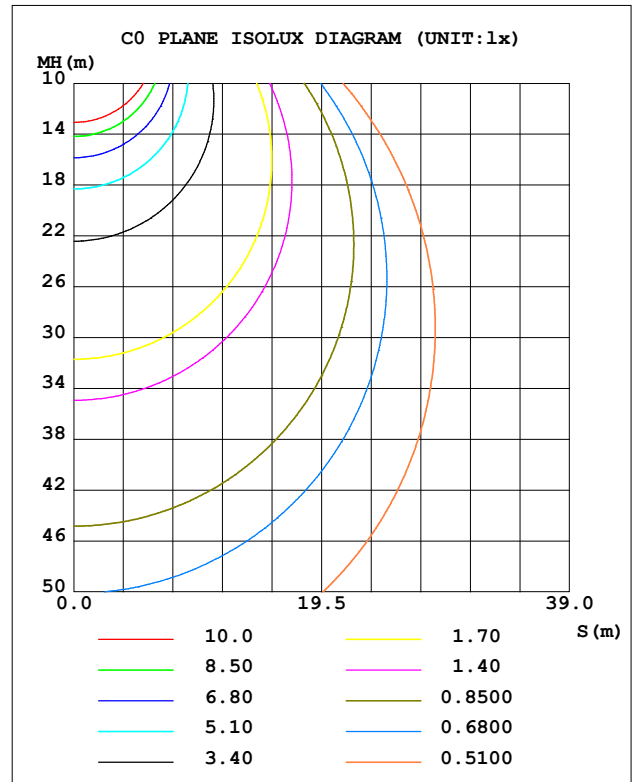
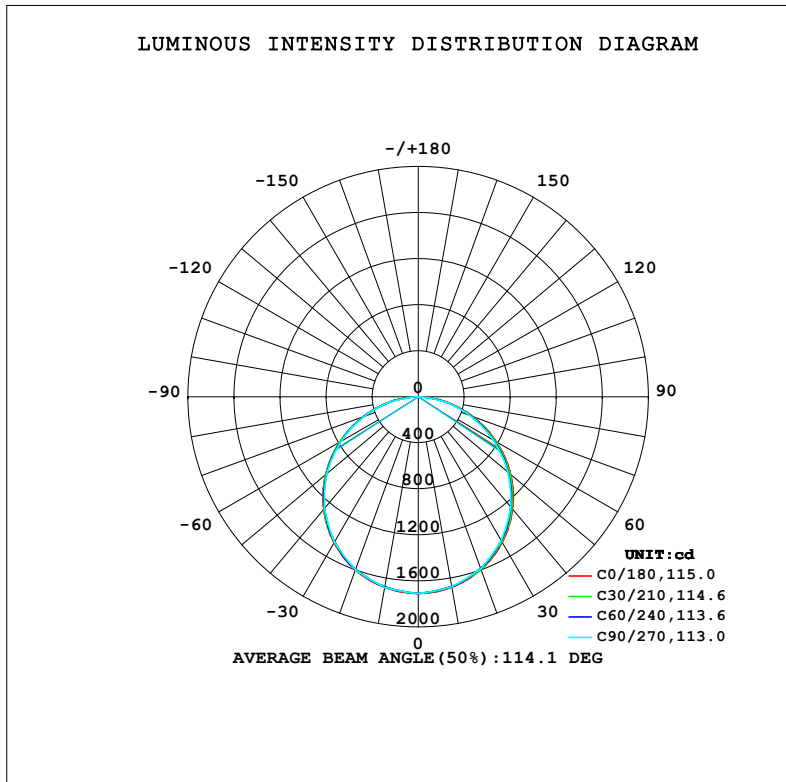


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92Panel021W	I _{max} (cd)	1709	S/MH (C0/180)	1.27
NOMINAL POWER (W)	48	LOR (%)	103.7	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	4975.7	η UP, DN (C0-180)	0.0, 51.5
NOMINAL FLUX (lm)	4800	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 52.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	103.7	CIBSE SHR MAX	1.35



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 08 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	1680	1672	1677	1672	1681	1675	1682	1675	0- 10	161.2	161.2	3.24, 3.36
20	1596	1587	1588	1585	1600	1592	1597	1593	10- 20	462.9	624.1	12.5, 13
30	1460	1448	1443	1448	1464	1458	1456	1456	20- 30	704.2	1328	26.7, 27.7
40	1275	1262	1249	1260	1279	1274	1266	1272	30- 40	853.1	2181	43.8, 45.4
50	1047	1031	1016	1029	1051	1047	1035	1043	40- 50	890.2	3072	61.7, 64
60	784.6	768.1	752.1	764.9	787.4	784.9	774.0	780.8	50- 60	810.7	3882	78, 80.9
70	505.1	488.6	474.5	485.3	504.5	506.4	497.2	500.9	60- 70	628.3	4511	90.7, 94
80	227.9	219.4	208.8	216.6	228.1	238.3	233.9	232.7	70- 80	378.2	4889	98.3, 102
90	2.907	0	0	0	3.209	0	0	0	80- 90	86.94	4976	100, 104
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): 2629.3 lm

%lum = 52.8%

%lamp = 54.8%

Conical surface Flux(130deg): 4224.7 lm

%lum = 84.9%

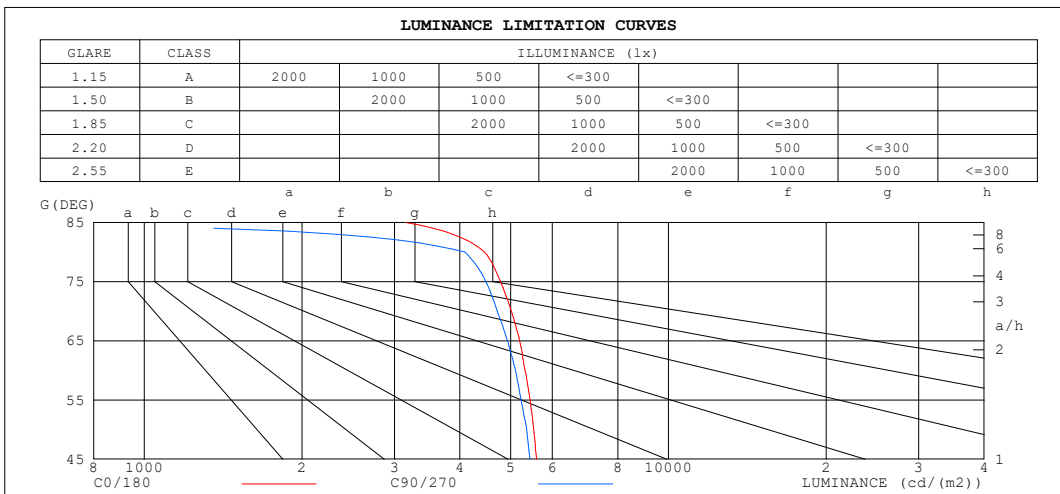
%lamp = 88.0%

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3150	0
80	4456	4083
75	4781	4482
70	5014	4710
65	5200	4927
60	5328	5107
55	5444	5233
50	5531	5366
45	5599	5439

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	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	.324	.184	.058	.317	.181	.057	.303	.174	.055	.290	.167	.054	.279	.161	.052	
2.0	.305	.167	.051	.299	.165	.051	.287	.159	.050	.276	.155	.048	.265	.150	.047	
3.0	.282	.150	.045	.277	.148	.045	.266	.144	.044	.256	.140	.043	.247	.137	.042	
4.0	.260	.135	.040	.255	.134	.039	.246	.130	.039	.237	.127	.038	.229	.124	.038	
5.0	.241	.123	.036	.236	.121	.035	.228	.118	.035	.220	.116	.034	.212	.113	.034	
6.0	.223	.112	.032	.219	.111	.032	.211	.108	.032	.204	.106	.031	.198	.104	.031	
7.0	.207	.102	.029	.204	.102	.029	.197	.100	.029	.191	.098	.028	.185	.096	.028	
8.0	.193	.095	.027	.190	.094	.026	.184	.092	.026	.179	.090	.026	.173	.089	.026	
9.0	.181	.088	.024	.178	.087	.024	.173	.086	.024	.168	.084	.024	.163	.083	.024	
10.0	.170	.082	.023	.168	.081	.023	.163	.080	.022	.158	.079	.022	.154	.077	.022	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.197	.197	.197	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.187	.162	.139	.160	.139	.120	.109	.096	.083	.063	.055	.048	.020	.018	.016	
2.0	.179	.137	.101	.153	.118	.088	.105	.081	.061	.061	.047	.036	.019	.015	.012	
3.0	.171	.118	.077	.147	.102	.066	.101	.071	.047	.058	.041	.027	.019	.013	.009	
4.0	.163	.105	.060	.140	.090	.052	.096	.063	.037	.056	.037	.022	.018	.012	.007	
5.0	.155	.094	.049	.133	.081	.042	.092	.057	.030	.053	.033	.018	.017	.011	.006	
6.0	.148	.085	.040	.127	.074	.035	.088	.052	.025	.051	.030	.015	.016	.010	.005	
7.0	.141	.078	.034	.121	.068	.030	.084	.048	.021	.049	.028	.013	.016	.009	.004	
8.0	.134	.072	.030	.115	.063	.026	.080	.044	.018	.046	.026	.011	.015	.008	.004	
9.0	.128	.067	.026	.110	.058	.023	.076	.041	.016	.044	.024	.010	.014	.008	.003	
10.0	.122	.063	.023	.105	.054	.020	.073	.038	.014	.042	.023	.009	.014	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W						TYPE: 92Panel021W			WEIGHT: 1		
SPEC.:						DIM.: 1155 x 255			SERIAL No.: 0		
MFR.: Elmark Industries JSC						SUR.: regtangle			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	13.3	14.9	13.6	15.1	15.3	13.2	14.7	13.4	14.9	15.1
	3H	14.9	16.4	15.2	16.6	16.8	14.7	16.1	15.0	16.4	16.6
	4H	15.6	17.0	15.9	17.2	17.5	15.3	16.7	15.7	16.9	17.2
	6H	16.1	17.4	16.4	17.6	17.9	15.8	17.1	16.1	17.4	17.6
	8H	16.2	17.5	16.6	17.8	18.1	15.9	17.1	16.2	17.4	17.7
	12H	16.3	17.5	16.7	17.8	18.1	15.9	17.1	16.2	17.4	17.7
4H	2H	13.9	15.3	14.3	15.5	15.8	13.8	15.2	14.1	15.4	15.7
	3H	15.7	16.9	16.1	17.2	17.5	15.5	16.7	15.9	17.0	17.3
	4H	16.5	17.6	16.9	17.9	18.3	16.3	17.4	16.7	17.7	18.0
	6H	17.2	18.1	17.6	18.5	18.8	16.9	17.9	17.3	18.2	18.6
	8H	17.4	18.3	17.8	18.6	19.0	17.0	17.9	17.5	18.3	18.7
	12H	17.5	18.3	17.9	18.7	19.1	17.0	17.9	17.5	18.2	18.6
8H	4H	16.8	17.7	17.2	18.1	18.5	16.6	17.5	17.0	17.9	18.3
	6H	17.6	18.3	18.0	18.8	19.2	17.4	18.1	17.8	18.5	19.0
	8H	17.9	18.6	18.4	19.0	19.4	17.6	18.2	18.0	18.7	19.1
	12H	18.1	18.7	18.6	19.1	19.6	17.6	18.1	18.1	18.6	19.1
12H	4H	16.8	17.7	17.3	18.0	18.4	16.6	17.5	17.1	17.8	18.2
	6H	17.7	18.3	18.1	18.8	19.2	17.5	18.1	17.9	18.5	19.0
	8H	18.0	18.6	18.5	19.0	19.5	17.7	18.2	18.2	18.7	19.2
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		+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 4800 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.4)
Area: 0.294525 m2

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

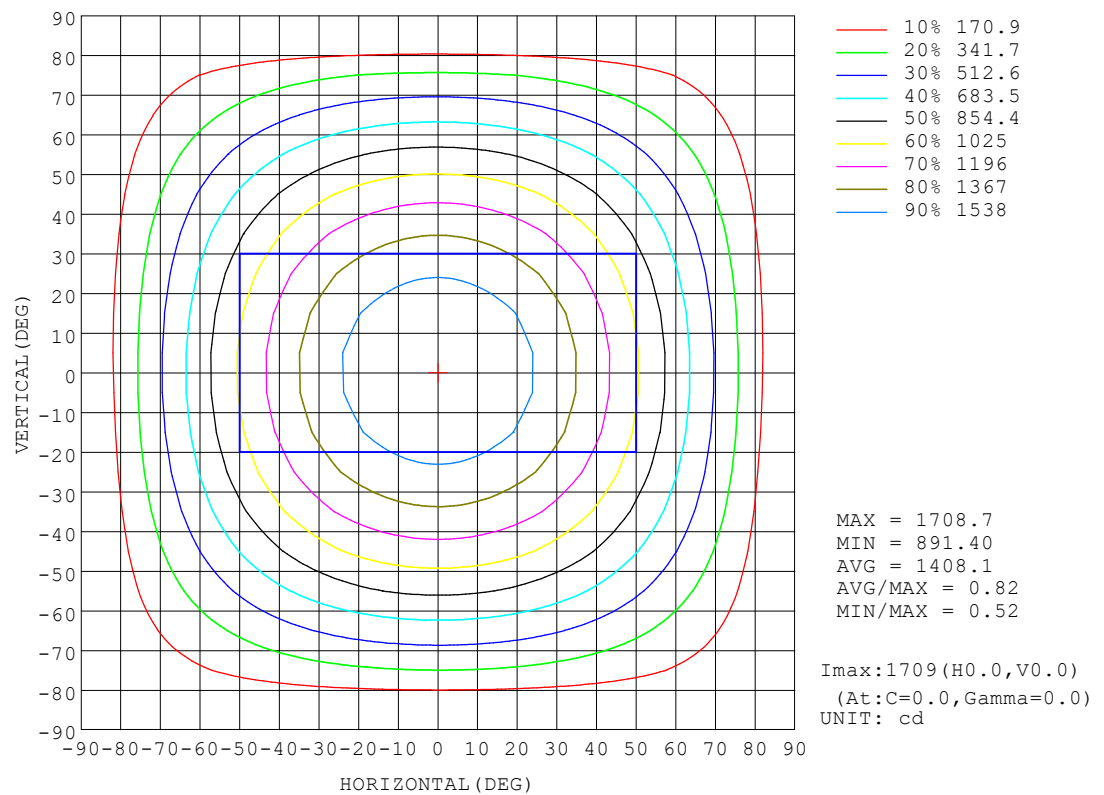
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	47	40	58	47	40	57	46	40	33
0.80	70	57	50	69	57	50	67	56	49	42
1.00	78	67	59	77	66	59	75	68	58	51
1.25	86	75	67	84	74	67	81	72	66	58
1.50	91	81	73	89	80	73	86	78	72	64
2.00	98	89	82	96	88	82	93	86	80	72
2.50	102	94	88	100	93	87	96	90	85	76
3.00	106	99	93	104	97	92	99	94	89	81
4.00	110	104	99	108	102	98	103	99	95	86
5.00	113	107	103	110	105	102	105	102	98	89
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: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

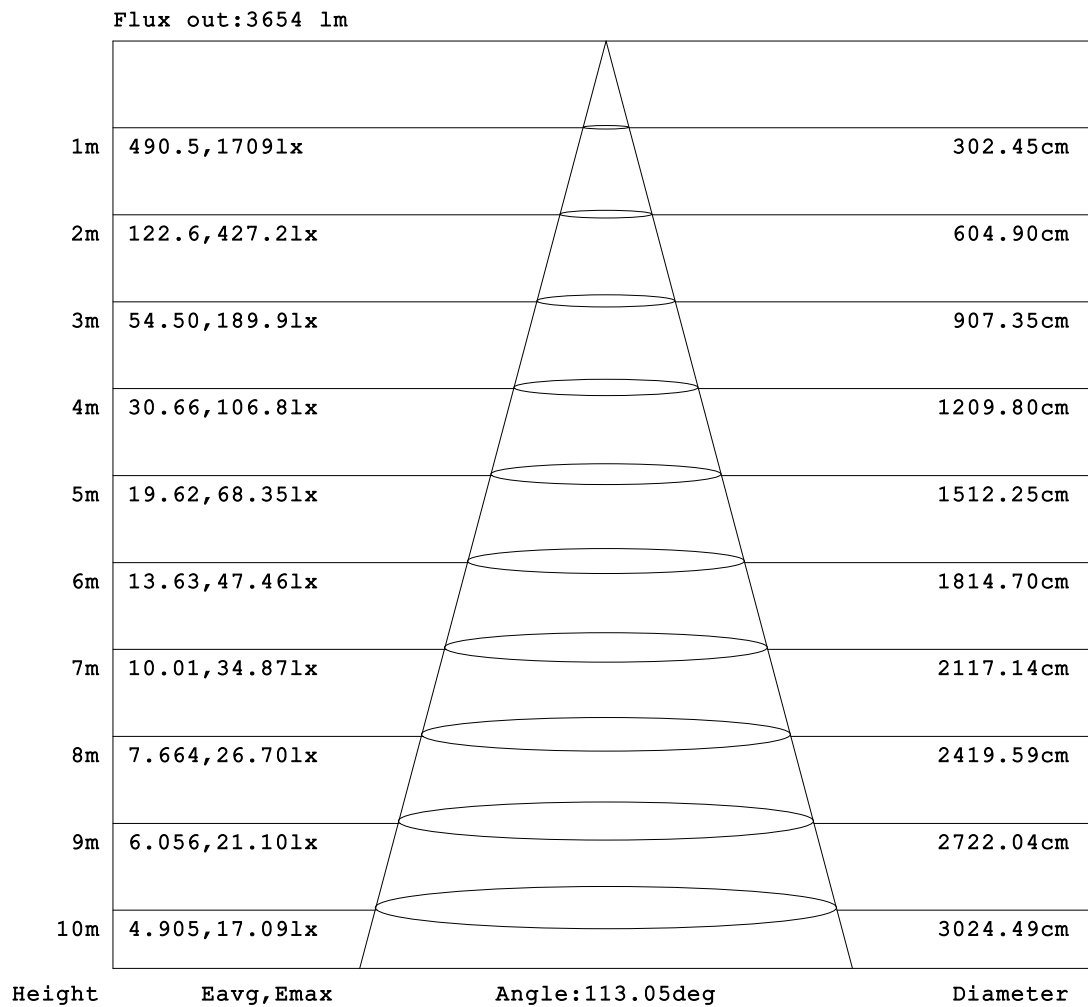


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 September 2022

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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	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: MEDIUM

Temperature:25.3°C

Operators:

Test Date:08 September 2022

V(B) Range:-80 - 80DEG

V(B) Interval: 5.0DEG

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

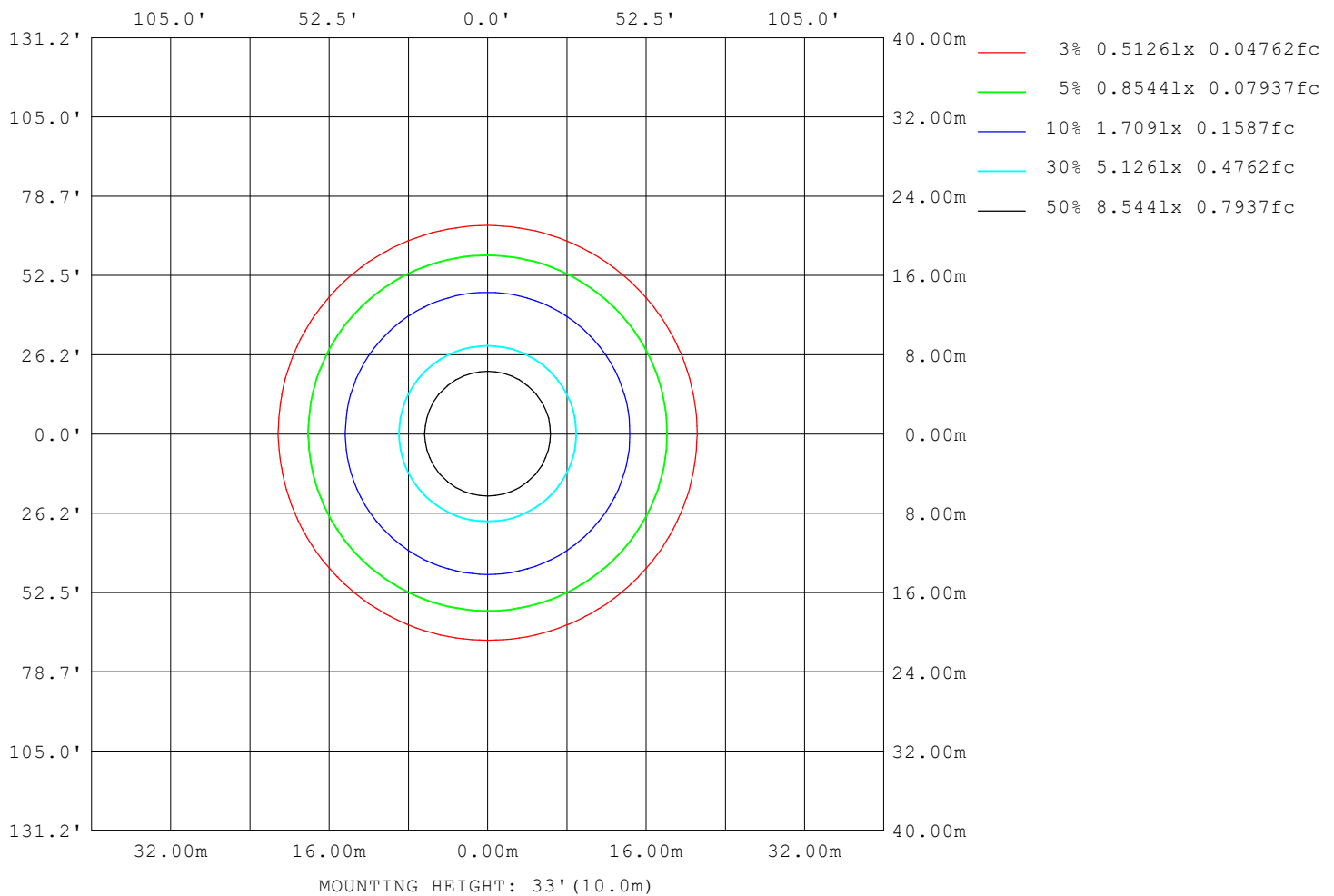
Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks:

ISOLUX DIAGRAM

NAME: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 92Panel021W	TYPE: 92Panel021W	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

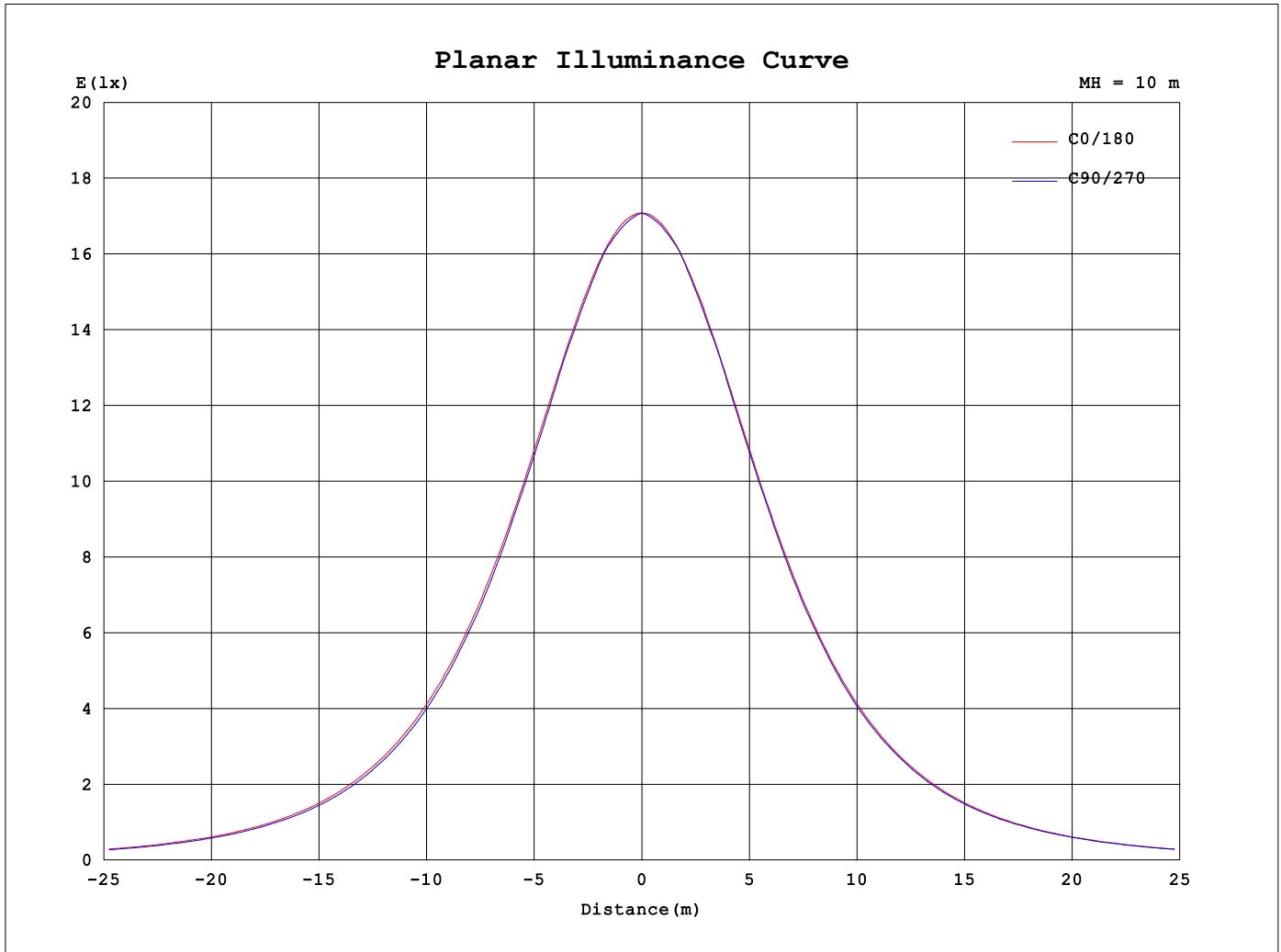
AvgL	cd/m2
L_0~180 (65) av	5198
L_0~180 (75) av	4777
L_0~180 (85) av	3135
L_90~270 (65) av	5017
L_90~270 (75) av	4639
L_90~270 (85) av	0
L_45 (65) av	5098
L_45 (75) av	4679
L_45 (85) av	2438

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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:

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: