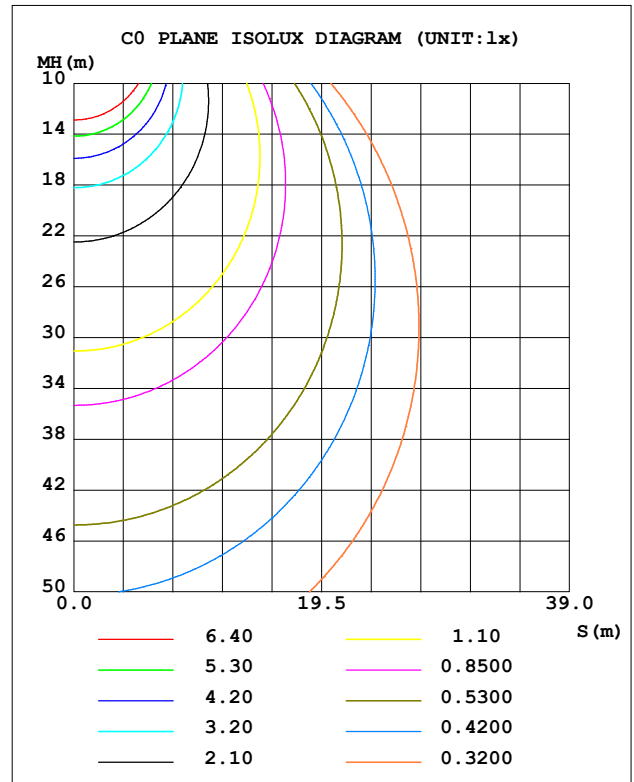
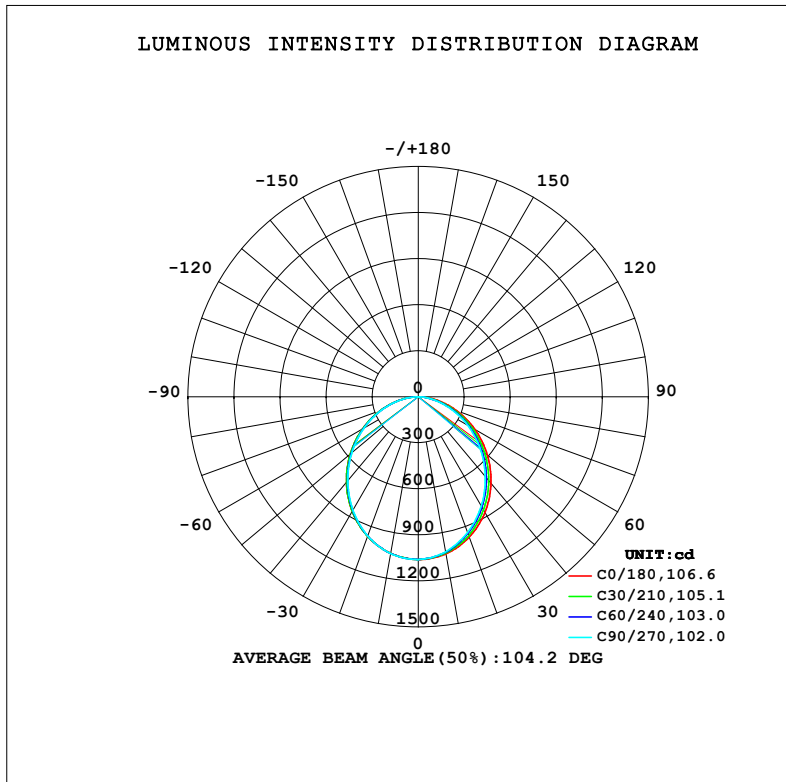


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFM602440/WH	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	99PFM602440/WH	I _{max} (cd)	1061	S/MH (C0/180)	1.21
NOMINAL POWER (W)	24	LOR (%)	128.1	S/MH (C90/270)	1.20
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2767.6	η UP, DN (C0-180)	0.0, 62.6
NOMINAL FLUX (lm)	2160	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 65.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	128.1	CIBSE SHR MAX	1.35



H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 30 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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1039	1031	1027	1028	1036	1036	1038	1039	0- 10	99.91	99.91	3.61,4.63
20	973.7	953.6	941.6	949.6	967.3	967.2	966.0	970.8	10- 20	282.6	382.5	13.8,17.7
30	870.0	840.1	822.1	834.8	862.1	858.6	853.3	863.0	20- 30	418.7	801.2	29,37.1
40	737.8	702.6	680.3	696.7	728.8	723.9	715.3	728.3	30- 40	490.5	1292	46.7,59.8
50	587.3	550.5	528.0	544.6	578.3	573.2	564.2	577.5	40- 50	493.1	1785	64.5,82.6
60	427.5	392.3	371.9	387.1	419.2	415.8	407.9	419.1	50- 60	432.6	2217	80.1,103
70	266.1	235.6	218.8	232.1	260.4	259.3	253.1	261.0	60- 70	322.4	2540	91.8,118
80	115.9	91.42	80.68	90.43	113.2	113.8	109.7	113.1	70- 80	183.5	2723	98.4,126
90	1.361	0	0	0	1.590	0	0	0	80- 90	44.15	2768	100,128
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): 1542.1 lm

%lum = 55.7%

%lamp = 71.4%

Conical surface Flux(130deg): 2394.8 lm

%lum = 86.5%

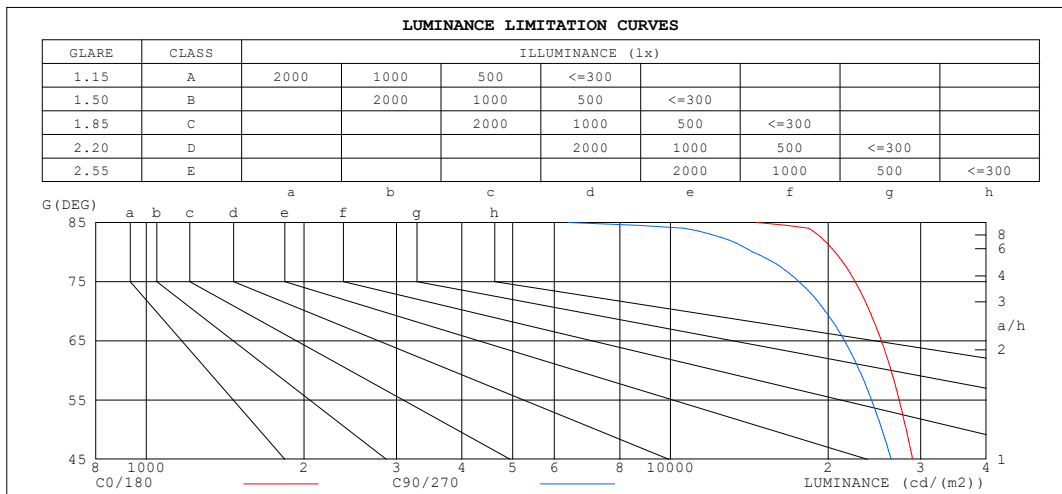
%lamp = 110.9%

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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: 99PFM602440/WH	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	14615	6367
80	20575	14319
75	22500	17581
70	23979	19716
65	25249	21479
60	26346	22924
55	27300	24179
50	28158	25315
45	28945	26356

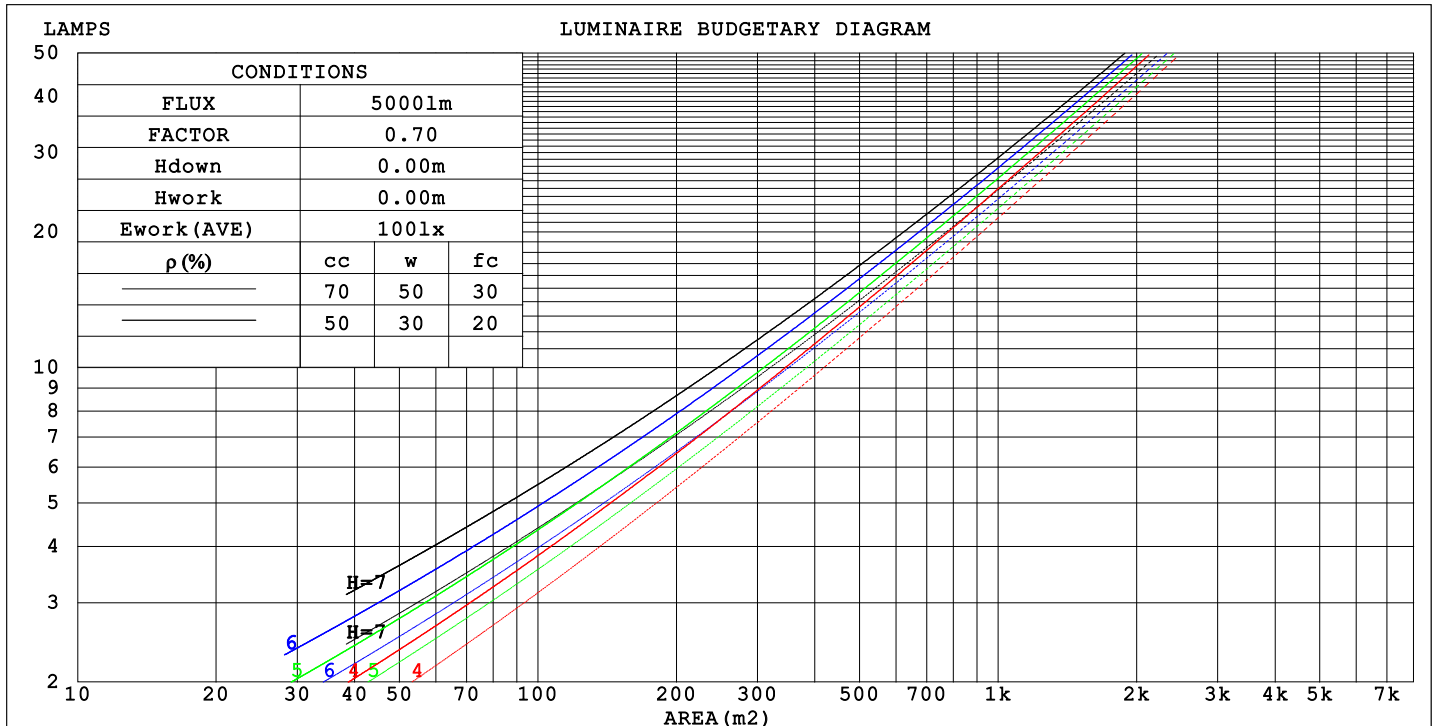
H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 November 2022

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: 99PFM602440/WH	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															



WEC AND CCEC

NAME: 99PFM602440/WH	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	.386	.220	.070	.377	.215	.068	.360	.207	.066	.345	.199	.064	.330	.192	.062	
2.0	.365	.200	.061	.357	.197	.061	.342	.190	.059	.329	.184	.058	.316	.179	.056	
3.0	.339	.180	.054	.332	.178	.054	.319	.173	.053	.307	.168	.052	.295	.163	.051	
4.0	.313	.163	.048	.307	.161	.048	.296	.157	.047	.285	.153	.046	.275	.149	.045	
5.0	.290	.148	.043	.285	.146	.043	.274	.143	.042	.265	.140	.042	.256	.137	.041	
6.0	.270	.135	.039	.265	.134	.038	.255	.131	.038	.247	.128	.038	.239	.126	.037	
7.0	.251	.124	.035	.247	.123	.035	.239	.121	.035	.231	.118	.034	.224	.116	.034	
8.0	.235	.115	.032	.231	.114	.032	.224	.112	.032	.217	.110	.032	.210	.108	.031	
9.0	.220	.107	.030	.217	.106	.030	.210	.104	.029	.204	.102	.029	.198	.101	.029	
10.0	.207	.099	.028	.204	.099	.028	.198	.097	.027	.193	.096	.027	.187	.094	.027	

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	.244	.244	.244	.209	.209	.209	.142	.142	.142	.082	.082	.082	.026	.026	.026	
1.0	.230	.200	.173	.197	.172	.149	.135	.118	.103	.078	.068	.060	.025	.022	.019	
2.0	.220	.169	.127	.188	.146	.109	.129	.101	.076	.074	.059	.045	.024	.019	.015	
3.0	.209	.146	.096	.180	.126	.083	.123	.088	.058	.071	.051	.034	.023	.017	.011	
4.0	.200	.129	.076	.171	.112	.066	.118	.078	.046	.068	.046	.027	.022	.015	.009	
5.0	.190	.116	.061	.163	.100	.053	.112	.070	.038	.065	.041	.022	.021	.013	.007	
6.0	.181	.105	.051	.155	.091	.044	.107	.064	.031	.062	.037	.019	.020	.012	.006	
7.0	.172	.096	.043	.148	.083	.037	.102	.058	.027	.059	.034	.016	.019	.011	.005	
8.0	.164	.089	.037	.141	.077	.032	.098	.054	.023	.057	.032	.014	.018	.010	.005	
9.0	.156	.082	.033	.135	.072	.028	.093	.050	.020	.054	.030	.012	.018	.010	.004	
10.0	.149	.077	.029	.128	.067	.025	.089	.047	.018	.052	.028	.011	.017	.009	.004	

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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: 99PFM602440/WH					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	21.6	23.0	21.8	23.2	23.5	21.0	22.5	21.3	22.7	22.9				
3H	23.0	24.4	23.3	24.7	24.9	22.3	23.7	22.6	23.9	24.2				
4H	23.7	25.0	24.0	25.2	25.5	22.8	24.1	23.1	24.4	24.6				
6H	24.1	25.4	24.4	25.6	25.9	23.1	24.4	23.4	24.6	24.9				
8H	24.3	25.5	24.6	25.7	26.0	23.2	24.4	23.5	24.7	25.0				
12H	24.3	25.5	24.7	25.8	26.1	23.2	24.3	23.5	24.6	24.9				
4H 2H	22.0	23.4	22.4	23.6	23.9	21.6	22.9	21.9	23.2	23.4				
3H	23.7	24.9	24.1	25.2	25.5	23.1	24.3	23.5	24.6	24.9				
4H	24.5	25.5	24.8	25.8	26.2	23.7	24.8	24.1	25.1	25.4				
6H	25.0	26.0	25.4	26.3	26.7	24.1	25.1	24.5	25.4	25.8				
8H	25.2	26.1	25.7	26.5	26.9	24.2	25.1	24.7	25.5	25.9				
12H	25.4	26.2	25.8	26.6	27.0	24.3	25.1	24.7	25.5	25.9				
8H 4H	24.7	25.5	25.1	25.9	26.3	24.0	24.9	24.4	25.2	25.6				
6H	25.4	26.1	25.8	26.5	26.9	24.5	25.2	25.0	25.6	26.1				
8H	25.6	26.3	26.1	26.7	27.1	24.7	25.3	25.2	25.8	26.2				
12H	25.8	26.4	26.3	26.8	27.3	24.8	25.3	25.3	25.8	26.2				
12H 4H	24.6	25.4	25.1	25.8	26.2	24.0	24.8	24.4	25.2	25.6				
6H	25.4	26.0	25.8	26.4	26.9	24.6	25.2	25.0	25.6	26.1				
8H	25.7	26.2	26.2	26.7	27.2	24.8	25.3	25.3	25.8	26.3				
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					+ 0.2 / - 0.3								
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3								

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

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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: 99PFM602440/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

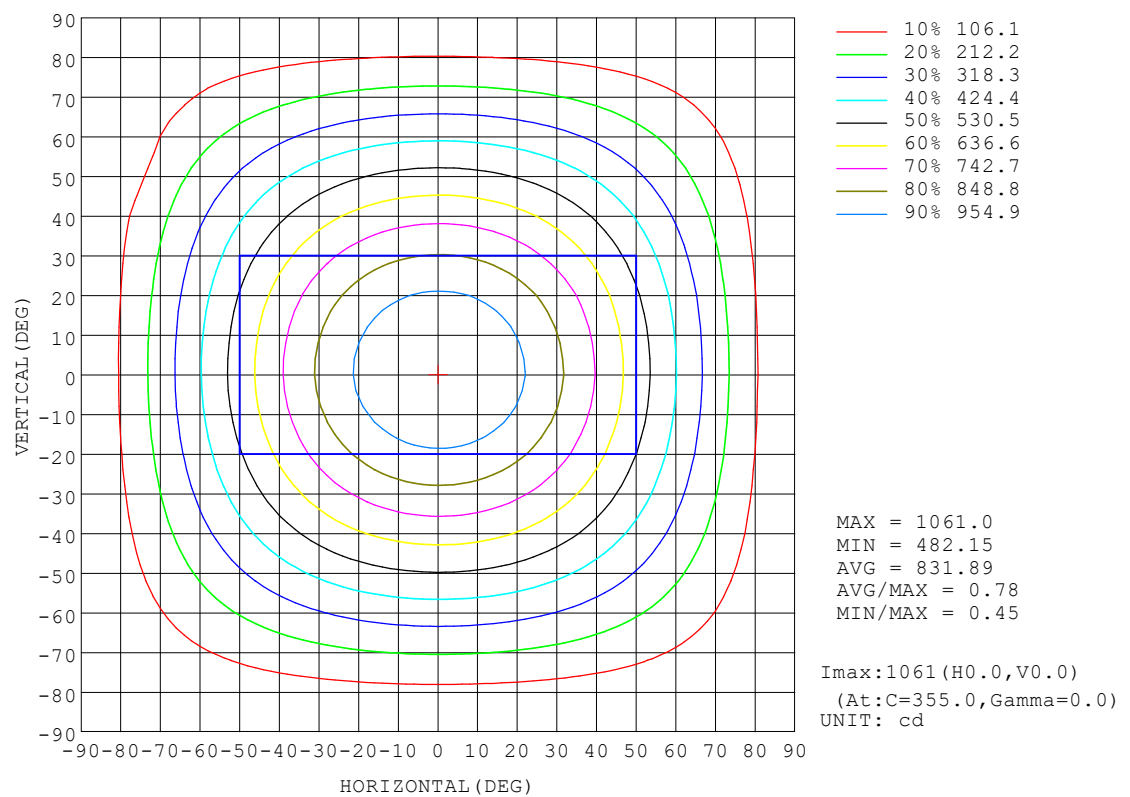
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	61	52	74	60	52	73	60	52	43
0.80	88	73	64	87	73	64	84	72	63	55
1.00	99	85	76	97	84	75	94	86	75	66
1.25	108	95	86	106	94	85	102	92	84	75
1.50	114	102	93	112	100	92	108	98	91	81
2.00	123	112	104	120	110	103	116	108	101	91
2.50	127	118	110	125	116	109	120	113	107	96
3.00	132	123	116	129	121	115	124	117	112	101
4.00	137	130	124	134	127	122	128	123	119	107
5.00	140	134	129	137	131	127	131	127	123	111
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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: 99PFM602440/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

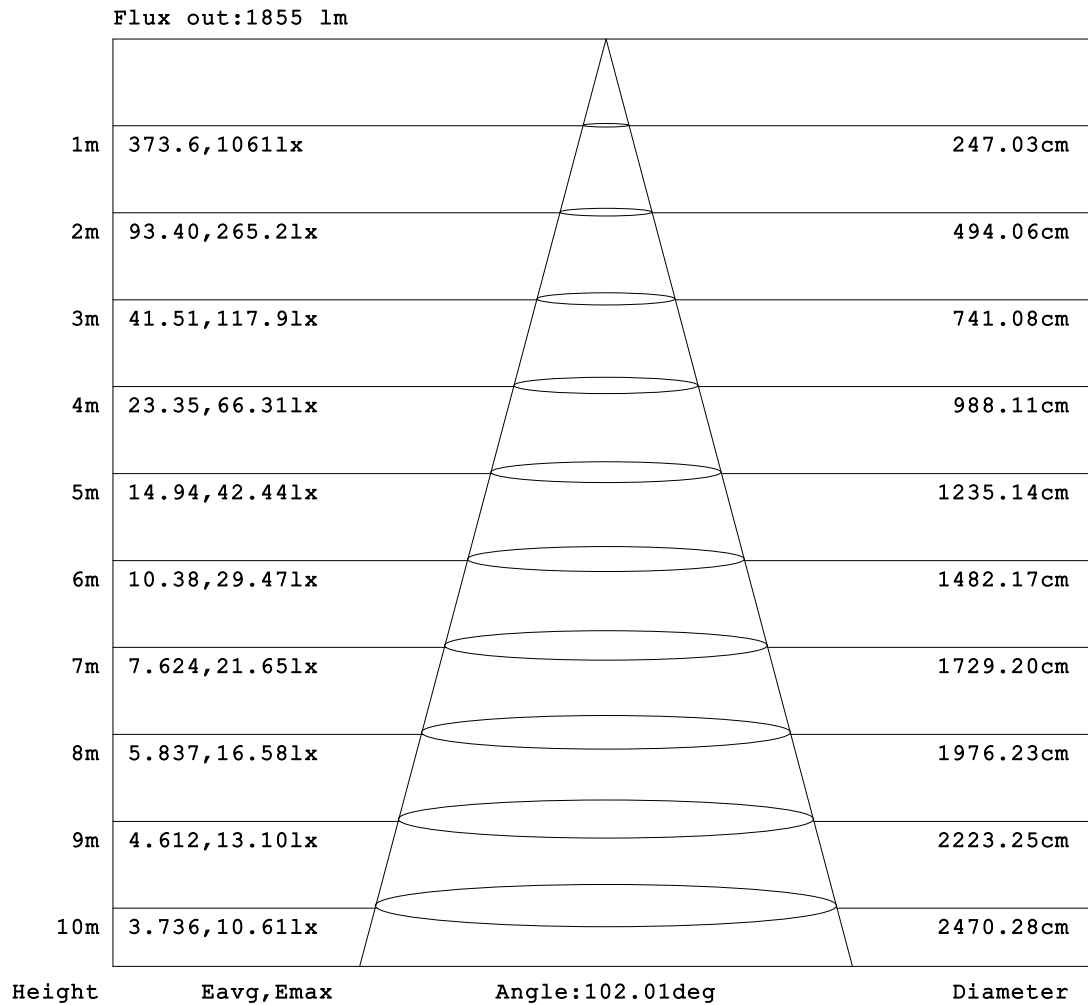


H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 November 2022

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: 99PFM602440/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



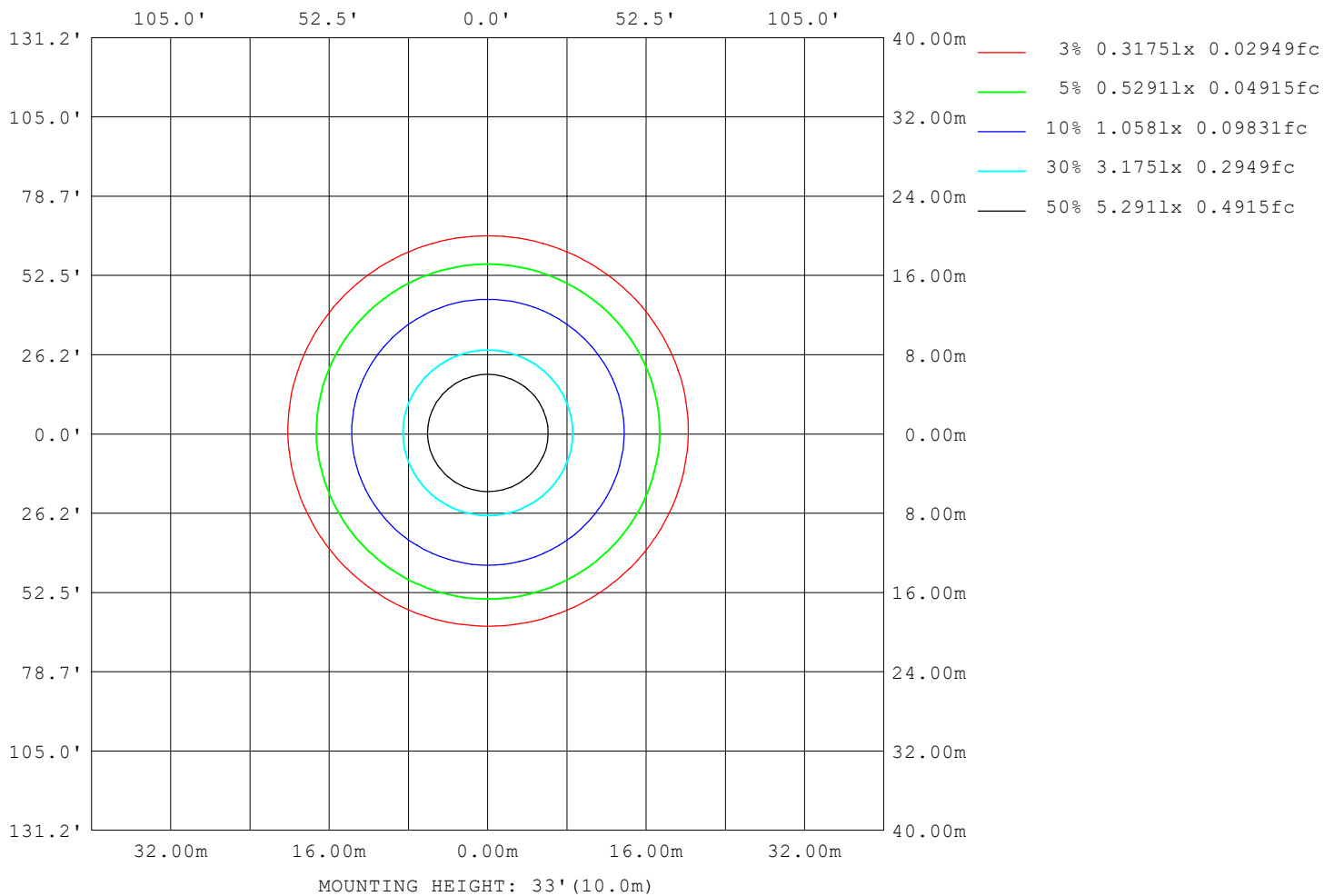
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
 H(β) Interval: 2.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 30 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: 99PFM602440/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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: 99PFM602440/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

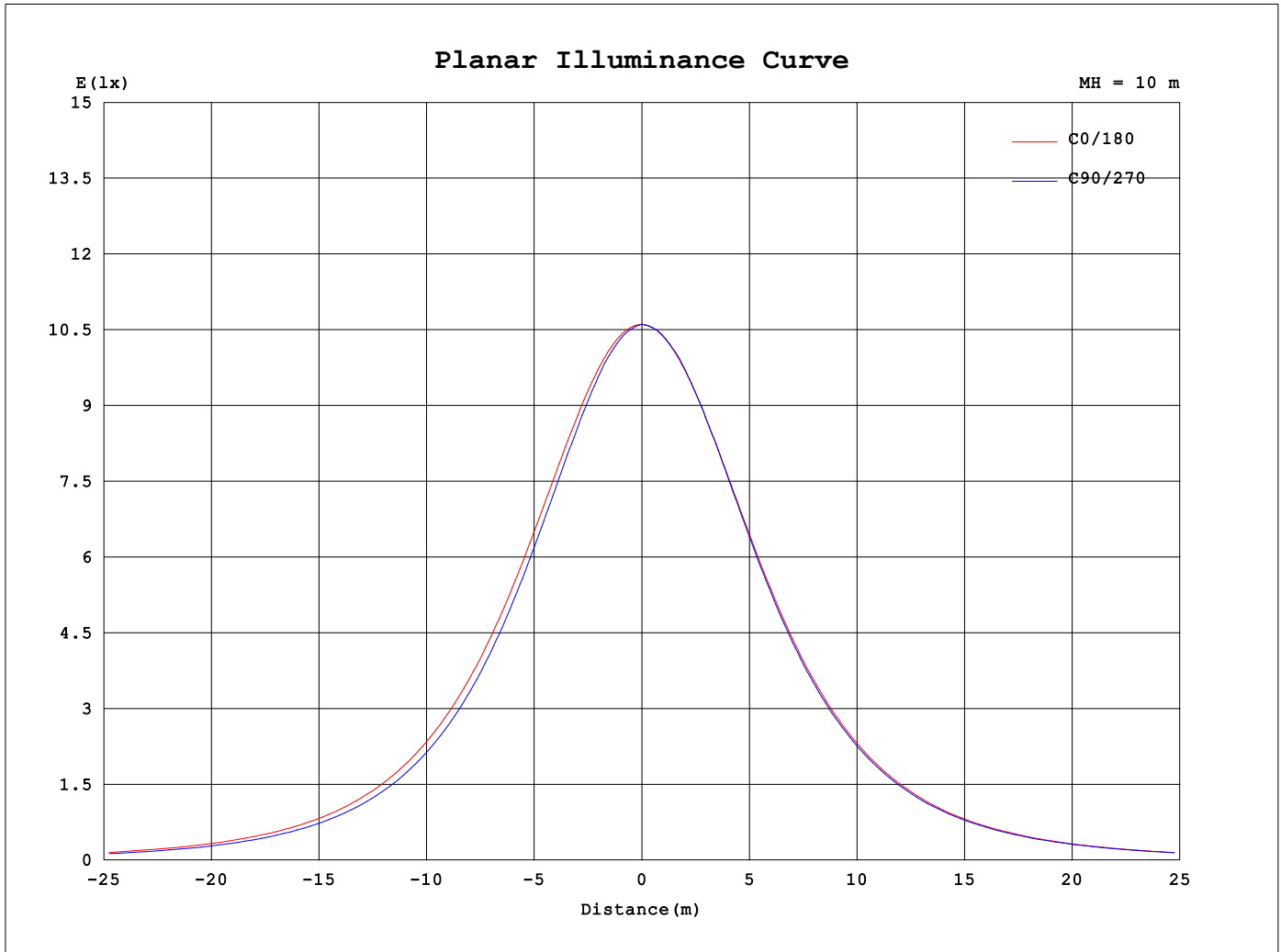
AvgL	cd/m2
L_0~180 (65) av	24990
L_0~180 (75) av	22238
L_0~180 (85) av	14644
L_90~270 (65) av	22773
L_90~270 (75) av	19482
L_90~270 (85) av	8544
L_45 (65) av	23670
L_45 (75) av	20493
L_45 (85) av	13956

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:30 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:
```