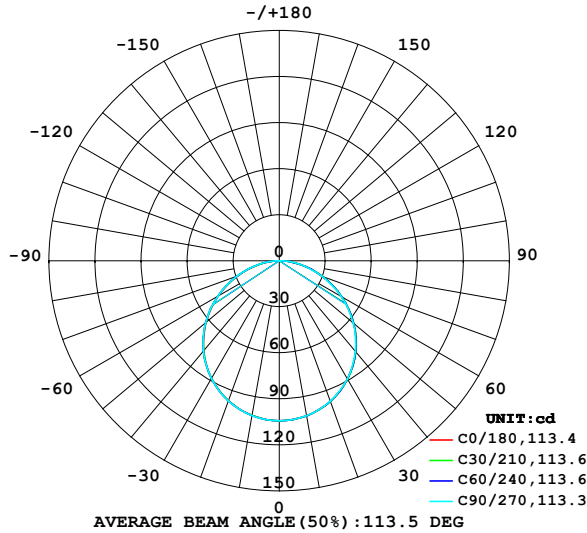


LUMINAIRE PHOTOMETRIC TEST REPORT

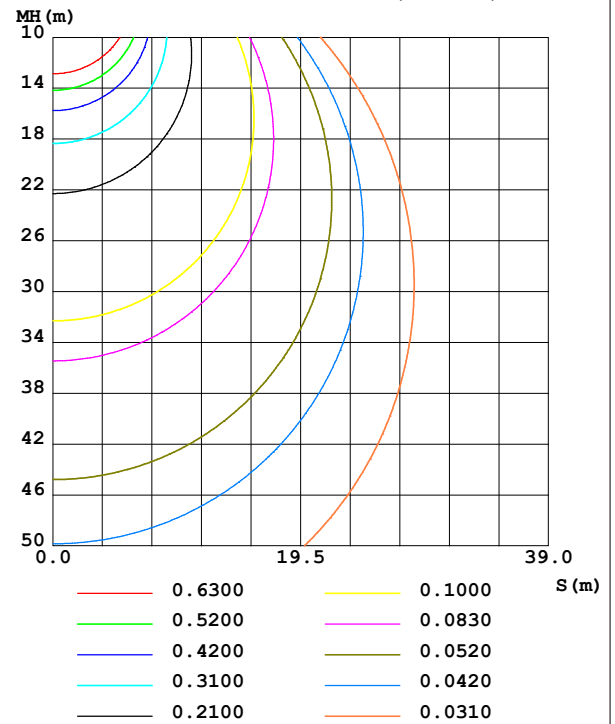
NAME: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99XLED610	Imax(cd)	104.2	S/MH(C0/180)	1.26
NOMINAL POWER(W)	6	LOR(%)	91.8	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	302.82	η UP,DN(C0-180)	0.0,46.0
NOMINAL FLUX(lm)	330	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,45.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down (%)	91.8	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 08 August 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	102.6	102.6	102.5	102.4	102.4	102.4	102.4	102.5	0- 10	9.867	9.867	3.26,2.99
20	97.50	97.54	97.38	97.13	97.03	97.09	97.18	97.35	10- 20	28.31	38.18	12.6,11.6
30	89.07	89.12	88.83	88.48	88.39	88.48	88.59	88.84	20- 30	43.05	81.23	26.8,24.6
40	77.52	77.59	77.23	76.73	76.66	76.81	76.96	77.26	30- 40	52.08	133.3	44,40.4
50	63.34	63.45	62.95	62.37	62.32	62.54	62.66	62.99	40- 50	54.17	187.5	61.9,56.8
60	47.11	47.27	46.68	46.00	46.00	46.29	46.36	46.64	50- 60	49.03	236.5	78.1,71.7
70	29.92	30.20	29.53	28.70	28.80	29.19	29.20	29.31	60- 70	37.58	274.1	90.5,83.1
80	13.44	13.70	13.16	12.39	12.49	12.77	12.80	12.91	70- 80	22.16	296.3	97.8,89.8
90	0.2040	0.1879	0.1852	0.1646	0.1442	0.1454	0.1661	0.1456	80- 90	6.565	302.8	100,91.8
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): 160.59 lm

%lum = 53.0%

%lamp = 48.7%

Conical surface Flux(130deg): 257.06 lm

%lum = 84.9%

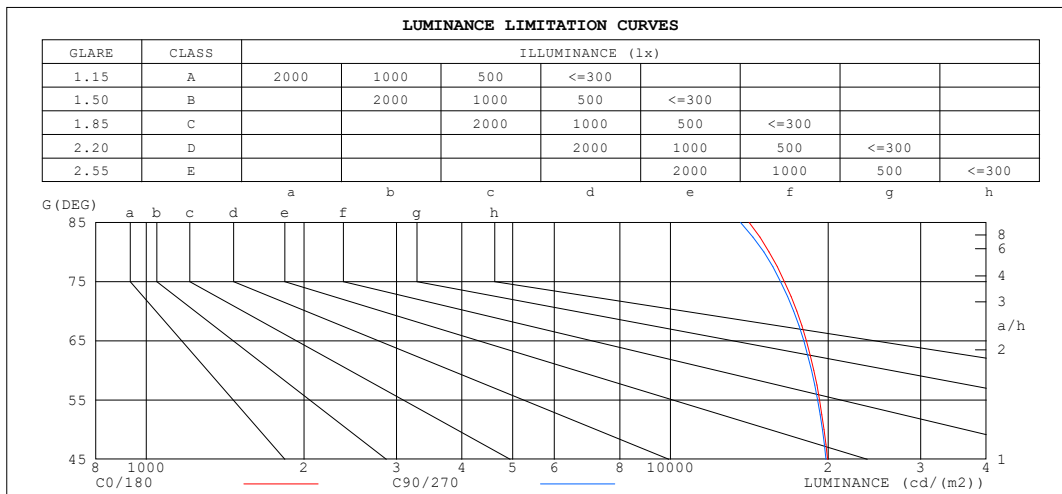
%lamp = 77.9%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:08 August 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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:



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

```

WEC AND CCEC

NAME: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	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	.289	.164	.052	.282	.161	.051	.270	.155	.049	.259	.149	.048	.249	.144	.046	
2.0	.271	.148	.046	.265	.146	.045	.254	.141	.044	.244	.137	.043	.235	.133	.042	
3.0	.250	.133	.040	.245	.131	.039	.235	.128	.039	.227	.124	.038	.218	.121	.037	
4.0	.230	.120	.035	.226	.118	.035	.217	.115	.034	.210	.113	.034	.202	.110	.033	
5.0	.213	.108	.031	.209	.107	.031	.201	.105	.031	.194	.102	.030	.188	.100	.030	
6.0	.197	.099	.028	.194	.098	.028	.187	.096	.028	.181	.094	.028	.175	.092	.027	
7.0	.183	.091	.026	.180	.090	.026	.174	.088	.025	.169	.086	.025	.163	.085	.025	
8.0	.171	.084	.024	.168	.083	.023	.163	.081	.023	.158	.080	.023	.153	.079	.023	
9.0	.160	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021	
10.0	.151	.072	.020	.148	.072	.020	.144	.071	.020	.140	.070	.020	.136	.068	.020	

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	.175	.175	.175	.149	.149	.149	.102	.102	.102	.059	.059	.059	.019	.019	.019	
1.0	.166	.143	.123	.142	.123	.106	.097	.085	.073	.056	.049	.043	.018	.016	.014	
2.0	.158	.121	.090	.136	.104	.077	.093	.072	.054	.054	.042	.032	.017	.014	.010	
3.0	.151	.105	.068	.130	.090	.059	.089	.063	.041	.051	.037	.024	.017	.012	.008	
4.0	.144	.093	.053	.124	.080	.046	.085	.056	.033	.049	.033	.019	.016	.011	.006	
5.0	.137	.083	.043	.118	.072	.037	.081	.050	.026	.047	.030	.016	.015	.010	.005	
6.0	.131	.076	.036	.113	.065	.031	.078	.046	.022	.045	.027	.013	.015	.009	.004	
7.0	.125	.069	.030	.107	.060	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
8.0	.119	.064	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.008	.003	
9.0	.113	.059	.023	.097	.051	.020	.067	.036	.014	.039	.021	.009	.013	.007	.003	
10.0	.108	.055	.021	.093	.048	.018	.064	.034	.013	.038	.020	.008	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:08 August 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: 99XLED610					TYPE: 99XLED610			WEIGHT: 1		
SPEC.:					DIM.: F 0.12 x 0.021			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: cylinder			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	27.1	28.6	27.3	28.8	29.0	27.0	28.5	27.3	28.7	29.0
3H	28.6	30.0	28.9	30.3	30.5	28.6	30.0	28.9	30.2	30.5
4H	29.3	30.6	29.6	30.9	31.1	29.2	30.5	29.5	30.8	31.1
6H	29.8	31.0	30.1	31.3	31.6	29.7	30.9	30.0	31.2	31.5
8H	29.9	31.2	30.3	31.4	31.7	29.8	31.1	30.2	31.3	31.6
12H	30.0	31.2	30.4	31.5	31.8	29.9	31.1	30.3	31.4	31.7
4H 2H	27.7	29.0	28.0	29.3	29.5	27.7	29.0	28.0	29.3	29.5
3H	29.4	30.6	29.8	30.9	31.2	29.4	30.6	29.7	30.9	31.2
4H	30.2	31.3	30.6	31.6	32.0	30.2	31.2	30.5	31.6	31.9
6H	30.8	31.8	31.2	32.2	32.5	30.8	31.7	31.2	32.1	32.5
8H	31.1	32.0	31.5	32.3	32.7	31.0	31.9	31.4	32.3	32.6
12H	31.2	32.1	31.7	32.4	32.9	31.1	32.0	31.6	32.4	32.8
8H 4H	30.5	31.4	30.9	31.8	32.2	30.5	31.4	30.9	31.7	32.1
6H	31.3	32.1	31.8	32.5	32.9	31.2	32.0	31.7	32.4	32.8
8H	31.6	32.3	32.1	32.7	33.2	31.6	32.2	32.0	32.6	33.1
12H	31.9	32.5	32.4	32.9	33.4	31.8	32.4	32.3	32.8	33.3
12H 4H	30.5	31.4	31.0	31.7	32.2	30.5	31.3	30.9	31.7	32.1
6H	31.4	32.0	31.8	32.5	32.9	31.3	32.0	31.8	32.4	32.9
8H	31.7	32.3	32.2	32.8	33.2	31.7	32.2	32.2	32.7	33.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 330.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.9)
Area: 0.005024 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:08 August 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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:

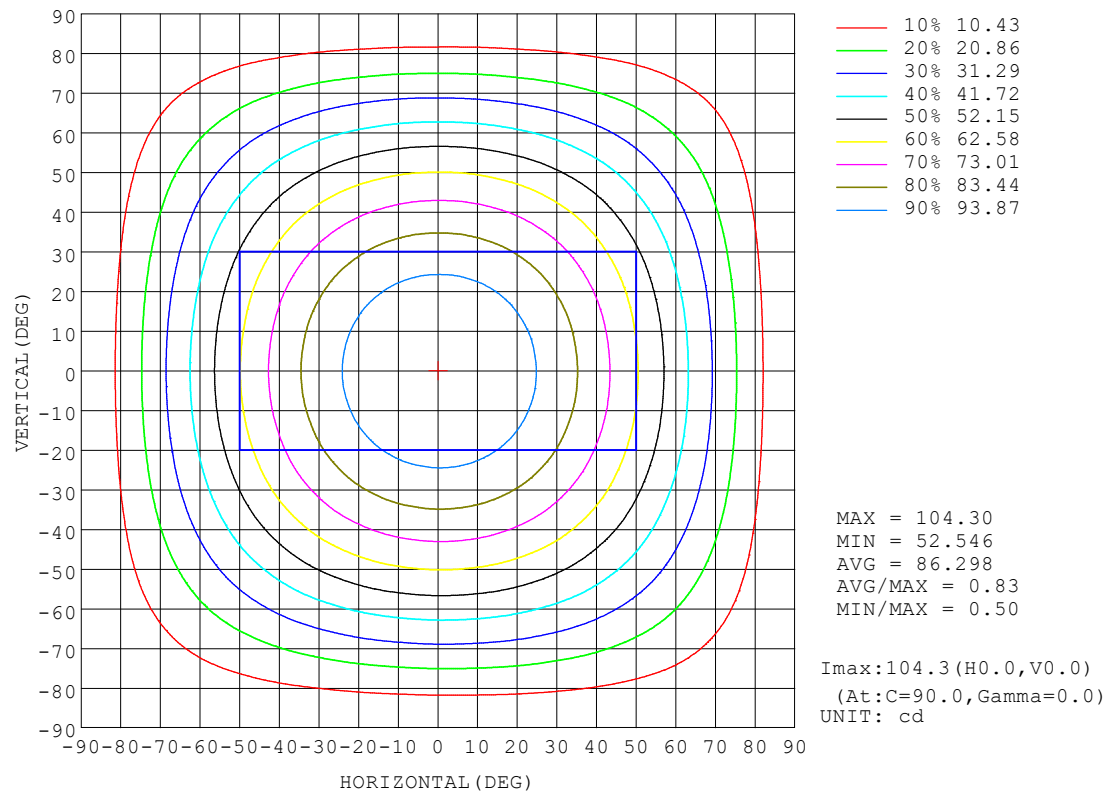
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	52	42	35	52	42	35	51	41	35	29
0.80	62	51	44	61	51	44	59	50	44	37
1.00	69	59	52	68	59	52	66	60	52	45
1.25	76	66	60	75	66	59	72	64	58	52
1.50	81	71	65	79	71	64	76	69	63	56
2.00	87	79	73	85	78	72	82	76	71	64
2.50	90	83	78	89	82	77	85	80	75	67
3.00	94	87	82	92	86	81	88	83	79	71
4.00	97	92	88	95	90	86	91	87	84	76
5.00	100	95	91	97	93	90	93	90	87	79
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: 08 August 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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:

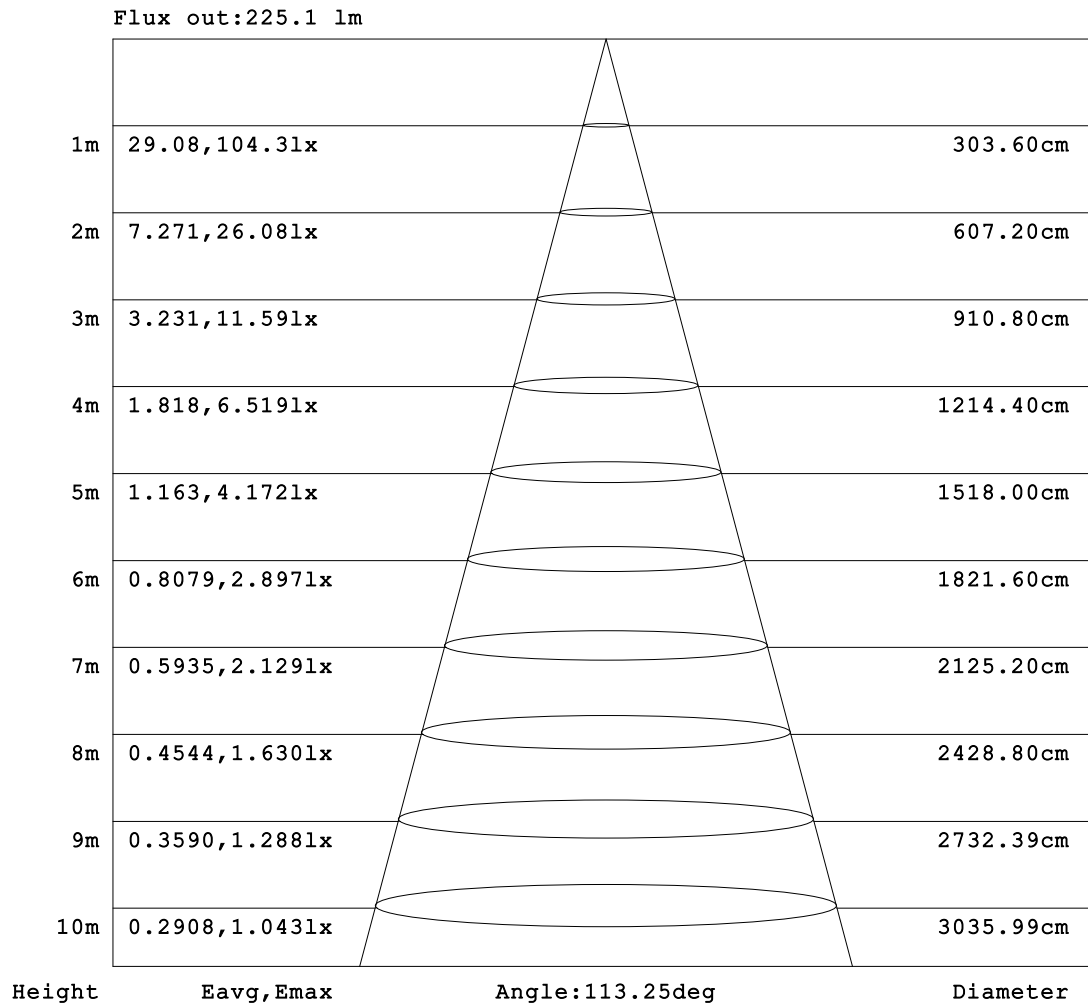


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:08 August 2022

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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:



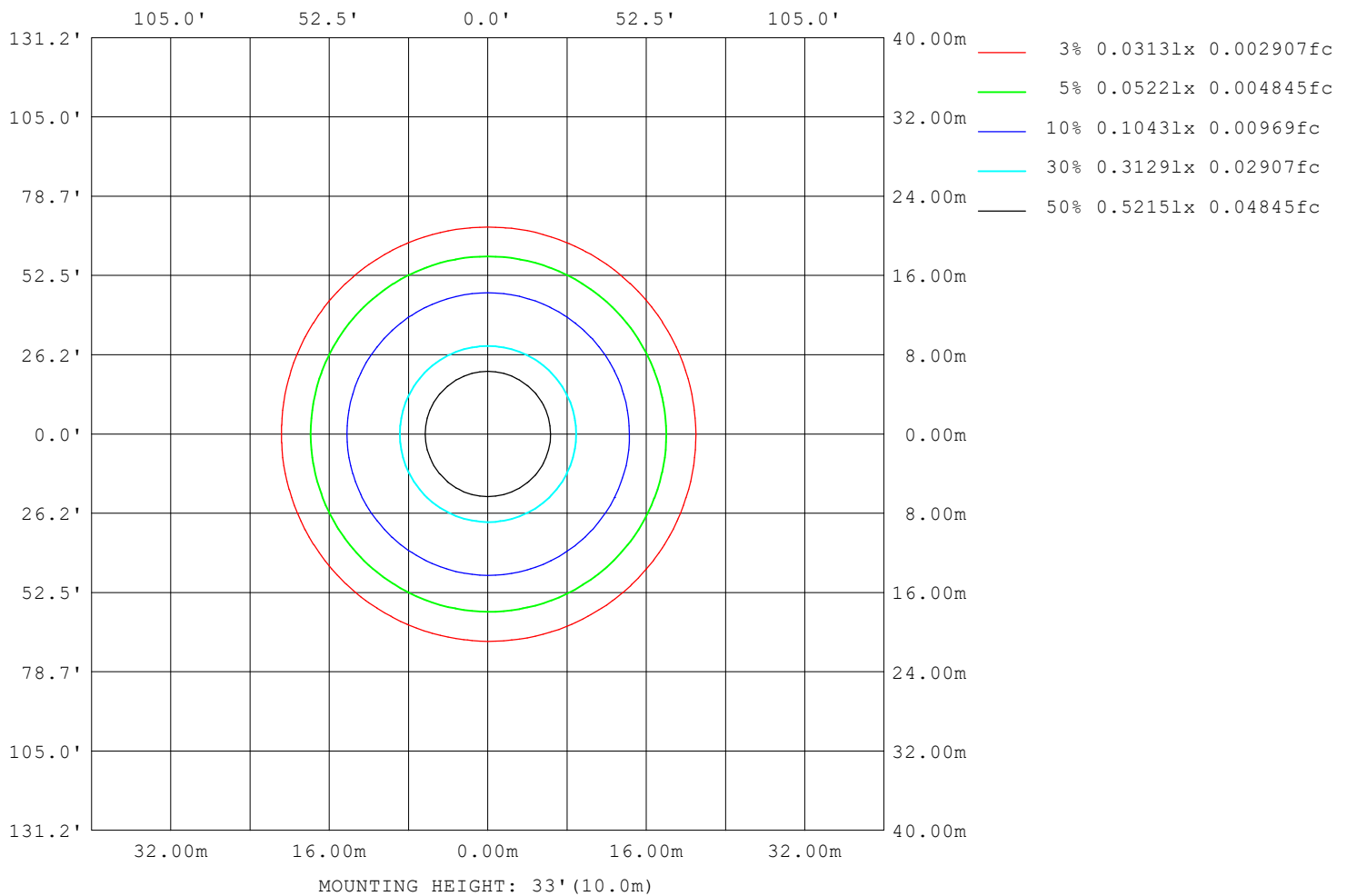
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 08 August 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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 08 August 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: 99XLED610	TYPE: 99XLED610	WEIGHT: 1
SPEC.:	DIM.: F 0.12 x 0.021	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cylinder	Shielding Angle:

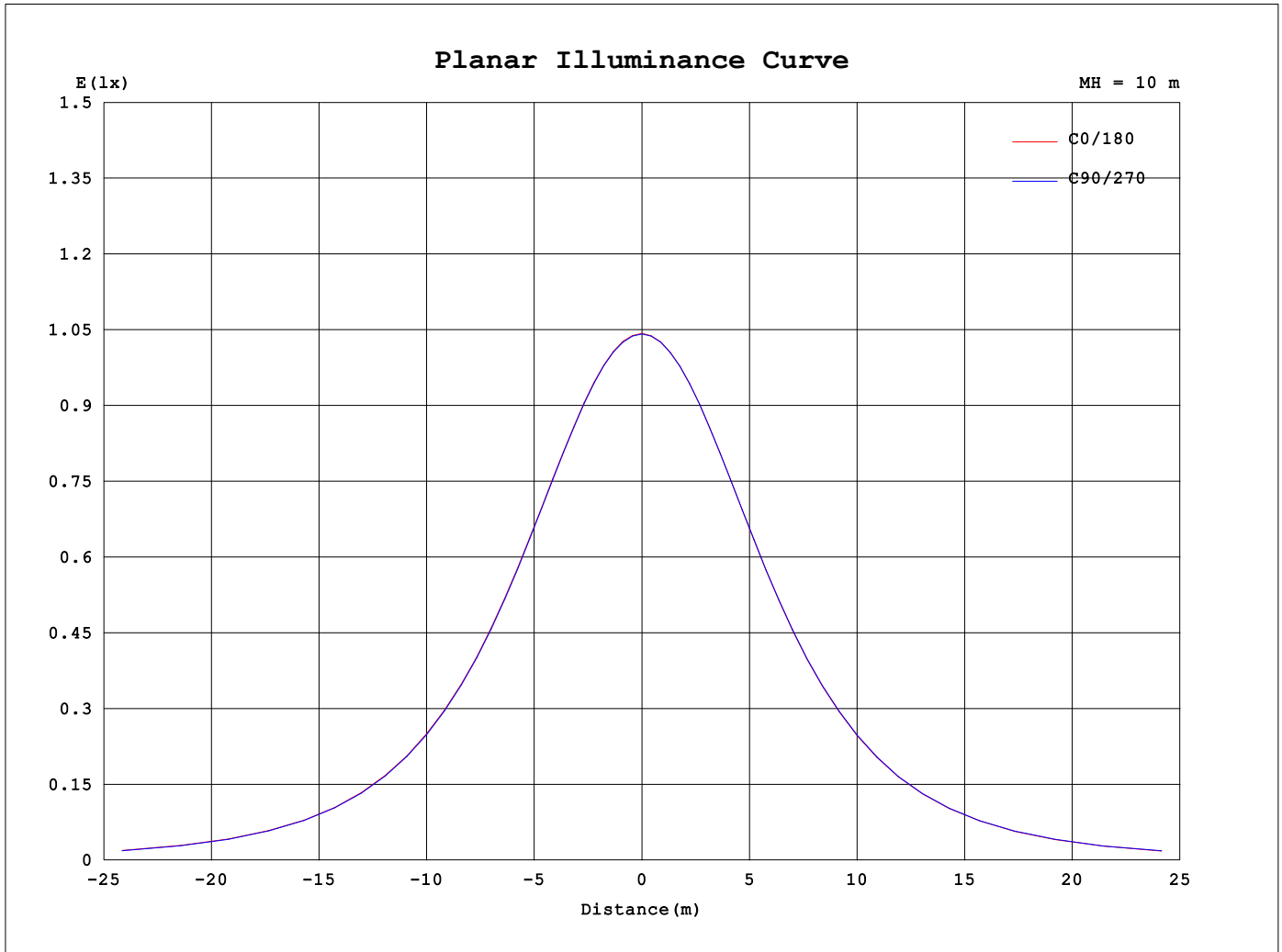
AvgL	cd/m2
L_0~180 (65) av	17896
L_0~180 (75) av	16090
L_0~180 (85) av	13190
L_90~270 (65) av	17876
L_90~270 (75) av	16110
L_90~270 (85) av	13215
L_45 (65) av	17892
L_45 (75) av	16072
L_45 (85) av	13146

Standard: GB/T 29293-2012

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

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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:

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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:

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