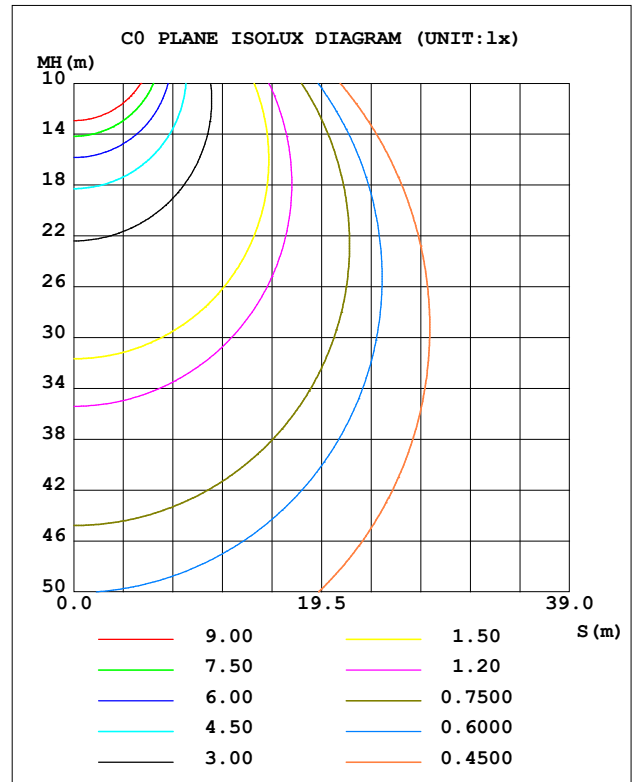
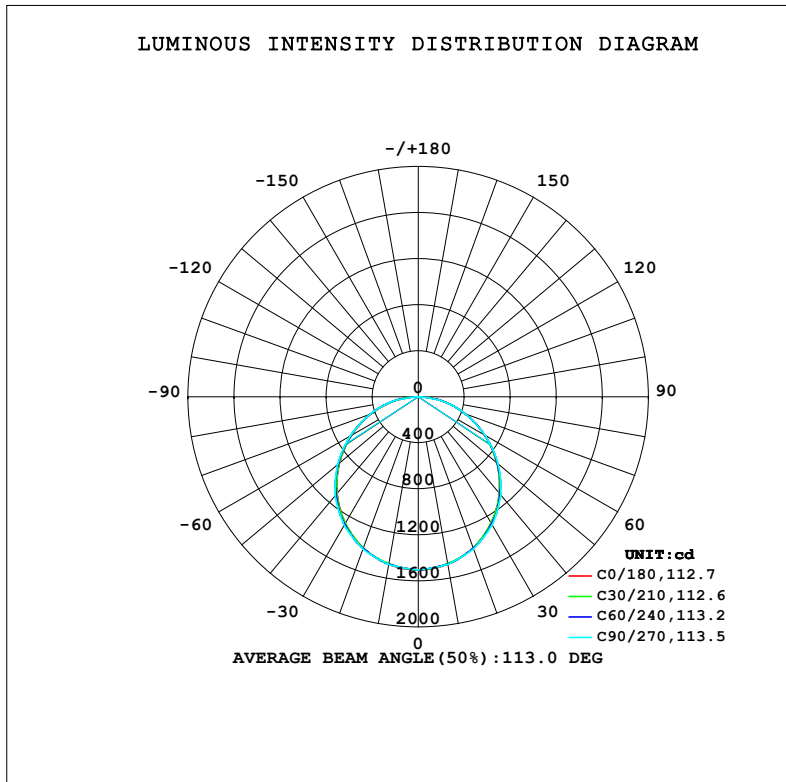


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92Panel030W	Imax(cd)	1504	S/MH(C0/180)	1.25
NOMINAL POWER(W)	48	LOR(%)	90.9	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	4363.6	η UP,DN(C0-180)	0.0,45.3
NOMINAL FLUX(lm)	4800	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,45.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down (%)	90.9	CIBSE SHR MAX	1.35



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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	1477	1473	1479	1473	1477	1474	1480	1474	0- 10	141.9	141.9	3.25, 2.96
20	1397	1395	1406	1396	1398	1397	1408	1397	10- 20	407.1	549.1	12.6, 11.4
30	1267	1271	1286	1272	1269	1275	1289	1274	20- 30	618.3	1167	26.8, 24.3
40	1096	1104	1117	1103	1097	1108	1123	1107	30- 40	746.8	1914	43.9, 39.9
50	891.1	896.2	905.5	896.8	893.3	904.4	914.5	901.6	40- 50	775.0	2689	61.6, 56
60	667.4	667.0	669.7	666.6	669.5	676.3	681.6	673.9	50- 60	702.6	3392	77.7, 70.7
70	435.3	432.5	431.5	433.5	437.5	444.1	444.6	440.6	60- 70	548.3	3940	90.3, 82.1
80	207.3	205.1	205.4	206.2	209.4	218.4	221.0	214.5	70- 80	341.0	4281	98.1, 89.2
90	2.338	0	0	0	2.646	0	0	0	80- 90	82.56	4364	100, 90.9
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): 2304.7 lm

%lum = 52.8%

%lamp = 48.0%

Conical surface Flux(130deg): 3689.3 lm

%lum = 84.5%

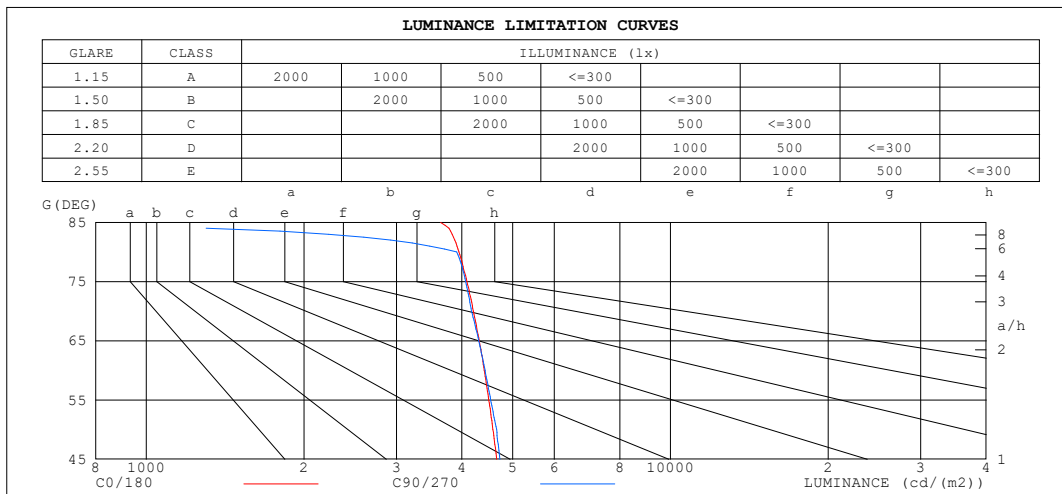
%lamp = 76.9%

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3643	0
80	3947	3911
75	4088	4067
70	4207	4170
65	4318	4307
60	4413	4428
55	4502	4539
50	4583	4657
45	4660	4727

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:05 September 2022

V(B) Range:-80 - 80DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:6.265m [K=1.0000]
 Remarks:

```
V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	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	.286	.163	.052	.280	.159	.051	.267	.153	.049	.256	.148	.047	.246	.143	.046	
2.0	.269	.147	.045	.263	.145	.045	.252	.140	.044	.243	.136	.043	.234	.132	.042	
3.0	.248	.132	.040	.243	.130	.039	.234	.127	.039	.225	.123	.038	.217	.120	.037	
4.0	.229	.119	.035	.224	.117	.035	.216	.115	.034	.208	.112	.034	.201	.109	.033	
5.0	.211	.108	.031	.207	.106	.031	.200	.104	.031	.193	.102	.030	.186	.100	.030	
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027	.173	.091	.027	
7.0	.182	.090	.025	.179	.089	.025	.173	.087	.025	.167	.086	.025	.162	.084	.025	
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023	
9.0	.159	.077	.021	.156	.076	.021	.152	.075	.021	.147	.074	.021	.143	.073	.021	
10.0	.149	.072	.020	.147	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.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	.173	.173	.173	.148	.148	.148	.101	.101	.101	.058	.058	.058	.019	.019	.019	
1.0	.164	.142	.122	.141	.122	.105	.096	.084	.072	.055	.048	.042	.018	.016	.014	
2.0	.157	.120	.089	.135	.103	.077	.092	.071	.053	.053	.042	.031	.017	.013	.010	
3.0	.150	.104	.067	.129	.090	.058	.088	.062	.041	.051	.036	.024	.016	.012	.008	
4.0	.143	.092	.053	.123	.079	.046	.084	.055	.032	.049	.032	.019	.016	.011	.006	
5.0	.136	.082	.043	.117	.071	.037	.081	.050	.026	.047	.029	.016	.015	.010	.005	
6.0	.130	.075	.035	.112	.065	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
7.0	.124	.069	.030	.106	.059	.026	.073	.042	.019	.043	.025	.011	.014	.008	.004	
8.0	.118	.063	.026	.101	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
9.0	.112	.059	.023	.097	.051	.020	.067	.036	.014	.039	.021	.008	.013	.007	.003	
10.0	.107	.055	.020	.092	.048	.018	.064	.034	.013	.037	.020	.008	.012	.007	.002	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W					TYPE: 92Panel030W					WEIGHT: 1				
SPEC.:					DIM.: 596 x 596					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	12.6	14.2	12.9	14.4	14.6	12.7	14.2	12.9	14.4	14.6				
3H	14.2	15.7	14.5	15.9	16.1	14.3	15.7	14.6	15.9	16.2				
4H	14.9	16.3	15.3	16.5	16.8	15.0	16.3	15.3	16.6	16.8				
6H	15.5	16.8	15.8	17.0	17.3	15.5	16.8	15.8	17.1	17.3				
8H	15.7	16.9	16.0	17.2	17.5	15.6	16.9	16.0	17.1	17.4				
12H	15.8	16.9	16.1	17.2	17.6	15.6	16.8	15.9	17.1	17.4				
4H 2H	13.3	14.6	13.6	14.9	15.1	13.3	14.6	13.6	14.9	15.2				
3H	15.1	16.3	15.4	16.6	16.9	15.1	16.3	15.4	16.6	16.9				
4H	15.9	17.0	16.3	17.3	17.7	15.9	17.0	16.3	17.3	17.7				
6H	16.6	17.6	17.0	17.9	18.3	16.6	17.6	17.0	17.9	18.3				
8H	16.8	17.7	17.2	18.1	18.5	16.8	17.7	17.2	18.0	18.4				
12H	17.0	17.8	17.4	18.2	18.6	16.8	17.6	17.2	18.0	18.4				
8H 4H	16.2	17.1	16.6	17.5	17.9	16.2	17.1	16.6	17.5	17.9				
6H	17.1	17.8	17.5	18.2	18.7	17.1	17.8	17.5	18.3	18.7				
8H	17.4	18.1	17.9	18.5	19.0	17.3	18.0	17.8	18.4	18.9				
12H	17.6	18.2	18.1	18.7	19.1	17.3	17.9	17.8	18.4	18.8				
12H 4H	16.3	17.1	16.7	17.5	17.9	16.3	17.1	16.7	17.5	17.9				
6H	17.2	17.8	17.6	18.3	18.7	17.2	17.8	17.6	18.3	18.7				
8H	17.6	18.1	18.0	18.6	19.1	17.4	18.0	17.9	18.5	18.9				
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					+ 0.1 / - 0.3								
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3								

CIE Pub.117, 4800 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.4)
Area: 0.3025 m2

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

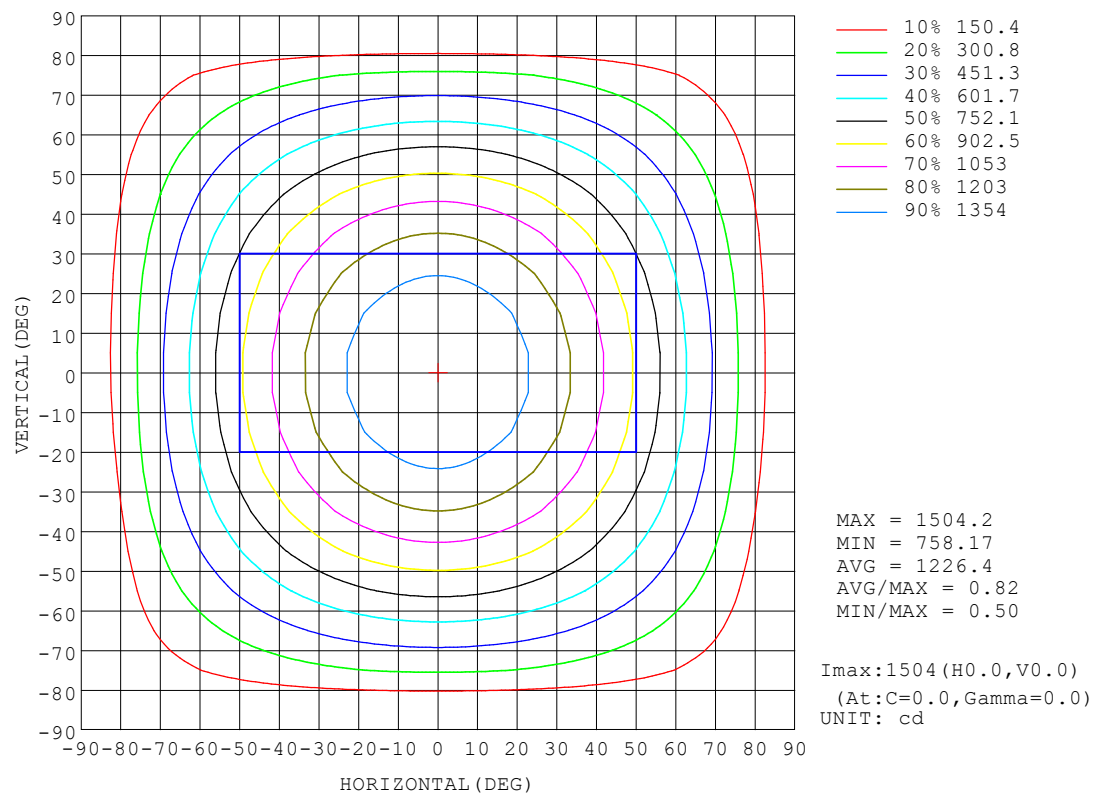
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	52	41	35	51	41	35	50	41	35	29
0.80	61	50	44	60	50	43	58	49	43	37
1.00	69	58	52	68	58	51	65	59	51	44
1.25	75	65	59	74	65	58	71	63	58	51
1.50	80	71	64	78	70	64	75	68	63	56
2.00	86	78	72	84	77	71	81	75	70	63
2.50	90	82	77	88	81	76	84	79	74	67
3.00	93	86	81	91	85	80	87	82	78	70
4.00	96	91	87	94	89	86	90	86	83	75
5.00	99	94	90	96	92	89	92	89	86	78
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel1030W	TYPE: 92Panel1030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

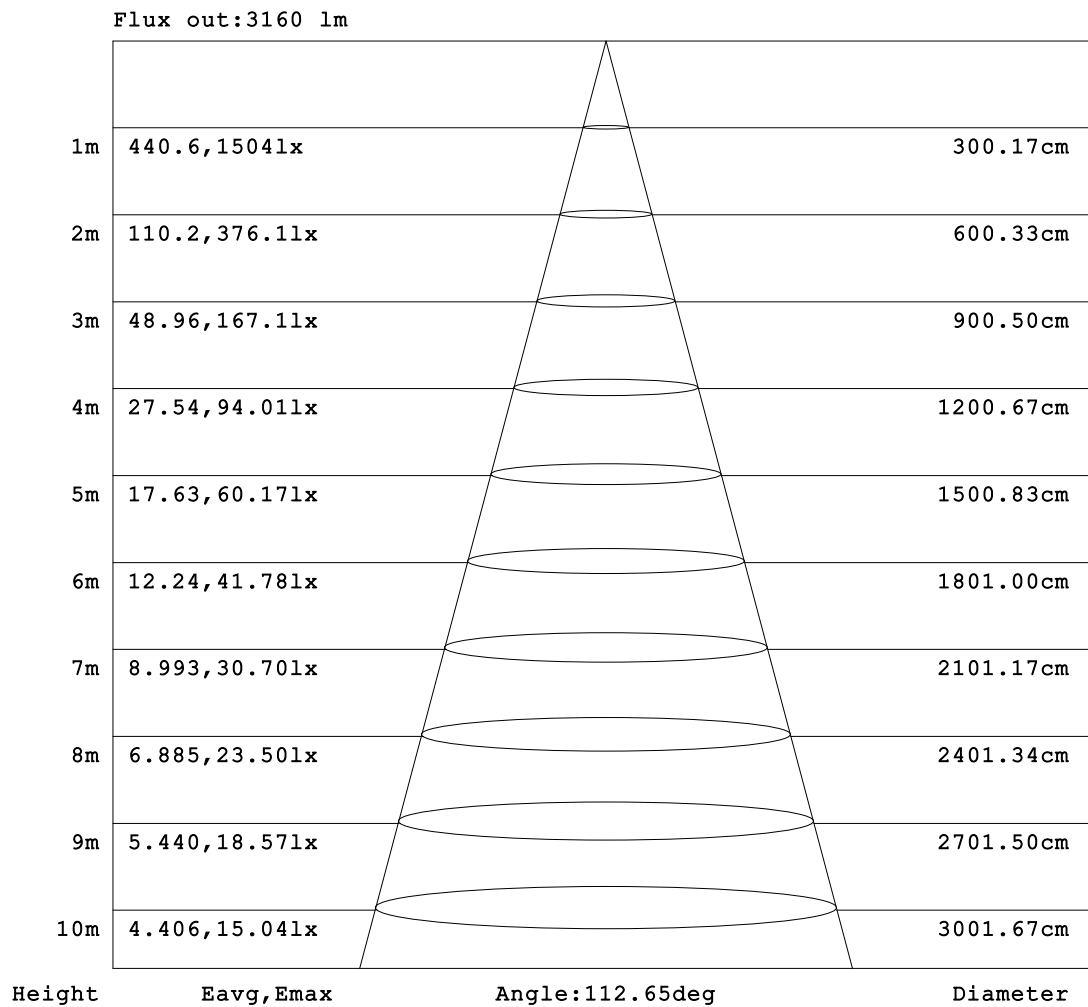


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	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.

 H(β) Range:-90 - 90DEG

 H(β) Interval: 1.0DEG

Test Speed: HIGH

Temperature: 25.3°C

Operators:

Test Date: 05 September 2022

V(B) Range:-80 - 80DEG

V(B) Interval: 5.0DEG

Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456

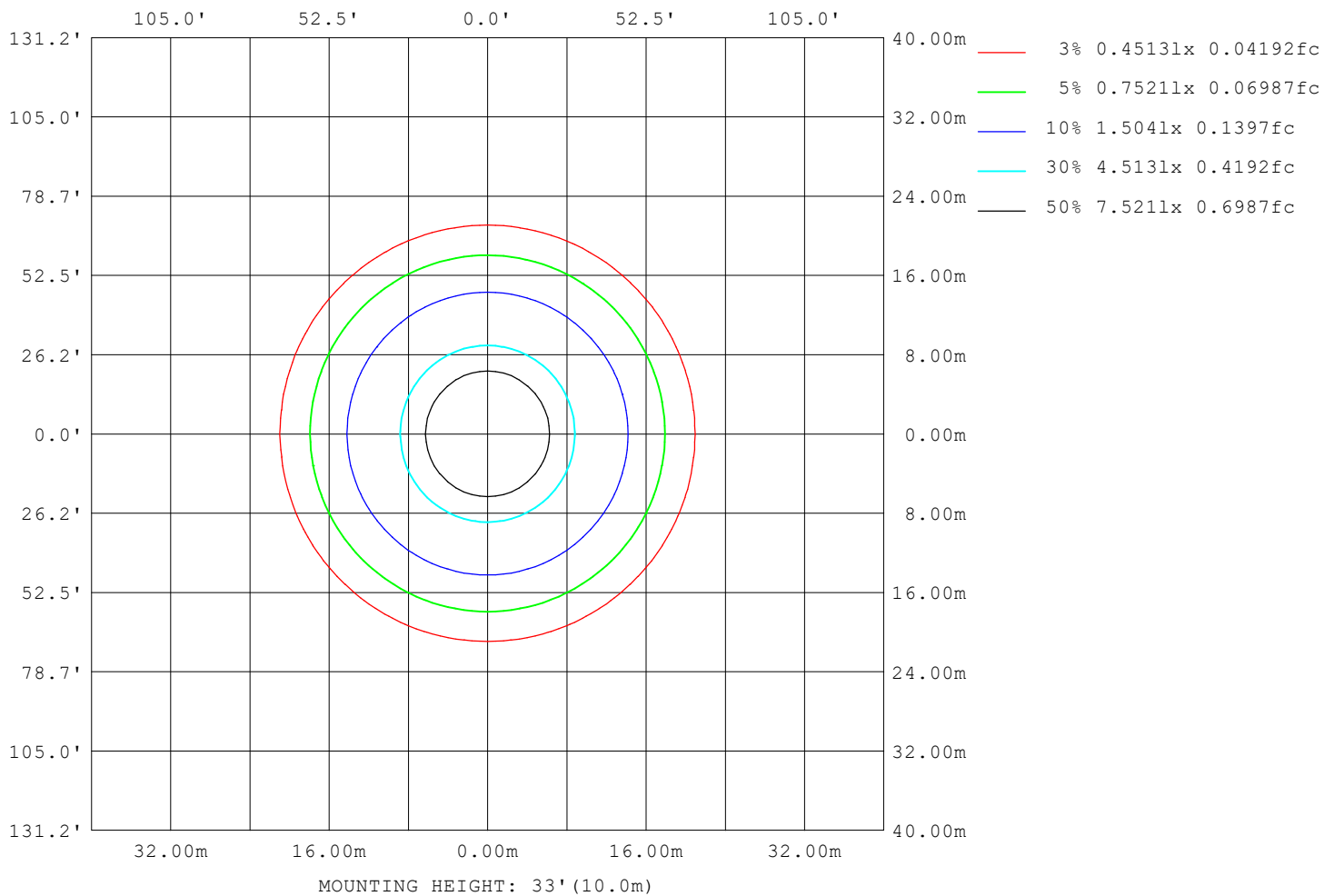
Humidity: 65.0%

Test Distance: 6.265m [K=1.0000]

Remarks:

ISOLUX DIAGRAM

NAME: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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: 92Panel030W	TYPE: 92Panel030W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

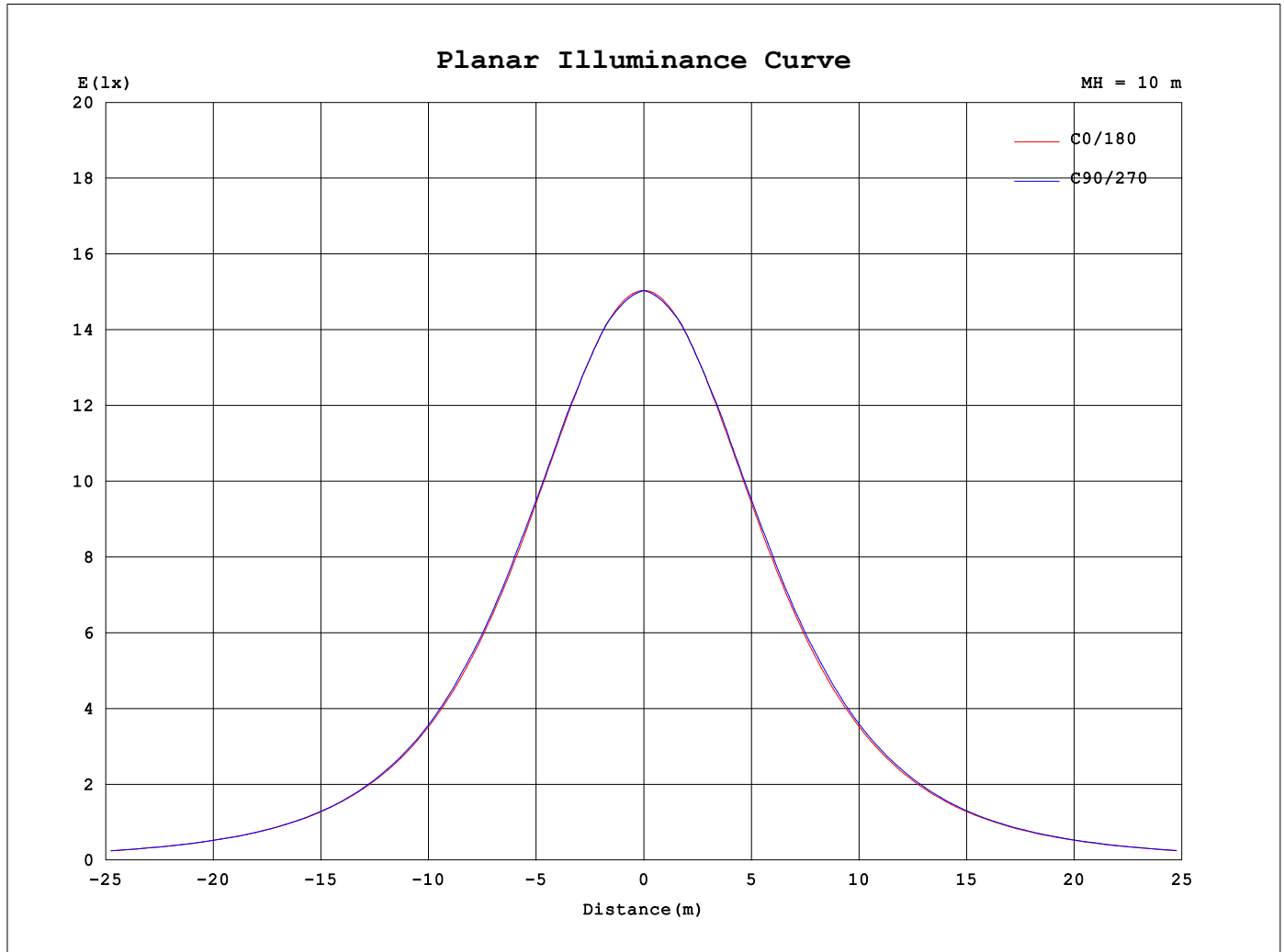
AvgL	cd/m2
L_0~180 (65) av	4325
L_0~180 (75) av	4102
L_0~180 (85) av	3641
L_90~270 (65) av	4356
L_90~270 (75) av	4159
L_90~270 (85) av	0
L_45 (65) av	4329
L_45 (75) av	4121
L_45 (85) av	2287

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:05 September 2022

V(B) Range:-80 - 80DEG
V(B) 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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V(B) Range:-80 - 80DEG
V(B) 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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V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:
```

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:
```