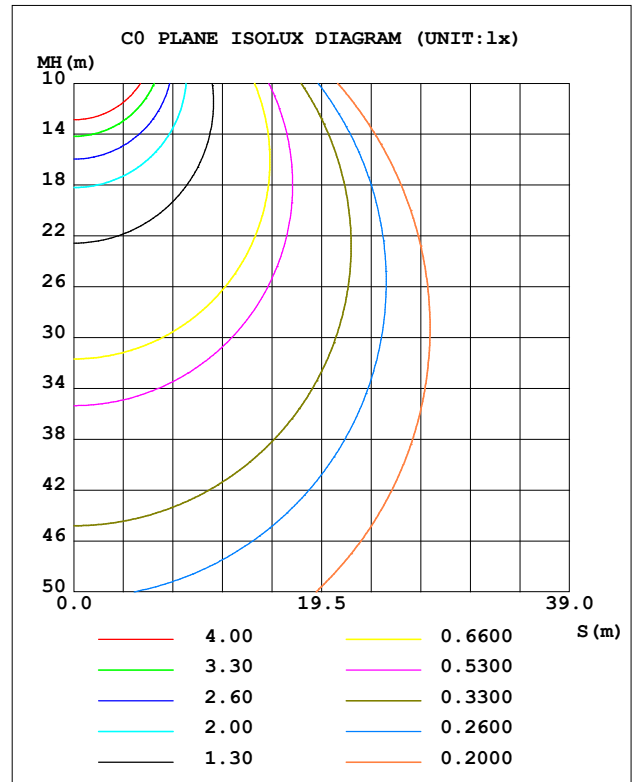
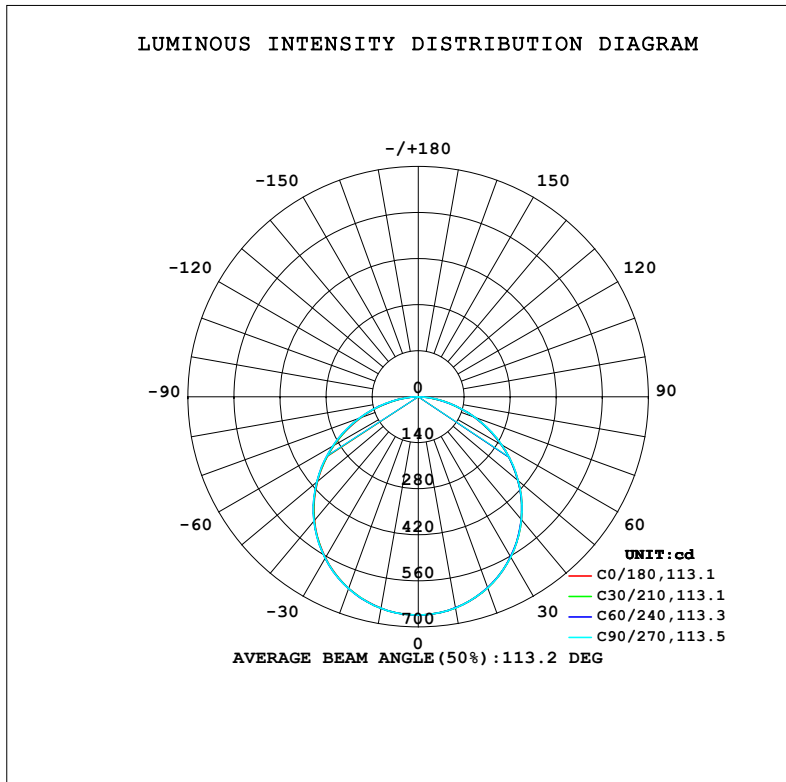


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99XLED620	Imax (cd)	663.7	S/MH (C0/180)	1.27
NOMINAL POWER (W)	24	LOR (%)	106.5	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1917.6	η UP, DN (C0-180)	0.0, 53.0
NOMINAL FLUX (lm)	1800	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 53.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	106.5	CIBSE SHR MAX	1.35



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

γ Range: 0 - 90DEG
 γ 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	652.0	651.6	651.8	652.3	652.9	653.1	653.1	652.6	0- 10	62.82	62.82	3.28,3.49
20	618.0	617.4	617.9	618.8	619.8	620.4	620.4	619.4	10- 20	180.2	243.0	12.7,13.5
30	562.8	561.9	562.7	564.0	565.3	566.5	566.6	565.1	20- 30	273.9	516.9	27,28.7
40	488.3	487.2	488.2	489.7	491.5	492.9	493.4	491.3	30- 40	331.3	848.2	44.2,47.1
50	396.9	395.7	397.2	398.8	400.6	402.6	403.3	400.6	40- 50	344.5	1193	62.2,66.3
60	292.6	291.6	293.7	295.1	296.5	299.2	300.6	297.3	50- 60	311.7	1504	78.5,83.6
70	182.1	181.4	183.4	185.5	186.0	189.2	190.3	187.5	60- 70	238.5	1743	90.9,96.8
80	76.39	75.48	75.61	79.59	80.75	79.71	81.70	77.96	70- 80	138.6	1882	98.1,105
90	1.113	1.150	1.099	1.156	1.178	1.011	1.012	1.002	80- 90	36.05	1918	100,107
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): 1056.3 lm

%lum = 55.1%
%lamp = 58.7%

Conical surface Flux(130deg): 1658.4 lm

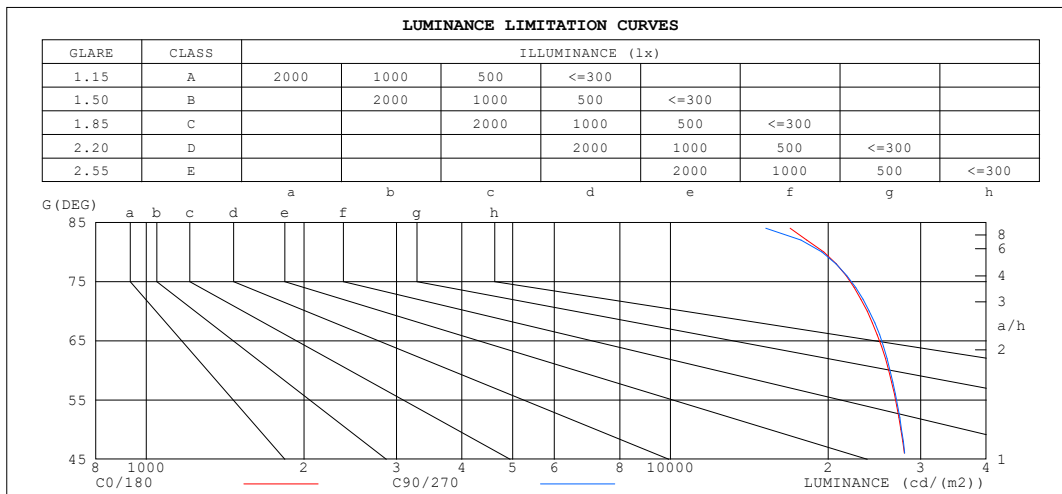
%lum = 86.5%
%lamp = 92.1%

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

γ Range: 0 - 90DEG
 γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20270	18223
80	19597	19442
75	23848	24030
70	23717	23941
65	26206	26448
60	26066	26228
55	27685	27791
50	27505	27590
45	28574	28644

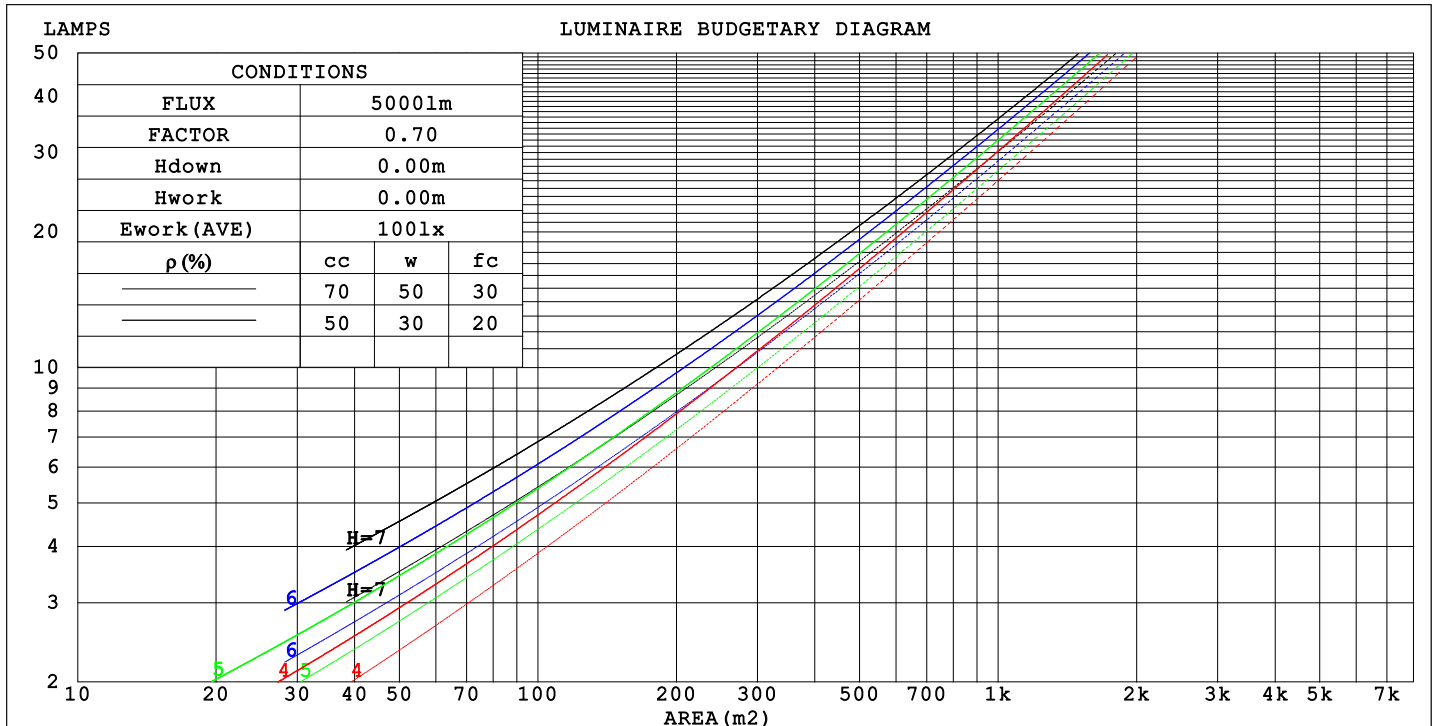
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 09 August 2022

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	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:09 August 2022

γ Range: 0 - 90DEG
γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	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	.332	.189	.060	.324	.185	.059	.310	.178	.057	.297	.171	.055	.285	.165	.053	
2.0	.312	.171	.053	.306	.168	.052	.293	.163	.051	.282	.158	.049	.271	.153	.048	
3.0	.289	.154	.046	.283	.152	.046	.272	.147	.045	.262	.143	.044	.252	.140	.043	
4.0	.267	.138	.041	.261	.137	.040	.252	.133	.040	.242	.130	.039	.234	.127	.039	
5.0	.246	.125	.036	.242	.124	.036	.233	.121	.036	.225	.119	.035	.217	.116	.035	
6.0	.228	.114	.033	.224	.113	.033	.216	.111	.032	.209	.109	.032	.202	.107	.032	
7.0	.212	.105	.030	.209	.104	.030	.202	.102	.029	.195	.100	.029	.189	.098	.029	
8.0	.198	.097	.027	.195	.096	.027	.189	.094	.027	.183	.093	.027	.178	.091	.027	
9.0	.186	.090	.025	.183	.089	.025	.177	.088	.025	.172	.086	.025	.167	.085	.025	
10.0	.175	.084	.023	.172	.083	.023	.167	.082	.023	.162	.081	.023	.158	.079	.023	

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	.203	.203	.203	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.192	.166	.143	.164	.143	.123	.112	.098	.085	.065	.057	.049	.021	.018	.016	
2.0	.184	.141	.104	.157	.121	.090	.108	.084	.063	.062	.049	.037	.020	.016	.012	
3.0	.175	.122	.079	.150	.105	.068	.103	.073	.048	.060	.043	.028	.019	.014	.009	
4.0	.167	.108	.062	.144	.093	.054	.099	.065	.038	.057	.038	.022	.018	.012	.007	
5.0	.159	.097	.050	.137	.084	.044	.094	.058	.031	.055	.034	.018	.018	.011	.006	
6.0	.152	.088	.042	.130	.076	.036	.090	.053	.026	.052	.031	.015	.017	.010	.005	
7.0	.144	.080	.035	.124	.070	.031	.086	.049	.022	.050	.029	.013	.016	.009	.004	
8.0	.138	.074	.030	.118	.064	.027	.082	.045	.019	.048	.027	.011	.015	.009	.004	
9.0	.131	.069	.027	.113	.060	.023	.078	.042	.017	.046	.025	.010	.015	.008	.003	
10.0	.125	.064	.024	.108	.056	.021	.075	.039	.015	.044	.023	.009	.014	.008	.003	

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

γ Range: 0 - 90DEG
γ 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: 99XLED620						TYPE: 99XLED620			WEIGHT: 1			
SPEC.:						DIM.: F295			SERIAL No.: 0			
MFR.: Elmark Industries JSC						SUR.: circle F250			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	22.2	23.8	22.5	24.0	24.2	22.3	23.8	22.5	24.0	24.2	
	3H	23.7	25.2	24.0	25.4	25.6	23.8	25.2	24.1	25.4	25.7	
	4H	24.3	25.7	24.7	25.9	26.2	24.4	25.7	24.7	26.0	26.2	
	6H	24.8	26.0	25.1	26.3	26.6	24.8	26.1	25.1	26.3	26.6	
	8H	24.9	26.1	25.2	26.4	26.7	24.9	26.1	25.2	26.4	26.7	
	12H	25.0	26.1	25.3	26.4	26.7	24.9	26.1	25.3	26.4	26.7	
	4H	2H	22.8	24.2	23.2	24.4	24.7	22.9	24.2	23.2	24.5	24.7
		3H	24.5	25.7	24.9	26.0	26.3	24.6	25.7	24.9	26.0	26.3
		4H	25.3	26.3	25.6	26.7	27.0	25.3	26.4	25.7	26.7	27.0
		6H	25.8	26.8	26.2	27.1	27.5	25.8	26.8	26.2	27.1	27.5
		8H	26.0	26.9	26.4	27.2	27.6	26.0	26.9	26.4	27.2	27.6
		12H	26.1	26.9	26.5	27.3	27.7	26.1	26.9	26.5	27.3	27.7
	8H	4H	25.5	26.4	25.9	26.8	27.2	25.5	26.4	26.0	26.8	27.2
		6H	26.2	27.0	26.7	27.4	27.8	26.2	27.0	26.7	27.4	27.8
		8H	26.5	27.1	26.9	27.6	28.0	26.5	27.1	26.9	27.5	28.0
		12H	26.7	27.2	27.1	27.7	28.2	26.6	27.2	27.1	27.6	28.1
	12H	4H	25.5	26.3	26.0	26.7	27.1	25.6	26.4	26.0	26.8	27.2
		6H	26.3	26.9	26.7	27.4	27.8	26.3	26.9	26.7	27.4	27.8
		8H	26.6	27.1	27.0	27.6	28.1	26.5	27.1	27.0	27.6	28.0
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, 1800 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.0)
Area: 0.0224041 m2

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

γ Range: 0 - 90DEG
γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:

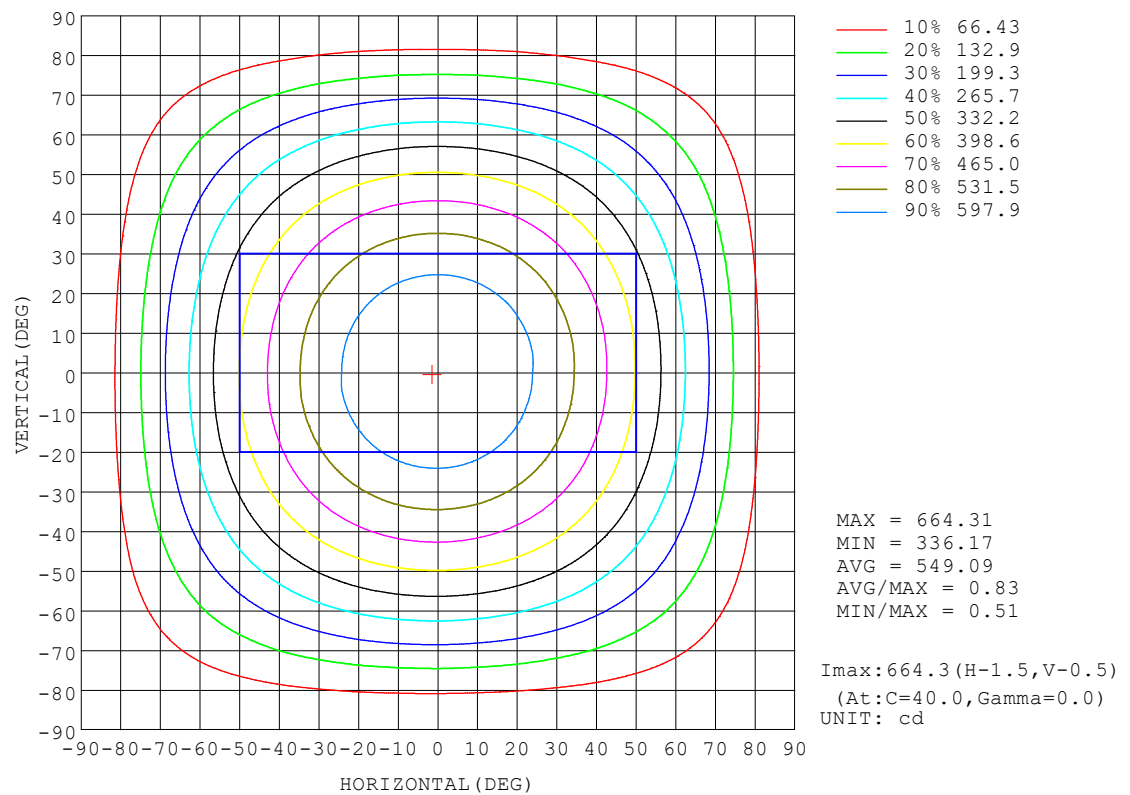
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	61	49	41	60	48	41	59	48	41	34
0.80	72	59	51	71	59	51	69	58	51	43
1.00	81	69	61	79	68	61	77	70	60	52
1.25	88	77	69	87	76	69	84	75	68	60
1.50	94	83	76	92	82	75	89	80	74	66
2.00	101	92	85	99	91	84	95	88	82	74
2.50	105	97	90	103	95	89	99	93	87	79
3.00	109	101	96	106	100	94	102	97	92	83
4.00	113	107	102	111	105	101	106	102	98	88
5.00	116	111	106	113	108	104	108	105	101	91
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: 09 August 2022

γ Range: 0 - 90DEG
γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:

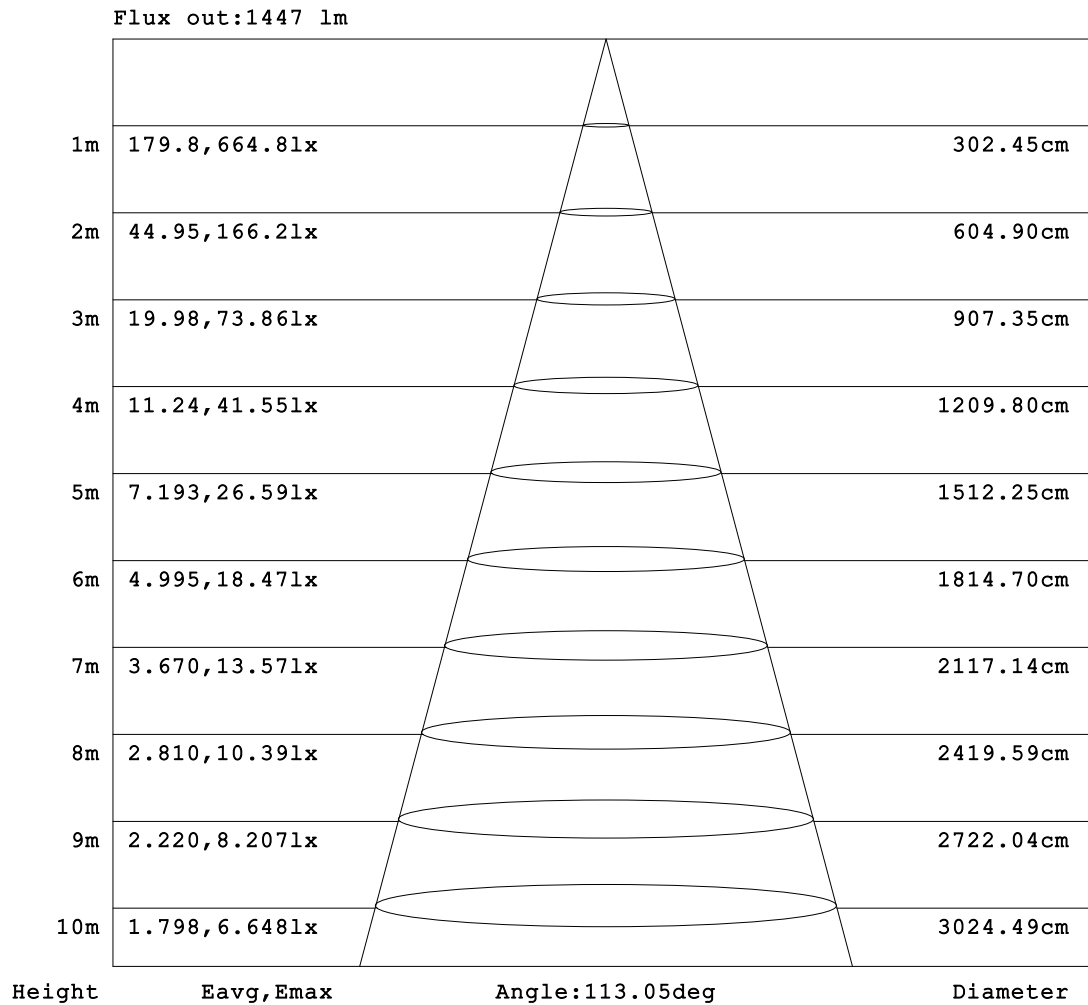


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:09 August 2022

γ Range: 0 - 90DEG
 γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:



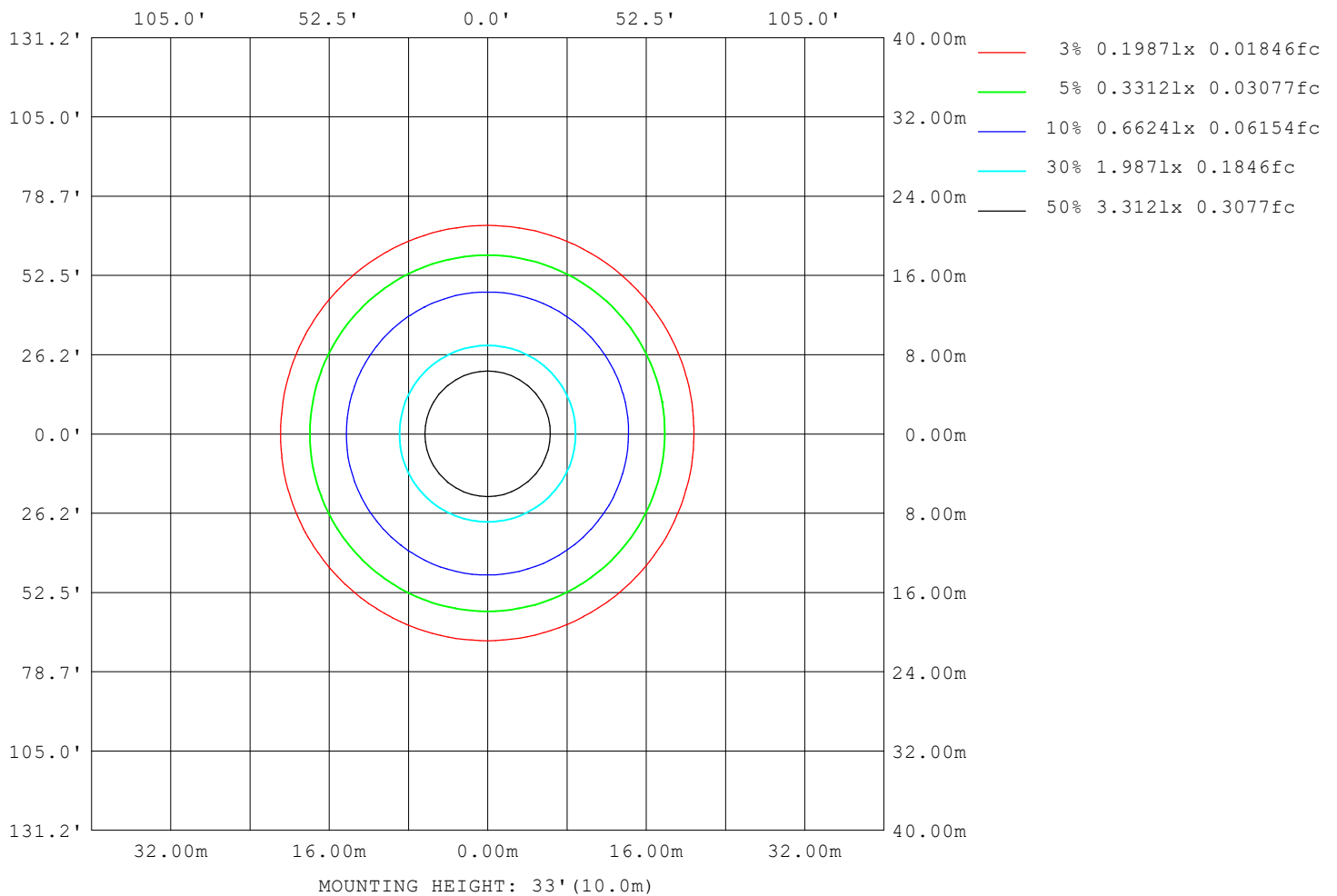
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

γ Range: 0 - 90DEG
 γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:



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

γ Range: 0 - 90DEG
γ 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: 99XLED620	TYPE: 99XLED620	WEIGHT: 1
SPEC.:	DIM.: F295	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F250	Shielding Angle:

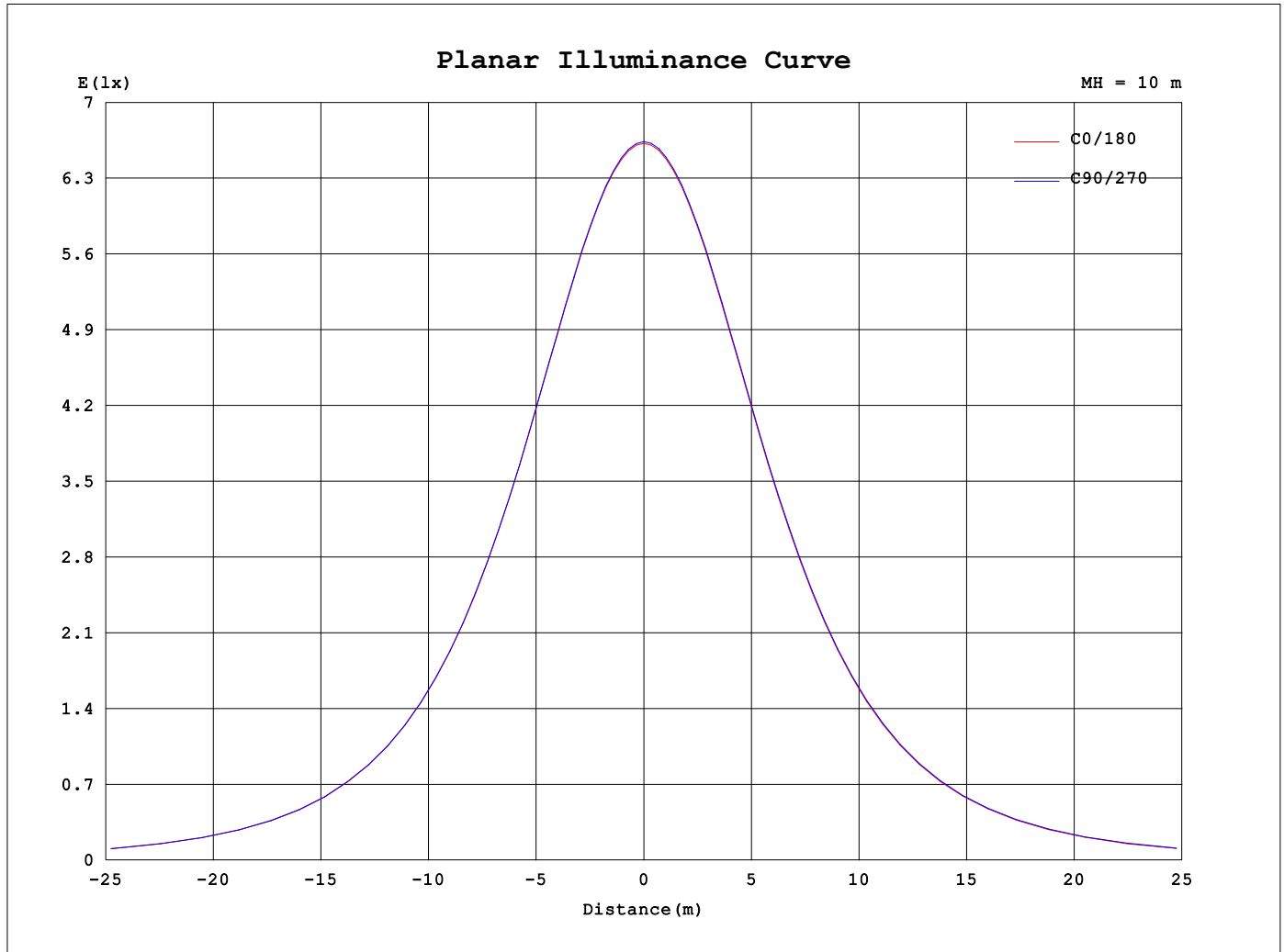
AvgL	cd/m2
L_0~180 (65) av	25287
L_0~180 (75) av	22447
L_0~180 (85) av	17271
L_90~270 (65) av	25639
L_90~270 (75) av	22681
L_90~270 (85) av	14755
L_45 (65) av	25471
L_45 (75) av	22636
L_45 (85) av	15138

Standard: GB/T 29293-2012

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

γ Range: 0 - 90DEG
γ 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



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

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 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: 2.0DEG
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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γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```