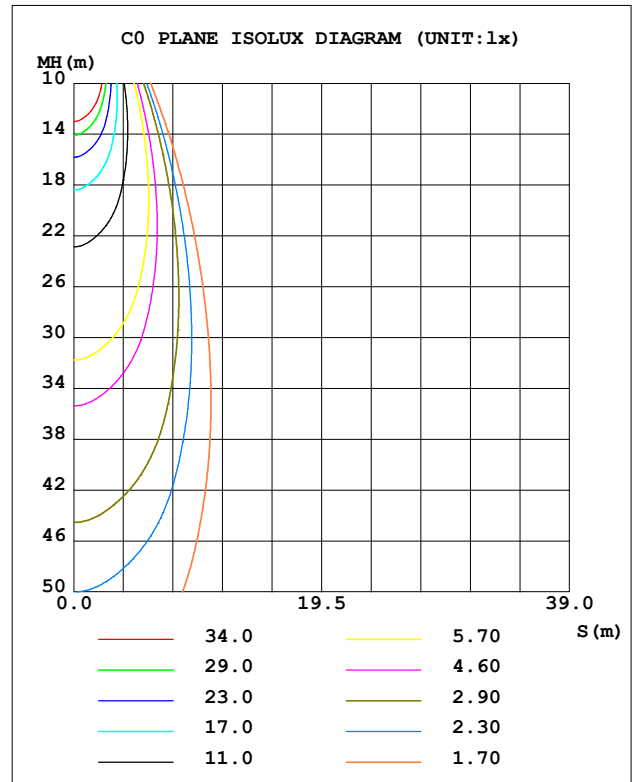
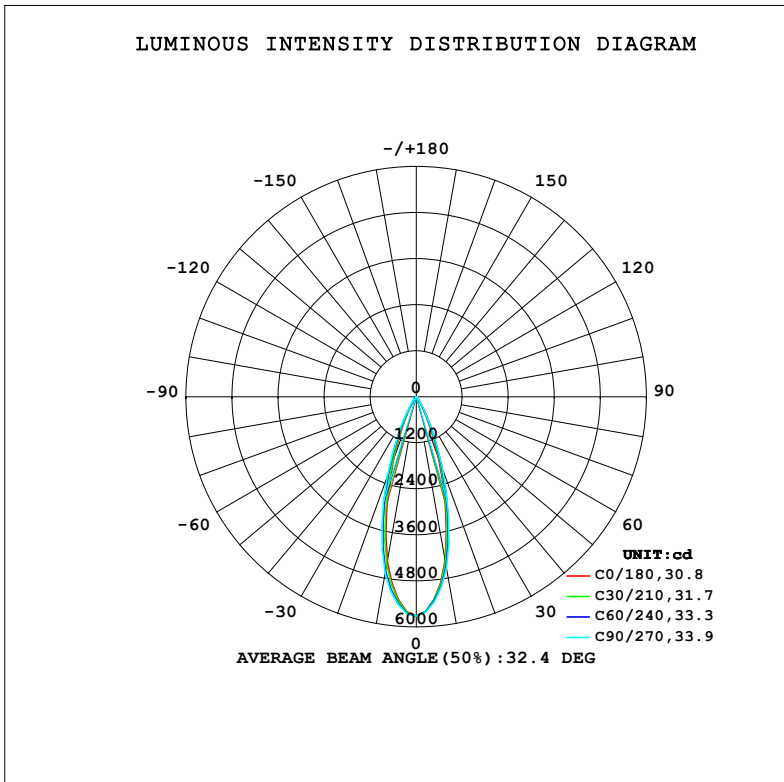


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92EL142030/WHBK	Imax (cd)	5716	S/MH (C0/180)	0.52
NOMINAL POWER (W)	20	LOR (%)	107.6	S/MH (C90/270)	0.57
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1936.2	$\eta$ UP, DN (C0-180)	0.0, 52.6
NOMINAL FLUX (lm)	1800	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 55.0
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	$\eta$ down (%)	107.6	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 09 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	4336	4450	4540	4441	4367	4539	4676	4531	0- 10	483.8	483.8	25,26.9
20	1691	1882	2002	1872	1731	1979	2204	1971	10- 20	866.4	1350	69.7,75
30	337.0	408.0	448.1	391.4	336.6	443.6	548.4	455.5	20- 30	466.1	1816	93.8,101
40	29.80	35.43	40.92	37.09	33.53	39.43	44.49	35.06	30- 40	109.7	1926	99.5,107
50	1.969	1.710	1.914	1.871	1.742	1.255	1.144	0.8567	40- 50	9.483	1935	100,108
60	0.5146	0.3223	0.3484	0.3123	0.3328	0.1047	0.1389	0.1023	50- 60	0.4703	1936	100,108
70	0.2059	0.0897	0.0899	0.0859	0.2219	0.0856	0.1090	0.0846	60- 70	0.1484	1936	100,108
80	0.0866	0.0367	0.0327	0.0382	0.1272	0.0816	0.0926	0.0818	70- 80	0.0794	1936	100,108
90	0.0325	0.0299	0.0327	0.0341	0.0839	0.0802	0.0844	0.0791	80- 90	0.0653	1936	100,108
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): 1933.4 lm

%lum = 99.9%

%lamp = 107.4%

Conical surface Flux(130deg): 1936 lm

%lum = 100.0%

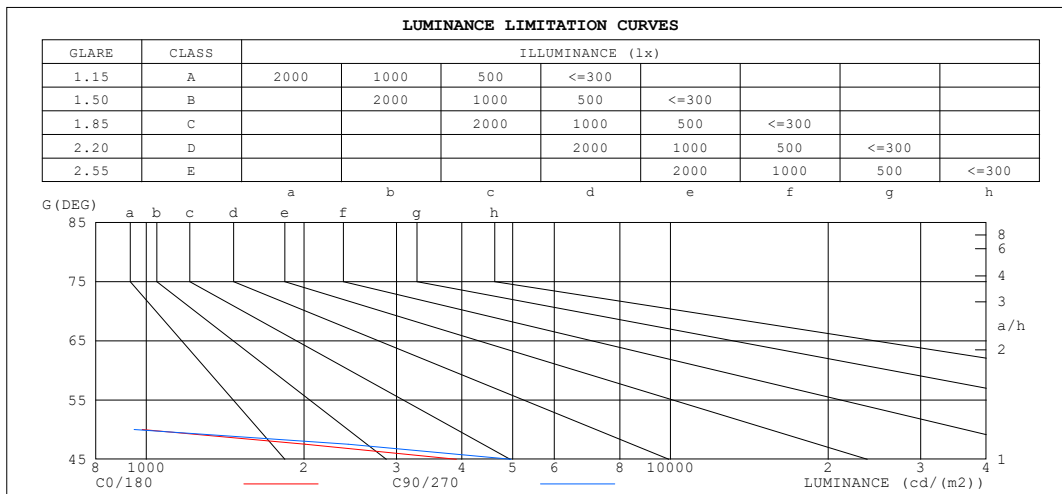
%lamp = 107.6%

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3°C  
 Operators:  
 Test Date:09 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	209	119
80	160	60
75	168	57
70	193	84
65	248	137
60	330	222
55	446	340
50	981	948
45	3903	4965

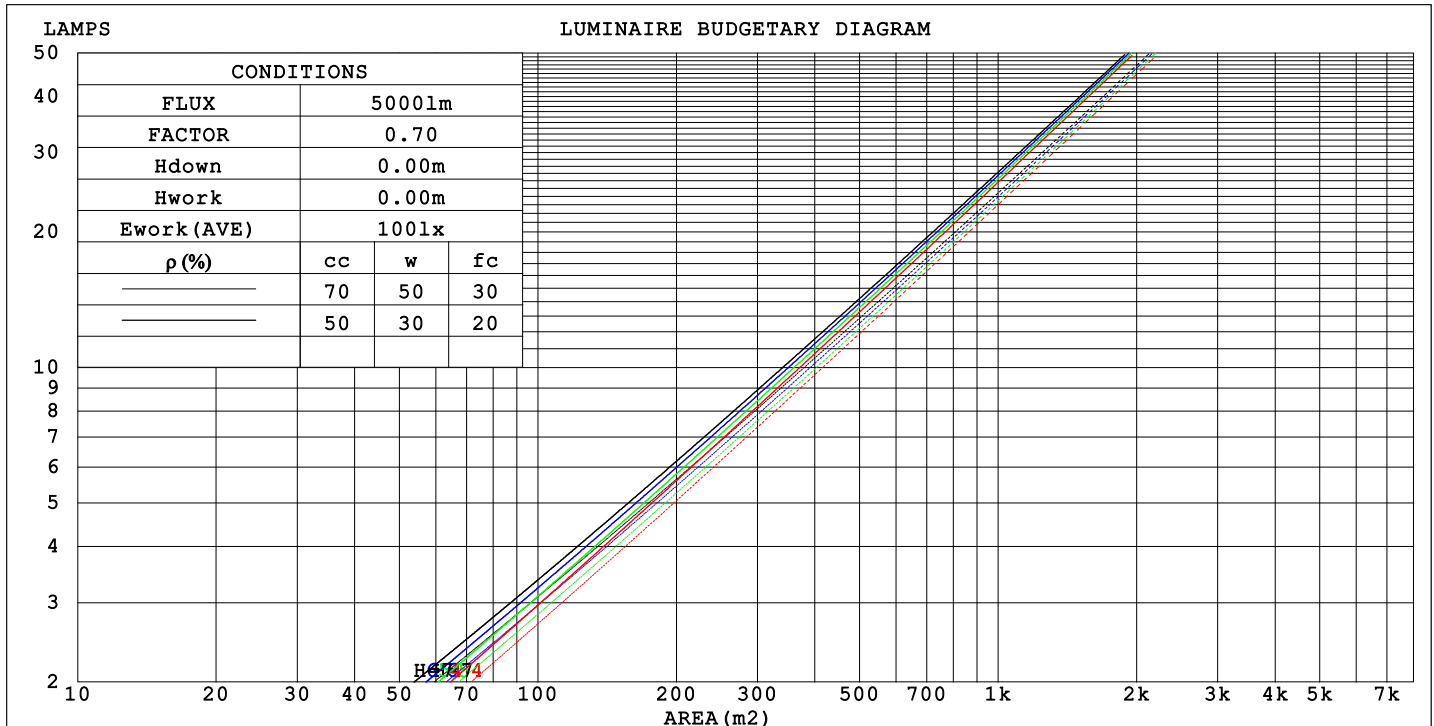
C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 09 December 2022

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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	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 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	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	.156	.089	.028	.149	.085	.027	.136	.078	.025	.124	.071	.023	.112	.065	.021	
2.0	.146	.080	.025	.140	.077	.024	.129	.072	.022	.119	.067	.021	.110	.062	.020	
3.0	.137	.073	.022	.132	.071	.021	.123	.067	.020	.114	.063	.019	.106	.059	.018	
4.0	.129	.067	.020	.125	.066	.019	.117	.062	.019	.110	.059	.018	.103	.056	.017	
5.0	.123	.063	.018	.119	.061	.018	.112	.058	.017	.106	.056	.017	.100	.054	.016	
6.0	.117	.058	.017	.114	.057	.017	.108	.055	.016	.102	.053	.016	.097	.051	.015	
7.0	.111	.055	.016	.109	.054	.015	.104	.052	.015	.099	.051	.015	.094	.049	.014	
8.0	.107	.052	.015	.104	.051	.014	.100	.050	.014	.095	.048	.014	.091	.047	.014	
9.0	.102	.049	.014	.100	.049	.014	.096	.047	.013	.092	.046	.013	.089	.045	.013	
10.0	.098	.047	.013	.096	.047	.013	.093	.045	.013	.089	.044	.013	.086	.043	.012	

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	.205	.205	.205	.175	.175	.175	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.182	.170	.159	.155	.145	.136	.106	.100	.094	.061	.058	.055	.020	.019	.018	
2.0	.163	.143	.126	.140	.123	.109	.096	.085	.076	.055	.049	.044	.018	.016	.014	
3.0	.147	.122	.102	.126	.105	.088	.087	.073	.062	.050	.043	.036	.016	.014	.012	
4.0	.135	.106	.083	.115	.091	.072	.079	.064	.051	.046	.037	.030	.015	.012	.010	
5.0	.124	.092	.069	.106	.080	.060	.073	.056	.043	.042	.033	.025	.014	.011	.008	
6.0	.115	.082	.058	.099	.071	.051	.068	.050	.036	.039	.029	.021	.013	.010	.007	
7.0	.107	.073	.050	.092	.064	.043	.064	.045	.031	.037	.026	.018	.012	.009	.006	
8.0	.100	.066	.043	.086	.057	.037	.060	.040	.026	.035	.024	.016	.011	.008	.005	
9.0	.094	.060	.037	.081	.052	.032	.056	.037	.023	.033	.022	.014	.011	.007	.005	
10.0	.089	.055	.033	.077	.048	.028	.053	.034	.020	.031	.020	.012	.010	.007	.004	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:09 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: 92EL142030/WHBK					TYPE:					WEIGHT: 1				
SPEC.:					DIM.: 270 x 35 x 68					SERIAL No.: 0				
MFR.: Elmark Industries JSC					SUR.: rectangular					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	8.5	9.3	8.8	9.4	9.6	10.7	11.4	10.9	11.5	11.7				
3H	8.4	9.1	8.6	9.2	9.4	10.5	11.2	10.8	11.4	11.6				
4H	8.3	8.9	8.6	9.2	9.4	10.4	11.1	10.7	11.3	11.5				
6H	8.2	8.8	8.5	9.1	9.3	10.4	10.9	10.6	11.2	11.4				
8H	8.2	8.8	8.5	9.0	9.3	10.3	10.9	10.6	11.1	11.4				
12H	8.1	8.7	8.4	9.0	9.2	10.3	10.8	10.6	11.1	11.3				
4H 2H	8.3	8.9	8.6	9.2	9.4	10.4	11.1	10.7	11.3	11.5				
3H	8.1	8.7	8.4	9.0	9.2	10.3	10.8	10.6	11.1	11.3				
4H	8.0	8.5	8.4	8.8	9.1	10.2	10.7	10.5	11.0	11.3				
6H	7.9	8.4	8.3	8.7	9.1	10.1	10.5	10.4	10.8	11.2				
8H	7.9	8.3	8.3	8.7	9.0	10.0	10.4	10.4	10.8	11.1				
12H	7.8	8.2	8.2	8.6	9.0	10.0	10.3	10.4	10.7	11.1				
8H 4H	7.9	8.3	8.3	8.6	9.0	10.0	10.4	10.4	10.8	11.1				
6H	7.8	8.1	8.2	8.5	8.9	9.9	10.2	10.3	10.6	11.0				
8H	7.7	8.0	8.2	8.4	8.9	9.8	10.1	10.3	10.6	11.0				
12H	7.7	7.9	8.1	8.4	8.8	9.8	10.0	10.2	10.5	10.9				
12H 4H	7.8	8.2	8.2	8.6	9.0	10.0	10.3	10.4	10.7	11.1				
6H	7.7	8.0	8.2	8.4	8.9	9.8	10.1	10.3	10.6	11.0				
8H	7.7	7.9	8.1	8.4	8.8	9.8	10.0	10.2	10.5	10.9				
Variations with the observer position at spacings(CIE Pub.117):														
S = 1.0H	+ 4.8 / -20.5					+ 5.0 / -22.7								
1.5H	+ 7.5 / -19.2					+ 7.8 / -20.7								
2.0H	+ 8.9 / -10.9					+ 9.3 / -11.1								

CIE Pub.117, 1800 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.0)  
Area: 0.00314 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:09 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:

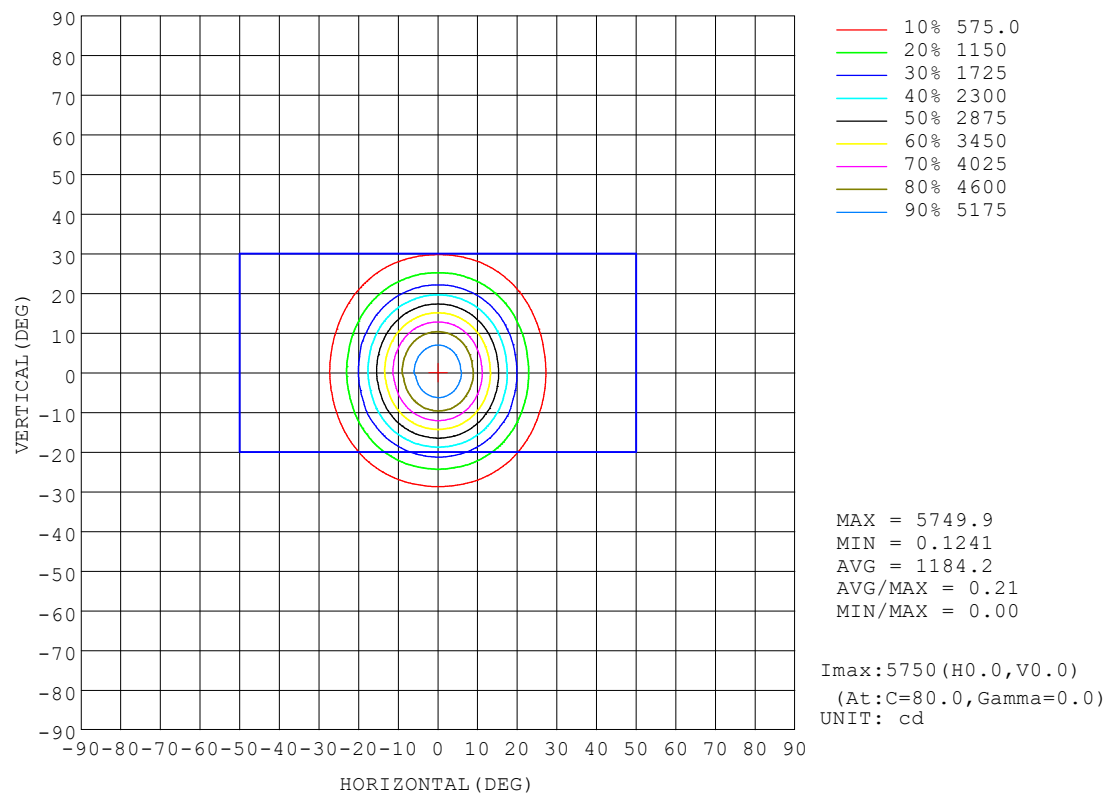
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	98	92	88	98	92	88	97	92	88	85
0.80	106	100	97	105	100	96	104	99	96	92
1.00	110	104	101	109	104	101	107	103	100	96
1.25	113	108	105	112	108	105	110	107	104	100
1.50	116	111	108	115	111	108	112	109	107	102
2.00	118	114	111	117	113	110	114	111	109	103
2.50	120	116	113	118	115	112	115	112	110	104
3.00	121	118	115	119	116	114	116	114	112	105
4.00	123	121	119	121	119	117	117	116	114	107
5.00	125	122	121	122	120	119	118	117	116	108
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 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:

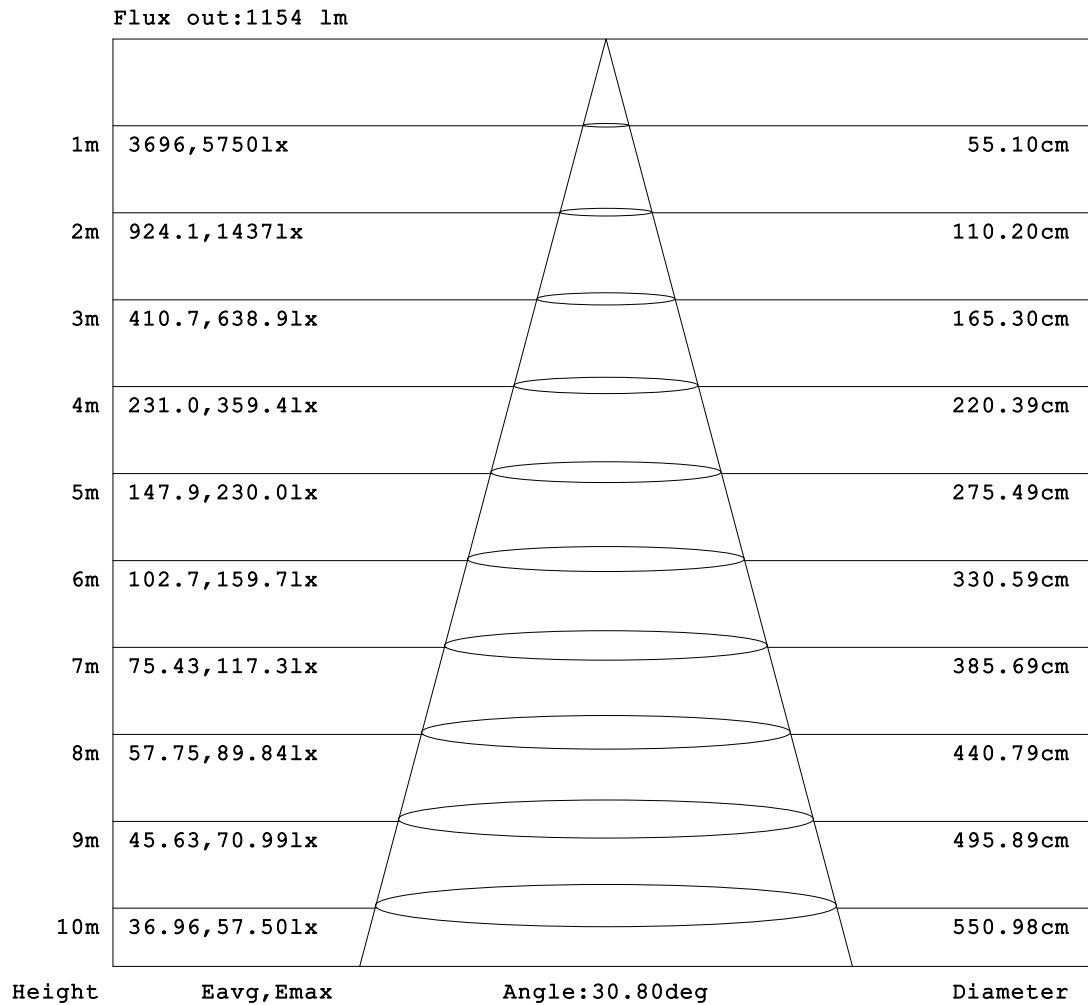


C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3°C  
 Operators:  
 Test Date:09 December 2022

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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:



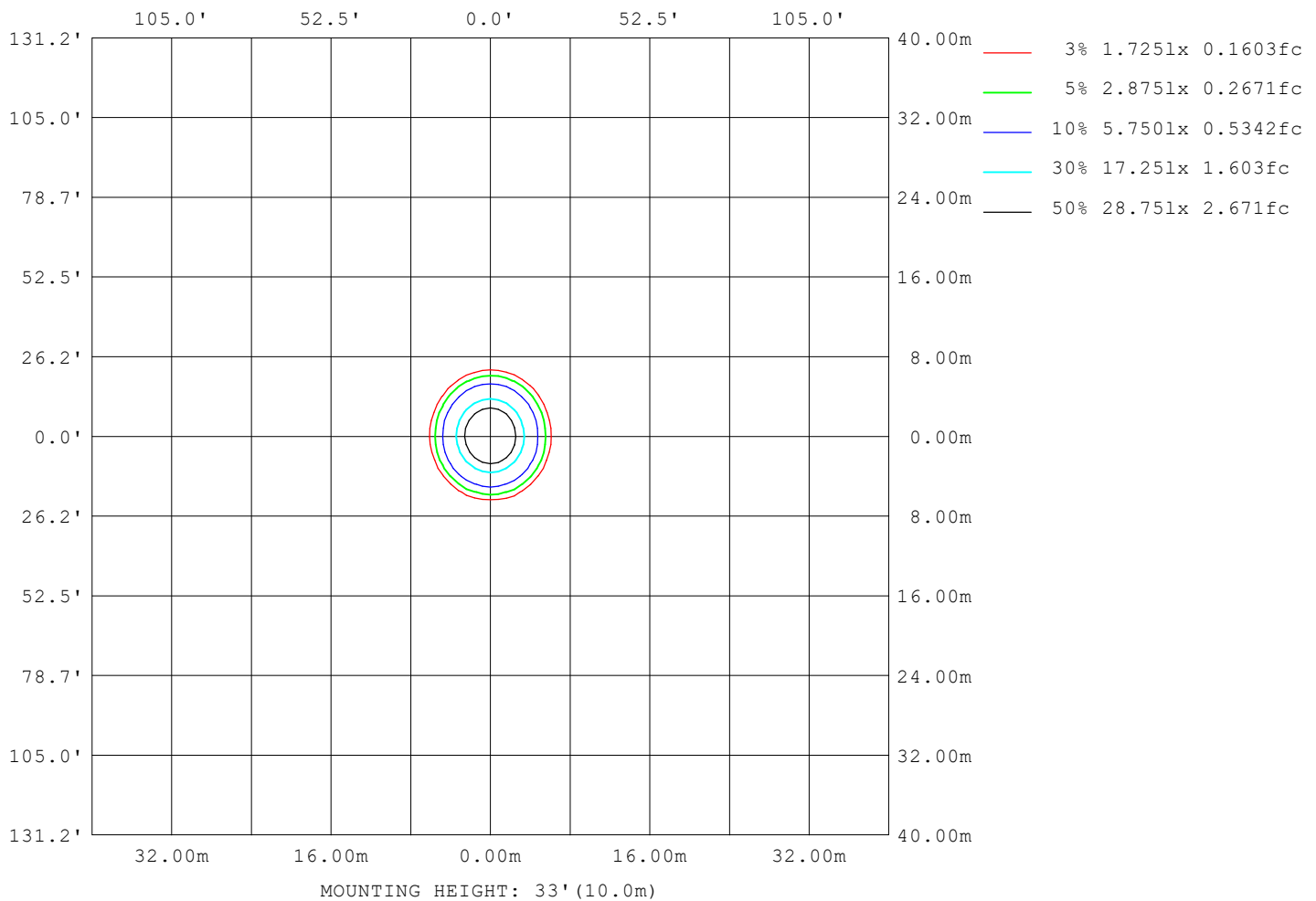
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 09 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 09 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: 92EL142030/WHBK	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 270 x 35 x 68	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:

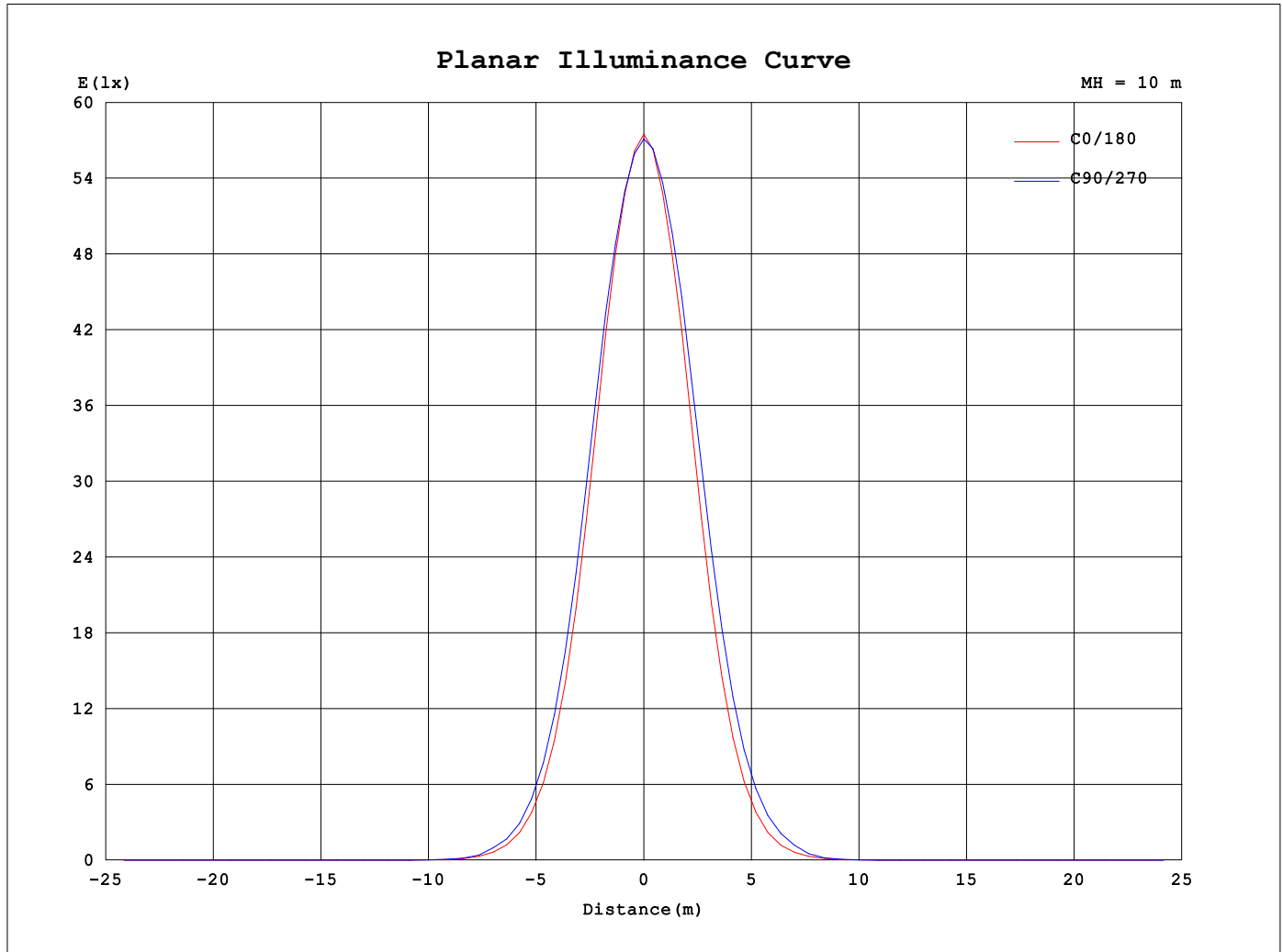
AvgL	cd/m2
L_0~180 (65) av	228
L_0~180 (75) av	188
L_0~180 (85) av	257
L_90~270 (65) av	115
L_90~270 (75) av	92
L_90~270 (85) av	224
L_45 (65) av	96
L_45 (75) av	81
L_45 (85) av	213

Standard: GB/T 29293-2012

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

```

```

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:

```