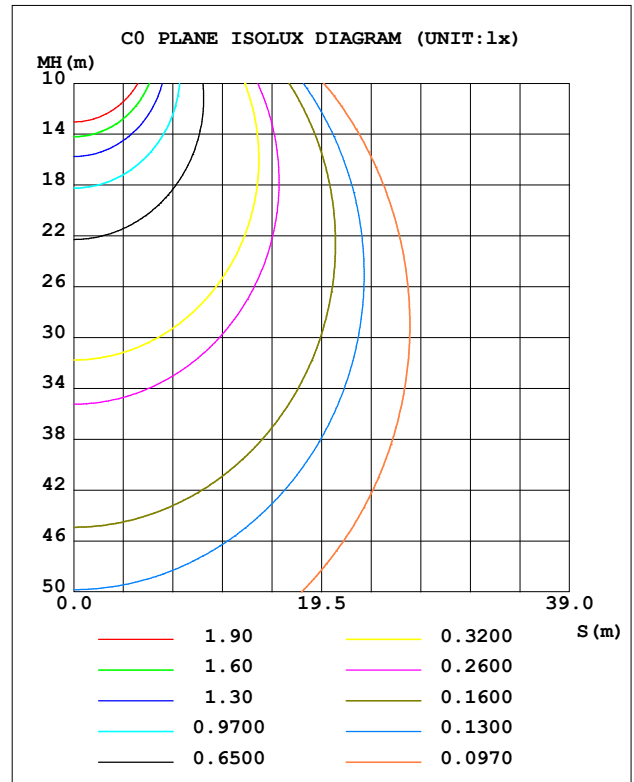
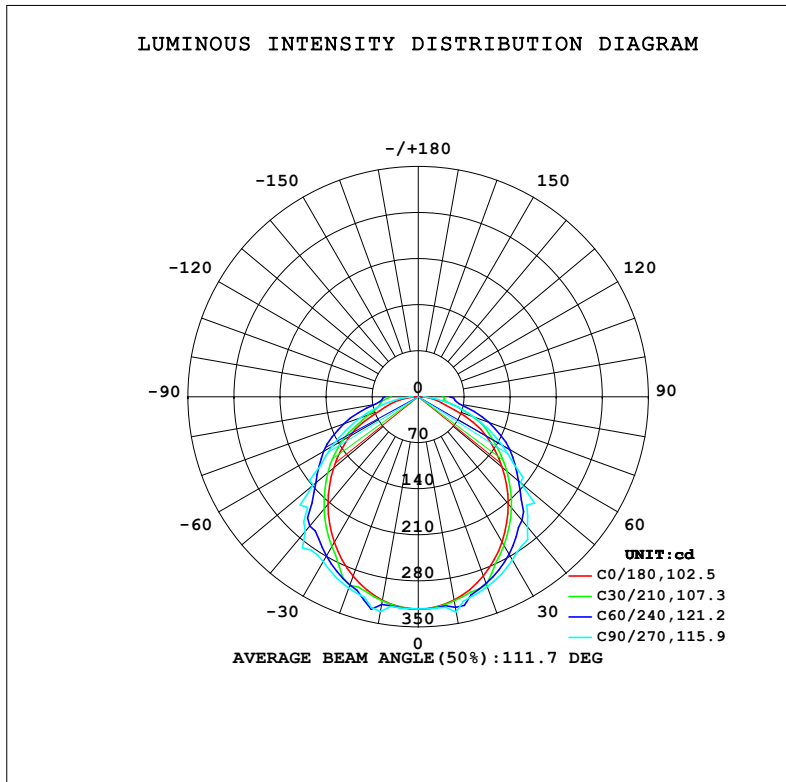


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99PFMI30/WH	I _{max} (cd)	332.2	S/MH (C0/180)	1.19
NOMINAL POWER (W)	10	LOR (%)	95.7	S/MH (C90/270)	1.35
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	956.71	η UP, DN (C0-180)	0.0, 47.4
NOMINAL FLUX (lm)	1000	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 48.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	95.7	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 17 November 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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	313.8	317.7	332.2	317.9	314.0	317.0	331.7	317.4	0- 10	30.62	30.62	3.2,3.06
20	289.8	297.9	307.3	298.2	290.2	302.1	309.4	301.1	10- 20	88.05	118.7	12.4,11.9
30	254.7	268.0	286.5	269.0	255.5	270.7	289.4	271.4	20- 30	132.1	250.8	26.2,25.1
40	212.8	230.1	258.4	231.4	213.7	234.3	267.7	235.5	30- 40	159.5	410.2	42.9,41
50	166.8	188.7	203.6	189.8	167.9	193.1	208.7	193.0	40- 50	165.0	575.2	60.1,57.5
60	119.2	149.5	146.8	151.4	120.4	152.8	151.2	154.4	50- 60	148.7	723.9	75.7,72.4
70	58.93	102.8	90.24	105.7	62.75	106.0	94.38	107.9	60- 70	118.2	842.1	88,84.2
80	24.58	53.69	39.38	56.04	27.52	51.87	42.91	52.85	70- 80	73.75	915.9	95.7,91.6
90	1.363	29.21	7.760	28.16	1.331	33.24	8.248	32.19	80- 90	40.84	956.7	100,95.7
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): 493.64 lm

%lum = 51.6%

%lamp = 49.4%

Conical surface Flux(130deg): 788.18 lm

%lum = 82.4%

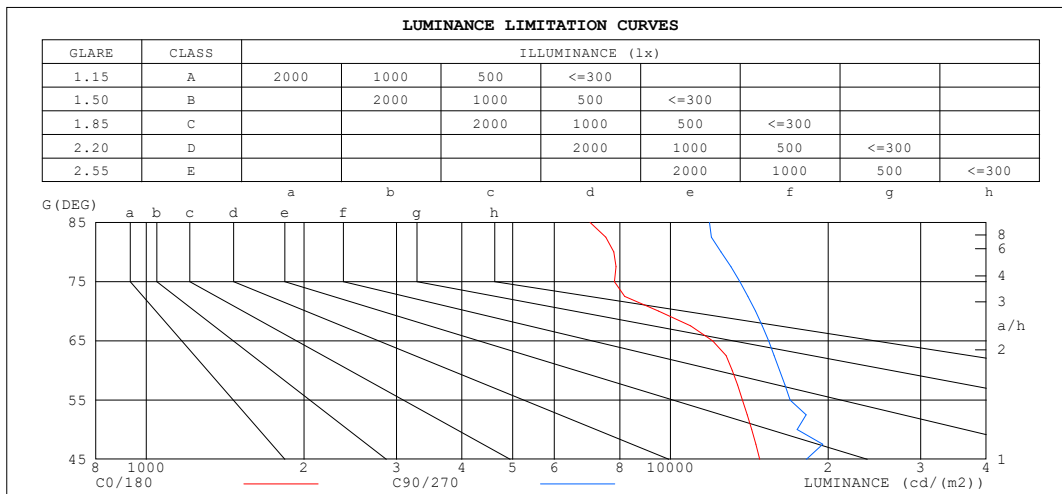
%lamp = 78.8%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:17 November 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:

LUMINANCE LIMITATION CURVES

NAME: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7027	11870
80	7791	12481
75	7820	13567
70	9484	14521
65	12029	15381
60	13120	16154
55	13719	16916
50	14281	17435
45	14798	18155

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 17 November 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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	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	.323	.184	.058	.316	.180	.057	.304	.174	.056	.292	.168	.054	.281	.163	.052	
2.0	.294	.161	.049	.288	.158	.049	.276	.154	.048	.266	.149	.047	.256	.145	.046	
3.0	.268	.142	.043	.262	.141	.042	.252	.137	.042	.243	.133	.041	.235	.130	.040	
4.0	.245	.127	.037	.240	.126	.037	.231	.123	.037	.223	.120	.036	.215	.117	.036	
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.206	.109	.032	.199	.106	.032	
6.0	.208	.104	.030	.204	.103	.030	.197	.101	.029	.191	.099	.029	.185	.097	.029	
7.0	.193	.095	.027	.190	.095	.027	.183	.093	.027	.178	.091	.026	.172	.089	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.168	.081	.023	.166	.081	.023	.161	.079	.023	.156	.078	.022	.151	.077	.022	
10.0	.158	.076	.021	.156	.075	.021	.151	.074	.021	.147	.073	.021	.143	.072	.021	

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	.182	.182	.182	.156	.156	.156	.106	.106	.106	.061	.061	.061	.020	.020	.020	
1.0	.174	.149	.126	.149	.128	.109	.102	.088	.075	.059	.051	.044	.019	.016	.014	
2.0	.167	.126	.092	.143	.109	.080	.098	.075	.055	.056	.044	.033	.018	.014	.011	
3.0	.159	.109	.070	.136	.094	.060	.094	.066	.042	.054	.038	.025	.017	.012	.008	
4.0	.152	.097	.055	.130	.084	.048	.089	.058	.034	.052	.034	.020	.017	.011	.007	
5.0	.144	.087	.044	.124	.075	.039	.085	.052	.027	.049	.031	.016	.016	.010	.005	
6.0	.137	.079	.037	.118	.068	.032	.081	.048	.023	.047	.028	.014	.015	.009	.004	
7.0	.131	.072	.031	.112	.063	.027	.078	.044	.019	.045	.026	.012	.015	.008	.004	
8.0	.124	.067	.027	.107	.058	.024	.074	.041	.017	.043	.024	.010	.014	.008	.003	
9.0	.118	.062	.024	.102	.054	.021	.071	.038	.015	.041	.022	.009	.013	.007	.003	
10.0	.113	.058	.021	.097	.050	.019	.067	.035	.013	.039	.021	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:17 November 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: 99PFMI30/WH						TYPE:			WEIGHT: 1		
SPEC.:						DIM.: 35 x 75 x 204			SERIAL No.: 0		
MFR.: Elmark Industries JSC						SUR.: L			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	21.6	23.2	21.9	23.4	23.6	22.8	24.4	23.1	24.6	24.8	
	22.7	24.1	23.0	24.4	24.6	24.4	25.9	24.7	26.1	26.4	
	23.0	24.4	23.3	24.6	24.9	25.1	26.5	25.4	26.7	27.0	
	23.3	24.6	23.6	24.8	25.1	25.6	26.9	25.9	27.1	27.4	
	23.4	24.6	23.7	24.9	25.2	25.7	27.0	26.1	27.3	27.6	
	23.5	24.7	23.8	25.0	25.3	25.8	27.0	26.2	27.3	27.6	
4H	2H	22.6	24.0	22.9	24.2	24.5	23.5	24.9	23.8	25.1	25.4
	3H	23.9	25.1	24.3	25.4	25.7	25.4	26.7	25.8	27.0	27.3
	4H	24.4	25.5	24.7	25.8	26.1	26.3	27.4	26.7	27.7	28.1
	6H	24.8	25.8	25.2	26.1	26.5	27.0	28.0	27.4	28.4	28.7
	8H	25.0	25.9	25.4	26.3	26.7	27.3	28.2	27.7	28.6	28.9
	12H	25.2	26.0	25.6	26.4	26.8	27.4	28.3	27.9	28.7	29.1
8H	4H	25.0	25.9	25.4	26.3	26.7	26.7	27.6	27.1	27.9	28.3
	6H	25.7	26.5	26.2	26.9	27.3	27.7	28.4	28.1	28.8	29.3
	8H	26.1	26.8	26.6	27.2	27.7	28.1	28.8	28.6	29.3	29.7
	12H	26.5	27.1	27.0	27.6	28.1	28.6	29.2	29.1	29.6	30.1
12H	4H	25.1	26.0	25.6	26.4	26.8	26.7	27.5	27.1	27.9	28.3
	6H	26.0	26.7	26.4	27.1	27.5	27.8	28.5	28.2	28.9	29.3
	8H	26.5	27.1	27.0	27.6	28.1	28.4	29.0	28.8	29.4	29.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1					
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 1000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.0)
Area: 0.01817 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:17 November 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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:

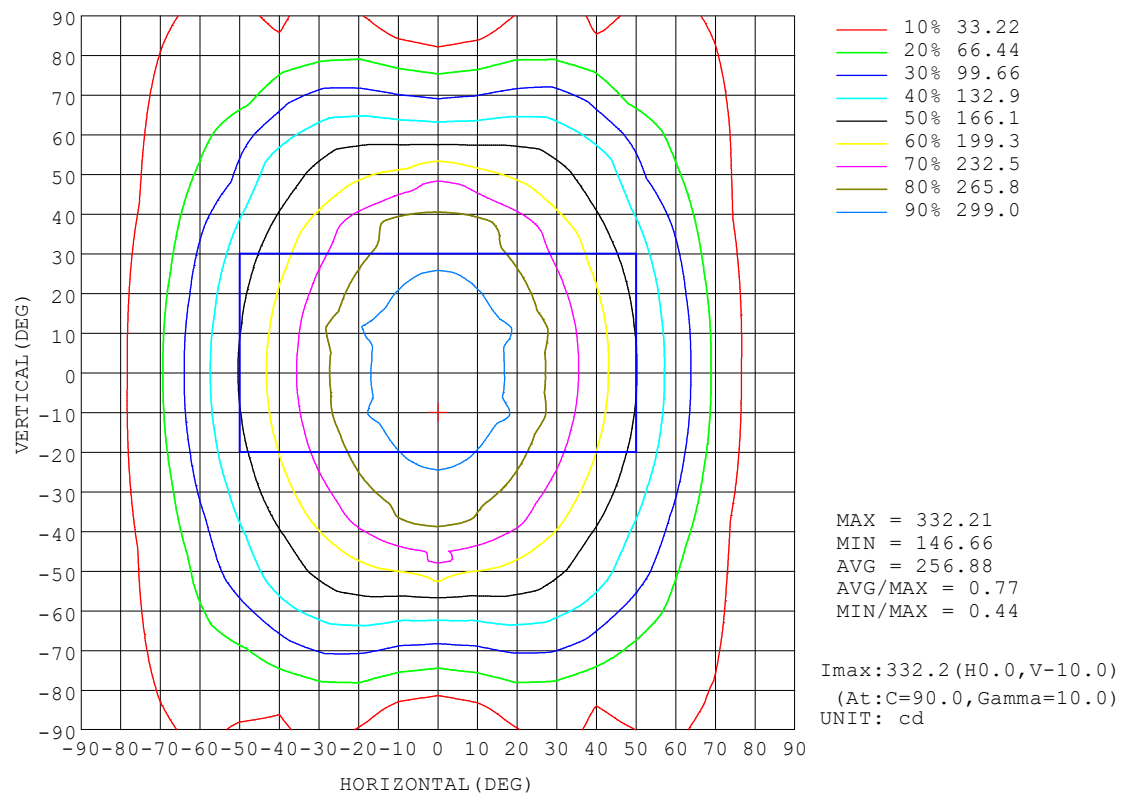
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	43	36	53	43	36	52	42	36	30
0.80	64	52	45	63	52	45	61	51	45	38
1.00	71	61	53	70	60	53	68	61	53	46
1.25	78	68	61	77	67	60	74	66	60	52
1.50	83	73	66	81	72	66	78	71	65	57
2.00	90	81	74	88	80	74	84	78	72	64
2.50	93	85	79	91	84	78	88	82	77	68
3.00	97	90	84	94	88	83	90	85	81	72
4.00	101	95	90	98	93	88	94	90	86	77
5.00	103	98	94	101	96	92	96	92	89	80
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: 17 November 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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:

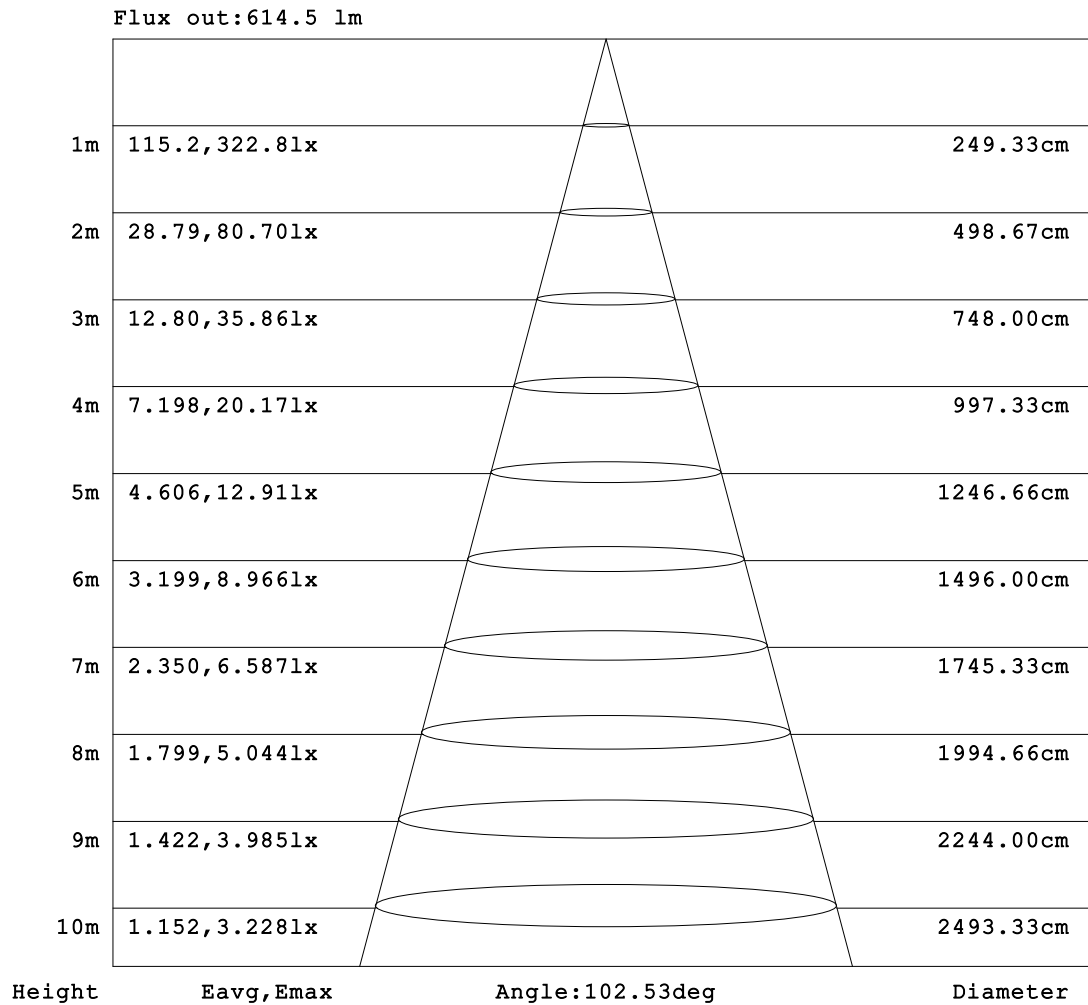


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:17 November 2022

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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:



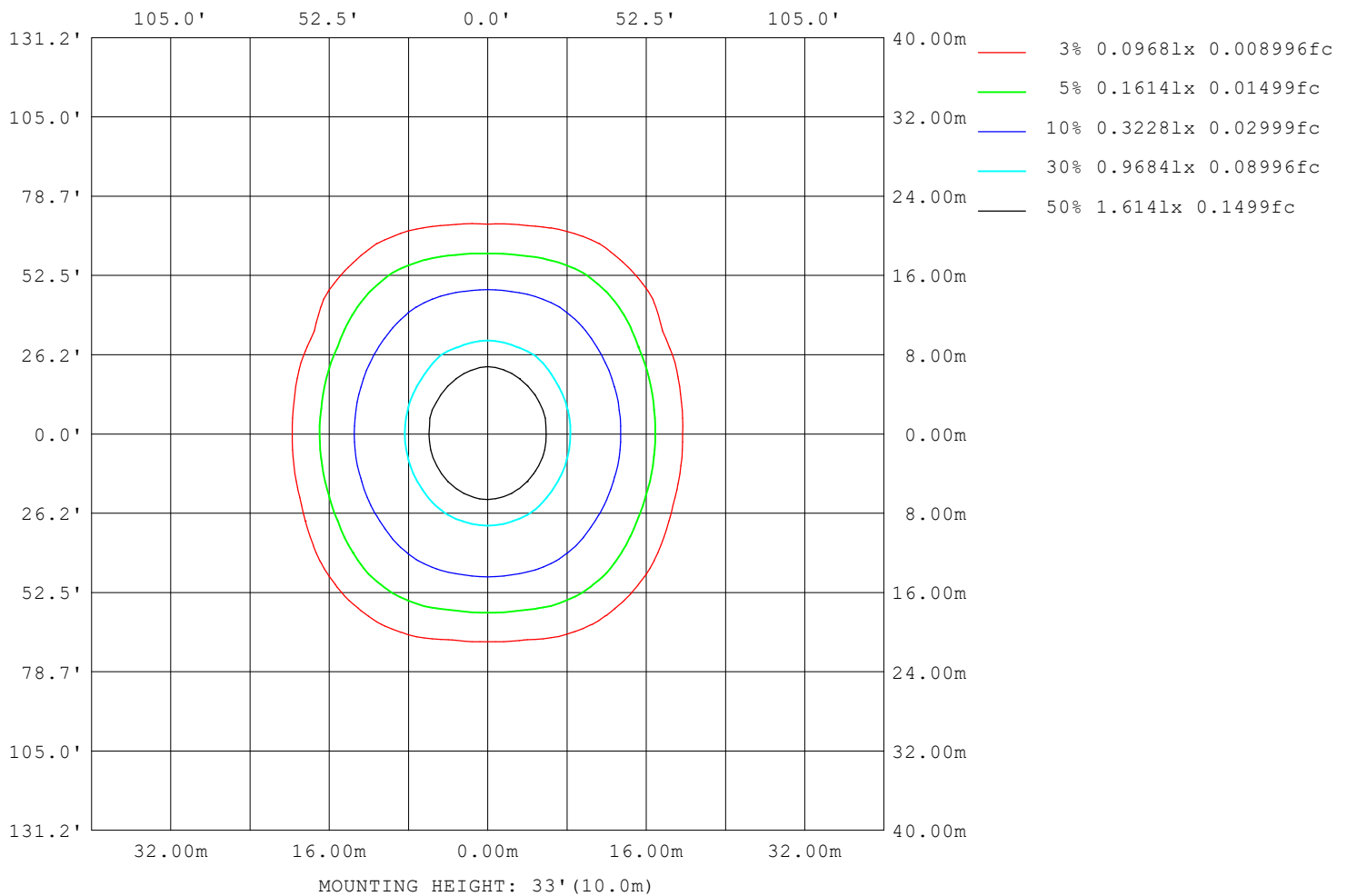
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 17 November 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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 17 November 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: 99PFMI30/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 35 x 75 x 204	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: L	Shielding Angle:

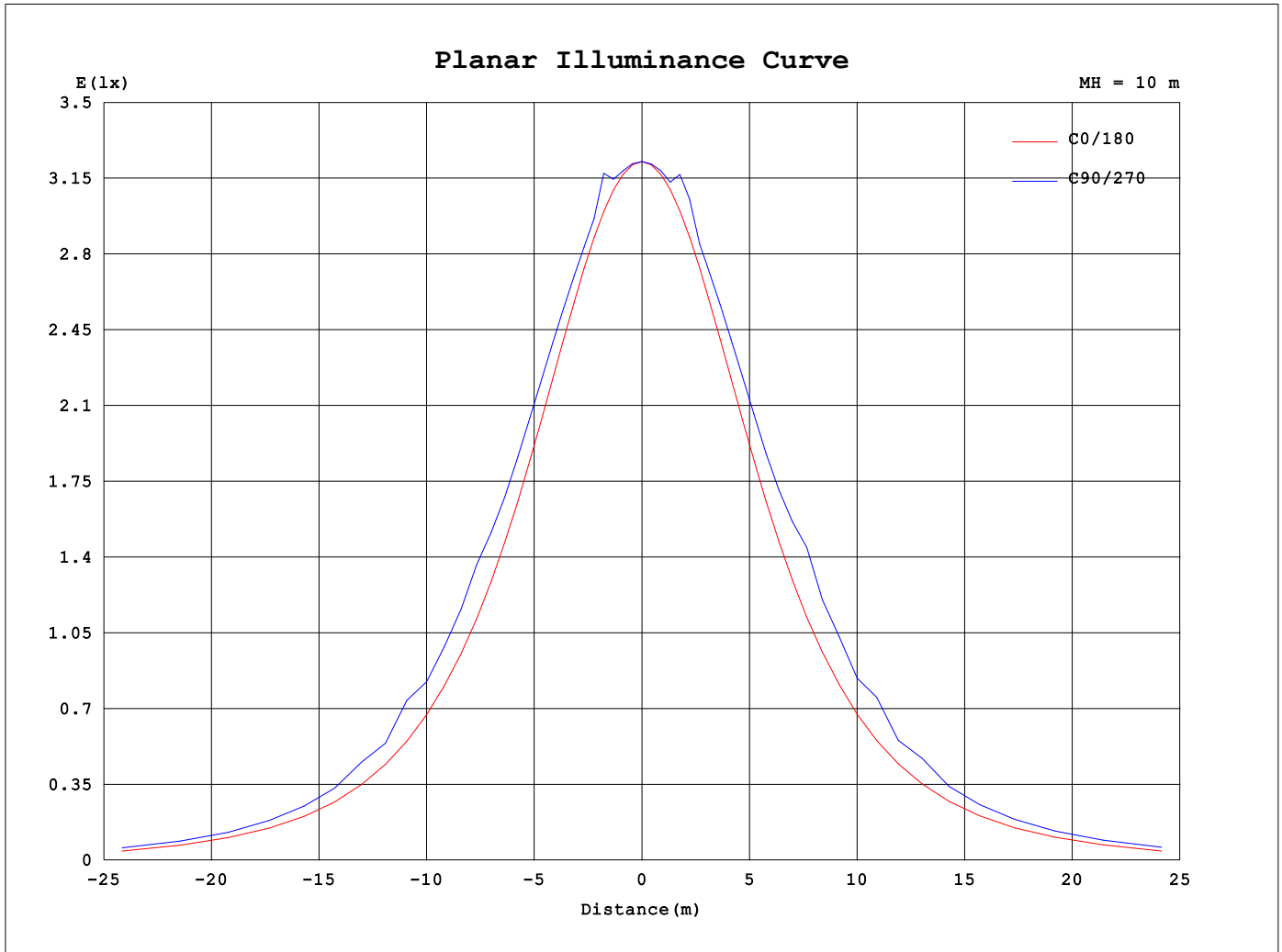
AvgL	cd/m2
L_0~180 (65) av	12109
L_0~180 (75) av	8632
L_0~180 (85) av	7232
L_90~270 (65) av	15653
L_90~270 (75) av	13995
L_90~270 (85) av	12793
L_45 (65) av	17425
L_45 (75) av	16771
L_45 (85) av	24394

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:17 November 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: 17 November 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:

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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:

```