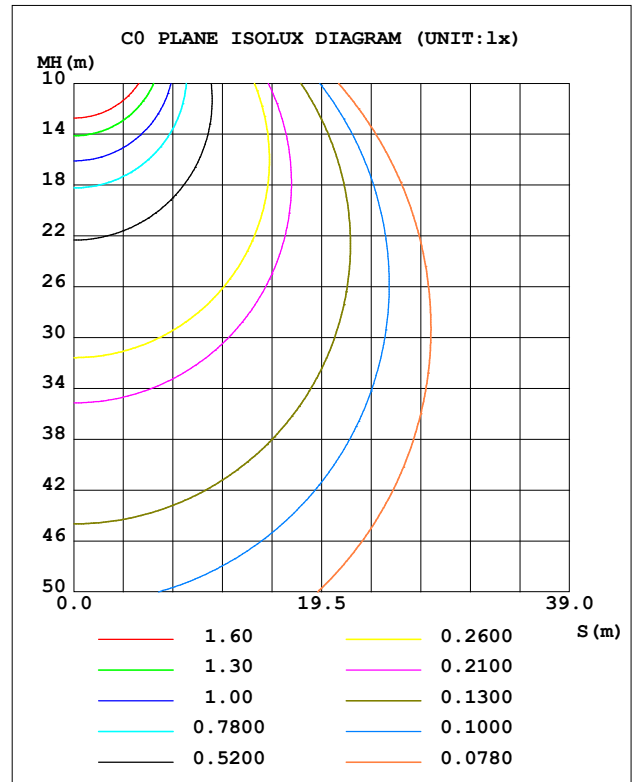
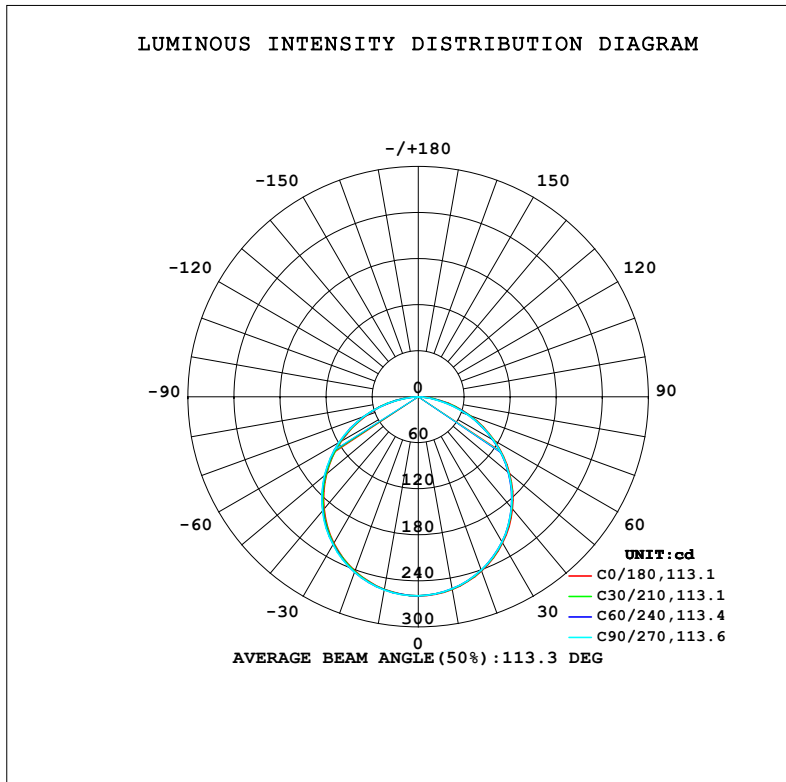


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99LED967WW	I _{max} (cd)	259.3	S/MH (C0/180)	1.26
NOMINAL POWER (W)	12	LOR (%)	83.8	S/MH (C90/270)	1.28
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	745.61	η UP, DN (C0-180)	0.0, 41.3
NOMINAL FLUX (lm)	890	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 42.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	83.8	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 12 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	254.8	254.3	254.1	254.2	254.8	255.3	255.6	255.4	0- 10	24.54	24.54	3.29, 2.76
20	241.5	240.6	240.3	240.6	241.5	242.7	243.2	242.7	10- 20	70.36	94.89	12.7, 10.7
30	219.9	218.7	218.4	218.6	220.0	221.6	222.5	221.7	20- 30	106.9	201.8	27.1, 22.7
40	191.0	189.3	189.1	189.3	191.2	193.1	194.2	193.1	30- 40	129.2	331.0	44.4, 37.2
50	155.4	153.7	153.8	153.9	156.1	158.2	159.4	158.1	40- 50	134.5	465.5	62.4, 52.3
60	114.8	113.1	113.0	113.4	115.7	118.1	119.5	117.8	50- 60	121.8	587.3	78.8, 66
70	71.89	69.75	68.62	70.31	72.61	74.88	75.08	74.79	60- 70	93.10	680.4	91.3, 76.4
80	29.52	26.94	24.29	27.29	29.84	30.96	29.43	30.95	70- 80	53.13	733.5	98.4, 82.4
90	0.4193	0.4232	0.4137	0.4301	0.3621	0.4069	0.3511	0.3757	80- 90	12.09	745.6	100, 83.8
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): 398.7 lm

%lum = 53.5%

%lamp = 44.8%

Conical surface Flux(130deg): 638.29 lm

%lum = 85.6%

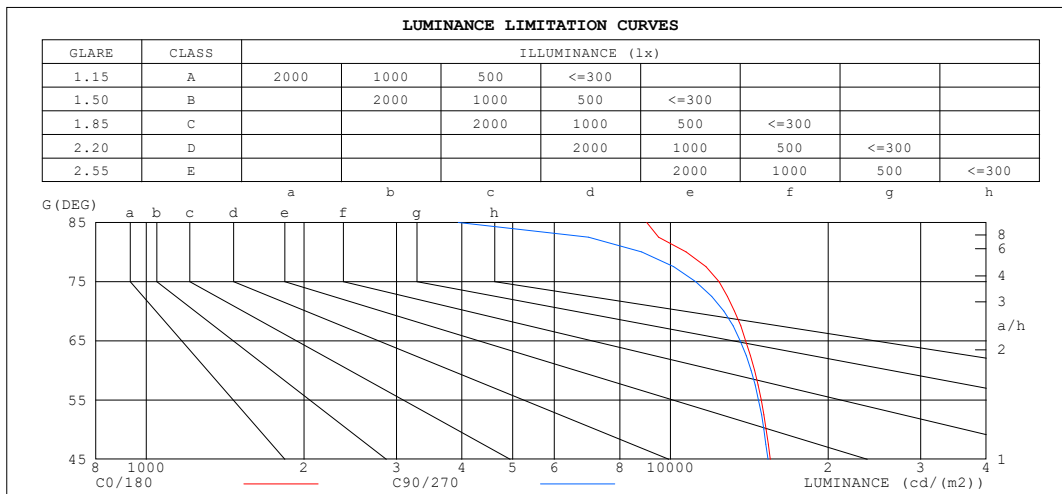
%lamp = 71.7%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:12 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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	9008	3936
80	10707	8813
75	12384	11167
70	13238	12640
65	13907	13583
60	14462	14243
55	14897	14721
50	15228	15072
45	15488	15339

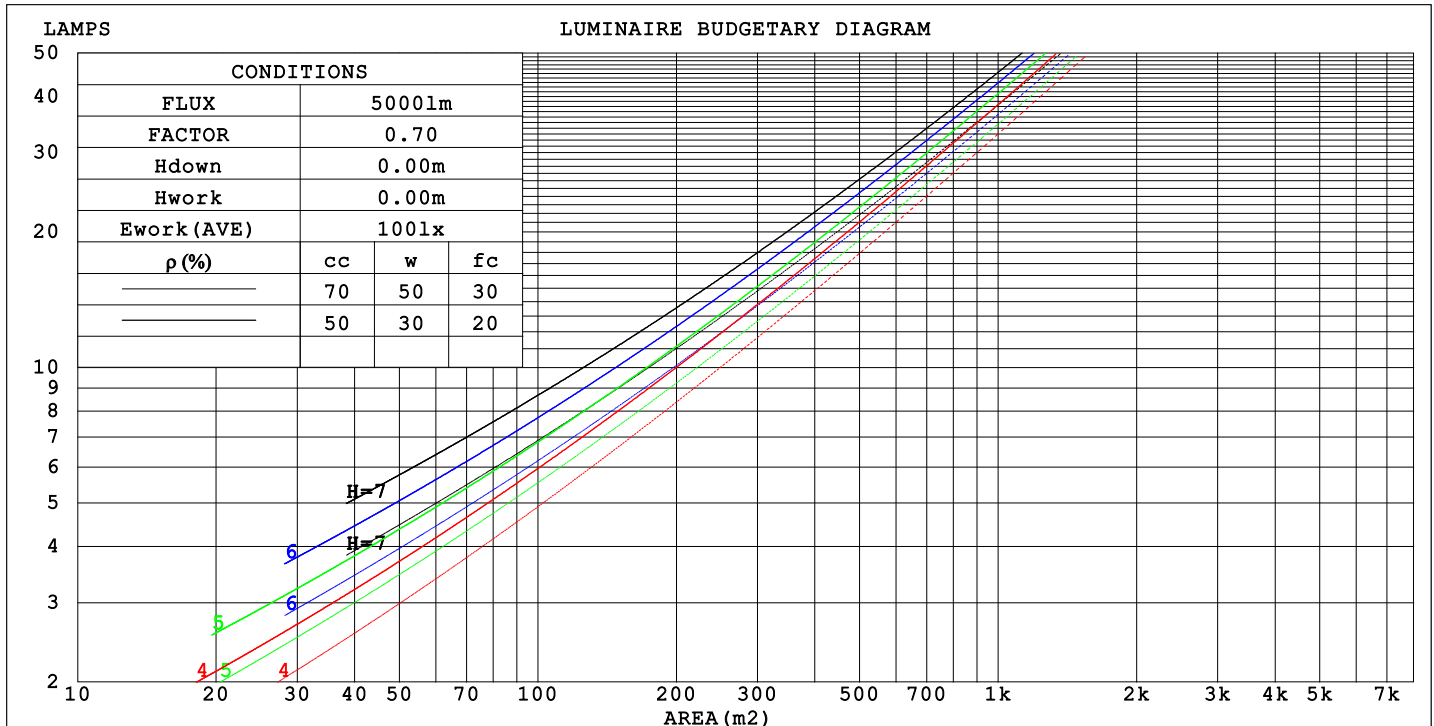
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 12 August 2022

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	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															Coefficients of Utilization(CU)														
0.0	.00	.00	.00	.97	.97	.97	.93	.93	.93	.89	.89	.89	.85	.85	.85	.84														
1.0	.87	.83	.80	.85	.82	.79	.82	.79	.76	.78	.76	.74	.75	.74	.72	.70														
2.0	.76	.70	.65	.74	.69	.64	.71	.67	.63	.68	.65	.61	.66	.63	.60	.58														
3.0	.66	.60	.54	.65	.59	.54	.63	.57	.53	.60	.56	.52	.58	.54	.51	.49														
4.0	.59	.51	.46	.58	.51	.45	.56	.50	.45	.54	.48	.44	.52	.47	.44	.42														
5.0	.52	.45	.39	.52	.44	.39	.50	.43	.39	.48	.43	.38	.47	.42	.38	.36														
6.0	.47	.40	.34	.46	.39	.34	.45	.39	.34	.43	.38	.33	.42	.37	.33	.31														
7.0	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.38	.33	.29	.28														
8.0	.39	.32	.27	.38	.32	.27	.37	.31	.27	.36	.31	.26	.35	.30	.26	.25														
9.0	.36	.29	.24	.35	.29	.24	.34	.28	.24	.33	.28	.24	.33	.27	.24	.22														
10.0	.33	.26	.22	.33	.26	.22	.32	.26	.22	.31	.26	.22	.30	.25	.22	.20														



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 12 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:

WEC AND CCEC

NAME: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	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	.258	.147	.047	.252	.144	.046	.241	.138	.044	.231	.133	.043	.222	.128	.041	
2.0	.244	.134	.041	.239	.132	.041	.229	.127	.040	.220	.123	.039	.212	.120	.038	
3.0	.226	.120	.036	.222	.119	.036	.213	.115	.035	.205	.112	.034	.198	.109	.034	
4.0	.209	.109	.032	.205	.107	.032	.197	.105	.031	.190	.102	.031	.183	.100	.030	
5.0	.193	.098	.029	.190	.097	.028	.183	.095	.028	.176	.093	.028	.171	.091	.027	
6.0	.179	.090	.026	.176	.089	.026	.170	.087	.025	.164	.085	.025	.159	.084	.025	
7.0	.167	.082	.023	.164	.082	.023	.159	.080	.023	.153	.079	.023	.149	.077	.023	
8.0	.156	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.021	.140	.072	.021	
9.0	.146	.071	.020	.144	.070	.020	.139	.069	.020	.135	.068	.019	.131	.067	.019	
10.0	.137	.066	.018	.135	.065	.018	.131	.064	.018	.128	.063	.018	.124	.062	.018	

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	.160	.160	.160	.136	.136	.136	.093	.093	.093	.053	.053	.053	.017	.017	.017	
1.0	.151	.131	.113	.129	.112	.097	.088	.077	.067	.051	.045	.039	.016	.014	.013	
2.0	.144	.111	.082	.124	.095	.071	.085	.066	.050	.049	.038	.029	.016	.012	.009	
3.0	.138	.096	.062	.118	.083	.054	.081	.057	.038	.047	.034	.022	.015	.011	.007	
4.0	.131	.085	.049	.113	.073	.042	.078	.051	.030	.045	.030	.018	.014	.010	.006	
5.0	.125	.076	.039	.108	.066	.034	.074	.046	.024	.043	.027	.014	.014	.009	.005	
6.0	.119	.069	.033	.103	.060	.029	.071	.042	.020	.041	.025	.012	.013	.008	.004	
7.0	.114	.063	.028	.098	.055	.024	.067	.038	.017	.039	.023	.010	.013	.007	.003	
8.0	.108	.058	.024	.093	.051	.021	.064	.035	.015	.037	.021	.009	.012	.007	.003	
9.0	.103	.054	.021	.089	.047	.018	.061	.033	.013	.036	.019	.008	.012	.006	.003	
10.0	.098	.051	.019	.085	.044	.016	.059	.031	.012	.034	.018	.007	.011	.006	.002	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:12 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: 99LED967WW						TYPE: 99LED967WW			WEIGHT: 1		
SPEC.:						DIM.: 170 x 170			SERIAL No.: 0		
MFR.: Elmark Industries JSC						SUR.: square			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	22.6	24.2	22.9	24.4	24.6	22.6	24.1	22.8	24.3	24.5
	3H	24.2	25.6	24.5	25.8	26.0	24.0	25.4	24.3	25.7	25.9
	4H	24.8	26.1	25.1	26.4	26.6	24.6	25.9	24.9	26.2	26.4
	6H	25.2	26.5	25.5	26.7	27.0	24.9	26.1	25.2	26.4	26.7
	8H	25.3	26.6	25.7	26.8	27.1	24.9	26.1	25.3	26.4	26.7
	12H	25.4	26.6	25.8	26.9	27.2	24.9	26.1	25.2	26.4	26.7
4H	2H	23.2	24.6	23.5	24.8	25.1	23.2	24.5	23.5	24.8	25.0
	3H	24.9	26.1	25.3	26.4	26.7	24.8	26.0	25.2	26.3	26.6
	4H	25.7	26.7	26.0	27.1	27.4	25.5	26.5	25.8	26.9	27.2
	6H	26.2	27.2	26.6	27.5	27.9	25.9	26.8	26.3	27.2	27.5
	8H	26.4	27.3	26.8	27.7	28.1	26.0	26.8	26.4	27.2	27.6
	12H	26.5	27.4	27.0	27.7	28.1	25.9	26.8	26.4	27.1	27.6
8H	4H	25.9	26.8	26.3	27.2	27.5	25.7	26.6	26.1	27.0	27.4
	6H	26.6	27.3	27.0	27.7	28.2	26.2	27.0	26.7	27.4	27.8
	8H	26.9	27.5	27.3	27.9	28.4	26.4	27.0	26.8	27.5	27.9
	12H	27.0	27.6	27.5	28.1	28.5	26.4	27.0	26.9	27.4	27.9
12H	4H	25.9	26.7	26.3	27.1	27.5	25.7	26.5	26.2	26.9	27.3
	6H	26.6	27.3	27.1	27.7	28.2	26.3	26.9	26.8	27.4	27.8
	8H	26.9	27.5	27.4	27.9	28.4	26.4	27.0	26.9	27.4	27.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 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, 890.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.4)
Area: 0.015876 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:12 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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

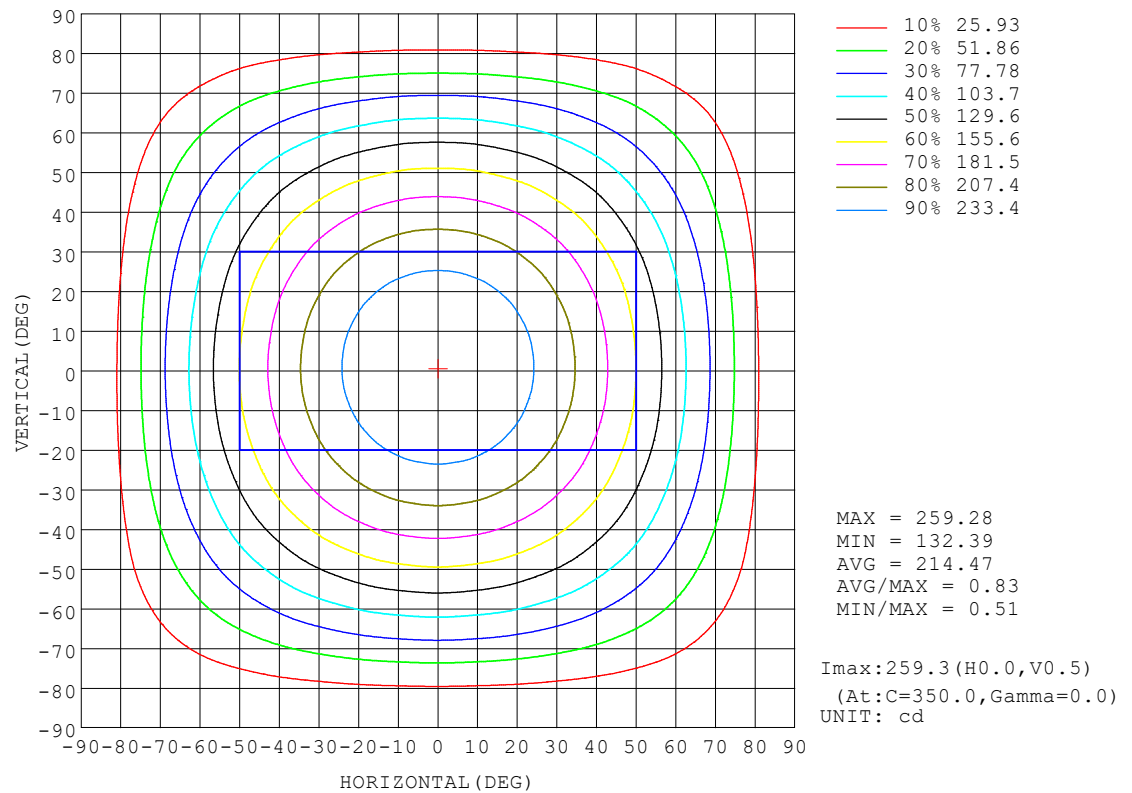
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	48	38	32	47	38	32	46	38	32	27
0.80	56	47	41	56	46	40	54	46	40	34
1.00	64	54	48	63	54	48	61	55	47	41
1.25	70	61	55	68	60	54	66	59	54	48
1.50	74	65	60	72	65	59	70	63	58	52
2.00	80	72	67	78	71	66	75	69	65	58
2.50	83	76	71	81	75	71	78	73	69	62
3.00	86	80	75	84	79	74	80	76	73	65
4.00	89	84	80	87	83	79	83	80	77	70
5.00	91	87	84	89	85	82	85	82	80	72
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: 12 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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

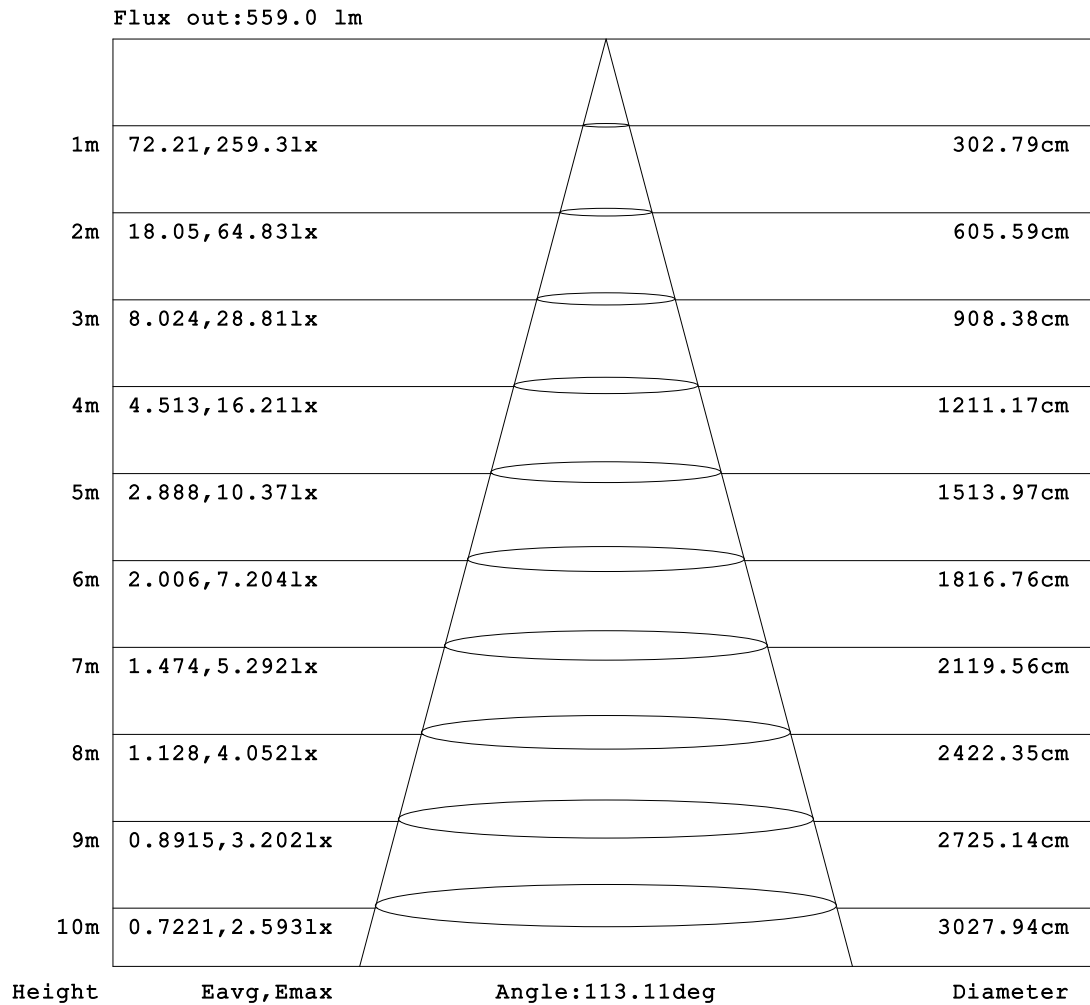


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 12 August 2022

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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:



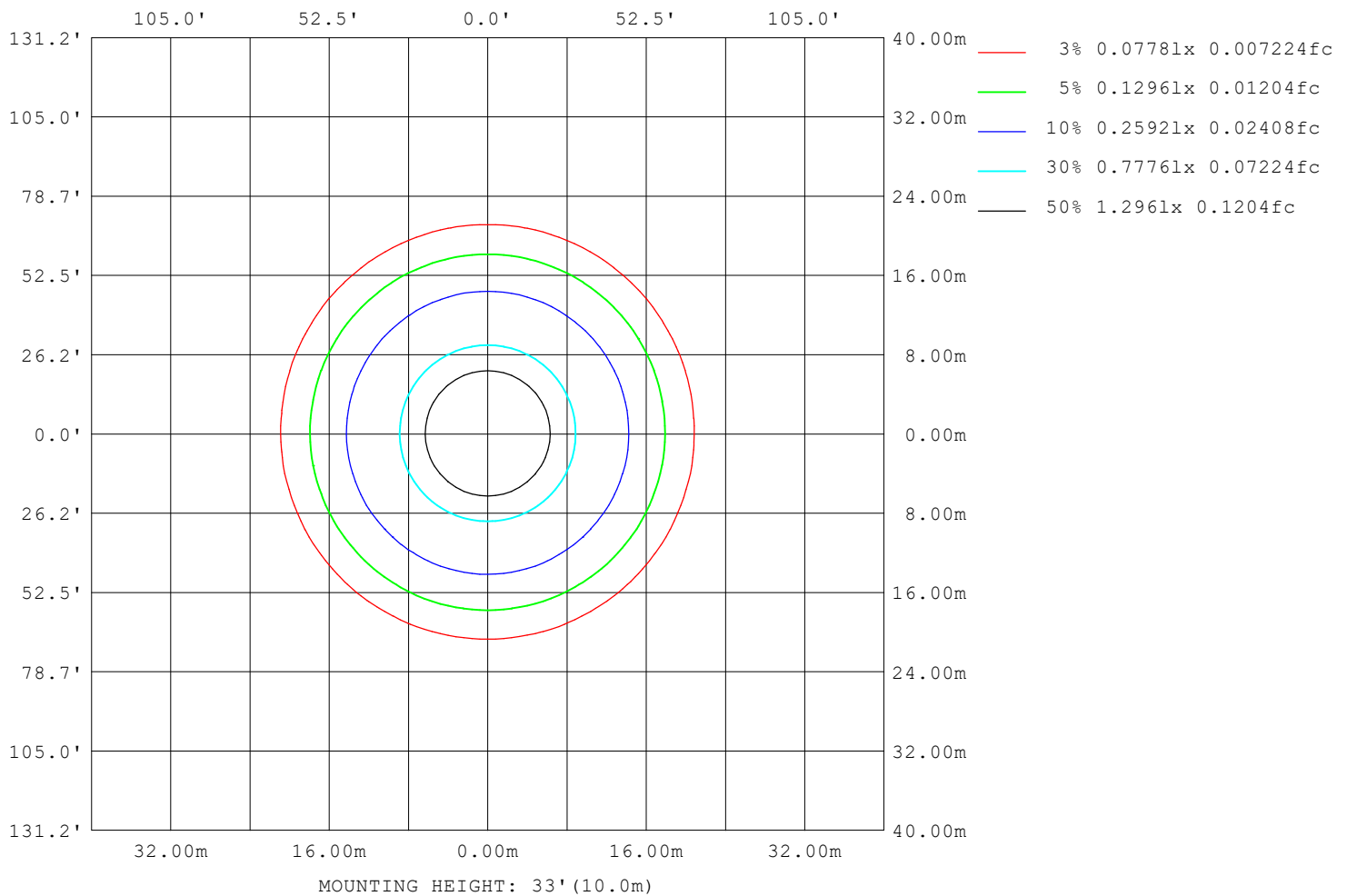
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 12 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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 12 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: 99LED967WW	TYPE: 99LED967WW	WEIGHT: 1
SPEC.:	DIM.: 170 x 170	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

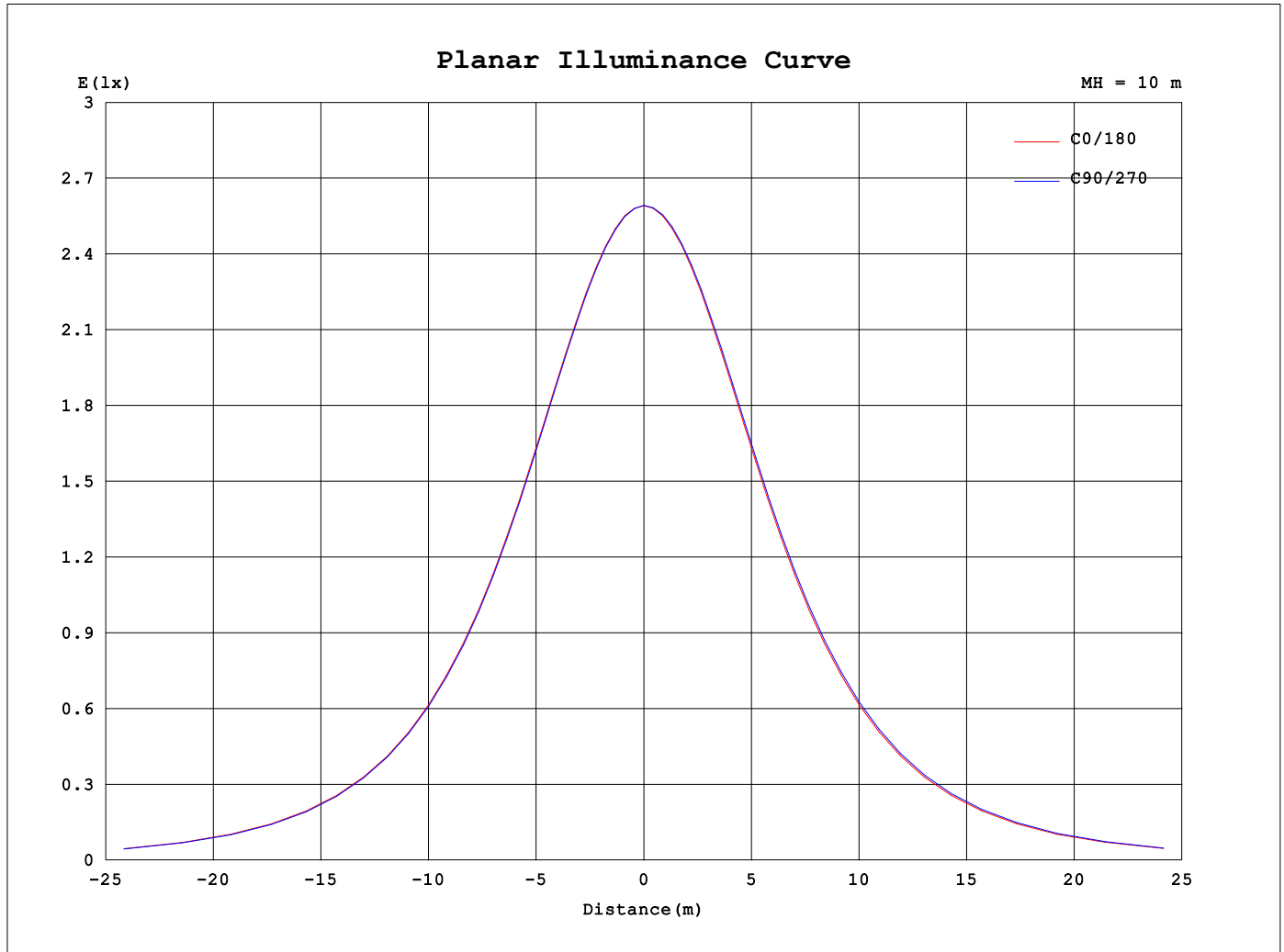
AvgL	cd/m2
L_0~180 (65) av	13980
L_0~180 (75) av	12453
L_0~180 (85) av	8841
L_90~270 (65) av	14066
L_90~270 (75) av	11888
L_90~270 (85) av	5438
L_45 (65) av	14036
L_45 (75) av	12319
L_45 (85) av	6760

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:12 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: 12 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:

```

```

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:

```