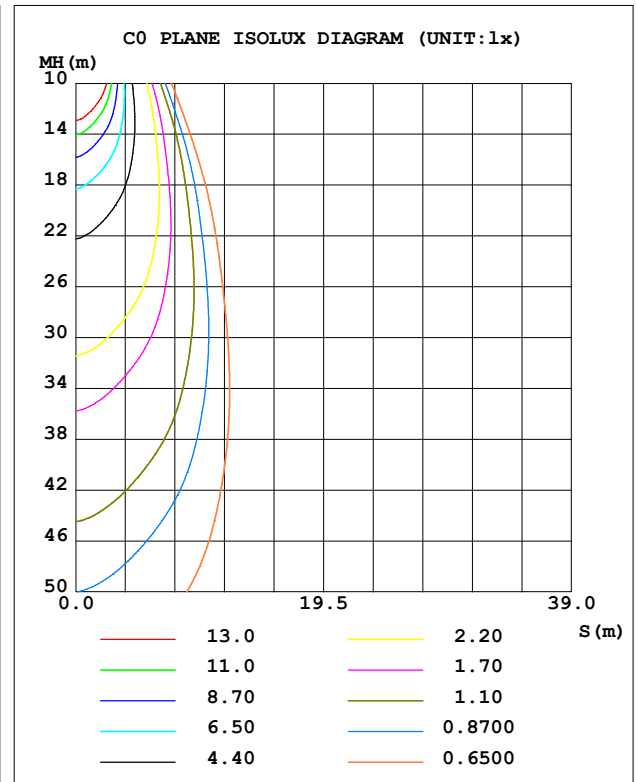
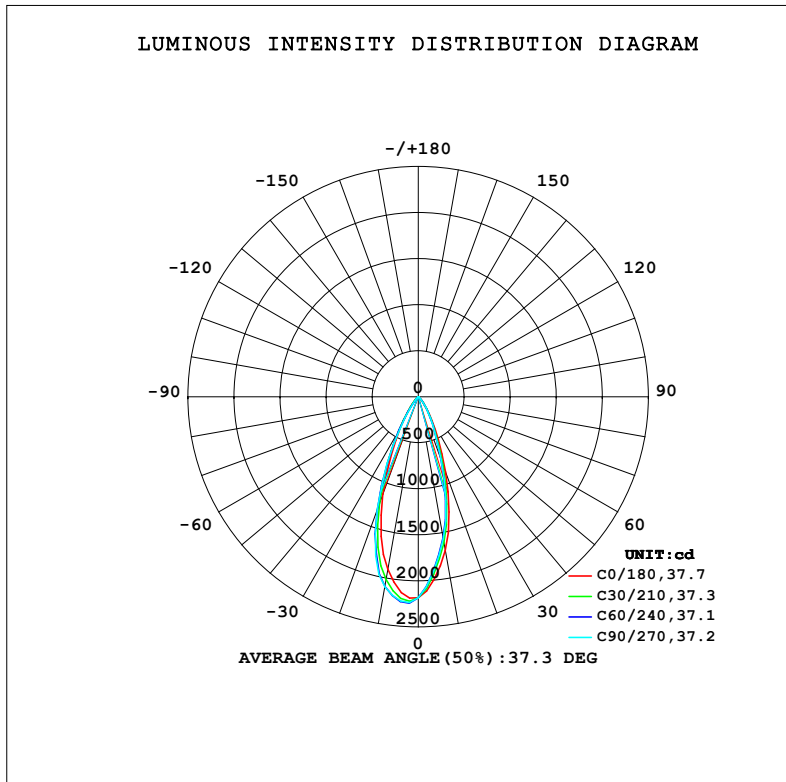


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93M20FGL1240/BL	Imax (cd)	2242	S/MH (C0/180)	0.65
NOMINAL POWER (W)	12	LOR (%)	117.6	S/MH (C90/270)	0.68
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1023.5	η UP, DN (C0-180)	0.0, 51.3
NOMINAL FLUX (lm)	870	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 66.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	117.6	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 09 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	1697	1578	1566	1674	1902	2060	2096	1956	0- 10	189.1	189.1	18.5, 21.7
20	866.8	758.4	723.9	854.8	1127	1276	1300	1148	10- 20	395.9	585.0	57.2, 67.2
30	303.7	276.2	266.0	303.6	406.8	431.5	401.4	386.9	20- 30	286.3	871.3	85.1, 100
40	88.32	86.29	79.34	86.34	104.9	84.67	59.56	83.53	30- 40	115.6	986.9	96.4, 113
50	16.92	16.84	13.24	18.45	24.19	14.85	6.300	13.41	40- 50	33.37	1020	99.7, 117
60	0.2130	0.1878	0.1764	0.2149	0.0681	0.0721	0.0816	0.0585	50- 60	3.114	1023	100, 118
70	0.0792	0.0653	0.0543	0.0734	0.0245	0.0299	0.0381	0.0245	60- 70	0.0853	1023	100, 118
80	0.0164	0.0095	0	0.0123	0.0136	0.0163	0.0190	0.0150	70- 80	0.0296	1024	100, 118
90	0	0	0	0	0.0136	0.0109	0.0109	0.0122	80- 90	0.0094	1024	100, 118
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): 1009.2 lm

%lum = 98.6%

%lamp = 116.0%

Conical surface Flux(130deg): 1023.5 lm

%lum = 100.0%

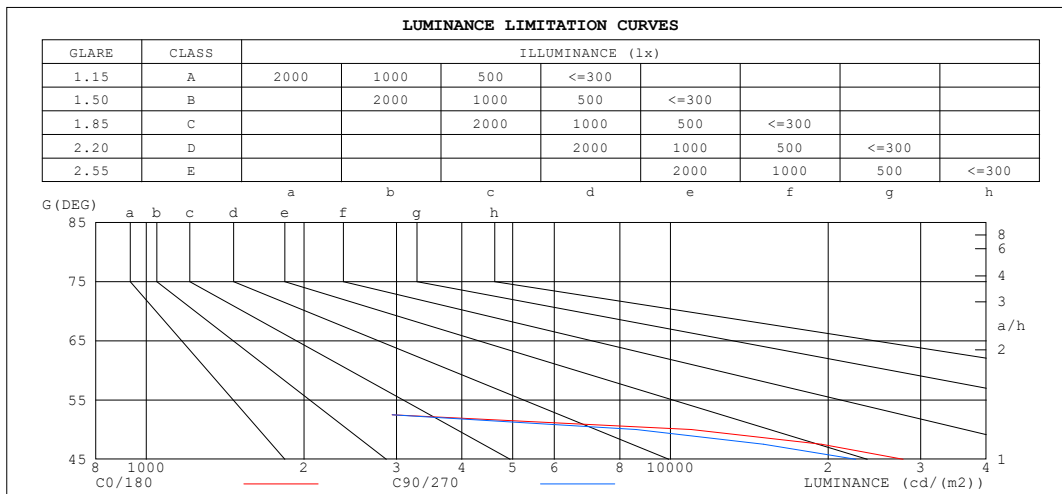
%lamp = 117.6%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:09 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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	13	0
80	39	0
75	70	31
70	96	66
65	129	99
60	177	147
55	293	333
50	10951	8596
45	27781	22553

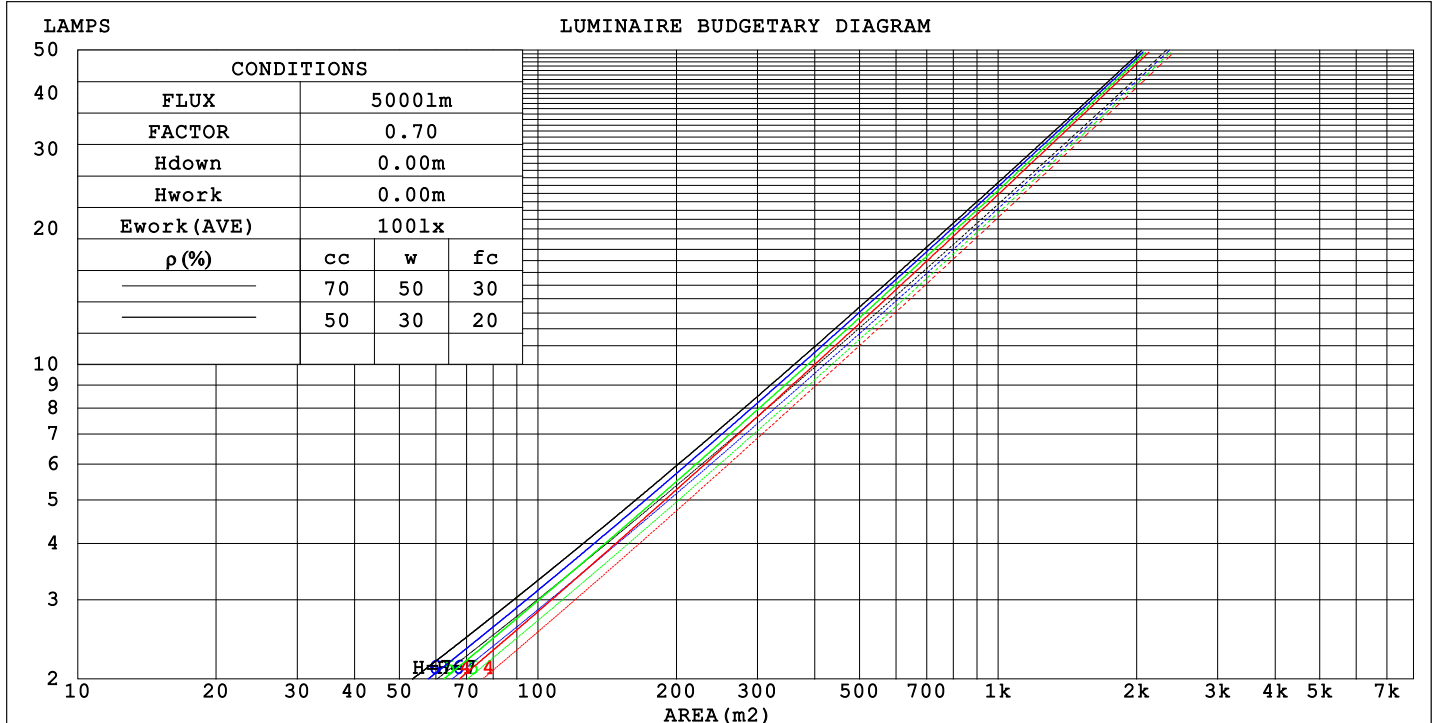
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 09 November 2022

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	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															



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:09 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:

WEC AND CCEC

NAME: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	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	.186	.106	.034	.178	.102	.032	.163	.094	.030	.150	.086	.028	.137	.080	.026	
2.0	.176	.096	.030	.169	.093	.029	.157	.087	.027	.146	.082	.026	.135	.077	.024	
3.0	.167	.089	.027	.161	.086	.026	.151	.082	.025	.141	.077	.024	.132	.073	.023	
4.0	.158	.082	.024	.153	.080	.024	.144	.077	.023	.136	.073	.022	.129	.070	.021	
5.0	.150	.077	.022	.146	.075	.022	.139	.072	.021	.132	.069	.021	.125	.067	.020	
6.0	.143	.072	.021	.140	.071	.020	.133	.068	.020	.127	.066	.019	.121	.064	.019	
7.0	.137	.068	.019	.134	.067	.019	.128	.065	.019	.123	.063	.018	.117	.061	.018	
8.0	.131	.064	.018	.128	.063	.018	.123	.062	.018	.118	.060	.017	.114	.058	.017	
9.0	.126	.061	.017	.123	.060	.017	.119	.059	.017	.114	.057	.016	.110	.056	.016	
10.0	.121	.058	.016	.119	.057	.016	.115	.056	.016	.111	.055	.016	.107	.054	.015	

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	.224	.224	.224	.192	.192	.192	.131	.131	.131	.075	.075	.075	.024	.024	.024	
1.0	.200	.185	.172	.171	.159	.148	.117	.109	.102	.067	.063	.060	.022	.020	.019	
2.0	.180	.156	.136	.154	.134	.117	.106	.093	.082	.061	.054	.048	.020	.017	.016	
3.0	.164	.133	.109	.141	.115	.094	.097	.080	.066	.056	.047	.039	.018	.015	.013	
4.0	.151	.116	.089	.130	.100	.077	.089	.070	.054	.052	.041	.032	.017	.013	.011	
5.0	.140	.102	.073	.120	.088	.064	.083	.062	.045	.048	.036	.027	.015	.012	.009	
6.0	.131	.090	.062	.112	.078	.054	.078	.055	.038	.045	.032	.023	.015	.011	.007	
7.0	.123	.081	.052	.106	.070	.046	.073	.049	.032	.042	.029	.019	.014	.010	.006	
8.0	.116	.074	.045	.100	.064	.039	.069	.045	.028	.040	.026	.017	.013	.009	.005	
9.0	.110	.067	.039	.094	.059	.034	.065	.041	.024	.038	.024	.014	.012	.008	.005	
10.0	.104	.062	.034	.090	.054	.030	.062	.038	.021	.036	.022	.013	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:09 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: 93M20FGL1240/BL					TYPE:			WEIGHT: 1		
SPEC.:					DIM.: 220 x 108 x 20			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: paralelepiped			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	17.3	18.2	17.6	18.3	18.5	16.6	17.4	16.8	17.5	17.7
3H	17.2	17.9	17.4	18.1	18.3	16.4	17.1	16.6	17.3	17.5
4H	17.1	17.8	17.4	18.0	18.2	16.3	17.0	16.6	17.2	17.5
6H	17.0	17.7	17.3	17.9	18.2	16.2	16.9	16.5	17.1	17.4
8H	17.0	17.6	17.3	17.9	18.1	16.2	16.8	16.5	17.1	17.3
12H	16.9	17.5	17.2	17.8	18.1	16.1	16.8	16.4	17.0	17.3
4H 2H	17.1	17.8	17.4	18.0	18.2	16.3	17.0	16.6	17.2	17.5
3H	16.9	17.5	17.2	17.8	18.1	16.1	16.8	16.4	17.0	17.3
4H	16.8	17.4	17.2	17.7	18.0	16.0	16.6	16.4	16.9	17.2
6H	16.7	17.2	17.1	17.6	17.9	15.9	16.4	16.3	16.8	17.1
8H	16.7	17.1	17.1	17.5	17.9	15.9	16.3	16.3	16.7	17.1
12H	16.6	17.0	17.0	17.4	17.8	15.8	16.3	16.2	16.6	17.0
8H 4H	16.7	17.1	17.1	17.5	17.9	15.9	16.3	16.3	16.7	17.1
6H	16.6	17.0	17.0	17.3	17.8	15.8	16.2	16.2	16.6	17.0
8H	16.5	16.8	17.0	17.3	17.7	15.7	16.1	16.2	16.5	16.9
12H	16.5	16.7	16.9	17.2	17.7	15.7	16.0	16.1	16.4	16.9
12H 4H	16.6	17.0	17.0	17.4	17.8	15.8	16.3	16.2	16.6	17.0
6H	16.5	16.8	17.0	17.3	17.7	15.7	16.1	16.2	16.5	16.9
8H	16.5	16.7	16.9	17.2	17.7	15.7	16.0	16.1	16.4	16.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.0 / -30.9					+ 3.1 / -30.9				
1.5H	+ 4.8 / -30.1					+ 5.2 / -28.9				
2.0H	+ 7.5 / -28.0					+ 7.6 / -25.4				

CIE Pub.117, 870.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.5)
Area: 0.0024 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:09 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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

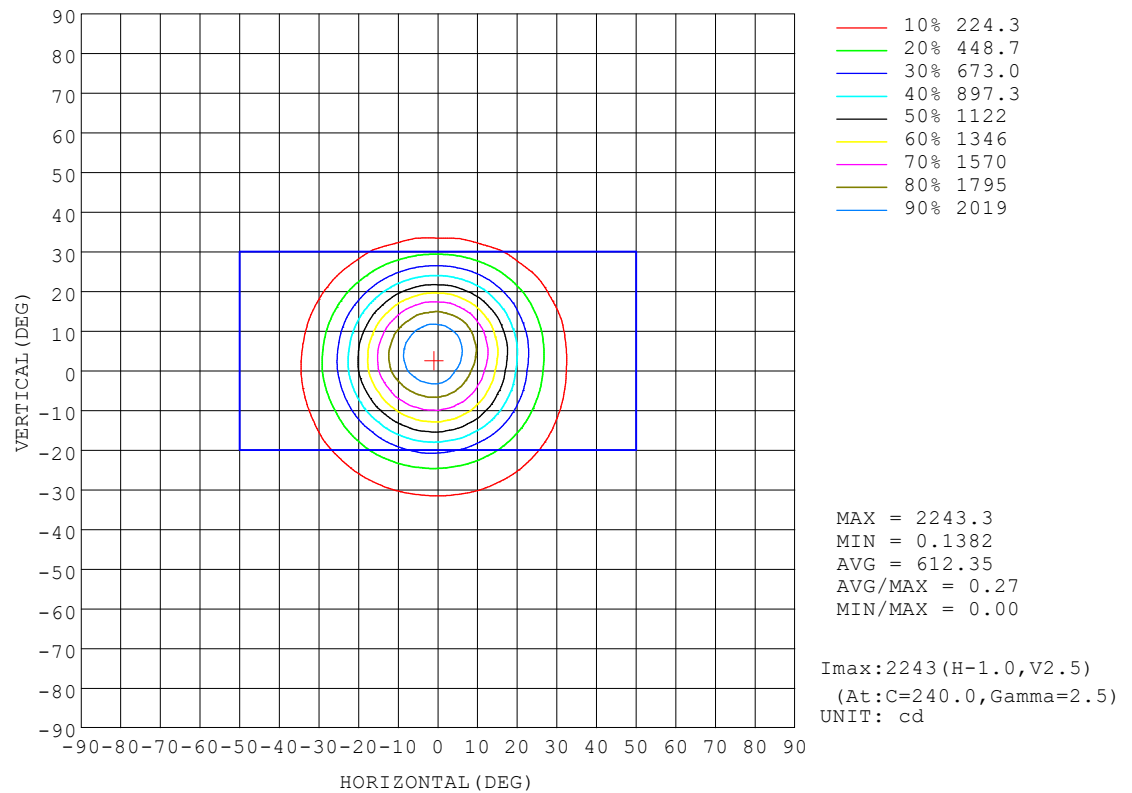
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	105	98	94	104	98	94	104	97	94	90
0.80	114	107	103	113	107	103	111	106	102	98
1.00	118	112	108	117	112	108	116	111	107	103
1.25	123	117	113	122	117	113	119	115	112	107
1.50	126	121	117	124	120	116	122	118	115	110
2.00	129	124	121	127	123	120	124	121	118	112
2.50	130	126	123	129	125	122	125	122	120	113
3.00	132	128	125	130	127	124	126	124	122	114
4.00	134	131	129	132	129	127	128	126	124	116
5.00	136	133	131	133	131	129	129	127	126	117
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: 09 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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

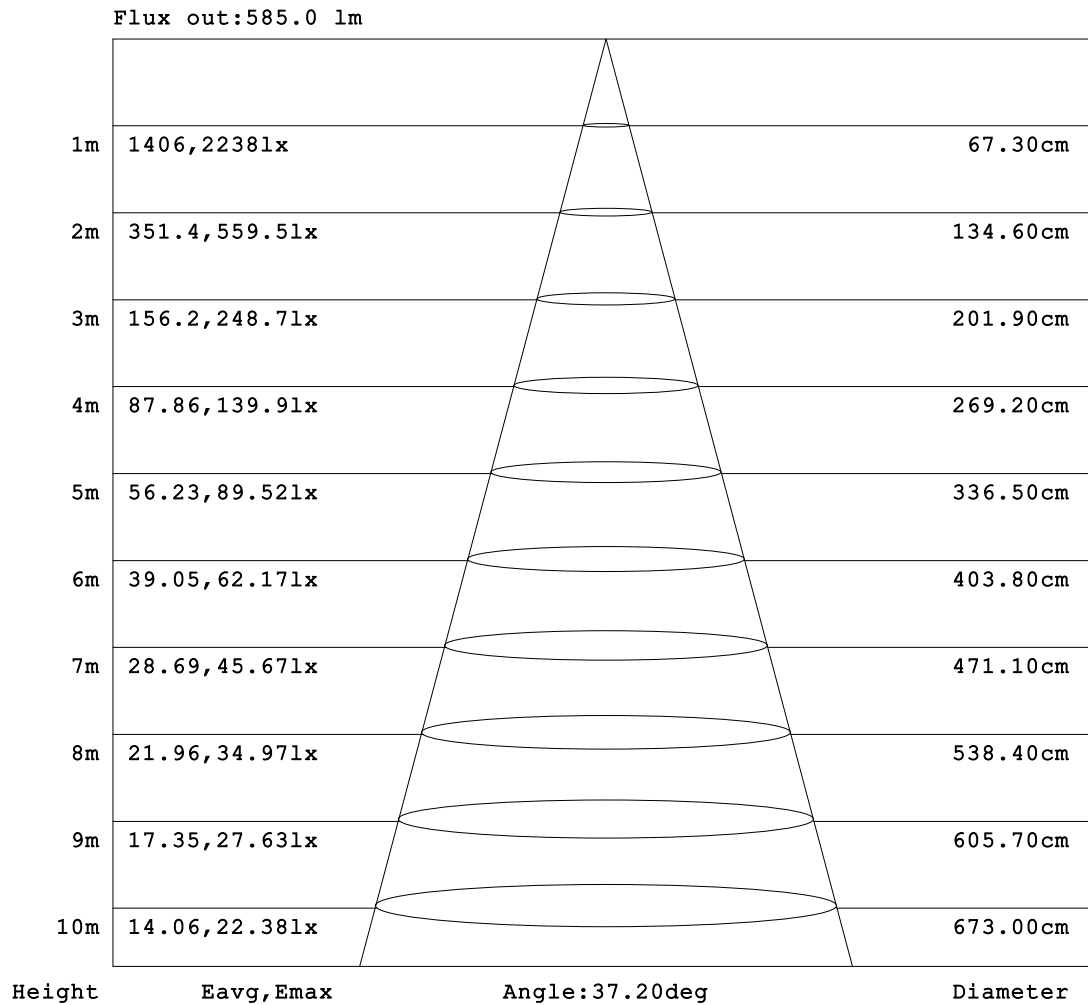


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:09 November 2022

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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



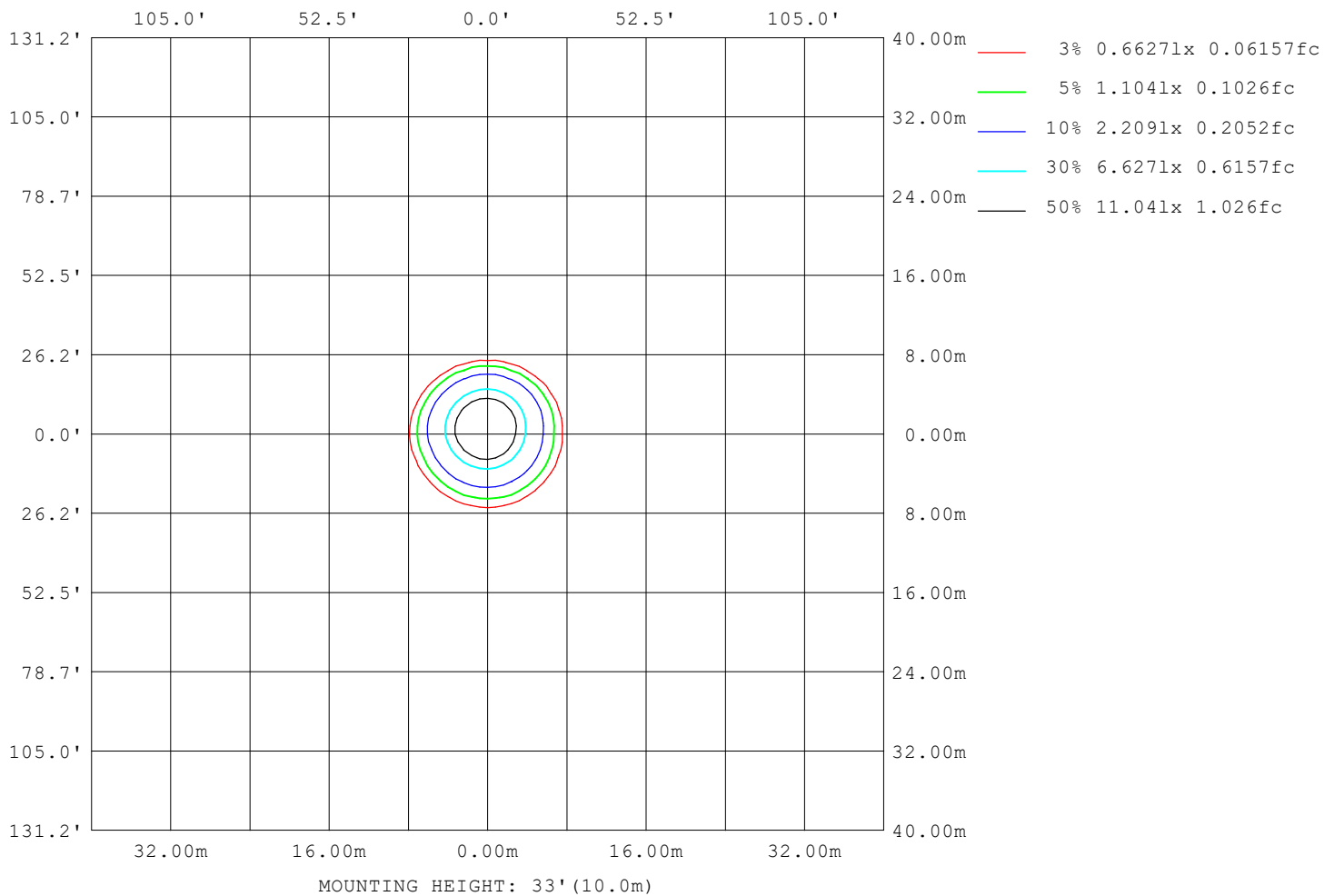
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 09 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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 09 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: 93M20FGL1240/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 220 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

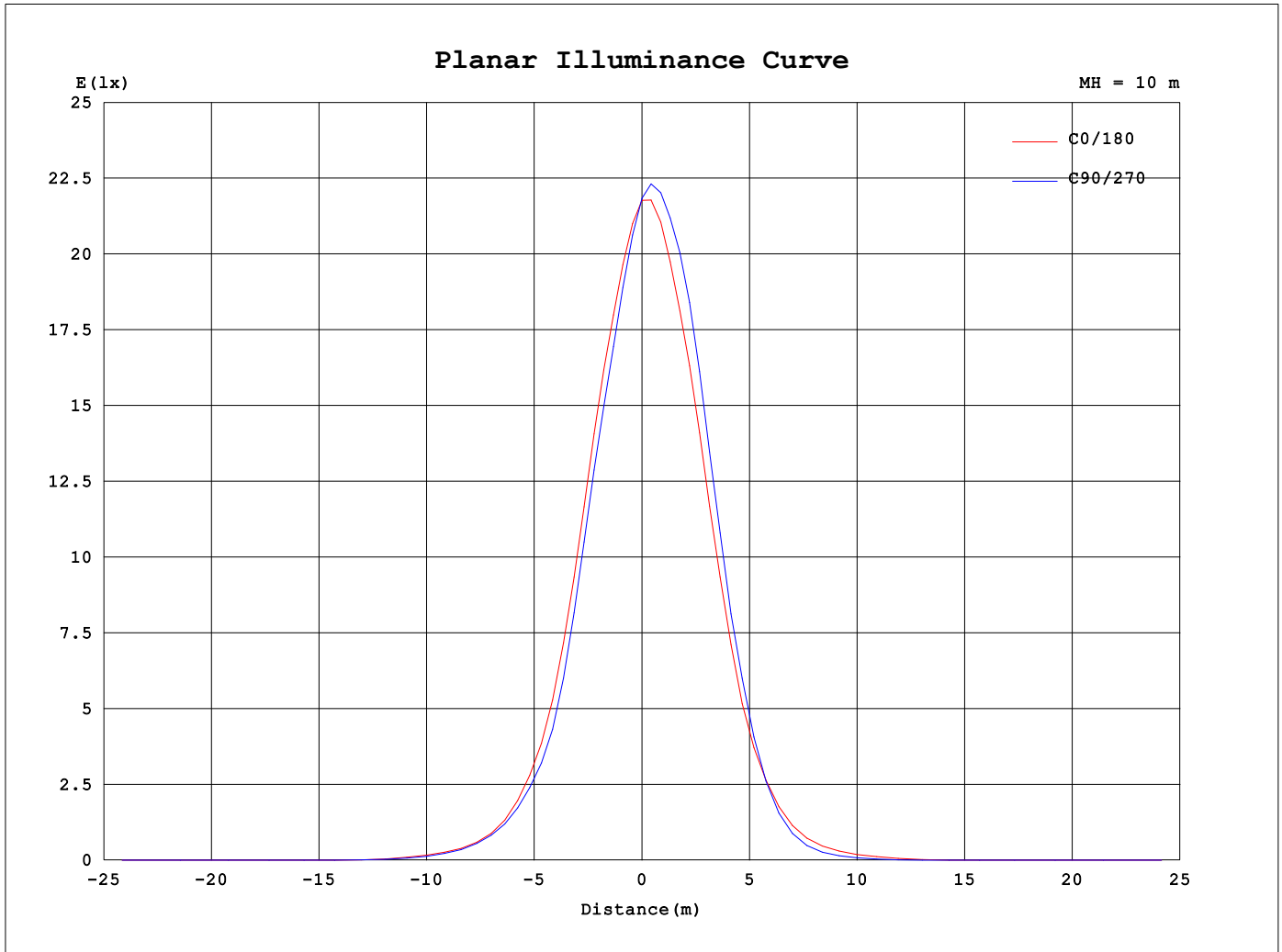
AvgL	cd/m2
L_0~180 (65) av	85
L_0~180 (75) av	46
L_0~180 (85) av	39
L_90~270 (65) av	75
L_90~270 (75) av	37
L_90~270 (85) av	32
L_45 (65) av	79
L_45 (75) av	40
L_45 (85) av	37

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:09 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: 09 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:

```