75.71	39415	99.7,99.7
90	0.1436	0.0838	0.0979	0.0838	0.1436	0.0838	0.0979	0.0838	80- 90	18.46	39434	99.7,99.7
100	0.1096	0.1167	0.1165	0.1167	0.1096	0.1167	0.1165	0.1167	90-100	0.5192	39434	99.7,99.7
110	0.4884	0.4943	0.4914	0.4943	0.4884	0.4943	0.4914	0.4943	100-110	2.901	39437	99.7,99.7
120	1.230	1.228	1.205	1.228	1.230	1.228	1.205	1.228	110-120	8.171	39445	99.7,99.7
130	2.266	2.259	2.243	2.259	2.266	2.259	2.243	2.259	120-130	15.47	39461	99.8,99.8
140	3.264	3.287	3.275	3.287	3.264	3.287	3.275	3.287	130-140	21.40	39482	99.8,99.8
150	4.071	4.120	4.115	4.120	4.071	4.120	4.115	4.120	140-150	23.21	39505	99.9,99.9
160	4.446	4.518	4.521	4.518	4.446	4.518	4.521	4.518	150-160	19.94	39525	99.9,99.9
170	6.066	6.166	6.183	6.166	6.066	6.166	6.183	6.166	160-170	14.57	39540	100,100
180	6.563	6.630	6.632	6.630	6.563	6.630	6.632	6.630	170-180	6.225	39546	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 31067 lm

%lum = 78.6%

%lamp = 78.6%

Conical surface Flux(120deg): 38269 lm

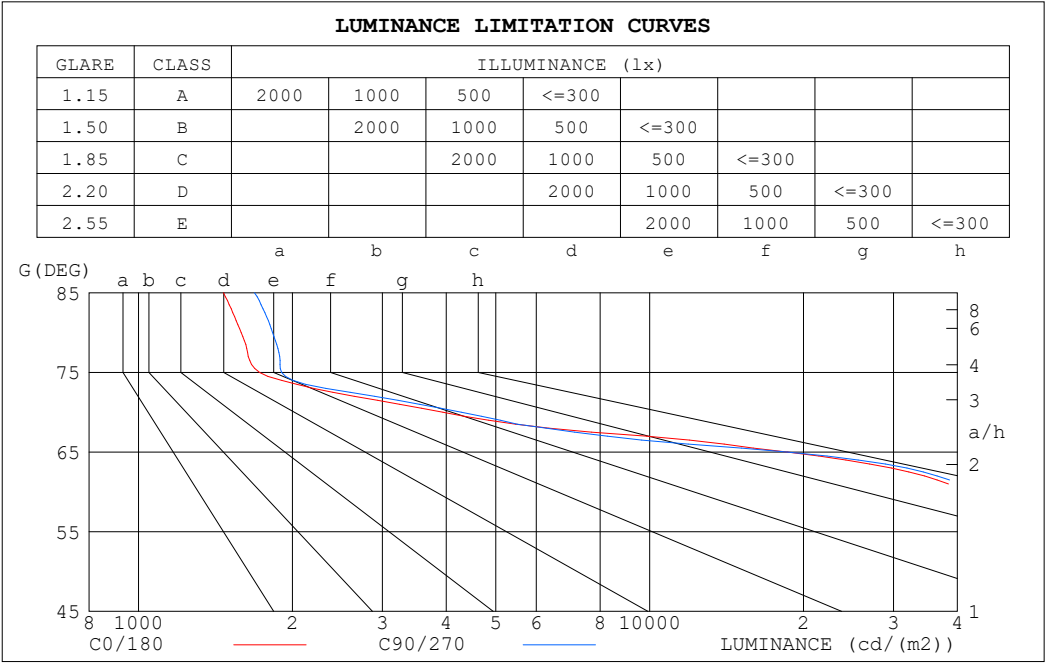
%lum = 96.8%

%lamp = 96.8%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-17

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



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1466	1686
80	1588	1829
75	1725	1905
70	3941	4281
65	18622	18641
60	42197	44777
55	61166	63182
50	84230	84736
45	115329	112485

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:ZZX

Test Date:2023-07-17

γ Range: 0 - 180DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465

Humidity:65.0%

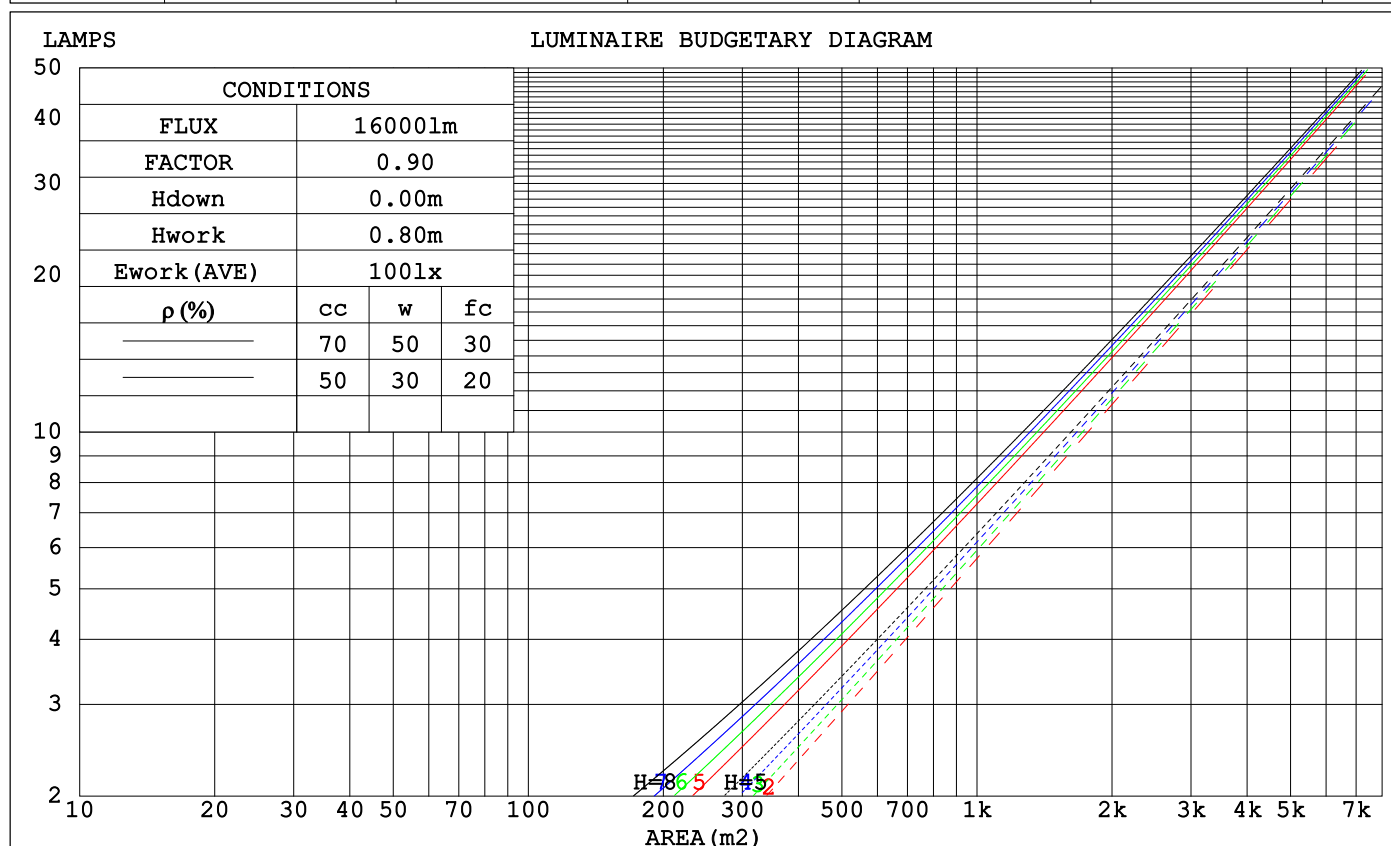
Test Distance:26.000m [K=0.4556]

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	1.09	1.05	1.03	1.06	1.04	1.01	1.02	.00	.98	.98	.97	.95	.95	.93	.92	.90
2.0	.98	.93	.89	.97	.92	.88	.93	.89	.86	.90	.87	.84	.87	.84	.82	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.82	.78	.75	.80	.76	.73	.71
4.0	.81	.74	.69	.80	.73	.68	.77	.72	.67	.75	.70	.66	.73	.69	.66	.64
5.0	.74	.66	.61	.73	.66	.61	.71	.65	.60	.69	.64	.59	.67	.62	.59	.57
6.0	.67	.60	.55	.67	.59	.54	.65	.59	.54	.63	.58	.53	.62	.57	.53	.51
7.0	.62	.54	.49	.61	.54	.49	.60	.53	.49	.58	.53	.48	.57	.52	.48	.46
8.0	.57	.50	.45	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.45	.41	.52	.45	.40	.51	.45	.40	.50	.44	.40	.49	.44	.40	.38
10.0	.49	.42	.37	.48	.42	.37	.47	.41	.37	.47	.41	.37	.46	.40	.37	.35



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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:

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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	.219	.125	.039	.212	.121	.038	.199	.114	.037	.187	.108	.035	.176	.102	.033	
2.0	.215	.118	.036	.209	.115	.036	.198	.110	.034	.188	.105	.033	.178	.101	.032	
3.0	.207	.110	.033	.202	.108	.033	.192	.104	.032	.183	.100	.031	.175	.097	.030	
4.0	.198	.103	.030	.193	.101	.030	.184	.098	.029	.176	.095	.029	.169	.092	.028	
5.0	.188	.096	.028	.184	.094	.027	.176	.092	.027	.169	.089	.027	.162	.087	.026	
6.0	.178	.089	.026	.175	.088	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024	
7.0	.169	.084	.024	.166	.083	.024	.160	.081	.023	.154	.079	.023	.149	.077	.023	
8.0	.161	.078	.022	.158	.078	.022	.152	.076	.022	.147	.075	.022	.142	.073	.021	
9.0	.153	.074	.021	.150	.073	.021	.145	.072	.020	.141	.070	.020	.136	.069	.020	
10.0	.145	.070	.019	.143	.069	.019	.139	.068	.019	.134	.067	.019	.130	.066	.019	

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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.176	.159	.144	.151	.137	.124	.103	.094	.086	.059	.054	.050	.019	.018	.016	
2.0	.164	.134	.109	.141	.116	.095	.096	.080	.066	.056	.047	.039	.018	.015	.013	
3.0	.155	.116	.085	.133	.100	.074	.091	.070	.052	.053	.041	.031	.017	.013	.010	
4.0	.146	.102	.068	.126	.088	.059	.086	.061	.042	.050	.036	.025	.016	.012	.008	
5.0	.139	.091	.056	.119	.079	.048	.082	.055	.034	.048	.032	.020	.015	.011	.007	
6.0	.132	.082	.046	.114	.071	.040	.079	.050	.029	.046	.029	.017	.015	.010	.006	
7.0	.126	.075	.039	.109	.065	.034	.075	.046	.024	.044	.027	.015	.014	.009	.005	
8.0	.121	.069	.034	.104	.060	.030	.072	.042	.021	.042	.025	.013	.014	.008	.004	
9.0	.116	.065	.030	.100	.056	.026	.069	.039	.019	.040	.023	.011	.013	.008	.004	
10.0	.111	.060	.027	.096	.052	.023	.066	.037	.017	.039	.022	.010	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
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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	24.1	25.4	24.5	25.7	26.0	23.7	25.0	24.0	25.3	25.6
3H	24.0	25.1	24.4	25.5	25.8	23.6	24.7	23.9	25.0	25.4
4H	23.9	25.0	24.3	25.3	25.7	23.5	24.5	23.9	24.9	25.3
6H	23.8	24.8	24.2	25.2	25.6	23.4	24.4	23.8	24.8	25.2
8H	23.8	24.7	24.2	25.1	25.5	23.4	24.3	23.8	24.7	25.1
12H	23.7	24.6	24.2	25.0	25.4	23.3	24.2	23.8	24.6	25.0
4H 2H	24.0	25.1	24.4	25.4	25.8	23.6	24.7	24.0	25.0	25.4
3H	23.9	24.8	24.3	25.2	25.6	23.5	24.4	23.9	24.8	25.2
4H	23.8	24.6	24.3	25.0	25.5	23.4	24.2	23.9	24.6	25.1
6H	23.7	24.4	24.2	24.9	25.3	23.4	24.0	23.8	24.5	24.9
8H	23.7	24.3	24.2	24.8	25.2	23.3	23.9	23.8	24.4	24.8
12H	23.6	24.2	24.1	24.7	25.1	23.2	23.8	23.7	24.3	24.8
8H 4H	23.7	24.3	24.2	24.8	25.2	23.3	23.9	23.8	24.4	24.8
6H	23.6	24.1	24.1	24.6	25.1	23.2	23.7	23.7	24.2	24.7
8H	23.5	24.0	24.0	24.5	25.0	23.1	23.6	23.7	24.1	24.6
12H	23.5	23.9	24.0	24.4	25.0	23.1	23.5	23.6	24.0	24.6
12H 4H	23.6	24.2	24.1	24.7	25.1	23.2	23.8	23.7	24.3	24.8
6H	23.5	24.0	24.1	24.4	25.0	23.1	23.6	23.7	24.1	24.6
8H	23.5	23.9	24.0	24.4	24.9	23.1	23.5	23.6	24.0	24.6
CIE190: 2010										

CIE190: 2010
Area: 0.1213 m2

C Range: 0 - 360DEG
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

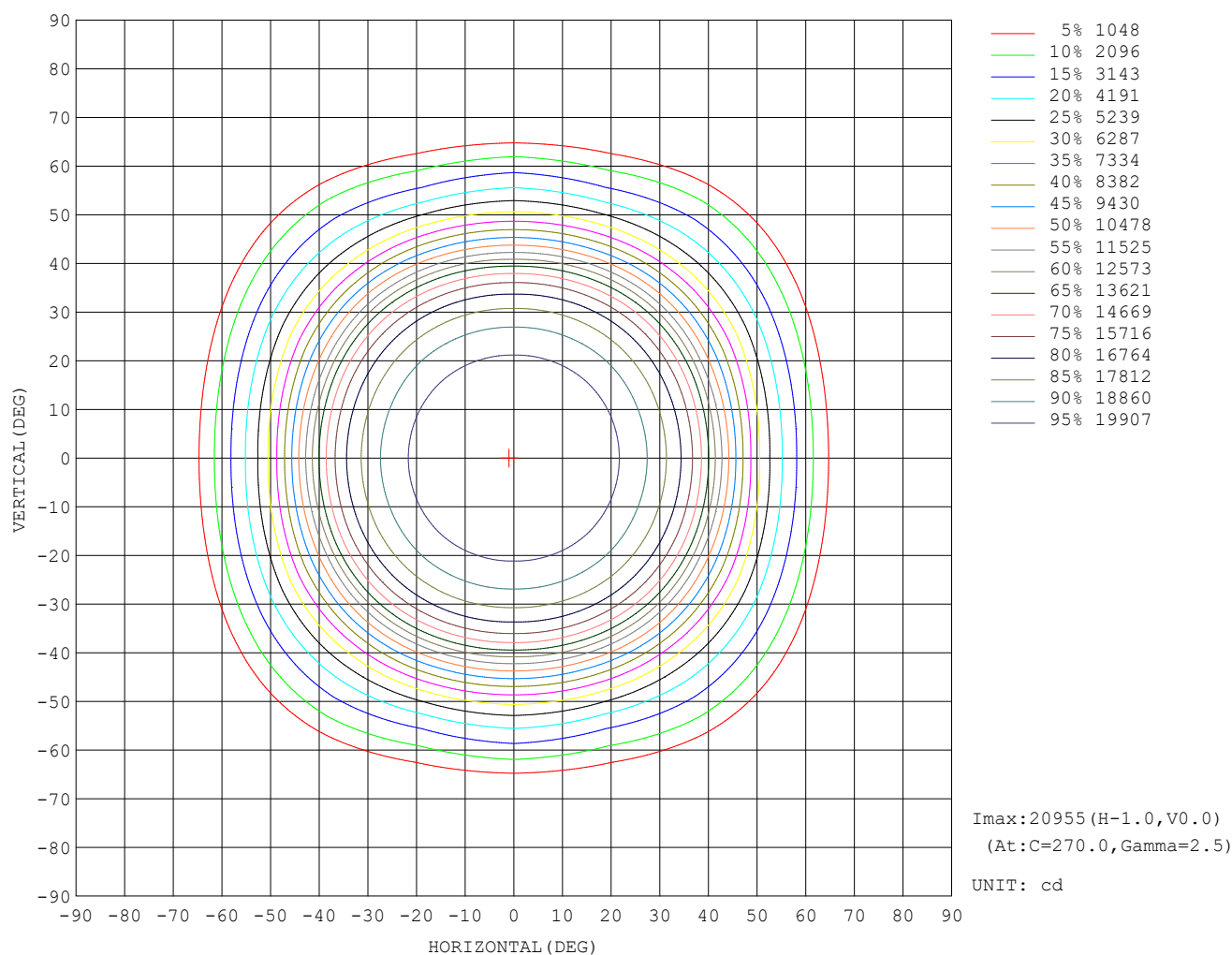
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	71	61	56	70	61	56	69	61	56	50
0.80	81	72	66	80	71	66	78	71	66	60
1.00	88	80	75	87	80	75	86	80	74	69
1.25	95	87	82	93	86	82	91	85	81	75
1.50	99	92	87	97	91	86	95	89	85	80
2.00	103	98	93	102	97	93	99	94	91	85
2.50	106	101	97	104	99	96	101	97	94	87
3.00	108	104	100	106	102	99	103	99	97	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	93
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
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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:

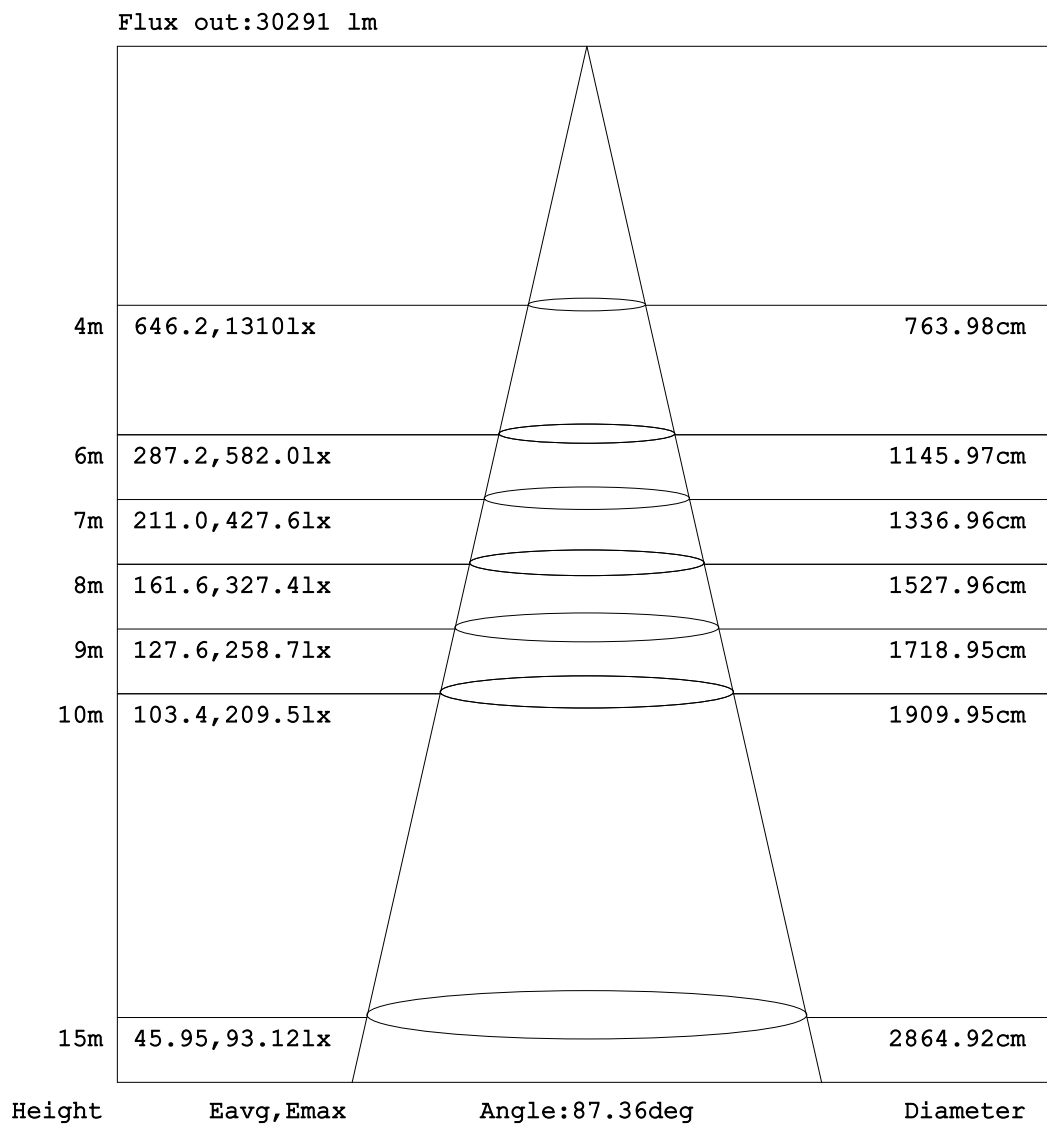
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Temperature:25.3°C
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Test Date:2023-07-17

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Remarks:

AAI Figure



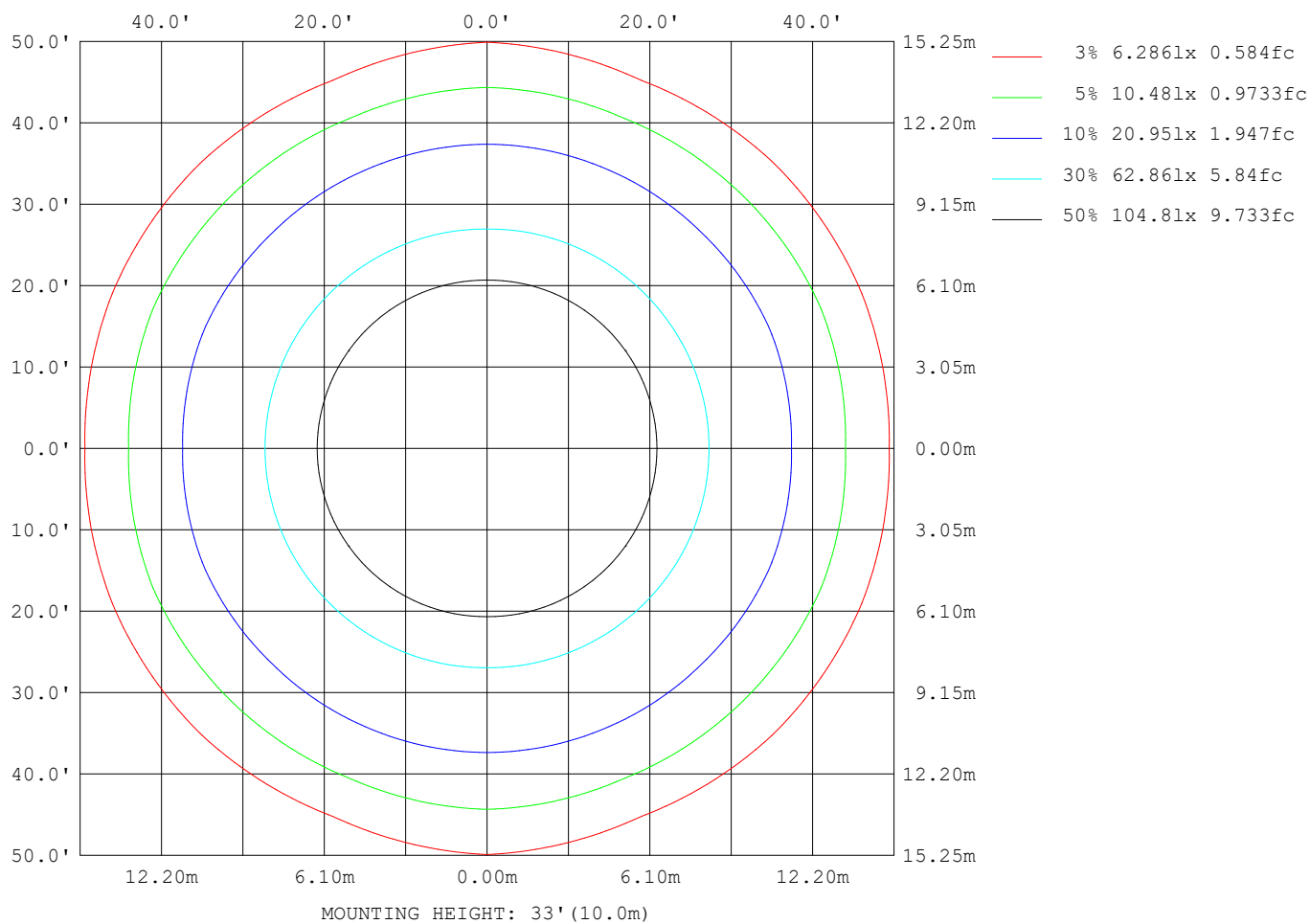
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
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Operators: ZZX
Test Date: 2023-07-17

γ Range: 0 - 180DEG
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

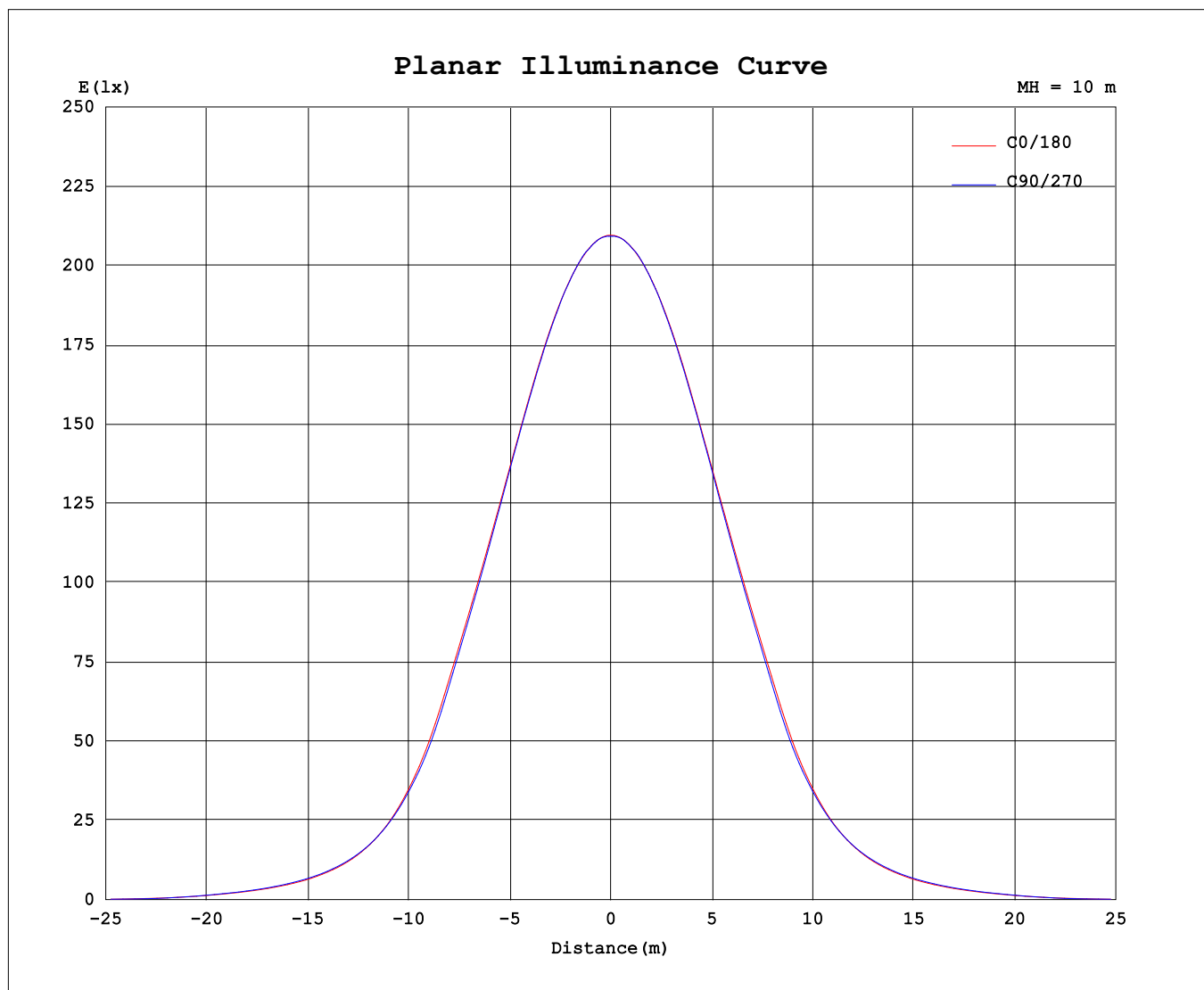
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-07-17

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



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