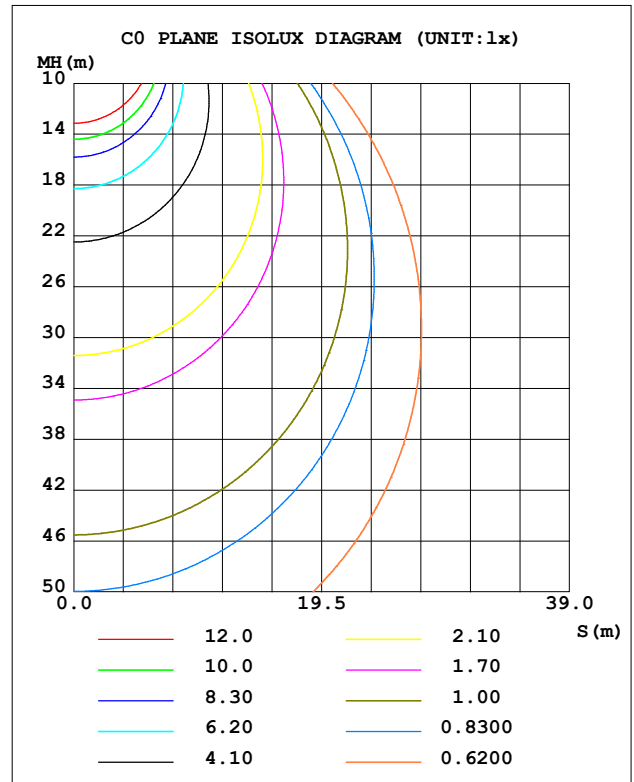
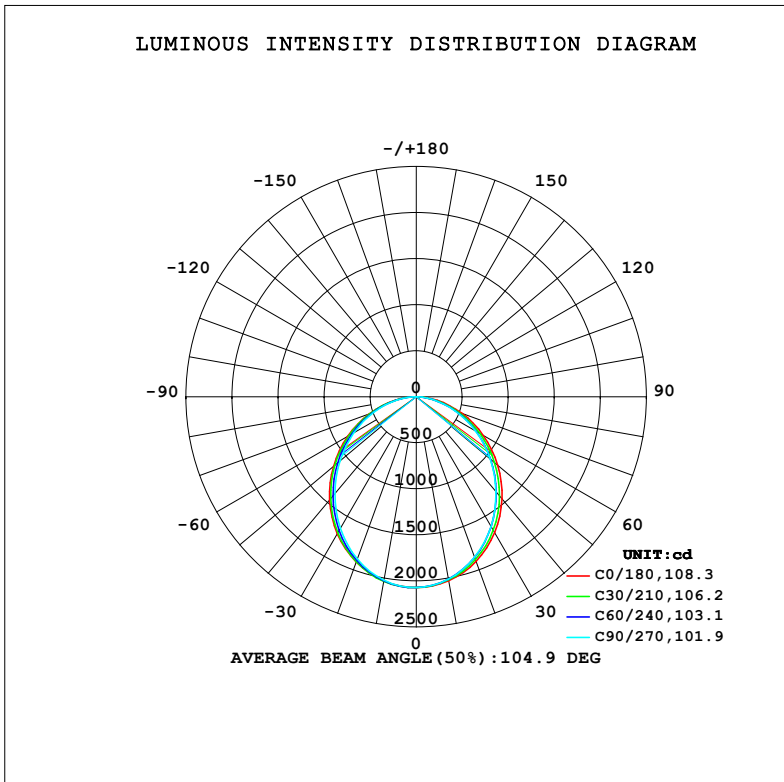


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFM1505040/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	99PFM1505040/WH	Imax (cd)	2073	S/MH (C0/180)	1.24
NOMINAL POWER (W)	50	LOR (%)	122.0	S/MH (C90/270)	1.19
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	5489.2	$\eta$ UP, DN (C0-180)	0.0, 60.3
NOMINAL FLUX (lm)	4500	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 61.6
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	$\eta$ down (%)	122.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
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	2028	2015	2013	2026	2032	2033	2024	2022	0- 10	195.5	195.5	3.56,4.34
20	1901	1867	1854	1888	1910	1900	1875	1881	10- 20	553.8	749.4	13.7,16.7
30	1704	1648	1625	1677	1719	1692	1649	1668	20- 30	822.7	1572	28.6,34.9
40	1449	1378	1347	1412	1466	1429	1376	1401	30- 40	966.0	2538	46.2,56.4
50	1155	1079	1048	1116	1174	1134	1081	1105	40- 50	973.1	3511	64,78
60	841.4	771.4	744.8	807.1	860.2	826.7	782.1	797.0	50- 60	856.4	4368	79.6,97.1
70	527.9	466.8	449.1	501.0	542.5	521.8	486.2	491.1	60- 70	643.4	5011	91.3,111
80	233.3	187.5	179.0	215.6	245.1	236.3	212.4	207.9	70- 80	372.8	5384	98.1,120
90	3.809	3.738	3.680	5.613	4.378	10.09	7.593	4.330	80- 90	105.4	5489	100,122
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): 3031.9 lm

%lum = 55.2%

%lamp = 67.4%

Conical surface Flux(130deg): 4720.7 lm

%lum = 86.0%

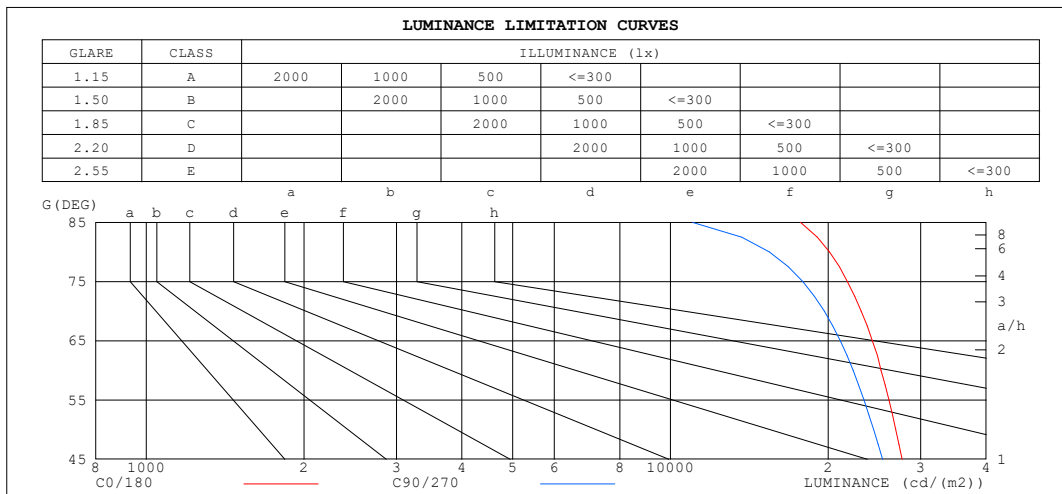
%lamp = 104.9%

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 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: 99PFM1505040/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	17718	11032
80	20112	15427
75	21745	17879
70	23108	19652
65	24282	21072
60	25195	22294
55	26111	23397
50	26907	24410
45	27648	25381

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
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: 99PFM1505040/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	.373	.212	.067	.365	.208	.066	.349	.200	.064	.334	.192	.062	.320	.185	.060	
2.0	.351	.192	.059	.343	.189	.058	.329	.183	.057	.316	.177	.056	.304	.172	.054	
3.0	.325	.173	.052	.318	.170	.051	.306	.166	.050	.294	.161	.049	.283	.157	.049	
4.0	.300	.156	.046	.294	.154	.046	.283	.150	.045	.273	.146	.044	.263	.143	.044	
5.0	.278	.141	.041	.272	.140	.041	.263	.137	.040	.253	.134	.040	.245	.131	.039	
6.0	.258	.129	.037	.253	.128	.037	.244	.125	.036	.236	.123	.036	.228	.120	.036	
7.0	.240	.119	.034	.236	.117	.033	.228	.115	.033	.221	.113	.033	.214	.111	.033	
8.0	.224	.110	.031	.221	.109	.031	.214	.107	.030	.207	.105	.030	.201	.103	.030	
9.0	.210	.102	.028	.207	.101	.028	.201	.099	.028	.195	.098	.028	.189	.096	.028	
10.0	.198	.095	.026	.195	.094	.026	.189	.093	.026	.184	.091	.026	.179	.090	.026	

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	.232	.232	.232	.199	.199	.199	.136	.136	.136	.078	.078	.078	.025	.025	.025	
1.0	.220	.190	.164	.188	.163	.141	.129	.112	.098	.074	.065	.057	.024	.021	.018	
2.0	.209	.161	.120	.179	.139	.104	.123	.096	.072	.071	.056	.042	.023	.018	.014	
3.0	.200	.139	.091	.171	.120	.079	.118	.084	.055	.068	.049	.033	.022	.016	.011	
4.0	.190	.123	.072	.163	.106	.062	.112	.074	.044	.065	.043	.026	.021	.014	.009	
5.0	.181	.110	.058	.156	.095	.050	.107	.067	.036	.062	.039	.021	.020	.013	.007	
6.0	.173	.100	.048	.148	.087	.042	.102	.061	.030	.059	.036	.018	.019	.012	.006	
7.0	.164	.092	.041	.141	.079	.036	.098	.056	.025	.057	.033	.015	.018	.011	.005	
8.0	.156	.085	.035	.135	.073	.031	.093	.052	.022	.054	.030	.013	.018	.010	.004	
9.0	.149	.079	.031	.128	.068	.027	.089	.048	.019	.052	.028	.011	.017	.009	.004	
10.0	.142	.073	.028	.122	.064	.024	.085	.045	.017	.050	.026	.010	.016	.009	.003	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
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: 99PFM1505040/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	18.8	20.3	19.1	20.5	20.7	18.3	19.8	18.5	20.0	20.2
	3H	20.3	21.7	20.6	22.0	22.2	19.6	21.0	19.9	21.3	21.5
	4H	21.0	22.3	21.3	22.5	22.8	20.2	21.5	20.5	21.7	22.0
	6H	21.4	22.7	21.8	23.0	23.2	20.5	21.8	20.9	22.0	22.3
	8H	21.6	22.8	21.9	23.1	23.4	20.6	21.8	21.0	22.1	22.4
	12H	21.7	22.8	22.0	23.1	23.4	20.6	21.8	21.0	22.1	22.4
4H	2H	19.3	20.6	19.6	20.9	21.2	18.9	20.2	19.2	20.5	20.7
	3H	21.0	22.2	21.4	22.5	22.8	20.4	21.6	20.8	21.9	22.2
	4H	21.8	22.8	22.1	23.2	23.5	21.1	22.1	21.4	22.4	22.8
	6H	22.4	23.3	22.8	23.7	24.0	21.5	22.5	21.9	22.8	23.2
	8H	22.6	23.5	23.0	23.8	24.2	21.7	22.5	22.1	22.9	23.3
	12H	22.7	23.5	23.2	23.9	24.3	21.7	22.5	22.1	22.9	23.3
8H	4H	22.0	22.8	22.4	23.2	23.6	21.3	22.2	21.8	22.6	23.0
	6H	22.7	23.4	23.1	23.8	24.3	21.9	22.7	22.4	23.1	23.5
	8H	23.0	23.6	23.5	24.1	24.5	22.1	22.8	22.6	23.2	23.6
	12H	23.2	23.8	23.7	24.2	24.7	22.2	22.8	22.7	23.2	23.7
12H	4H	22.0	22.8	22.4	23.2	23.6	21.4	22.2	21.8	22.5	22.9
	6H	22.7	23.4	23.2	23.8	24.2	22.0	22.6	22.4	23.1	23.5
	8H	23.0	23.6	23.5	24.1	24.5	22.2	22.8	22.7	23.2	23.7
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.1 / - 0.3					+ 0.1 / - 0.3				
2.0H		+ 0.2 / - 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: MEDIUM  
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: 99PFM1505040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

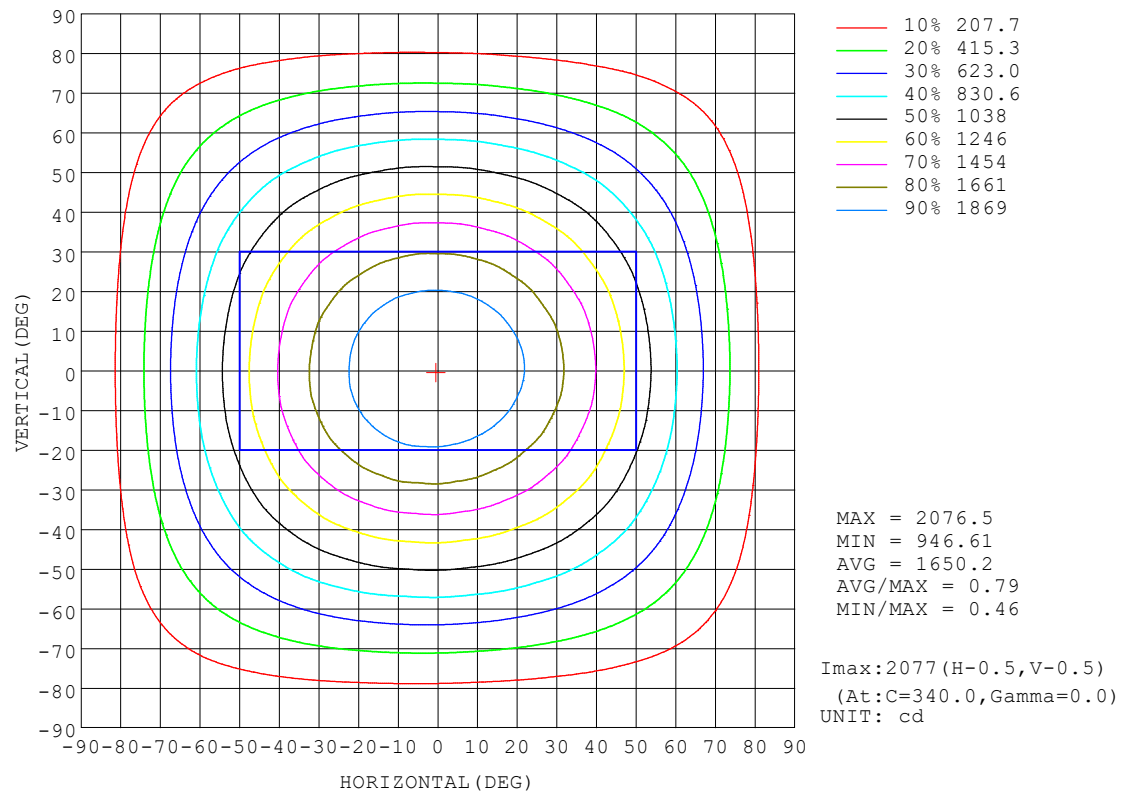
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	71	57	49	70	57	49	69	56	49	41
0.80	84	70	61	82	69	61	80	68	60	52
1.00	94	80	72	92	80	71	89	81	71	62
1.25	102	90	81	100	89	81	97	87	80	71
1.50	108	96	88	106	95	87	103	93	86	77
2.00	116	106	98	114	105	97	110	102	96	86
2.50	121	112	104	119	110	103	114	107	101	91
3.00	125	117	110	122	115	109	118	111	106	96
4.00	130	123	117	127	121	116	122	117	112	102
5.00	133	127	122	130	125	120	124	120	116	105
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: MEDIUM  
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: 99PFM1505040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



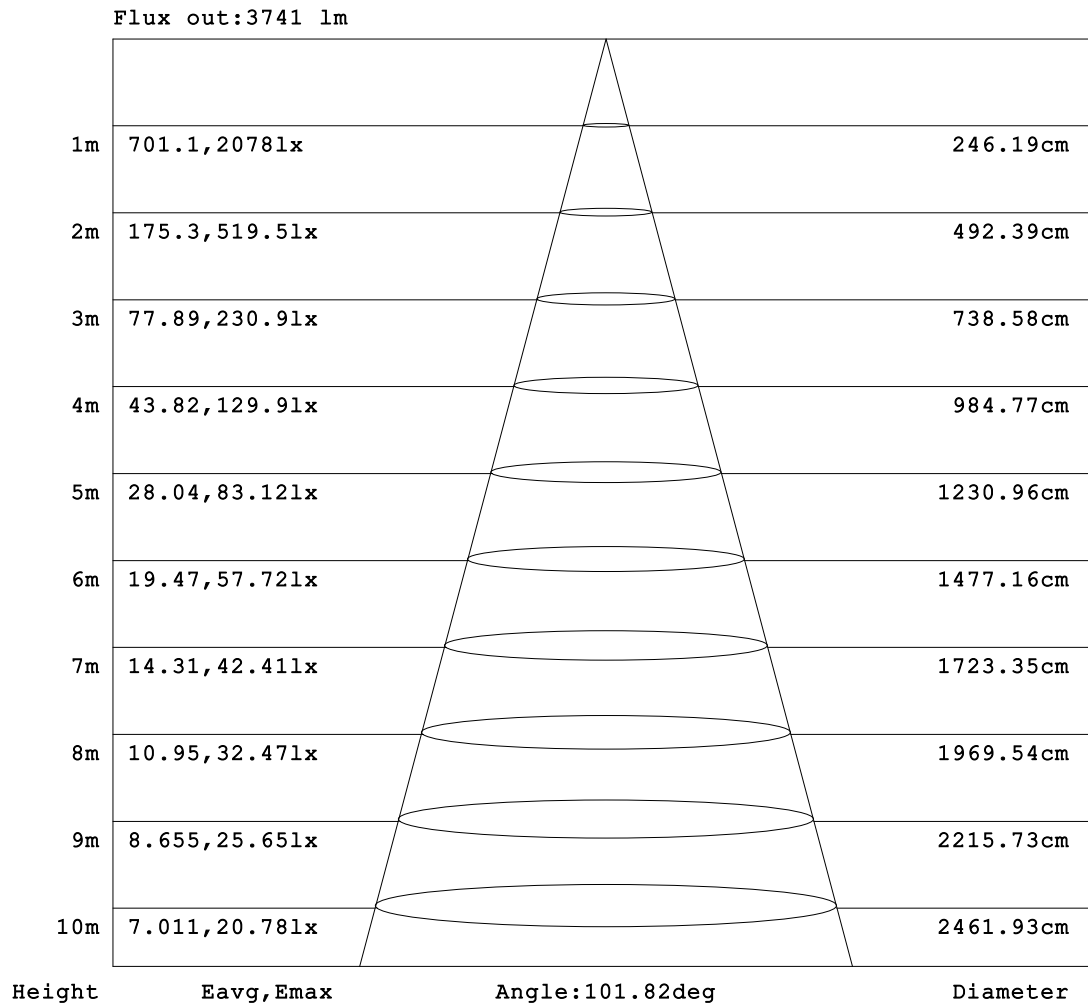
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 02 December 2022

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: 99PFM1505040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



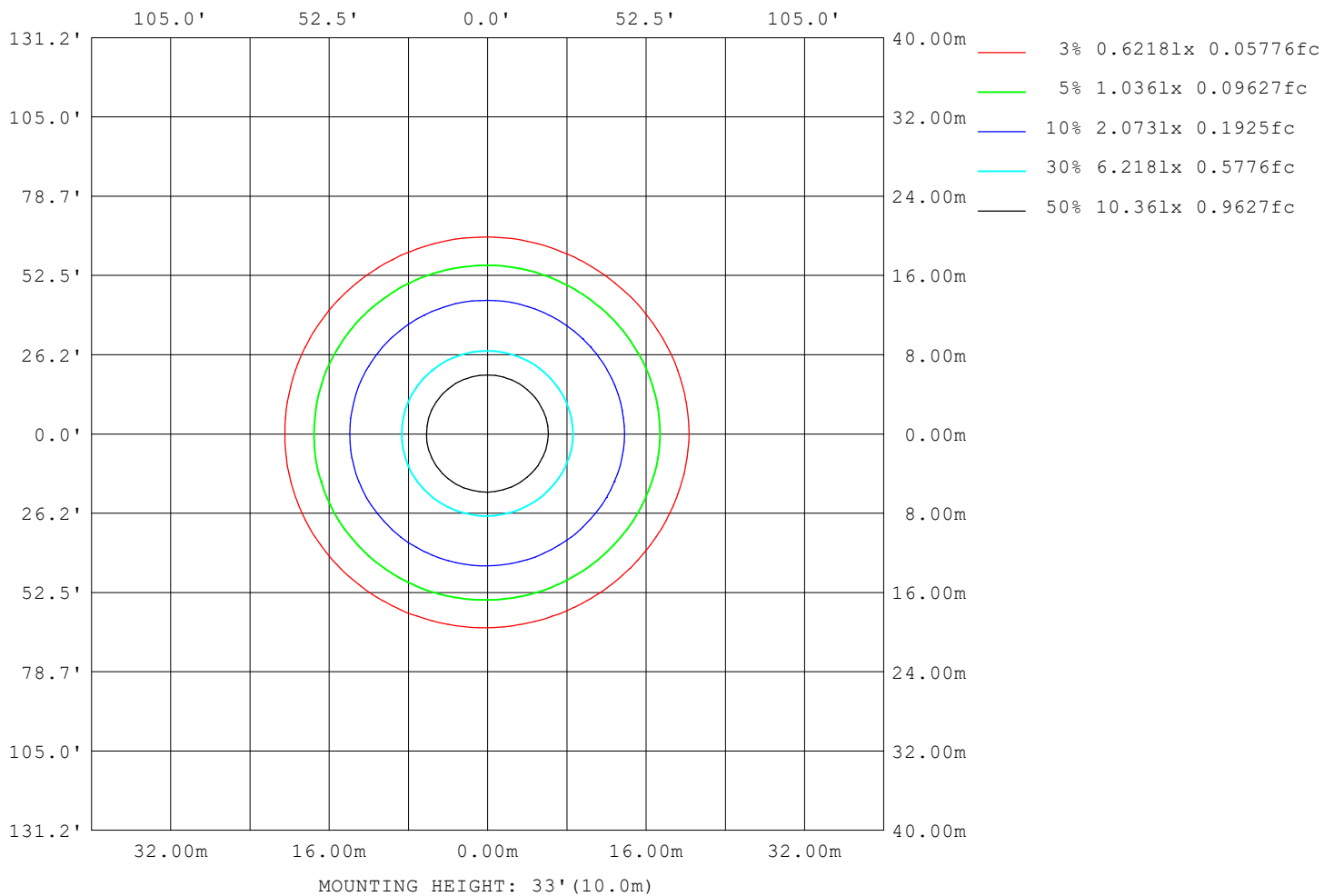
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 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: 99PFM1505040/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: MEDIUM  
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: 99PFM1505040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 1500 x 50 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

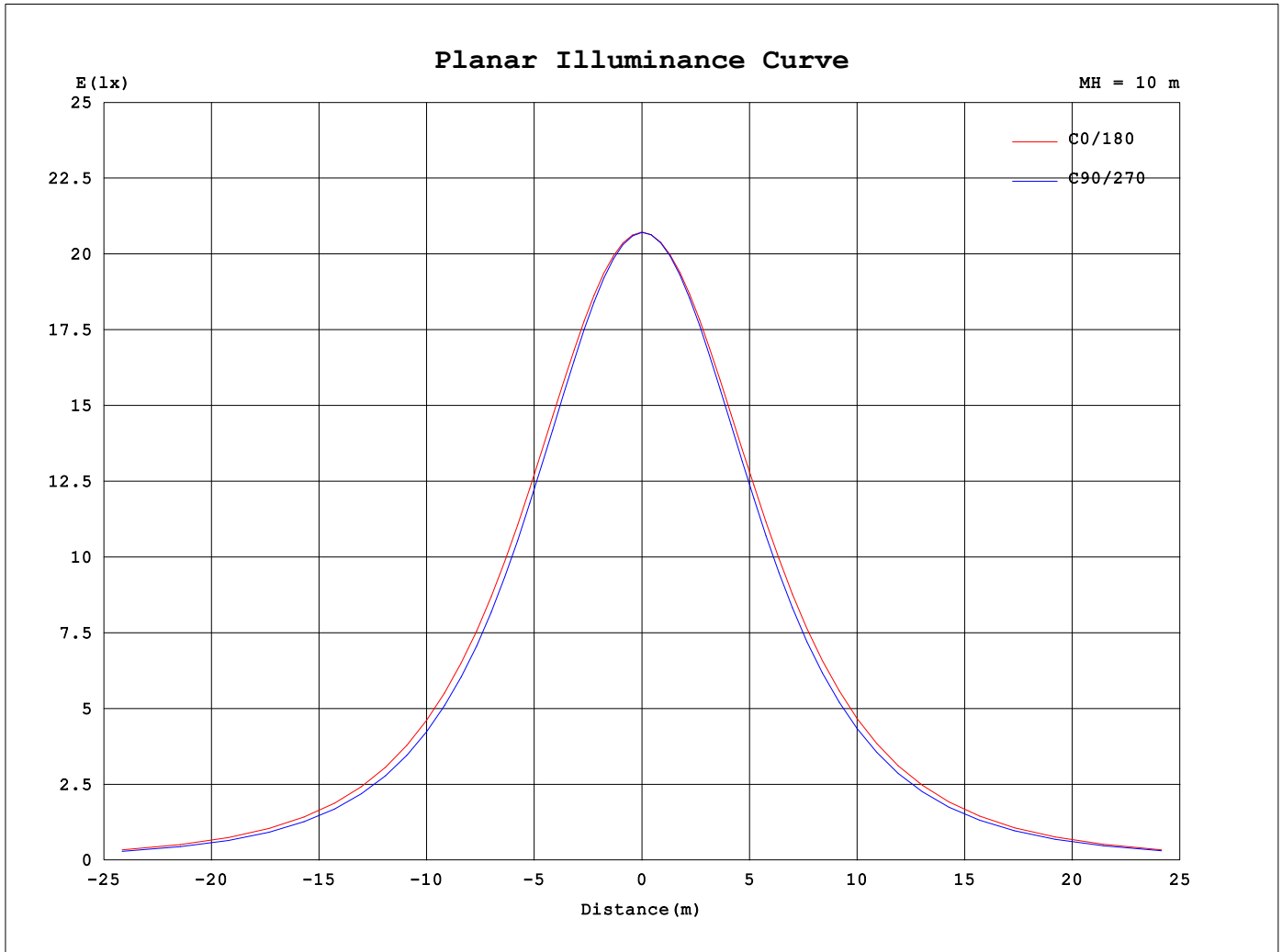
AvgL	cd/m2
L_0~180 (65) av	24553
L_0~180 (75) av	22144
L_0~180 (85) av	18635
L_90~270 (65) av	21748
L_90~270 (75) av	18932
L_90~270 (85) av	13306
L_45 (65) av	22911
L_45 (75) av	20197
L_45 (85) av	15127

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
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: MEDIUM  
 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:

```