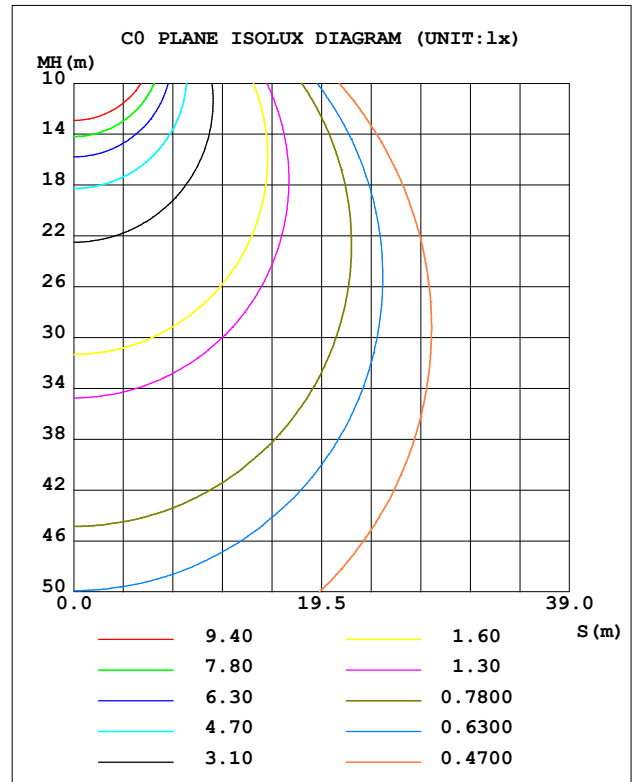
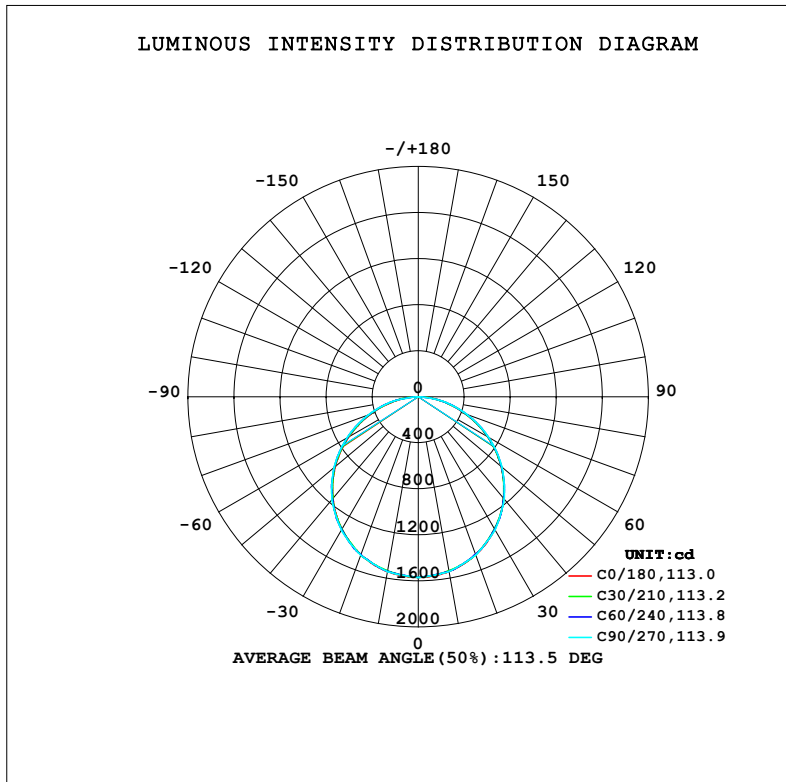


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92Panel020W	TYPE: 92Panel020W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92Panel020W	Imax(cd)	1570	S/MH(C0/180)	1.26
NOMINAL POWER(W)	48	LOR(%)	94.5	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	4535.2	η UP,DN(C0-180)	0.0,47.1
NOMINAL FLUX(lm)	4800	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down (%)	94.5	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:07 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	1542	1536	1542	1536	1543	1537	1543	1537	0- 10	148.0	148.0	3.26, 3.08
20	1459	1456	1463	1455	1460	1457	1465	1458	10- 20	424.6	572.7	12.6, 11.9
30	1331	1328	1335	1328	1330	1330	1338	1330	20- 30	645.0	1218	26.8, 25.4
40	1154	1156	1161	1155	1154	1161	1167	1161	30- 40	780.5	1998	44.1, 41.6
50	940.6	945.2	949.1	944.0	940.2	950.3	956.8	948.7	40- 50	813.1	2811	62, 58.6
60	697.3	702.0	707.7	700.7	697.0	709.3	716.3	707.5	50- 60	738.7	3550	78.3, 74
70	439.4	444.0	449.4	443.3	440.0	452.7	459.5	449.4	60- 70	569.6	4120	90.8, 85.8
80	192.9	196.5	199.3	196.6	193.6	207.6	213.2	204.1	70- 80	339.6	4459	98.3, 92.9
90	2.319	0	0	0	2.651	0	0	0	80- 90	75.94	4535	100, 94.5
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): 2407.5 lm

%lum = 53.1%
%lamp = 50.2%

Conical surface Flux(130deg): 3860.9 lm

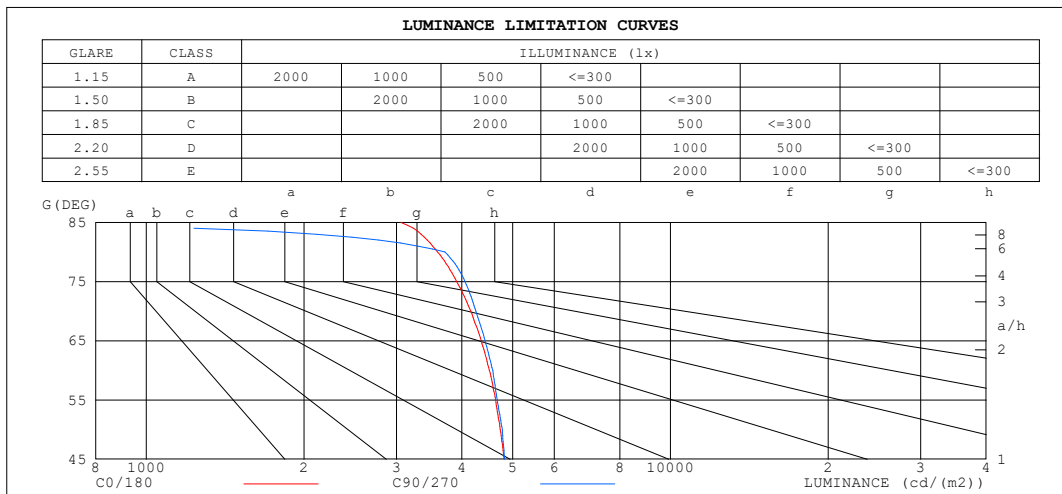
%lum = 85.1%
%lamp = 80.4%

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 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: 92Panel020W	TYPE: 92Panel020W	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	3059	0
80	3593	3712
75	3909	4054
70	4156	4251
65	4355	4429
60	4512	4579
55	4637	4672
50	4734	4776
45	4809	4827

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 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: 92Panel020W	TYPE: 92Panel020W	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	.294	.167	.053	.287	.164	.052	.275	.158	.050	.263	.152	.049	.252	.146	.047	
2.0	.277	.152	.047	.271	.149	.046	.260	.145	.045	.250	.140	.044	.241	.136	.043	
3.0	.257	.137	.041	.251	.135	.041	.242	.131	.040	.233	.127	.039	.224	.124	.038	
4.0	.237	.123	.036	.232	.121	.036	.223	.119	.035	.215	.116	.035	.208	.113	.034	
5.0	.219	.111	.032	.215	.110	.032	.207	.108	.032	.200	.105	.031	.193	.103	.031	
6.0	.203	.102	.029	.199	.101	.029	.192	.099	.029	.186	.097	.028	.180	.095	.028	
7.0	.189	.093	.026	.185	.092	.026	.179	.091	.026	.174	.089	.026	.168	.087	.026	
8.0	.176	.086	.024	.173	.085	.024	.168	.084	.024	.163	.082	.024	.158	.081	.024	
9.0	.165	.080	.022	.162	.079	.022	.157	.078	.022	.153	.077	.022	.148	.075	.022	
10.0	.155	.074	.021	.153	.074	.021	.148	.073	.020	.144	.072	.020	.140	.071	.020	

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	.180	.180	.180	.154	.154	.154	.105	.105	.105	.060	.060	.060	.019	.019	.019	
1.0	.170	.148	.127	.146	.127	.109	.100	.087	.076	.057	.050	.044	.018	.016	.014	
2.0	.163	.125	.092	.140	.107	.080	.096	.074	.056	.055	.043	.033	.018	.014	.011	
3.0	.156	.108	.070	.133	.093	.061	.092	.065	.043	.053	.038	.025	.017	.012	.008	
4.0	.149	.095	.055	.127	.082	.048	.088	.057	.034	.051	.034	.020	.016	.011	.007	
5.0	.141	.086	.044	.122	.074	.039	.084	.052	.027	.048	.030	.016	.016	.010	.005	
6.0	.135	.078	.037	.116	.067	.032	.080	.047	.023	.046	.028	.013	.015	.009	.004	
7.0	.128	.071	.031	.110	.062	.027	.076	.043	.019	.044	.025	.011	.014	.008	.004	
8.0	.122	.066	.027	.105	.057	.024	.073	.040	.017	.042	.024	.010	.014	.008	.003	
9.0	.116	.061	.024	.100	.053	.021	.069	.037	.015	.040	.022	.009	.013	.007	.003	
10.0	.111	.057	.021	.096	.050	.018	.066	.035	.013	.039	.021	.008	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 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: 92Panel020W					TYPE: 92Panel020W					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	12.7	14.3	13.0	14.5	14.7	12.8	14.3	13.1	14.5	14.8				
3H	14.3	15.7	14.6	15.9	16.2	14.4	15.8	14.7	16.0	16.3				
4H	14.9	16.3	15.2	16.5	16.8	15.0	16.4	15.4	16.6	16.9				
6H	15.4	16.7	15.7	16.9	17.2	15.5	16.8	15.9	17.1	17.4				
8H	15.5	16.7	15.9	17.0	17.3	15.6	16.9	16.0	17.1	17.4				
12H	15.6	16.8	15.9	17.0	17.4	15.6	16.8	16.0	17.1	17.4				
4H 2H	13.4	14.7	13.7	15.0	15.2	13.4	14.8	13.7	15.0	15.3				
3H	15.1	16.3	15.5	16.6	16.9	15.2	16.4	15.5	16.7	17.0				
4H	15.9	16.9	16.2	17.3	17.6	16.0	17.1	16.4	17.4	17.7				
6H	16.5	17.4	16.9	17.8	18.1	16.6	17.6	17.0	17.9	18.3				
8H	16.6	17.5	17.0	17.9	18.3	16.7	17.6	17.2	18.0	18.4				
12H	16.7	17.5	17.1	17.9	18.3	16.7	17.5	17.2	17.9	18.3				
8H 4H	16.2	17.0	16.6	17.4	17.8	16.3	17.2	16.7	17.5	17.9				
6H	16.9	17.6	17.3	18.1	18.5	17.0	17.8	17.5	18.2	18.6				
8H	17.2	17.8	17.6	18.3	18.7	17.2	17.9	17.7	18.3	18.8				
12H	17.3	17.9	17.8	18.4	18.8	17.3	17.8	17.7	18.3	18.7				
12H 4H	16.2	17.0	16.6	17.4	17.8	16.3	17.1	16.7	17.5	17.9				
6H	17.0	17.6	17.4	18.1	18.5	17.1	17.8	17.6	18.2	18.6				
8H	17.3	17.9	17.8	18.3	18.8	17.3	17.9	17.8	18.3	18.8				
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: 0.309136 m2

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 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: 92Panel020W	TYPE: 92Panel020W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

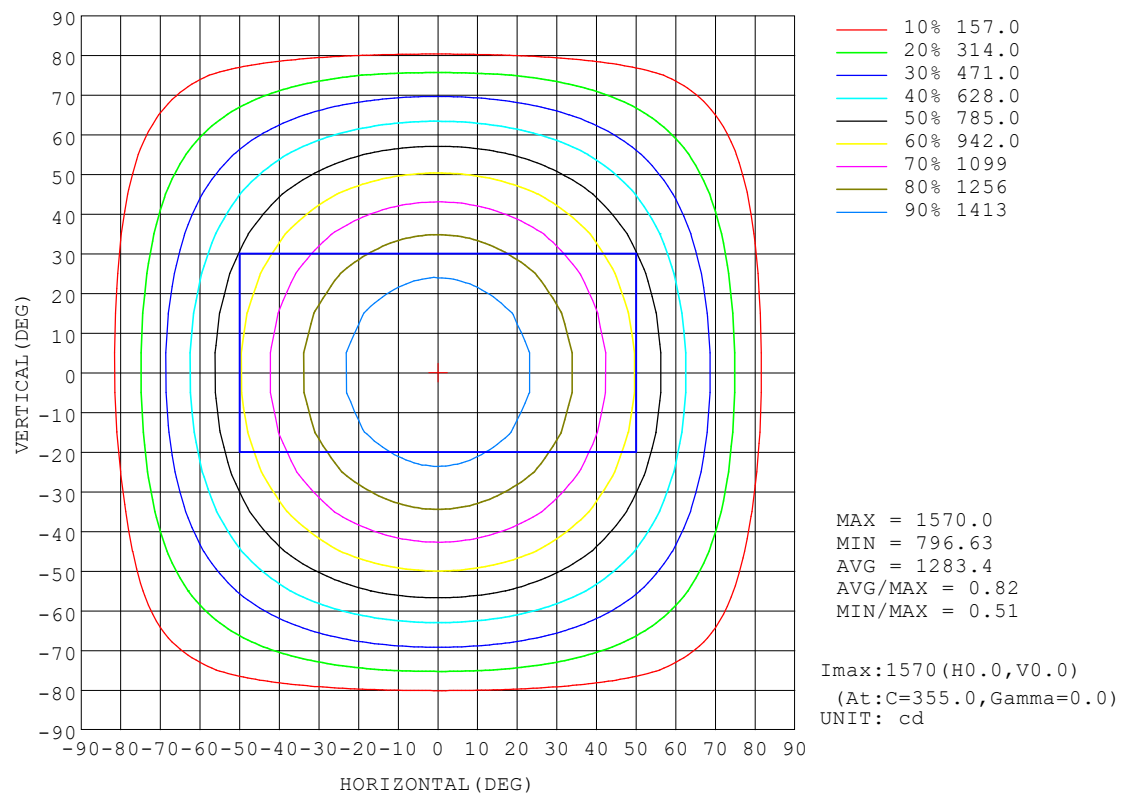
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	43	36	53	43	36	52	42	36	30
0.80	64	52	45	63	52	45	61	51	45	38
1.00	72	61	54	70	60	54	68	62	53	46
1.25	78	68	61	77	68	61	74	66	60	53
1.50	83	74	67	81	73	66	79	71	65	58
2.00	90	81	75	88	80	75	84	78	73	66
2.50	93	86	80	91	85	79	88	82	77	70
3.00	96	90	85	94	88	84	91	86	82	74
4.00	100	95	90	98	93	89	94	90	87	78
5.00	103	98	94	100	96	93	96	93	90	81
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:07 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: 92Panel020W	TYPE: 92Panel020W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

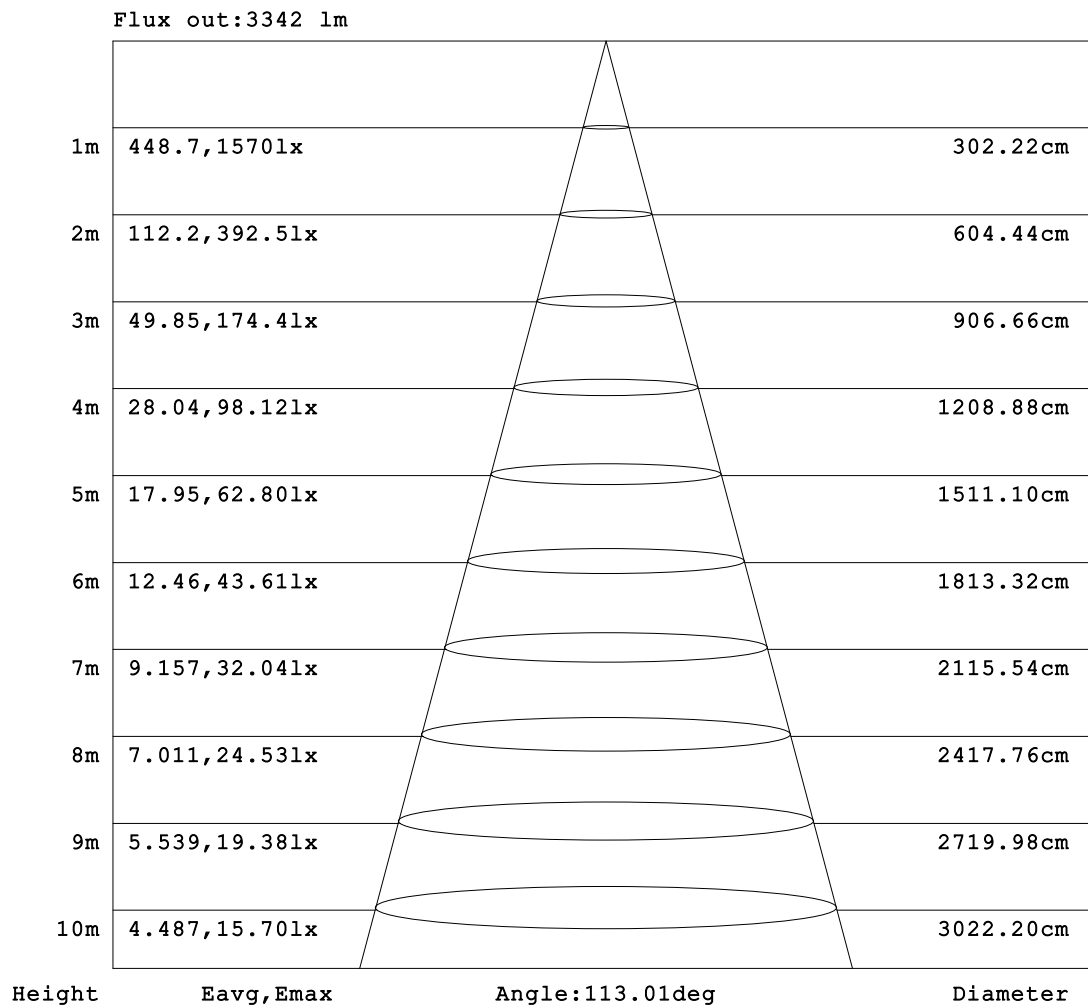


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 September 2022

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: 92Panel020W	TYPE: 92Panel020W	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: MEDIUM

Temperature:25.3°C

Operators:

Test Date:07 September 2022

V(B) Range:-80 - 80DEG

V(B) Interval: 5.0DEG

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

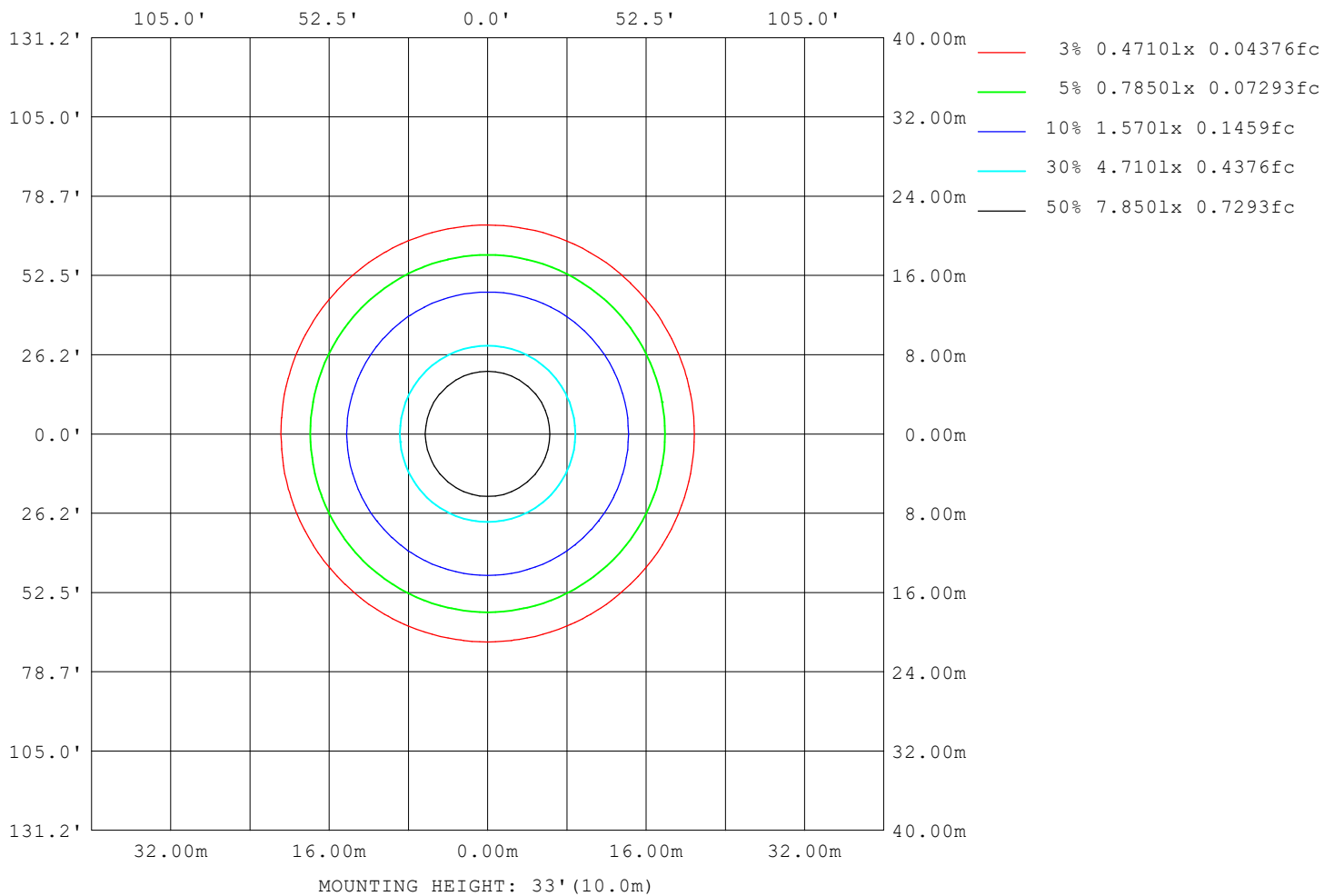
Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks:

ISOLUX DIAGRAM

NAME: 92Panel020W	TYPE: 92Panel020W	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: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:07 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: 92Panel020W	TYPE: 92Panel020W	WEIGHT: 1
SPEC.:	DIM.: 596 x 596	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: square	Shielding Angle:

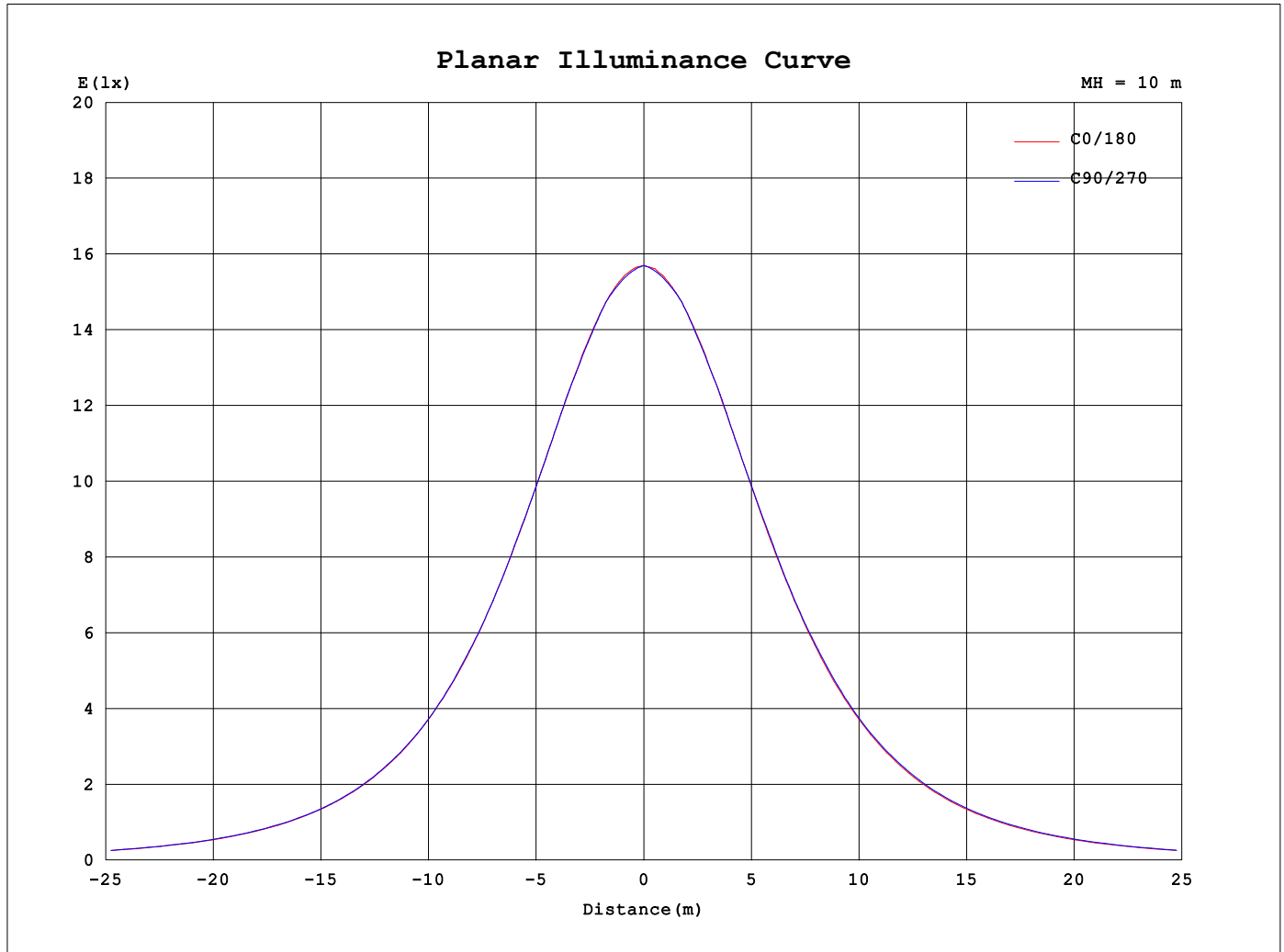
AvgL	cd/m2
L_0~180 (65) av	4353
L_0~180 (75) av	3916
L_0~180 (85) av	3044
L_90~270 (65) av	4464
L_90~270 (75) av	4129
L_90~270 (85) av	0
L_45 (65) av	4404
L_45 (75) av	4003
L_45 (85) av	2031

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:07 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:07 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: