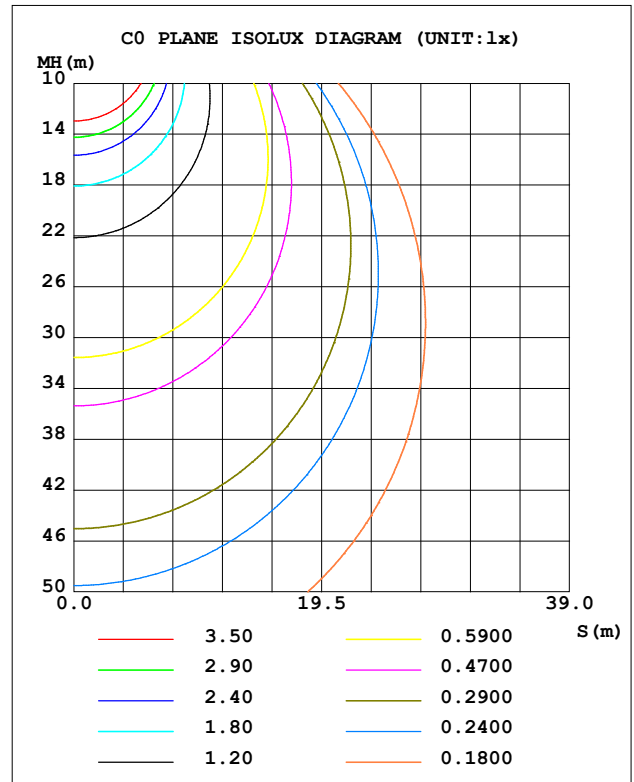
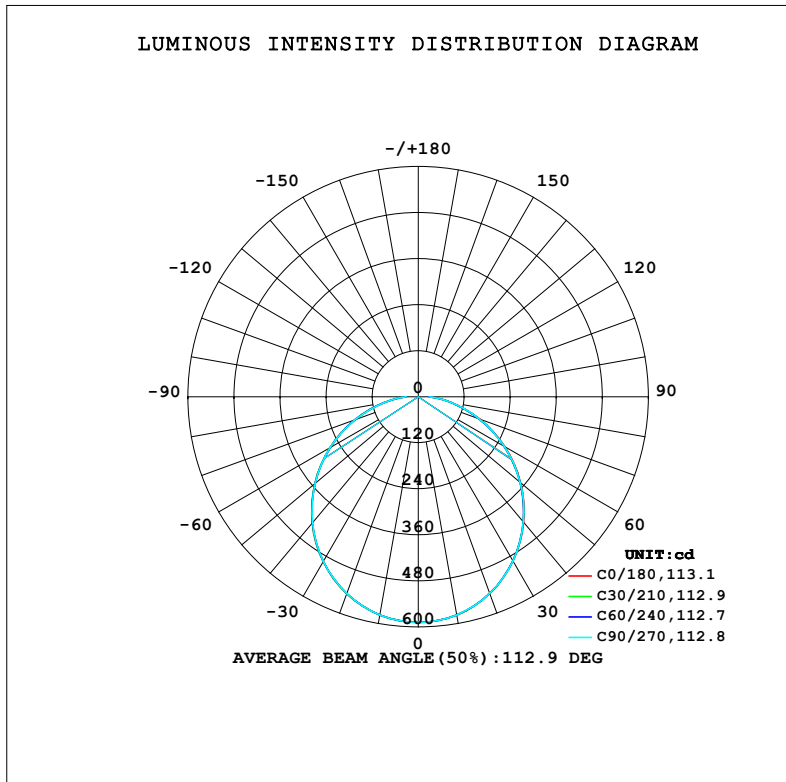


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	95EL401520W/GR	Imax (cd)	588.0	S/MH (C0/180)	1.25
NOMINAL POWER (W)	20	LOR (%)	108.4	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1734.7	$\eta$ UP, DN (C0-180)	0.0, 54.0
NOMINAL FLUX (lm)	1600	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 54.4
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	$\eta$ down (%)	108.4	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 03 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.340m [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	577.1	577.3	577.1	577.3	577.4	577.2	577.1	577.3	0- 10	55.61	55.61	3.21,3.48
20	545.3	545.3	545.2	546.0	546.1	545.7	545.5	545.6	10- 20	159.1	214.7	12.4,13.4
30	494.5	493.9	493.9	495.6	496.1	495.3	495.1	495.1	20- 30	240.8	455.5	26.3,28.5
40	427.4	426.1	426.3	428.9	430.1	429.3	429.1	428.7	30- 40	289.9	745.4	43,46.6
50	348.1	346.3	346.6	350.0	352.1	351.4	350.9	350.2	40- 50	300.9	1046	60.3,65.4
60	260.9	258.7	259.2	263.1	265.7	265.3	264.7	263.5	50- 60	274.3	1321	76.1,82.5
70	170.5	168.8	169.0	172.9	175.6	175.4	174.8	173.2	60- 70	215.5	1536	88.5,96
80	87.25	85.61	86.25	89.20	91.25	90.77	90.54	90.13	70- 80	136.6	1673	96.4,105
90	29.46	28.25	28.94	30.63	31.66	31.49	31.58	31.08	80- 90	62.14	1735	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): 896.87 lm

%lum = 51.7%  
%lamp = 56.1%

Conical surface Flux(130deg): 1437.3 lm

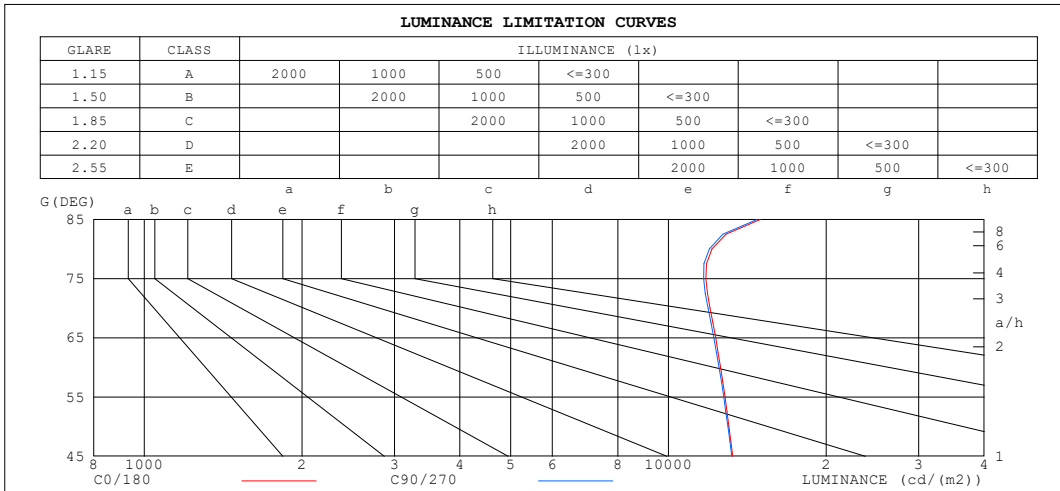
%lum = 82.9%  
%lamp = 89.8%

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	14965	14747
80	12102	11958
75	11785	11659
70	12008	11897
65	12301	12203
60	12567	12481
55	12817	12743
50	13044	12983
45	13254	13202

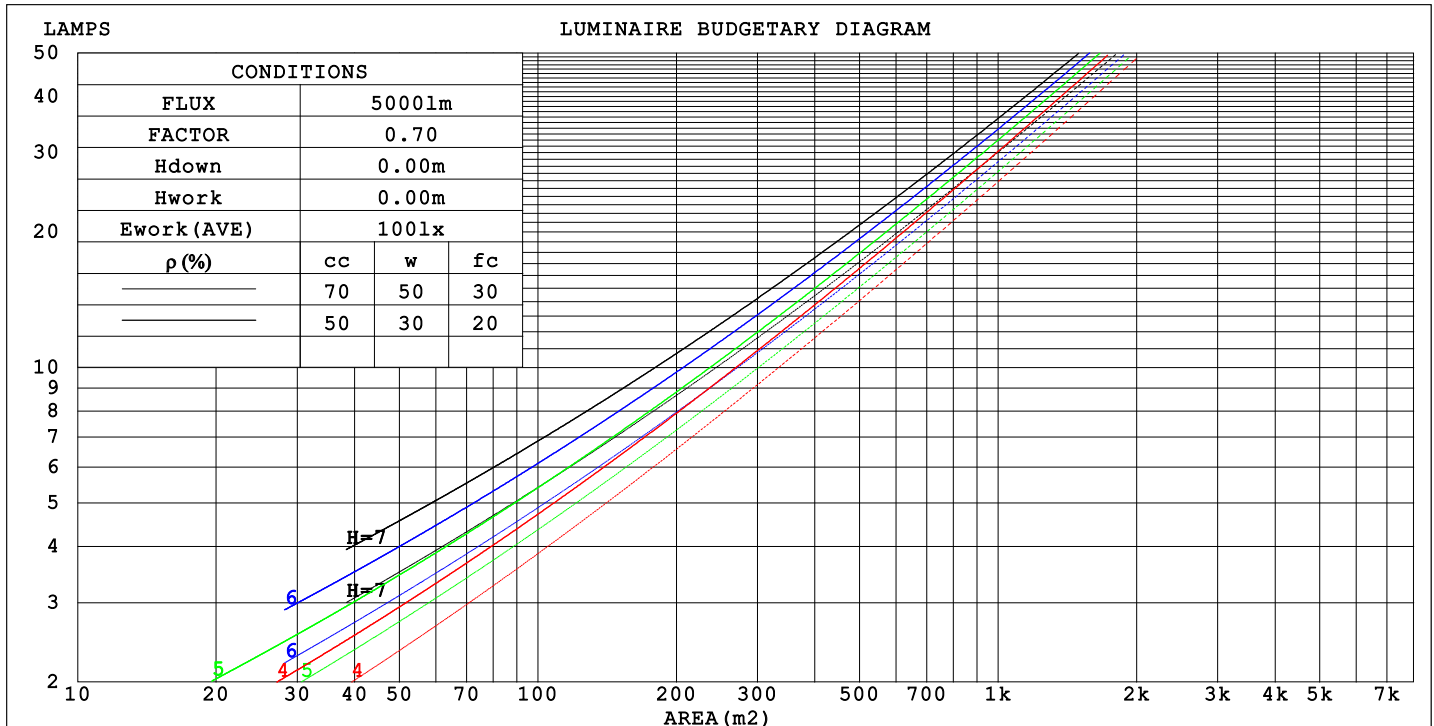
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.340m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	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: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:

## WEC AND CCEC

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	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	.360	.205	.065	.352	.201	.064	.338	.194	.062	.324	.187	.060	.312	.181	.058	
2.0	.330	.181	.056	.323	.178	.055	.311	.173	.054	.299	.168	.052	.288	.163	.051	
3.0	.302	.161	.048	.296	.158	.048	.285	.154	.047	.274	.150	.046	.264	.146	.045	
4.0	.277	.144	.042	.271	.142	.042	.261	.139	.041	.252	.135	.041	.243	.132	.040	
5.0	.255	.130	.038	.250	.128	.037	.241	.125	.037	.233	.123	.037	.225	.120	.036	
6.0	.235	.118	.034	.231	.117	.034	.223	.114	.033	.216	.112	.033	.209	.110	.033	
7.0	.218	.108	.031	.215	.107	.030	.208	.105	.030	.201	.103	.030	.195	.101	.030	
8.0	.204	.100	.028	.200	.099	.028	.194	.097	.028	.188	.095	.027	.182	.094	.027	
9.0	.191	.092	.026	.188	.091	.026	.182	.090	.025	.177	.089	.025	.172	.087	.025	
10.0	.179	.086	.024	.176	.085	.024	.171	.084	.024	.166	.083	.023	.162	.081	.023	

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	.207	.207	.207	.176	.176	.176	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.197	.169	.144	.169	.145	.124	.115	.100	.086	.066	.058	.050	.021	.019	.016	
2.0	.189	.143	.105	.162	.123	.090	.111	.085	.063	.064	.050	.037	.020	.016	.012	
3.0	.180	.124	.079	.154	.107	.069	.106	.074	.048	.061	.043	.028	.020	.014	.009	
4.0	.172	.110	.062	.147	.095	.054	.101	.066	.038	.059	.039	.023	.019	.013	.007	
5.0	.163	.098	.050	.140	.085	.044	.097	.059	.031	.056	.035	.018	.018	.011	.006	
6.0	.155	.089	.042	.134	.077	.036	.092	.054	.026	.053	.032	.015	.017	.010	.005	
7.0	.148	.082	.036	.127	.071	.031	.088	.050	.022	.051	.029	.013	.017	.010	.004	
8.0	.141	.076	.031	.121	.066	.027	.084	.046	.019	.049	.027	.011	.016	.009	.004	
9.0	.134	.070	.027	.115	.061	.024	.080	.043	.017	.047	.025	.010	.015	.008	.003	
10.0	.128	.066	.024	.110	.057	.021	.076	.040	.015	.045	.024	.009	.014	.008	.003	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

NAME: 95EL401520W/GR					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: F270 x 55			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	21.6	20.3	21.8	22.0	20.0	21.5	20.2	21.7	21.9
	3H	21.6	23.1	21.9	23.3	23.5	21.6	23.0	21.9	23.3	23.5
	4H	22.3	23.7	22.7	24.0	24.2	22.3	23.7	22.6	23.9	24.2
	6H	22.9	24.2	23.3	24.5	24.8	22.9	24.2	23.2	24.5	24.7
	8H	23.2	24.5	23.5	24.7	25.0	23.2	24.4	23.5	24.7	25.0
	12H	23.5	24.7	23.8	25.0	25.3	23.4	24.6	23.8	24.9	25.2
4H	2H	20.6	22.0	20.9	22.3	22.5	20.6	22.0	20.9	22.2	22.5
	3H	22.5	23.7	22.8	24.0	24.3	22.4	23.6	22.8	23.9	24.2
	4H	23.3	24.4	23.7	24.7	25.1	23.3	24.4	23.6	24.7	25.0
	6H	24.1	25.0	24.5	25.4	25.8	24.0	25.0	24.4	25.4	25.7
	8H	24.4	25.3	24.8	25.7	26.1	24.3	25.3	24.8	25.6	26.0
	12H	24.7	25.6	25.2	26.0	26.4	24.7	25.5	25.1	25.9	26.3
8H	4H	23.6	24.5	24.0	24.9	25.3	23.6	24.5	24.0	24.9	25.3
	6H	24.6	25.3	25.0	25.7	26.2	24.5	25.3	25.0	25.7	26.1
	8H	25.0	25.7	25.5	26.1	26.6	25.0	25.7	25.4	26.1	26.6
	12H	25.5	26.1	26.0	26.5	27.0	25.5	26.1	25.9	26.5	27.0
12H	4H	23.6	24.5	24.1	24.9	25.3	23.6	24.5	24.1	24.9	25.3
	6H	24.7	25.4	25.1	25.8	26.2	24.6	25.3	25.1	25.7	26.2
	8H	25.2	25.8	25.7	26.2	26.7	25.2	25.8	25.6	26.2	26.7
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		+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1600 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.6)  
Area: 0.0415265 m2

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

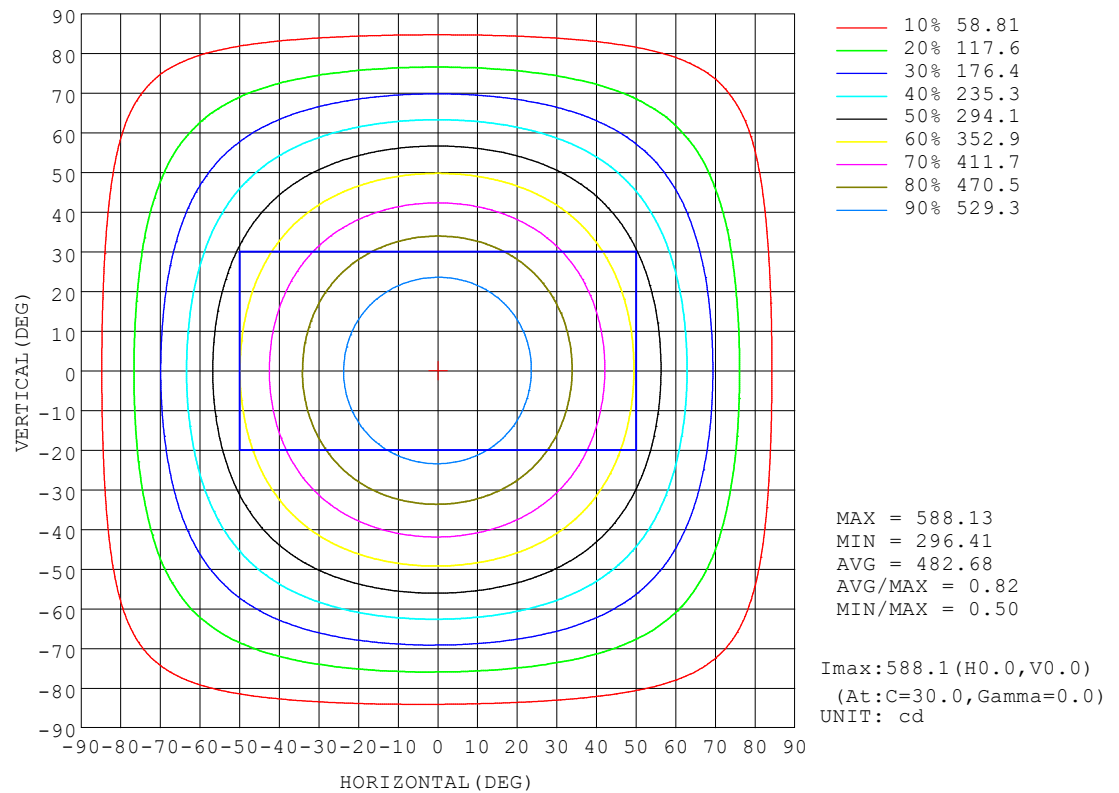
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	61	49	41	61	48	41	59	48	41	34
0.80	72	59	51	71	59	51	69	58	51	43
1.00	81	69	61	80	68	60	77	70	60	52
1.25	89	77	69	87	76	69	84	75	68	60
1.50	94	83	75	92	82	75	89	80	74	65
2.00	102	92	85	100	91	84	96	88	82	73
2.50	106	97	90	104	96	89	99	93	87	78
3.00	110	102	95	107	100	94	103	97	92	83
4.00	114	108	102	112	106	101	107	102	98	88
5.00	117	111	107	114	109	105	109	105	101	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.340m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



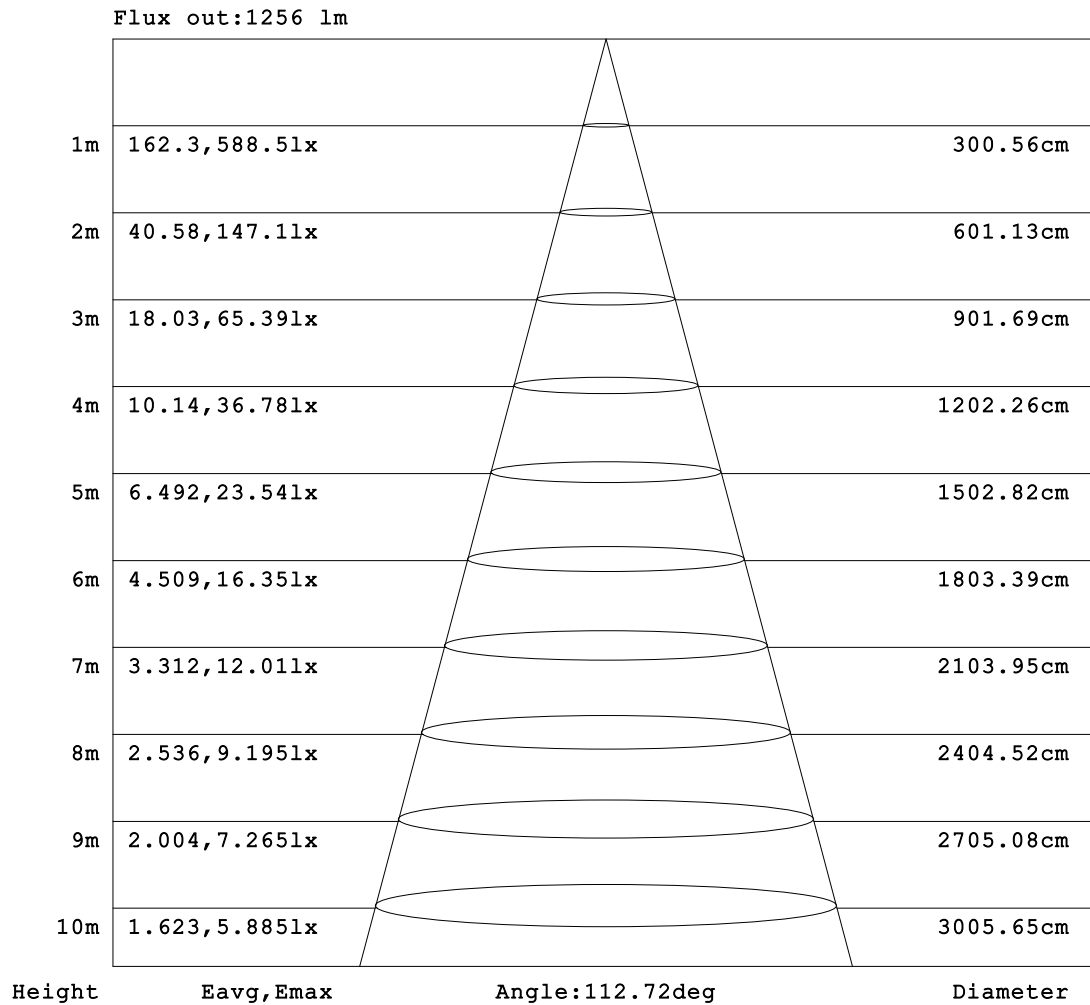
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:



### AAI Figure

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



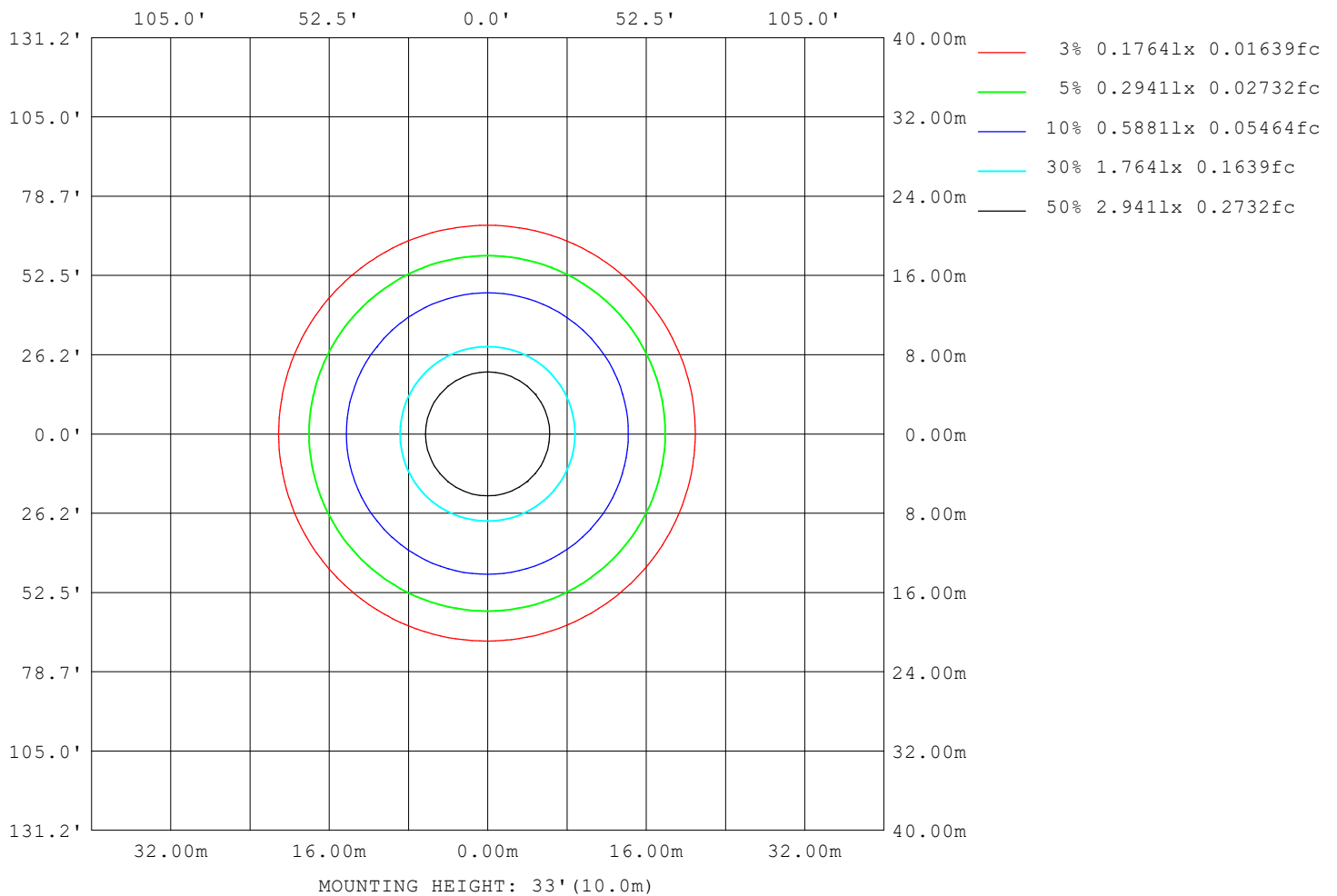
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3°C  
Operators:  
Test Date: 03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.340m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 03 February 2023

γ Range: 0 - 90DEG  
 γ Interval: 2.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.340m [K=1.0000]  
 Remarks:

### LED Avg.L Report

NAME: 95EL401520W/GR	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F270 x 55	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

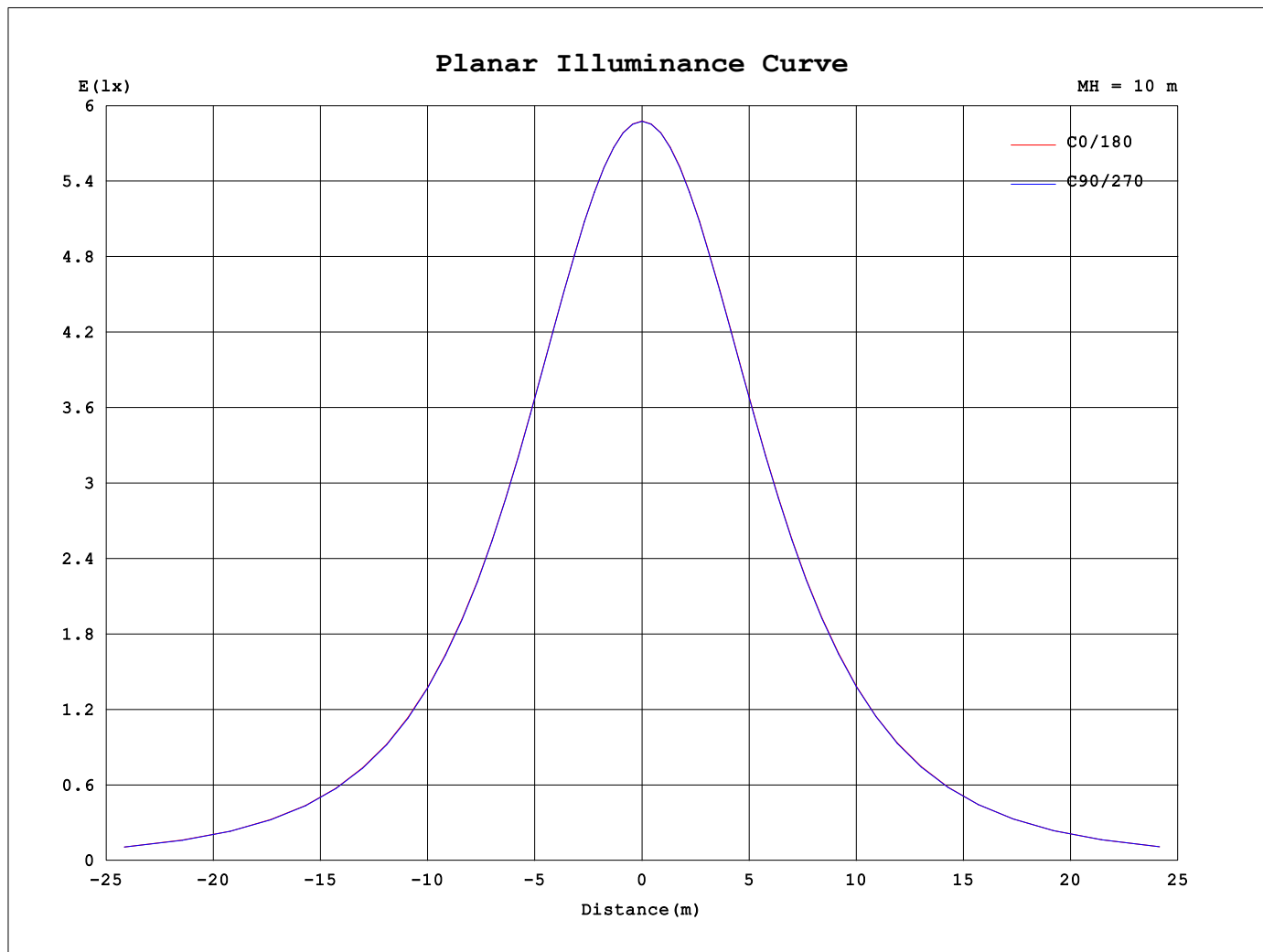
AvgL	cd/m2
L_0~180 (65) av	12439
L_0~180 (75) av	12011
L_0~180 (85) av	15407
L_90~270 (65) av	12367
L_90~270 (75) av	11917
L_90~270 (85) av	15244
L_45 (65) av	12402
L_45 (75) av	11964
L_45 (85) av	15308

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:03 February 2023

γ Range: 0 - 90DEG  
γ Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.340m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 03 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.340m [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:6.340m [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:6.340m [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:6.340m [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:6.340m [K=1.0000]
Remarks:

```