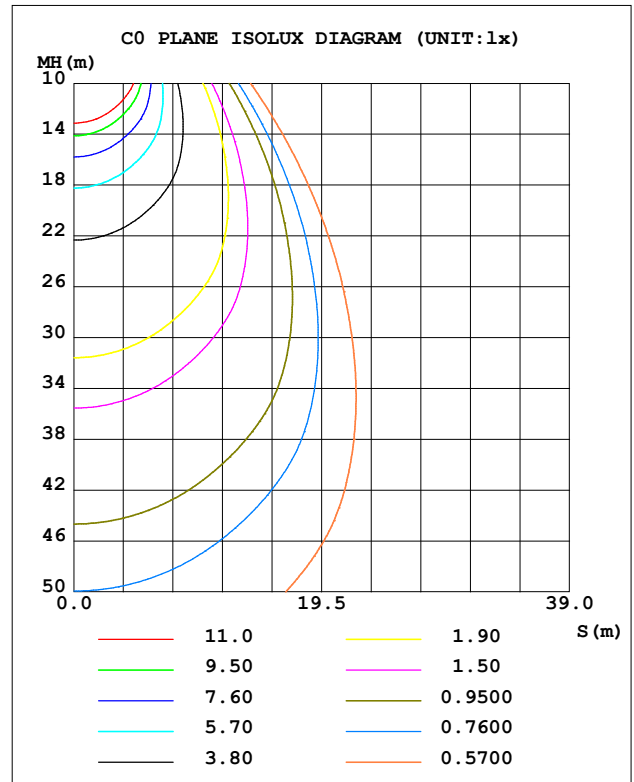
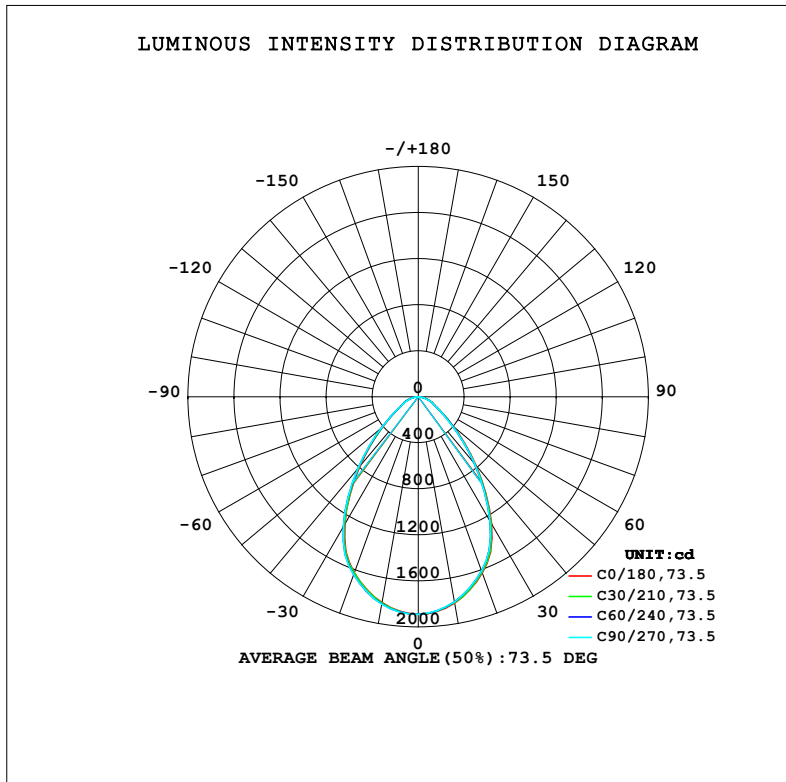


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92EL62283040/WH	Imax (cd)	1889	S/MH (C0/180)	1.06
NOMINAL POWER (W)	30	LOR (%)	112.3	S/MH (C90/270)	1.08
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2918.8	$\eta$ UP, DN (C0-180)	0.0, 55.2
NOMINAL FLUX (lm)	2600	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 57.0
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230	$\eta$ down (%)	112.3	CIBSE SHR MAX	1.10



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 06 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1820	1812	1809	1810	1815	1824	1829	1828	0- 10	176.9	176.9	6.06, 6.81
20	1628	1616	1608	1610	1625	1636	1643	1644	10- 20	487.7	664.7	22.8, 25.6
30	1273	1253	1247	1254	1277	1296	1304	1298	20- 30	676.7	1341	46, 51.6
40	784.4	767.2	760.6	770.2	794.5	808.1	818.9	812.1	30- 40	642.4	1984	68, 76.3
50	395.1	381.2	380.7	387.0	396.3	411.0	415.4	408.0	40- 50	445.5	2429	83.2, 93.4
60	186.9	183.4	181.0	184.6	187.6	191.3	190.8	191.2	50- 60	248.5	2678	91.7, 103
70	112.1	107.6	103.6	108.8	112.9	111.6	108.2	111.8	60- 70	144.6	2822	96.7, 109
80	46.20	40.18	35.47	41.06	44.61	43.76	40.23	44.17	70- 80	78.79	2901	99.4, 112
90	0.7734	0.7496	0.7243	0.7642	0.6838	0.6734	0.6672	0.6756	80- 90	17.73	2919	100, 112
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): 2234.9 lm

%lum = 76.6%

%lamp = 86.0%

Conical surface Flux(130deg): 2757.6 lm

%lum = 94.5%

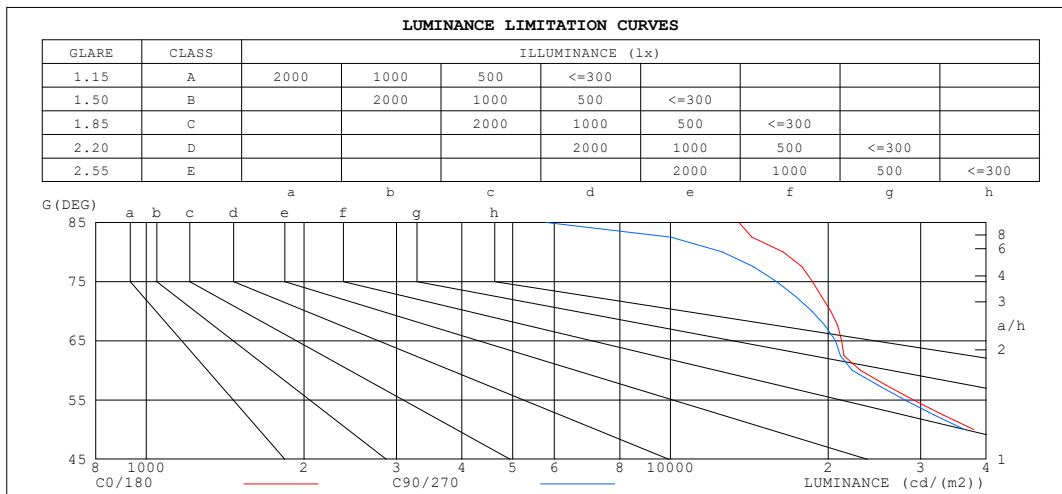
%lamp = 106.1%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:06 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	13510	5795
80	16397	12544
75	18653	15942
70	20204	18599
65	21207	20648
60	23038	22225
55	29078	28017
50	37878	36368
45	49515	47712

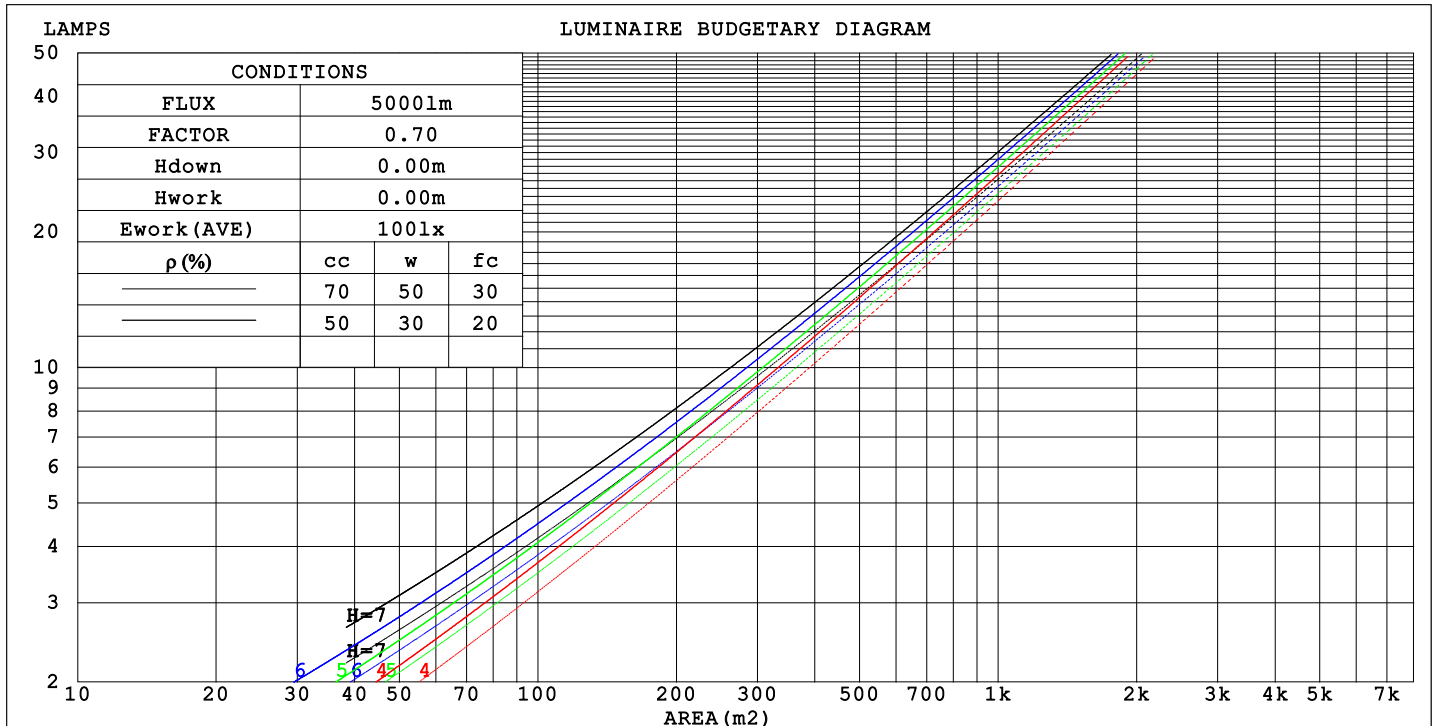
C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 06 December 2022

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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	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:06 December 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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	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	.266	.151	.048	.258	.147	.047	.243	.140	.045	.230	.133	.043	.218	.126	.041	
2.0	.255	.140	.043	.248	.137	.042	.236	.131	.041	.224	.126	.039	.214	.121	.038	
3.0	.241	.128	.038	.235	.126	.038	.224	.121	.037	.214	.117	.036	.205	.113	.035	
4.0	.226	.118	.035	.221	.116	.034	.212	.112	.034	.203	.109	.033	.195	.106	.032	
5.0	.213	.108	.031	.208	.107	.031	.200	.104	.031	.192	.101	.030	.185	.099	.030	
6.0	.201	.101	.029	.197	.099	.029	.189	.097	.028	.182	.095	.028	.176	.092	.027	
7.0	.189	.094	.027	.186	.093	.026	.179	.091	.026	.173	.089	.026	.167	.087	.026	
8.0	.179	.087	.025	.176	.087	.024	.170	.085	.024	.164	.083	.024	.159	.082	.024	
9.0	.170	.082	.023	.167	.081	.023	.161	.080	.023	.156	.078	.022	.152	.077	.022	
10.0	.161	.077	.021	.159	.077	.021	.154	.075	.021	.149	.074	.021	.145	.073	.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	.214	.214	.214	.183	.183	.183	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.197	.176	.157	.168	.151	.135	.115	.104	.094	.066	.060	.054	.021	.019	.018	
2.0	.184	.148	.119	.157	.128	.103	.108	.088	.072	.062	.051	.042	.020	.017	.014	
3.0	.173	.128	.092	.148	.110	.080	.102	.077	.056	.059	.045	.033	.019	.015	.011	
4.0	.163	.112	.073	.140	.097	.064	.096	.068	.045	.056	.040	.027	.018	.013	.009	
5.0	.154	.100	.060	.132	.086	.052	.091	.060	.037	.053	.035	.022	.017	.012	.007	
6.0	.146	.090	.050	.126	.078	.043	.087	.055	.031	.050	.032	.018	.016	.010	.006	
7.0	.139	.082	.042	.120	.071	.037	.083	.050	.026	.048	.029	.015	.016	.010	.005	
8.0	.133	.075	.036	.114	.065	.031	.079	.046	.022	.046	.027	.013	.015	.009	.004	
9.0	.127	.070	.031	.109	.060	.027	.076	.043	.019	.044	.025	.012	.014	.008	.004	
10.0	.121	.065	.028	.104	.056	.024	.072	.040	.017	.042	.023	.010	.014	.008	.003	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:06 December 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: 92EL62283040/WH					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: F 190 x 110			SERIAL No.: 0			
MFR.: Elmark Industries JSC					SUR.: Round			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	20.0	21.3	20.3	21.5	21.6	19.9	21.1	20.1	21.3	21.5
	3H	20.7	21.9	21.0	22.1	22.3	20.5	21.7	20.8	21.9	22.1
	4H	21.1	22.1	21.4	22.4	22.6	20.8	21.9	21.1	22.1	22.3
	6H	21.3	22.3	21.6	22.6	22.8	20.9	21.9	21.2	22.2	22.4
	8H	21.4	22.3	21.7	22.6	22.9	20.9	21.9	21.2	22.2	22.4
	12H	21.4	22.3	21.7	22.6	22.9	20.9	21.8	21.2	22.1	22.4
4H	2H	20.2	21.3	20.5	21.5	21.8	20.1	21.2	20.4	21.4	21.6
	3H	21.1	22.1	21.5	22.3	22.6	20.9	21.9	21.3	22.1	22.4
	4H	21.6	22.4	21.9	22.7	23.1	21.3	22.1	21.6	22.4	22.8
	6H	21.9	22.7	22.3	23.0	23.4	21.5	22.3	21.9	22.6	23.0
	8H	22.0	22.7	22.5	23.1	23.5	21.6	22.3	22.0	22.6	23.0
	12H	22.1	22.8	22.5	23.1	23.5	21.5	22.2	22.0	22.6	22.9
8H	4H	21.7	22.4	22.1	22.7	23.1	21.4	22.1	21.8	22.5	22.8
	6H	22.1	22.7	22.6	23.1	23.5	21.7	22.3	22.2	22.7	23.1
	8H	22.3	22.8	22.8	23.2	23.7	21.8	22.3	22.3	22.7	23.2
	12H	22.4	22.9	22.9	23.3	23.8	21.8	22.2	22.3	22.7	23.2
12H	4H	21.7	22.3	22.1	22.7	23.1	21.4	22.0	21.8	22.4	22.8
	6H	22.1	22.7	22.6	23.1	23.5	21.7	22.3	22.2	22.7	23.1
	8H	22.3	22.8	22.8	23.2	23.7	21.8	22.3	22.3	22.7	23.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.6 / - 0.8					+ 0.7 / - 0.9				
1.5H		+ 0.7 / - 0.7					+ 0.8 / - 0.7				
2.0H		+ 1.5 / - 1.0					+ 1.6 / - 1.1				

CIE Pub.117, 2600 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.3)  
Area: 0.0162778 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:06 December 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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

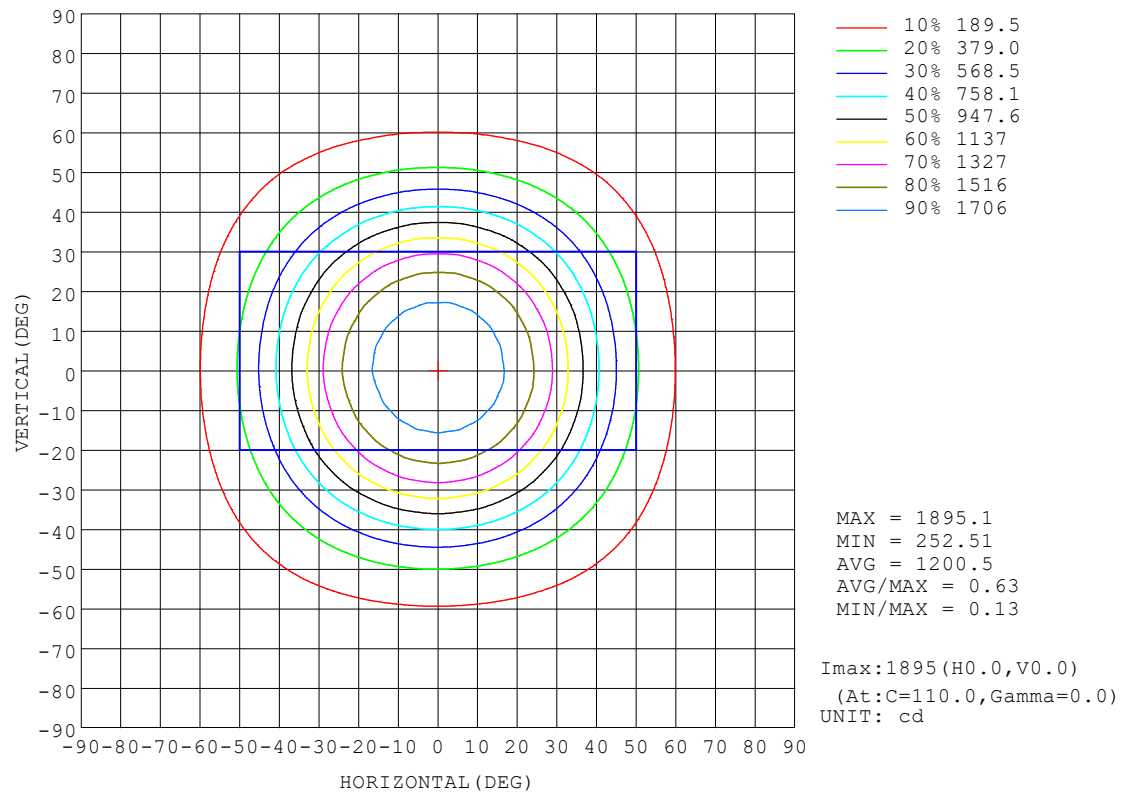
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	70	64	80	70	64	78	69	64	58
0.80	91	81	74	90	80	74	88	80	74	68
1.00	98	89	83	97	89	83	95	89	82	76
1.25	105	96	90	104	96	90	101	94	89	83
1.50	109	101	96	108	100	95	105	99	94	87
2.00	115	108	103	113	107	102	110	104	100	93
2.50	118	112	107	116	110	106	112	107	103	96
3.00	121	115	110	118	113	109	114	110	107	99
4.00	124	119	115	121	117	114	117	114	111	102
5.00	126	122	119	123	120	117	118	116	113	104
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: 06 December 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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



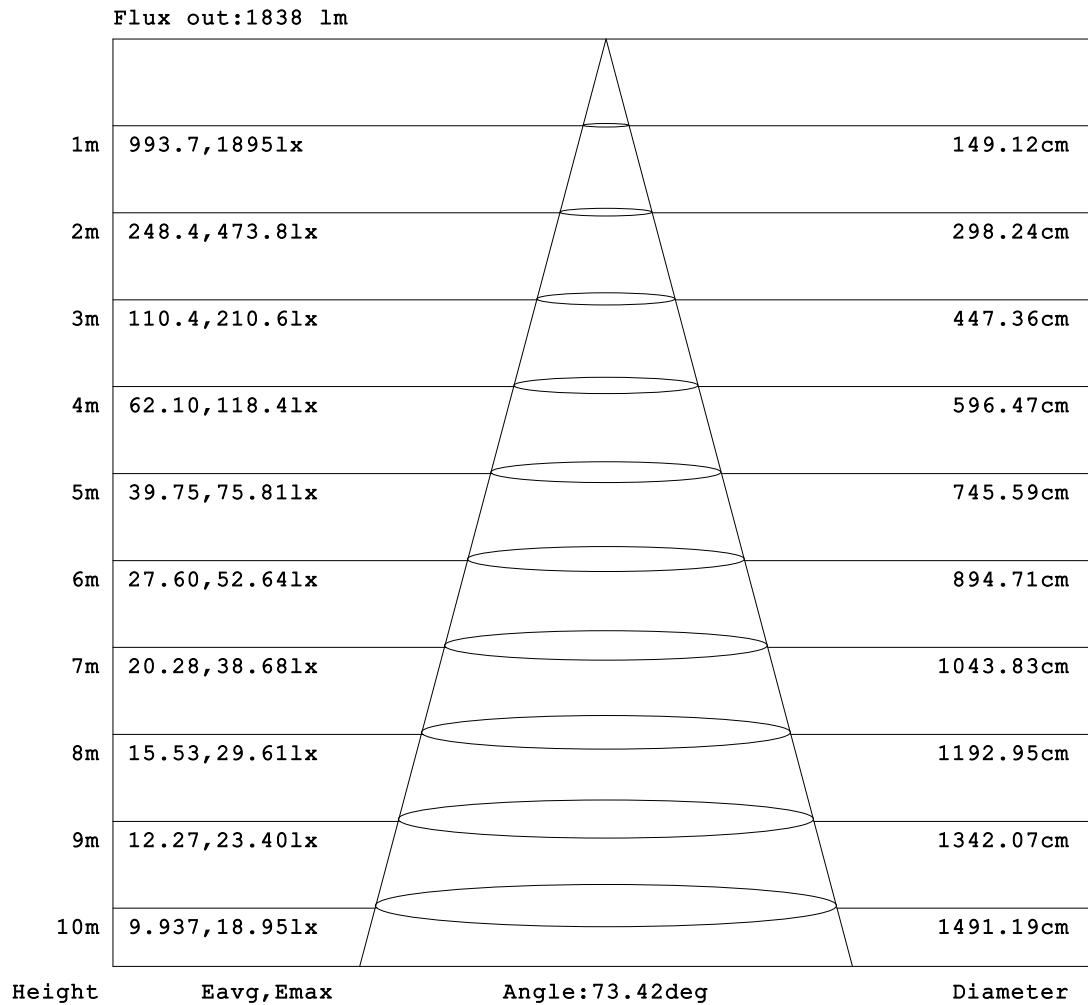
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:06 December 2022

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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



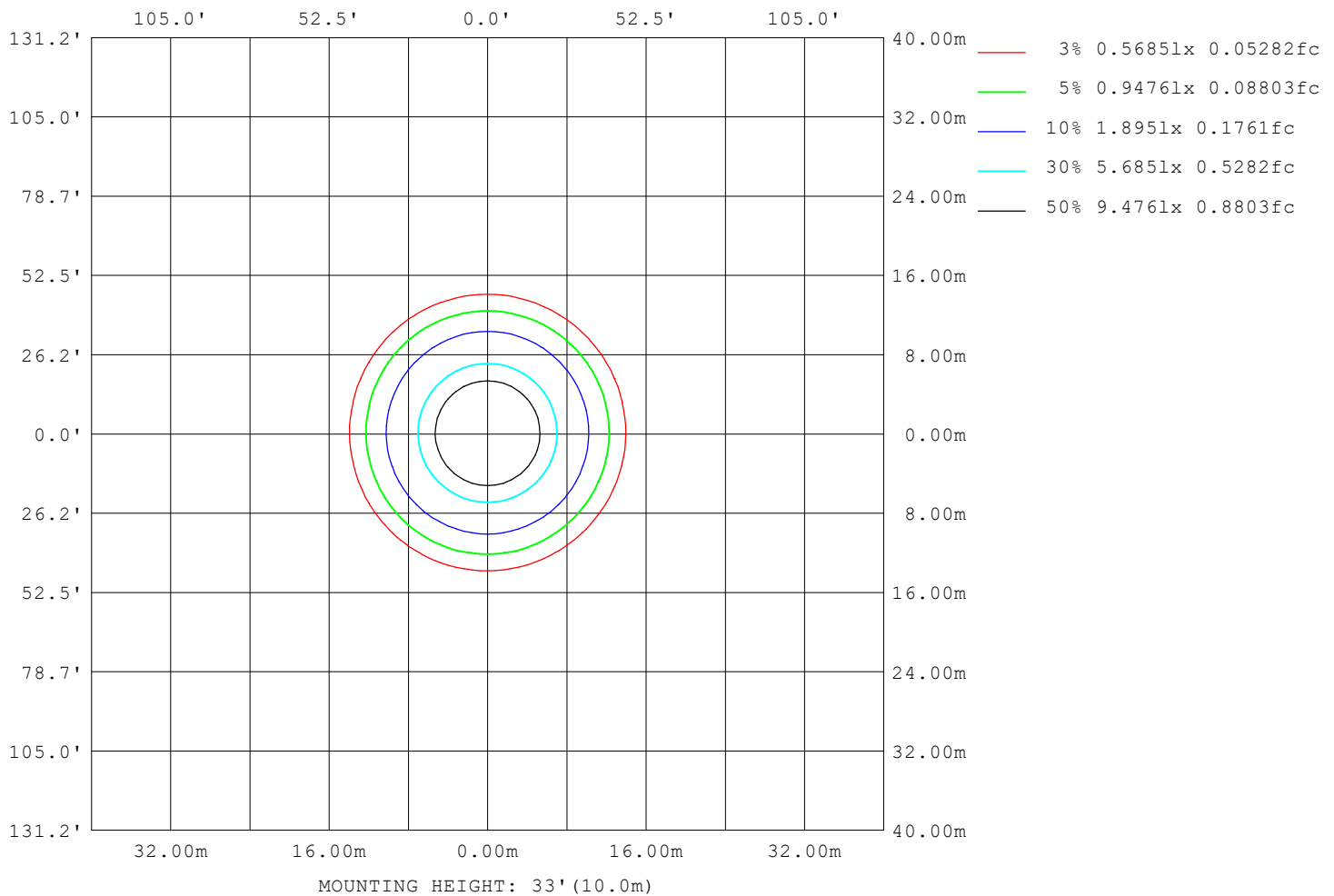
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 06 December 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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 06 December 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: 92EL62283040/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 190 x 110	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

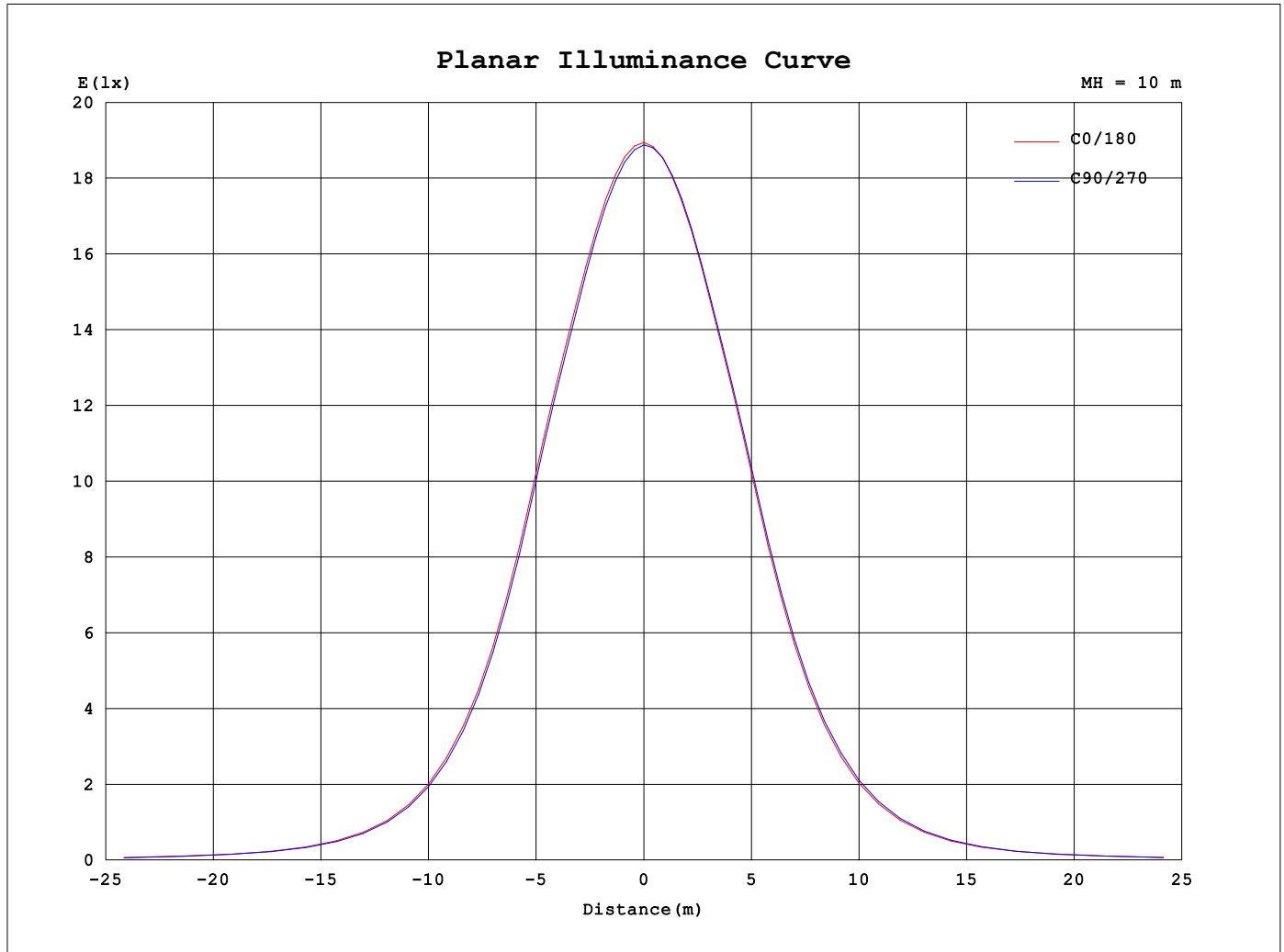
AvgL	cd/m2
L_0~180 (65) av	21275
L_0~180 (75) av	18590
L_0~180 (85) av	13222
L_90~270 (65) av	20871
L_90~270 (75) av	16553
L_90~270 (85) av	7384
L_45 (65) av	21142
L_45 (75) av	17621
L_45 (85) av	10068

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:06 December 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: 06 December 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:

```

