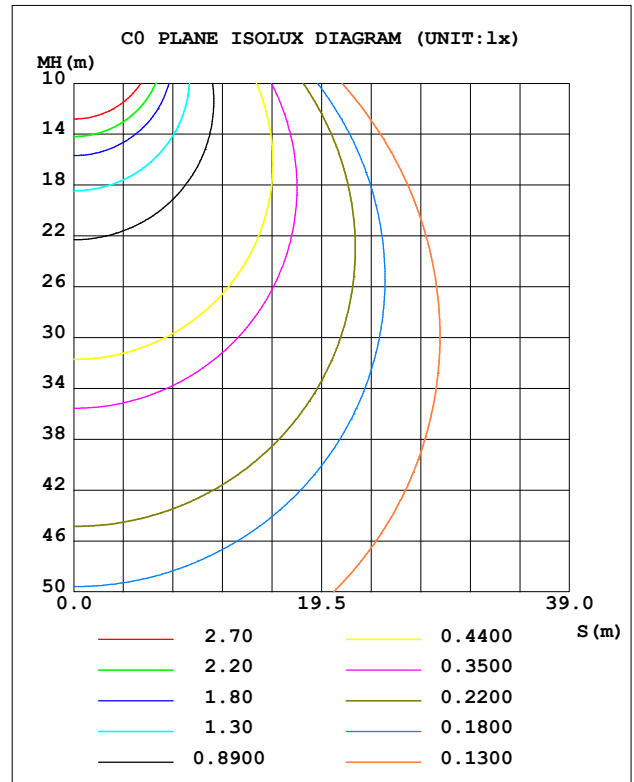
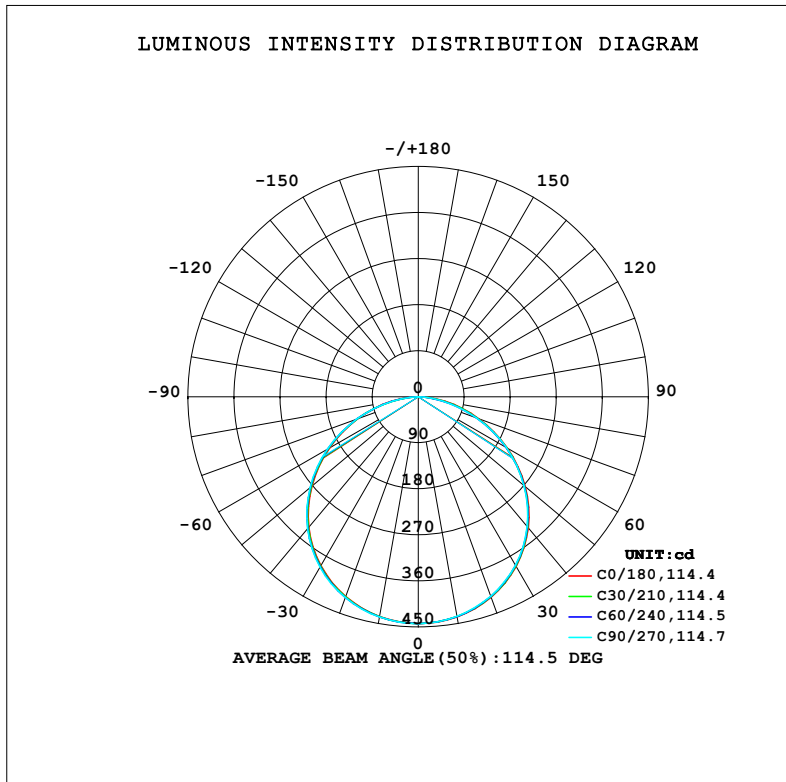


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99XLED614CW	Imax(cd)	443.2	S/MH(C0/180)	1.28
NOMINAL POWER(W)	18	LOR(%)	96.1	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1296.8	η UP,DN(C0-180)	0.0,47.7
NOMINAL FLUX(lm)	1350	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down (%)	96.1	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 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	436.8	436.2	435.8	435.7	436.2	436.7	437.2	437.1	0- 10	41.98	41.98	3.24, 3.11
20	416.7	415.7	414.8	414.7	415.5	416.8	417.6	417.5	10- 20	120.9	162.8	12.6, 12.1
30	382.7	381.3	380.1	379.8	381.1	383.0	384.3	384.0	20- 30	184.8	347.6	26.8, 25.7
40	334.5	332.7	331.4	331.1	332.7	335.2	336.8	336.3	30- 40	225.0	572.6	44.2, 42.4
50	272.8	270.7	269.7	269.7	271.5	274.3	276.2	275.4	40- 50	234.9	807.5	62.3, 59.8
60	200.9	198.8	198.7	199.0	200.5	203.4	205.6	204.5	50- 60	212.5	1020	78.7, 75.6
70	126.2	122.3	121.3	124.0	126.0	127.5	127.8	129.3	60- 70	161.9	1182	91.1, 87.5
80	53.58	49.29	46.12	50.82	53.56	52.47	51.93	53.50	70- 80	92.90	1275	98.3, 94.4
90	0.7469	0.7644	0.7348	0.7708	0.6924	0.6935	0.6831	0.6566	80- 90	22.01	1297	100, 96.1
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): 690.81 lm

%lum = 53.3%

%lamp = 51.2%

Conical surface Flux(130deg): 1108.7 lm

%lum = 85.5%

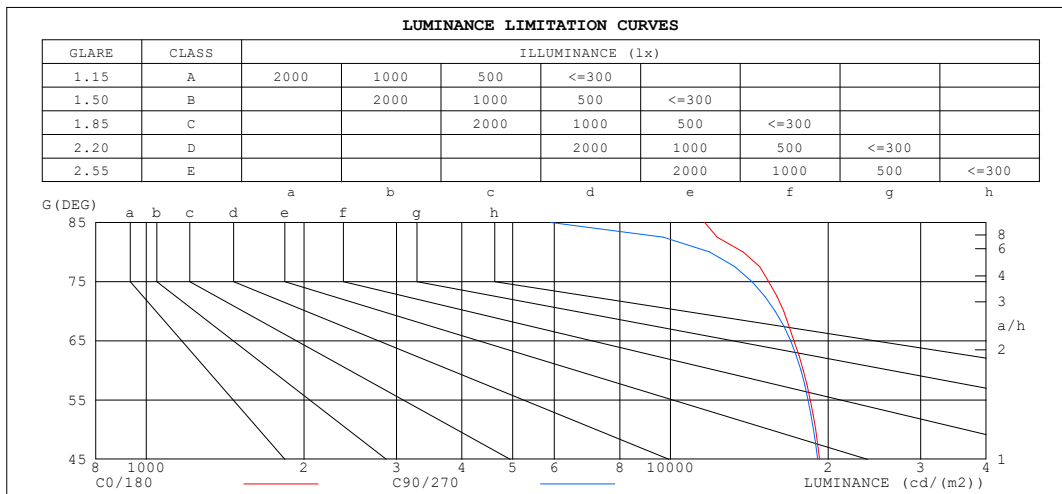
%lamp = 82.1%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	11612	5907
80	13753	11858
75	15397	14302
70	16447	15838
65	17198	16956
60	17910	17738
55	18486	18296
50	18918	18733
45	19242	19070

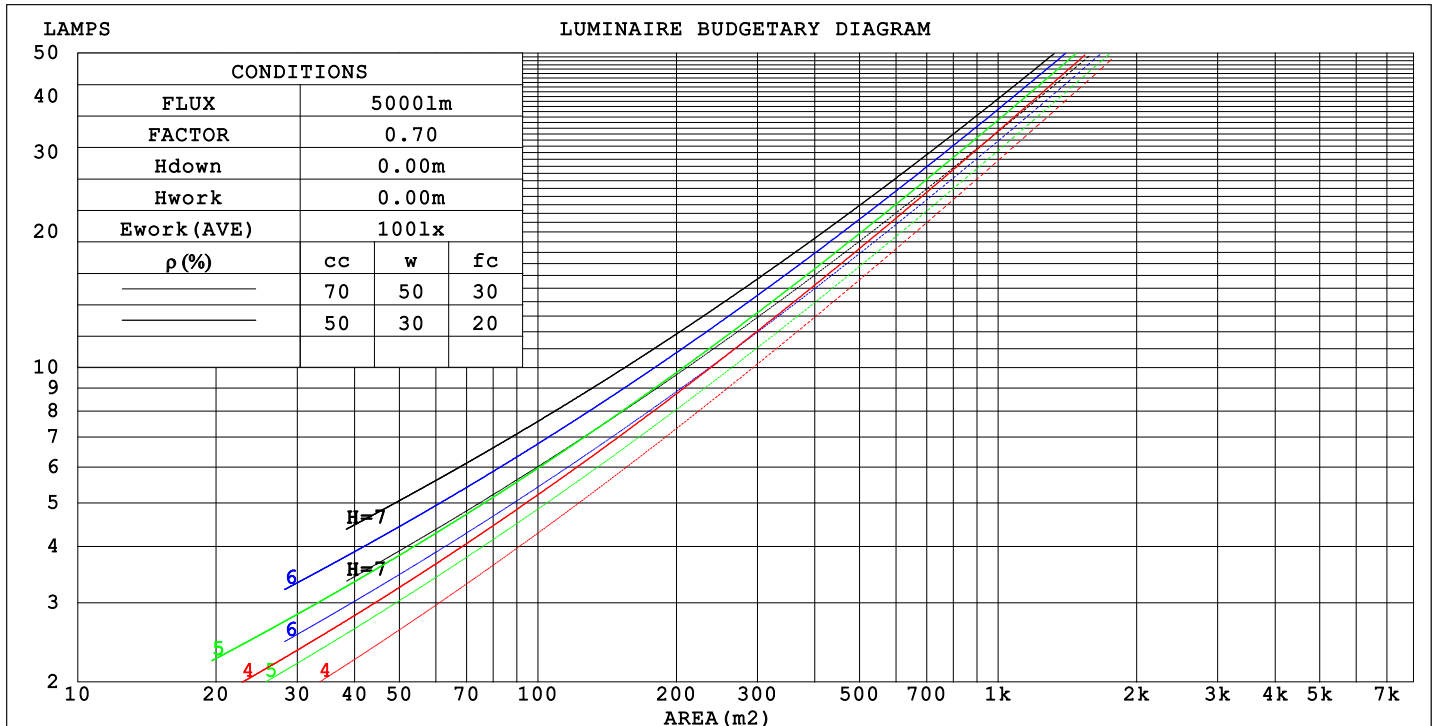
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 14 July 2022

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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	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: 14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	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	.297	.169	.054	.291	.166	.053	.278	.159	.051	.266	.154	.049	.255	.148	.048	
2.0	.281	.154	.047	.275	.151	.047	.264	.147	.046	.253	.142	.044	.244	.138	.043	
3.0	.260	.138	.041	.255	.136	.041	.245	.133	.040	.236	.129	.040	.227	.126	.039	
4.0	.240	.125	.037	.235	.123	.036	.227	.120	.036	.218	.117	.035	.211	.115	.035	
5.0	.222	.113	.033	.218	.112	.033	.210	.109	.032	.203	.107	.032	.196	.105	.031	
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.189	.098	.029	.183	.096	.029	
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026	
8.0	.179	.087	.025	.176	.087	.024	.170	.085	.024	.165	.084	.024	.160	.082	.024	
9.0	.168	.081	.023	.165	.080	.023	.160	.079	.022	.155	.078	.022	.151	.077	.022	
10.0	.158	.076	.021	.155	.075	.021	.151	.074	.021	.146	.073	.021	.142	.072	.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	.183	.183	.183	.156	.156	.156	.107	.107	.107	.061	.061	.061	.020	.020	.020	
1.0	.173	.150	.129	.148	.129	.111	.101	.089	.077	.058	.051	.045	.019	.016	.014	
2.0	.166	.127	.094	.142	.109	.081	.097	.075	.057	.056	.044	.033	.018	.014	.011	
3.0	.158	.110	.071	.136	.095	.062	.093	.066	.043	.054	.038	.026	.017	.012	.008	
4.0	.151	.097	.056	.129	.084	.049	.089	.058	.034	.051	.034	.020	.017	.011	.007	
5.0	.144	.087	.045	.123	.075	.039	.085	.053	.028	.049	.031	.016	.016	.010	.005	
6.0	.137	.079	.037	.118	.068	.033	.081	.048	.023	.047	.028	.014	.015	.009	.005	
7.0	.130	.072	.032	.112	.063	.028	.077	.044	.020	.045	.026	.012	.015	.008	.004	
8.0	.124	.067	.027	.107	.058	.024	.074	.041	.017	.043	.024	.010	.014	.008	.003	
9.0	.118	.062	.024	.102	.054	.021	.071	.038	.015	.041	.022	.009	.013	.007	.003	
10.0	.113	.058	.021	.097	.050	.019	.067	.035	.013	.039	.021	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 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: 99XLED614CW					TYPE: 99XLED614CW			WEIGHT: 1		
SPEC.:					DIM.: F225			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: circle F175			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	22.0	23.5	22.2	23.7	23.9	21.9	23.4	22.2	23.7	23.9
3H	23.5	24.9	23.8	25.1	25.4	23.4	24.8	23.7	25.0	25.3
4H	24.1	25.4	24.4	25.7	26.0	23.9	25.3	24.3	25.5	25.8
6H	24.5	25.8	24.9	26.1	26.4	24.3	25.6	24.6	25.8	26.1
8H	24.7	25.9	25.0	26.2	26.5	24.4	25.6	24.7	25.9	26.2
12H	24.8	25.9	25.1	26.2	26.5	24.4	25.5	24.7	25.8	26.1
4H 2H	22.6	23.9	22.9	24.2	24.4	22.5	23.9	22.8	24.1	24.4
3H	24.3	25.4	24.6	25.7	26.0	24.2	25.3	24.5	25.6	25.9
4H	25.0	26.1	25.4	26.4	26.7	24.8	25.9	25.2	26.2	26.6
6H	25.6	26.5	26.0	26.9	27.2	25.3	26.3	25.7	26.6	27.0
8H	25.8	26.7	26.2	27.0	27.4	25.4	26.3	25.8	26.7	27.1
12H	25.9	26.7	26.3	27.1	27.5	25.4	26.2	25.9	26.6	27.0
8H 4H	25.2	26.1	25.7	26.5	26.9	25.1	26.0	25.5	26.4	26.7
6H	26.0	26.7	26.4	27.1	27.5	25.7	26.4	26.1	26.8	27.3
8H	26.2	26.9	26.7	27.3	27.8	25.9	26.5	26.3	26.9	27.4
12H	26.4	27.0	26.9	27.4	27.9	25.9	26.5	26.4	26.9	27.4
12H 4H	25.2	26.1	25.7	26.4	26.9	25.1	25.9	25.5	26.3	26.7
6H	26.0	26.7	26.5	27.1	27.5	25.7	26.4	26.2	26.8	27.3
8H	26.3	26.9	26.8	27.3	27.8	25.9	26.5	26.4	26.9	27.4
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	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1350 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.0)
Area: 0.0224041 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:

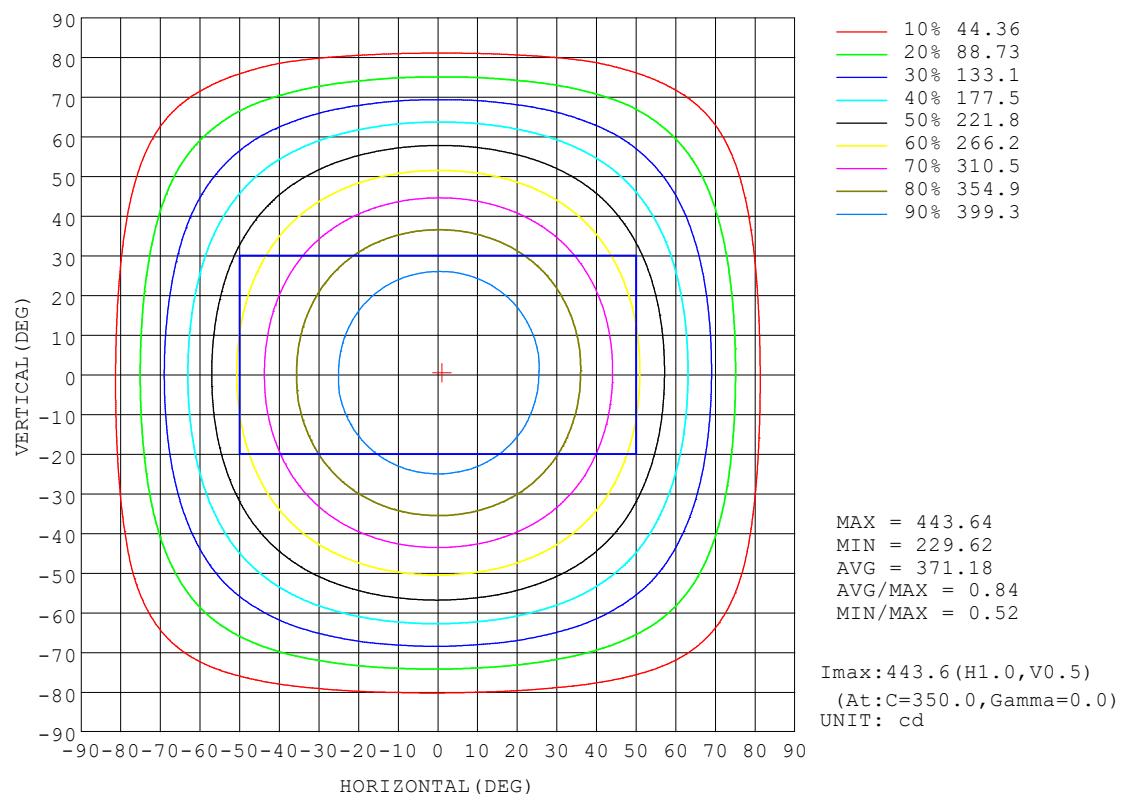
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	55	44	37	54	44	37	53	43	37	31
0.80	65	53	46	64	53	46	62	52	46	39
1.00	73	62	55	72	61	55	69	63	54	47
1.25	80	70	63	78	69	62	76	67	61	54
1.50	84	75	68	83	74	68	80	72	67	59
2.00	91	83	77	89	82	76	86	80	74	67
2.50	95	87	82	93	86	81	89	84	79	71
3.00	98	92	86	96	90	85	92	87	83	75
4.00	102	97	92	100	95	91	96	92	88	80
5.00	104	100	96	102	98	94	98	94	91	83
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: 14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:

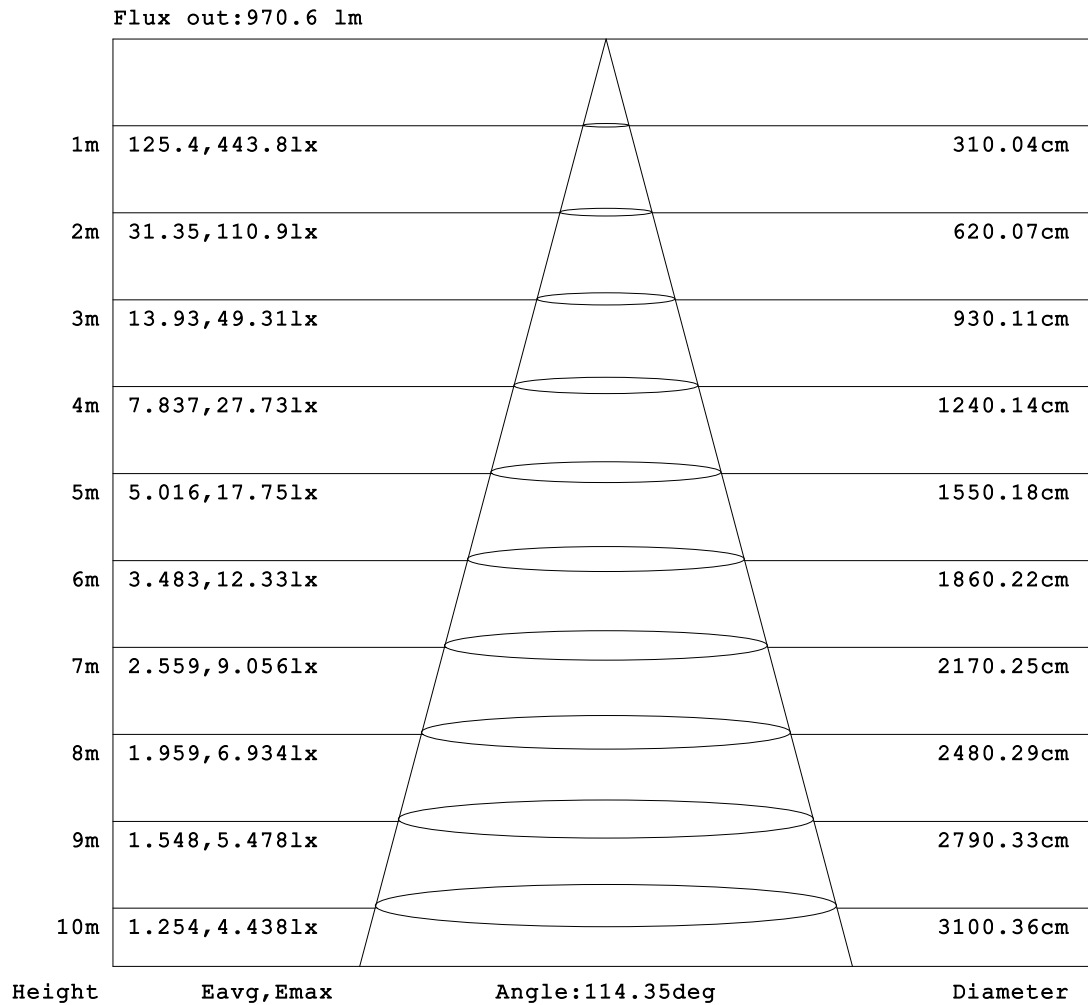


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 2022

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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:



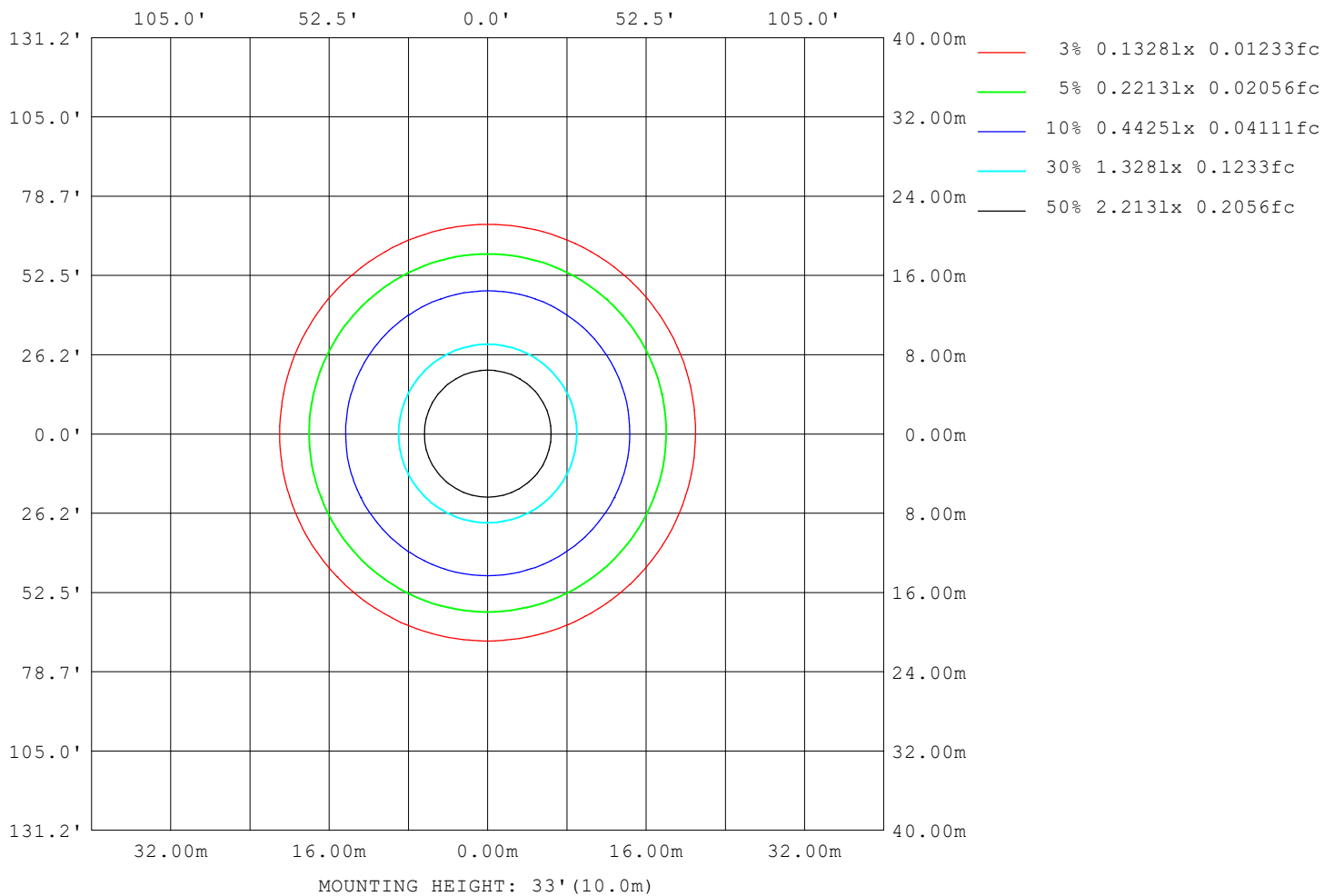
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 14 July 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: 99XLED614CW	TYPE: 99XLED614CW	WEIGHT: 1
SPEC.:	DIM.: F225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circle F175	Shielding Angle:

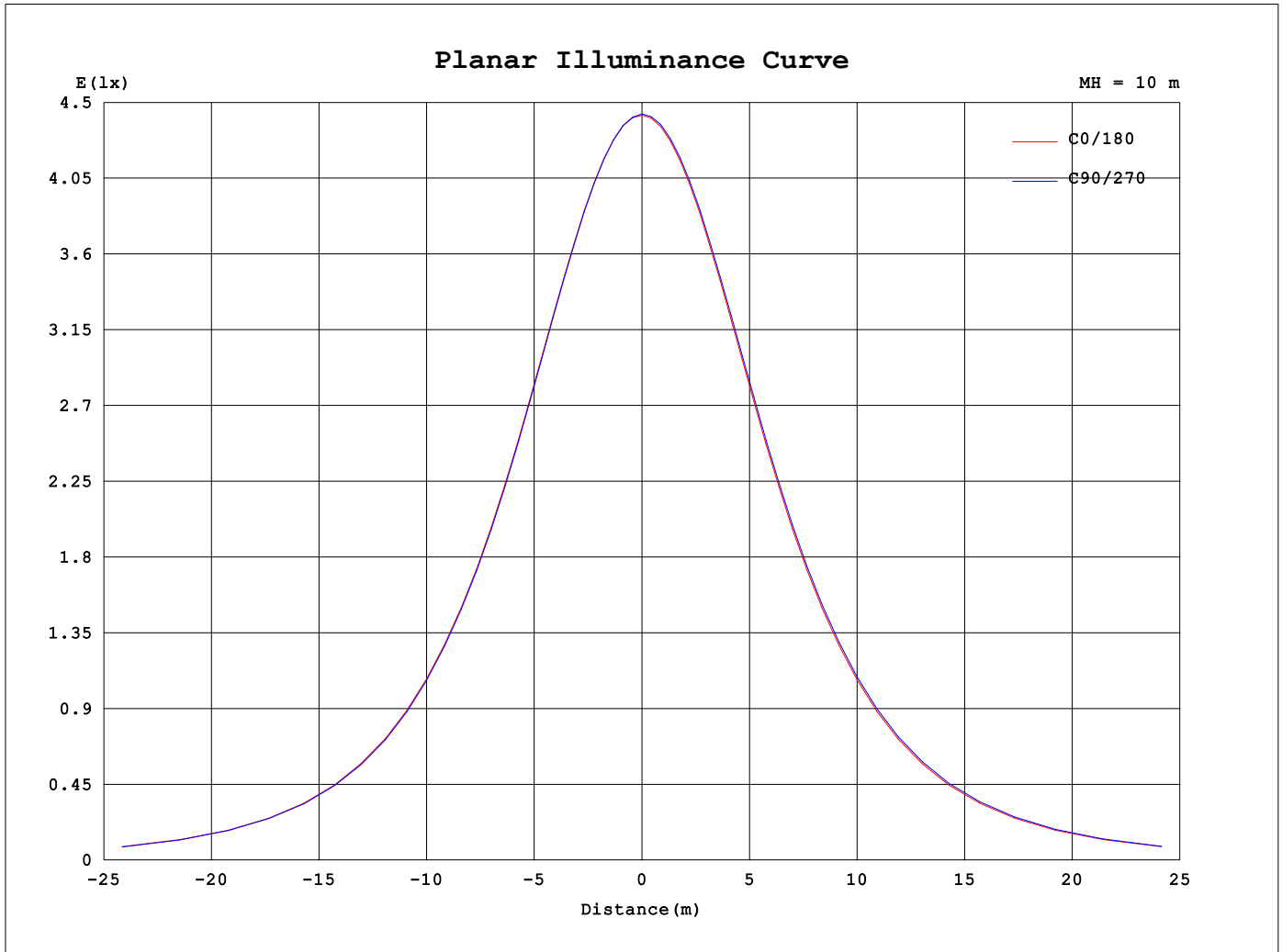
AvgL	cd/m2
L_0~180 (65) av	17235
L_0~180 (75) av	15425
L_0~180 (85) av	11670
L_90~270 (65) av	17305
L_90~270 (75) av	14828
L_90~270 (85) av	7221
L_45 (65) av	17307
L_45 (75) av	15206
L_45 (85) av	8816

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:14 July 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: 14 July 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:

```