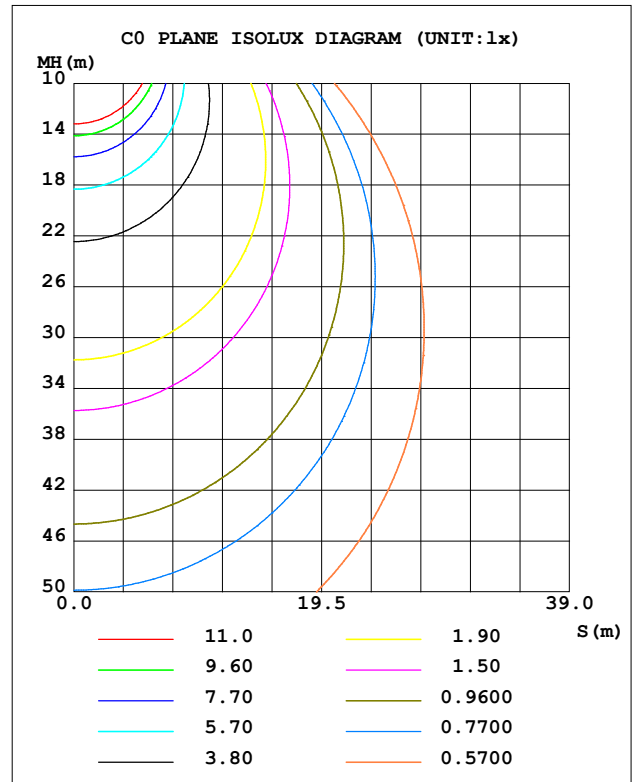
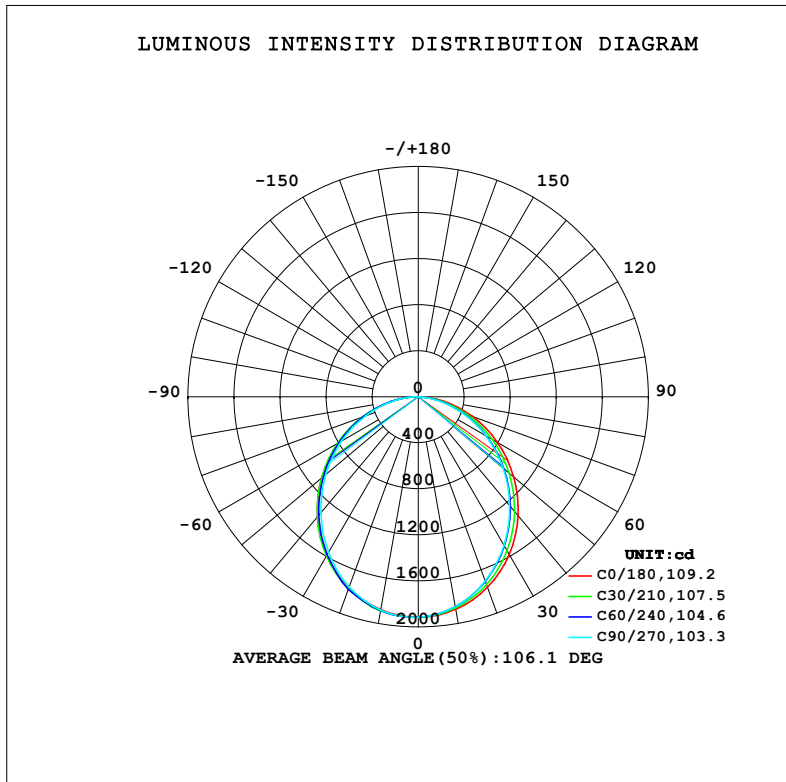


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99PFM1505030/WH	Imax(cd)	1918	S/MH(C0/180)	1.24
NOMINAL POWER(W)	50	LOR(%)	114.3	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	5144.4	$\eta$ UP,DN(C0-180)	0.0,56.2
NOMINAL FLUX(lm)	4500	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,58.1
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	$\eta$ down (%)	114.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1876	1857	1852	1881	1878	1887	1882	1863	0- 10	180.8	180.8	3.51,4.02
20	1762	1720	1704	1764	1769	1776	1757	1732	10- 20	513.1	693.9	13.5,15.4
30	1582	1518	1490	1576	1592	1592	1561	1533	20- 30	764.2	1458	28.3,32.4
40	1351	1270	1235	1339	1362	1357	1317	1288	30- 40	900.5	2359	45.8,52.4
50	1083	996.5	961.8	1070	1095	1089	1048	1015	40- 50	911.9	3271	63.6,72.7
60	793.6	711.8	680.1	784.9	805.4	804.4	770.1	730.6	50- 60	807.2	4078	79.3,90.6
70	499.8	428.0	403.9	498.2	508.8	516.3	490.1	445.8	60- 70	609.8	4688	91.1,104
80	222.8	166.8	149.9	227.3	228.9	242.4	225.1	181.0	70- 80	355.5	5043	98,112
90	3.539	3.251	2.827	10.21	3.512	16.68	15.48	2.799	80- 90	101.3	5144	100,114
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:cd									UNIT:lm		

Conical surface Flux(90deg): 2820.8 lm

%lum = 54.8%

%lamp = 62.7%

Conical surface Flux(130deg): 4412 lm

%lum = 85.8%

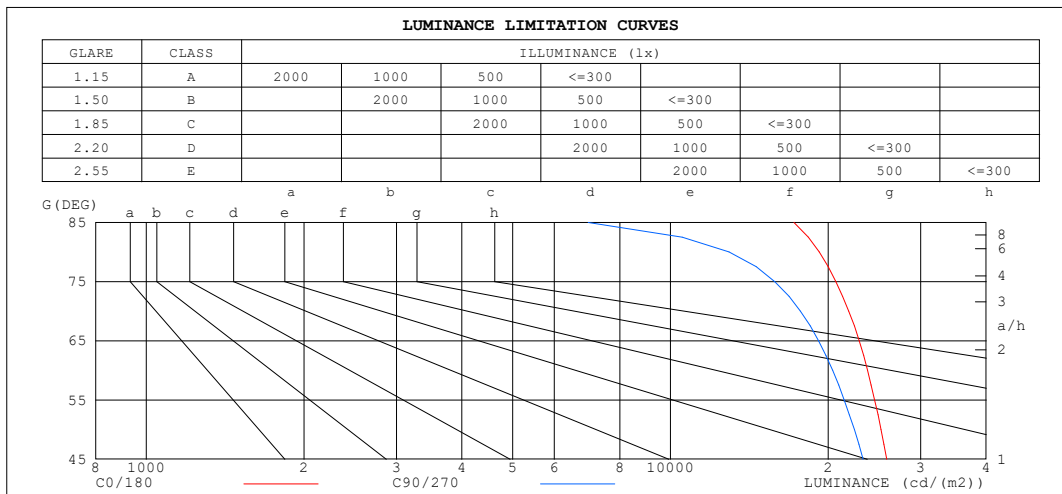
%lamp = 98.0%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17190	6964
80	19211	12934
75	20670	15813
70	21881	17693
65	22916	19158
60	23764	20378
55	24523	21450
50	25219	22416
45	25842	23314

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```

## WEC AND CCEC

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.352	.200	.063	.344	.196	.062	.329	.189	.060	.315	.181	.058	.302	.175	.056	
2.0	.331	.181	.056	.323	.178	.055	.310	.172	.054	.298	.167	.052	.286	.162	.051	
3.0	.306	.163	.049	.300	.160	.048	.288	.156	.047	.277	.152	.047	.267	.148	.046	
4.0	.282	.147	.043	.277	.145	.043	.266	.141	.042	.257	.138	.042	.248	.135	.041	
5.0	.261	.133	.039	.256	.131	.038	.247	.129	.038	.238	.126	.037	.230	.123	.037	
6.0	.242	.121	.035	.238	.120	.035	.230	.118	.034	.222	.115	.034	.215	.113	.034	
7.0	.225	.111	.032	.222	.110	.031	.214	.108	.031	.207	.106	.031	.201	.104	.031	
8.0	.211	.103	.029	.207	.102	.029	.201	.100	.029	.194	.098	.028	.189	.097	.028	
9.0	.198	.096	.027	.194	.095	.027	.188	.093	.026	.183	.092	.026	.178	.090	.026	
10.0	.186	.089	.025	.183	.088	.025	.178	.087	.025	.173	.086	.024	.168	.084	.024	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.218	.218	.218	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.206	.179	.154	.176	.153	.132	.121	.105	.092	.069	.061	.053	.022	.020	.017	
2.0	.197	.151	.112	.168	.130	.097	.115	.090	.068	.067	.052	.040	.021	.017	.013	
3.0	.187	.131	.085	.161	.113	.074	.110	.078	.052	.064	.046	.031	.020	.015	.010	
4.0	.179	.115	.067	.153	.100	.058	.105	.069	.041	.061	.041	.024	.020	.013	.008	
5.0	.170	.103	.054	.146	.090	.047	.101	.063	.033	.058	.037	.020	.019	.012	.007	
6.0	.162	.094	.045	.139	.081	.039	.096	.057	.028	.056	.033	.016	.018	.011	.005	
7.0	.154	.086	.038	.133	.075	.033	.092	.052	.024	.053	.031	.014	.017	.010	.005	
8.0	.147	.079	.033	.126	.069	.029	.087	.048	.020	.051	.028	.012	.016	.009	.004	
9.0	.140	.074	.029	.120	.064	.025	.083	.045	.018	.049	.027	.011	.016	.009	.004	
10.0	.133	.069	.026	.115	.060	.022	.080	.042	.016	.047	.025	.010	.015	.008	.003	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

NAME: 99PFM1505030/WH						TYPE:			WEIGHT: 1		
SPEC.:						DIM.: 1500 x 50 x 35			SERIAL No.: 0		
MFR.: Elmark Industries JSC						SUR.:			Shielding Angle:		
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	20.1	18.8	20.3	20.5	17.9	19.4	18.2	19.6	19.8
	3H	20.1	21.5	20.4	21.7	22.0	19.2	20.6	19.5	20.9	21.1
	4H	20.7	22.1	21.1	22.3	22.6	19.7	21.1	20.0	21.3	21.6
	6H	21.2	22.5	21.5	22.7	23.0	20.0	21.3	20.4	21.6	21.8
	8H	21.4	22.6	21.7	22.9	23.2	20.1	21.3	20.4	21.6	21.9
	12H	21.5	22.6	21.8	22.9	23.2	20.1	21.2	20.4	21.5	21.8
4H	2H	19.0	20.4	19.4	20.6	20.9	18.5	19.9	18.8	20.1	20.4
	3H	20.8	21.9	21.1	22.2	22.5	20.0	21.2	20.4	21.5	21.8
	4H	21.5	22.6	21.9	22.9	23.2	20.6	21.7	21.0	22.0	22.4
	6H	22.1	23.1	22.5	23.4	23.8	21.0	22.0	21.4	22.3	22.7
	8H	22.3	23.2	22.8	23.6	24.0	21.1	22.0	21.5	22.4	22.8
	12H	22.5	23.3	22.9	23.7	24.1	21.1	21.9	21.6	22.3	22.7
8H	4H	21.7	22.6	22.1	22.9	23.3	20.9	21.8	21.3	22.2	22.5
	6H	22.4	23.2	22.9	23.6	24.0	21.4	22.2	21.9	22.6	23.0
	8H	22.7	23.4	23.2	23.8	24.3	21.6	22.2	22.0	22.6	23.1
	12H	22.9	23.5	23.4	23.9	24.4	21.6	22.2	22.1	22.6	23.1
12H	4H	21.7	22.5	22.1	22.9	23.3	20.9	21.7	21.3	22.1	22.5
	6H	22.5	23.1	22.9	23.5	24.0	21.5	22.1	21.9	22.6	23.0
	8H	22.8	23.3	23.2	23.8	24.3	21.6	22.2	22.1	22.6	23.1
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.1 / - 0.3					+ 0.1 / - 0.3				
2.0H		+ 0.3 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 4500 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.2)  
Area: 0.06678 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

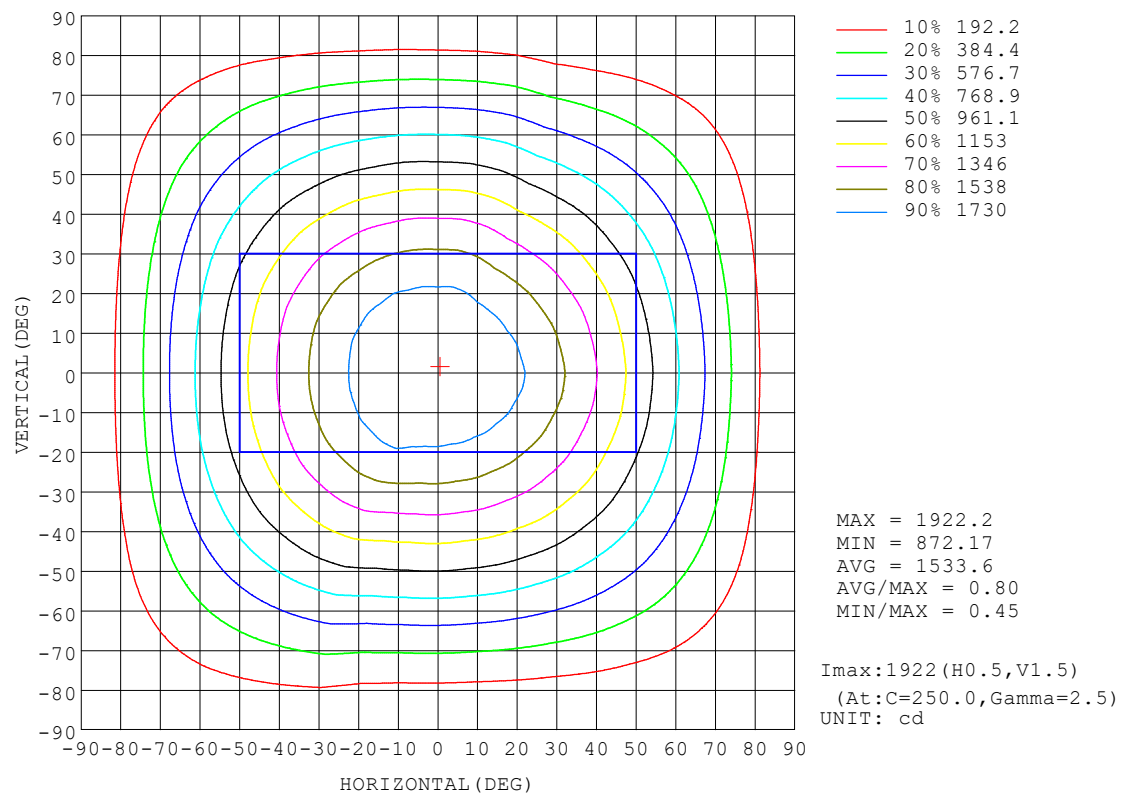
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	67	53	46	66	53	45	64	53	45	38
0.80	78	65	57	77	64	56	75	63	56	48
1.00	88	75	67	86	74	66	84	76	66	58
1.25	96	84	76	94	83	75	91	81	74	66
1.50	101	90	82	99	89	82	96	87	80	72
2.00	109	99	92	107	98	91	103	95	89	80
2.50	113	105	98	111	103	97	107	100	94	85
3.00	117	109	103	115	108	102	110	104	99	90
4.00	122	115	110	119	113	108	114	109	105	95
5.00	124	119	114	122	117	112	116	112	109	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



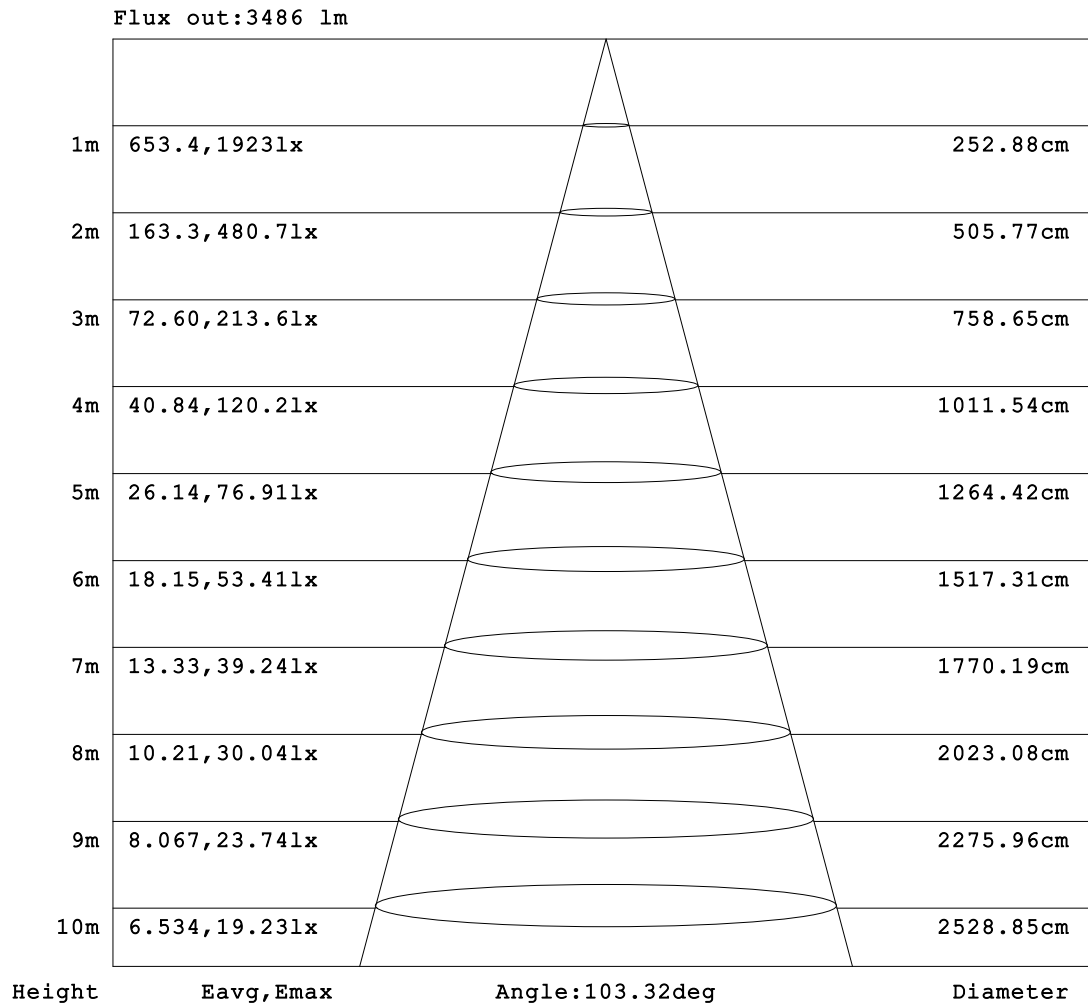
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:



**AAI Figure**

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



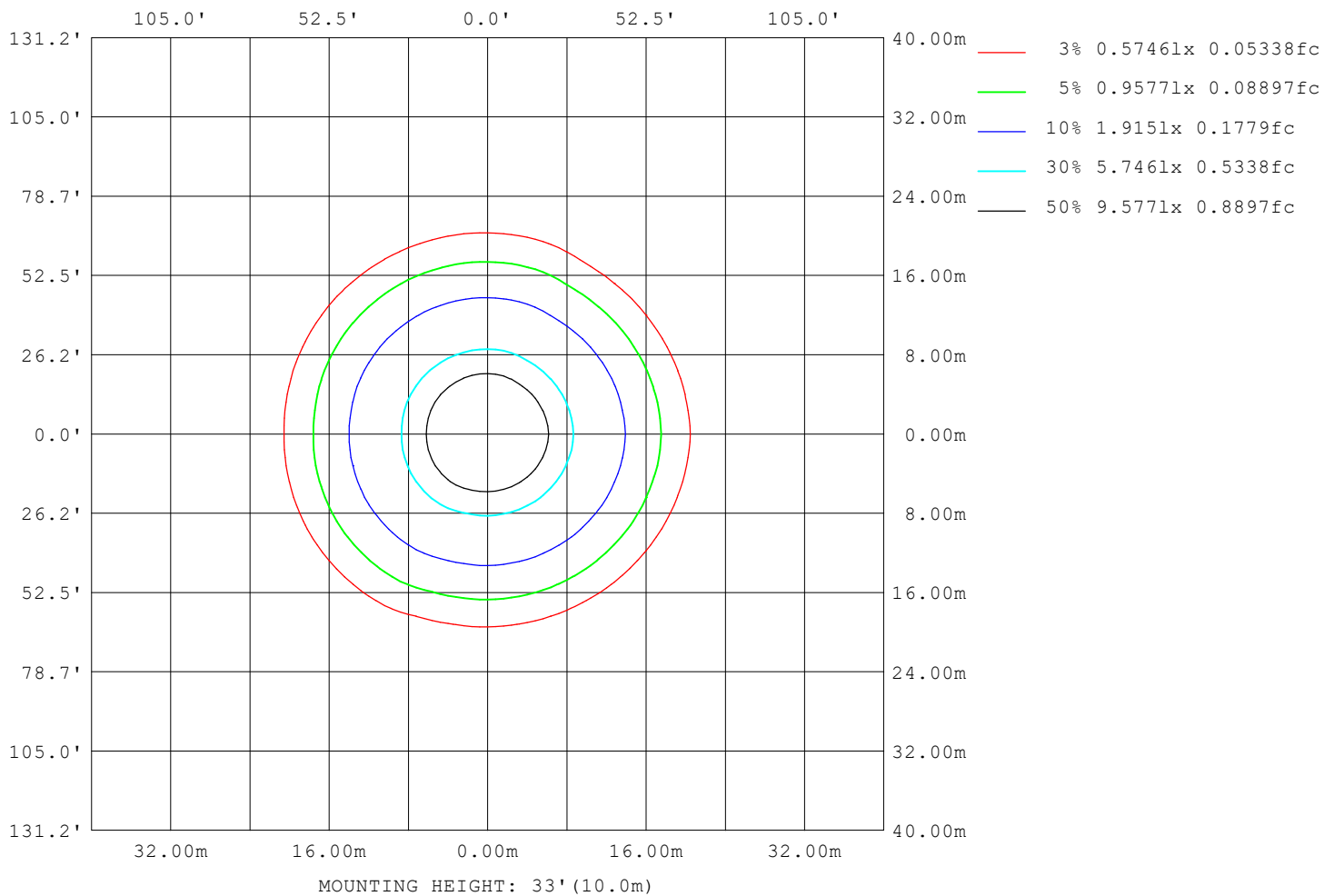
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

### LED Avg.L Report

NAME: 99PFM1505030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

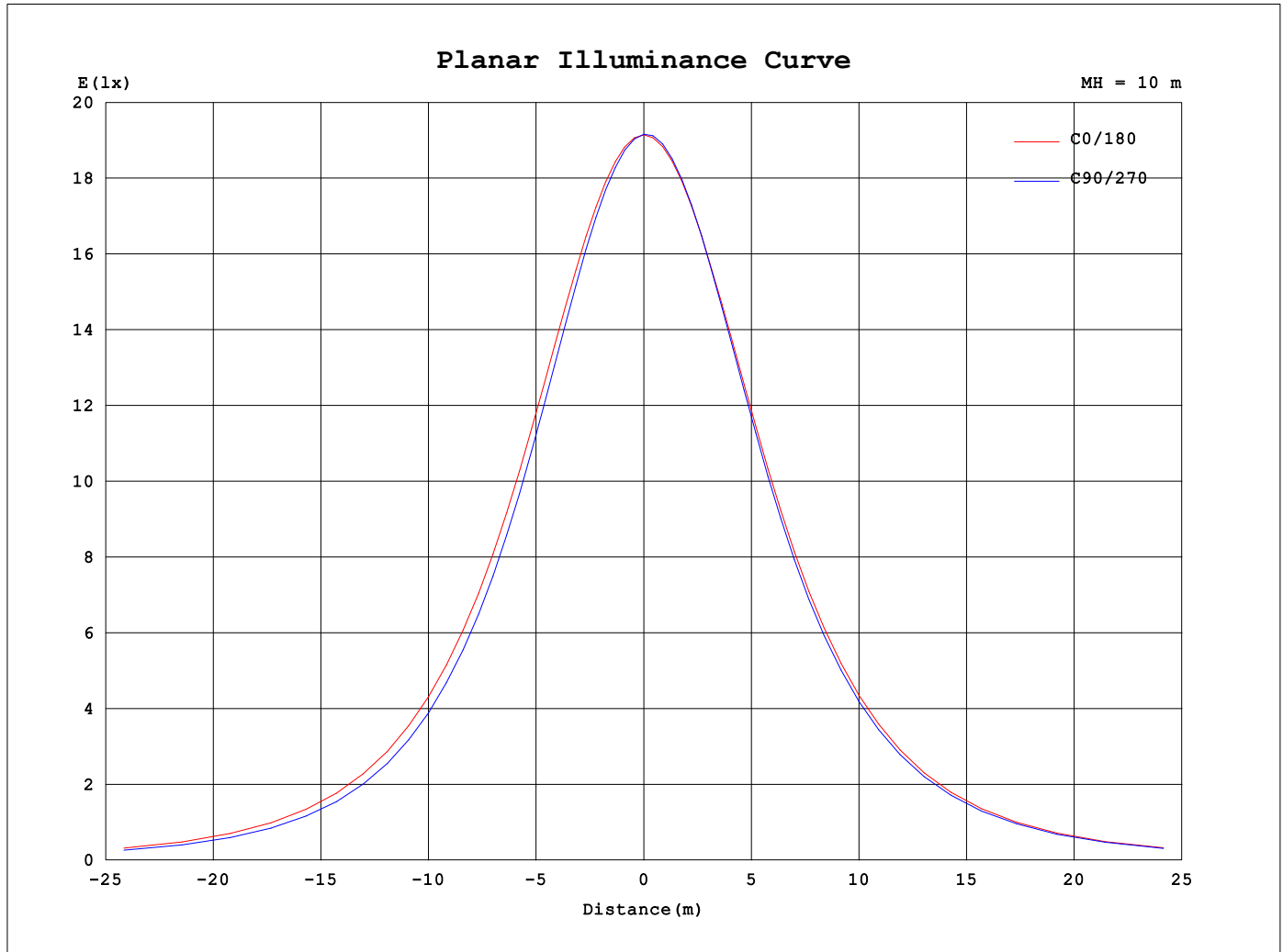
AvgL	cd/m2
L_0~180 (65) av	23092
L_0~180 (75) av	20899
L_0~180 (85) av	17582
L_90~270 (65) av	20718
L_90~270 (75) av	18166
L_90~270 (85) av	12605
L_45 (65) av	21761
L_45 (75) av	19353
L_45 (85) av	14492

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:02 December 2022

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 02 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```