

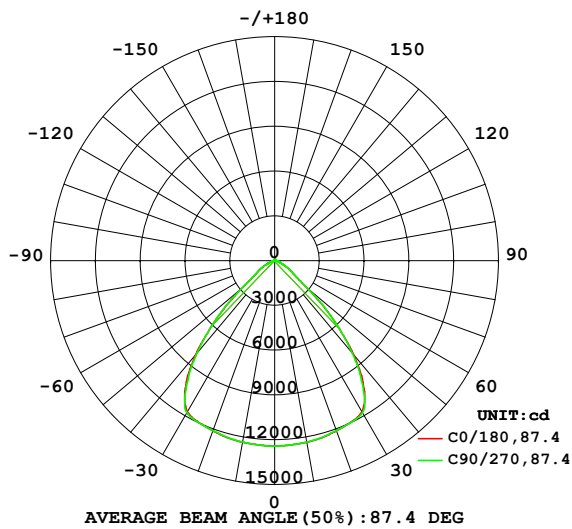
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

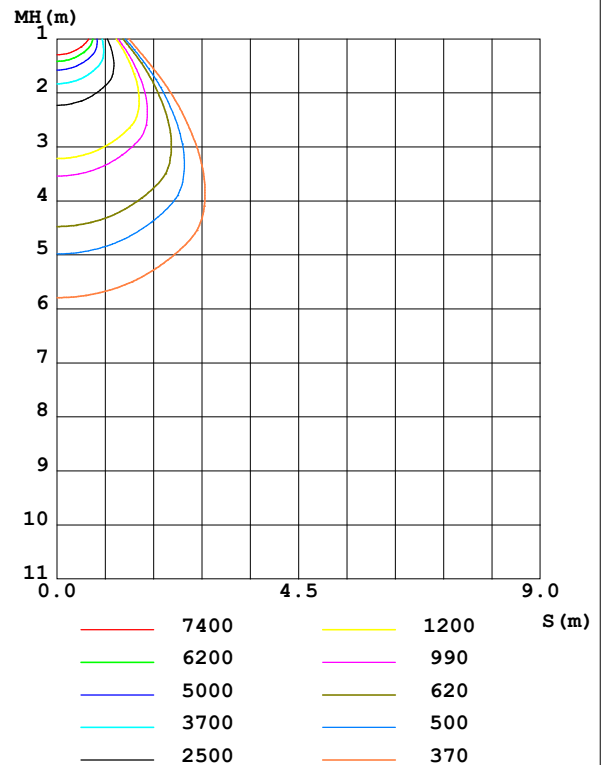
Test:U:230.0V I:0.538A P:120.6W PF:0.975 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:23547.3x1 lm		
NAME: HB68-120H-5070-H00195+H00C01A	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 195.20 lm/W			
MODEL	/	Imax (cd)	12417	S/MH(C0/180)	1.26
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	23547	η UP,DN(C0-180)	0.5,49.5
NOMINAL FLUX(lm)	23547.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.5,49.5
LAMPS INSIDE	1	η up (%)	1.1	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	/	η down (%)	98.9	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℃
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	1235	1236	1235	1236	1235	1236	1235	1236	0- 10	1182	1182	5.02,5.02
20	1213	1214	1211	1214	1213	1214	1211	1214	10- 20	3471	4653	19.8,19.8
30	1170	1176	1176	1176	1170	1176	1176	1176	20- 30	5539	10192	43.3,43.3
40	826.6	823.8	807.6	823.8	826.6	823.8	807.6	823.8	30- 40	6410	16602	70.5,70.5
50	285.0	282.8	285.1	282.8	285.0	282.8	285.1	282.8	40- 50	4217	20819	88.4,88.4
60	106.4	105.2	105.3	105.2	106.4	105.2	105.3	105.2	50- 60	1480	22299	94.7,94.7
70	38.72	38.95	38.99	38.95	38.72	38.95	38.99	38.95	60- 70	645.5	22944	97.4,97.4
80	14.50	14.24	13.77	14.24	14.50	14.24	13.77	14.24	70- 80	264.3	23209	98.6,98.6
90	4.271	4.177	3.970	4.177	4.271	4.177	3.970	4.177	80- 90	88.93	23297	98.9,98.9
100	2.260	2.498	2.395	2.498	2.260	2.498	2.395	2.498	90-100	31.66	23329	99.1,99.1
110	2.469	2.582	2.390	2.582	2.469	2.582	2.390	2.582	100-110	24.80	23354	99.2,99.2
120	3.394	3.607	3.284	3.607	3.394	3.607	3.284	3.607	110-120	28.64	23383	99.3,99.3
130	4.744	4.982	4.964	4.982	4.744	4.982	4.964	4.982	120-130	36.53	23419	99.5,99.5
140	5.399	5.510	5.537	5.510	5.399	5.510	5.537	5.510	130-140	41.37	23460	99.6,99.6
150	5.727	5.868	5.905	5.868	5.727	5.868	5.905	5.868	140-150	35.81	23496	99.8,99.8
160	5.608	5.675	5.697	5.675	5.608	5.675	5.697	5.675	150-160	26.85	23523	99.9,99.9
170	6.724	6.740	6.731	6.740	6.724	6.740	6.731	6.740	160-170	17.42	23541	100,100
180	7.255	7.373	7.368	7.373	7.255	7.373	7.368	7.373	170-180	6.776	23547	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 19141 lm

%lum = 81.3%
%lamp = 81.3%

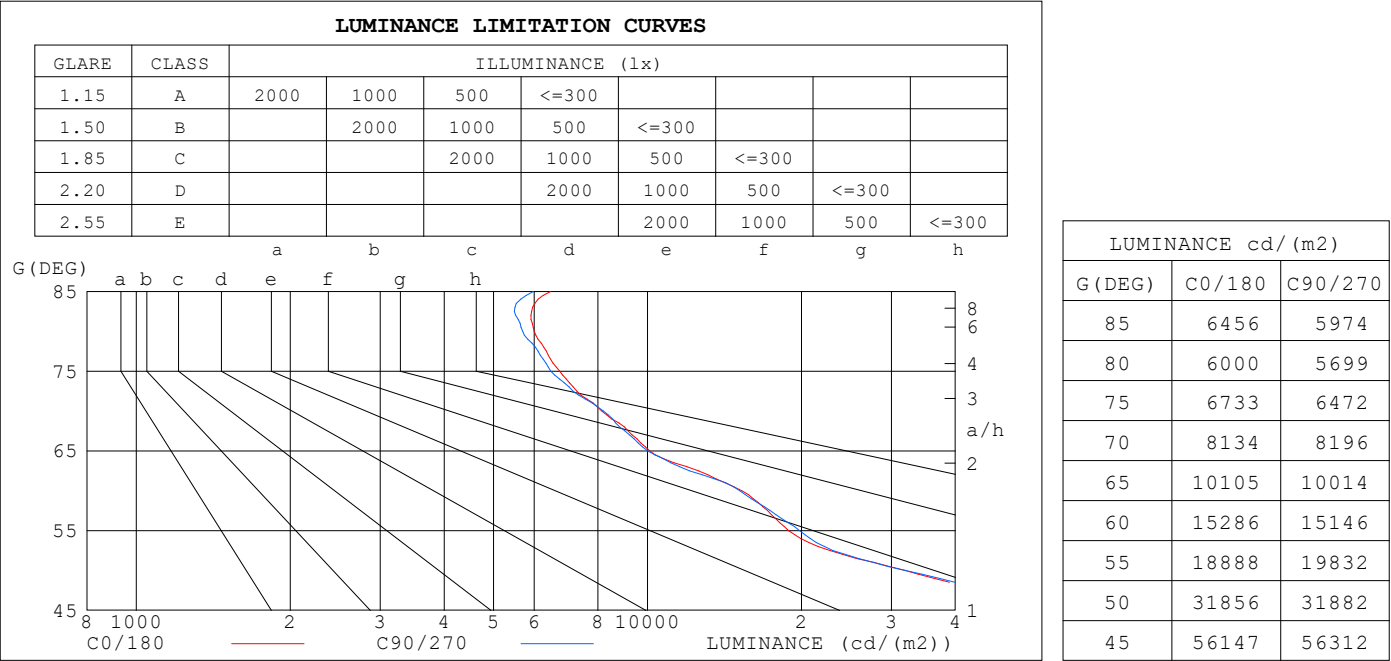
Conical surface Flux(120deg): 22299 lm

%lum = 94.7%
%lamp = 94.7%

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
 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



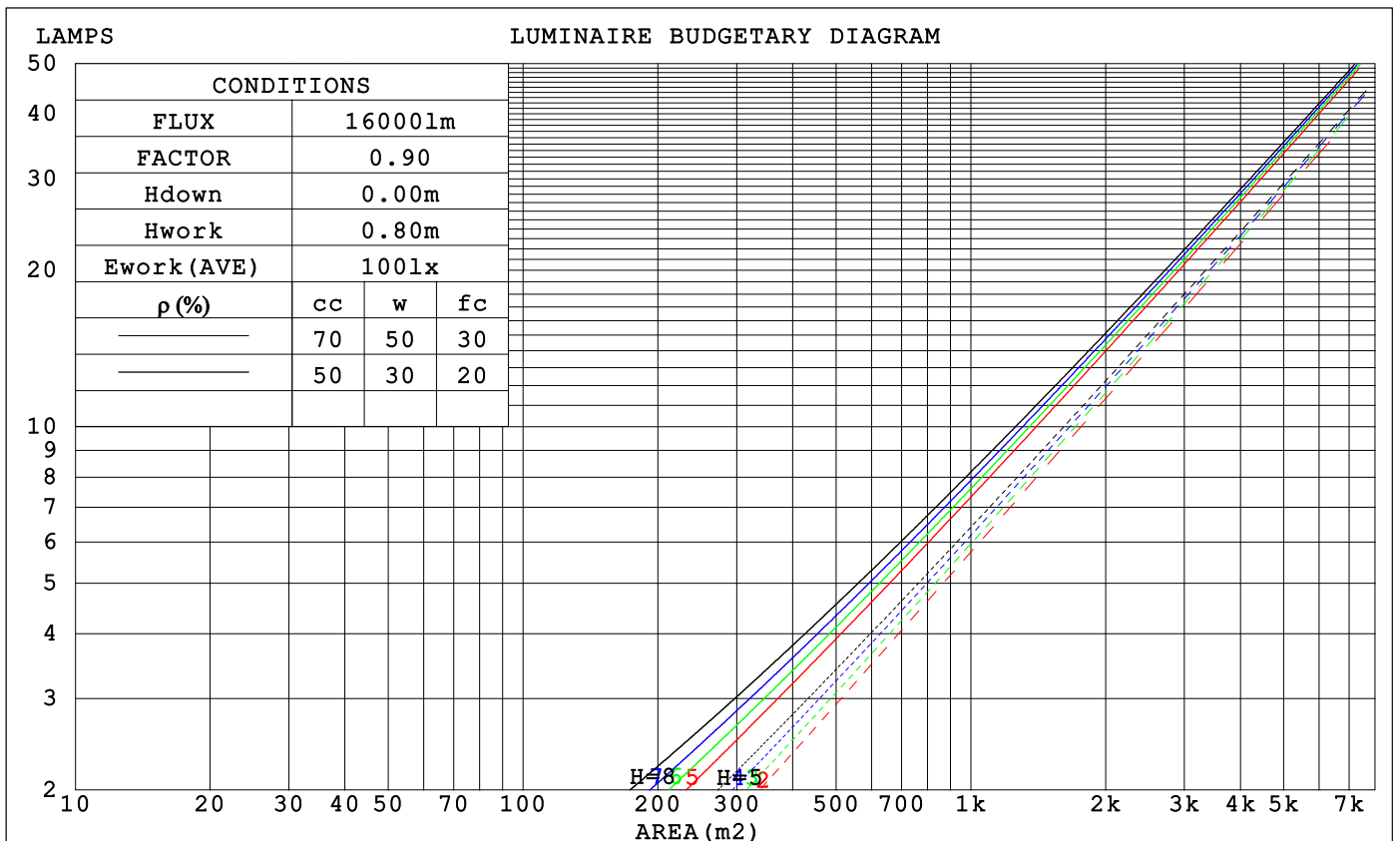
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C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-17

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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
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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	1.01	1.01	1.01	.99
1.0	1.08	1.05	1.02	1.06	1.03	1.01	1.02	.99	.97	.98	.96	.94	.94	.92	.91	.89
2.0	.98	.93	.89	.96	.92	.88	.93	.89	.85	.89	.86	.83	.86	.84	.82	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.82	.78	.74	.79	.76	.73	.71
4.0	.81	.74	.69	.80	.73	.68	.77	.72	.67	.75	.70	.66	.73	.69	.66	.64
5.0	.74	.67	.61	.73	.66	.61	.71	.65	.60	.69	.64	.60	.67	.63	.59	.57
6.0	.68	.61	.55	.67	.60	.55	.65	.59	.54	.64	.58	.54	.62	.57	.53	.52
7.0	.62	.55	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.57	.52	.49	.47
8.0	.58	.50	.45	.57	.50	.45	.56	.49	.45	.54	.49	.45	.53	.48	.44	.43
9.0	.53	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.44	.41	.39
10.0	.50	.43	.38	.49	.42	.38	.48	.42	.38	.47	.41	.37	.46	.41	.37	.36



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

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	.223	.127	.040	.216	.123	.039	.202	.116	.037	.190	.110	.035	.179	.104	.033	
2.0	.216	.118	.036	.210	.116	.036	.198	.110	.034	.188	.105	.033	.178	.100	.032	
3.0	.206	.110	.033	.201	.107	.032	.191	.103	.031	.181	.099	.030	.173	.096	.030	
4.0	.196	.102	.030	.191	.100	.030	.182	.097	.029	.174	.093	.028	.166	.090	.027	
5.0	.185	.095	.027	.181	.093	.027	.173	.090	.027	.166	.088	.026	.159	.085	.026	
6.0	.176	.088	.025	.172	.087	.025	.165	.085	.025	.159	.082	.024	.152	.080	.024	
7.0	.167	.083	.023	.164	.082	.023	.157	.080	.023	.151	.078	.023	.146	.076	.022	
8.0	.159	.077	.022	.156	.077	.022	.150	.075	.021	.145	.073	.021	.140	.072	.021	
9.0	.151	.073	.020	.148	.072	.020	.143	.071	.020	.138	.069	.020	.134	.068	.020	
10.0	.144	.069	.019	.141	.068	.019	.137	.067	.019	.132	.066	.019	.128	.064	.018	

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	.199	.199	.199	.170	.170	.170	.116	.116	.116	.067	.067	.067	.021	.021	.021	
1.0	.182	.165	.149	.156	.142	.129	.107	.097	.089	.061	.056	.052	.020	.018	.017	
2.0	.170	.140	.115	.146	.121	.100	.100	.084	.070	.058	.049	.041	.018	.016	.013	
3.0	.160	.122	.092	.138	.105	.079	.094	.073	.056	.055	.043	.033	.018	.014	.011	
4.0	.152	.108	.075	.130	.093	.065	.090	.065	.046	.052	.038	.027	.017	.012	.009	
5.0	.144	.097	.062	.124	.084	.054	.085	.059	.038	.050	.034	.023	.016	.011	.007	
6.0	.138	.088	.053	.118	.077	.046	.082	.054	.033	.047	.032	.019	.015	.010	.006	
7.0	.132	.081	.046	.113	.070	.040	.078	.049	.028	.045	.029	.017	.015	.010	.006	
8.0	.126	.075	.041	.109	.065	.035	.075	.046	.025	.044	.027	.015	.014	.009	.005	
9.0	.121	.070	.036	.104	.061	.032	.072	.043	.022	.042	.025	.013	.014	.008	.004	
10.0	.116	.066	.033	.100	.058	.029	.069	.040	.020	.041	.024	.012	.013	.008	.004	

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

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	18.6	19.8	18.9	20.1	20.5	18.6	19.9	19.0	20.2	20.5
3H	19.2	20.3	19.6	20.7	21.1	19.2	20.3	19.6	20.6	21.0
4H	19.4	20.4	19.8	20.8	21.2	19.3	20.4	19.8	20.8	21.2
6H	19.5	20.5	19.9	20.8	21.3	19.5	20.4	19.9	20.8	21.2
8H	19.6	20.4	20.0	20.9	21.3	19.5	20.4	19.9	20.8	21.2
12H	19.6	20.4	20.0	20.8	21.3	19.5	20.4	20.0	20.8	21.2
4H 2H	18.7	19.7	19.1	20.1	20.5	18.7	19.8	19.2	20.1	20.6
3H	19.5	20.3	19.9	20.8	21.2	19.5	20.3	19.9	20.7	21.2
4H	19.8	20.5	20.2	21.0	21.4	19.7	20.5	20.2	20.9	21.4
6H	20.0	20.6	20.5	21.1	21.6	19.9	20.5	20.4	21.0	21.5
8H	20.1	20.7	20.5	21.1	21.6	20.0	20.6	20.4	21.0	21.5
12H	20.1	20.6	20.6	21.1	21.6	20.0	20.5	20.5	21.0	21.5
8H 4H	19.8	20.4	20.3	20.9	21.4	19.7	20.3	20.2	20.8	21.3
6H	20.1	20.6	20.6	21.1	21.6	20.0	20.5	20.5	21.0	21.5
8H	20.2	20.6	20.7	21.2	21.7	20.1	20.5	20.6	21.1	21.6
12H	20.3	20.7	20.9	21.2	21.8	20.2	20.6	20.7	21.1	21.7
12H 4H	19.8	20.3	20.3	20.8	21.3	19.7	20.2	20.2	20.7	21.2
6H	20.1	20.5	20.6	21.0	21.6	20.0	20.4	20.5	20.9	21.5
8H	20.2	20.6	20.8	21.1	21.7	20.1	20.5	20.7	21.0	21.6
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:2023-07-17

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

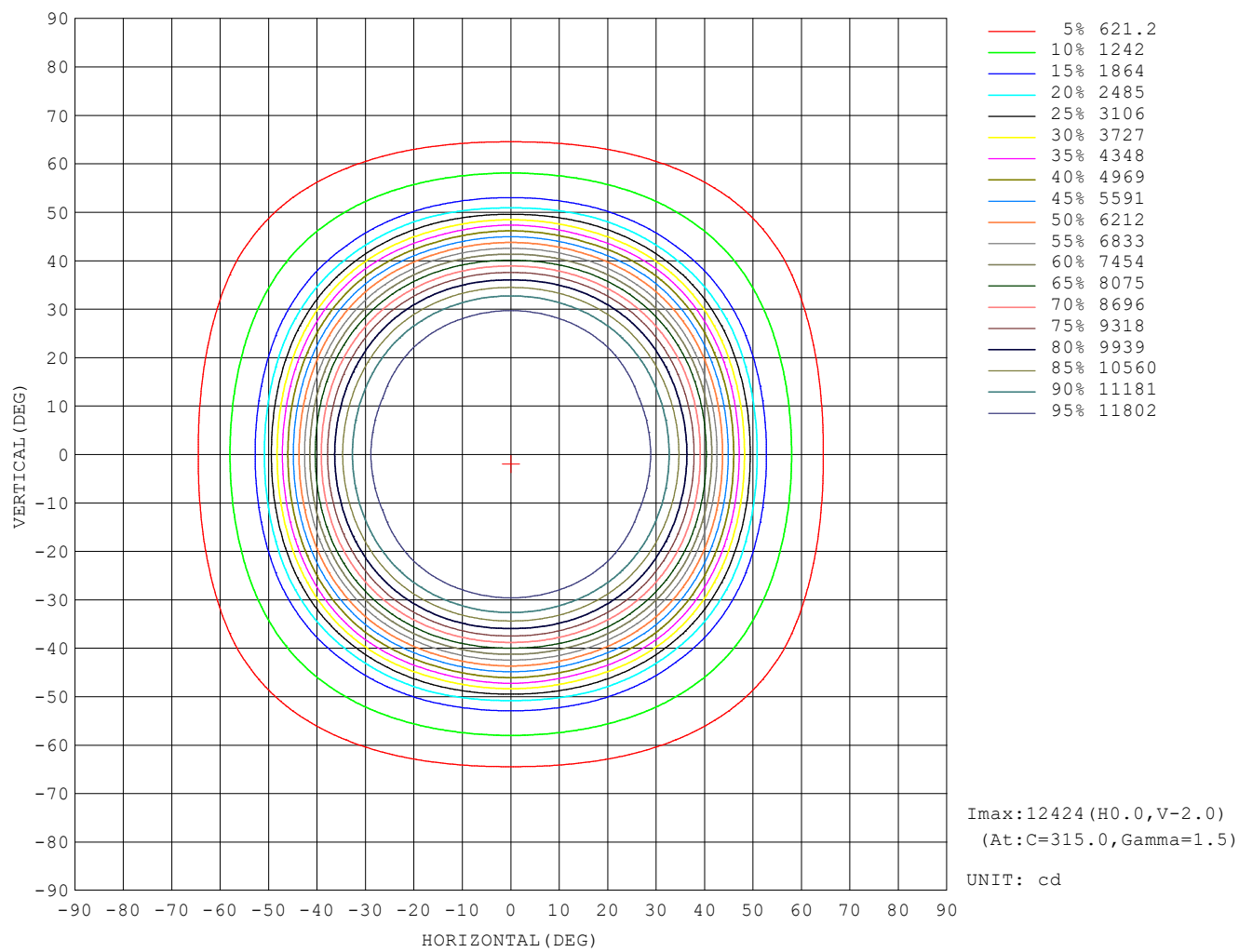
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	73	64	59	72	64	59	71	63	58	54
0.80	82	74	68	81	73	68	80	73	68	63
1.00	89	81	76	88	81	76	86	81	75	70
1.25	95	88	83	94	87	82	91	86	82	76
1.50	99	92	87	97	91	87	95	90	86	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	103	100	106	102	99	102	99	96	89
4.00	111	107	104	108	105	102	104	102	99	91
5.00	112	109	106	110	107	105	106	103	101	93
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: 2023-07-17

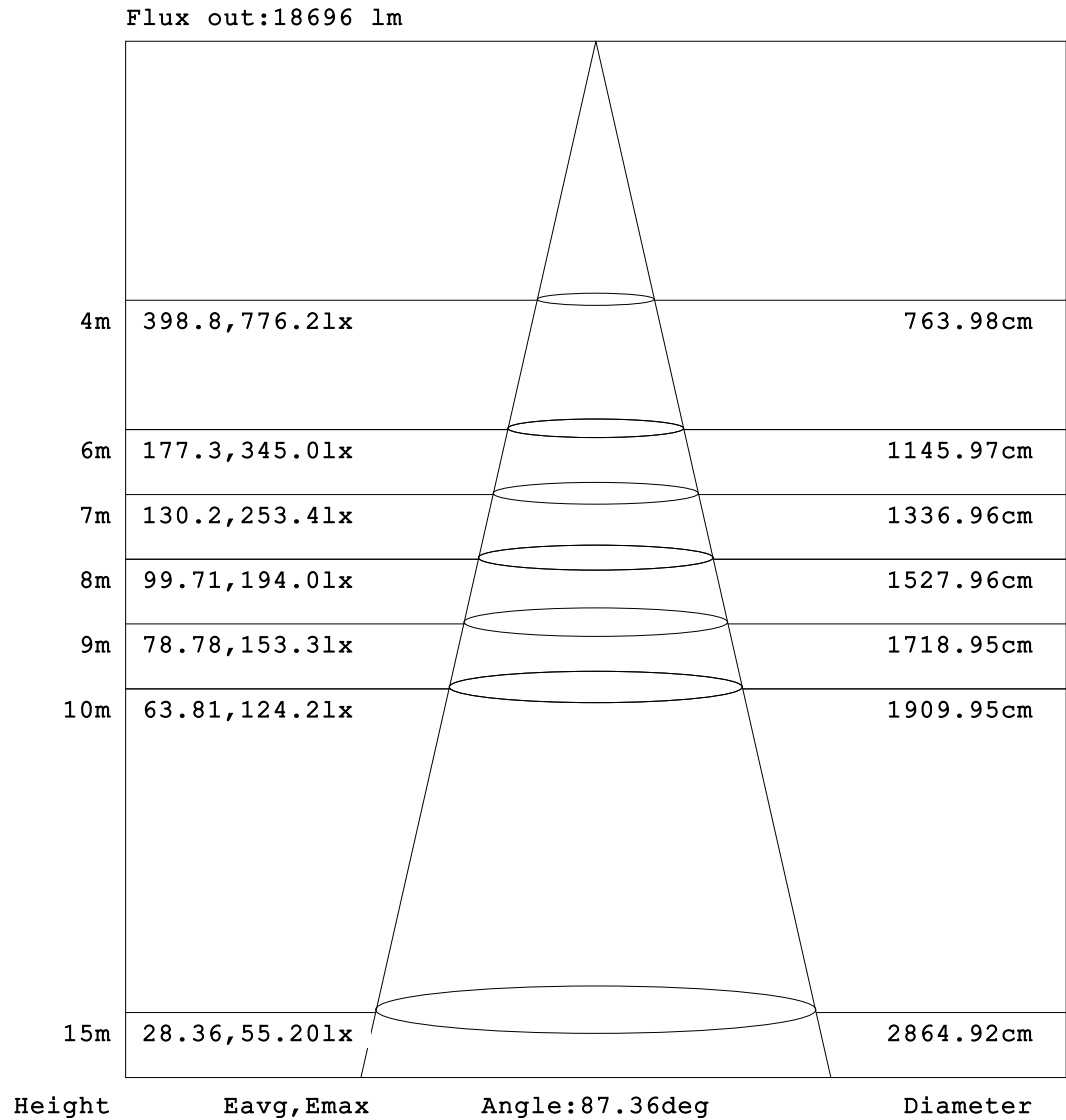
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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	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°C	Humidity: 65.0%
Operators: ZZX	Test Distance: 26.000m [K=0.4556]
Test Date: 2023-07-17	Remarks:

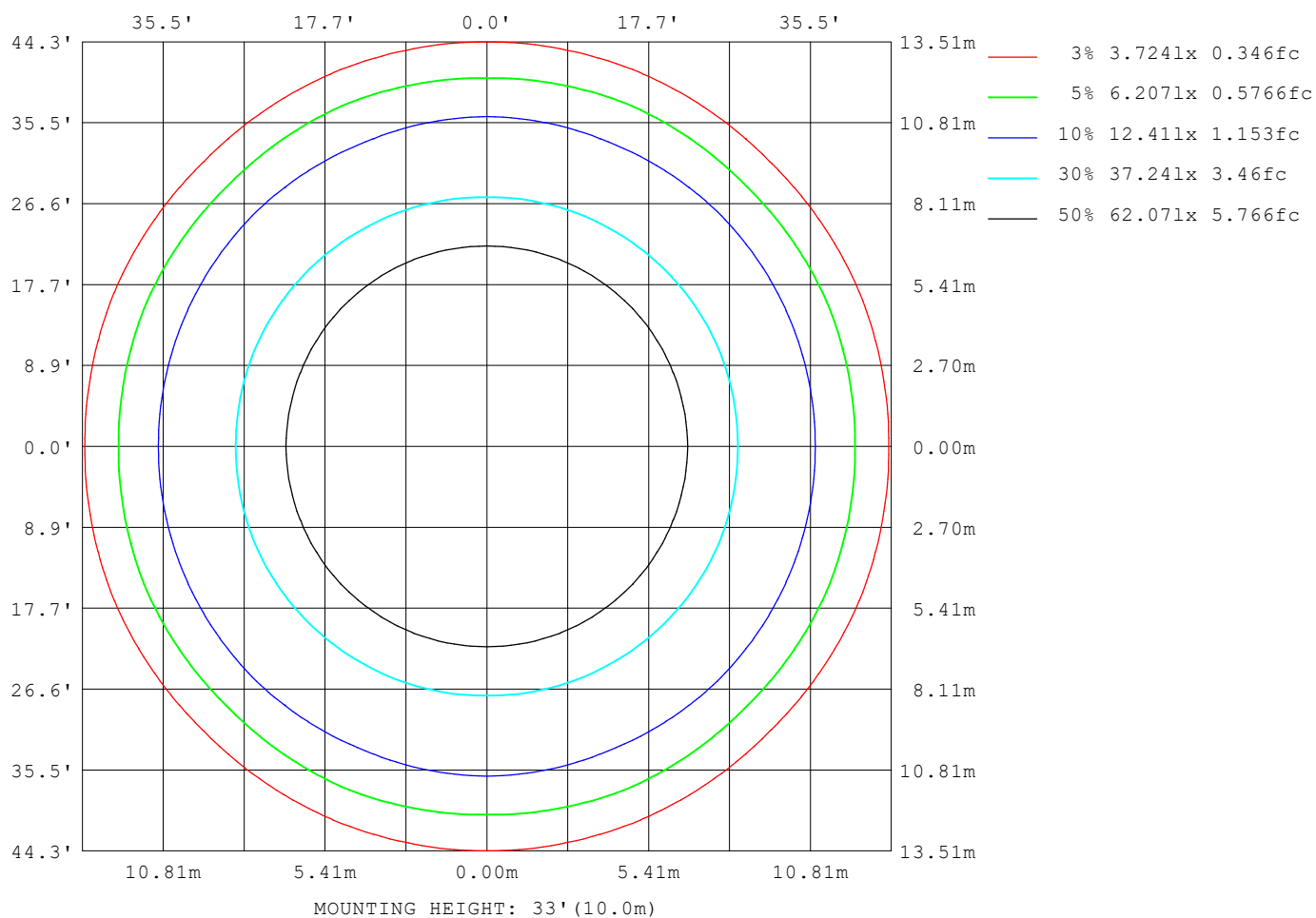
AAI Figure



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

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

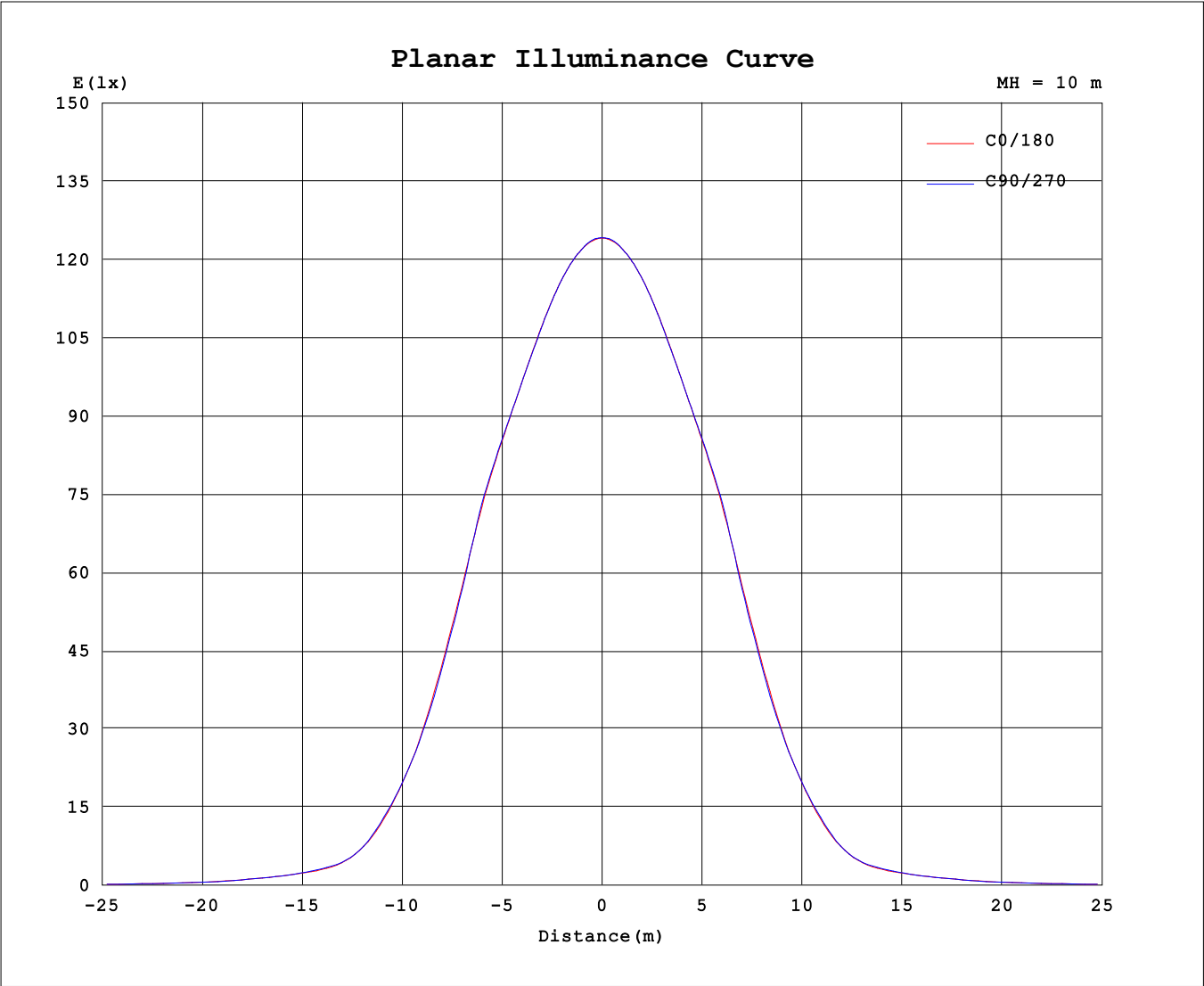
ISOLUX DIAGRAM



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

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



C Range: 0 - 360DEG
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