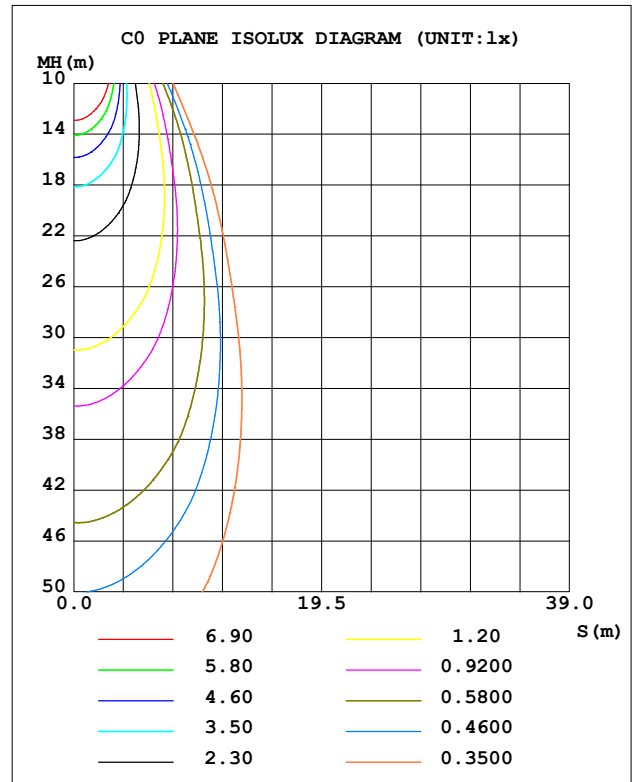
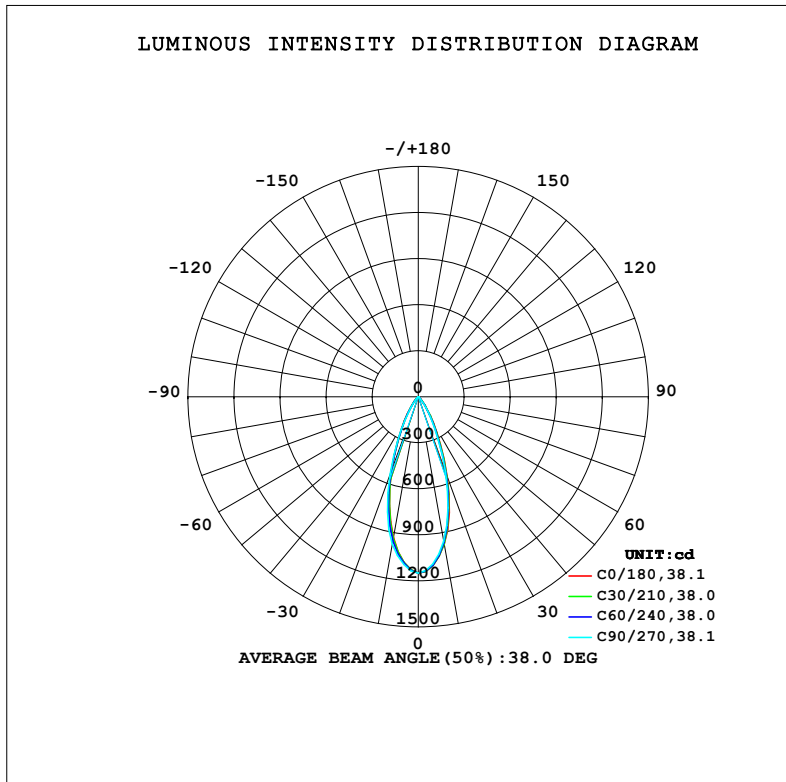


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93M20FGL0640/BL	Imax (cd)	1149	S/MH (C0/180)	0.60
NOMINAL POWER (W)	6	LOR (%)	109.0	S/MH (C90/270)	0.62
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	544.91	η UP, DN (C0-180)	0.0, 54.1
NOMINAL FLUX (lm)	500	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 54.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	109.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 08 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	974.9	970.9	956.7	937.5	934.9	944.9	975.6	993.4	0- 10	100.2	100.2	18.4,20
20	553.9	541.9	520.9	514.8	515.8	516.4	537.1	570.8	10- 20	208.1	308.3	56.6,61.7
30	201.1	191.5	172.7	179.1	184.6	178.5	178.2	205.8	20- 30	152.4	460.7	84.5,92.1
40	54.45	48.34	40.93	43.92	48.34	42.48	38.77	48.79	30- 40	63.10	523.8	96.1,105
50	13.55	11.42	6.963	9.442	11.05	9.084	6.494	11.15	40- 50	18.55	542.3	99.5,108
60	0.1114	0.0925	0.0736	0.0858	0	0.0082	0.0164	0.0068	50- 60	2.547	544.9	100,109
70	0.0217	0.0109	0	0.0082	0	0	0.0000	0	60- 70	0.0233	544.9	100,109
80	0	0	0	0	0	0	0	0	70- 80	0.0015	544.9	100,109
90	0	0	0	0	0	0	0	0	80- 90	0	544.9	100,109
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): 535.95 lm

%lum = 98.4%

%lamp = 107.2%

Conical surface Flux(130deg): 544.9 lm

%lum = 100.0%

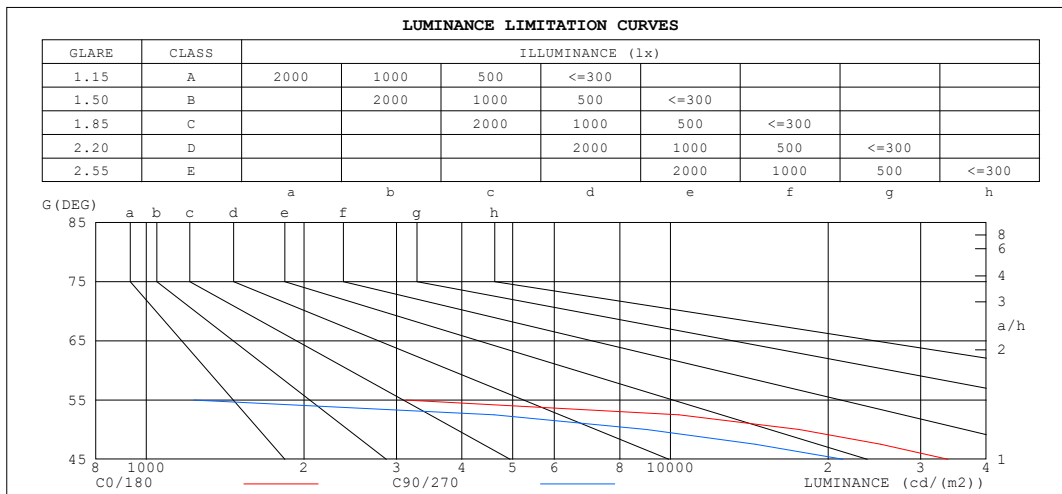
%lamp = 109.0%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 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	0	0
80	0	0
75	0	0
70	53	0
65	113	54
60	186	122
55	3129	1233
50	17604	9014
45	33827	21315

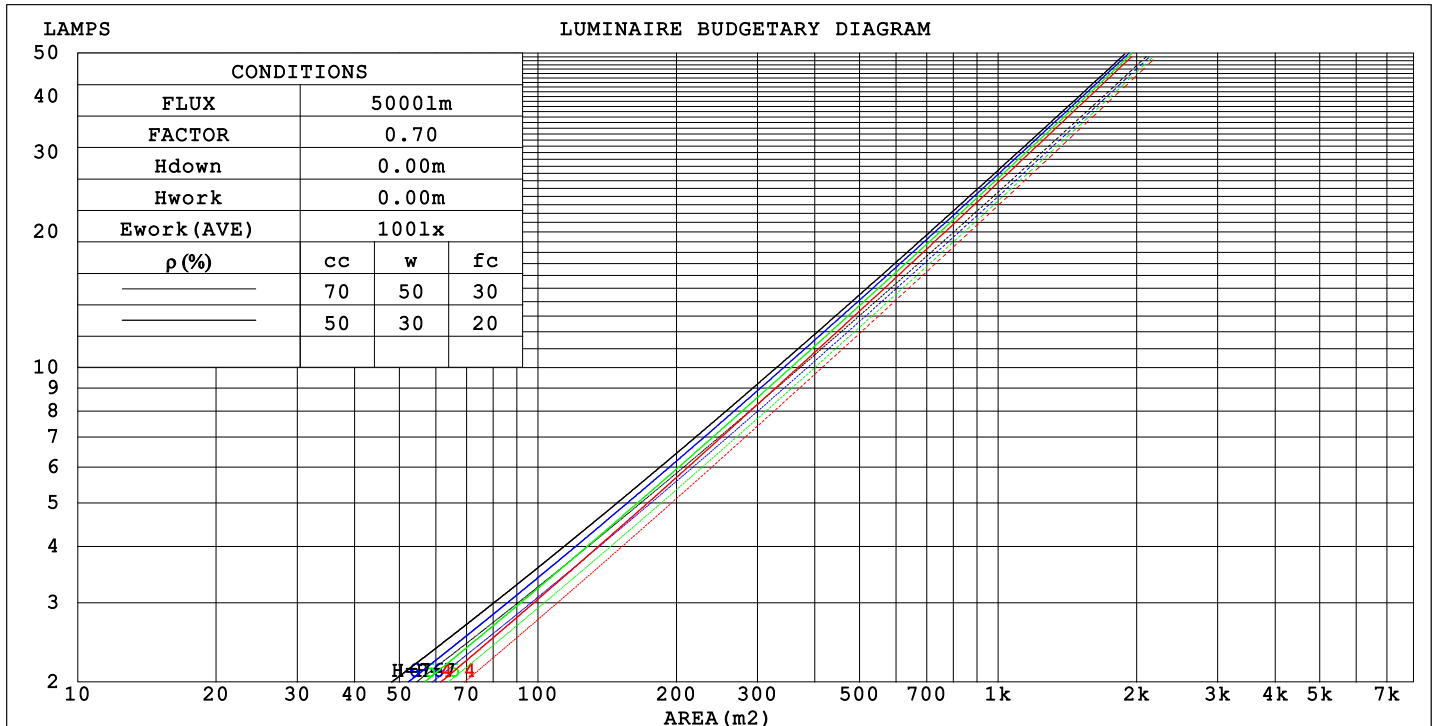
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 08 November 2022

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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 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: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 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	.173	.098	.031	.166	.095	.030	.152	.087	.028	.140	.081	.026	.128	.074	.024	
2.0	.164	.090	.028	.158	.087	.027	.146	.081	.025	.136	.076	.024	.126	.071	.023	
3.0	.155	.083	.025	.150	.080	.024	.140	.076	.023	.132	.072	.022	.123	.068	.021	
4.0	.147	.076	.022	.143	.075	.022	.135	.071	.021	.127	.068	.021	.120	.065	.020	
5.0	.140	.071	.021	.136	.070	.020	.129	.067	.020	.123	.065	.019	.116	.062	.019	
6.0	.134	.067	.019	.130	.066	.019	.124	.064	.018	.118	.061	.018	.113	.059	.018	
7.0	.128	.063	.018	.125	.062	.018	.119	.060	.017	.114	.059	.017	.109	.057	.017	
8.0	.122	.060	.017	.120	.059	.017	.115	.057	.016	.110	.056	.016	.106	.054	.016	
9.0	.117	.057	.016	.115	.056	.016	.111	.055	.016	.107	.053	.015	.103	.052	.015	
10.0	.113	.054	.015	.111	.053	.015	.107	.052	.015	.103	.051	.015	.100	.050	.014	

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	.208	.208	.208	.177	.177	.177	.121	.121	.121	.070	.070	.070	.022	.022	.022	
1.0	.185	.172	.159	.158	.147	.137	.108	.101	.095	.062	.059	.055	.020	.019	.018	
2.0	.167	.145	.125	.143	.124	.108	.098	.086	.076	.057	.050	.044	.018	.016	.014	
3.0	.152	.124	.101	.131	.107	.087	.090	.074	.061	.052	.043	.036	.017	.014	.012	
4.0	.140	.107	.082	.120	.093	.071	.083	.065	.050	.048	.038	.030	.015	.012	.010	
5.0	.130	.094	.068	.112	.082	.059	.077	.057	.042	.045	.033	.025	.014	.011	.008	
6.0	.121	.084	.057	.104	.073	.050	.072	.051	.035	.042	.030	.021	.013	.010	.007	
7.0	.114	.075	.048	.098	.065	.042	.068	.046	.030	.039	.027	.018	.013	.009	.006	
8.0	.107	.068	.042	.093	.059	.036	.064	.042	.026	.037	.025	.015	.012	.008	.005	
9.0	.102	.063	.036	.088	.054	.031	.061	.038	.022	.035	.023	.013	.011	.007	.004	
10.0	.097	.058	.032	.083	.050	.028	.058	.035	.020	.034	.021	.012	.011	.007	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FGL0640/BL						TYPE:			WEIGHT: 1		
SPEC.:						DIM.: 116 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	20.6	21.5	20.9	21.6	21.8	19.6	20.4	19.8	20.6	20.7
	3H	20.5	21.2	20.7	21.4	21.6	19.4	20.2	19.7	20.4	20.6
	4H	20.4	21.1	20.7	21.3	21.5	19.4	20.1	19.6	20.3	20.5
	6H	20.3	21.0	20.6	21.2	21.5	19.3	19.9	19.6	20.2	20.4
	8H	20.3	20.9	20.6	21.2	21.4	19.2	19.9	19.5	20.1	20.4
	12H	20.2	20.8	20.5	21.1	21.4	19.2	19.8	19.5	20.1	20.3
4H	2H	20.4	21.1	20.7	21.3	21.5	19.4	20.1	19.6	20.3	20.5
	3H	20.2	20.8	20.5	21.1	21.4	19.2	19.8	19.5	20.1	20.3
	4H	20.1	20.7	20.5	21.0	21.3	19.1	19.7	19.4	20.0	20.3
	6H	20.0	20.5	20.4	20.8	21.2	19.0	19.5	19.4	19.8	20.2
	8H	20.0	20.4	20.4	20.8	21.1	18.9	19.4	19.3	19.8	20.1
	12H	19.9	20.3	20.3	20.7	21.1	18.9	19.3	19.3	19.7	20.1
8H	4H	20.0	20.4	20.4	20.8	21.1	18.9	19.4	19.3	19.8	20.1
	6H	19.9	20.2	20.3	20.6	21.0	18.8	19.2	19.3	19.6	20.0
	8H	19.8	20.1	20.3	20.6	21.0	18.8	19.1	19.2	19.5	20.0
	12H	19.7	20.0	20.2	20.5	20.9	18.7	19.0	19.2	19.4	19.9
12H	4H	19.9	20.3	20.3	20.7	21.1	18.9	19.3	19.3	19.7	20.1
	6H	19.8	20.1	20.3	20.6	21.0	18.8	19.1	19.2	19.5	20.0
	8H	19.7	20.0	20.2	20.5	20.9	18.7	19.0	19.2	19.4	19.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 3.4 / -32.6					+ 3.2 / -32.5				
1.5H		+ 5.0 / -29.4					+ 5.1 / -27.3				
2.0H		+ 6.8 / -33.9					+ 6.6 / -28.4				

CIE Pub.117, 500.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.4)
Area: 0.0012 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

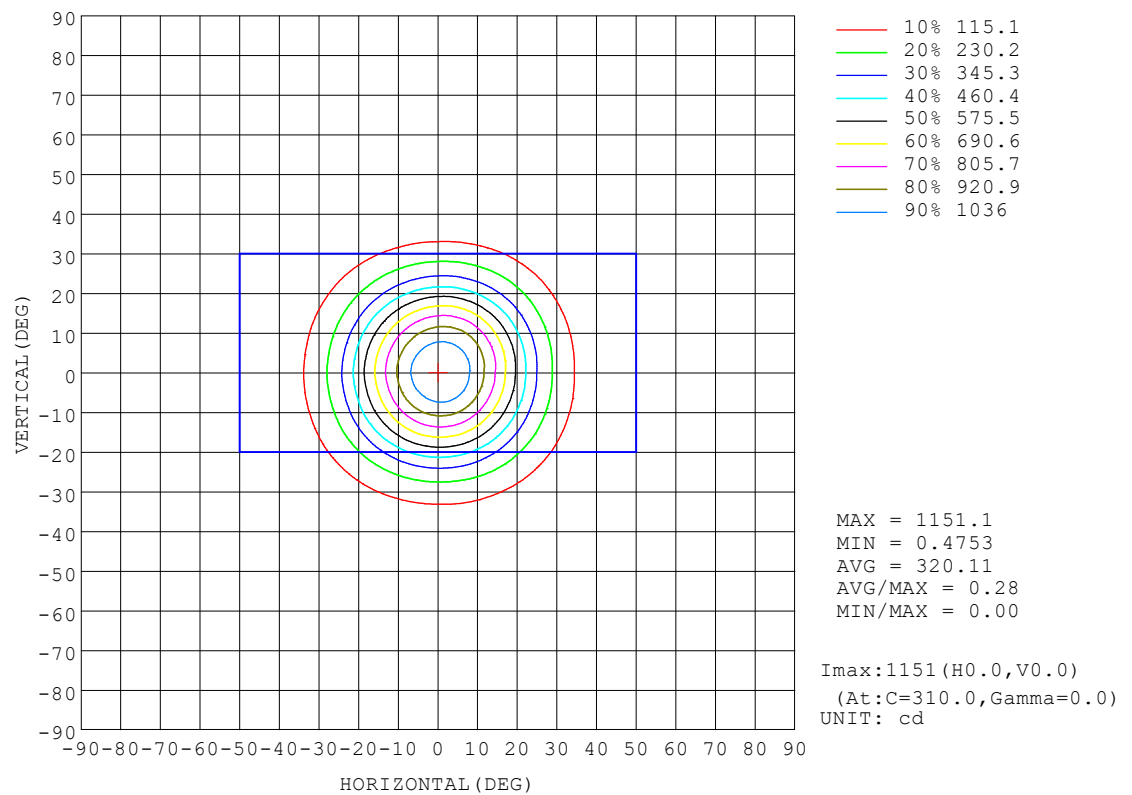
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	97	91	87	97	90	87	96	90	86	83
0.80	105	99	95	104	99	95	103	98	95	91
1.00	110	104	100	109	103	100	107	103	99	95
1.25	114	108	105	113	108	104	111	107	104	99
1.50	117	112	108	115	111	108	113	109	107	102
2.00	119	115	112	118	114	111	115	112	109	104
2.50	121	117	114	119	116	113	116	113	111	105
3.00	122	119	116	120	117	115	117	114	113	106
4.00	124	122	119	122	120	118	118	116	115	107
5.00	126	123	122	123	121	120	119	118	116	108
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: 08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

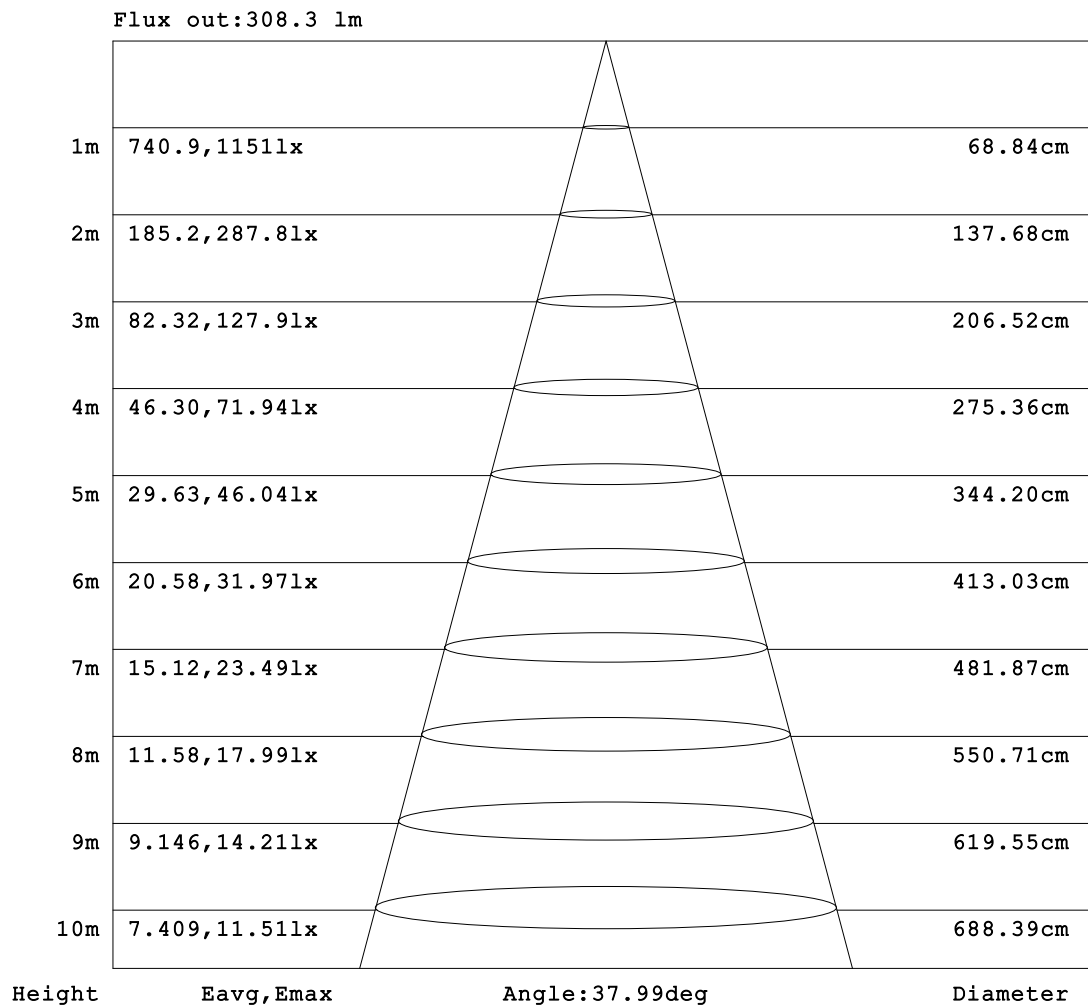


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:08 November 2022

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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



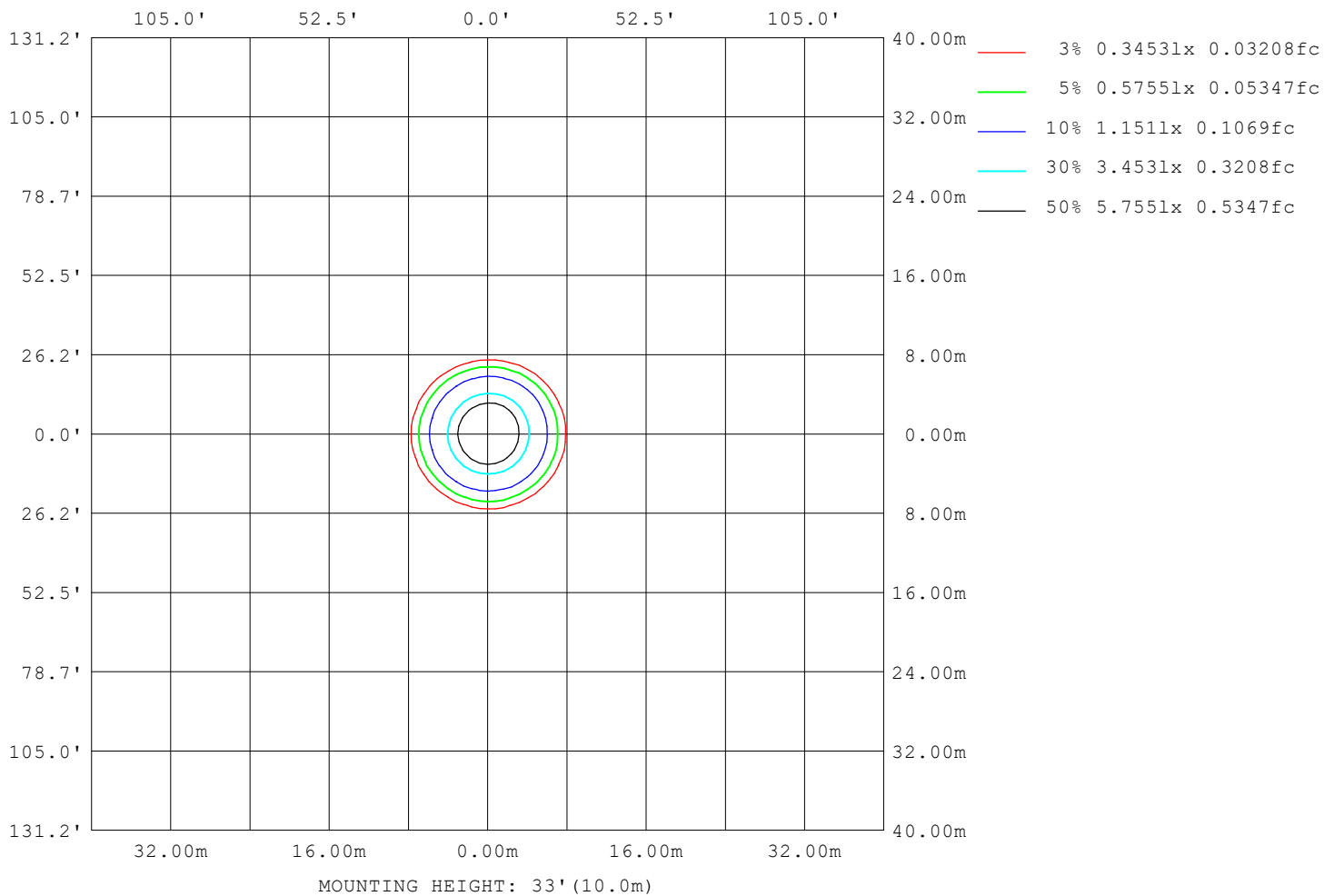
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 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: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 08 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: 93M20FGL0640/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 116 x 108 x 20	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

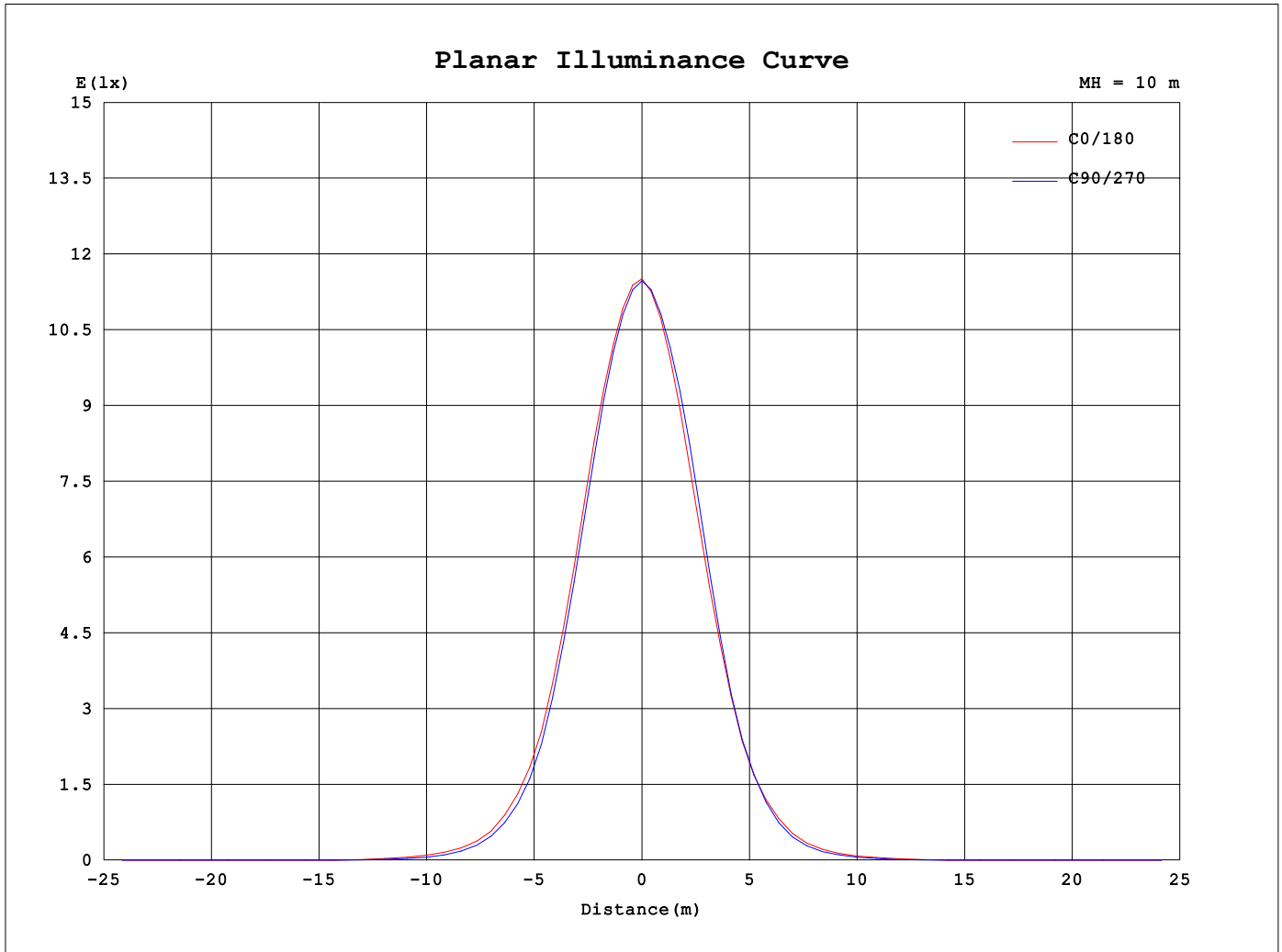
AvgL	cd/m2
L_0~180 (65) av	56
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	32
L_90~270 (75) av	0
L_90~270 (85) av	0
L_45 (65) av	43
L_45 (75) av	0
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 08 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:

```

```

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:

```