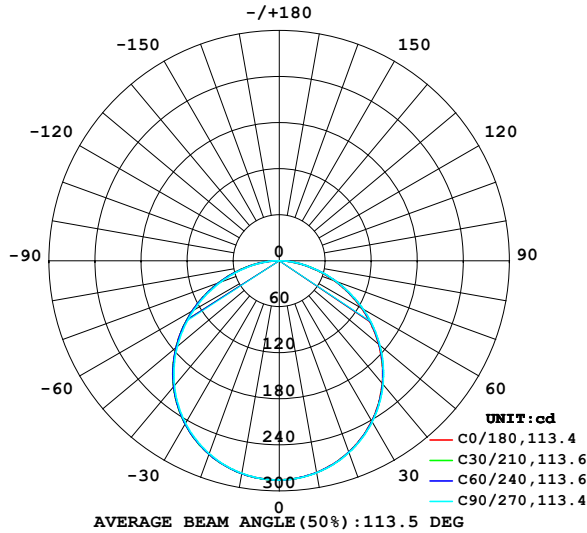


LUMINAIRE PHOTOMETRIC TEST REPORT

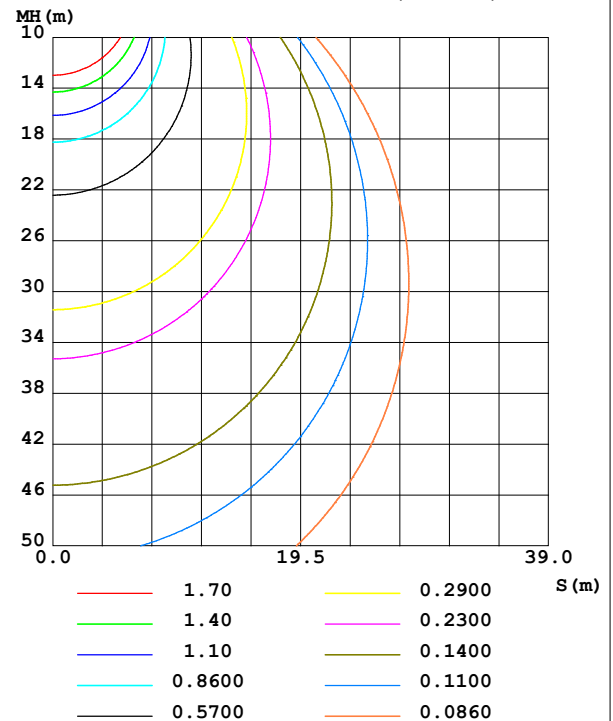
NAME: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99XLED611	I _{max} (cd)	285.7	S/MH (C0/180)	1.28
NOMINAL POWER (W)	12	LOR (%)	98.7	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	828.90	η UP, DN (C0-180)	0.0, 48.9
NOMINAL FLUX (lm)	840	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	98.7	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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	280.1	280.2	280.5	280.8	281.5	281.6	281.2	280.8	0- 10	27.04	27.04	3.26,3.22
20	265.2	265.5	265.9	266.5	268.1	268.1	267.4	266.5	10- 20	77.60	104.6	12.6,12.5
30	241.2	241.7	242.4	243.2	245.4	245.5	244.3	243.1	20- 30	118.0	222.7	26.9,26.5
40	208.9	209.5	210.3	211.4	214.2	214.2	212.6	211.1	30- 40	142.9	365.5	44.1,43.5
50	169.2	170.2	171.1	172.2	175.5	175.4	173.4	171.6	40- 50	148.6	514.2	62,61.2
60	124.0	125.4	126.4	127.3	131.1	130.9	128.5	126.6	50- 60	134.5	648.7	78.3,77.2
70	76.83	78.26	78.96	79.63	83.64	83.59	81.13	78.88	60- 70	102.8	751.4	90.7,89.5
80	32.18	33.51	34.07	34.60	38.12	38.10	35.76	33.66	70- 80	60.17	811.6	97.9,96.6
90	0.5020	0.4816	0.4742	0.5561	1.398	1.328	0.5368	0.4211	80- 90	17.32	828.9	100,98.7
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): 440.4 lm

%lum = 53.1%

%lamp = 52.4%

Conical surface Flux(130deg): 704.89 lm

%lum = 85.0%

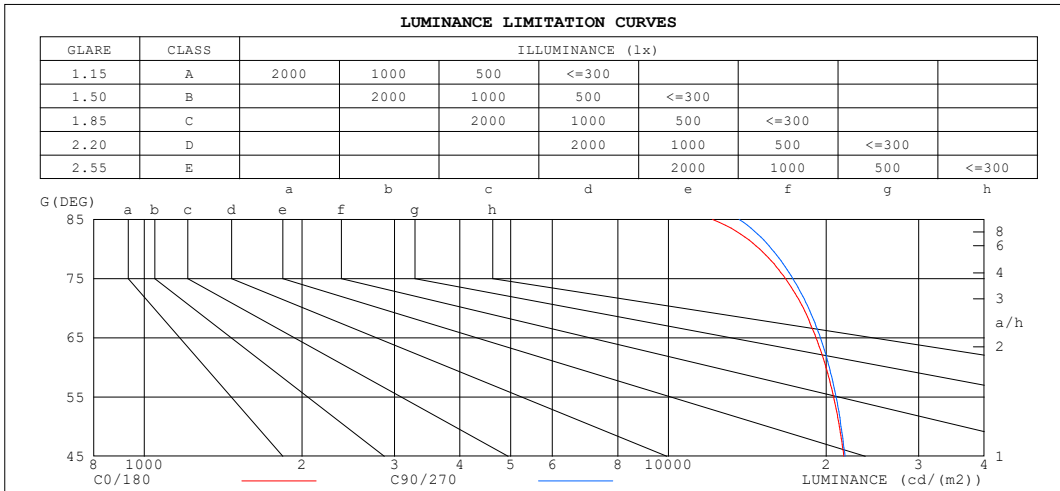
%lamp = 83.9%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12131	13635
80	14915	15725
75	16713	17272
70	18082	18503
65	19112	19485
60	19965	20265
55	20646	20882
50	21187	21339
45	21608	21710

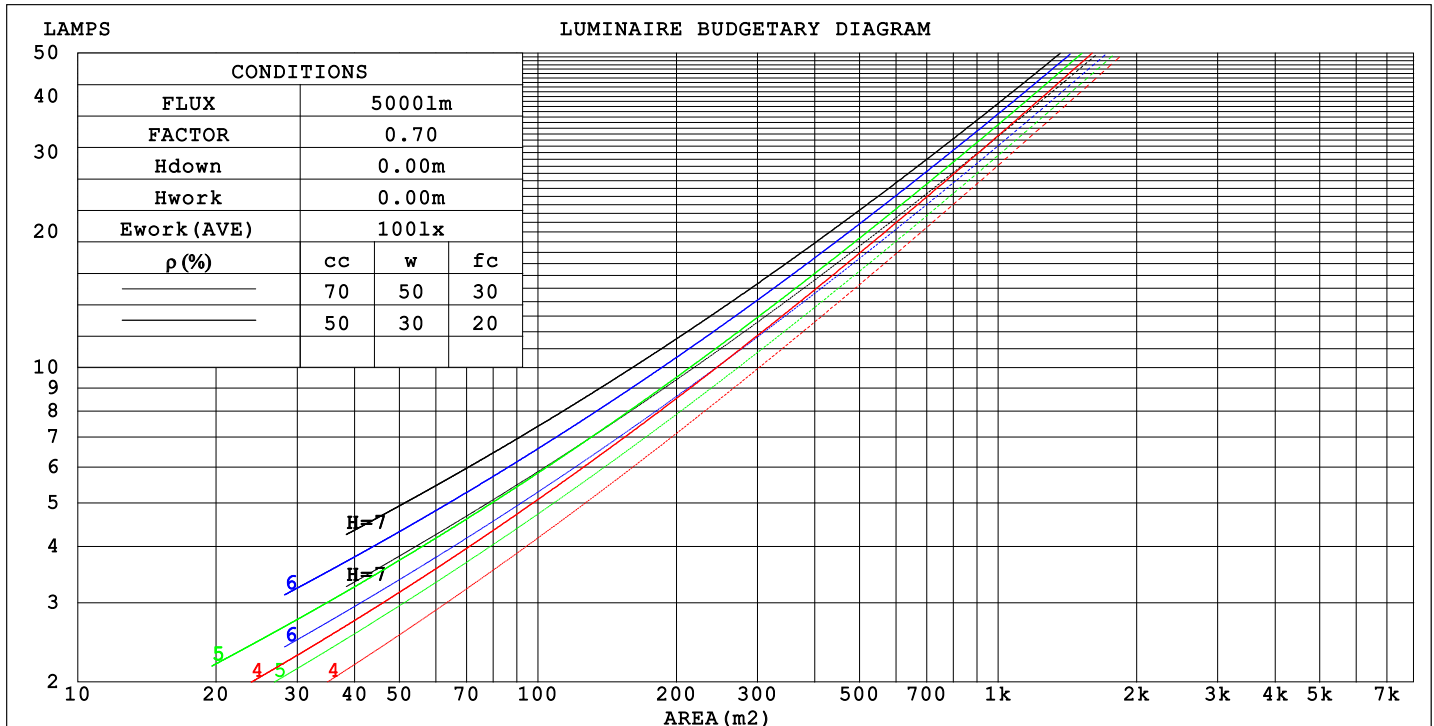
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 14 July 2022

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	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: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	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	.310	.176	.056	.303	.173	.055	.289	.166	.053	.277	.160	.051	.266	.154	.050	
2.0	.290	.159	.049	.284	.157	.048	.273	.152	.047	.262	.147	.046	.252	.143	.045	
3.0	.268	.143	.043	.263	.141	.042	.253	.137	.042	.243	.133	.041	.234	.130	.040	
4.0	.247	.129	.038	.243	.127	.038	.233	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.228	.116	.034	.224	.115	.034	.216	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.197	.097	.028	.194	.096	.027	.187	.095	.027	.181	.093	.027	.176	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.172	.083	.023	.170	.083	.023	.164	.081	.023	.160	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.021	.155	.076	.021	.151	.075	.021	.146	.074	.021	

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	.188	.188	.188	.161	.161	.161	.110	.110	.110	.063	.063	.063	.020	.020	.020	
1.0	.178	.154	.132	.152	.132	.114	.104	.091	.079	.060	.053	.046	.019	.017	.015	
2.0	.170	.130	.096	.146	.112	.083	.100	.078	.058	.058	.045	.034	.018	.015	.011	
3.0	.163	.113	.073	.139	.097	.063	.096	.068	.044	.055	.039	.026	.018	.013	.009	
4.0	.155	.100	.057	.133	.086	.050	.092	.060	.035	.053	.035	.021	.017	.011	.007	
5.0	.148	.089	.046	.127	.077	.040	.087	.054	.028	.051	.032	.017	.016	.010	.006	
6.0	.141	.081	.038	.121	.070	.034	.083	.049	.024	.048	.029	.014	.016	.009	.005	
7.0	.134	.074	.033	.115	.064	.028	.080	.045	.020	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.028	.110	.060	.025	.076	.042	.017	.044	.025	.010	.014	.008	.003	
9.0	.122	.064	.025	.105	.055	.022	.073	.039	.015	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.022	.100	.052	.019	.069	.036	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 99XLED611					TYPE: 99XLED611			WEIGHT: 1		
SPEC.:					DIM.: F168			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: circle F126			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	24.0	25.5	24.2	25.7	25.9	24.0	25.5	24.3	25.7	25.9
3H	25.4	26.9	25.7	27.1	27.3	25.5	26.9	25.8	27.2	27.4
4H	26.0	27.4	26.4	27.6	27.9	26.1	27.5	26.4	27.7	28.0
6H	26.5	27.7	26.8	28.0	28.3	26.6	27.8	26.9	28.1	28.4
8H	26.6	27.8	26.9	28.1	28.4	26.7	27.9	27.1	28.2	28.5
12H	26.7	27.8	27.0	28.1	28.4	26.8	28.0	27.2	28.3	28.6
4H 2H	24.6	25.9	24.9	26.2	26.4	24.6	25.9	24.9	26.2	26.4
3H	26.2	27.4	26.6	27.7	28.0	26.3	27.5	26.7	27.8	28.1
4H	27.0	28.1	27.3	28.4	28.7	27.0	28.1	27.4	28.4	28.8
6H	27.5	28.5	27.9	28.8	29.2	27.6	28.6	28.0	28.9	29.3
8H	27.7	28.6	28.1	29.0	29.4	27.8	28.7	28.2	29.1	29.5
12H	27.8	28.6	28.2	29.0	29.4	28.0	28.8	28.4	29.2	29.6
8H 4H	27.2	28.1	27.7	28.5	28.9	27.3	28.2	27.7	28.6	29.0
6H	27.9	28.7	28.4	29.1	29.5	28.0	28.8	28.5	29.2	29.6
8H	28.2	28.9	28.7	29.3	29.8	28.3	29.0	28.8	29.4	29.9
12H	28.4	29.0	28.9	29.4	29.9	28.5	29.1	29.0	29.6	30.0
12H 4H	27.3	28.1	27.7	28.5	28.9	27.3	28.1	27.7	28.5	28.9
6H	28.0	28.7	28.5	29.1	29.5	28.1	28.8	28.6	29.2	29.6
8H	28.3	28.9	28.8	29.3	29.8	28.4	29.0	28.9	29.4	29.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 840.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.6)
Area: 0.0124627 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:

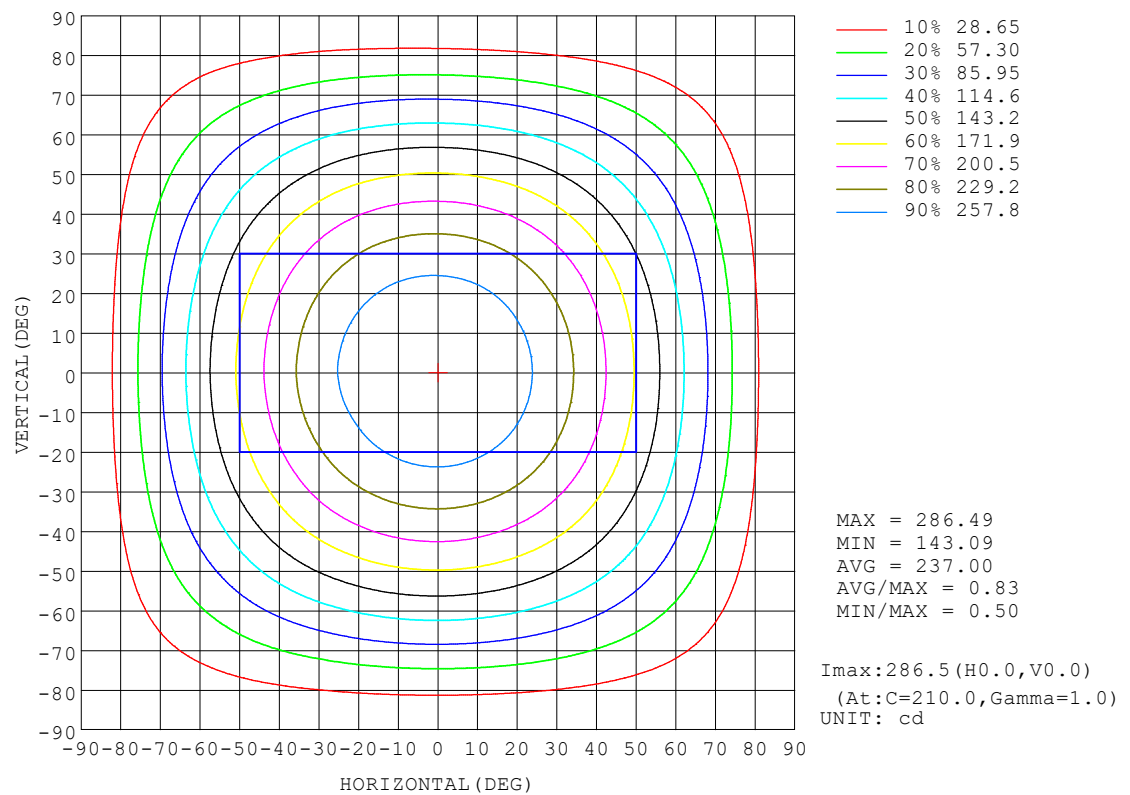
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	38	56	45	38	55	44	38	31
0.80	66	55	48	65	54	47	64	54	47	40
1.00	75	64	56	73	63	56	71	64	56	48
1.25	82	71	64	80	71	64	78	69	63	56
1.50	87	77	70	85	76	69	82	74	68	61
2.00	93	85	78	92	84	78	88	82	76	68
2.50	97	90	84	95	88	83	92	86	81	73
3.00	101	94	88	99	92	87	95	89	85	77
4.00	105	99	94	102	97	93	98	94	90	82
5.00	107	102	98	105	100	97	100	97	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:

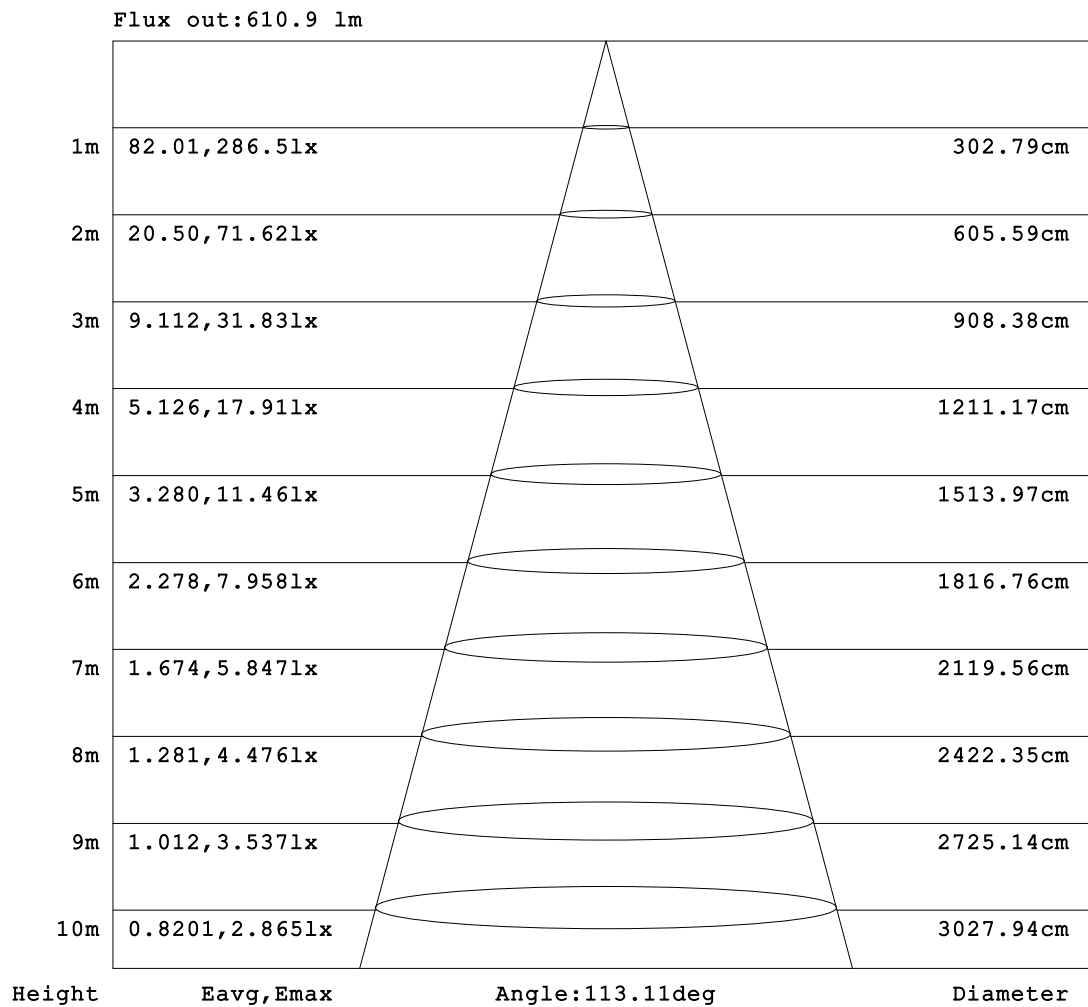


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 14 July 2022

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

AAI Figure

NAME: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:



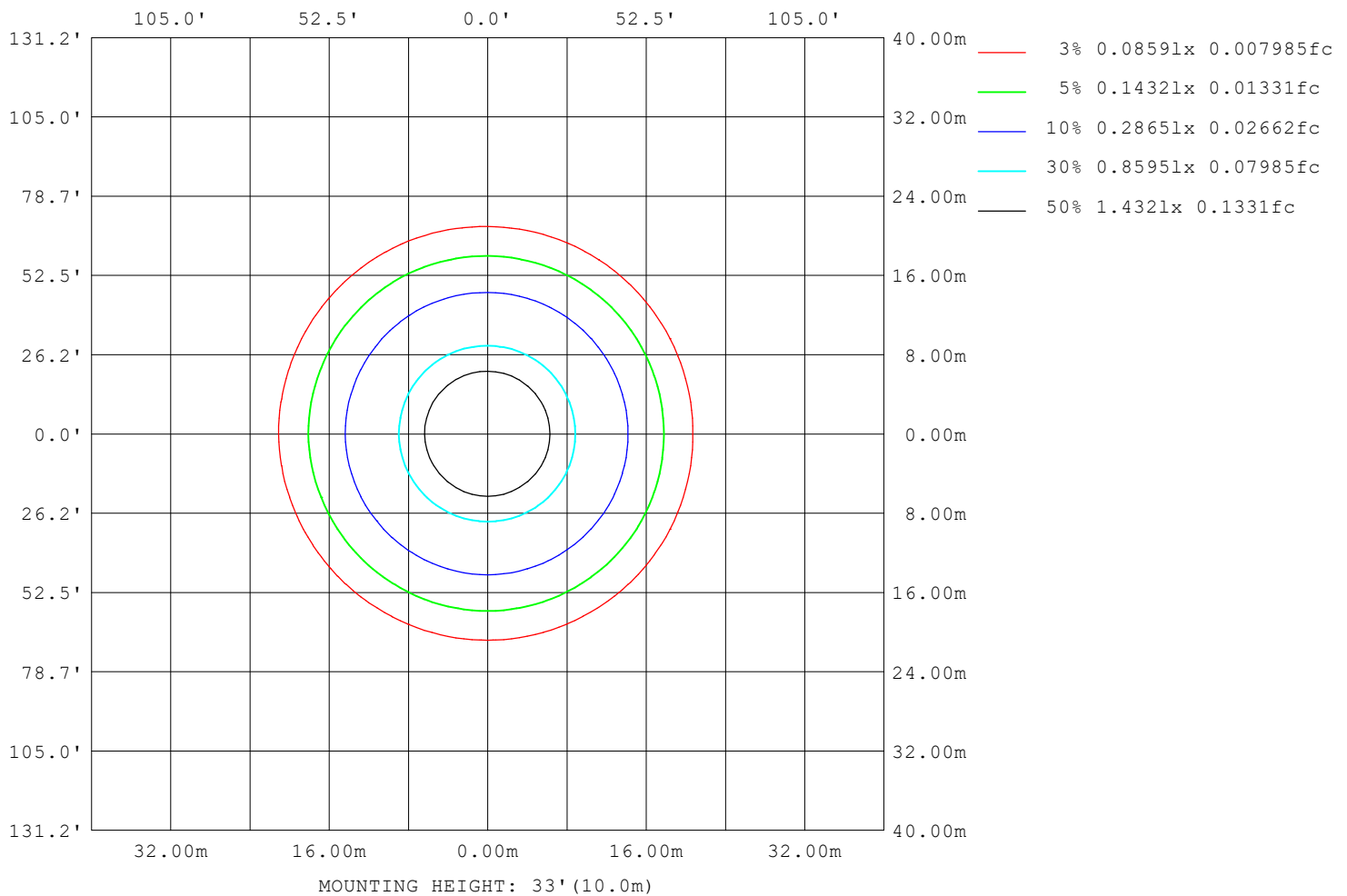
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 14 July 2022

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 99XLED611	TYPE: 99XLED611	WEIGHT: 1
SPEC.:	DIM.: F168	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F126	Shielding Angle:

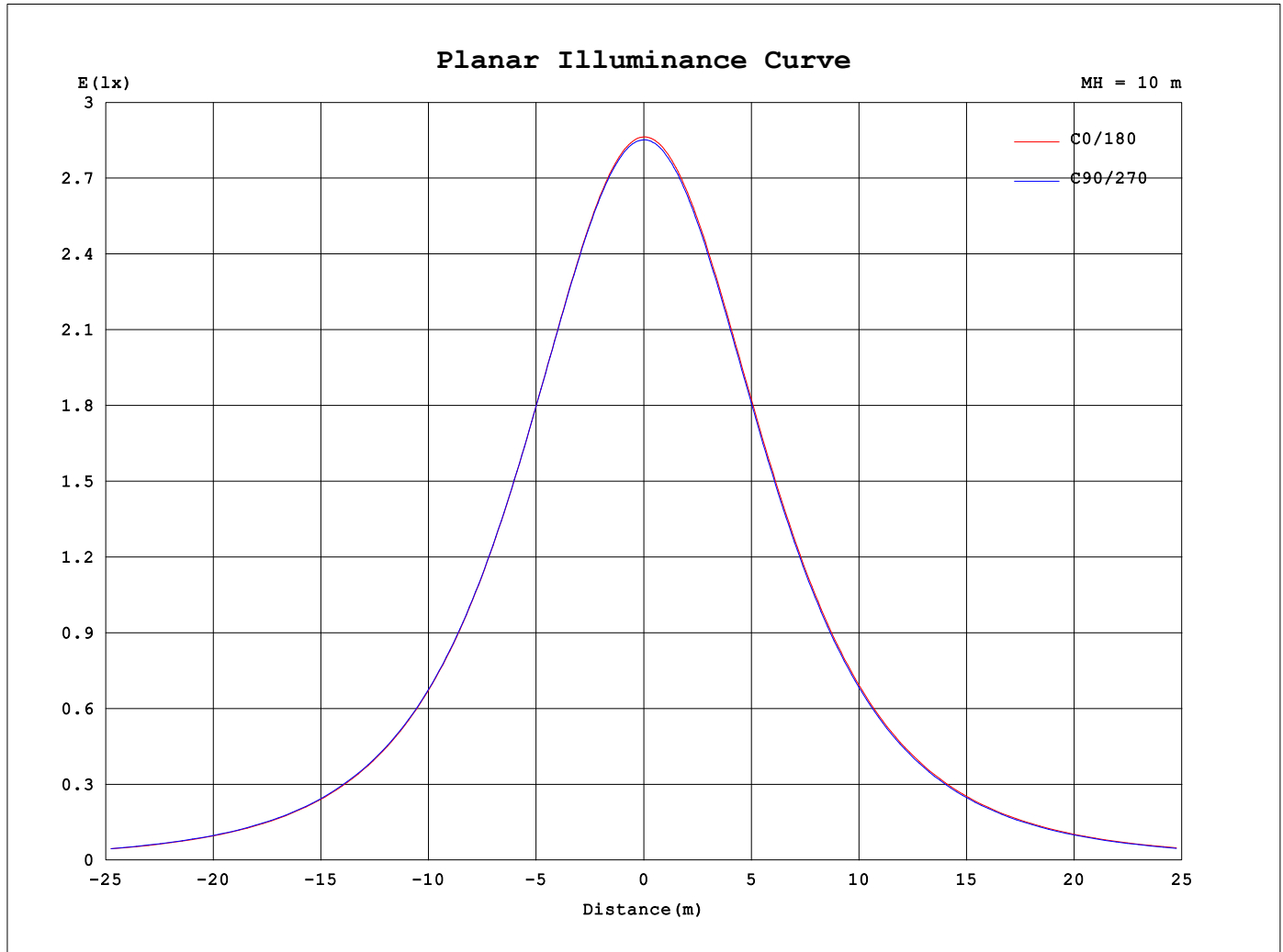
AvgL	cd/m2
L_0~180 (65) av	19731
L_0~180 (75) av	17663
L_0~180 (85) av	12519
L_90~270 (65) av	19706
L_90~270 (75) av	17597
L_90~270 (85) av	14318
L_45 (65) av	19722
L_45 (75) av	17604
L_45 (85) av	13994

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:14 July 2022

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 14 July 2022

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```