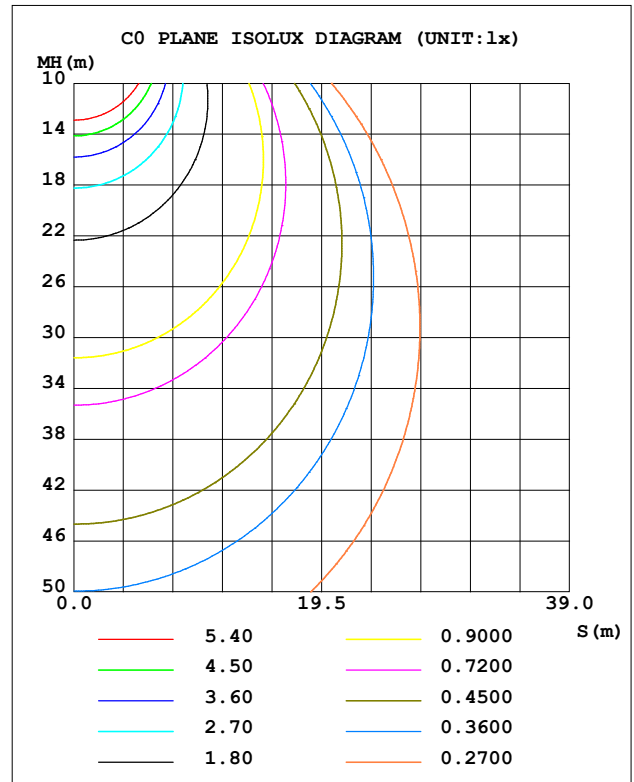
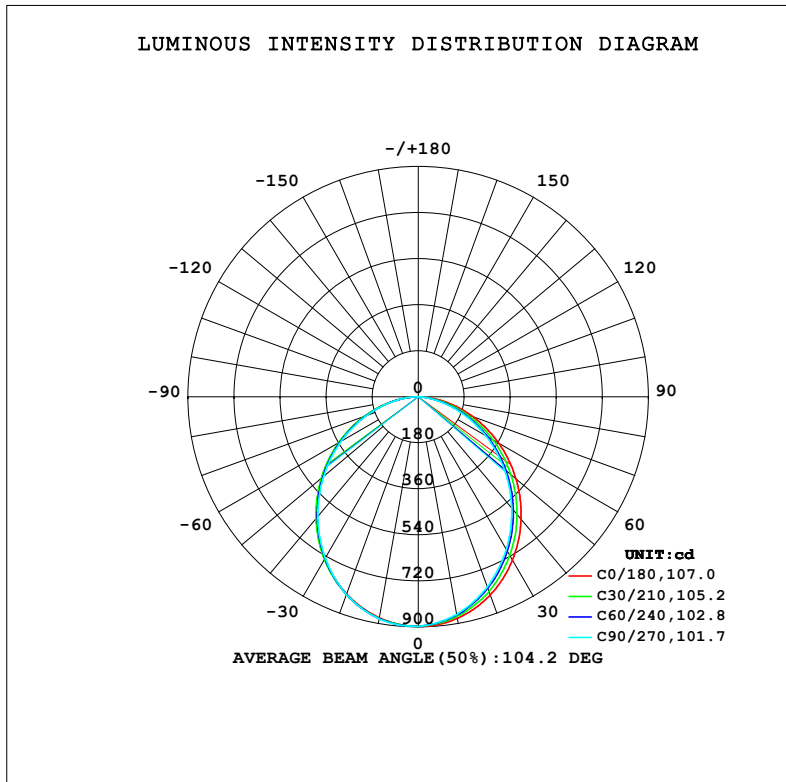


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99PFM602430/BL	I <sub>max</sub> (cd)	898.0	S/MH (C0/180)	1.22
NOMINAL POWER (W)	24	LOR (%)	108.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2333.4	η UP, DN (C0-180)	0.0, 52.2
NOMINAL FLUX (lm)	2160	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 55.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	108.0	CIBSE SHR MAX	1.35



H (β) Range: -90 - 90 DEG  
H (β) Interval: 2.0 DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators:  
Test Date: 16 November 2022

V (B) Range: -85 - 85 DEG  
V (B) Interval: 2.0 DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0 %  
Test Distance: 6.265 m [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	879.7	868.5	864.4	867.0	877.4	879.6	882.0	881.1	0- 10	84.52	84.52	3.62, 3.91
20	824.2	801.8	791.0	799.5	820.0	822.8	822.3	825.2	10- 20	239.0	323.6	13.9, 15
30	737.0	705.2	689.0	702.3	731.7	732.1	728.1	735.3	20- 30	354.3	677.9	29.1, 31.4
40	625.7	588.8	568.5	585.8	619.7	618.7	611.4	621.9	30- 40	415.3	1093	46.9, 50.6
50	498.7	459.8	438.2	456.8	492.6	490.9	482.7	493.8	40- 50	417.6	1511	64.7, 69.9
60	363.3	324.6	304.3	322.1	357.6	355.9	348.5	358.3	50- 60	365.8	1877	80.4, 86.9
70	226.3	190.7	173.2	189.3	222.0	220.9	214.4	222.1	60- 70	271.0	2148	92.9, 94.4
80	98.19	68.37	56.46	68.34	95.86	94.71	89.60	94.44	70- 80	151.4	2299	98.5, 106
90	1.143	0	0	0	1.328	0	0	0	80- 90	34.38	2333	100, 108
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): 1305.3 lm

%lum = 55.9%

%lamp = 60.4%

Conical surface Flux(130deg): 2026 lm

%lum = 86.8%

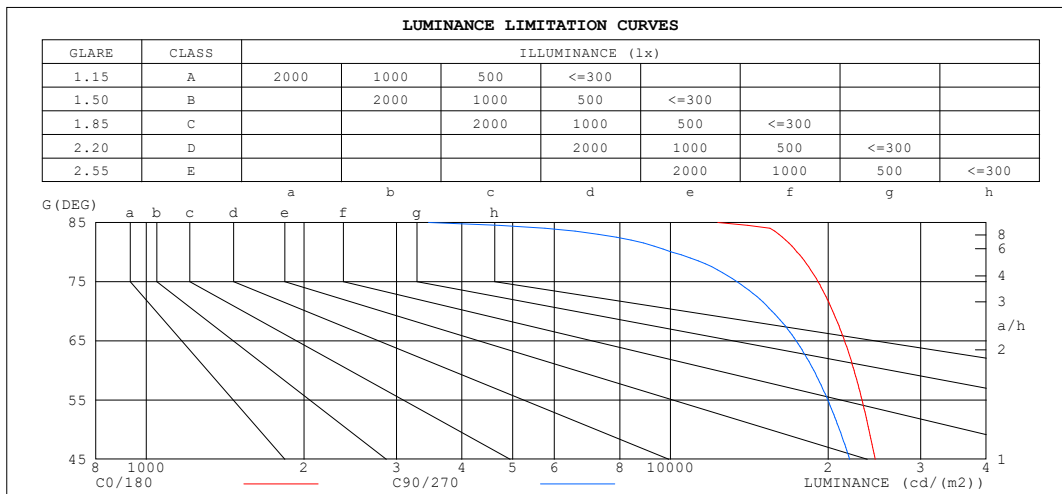
%lamp = 93.8%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
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: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12310	3454
80	17426	10020
75	19121	13386
70	20390	15604
65	21481	17358
60	22392	18755
55	23192	19950
50	23908	21010
45	24565	21965

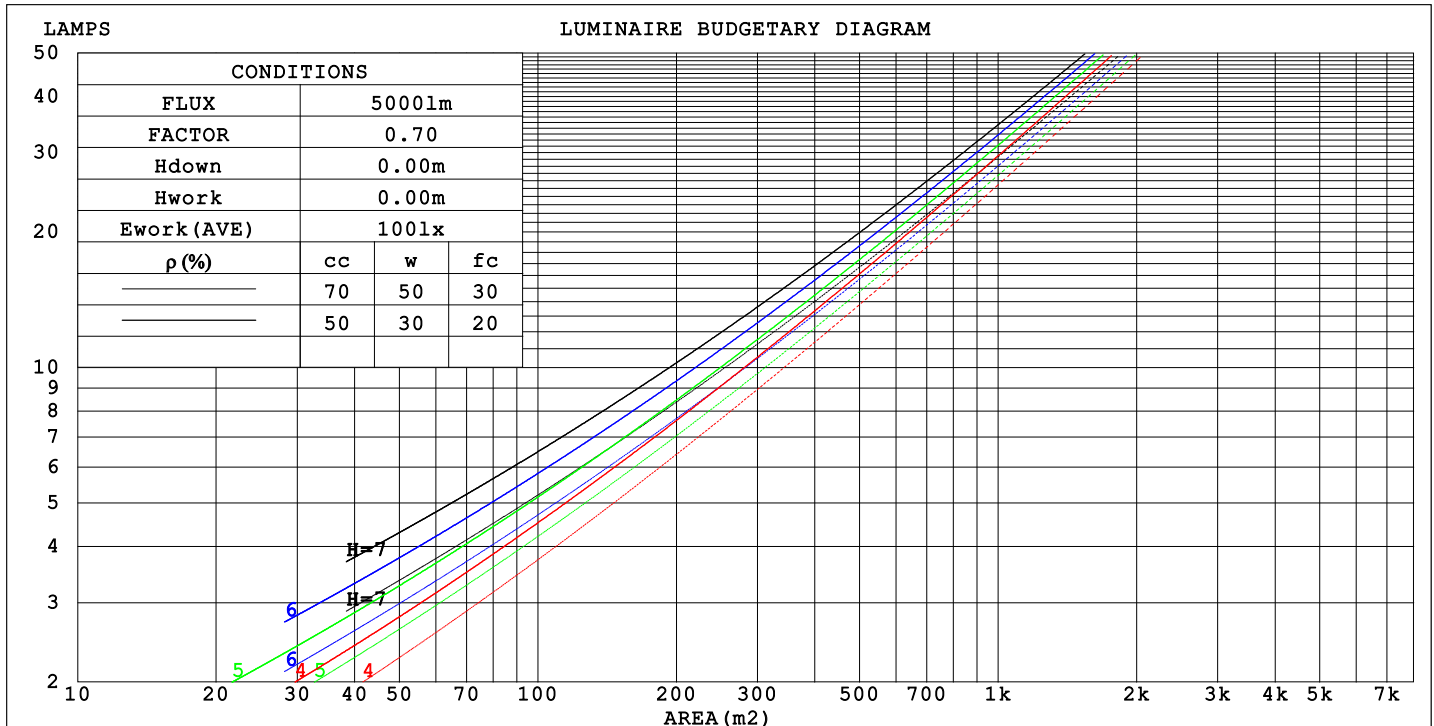
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 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															



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
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: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 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	.324	.184	.058	.316	.180	.057	.302	.173	.055	.289	.166	.053	.276	.160	.052	
2.0	.307	.168	.052	.300	.165	.051	.287	.160	.050	.276	.155	.048	.265	.150	.047	
3.0	.285	.152	.045	.279	.149	.045	.268	.145	.044	.258	.141	.043	.248	.137	.042	
4.0	.264	.137	.040	.258	.135	.040	.249	.132	.039	.239	.129	.039	.231	.125	.038	
5.0	.244	.124	.036	.240	.123	.036	.231	.120	.035	.223	.118	.035	.215	.115	.035	
6.0	.227	.114	.033	.223	.113	.032	.215	.110	.032	.208	.108	.032	.201	.106	.031	
7.0	.211	.105	.030	.208	.104	.030	.201	.102	.029	.194	.100	.029	.188	.098	.029	
8.0	.198	.097	.027	.194	.096	.027	.188	.094	.027	.182	.092	.027	.177	.091	.026	
9.0	.186	.090	.025	.183	.089	.025	.177	.088	.025	.172	.086	.025	.167	.085	.024	
10.0	.175	.084	.023	.172	.083	.023	.167	.082	.023	.162	.081	.023	.158	.079	.023	

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	.206	.206	.206	.176	.176	.176	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.194	.169	.146	.166	.145	.126	.114	.100	.087	.065	.058	.051	.021	.019	.016	
2.0	.185	.143	.107	.158	.123	.092	.109	.085	.064	.063	.049	.038	.020	.016	.012	
3.0	.176	.123	.081	.151	.106	.070	.104	.074	.049	.060	.043	.029	.019	.014	.010	
4.0	.168	.109	.064	.144	.094	.055	.099	.066	.039	.057	.038	.023	.018	.013	.008	
5.0	.160	.098	.052	.137	.085	.045	.095	.059	.032	.055	.035	.019	.018	.011	.006	
6.0	.152	.089	.043	.131	.077	.037	.090	.054	.026	.052	.032	.016	.017	.010	.005	
7.0	.145	.081	.036	.125	.070	.032	.086	.049	.022	.050	.029	.013	.016	.010	.004	
8.0	.138	.075	.031	.119	.065	.027	.082	.046	.019	.048	.027	.012	.015	.009	.004	
9.0	.132	.069	.028	.113	.060	.024	.079	.042	.017	.046	.025	.010	.015	.008	.003	
10.0	.126	.065	.024	.108	.056	.021	.075	.040	.015	.044	.023	.009	.014	.008	.003	

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
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: 99PFM602430/BL					TYPE:					WEIGHT: 1				
SPEC.:					DIM.: 616 x 75 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	20.9	22.4	21.2	22.6	22.8	20.2	21.7	20.5	21.9	22.1				
3H	22.4	23.8	22.7	24.1	24.3	21.5	22.9	21.8	23.1	23.3				
4H	23.1	24.4	23.4	24.6	24.9	21.9	23.2	22.2	23.5	23.7				
6H	23.5	24.7	23.8	25.0	25.3	22.2	23.4	22.5	23.7	23.9				
8H	23.6	24.8	24.0	25.1	25.4	22.2	23.4	22.5	23.7	24.0				
12H	23.7	24.9	24.1	25.2	25.5	22.2	23.3	22.5	23.6	23.9				
4H 2H	21.4	22.7	21.7	23.0	23.2	20.9	22.2	21.2	22.4	22.7				
3H	23.1	24.2	23.4	24.5	24.8	22.3	23.4	22.6	23.7	24.0				
4H	23.8	24.9	24.2	25.2	25.5	22.8	23.9	23.2	24.2	24.5				
6H	24.4	25.3	24.8	25.7	26.0	23.1	24.1	23.5	24.4	24.8				
8H	24.6	25.4	25.0	25.8	26.2	23.2	24.1	23.6	24.4	24.8				
12H	24.7	25.5	25.1	25.9	26.3	23.2	24.0	23.6	24.4	24.8				
8H 4H	24.0	24.8	24.4	25.2	25.6	23.1	23.9	23.5	24.3	24.7				
6H	24.7	25.4	25.1	25.8	26.2	23.5	24.2	23.9	24.6	25.0				
8H	24.9	25.6	25.4	26.0	26.4	23.6	24.2	24.1	24.7	25.1				
12H	25.1	25.7	25.6	26.1	26.6	23.6	24.2	24.1	24.6	25.1				
12H 4H	24.0	24.8	24.4	25.1	25.5	23.1	23.9	23.5	24.3	24.7				
6H	24.7	25.3	25.1	25.7	26.2	23.5	24.2	24.0	24.6	25.1				
8H	25.0	25.5	25.4	26.0	26.4	23.7	24.2	24.1	24.7	25.1				
Variations with the observer position at spacings(CIE Pub.117):														
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3								
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.3								
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.4								

CIE Pub.117, 2160 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)  
Area: 0.03245 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
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: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

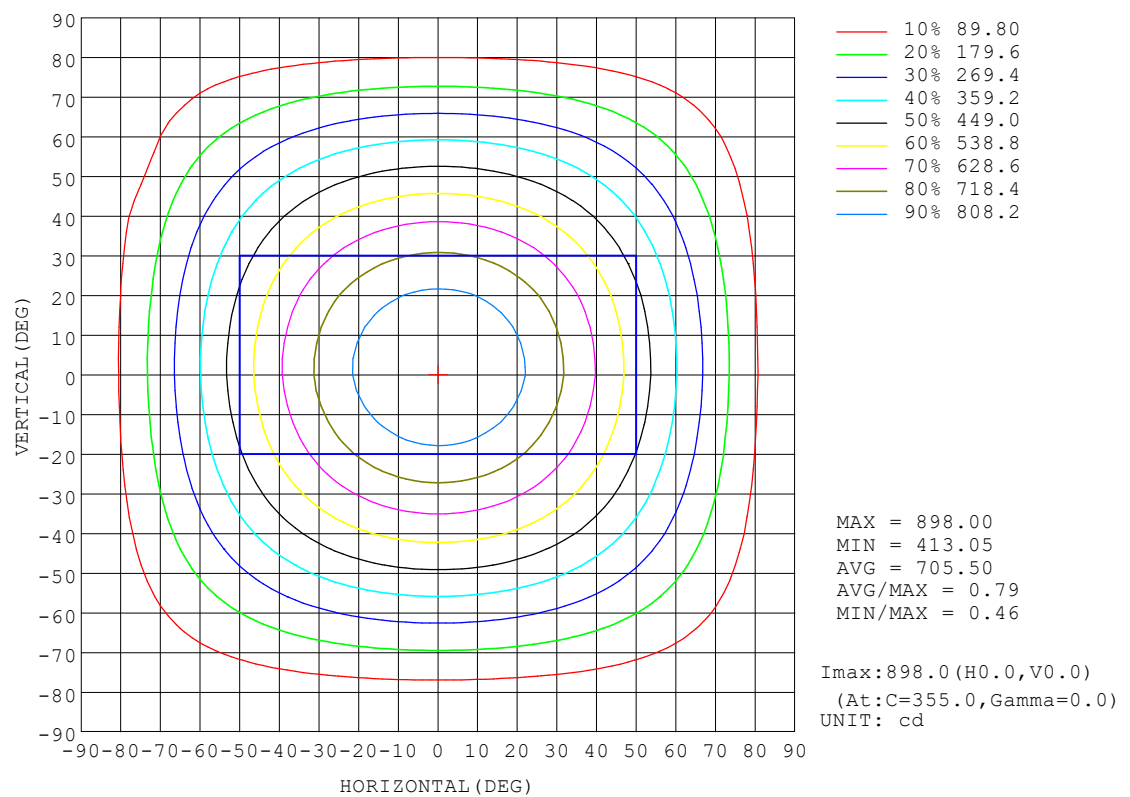
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	51	44	63	51	44	61	50	44	37
0.80	74	62	54	73	62	54	71	61	54	46
1.00	83	72	64	82	71	64	80	72	63	56
1.25	91	80	72	89	79	72	87	78	71	63
1.50	96	86	79	94	85	78	91	83	77	69
2.00	103	95	88	102	93	87	98	91	85	77
2.50	108	99	93	105	98	92	101	95	90	81
3.00	111	104	98	109	102	97	104	99	95	86
4.00	115	109	105	113	107	103	108	104	100	91
5.00	118	113	109	115	111	107	110	107	104	94
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

NAME: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



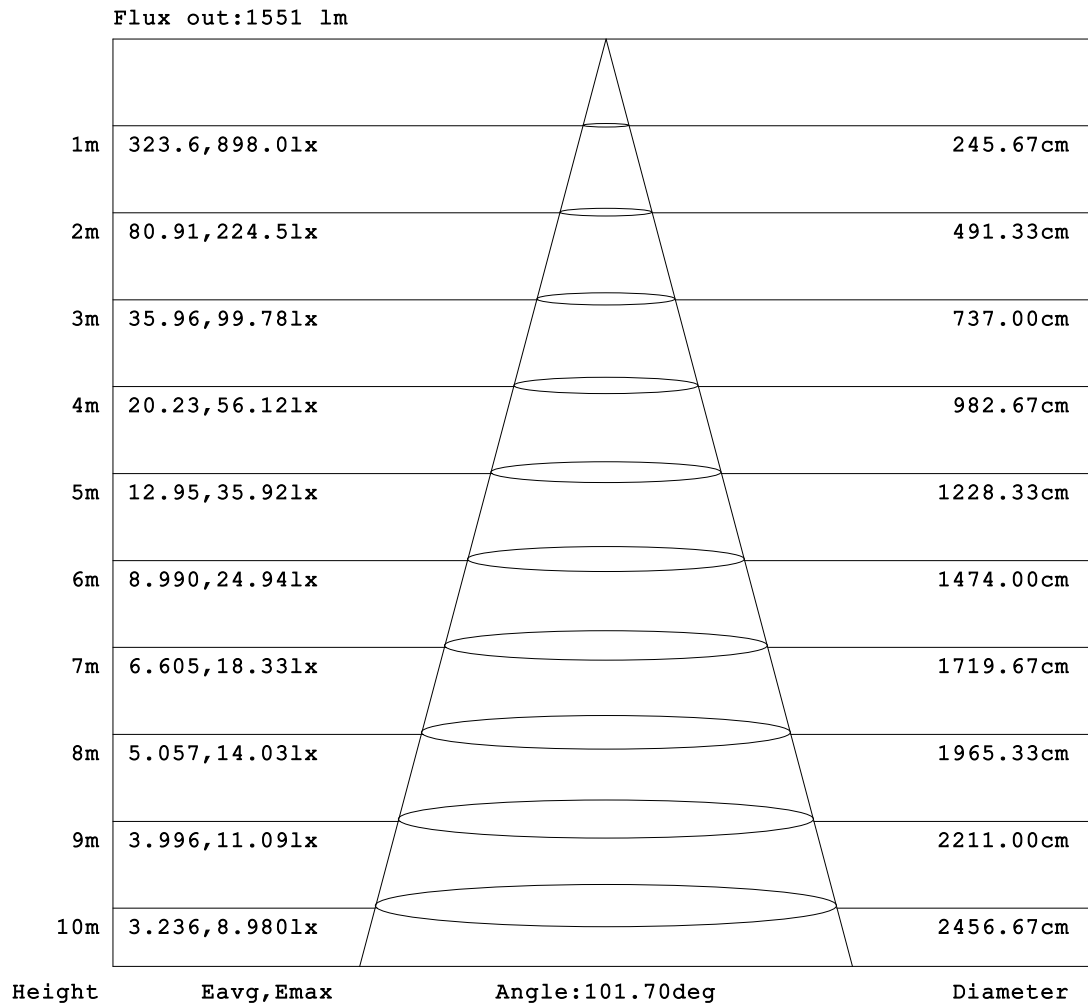
H( $\beta$ ) Range: -90 - 90DEG  
 H( $\beta$ ) Interval: 2.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 16 November 2022

V(B) Range: -85 - 85DEG  
 V(B) Interval: 2.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.265m [K=1.0000]  
 Remarks:



**AAI Figure**

NAME: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



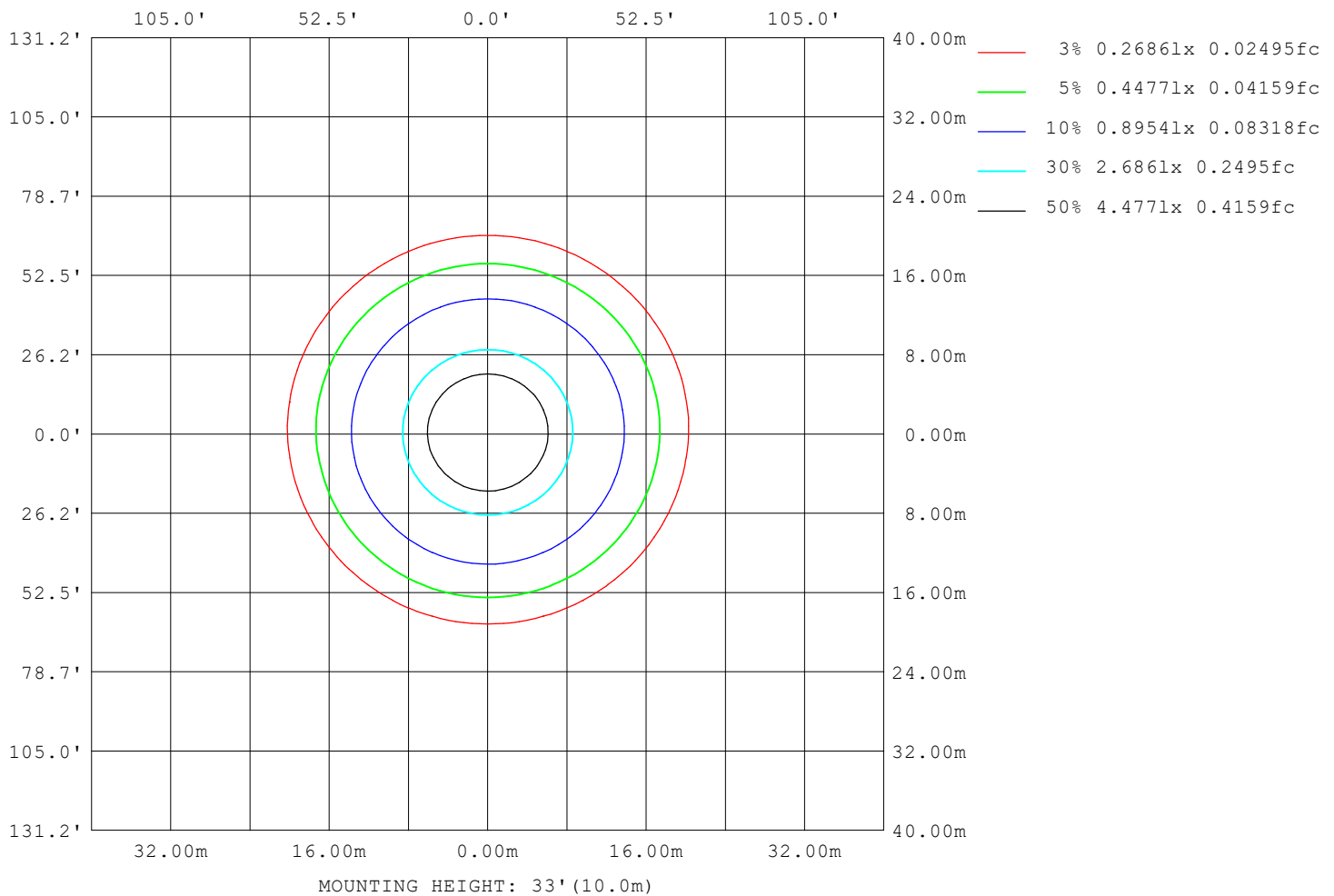
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range: -90 - 90DEG  
 H( $\beta$ ) Interval: 2.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 16 November 2022

V(B) Range: -85 - 85DEG  
 V(B) Interval: 2.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.265m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

NAME: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
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: 99PFM602430/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

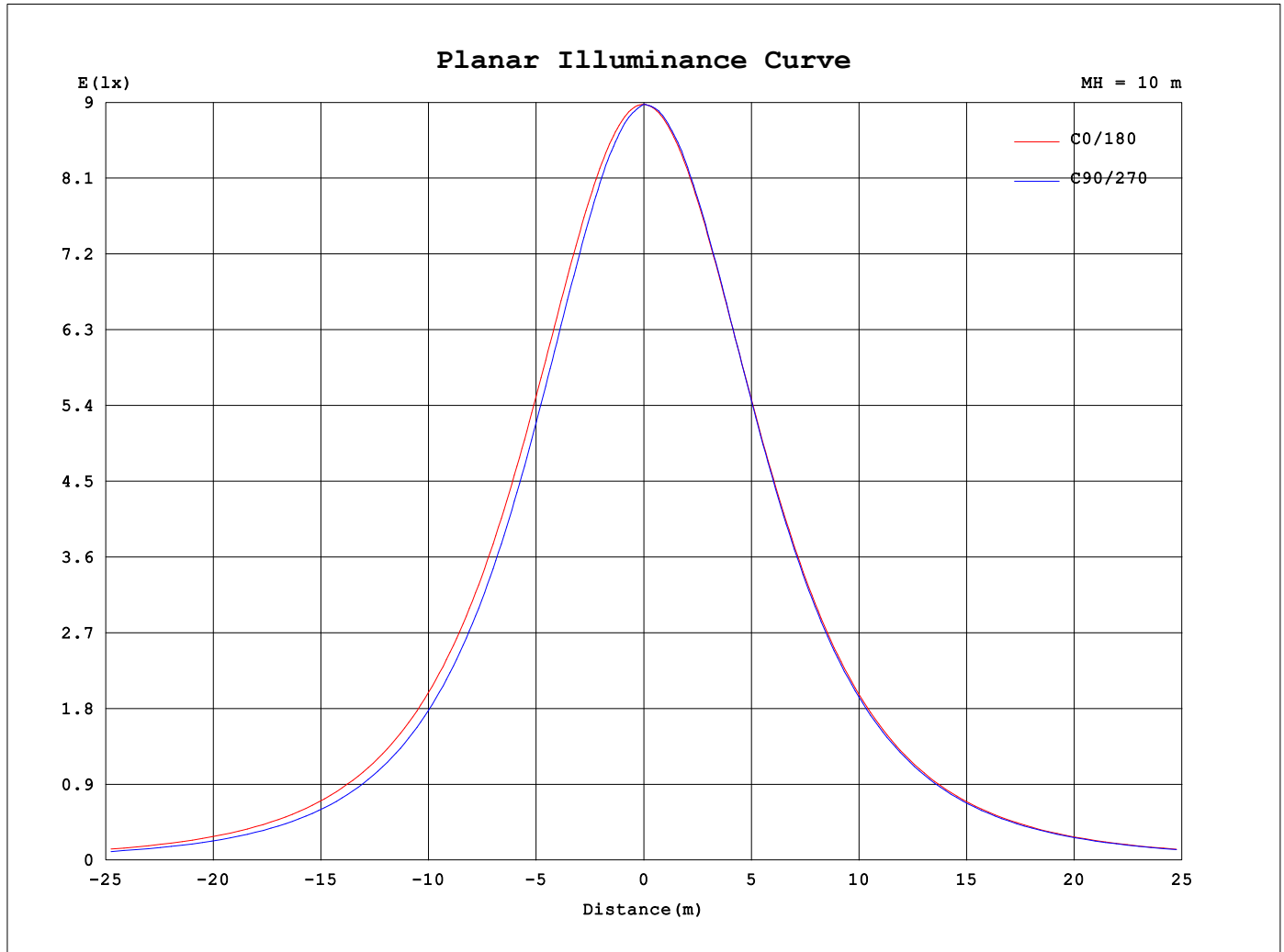
AvgL	cd/m2
L_0~180 (65) av	21292
L_0~180 (75) av	18914
L_0~180 (85) av	12202
L_90~270 (65) av	18927
L_90~270 (75) av	15664
L_90~270 (85) av	5879
L_45 (65) av	19866
L_45 (75) av	16852
L_45 (85) av	10174

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

# Planar Illuminance Curve



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 2.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:16 November 2022

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

V(B) Range:-85 - 85DEG  
V(B) Interval: 2.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks: