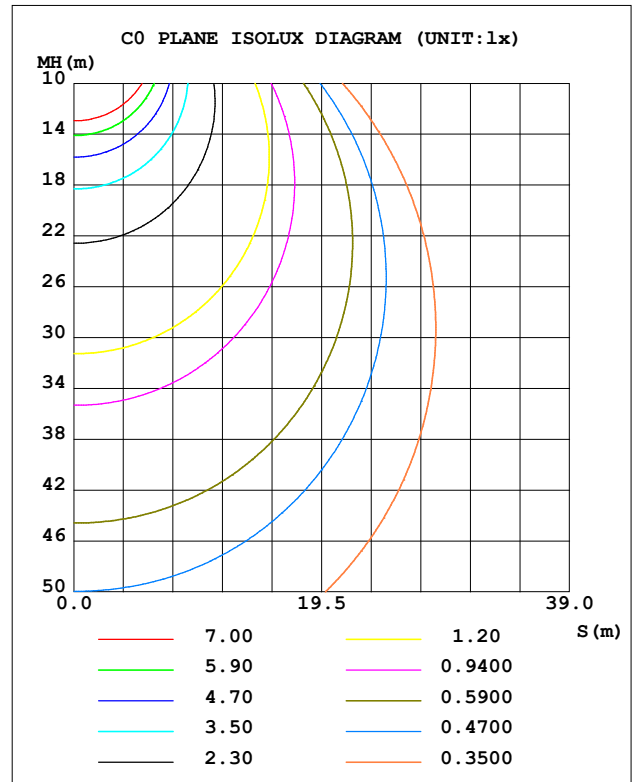
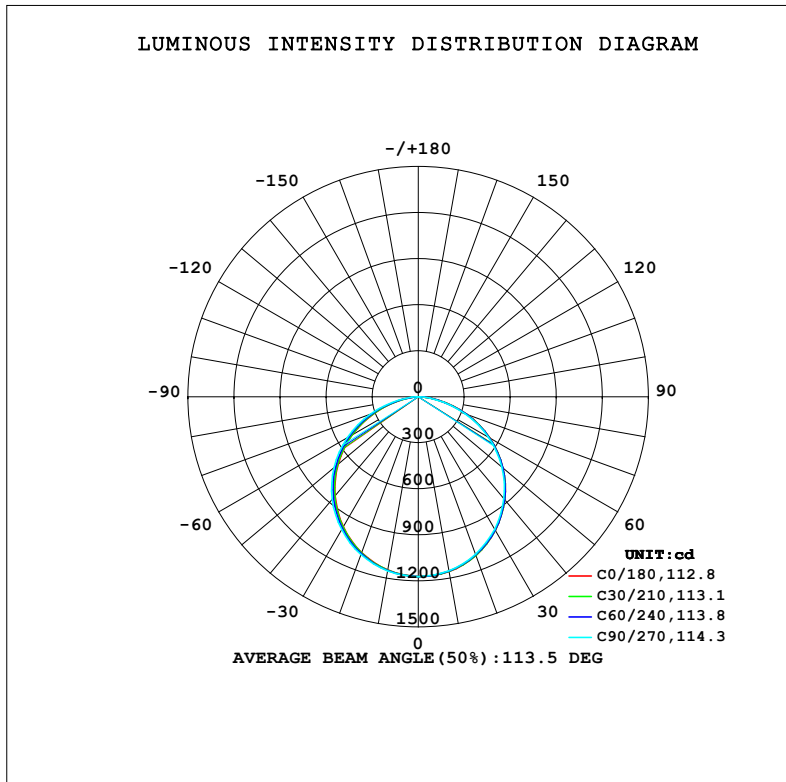


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93FGNL6030/BL	Imax (cd)	1171	S/MH (C0/180)	1.24
NOMINAL POWER (W)	60	LOR (%)	134.3	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	3356.7	$\eta$ UP, DN (C0-180)	0.0, 67.0
NOMINAL FLUX (lm)	2500	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 67.2
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	$\eta$ down (%)	134.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 30 August 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	1156	1154	1151	1147	1146	1148	1152	1155	0- 10	110.9	110.9	3.3,4.43
20	1100	1099	1092	1083	1080	1085	1094	1100	10- 20	317.9	428.8	12.8,17.2
30	1004	1004	996.1	982.8	977.4	985.6	999.5	1006	20- 30	482.8	911.6	27.2,36.5
40	876.3	876.2	868.2	850.1	843.0	853.6	872.3	878.8	30- 40	584.0	1496	44.6,59.8
50	719.8	719.5	711.3	689.1	681.0	693.5	716.3	722.7	40- 50	608.5	2104	62.7,84.2
60	538.9	537.5	528.4	503.6	495.7	508.9	534.6	542.0	50- 60	552.0	2656	79.1,106
70	339.2	335.7	325.4	300.2	293.0	305.4	332.5	341.6	60- 70	419.3	3075	91.6,123
80	137.0	132.4	121.2	100.6	95.67	102.3	127.4	138.0	70- 80	230.5	3306	98.5,132
90	2.876	2.302	1.994	1.958	1.658	1.700	1.757	2.912	80- 90	50.78	3357	100,134
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): 1801.8 lm

%lum = 53.7%

%lamp = 72.1%

Conical surface Flux(130deg): 2886.6 lm

%lum = 86.0%

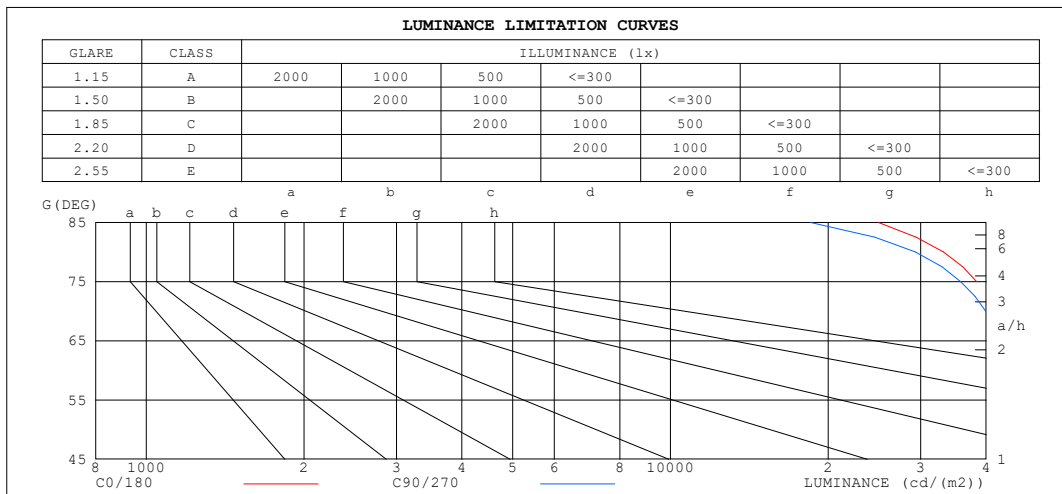
%lamp = 115.5%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:30 August 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: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	24926	18510
80	33171	29292
75	38385	35792
70	41683	39919
65	43848	42562
60	45302	44340
55	46330	45565
50	47068	46435
45	47641	47073

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 30 August 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: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	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	.411	.234	.074	.401	.229	.073	.384	.220	.070	.367	.212	.068	.352	.204	.066		
2.0	.389	.213	.065	.381	.210	.065	.365	.203	.063	.351	.197	.062	.337	.191	.060		
3.0	.361	.192	.058	.354	.190	.057	.340	.184	.056	.327	.179	.055	.315	.175	.054		
4.0	.334	.174	.051	.327	.171	.051	.315	.167	.050	.304	.163	.049	.293	.159	.049		
5.0	.309	.157	.046	.303	.156	.045	.292	.152	.045	.282	.149	.044	.273	.146	.044		
6.0	.287	.144	.041	.282	.142	.041	.272	.139	.041	.263	.137	.040	.254	.134	.040		
7.0	.267	.132	.037	.262	.131	.037	.254	.128	.037	.246	.126	.037	.238	.124	.036		
8.0	.249	.122	.034	.245	.121	.034	.238	.119	.034	.230	.117	.034	.223	.115	.033		
9.0	.234	.113	.032	.230	.112	.031	.223	.110	.031	.217	.109	.031	.210	.107	.031		
10.0	.220	.105	.029	.216	.105	.029	.210	.103	.029	.204	.101	.029	.199	.100	.029		

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	.256	.256	.256	.219	.219	.219	.149	.149	.149	.086	.086	.086	.027	.027	.027	
1.0	.242	.210	.181	.207	.180	.156	.141	.124	.108	.081	.072	.063	.026	.023	.020	
2.0	.231	.177	.132	.198	.152	.114	.136	.105	.080	.078	.061	.047	.025	.020	.015	
3.0	.221	.153	.100	.189	.132	.087	.130	.092	.061	.075	.054	.036	.024	.017	.012	
4.0	.210	.136	.078	.181	.117	.068	.124	.082	.048	.072	.048	.028	.023	.016	.009	
5.0	.201	.122	.063	.172	.105	.055	.119	.074	.039	.069	.043	.023	.022	.014	.008	
6.0	.191	.110	.053	.164	.096	.046	.113	.067	.032	.066	.039	.019	.021	.013	.006	
7.0	.182	.101	.045	.156	.088	.039	.108	.061	.028	.063	.036	.016	.020	.012	.005	
8.0	.173	.093	.039	.149	.081	.034	.103	.057	.024	.060	.034	.014	.019	.011	.005	
9.0	.165	.087	.034	.142	.075	.030	.098	.053	.021	.057	.031	.012	.019	.010	.004	
10.0	.157	.081	.030	.136	.070	.026	.094	.049	.019	.055	.029	.011	.018	.010	.004	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:30 August 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: 93FGNL6030/BL					TYPE: 93FGNL6030/BL			WEIGHT: 1		
SPEC.:					DIM.: 872 x 34 x 34			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: rectangle			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	23.2	24.7	23.4	24.9	25.1	23.1	24.6	23.4	24.8	25.0
3H	24.7	26.1	25.0	26.4	26.6	24.6	26.0	24.9	26.3	26.5
4H	25.3	26.7	25.6	26.9	27.2	25.2	26.5	25.5	26.8	27.0
6H	25.7	27.0	26.1	27.3	27.5	25.5	26.8	25.9	27.1	27.3
8H	25.8	27.1	26.2	27.3	27.6	25.6	26.8	25.9	27.1	27.4
12H	25.9	27.0	26.2	27.3	27.6	25.6	26.8	25.9	27.1	27.4
4H 2H	23.8	25.1	24.1	25.4	25.6	23.7	25.1	24.1	25.3	25.6
3H	25.5	26.7	25.9	27.0	27.3	25.4	26.6	25.8	26.9	27.2
4H	26.2	27.3	26.6	27.6	28.0	26.1	27.2	26.5	27.5	27.8
6H	26.8	27.7	27.2	28.1	28.4	26.6	27.5	27.0	27.9	28.2
8H	26.9	27.8	27.3	28.2	28.6	26.7	27.6	27.1	27.9	28.3
12H	27.0	27.8	27.4	28.2	28.6	26.7	27.5	27.1	27.9	28.3
8H 4H	26.5	27.4	26.9	27.7	28.1	26.4	27.3	26.8	27.6	28.0
6H	27.1	27.9	27.6	28.3	28.7	27.0	27.7	27.4	28.1	28.5
8H	27.4	28.0	27.8	28.4	28.9	27.1	27.8	27.6	28.2	28.6
12H	27.5	28.1	28.0	28.5	29.0	27.2	27.8	27.7	28.2	28.7
12H 4H	26.5	27.3	26.9	27.7	28.1	26.4	27.2	26.8	27.6	28.0
6H	27.2	27.8	27.6	28.3	28.7	27.0	27.6	27.5	28.1	28.5
8H	27.4	28.0	27.9	28.4	28.9	27.2	27.8	27.7	28.2	28.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 2500 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.2)  
Area: 0.02382 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:30 August 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: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

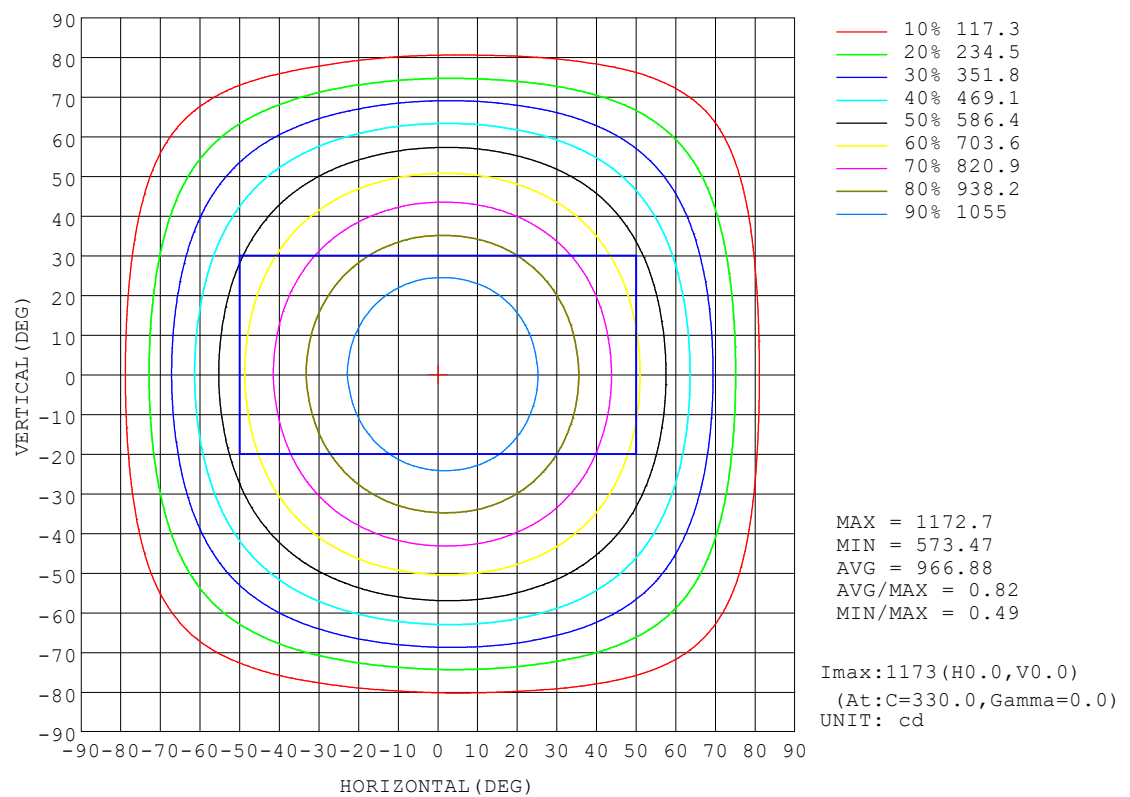
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	77	62	52	76	61	52	75	61	52	43
0.80	91	75	65	89	74	65	87	73	64	55
1.00	102	87	77	100	86	77	97	88	76	67
1.25	112	98	88	110	97	87	106	95	86	77
1.50	118	105	96	116	104	95	112	102	94	84
2.00	128	116	108	125	115	107	121	112	105	94
2.50	133	123	114	130	121	113	125	117	111	100
3.00	137	128	121	135	126	120	129	122	117	105
4.00	143	135	129	140	133	127	134	128	124	112
5.00	146	140	134	143	137	132	137	132	128	116
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: 30 August 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:

# ISOCANDELA DIAGRAM

NAME: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



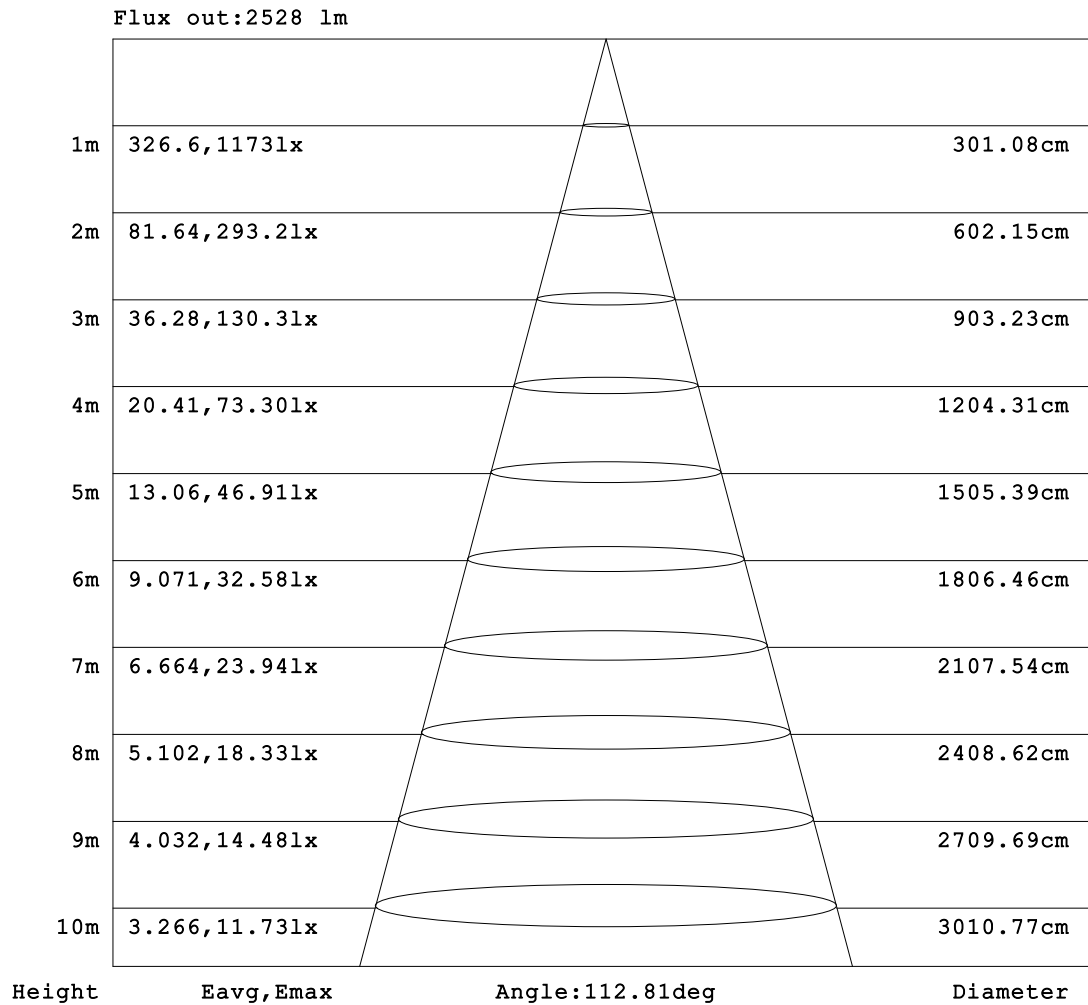
C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3°C  
 Operators:  
 Test Date:30 August 2022

$\gamma$  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:



**AAI Figure**

NAME: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



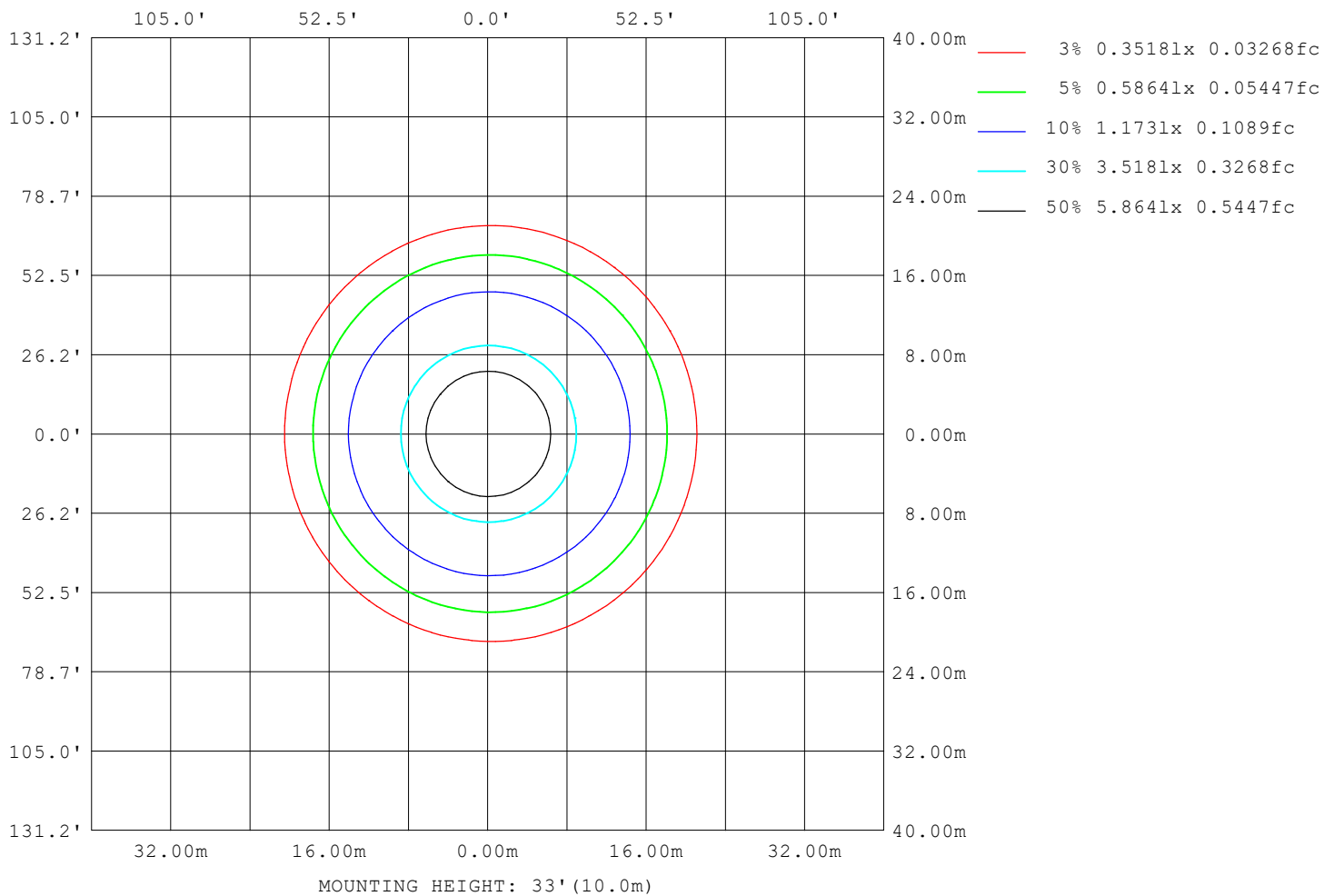
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 30 August 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: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 30 August 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: 93FGNL6030/BL	TYPE: 93FGNL6030/BL	WEIGHT: 1
SPEC.:	DIM.: 872 x 34 x 34	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

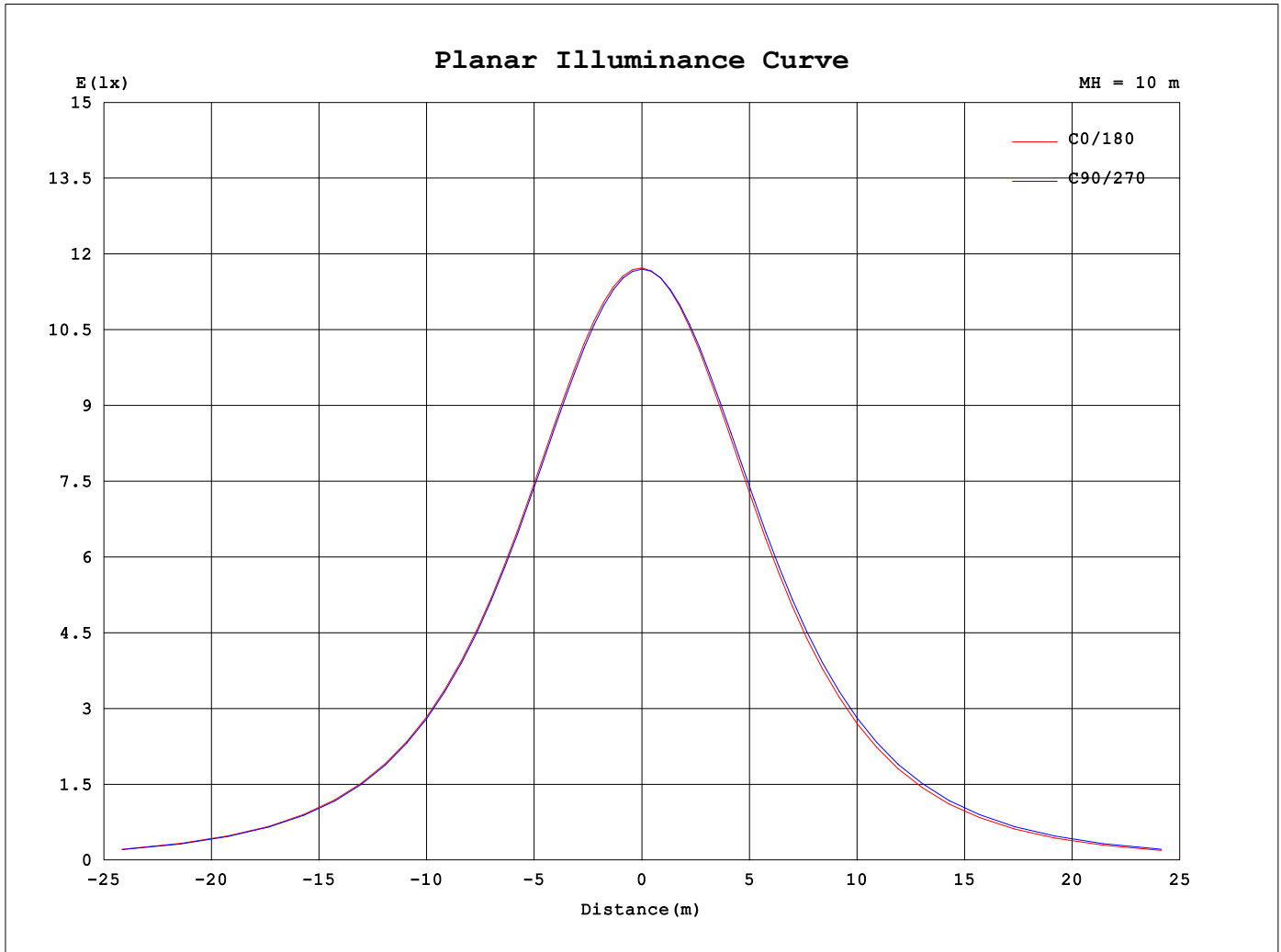
AvgL	cd/m2
L_0~180 (65) av	41557
L_0~180 (75) av	34652
L_0~180 (85) av	17926
L_90~270 (65) av	42924
L_90~270 (75) av	36405
L_90~270 (85) av	19574
L_45 (65) av	42088
L_45 (75) av	35092
L_45 (85) av	18448

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:30 August 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: 30 August 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:

```