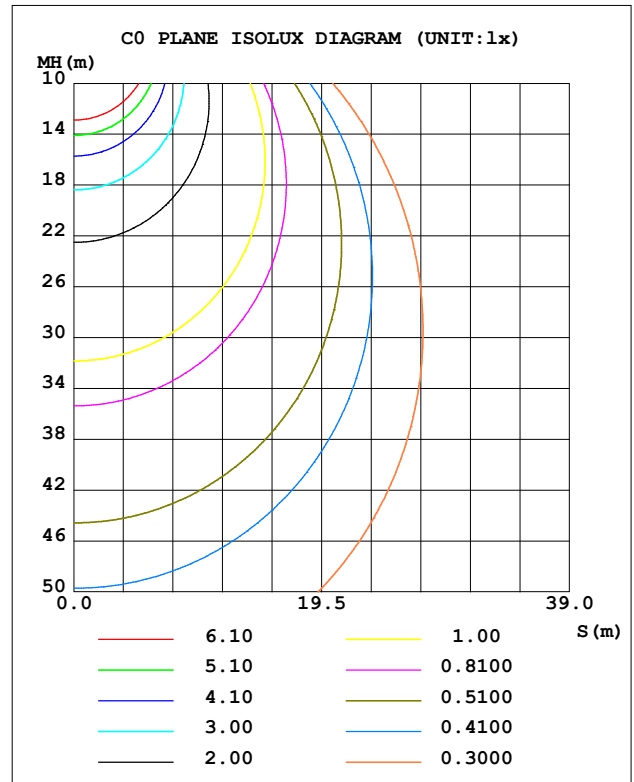
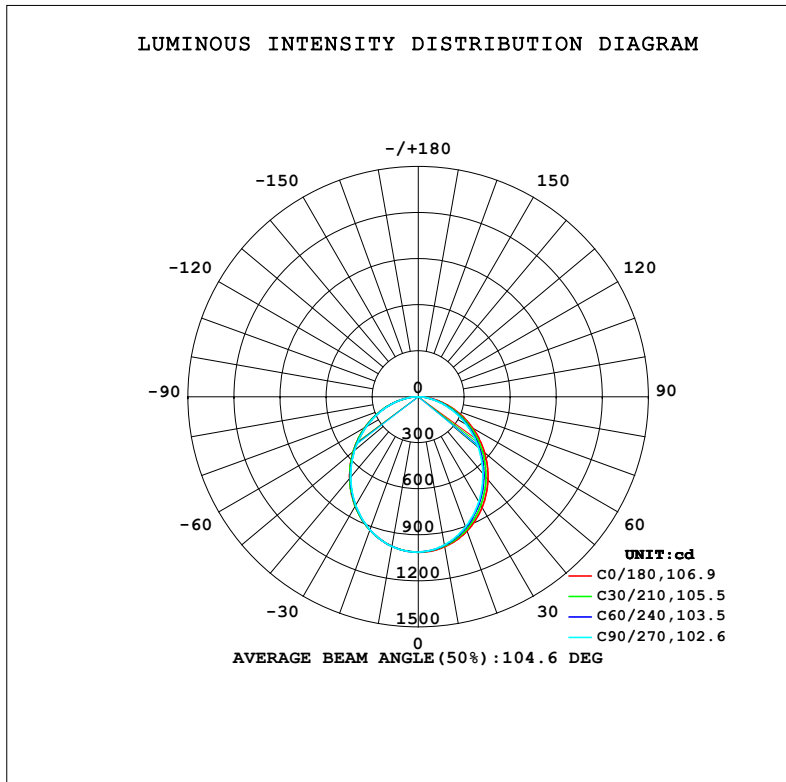


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99PFM602430/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	99PFM602430/WH	Imax (cd)	1013	S/MH (C0/180)	1.21
NOMINAL POWER (W)	24	LOR (%)	122.9	S/MH (C90/270)	1.20
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2655.6	η UP, DN (C0-180)	0.0, 60.3
NOMINAL FLUX (lm)	2160	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 62.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	122.9	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: 29 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	993.0	984.9	981.7	982.4	989.4	989.5	991.6	991.8	0- 10	95.42	95.42	3.59,4.42
20	930.9	913.8	902.8	909.6	923.7	923.8	922.8	927.7	10- 20	270.1	365.5	13.8,16.9
30	832.9	806.4	790.1	800.5	823.2	820.3	816.3	825.6	20- 30	400.7	766.2	28.9,35.5
40	707.3	676.0	655.8	669.0	696.8	692.2	685.4	697.8	30- 40	470.1	1236	46.6,57.2
50	564.0	531.0	511.0	524.4	553.6	548.8	541.1	554.0	40- 50	473.5	1710	64.4,79.2
60	411.0	379.7	361.5	374.1	401.9	398.1	391.0	402.0	50- 60	416.1	2126	80.1,98.4
70	255.9	229.0	214.1	225.1	249.7	247.8	241.9	249.8	60- 70	310.5	2436	91.7,113
80	111.6	90.03	80.49	88.58	108.1	108.0	103.5	107.6	70- 80	176.8	2613	98.4,121
90	1.301	0	0	0	1.522	0	0	0	80- 90	42.54	2656	100,123
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): 1476.6 lm

%lum = 55.6%

%lamp = 68.4%

Conical surface Flux(130deg): 2296.6 lm

%lum = 86.5%

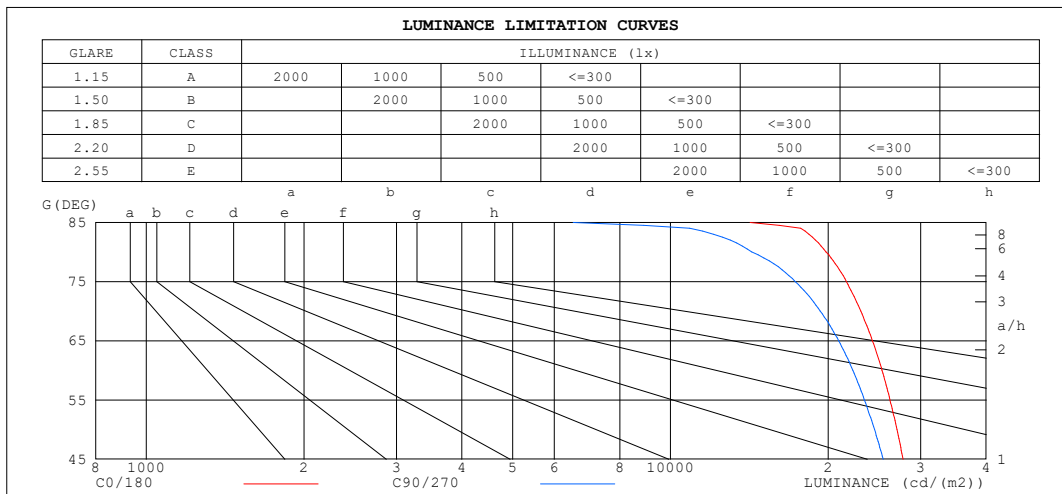
%lamp = 106.3%

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:29 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/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	14192	6518
80	19803	14284
75	21660	17305
70	23060	19289
65	24282	20930
60	25330	22278
55	26227	23443
50	27039	24497
45	27771	25459

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:29 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:
```

WEC AND CCEC

NAME: 99PFM602430/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	.371	.211	.067	.363	.207	.066	.346	.199	.063	.331	.191	.061	.318	.184	.059	
2.0	.351	.192	.059	.343	.189	.058	.329	.183	.057	.316	.177	.055	.304	.172	.054	
3.0	.326	.173	.052	.319	.171	.051	.306	.166	.050	.295	.161	.050	.284	.157	.049	
4.0	.301	.156	.046	.295	.154	.046	.284	.151	.045	.274	.147	.044	.264	.143	.044	
5.0	.279	.142	.041	.274	.140	.041	.264	.137	.040	.254	.134	.040	.246	.131	.039	
6.0	.259	.130	.037	.254	.128	.037	.245	.126	.037	.237	.123	.036	.229	.121	.036	
7.0	.241	.119	.034	.237	.118	.034	.229	.116	.033	.222	.114	.033	.215	.112	.033	
8.0	.226	.110	.031	.222	.109	.031	.215	.107	.031	.208	.105	.030	.202	.104	.030	
9.0	.212	.102	.029	.208	.101	.028	.202	.100	.028	.196	.098	.028	.190	.097	.028	
10.0	.199	.095	.026	.196	.095	.026	.190	.093	.026	.185	.092	.026	.180	.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	.234	.234	.234	.200	.200	.200	.137	.137	.137	.078	.078	.078	.025	.025	.025	
1.0	.221	.192	.166	.189	.165	.143	.129	.113	.099	.074	.066	.057	.024	.021	.019	
2.0	.211	.162	.121	.180	.140	.105	.124	.097	.073	.071	.056	.043	.023	.018	.014	
3.0	.201	.140	.092	.172	.121	.080	.118	.084	.056	.068	.049	.033	.022	.016	.011	
4.0	.192	.124	.072	.164	.107	.063	.113	.075	.044	.065	.044	.026	.021	.014	.009	
5.0	.182	.111	.059	.157	.096	.051	.108	.067	.036	.063	.039	.021	.020	.013	.007	
6.0	.174	.101	.049	.149	.087	.042	.103	.061	.030	.060	.036	.018	.019	.012	.006	
7.0	.165	.092	.041	.142	.080	.036	.098	.056	.025	.057	.033	.015	.018	.011	.005	
8.0	.157	.085	.036	.135	.074	.031	.094	.052	.022	.055	.031	.013	.018	.010	.004	
9.0	.150	.079	.031	.129	.069	.027	.090	.048	.019	.052	.029	.012	.017	.009	.004	
10.0	.143	.074	.028	.123	.064	.024	.086	.045	.017	.050	.027	.010	.016	.009	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:29 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/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	21.4	22.9	21.7	23.1	23.3	20.9	22.4	21.2	22.6	22.8				
3H	22.9	24.3	23.2	24.5	24.8	22.3	23.6	22.5	23.9	24.1				
4H	23.5	24.9	23.9	25.1	25.4	22.8	24.1	23.1	24.3	24.6				
6H	24.0	25.2	24.3	25.5	25.8	23.1	24.3	23.4	24.6	24.9				
8H	24.1	25.3	24.5	25.6	25.9	23.2	24.4	23.5	24.6	24.9				
12H	24.2	25.4	24.6	25.7	26.0	23.2	24.3	23.5	24.6	24.9				
4H 2H	21.9	23.3	22.3	23.5	23.8	21.5	22.8	21.8	23.1	23.4				
3H	23.6	24.8	24.0	25.1	25.4	23.1	24.2	23.4	24.5	24.8				
4H	24.4	25.4	24.7	25.7	26.1	23.7	24.7	24.0	25.0	25.4				
6H	24.9	25.9	25.3	26.2	26.6	24.1	25.0	24.5	25.4	25.8				
8H	25.1	26.0	25.5	26.4	26.8	24.2	25.1	24.6	25.5	25.9				
12H	25.3	26.1	25.7	26.4	26.9	24.3	25.1	24.7	25.5	25.9				
8H 4H	24.6	25.4	25.0	25.8	26.2	23.9	24.8	24.4	25.2	25.6				
6H	25.3	26.0	25.7	26.4	26.8	24.5	25.2	24.9	25.6	26.1				
8H	25.5	26.2	26.0	26.6	27.1	24.7	25.3	25.1	25.8	26.2				
12H	25.7	26.3	26.2	26.7	27.2	24.8	25.3	25.3	25.8	26.3				
12H 4H	24.5	25.3	25.0	25.7	26.1	24.0	24.8	24.4	25.1	25.5				
6H	25.3	25.9	25.8	26.4	26.8	24.6	25.2	25.0	25.6	26.1				
8H	25.6	26.1	26.1	26.6	27.1	24.8	25.3	25.3	25.8	26.2				
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:29 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/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

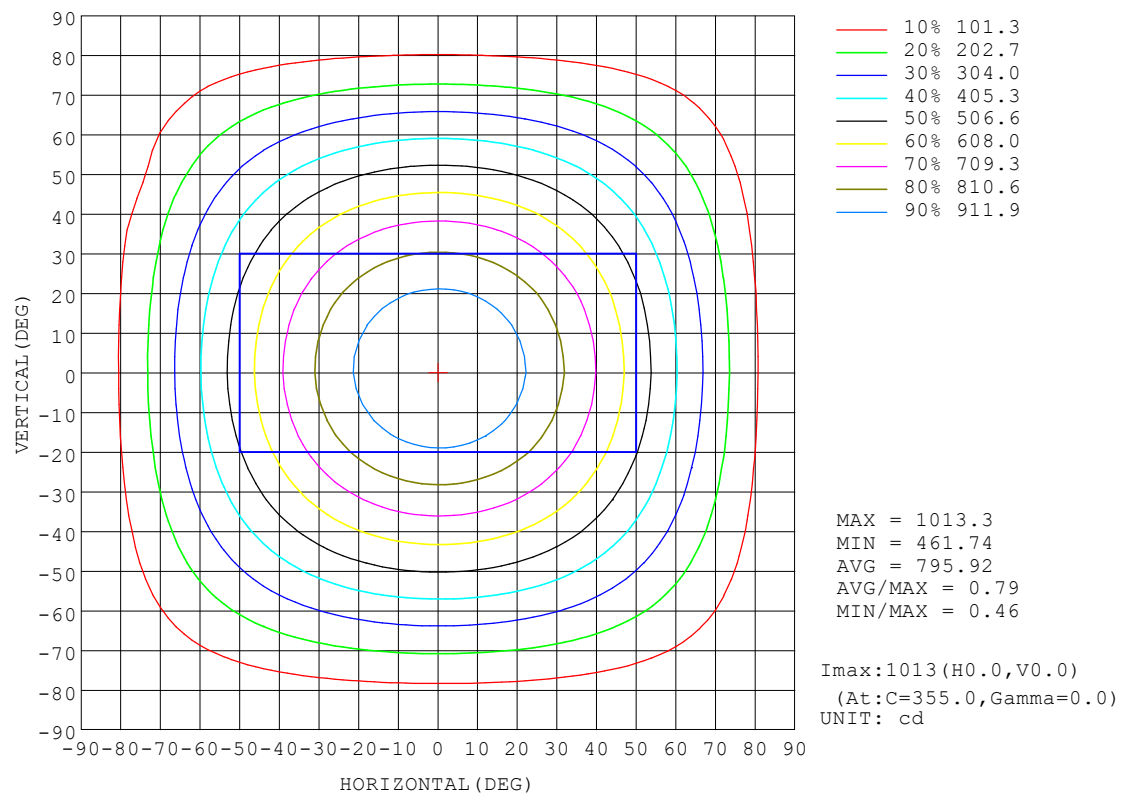
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	72	58	50	71	58	50	70	57	49	42
0.80	84	70	62	83	70	61	81	69	61	52
1.00	95	81	72	93	81	72	90	82	71	63
1.25	103	91	82	101	90	82	98	88	81	72
1.50	109	97	89	107	96	88	104	94	87	78
2.00	118	107	100	115	106	99	111	103	97	87
2.50	122	113	106	120	111	105	115	108	102	92
3.00	126	118	111	124	116	110	119	113	107	97
4.00	131	124	119	128	122	117	123	118	114	103
5.00	134	128	123	131	126	121	126	121	118	107
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:29 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/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

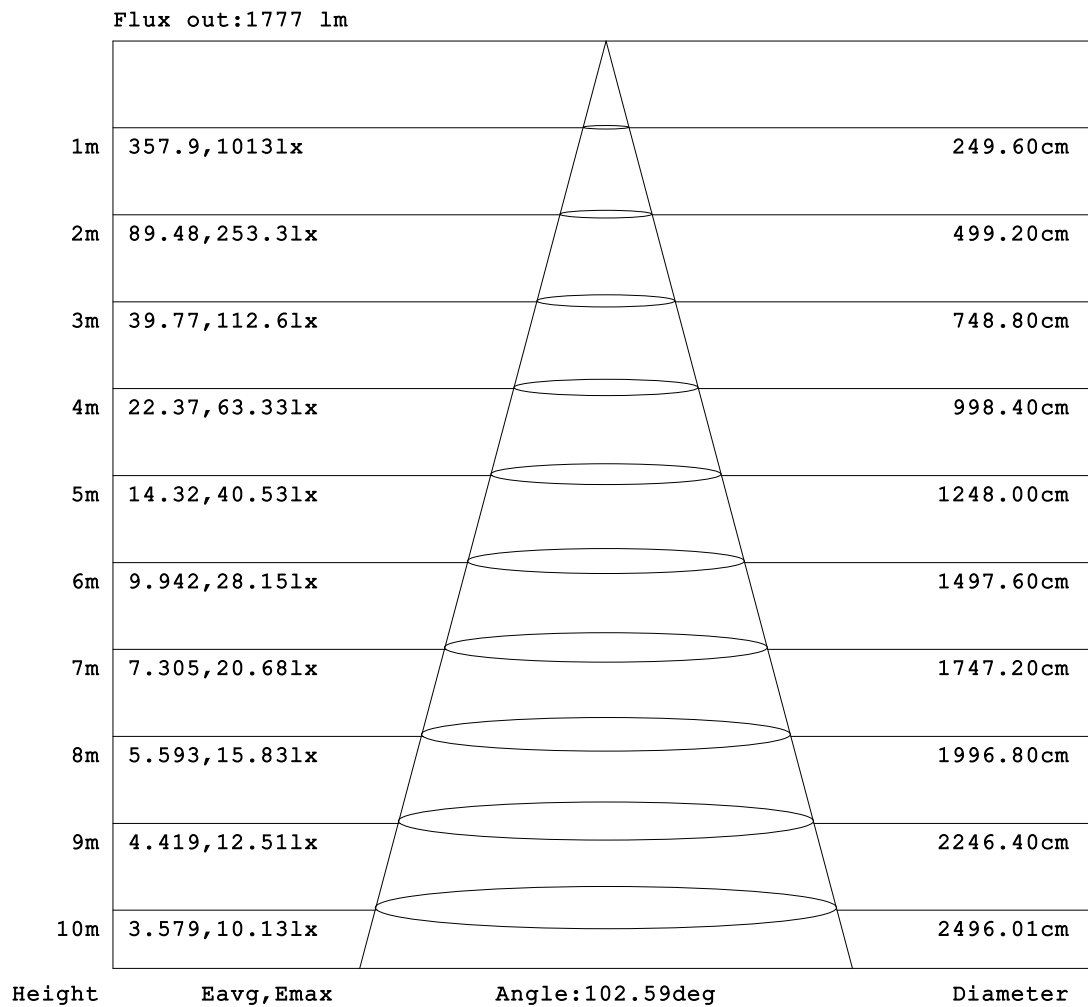


H(β) Range:-90 - 90DEG
 H(β) Interval: 2.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:29 November 2022

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



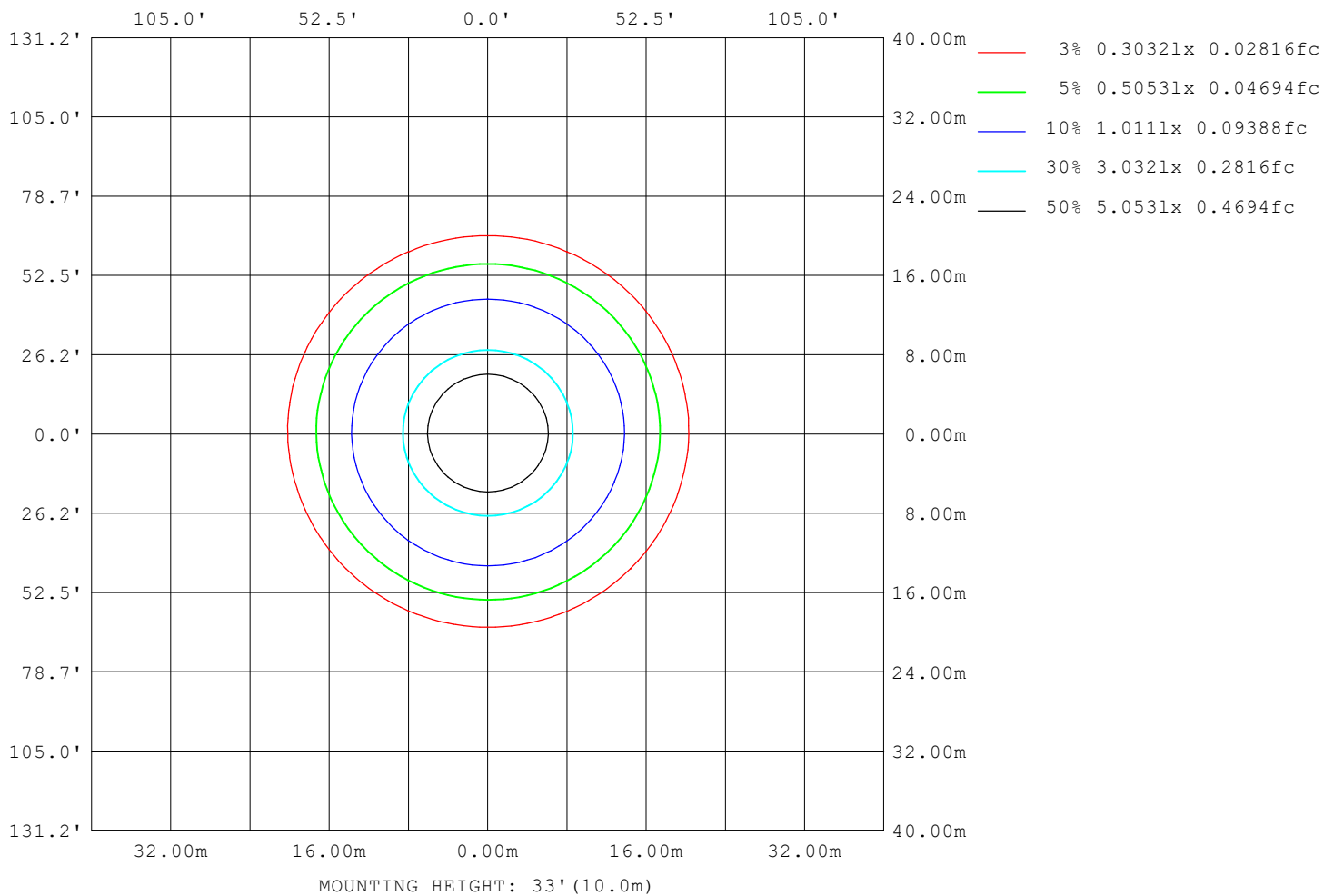
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 2.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 29 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/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:29 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/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 616 x 75 x 35	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.:	Shielding Angle:

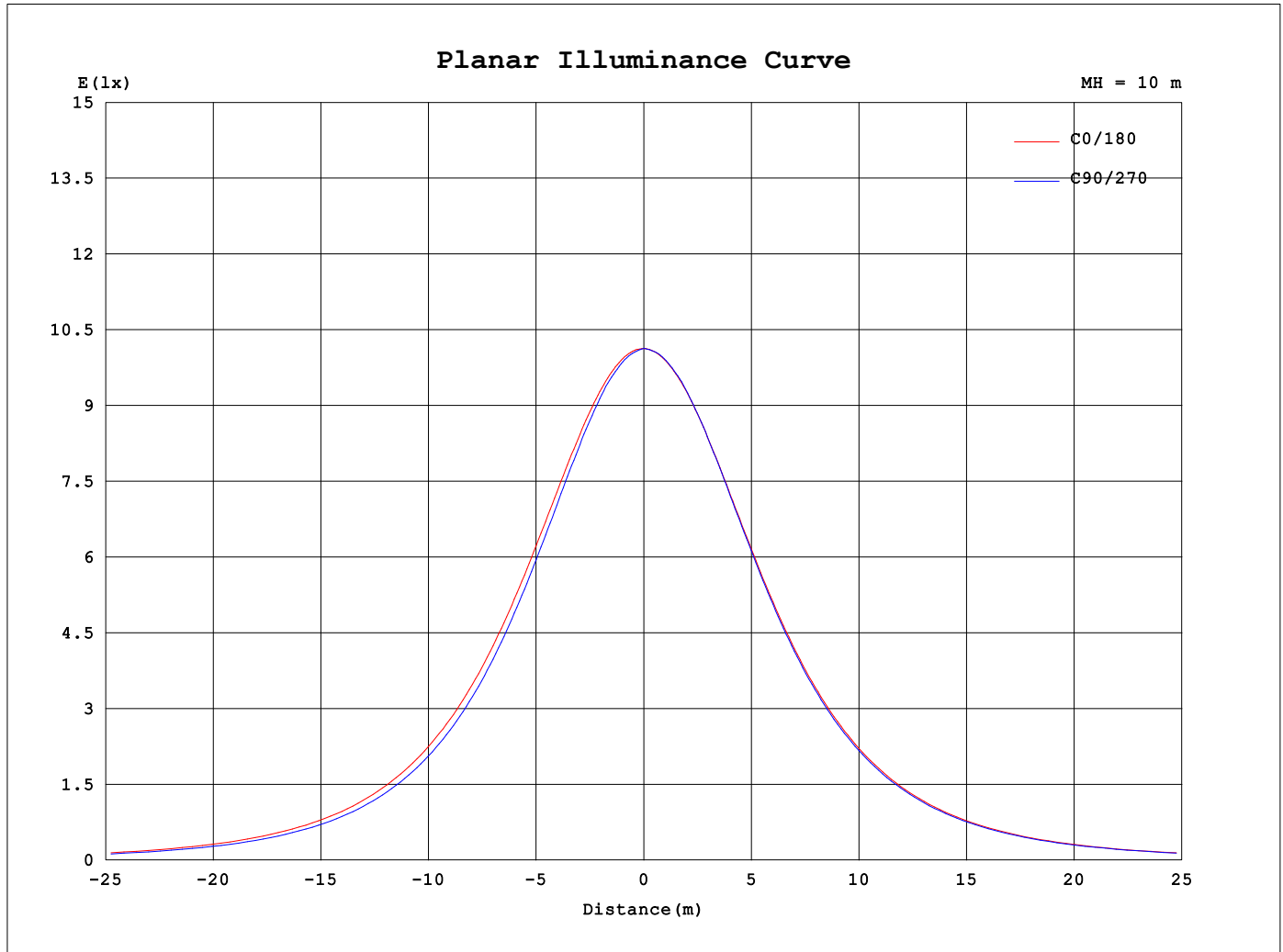
AvgL	cd/m2
L_0~180 (65) av	24000
L_0~180 (75) av	21359
L_0~180 (85) av	14008
L_90~270 (65) av	21987
L_90~270 (75) av	18824
L_90~270 (85) av	8270
L_45 (65) av	22793
L_45 (75) av	19752
L_45 (85) av	13458

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:29 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:29 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:

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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:
```