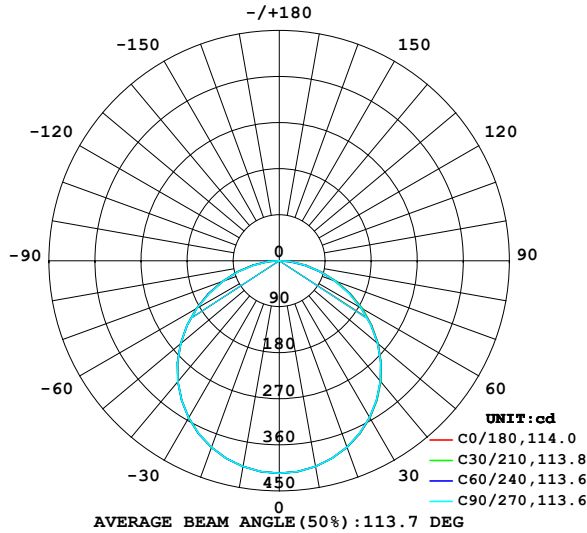


LUMINAIRE PHOTOMETRIC TEST REPORT

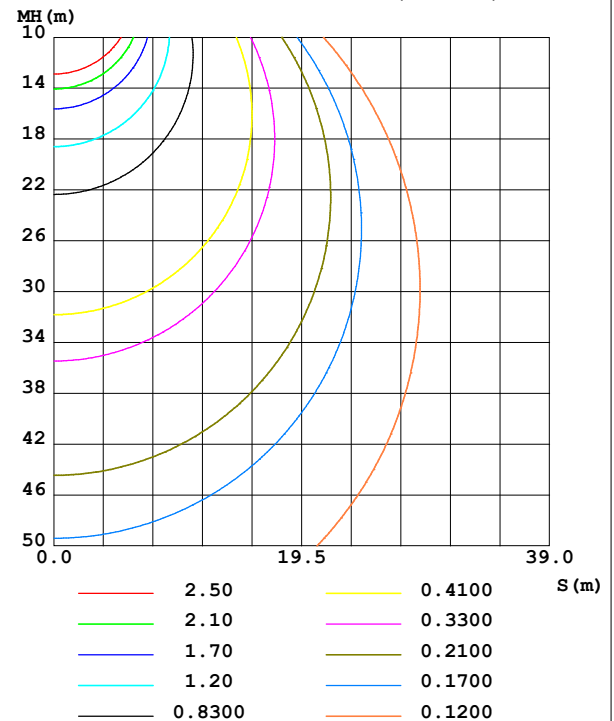
NAME: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99XLED635	I _{max} (cd)	415.3	S/MH (C0/180)	1.27
NOMINAL POWER (W)	18	LOR (%)	89.7	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1211.5	η UP, DN (C0-180)	0.0, 44.8
NOMINAL FLUX (lm)	1350	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 45.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	89.7	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: 27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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	408.4	408.3	408.4	408.3	408.5	408.5	408.7	408.6	0- 10	39.32	39.32	3.25,2.91
20	388.0	387.7	387.5	387.6	388.1	388.2	388.3	388.3	10- 20	112.9	152.2	12.6,11.3
30	354.4	353.9	353.7	353.7	354.5	354.5	354.6	354.8	20- 30	171.8	324.0	26.7,24
40	308.7	307.9	307.5	307.4	308.6	308.4	308.6	308.9	30- 40	208.1	532.1	43.9,39.4
50	252.3	251.1	250.6	250.5	252.0	251.5	251.9	252.2	40- 50	216.7	748.8	61.8,55.5
60	187.7	186.1	185.3	185.3	187.4	186.5	186.3	187.2	50- 60	196.4	945.2	78,70
70	119.1	117.3	116.2	116.5	118.8	117.6	117.1	118.3	60- 70	150.6	1096	90.5,81.2
80	53.44	51.71	49.57	51.09	53.20	52.14	50.89	52.67	70- 80	88.99	1185	97.8,87.8
90	0.7301	0.7736	0.7403	0.7751	0.6675	0.7136	0.6941	0.7077	80- 90	26.67	1212	100,89.7
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): 641.2 lm

%lum = 52.9%

%lamp = 47.5%

Conical surface Flux(130deg): 1027.5 lm

%lum = 84.8%

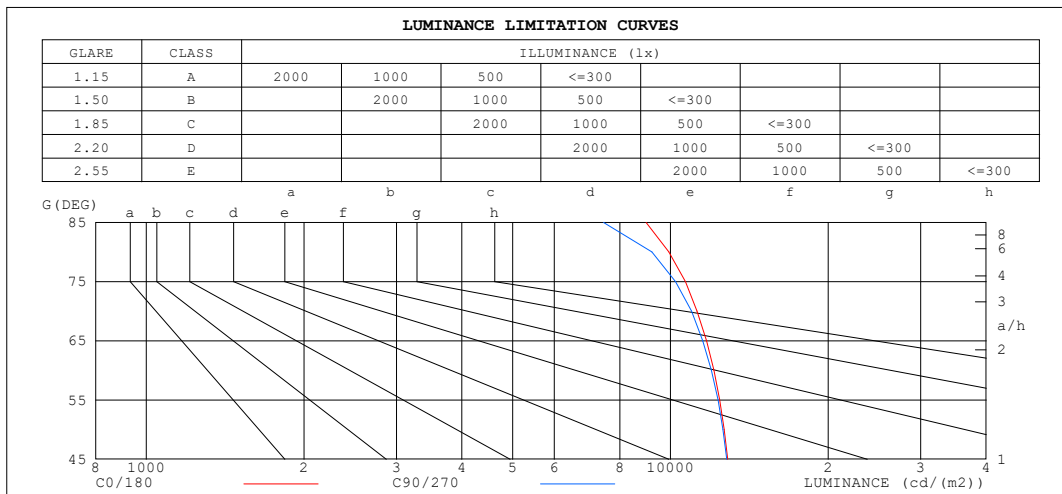
%lamp = 76.1%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:27 July 2022

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
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: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8982	7450
80	9926	9216
75	10672	10219
70	11236	10971
65	11718	11526
60	12109	11966
55	12419	12322
50	12660	12589
45	12853	12798

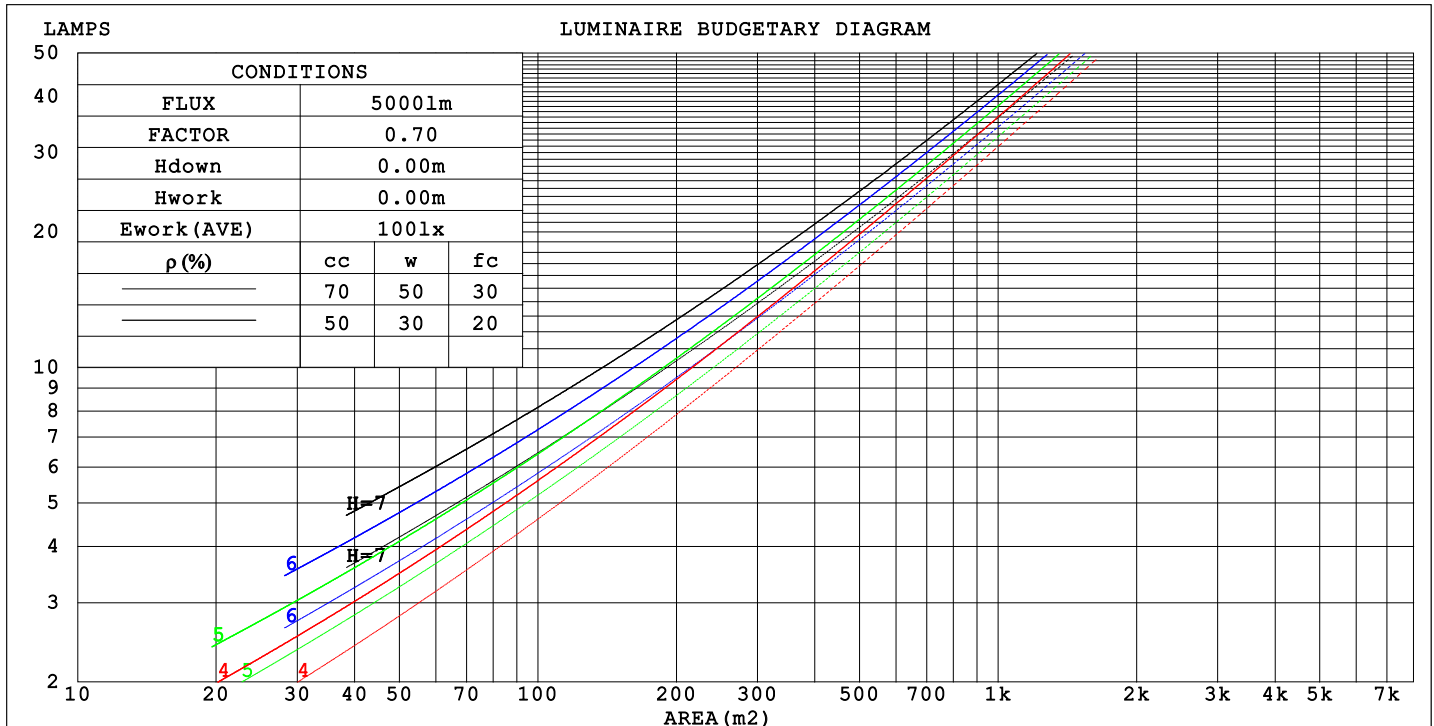
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	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: HIGH
Temperature:25.3°C
Operators:
Test Date:27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	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	.283	.161	.051	.277	.158	.050	.265	.152	.048	.254	.146	.047	.244	.141	.046		
2.0	.265	.145	.045	.259	.143	.044	.249	.138	.043	.239	.134	.042	.230	.130	.041		
3.0	.245	.130	.039	.240	.128	.039	.230	.125	.038	.222	.122	.037	.214	.118	.037		
4.0	.225	.117	.034	.221	.116	.034	.213	.113	.034	.205	.110	.033	.198	.108	.033		
5.0	.208	.106	.031	.204	.105	.031	.197	.103	.030	.190	.100	.030	.184	.098	.030		
6.0	.193	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	.171	.090	.027		
7.0	.179	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	.160	.083	.024		
8.0	.167	.082	.023	.165	.081	.023	.159	.080	.023	.155	.078	.023	.150	.077	.022		
9.0	.157	.076	.021	.154	.075	.021	.150	.074	.021	.145	.073	.021	.141	.072	.021		
10.0	.147	.071	.020	.145	.070	.020	.141	.069	.019	.137	.068	.019	.133	.067	.019		

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	.171	.171	.171	.146	.146	.146	.100	.100	.100	.057	.057	.057	.018	.018	.018	
1.0	.162	.140	.120	.139	.120	.103	.095	.083	.072	.055	.048	.042	.017	.015	.013	
2.0	.155	.118	.088	.133	.102	.076	.091	.070	.053	.052	.041	.031	.017	.013	.010	
3.0	.148	.103	.066	.127	.088	.058	.087	.061	.040	.050	.036	.024	.016	.012	.008	
4.0	.141	.091	.052	.121	.078	.045	.083	.055	.032	.048	.032	.019	.016	.010	.006	
5.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005	
6.0	.128	.074	.035	.110	.064	.030	.076	.045	.022	.044	.026	.013	.014	.009	.004	
7.0	.122	.068	.030	.105	.059	.026	.072	.041	.018	.042	.024	.011	.014	.008	.004	
8.0	.116	.062	.026	.100	.054	.022	.069	.038	.016	.040	.022	.009	.013	.007	.003	
9.0	.111	.058	.023	.095	.050	.020	.066	.035	.014	.038	.021	.008	.012	.007	.003	
10.0	.105	.054	.020	.091	.047	.018	.063	.033	.012	.037	.020	.007	.012	.006	.002	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 99XLED635					TYPE: 99XLED635			WEIGHT: 0.420		
SPEC.:					DIM.: 225 x225			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: square 176 x176			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	22.1	20.9	22.3	22.5	20.5	22.1	20.8	22.3	22.5
3H	22.2	23.6	22.5	23.8	24.0	22.1	23.5	22.4	23.7	24.0
4H	22.8	24.1	23.1	24.4	24.6	22.7	24.0	23.0	24.3	24.5
6H	23.3	24.5	23.6	24.8	25.1	23.1	24.4	23.4	24.6	24.9
8H	23.4	24.6	23.7	24.9	25.2	23.2	24.4	23.5	24.7	25.0
12H	23.5	24.7	23.9	25.0	25.3	23.2	24.4	23.6	24.7	25.0
4H 2H	21.2	22.6	21.5	22.8	23.1	21.2	22.5	21.5	22.8	23.0
3H	22.9	24.1	23.3	24.4	24.7	22.9	24.0	23.2	24.3	24.6
4H	23.7	24.8	24.1	25.1	25.4	23.6	24.7	24.0	25.0	25.3
6H	24.3	25.3	24.7	25.6	26.0	24.1	25.1	24.5	25.4	25.8
8H	24.5	25.4	24.9	25.8	26.1	24.3	25.2	24.7	25.5	25.9
12H	24.7	25.5	25.1	25.9	26.3	24.4	25.2	24.8	25.6	26.0
8H 4H	24.0	24.9	24.4	25.2	25.6	23.9	24.8	24.3	25.1	25.5
6H	24.7	25.5	25.2	25.9	26.3	24.5	25.3	25.0	25.7	26.1
8H	25.0	25.7	25.4	26.1	26.5	24.8	25.4	25.2	25.9	26.3
12H	25.3	25.8	25.7	26.3	26.7	25.0	25.6	25.5	26.0	26.5
12H 4H	24.0	24.8	24.4	25.2	25.6	23.9	24.7	24.3	25.1	25.5
6H	24.8	25.4	25.2	25.9	26.3	24.6	25.3	25.1	25.7	26.1
8H	25.1	25.7	25.6	26.1	26.6	24.9	25.5	25.4	25.9	26.4
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: 0.030976 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:

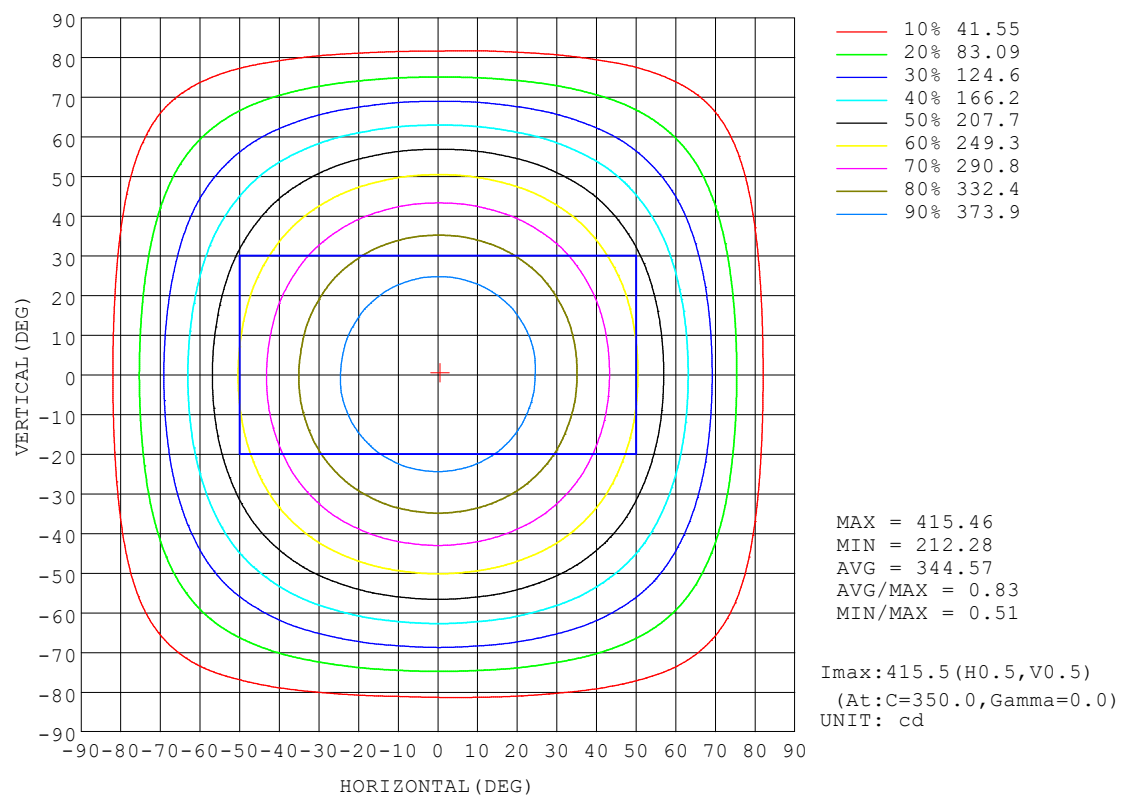
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	41	34	51	41	34	50	40	34	28
0.80	60	50	43	59	49	43	58	49	43	36
1.00	68	58	51	67	57	51	65	59	50	44
1.25	74	65	58	73	64	58	70	63	57	50
1.50	79	70	63	77	69	63	74	67	62	55
2.00	85	77	71	83	76	71	80	74	69	62
2.50	88	81	76	87	80	75	83	78	73	66
3.00	91	85	80	90	84	79	86	81	77	70
4.00	95	90	86	93	88	84	89	85	82	74
5.00	97	93	89	95	91	88	91	88	85	77
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:27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:

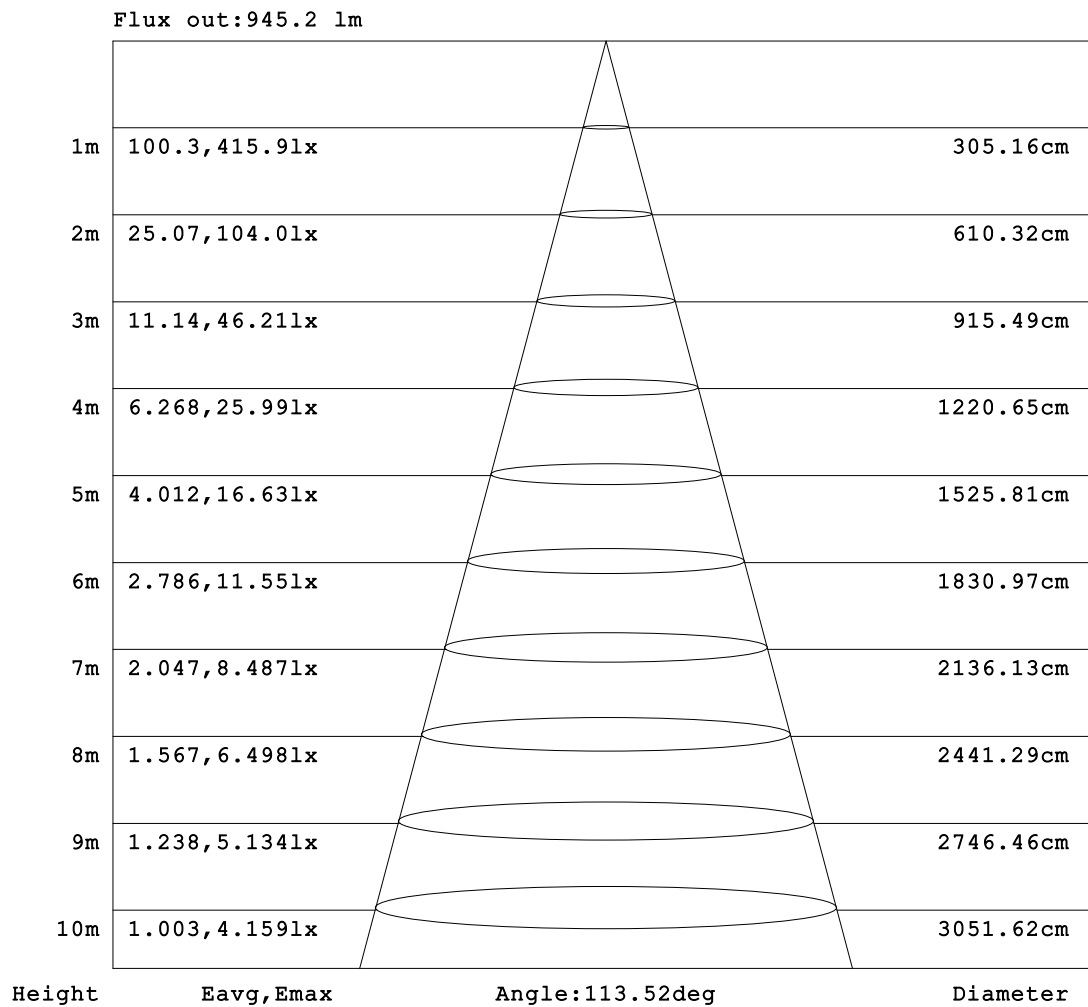


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

AAI Figure

NAME: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:



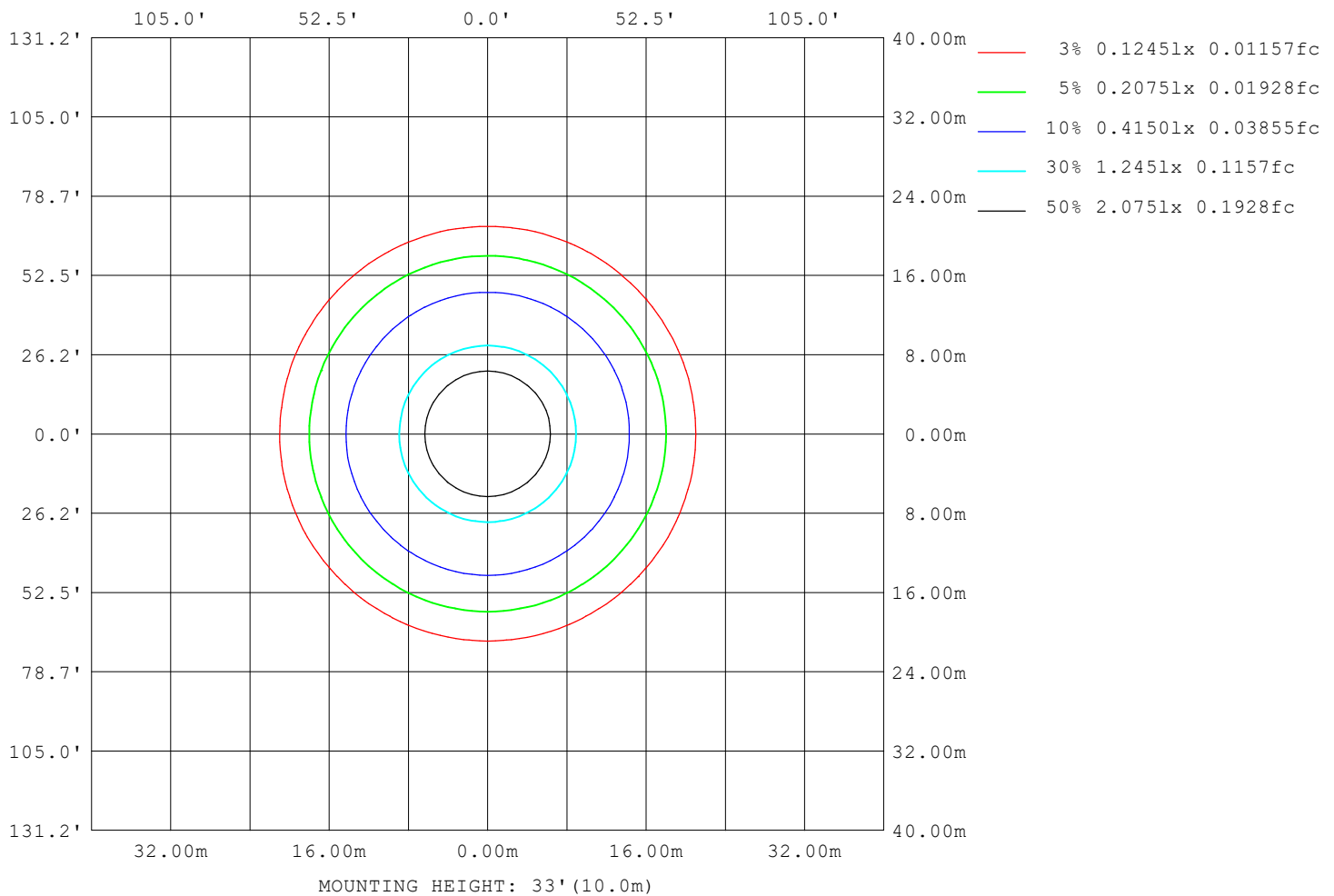
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 27 July 2022

γ Range: 0 - 90DEG
 γ Interval: 5.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 99XLED635	TYPE: 99XLED635	WEIGHT: 0.420
SPEC.:	DIM.: 225 x225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square 176 x176	Shielding Angle:

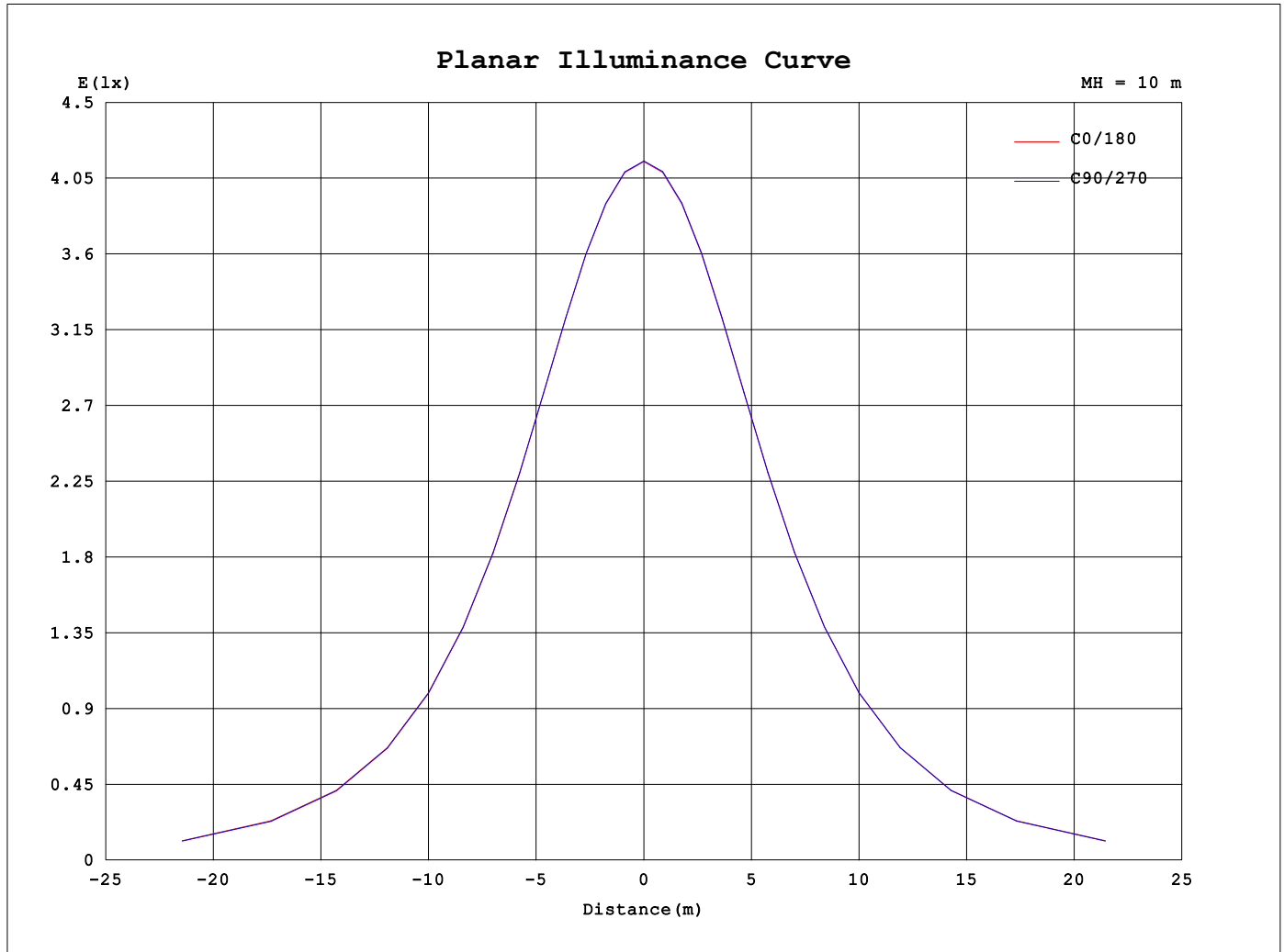
AvgL	cd/m2
L_0~180 (65) av	11717
L_0~180 (75) av	10652
L_0~180 (85) av	8966
L_90~270 (65) av	11556
L_90~270 (75) av	10309
L_90~270 (85) av	7654
L_45 (65) av	11611
L_45 (75) av	10454
L_45 (85) av	8354

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: HIGH
Temperature: 25.3°C
Operators:
Test Date: 27 July 2022

γ Range: 0 - 90DEG
γ Interval: 5.0DEG
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: 5.0DEG
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: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```