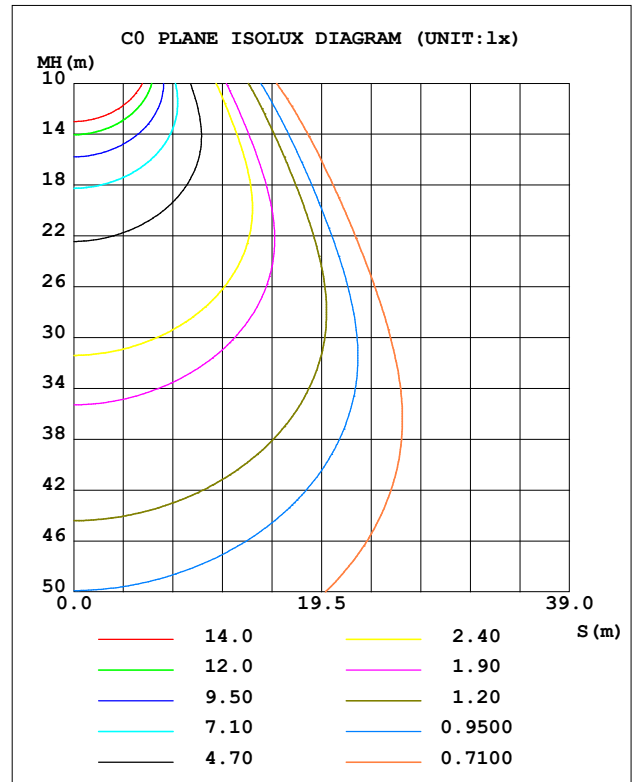
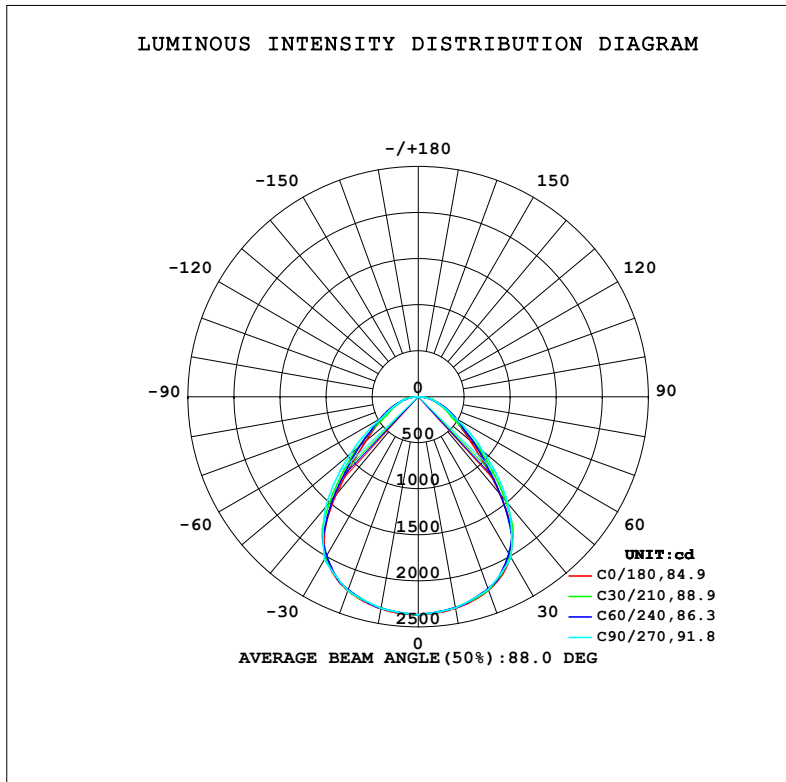


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92Panel029CW	Imax(cd)	2367	S/MH(C0/180)	1.21
NOMINAL POWER(W)	48	LOR(%)	94.4	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	4982.0	$\eta$ UP,DN(C0-180)	0.0,46.9
NOMINAL FLUX(lm)	5280	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,47.4
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	$\eta$ down (%)	94.4	CIBSE SHR MAX	1.30



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2331	2321	2327	2325	2337	2329	2333	2325	0- 10	223.6	223.6	4.49, 4.24
20	2234	2215	2226	2219	2240	2226	2238	2224	10- 20	645.6	869.2	17.4, 16.5
30	1999	1977	2016	1985	2004	1996	2038	2002	20- 30	981.4	1851	37.1, 35.1
40	1381	1451	1516	1456	1390	1471	1566	1488	30- 40	1096	2947	59.2, 55.8
50	730.9	808.0	913.8	820.8	738.2	827.4	955.7	832.4	40- 50	865.1	3812	76.5, 72.2
60	426.1	461.9	448.7	460.6	435.4	464.2	443.0	463.9	50- 60	560.5	4373	87.8, 82.8
70	242.2	269.8	248.4	275.9	245.0	266.7	250.3	265.1	60- 70	349.3	4722	94.8, 89.4
80	124.7	136.8	141.2	142.2	127.1	136.1	140.7	130.4	70- 80	204.9	4927	98.9, 93.3
90	1.843	0	0	0	1.960	0	0	0	80- 90	55.03	4982	100, 94.4
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): 3420.2 lm

%lum = 68.7%  
%lamp = 64.8%

Conical surface Flux(130deg): 4567.9 lm

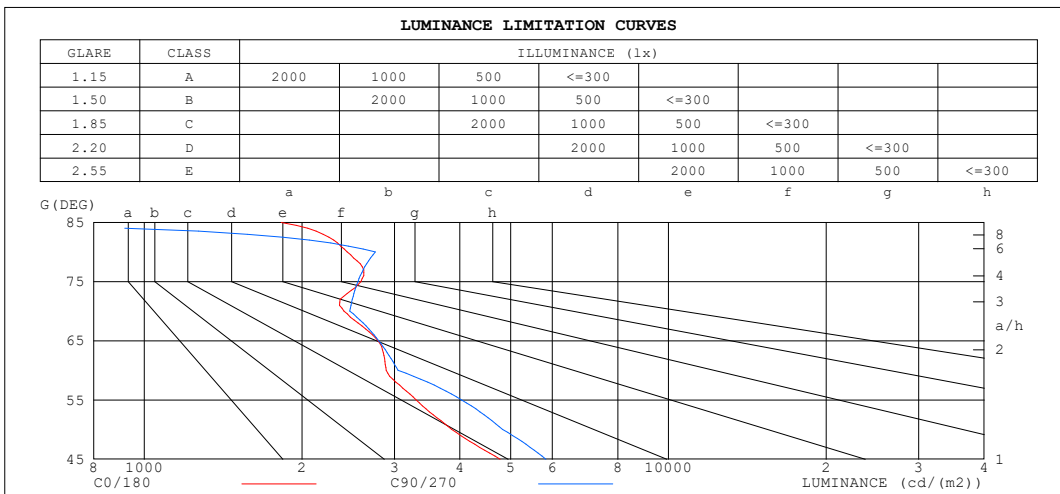
%lum = 91.7%  
%lamp = 86.5%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	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	1825	0
80	2439	2760
75	2587	2555
70	2405	2465
65	2794	2800
60	2894	3047
55	3300	4033
50	3861	4827
45	4772	5833

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	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	.249	.141	.045	.242	.138	.044	.230	.132	.042	.218	.126	.040	.208	.121	.039	
2.0	.237	.130	.040	.231	.127	.039	.220	.123	.038	.211	.118	.037	.201	.114	.036	
3.0	.222	.118	.035	.217	.116	.035	.208	.113	.034	.199	.109	.033	.191	.106	.033	
4.0	.207	.108	.032	.203	.106	.031	.195	.103	.031	.187	.101	.030	.180	.098	.030	
5.0	.194	.099	.029	.190	.098	.028	.183	.095	.028	.176	.093	.028	.170	.091	.027	
6.0	.182	.091	.026	.178	.090	.026	.172	.088	.026	.166	.086	.025	.160	.084	.025	
7.0	.171	.084	.024	.168	.084	.024	.162	.082	.024	.157	.080	.023	.151	.079	.023	
8.0	.161	.079	.022	.158	.078	.022	.153	.076	.022	.148	.075	.022	.143	.074	.021	
9.0	.152	.073	.021	.149	.073	.020	.145	.072	.020	.140	.070	.020	.136	.069	.020	
10.0	.144	.069	.019	.141	.068	.019	.137	.067	.019	.133	.066	.019	.129	.065	.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	.180	.180	.180	.154	.154	.154	.105	.105	.105	.060	.060	.060	.019	.019	.019	
1.0	.167	.148	.130	.143	.127	.112	.098	.087	.078	.056	.050	.045	.018	.016	.015	
2.0	.157	.125	.097	.135	.107	.084	.092	.074	.059	.053	.043	.034	.017	.014	.011	
3.0	.149	.108	.075	.128	.093	.065	.088	.065	.045	.051	.038	.027	.016	.012	.009	
4.0	.141	.095	.059	.121	.082	.051	.083	.057	.036	.048	.033	.021	.016	.011	.007	
5.0	.134	.085	.048	.115	.073	.042	.079	.051	.029	.046	.030	.017	.015	.010	.006	
6.0	.128	.076	.040	.110	.066	.035	.076	.046	.025	.044	.027	.015	.014	.009	.005	
7.0	.121	.070	.034	.104	.061	.029	.072	.042	.021	.042	.025	.012	.014	.008	.004	
8.0	.116	.064	.029	.100	.056	.025	.069	.039	.018	.040	.023	.011	.013	.008	.004	
9.0	.110	.060	.025	.095	.052	.022	.066	.036	.016	.038	.021	.009	.012	.007	.003	
10.0	.106	.056	.022	.091	.048	.019	.063	.034	.014	.037	.020	.008	.012	.007	.003	

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW					TYPE: 92Panel029CW			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	10.7	12.0	11.0	12.2	12.4	11.0	12.4	11.3	12.6	12.8
3H	11.5	12.8	11.8	13.0	13.2	11.9	13.1	12.2	13.4	13.6
4H	11.9	13.1	12.2	13.3	13.6	12.3	13.5	12.6	13.7	14.0
6H	12.3	13.4	12.6	13.6	13.9	12.8	13.9	13.1	14.1	14.4
8H	12.4	13.4	12.7	13.7	14.0	12.9	13.9	13.2	14.2	14.5
12H	12.4	13.5	12.8	13.8	14.1	12.8	13.9	13.2	14.1	14.4
4H 2H	11.0	12.2	11.3	12.4	12.7	11.3	12.5	11.6	12.8	13.0
3H	12.0	13.1	12.4	13.3	13.6	12.4	13.5	12.8	13.7	14.0
4H	12.6	13.5	12.9	13.8	14.1	13.0	13.9	13.4	14.3	14.6
6H	13.1	13.9	13.5	14.3	14.6	13.6	14.4	14.0	14.8	15.1
8H	13.3	14.1	13.7	14.4	14.8	13.7	14.5	14.2	14.9	15.3
12H	13.5	14.2	13.9	14.5	14.9	13.7	14.4	14.2	14.8	15.2
8H 4H	12.8	13.6	13.2	14.0	14.3	13.2	14.0	13.6	14.3	14.7
6H	13.6	14.2	14.0	14.6	15.0	13.9	14.6	14.4	15.0	15.4
8H	13.9	14.5	14.4	14.9	15.3	14.1	14.7	14.6	15.1	15.6
12H	14.2	14.7	14.7	15.1	15.6	14.1	14.6	14.6	15.1	15.5
12H 4H	12.8	13.5	13.3	13.9	14.3	13.2	13.9	13.6	14.3	14.7
6H	13.6	14.2	14.1	14.6	15.1	14.0	14.5	14.4	15.0	15.4
8H	14.1	14.5	14.5	15.0	15.5	14.2	14.7	14.7	15.1	15.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.5 / - 0.6					+ 0.3 / - 0.4				
1.5H	+ 0.4 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.6 / - 0.6					+ 0.8 / - 0.8				

CIE Pub.117, 5280 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.8)  
Area: 0.294525 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

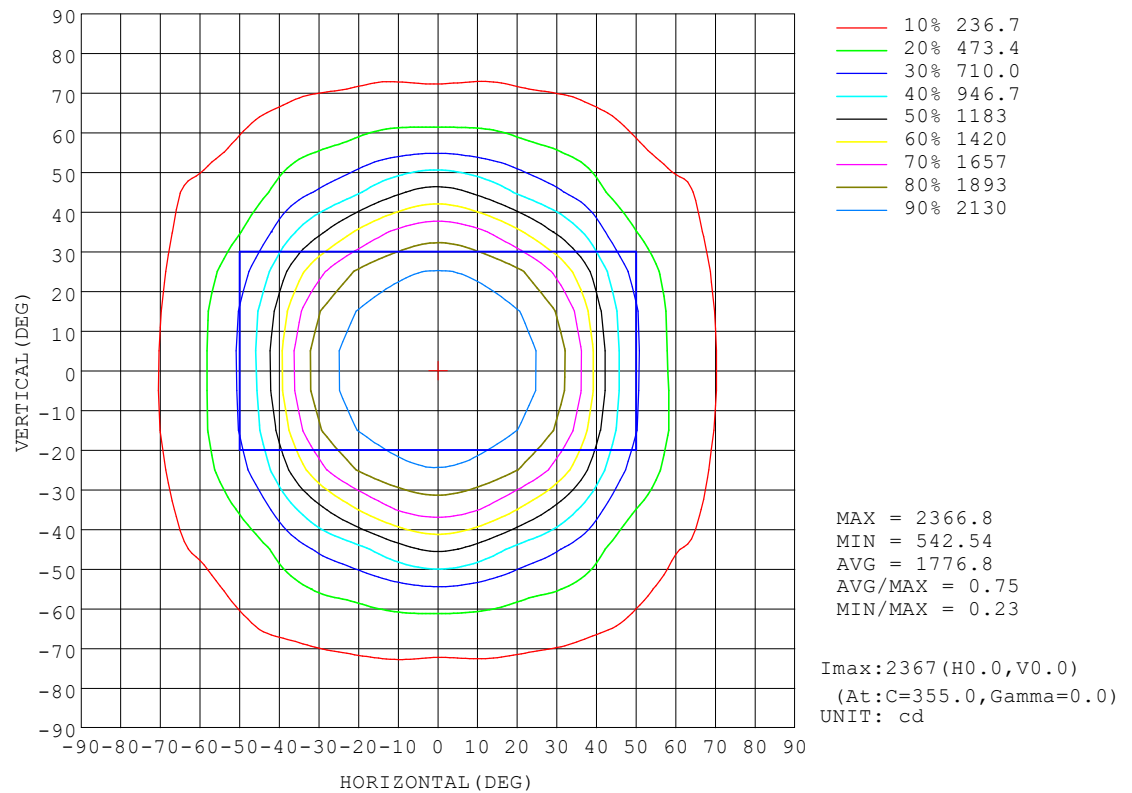
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	62	53	47	62	53	47	61	52	47	42
0.80	72	62	56	71	62	56	69	61	56	50
1.00	79	70	64	78	69	64	76	70	63	58
1.25	85	76	71	83	76	71	81	75	70	64
1.50	89	81	76	87	80	75	85	79	74	68
2.00	94	87	82	92	86	82	89	84	80	74
2.50	97	91	86	95	90	85	92	87	84	77
3.00	100	94	90	98	93	89	94	90	87	80
4.00	103	98	95	101	97	93	97	93	91	83
5.00	104	101	98	102	99	96	98	96	93	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



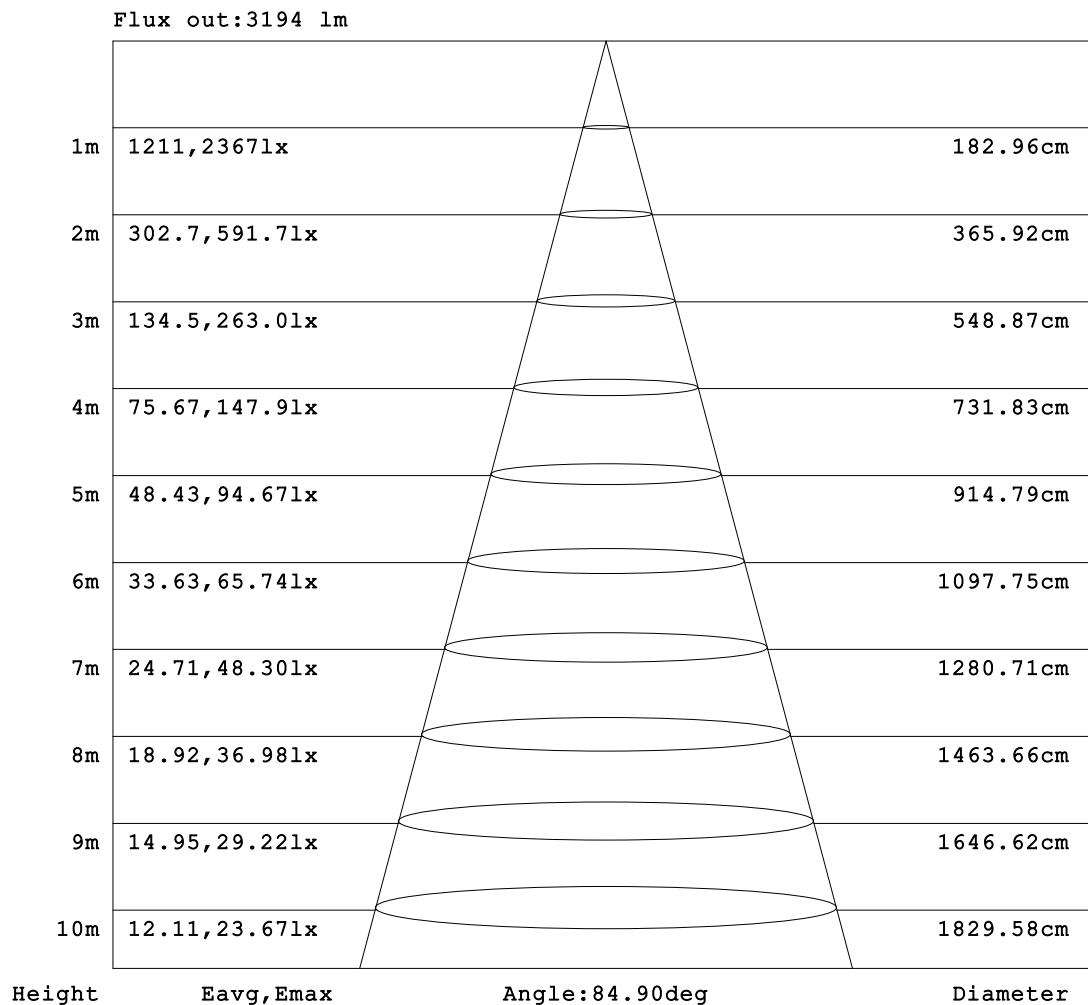
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: MEDIUM  
Temperature:25.3°C  
Operators:  
Test Date:07 September 2022

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: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



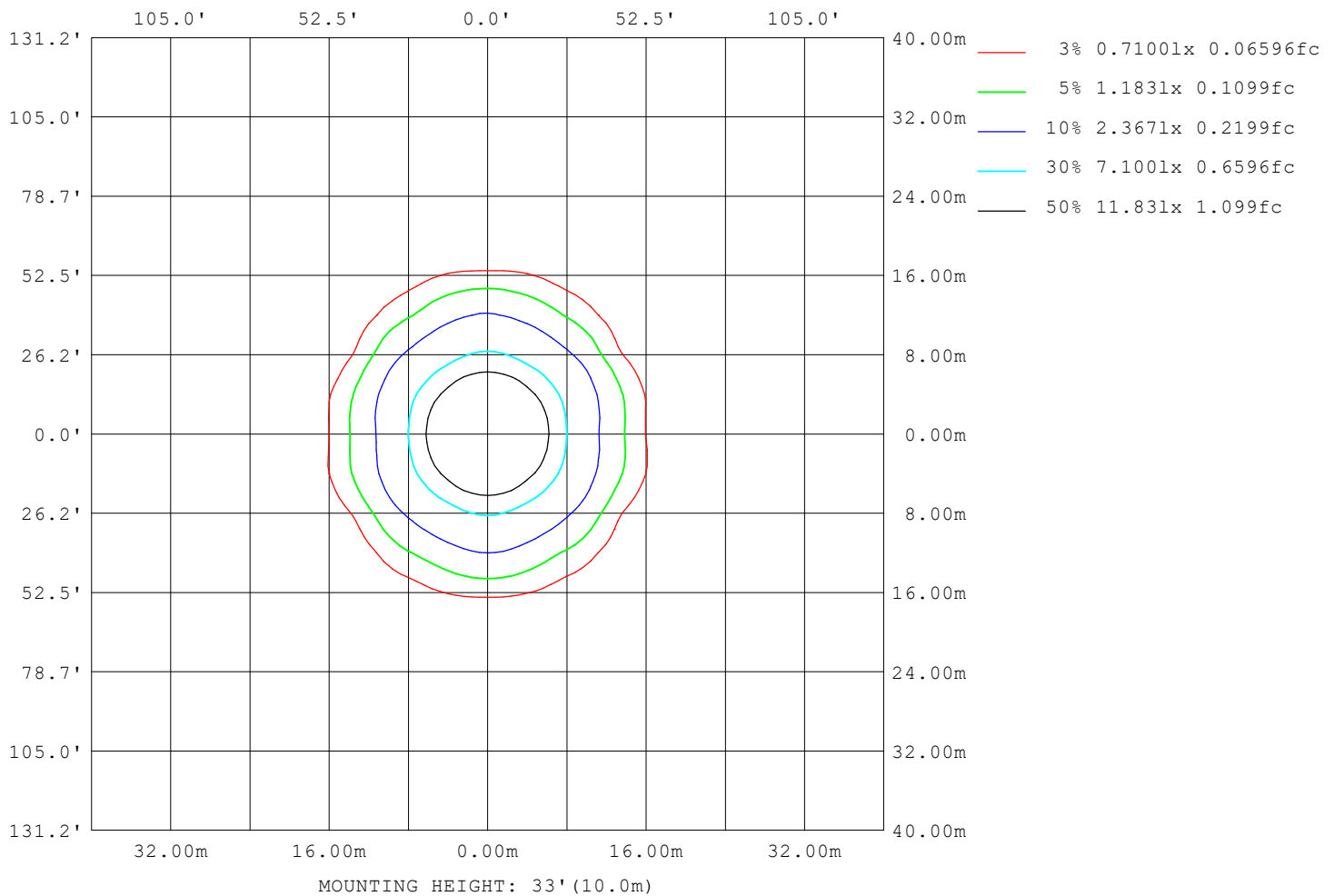
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: 92Panel029CW	TYPE: 92Panel029CW	WEIGHT: 1
SPEC.:	DIM.: 1155 x 255	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle	Shielding Angle:

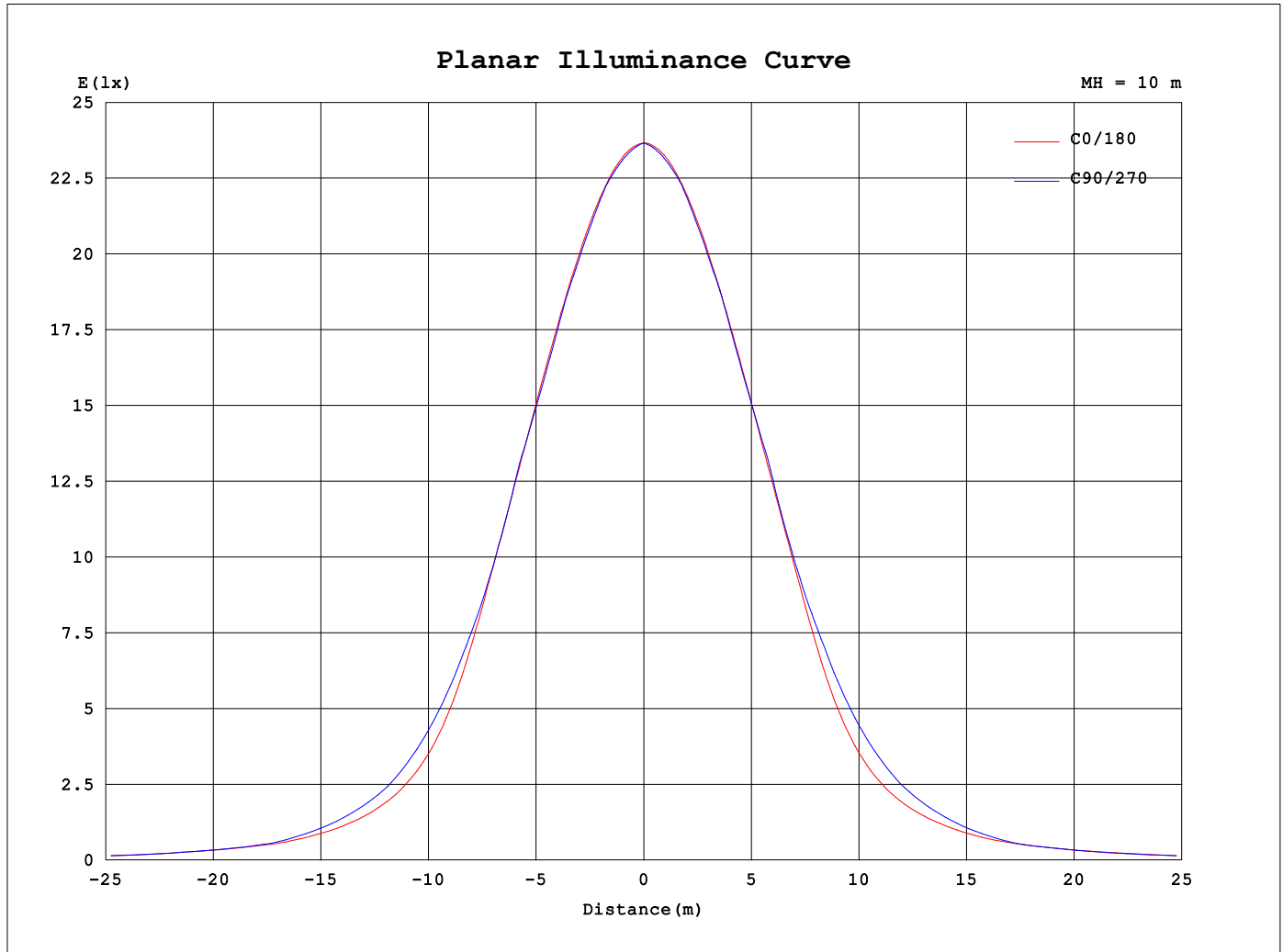
AvgL	cd/m2
L_0~180 (65) av	2819
L_0~180 (75) av	2550
L_0~180 (85) av	1832
L_90~270 (65) av	2792
L_90~270 (75) av	2559
L_90~270 (85) av	0
L_45 (65) av	2862
L_45 (75) av	2641
L_45 (85) av	1568

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) 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: