

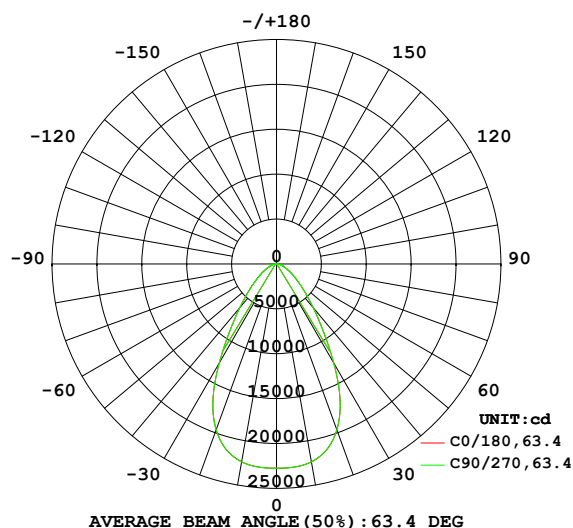
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

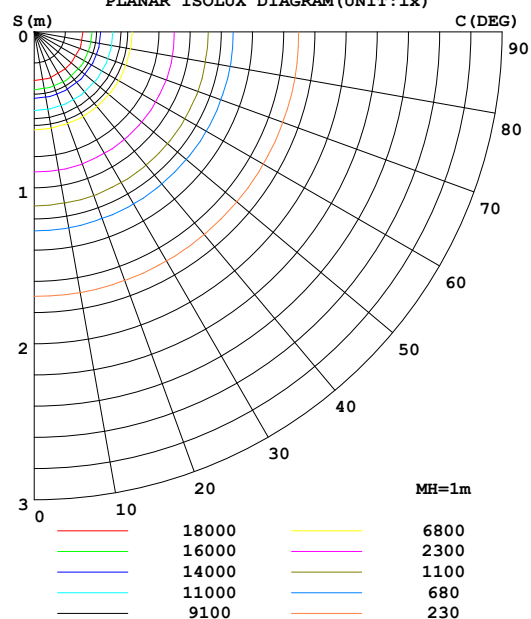
Test:U:230.0V I:0.659A P:150.0W PF:0.990 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29122x1 lm		
NAME: HB74-150H-5080-H00218	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 194.15 lm/W			
MODEL	/	I _{max} (cd)	22754	S/MH (C0/180)	0.95
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.95
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	29122	η UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	29122	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	0.95

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-09-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4559]
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	2238	2238	2238	2238	2238	2238	2238	2238	0- 10	2158	2158	7.41,7.41
20	1966	1966	1966	1966	1966	1966	1966	1966	10- 20	5999	8157	28,28
30	1276	1276	1276	1276	1276	1276	1276	1276	20- 30	7568	15726	54,54
40	637.2	637.2	637.2	637.2	637.2	637.2	637.2	637.2	30- 40	5699	21425	73.6,73.6
50	325.1	325.1	325.1	325.1	325.1	325.1	325.1	325.1	40- 50	3547	24972	85.7,85.7
60	168.9	168.9	168.9	168.9	168.9	168.9	168.9	168.9	50- 60	2131	27102	93.1,93.1
70	80.04	80.04	80.04	80.04	80.04	80.04	80.04	80.04	60- 70	1187	28290	97.1,97.1
80	38.49	38.49	38.49	38.49	38.49	38.49	38.49	38.49	70- 80	636.4	28926	99.3,99.3
90	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	80- 90	196.0	29122	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 23417 lm

%lum = 80.4%

%lamp = 80.4%

Conical surface Flux(120deg): 27102 lm

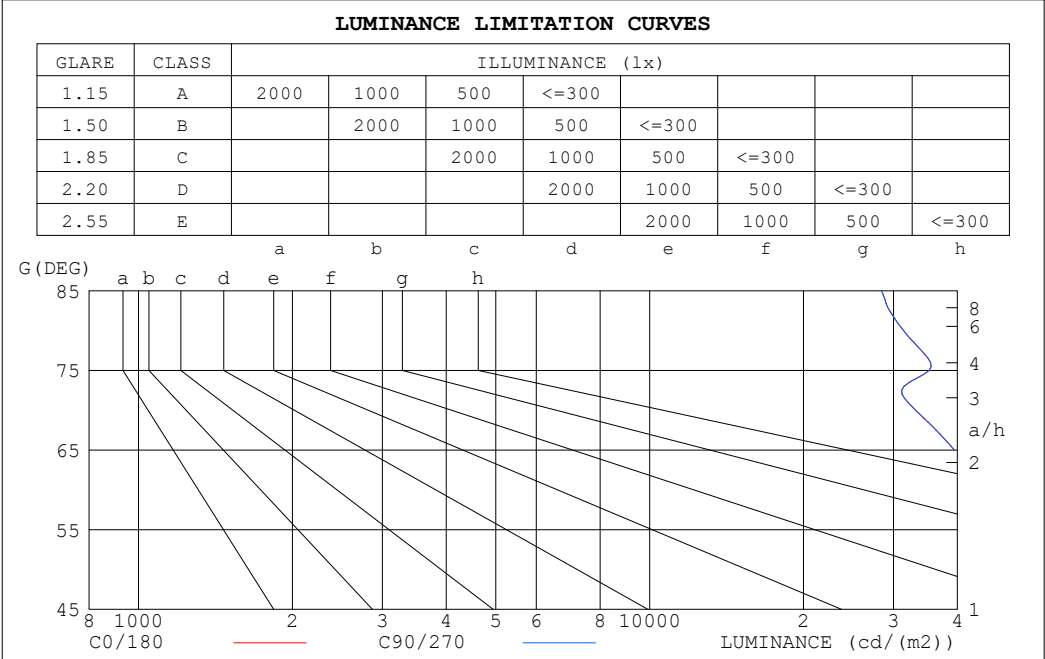
%lum = 93.1%

%lamp = 93.1%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-09-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	28420	28420
80	31394	31394
75	35234	35234
70	33148	33148
65	39503	39503
60	47835	47835
55	58025	58025
50	71634	71634
45	90701	90701

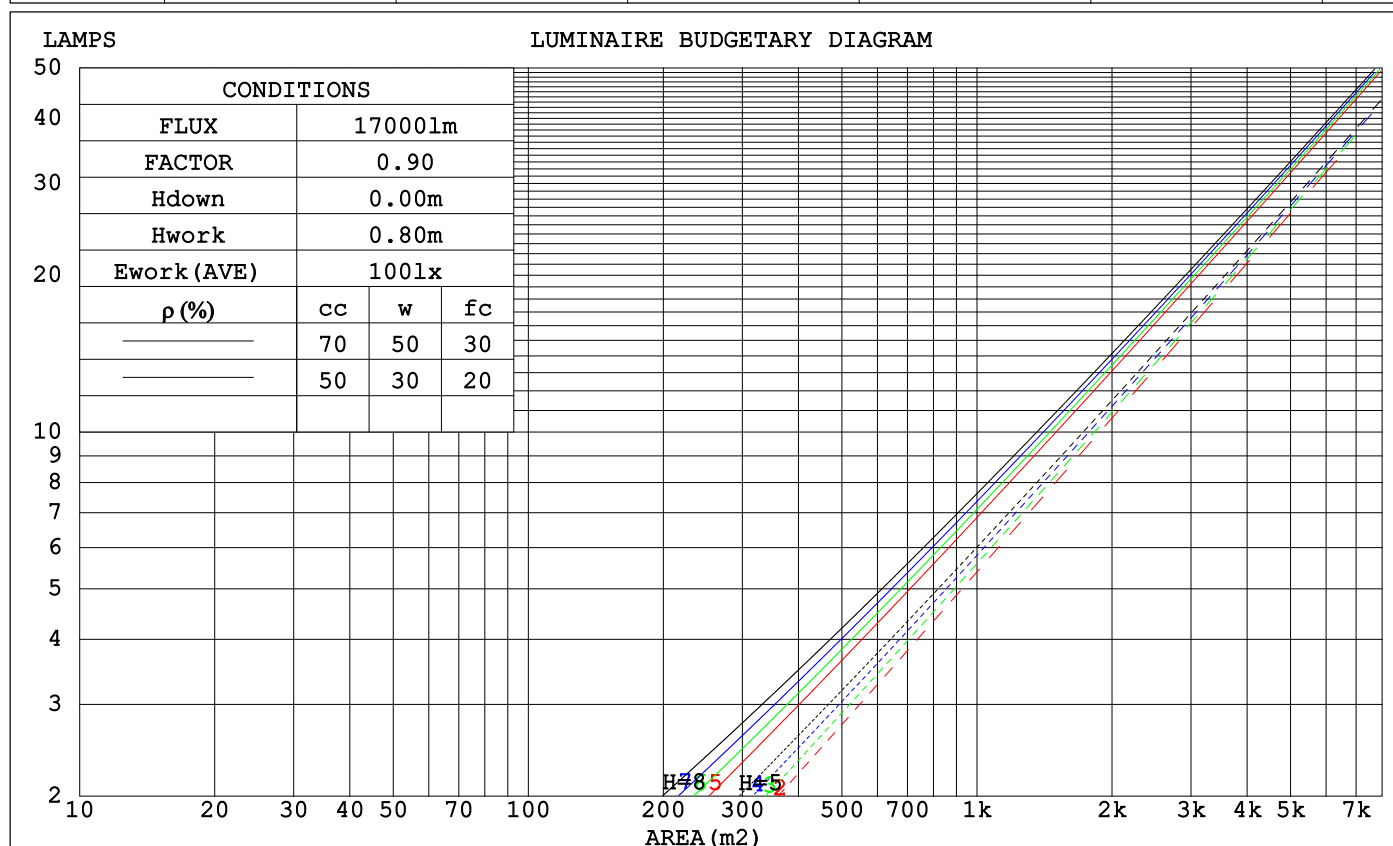
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-09-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
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	1.00
1.0	1.08	1.05	1.02	1.06	1.03	1.01	1.02	.00	.98	.98	.96	.95	.95	.93	.92	.90
2.0	.99	.93	.89	.97	.92	.88	.93	.90	.86	.90	.87	.84	.87	.85	.83	.81
3.0	.90	.84	.79	.88	.83	.78	.86	.81	.77	.83	.79	.76	.81	.77	.74	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.68	.75	.71	.68	.66
5.0	.76	.69	.64	.75	.68	.63	.73	.67	.63	.71	.66	.62	.70	.65	.62	.60
6.0	.70	.63	.58	.69	.63	.58	.68	.62	.57	.66	.61	.57	.65	.60	.57	.55
7.0	.65	.58	.53	.65	.58	.53	.63	.57	.53	.62	.57	.52	.61	.56	.52	.51
8.0	.61	.54	.49	.60	.54	.49	.59	.53	.49	.58	.53	.49	.57	.52	.48	.47
9.0	.57	.50	.46	.56	.50	.45	.55	.49	.45	.54	.49	.45	.53	.49	.45	.43
10.0	.53	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.50	.45	.42	.40



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
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Test Date:2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
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	.225	.128	.040	.218	.124	.039	.205	.118	.038	.193	.111	.036	.182	.106	.034	
2.0	.214	.117	.036	.208	.115	.035	.197	.110	.034	.187	.105	.033	.178	.101	.032	
3.0	.202	.108	.032	.197	.105	.032	.187	.102	.031	.179	.098	.030	.170	.094	.029	
4.0	.190	.099	.029	.186	.097	.029	.177	.094	.028	.170	.091	.027	.162	.088	.027	
5.0	.179	.091	.026	.175	.090	.026	.168	.087	.026	.161	.085	.025	.155	.083	.025	
6.0	.169	.085	.024	.166	.084	.024	.159	.082	.024	.153	.080	.023	.147	.078	.023	
7.0	.160	.079	.022	.157	.078	.022	.151	.076	.022	.146	.075	.022	.140	.073	.021	
8.0	.151	.074	.021	.149	.073	.021	.143	.072	.020	.139	.070	.020	.134	.069	.020	
9.0	.144	.069	.019	.141	.069	.019	.137	.068	.019	.132	.066	.019	.128	.065	.019	
10.0	.137	.066	.018	.134	.065	.018	.130	.064	.018	.126	.063	.018	.123	.062	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.141	.149	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.107	.139	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.130	.098	.073	.089	.068	.051	.051	.040	.030	.017	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.134	.089	.055	.115	.077	.048	.079	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.127	.080	.046	.109	.069	.040	.075	.048	.028	.044	.028	.017	.014	.009	.006	
7.0	.121	.072	.039	.104	.063	.034	.072	.044	.024	.042	.026	.014	.013	.008	.005	
8.0	.115	.066	.033	.099	.058	.029	.068	.040	.020	.040	.024	.012	.013	.008	.004	
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.104	.057	.025	.090	.049	.022	.062	.035	.016	.036	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4559]
 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	23.3	24.6	23.7	24.9	25.2	23.3	24.6	23.7	24.9	25.2
3H	24.3	25.5	24.7	25.8	26.2	24.3	25.5	24.7	25.8	26.2
4H	24.8	25.9	25.2	26.2	26.6	24.8	25.9	25.2	26.2	26.6
6H	25.2	26.2	25.6	26.5	26.9	25.2	26.2	25.6	26.5	26.9
8H	25.3	26.2	25.8	26.6	27.0	25.3	26.2	25.8	26.6	27.0
12H	25.4	26.3	25.9	26.7	27.1	25.4	26.3	25.9	26.7	27.1
4H 2H	23.7	24.7	24.1	25.0	25.4	23.7	24.7	24.1	25.0	25.4
3H	24.8	25.7	25.3	26.1	26.5	24.8	25.7	25.3	26.1	26.5
4H	25.5	26.3	25.9	26.7	27.1	25.5	26.3	25.9	26.7	27.1
6H	26.0	26.7	26.5	27.1	27.6	26.0	26.7	26.5	27.1	27.6
8H	26.2	26.8	26.7	27.3	27.7	26.2	26.8	26.7	27.3	27.7
12H	26.3	26.9	26.8	27.4	27.8	26.3	26.9	26.8	27.4	27.8
8H 4H	25.7	26.3	26.2	26.8	27.2	25.7	26.3	26.2	26.8	27.2
6H	26.4	26.9	26.9	27.4	27.8	26.4	26.9	26.9	27.4	27.8
8H	26.6	27.1	27.1	27.6	28.1	26.6	27.1	27.1	27.6	28.1
12H	26.8	27.2	27.3	27.7	28.3	26.8	27.2	27.3	27.7	28.3
12H 4H	25.7	26.2	26.2	26.7	27.2	25.7	26.2	26.2	26.7	27.2
6H	26.4	26.9	26.9	27.3	27.9	26.4	26.9	26.9	27.3	27.9
8H	26.7	27.1	27.2	27.6	28.2	26.7	27.1	27.2	27.6	28.2
CIE190: 2010										

CIE190: 2010
Area: 0.0706 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

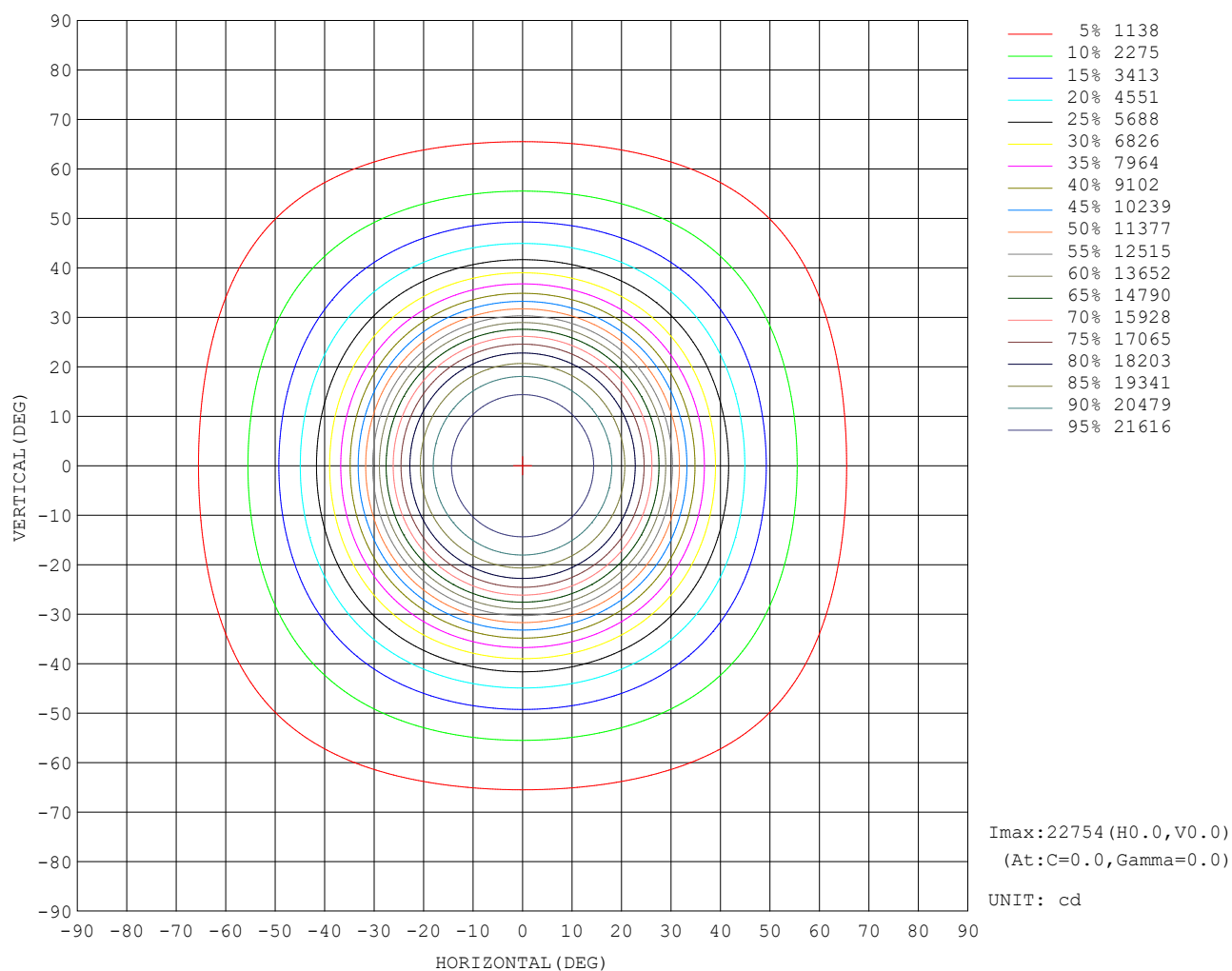
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	75	66	61	74	66	61	73	66	61	56
0.80	84	76	70	83	75	70	82	75	70	65
1.00	90	82	77	89	82	77	87	82	77	71
1.25	96	88	84	94	88	83	92	86	82	77
1.50	99	93	88	98	92	87	95	90	86	81
2.00	104	98	93	102	97	93	99	95	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	103	105	102	100	92
5.00	113	109	107	110	107	105	106	104	102	94
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: 2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4559]
 Remarks:

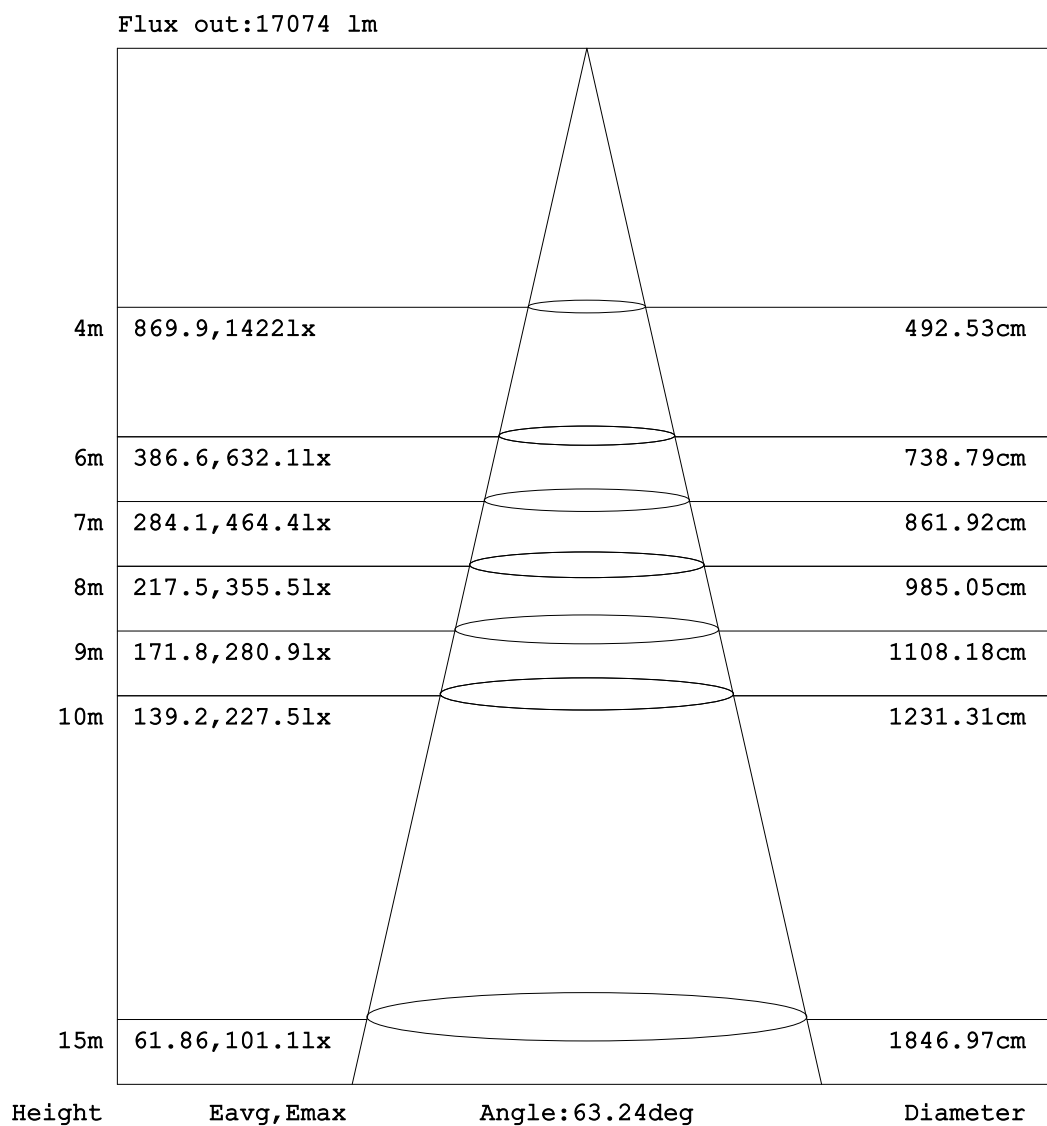
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4559]
Remarks:

AAI Figure



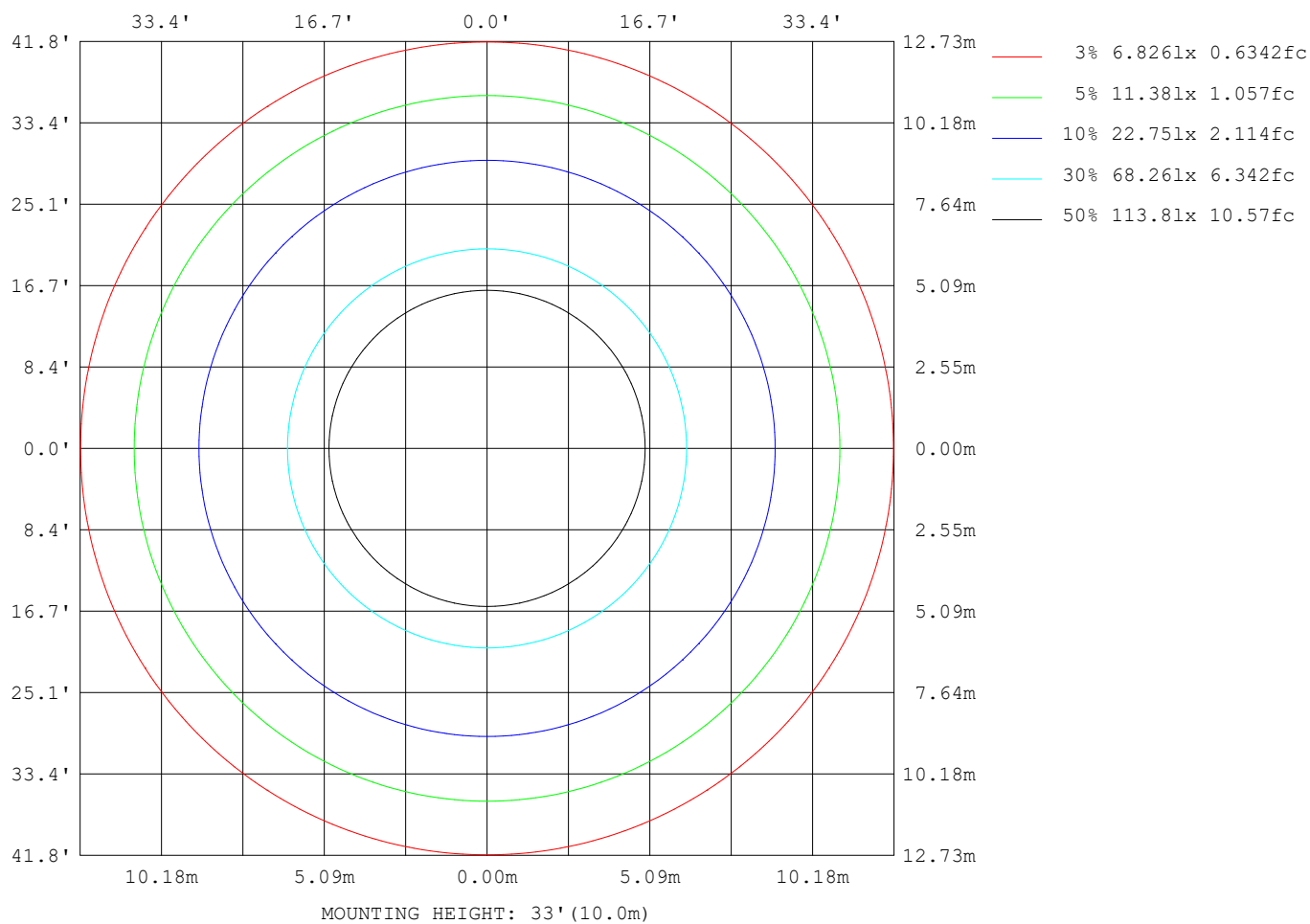
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4559]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

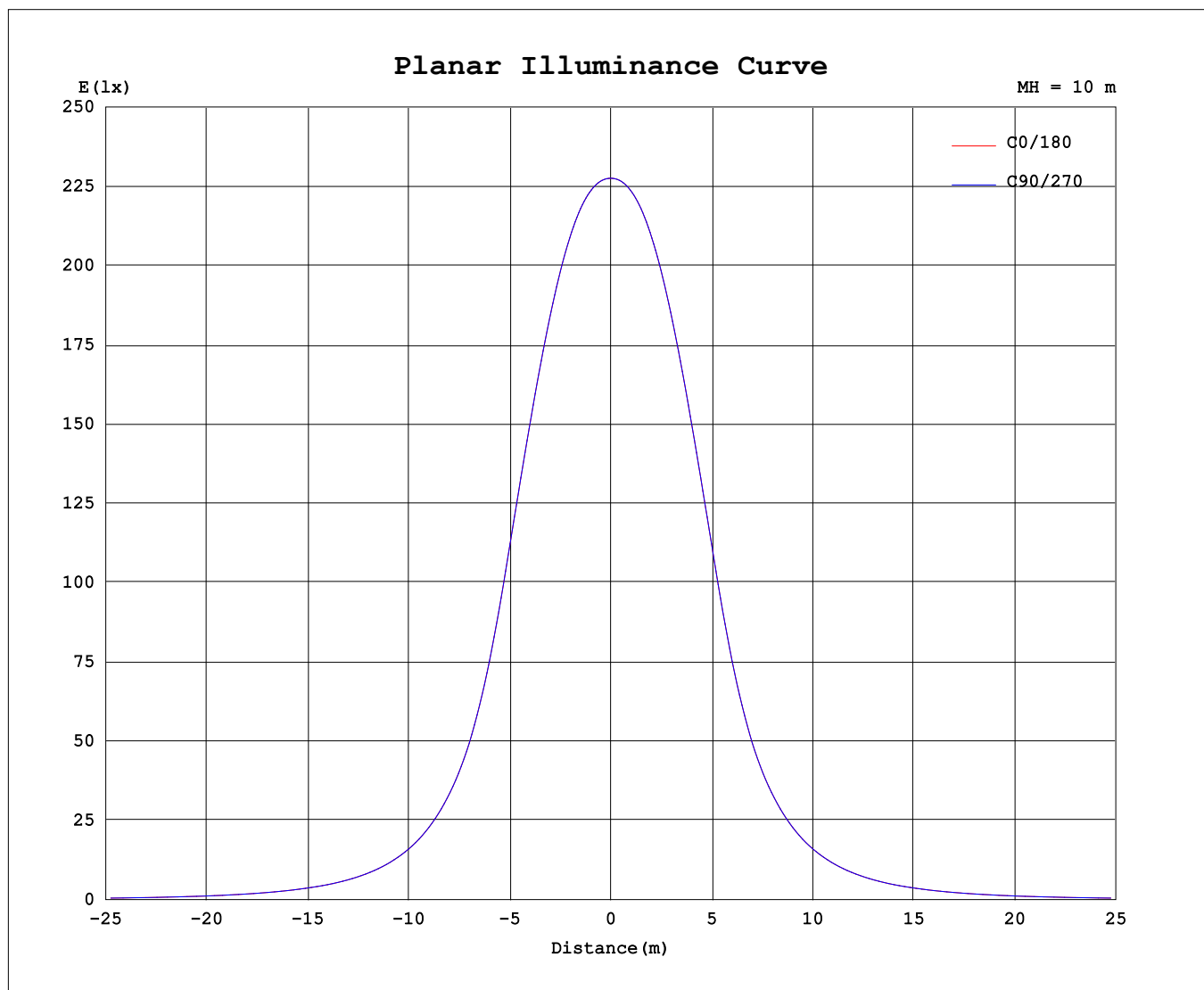
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4559]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-09-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4559]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-09-23

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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4559]
Remarks:

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