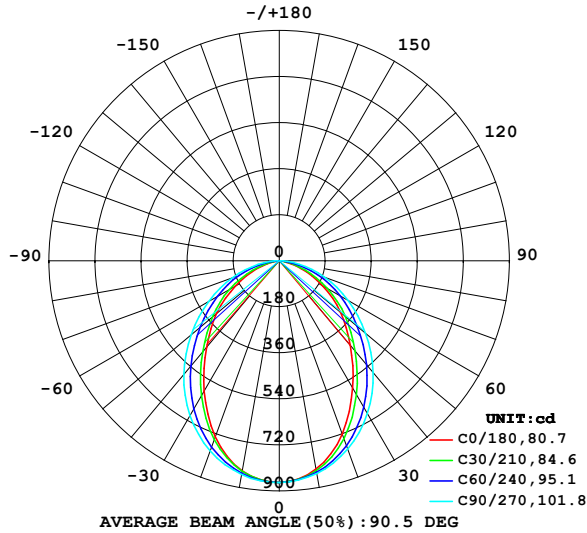


LUMINAIRE PHOTOMETRIC TEST REPORT

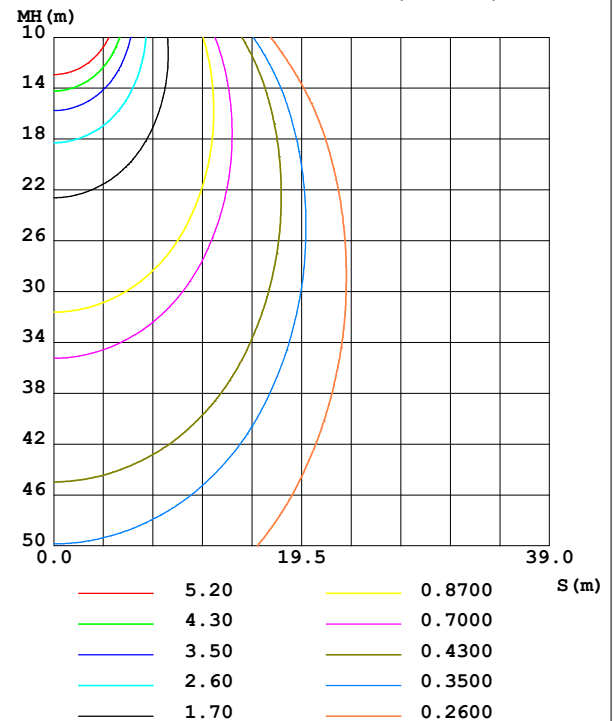
NAME: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93M20FL3030/BL	Imax (cd)	866.4	S/MH (C0/180)	1.05
NOMINAL POWER (W)	30	LOR (%)	124.8	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1902.9	η UP, DN (C0-180)	0.0, 61.9
NOMINAL FLUX (lm)	1525	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 62.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	48	η down (%)	124.8	CIBSE SHR MAX	1.25

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 03 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
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	827.1	836.7	844.6	836.3	834.3	839.9	848.7	840.2	0- 10	81.36	81.36	4.28,5.33
20	720.7	755.2	783.1	753.5	732.8	759.9	790.3	760.9	10- 20	226.0	307.3	16.2,20.2
30	573.9	632.4	689.8	630.2	587.9	638.2	698.9	639.2	20- 30	321.7	629.0	33.1,41.2
40	432.7	494.5	571.1	492.0	443.3	500.0	580.7	501.0	30- 40	355.8	984.8	51.8,64.6
50	313.1	364.1	440.3	362.0	320.9	368.5	449.7	369.7	40- 50	336.8	1322	69.5,86.7
60	196.0	245.9	310.7	247.2	197.8	252.7	318.6	251.6	50- 60	279.0	1601	84.1,105
70	92.51	129.6	188.8	132.8	94.64	136.6	195.2	134.8	60- 70	192.1	1793	94.2,118
80	14.35	33.68	79.24	35.11	15.81	37.38	84.19	36.86	70- 80	93.38	1886	99.1,124
90	0.7566	1.025	4.164	1.040	0.6427	0.9259	5.611	0.9247	80- 90	16.79	1903	100,125
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): 1158.3 lm

%lum = 60.9%

%lamp = 76.0%

Conical surface Flux(130deg): 1708.8 lm

%lum = 89.8%

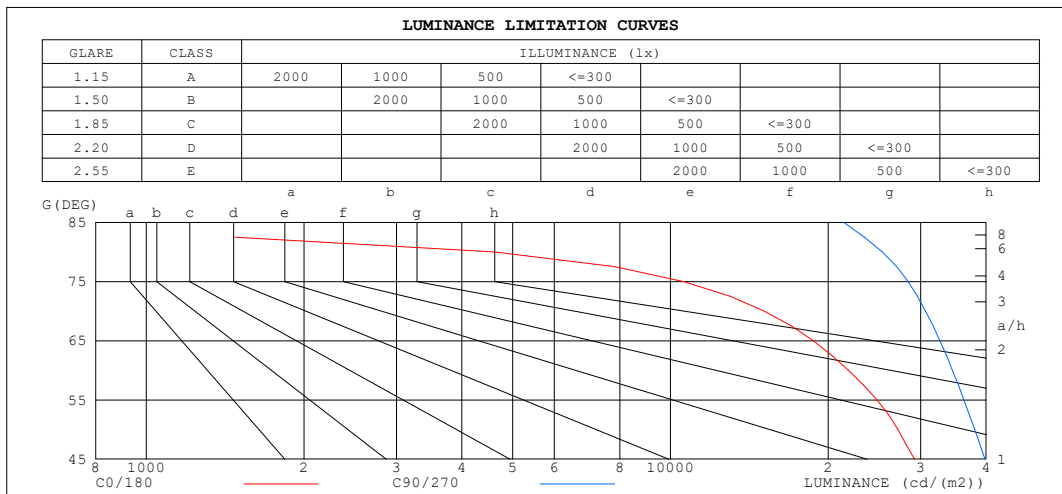
%lamp = 112.1%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:03 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 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: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	747	21418
80	4609	25338
75	10606	28409
70	15083	30655
65	18728	32640
60	21854	34507
55	24795	36274
50	27160	38031
45	29200	39778

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [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:6.265m [K=1.0000]
Remarks:

```

WEC AND CCEC

NAME: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	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	.347	.197	.063	.338	.193	.061	.322	.185	.059	.307	.177	.057	.293	.170	.055	
2.0	.333	.182	.056	.325	.179	.055	.311	.173	.054	.297	.167	.052	.285	.161	.051	
3.0	.311	.166	.050	.305	.163	.049	.292	.158	.048	.280	.154	.047	.270	.149	.046	
4.0	.290	.151	.044	.284	.149	.044	.273	.145	.043	.263	.141	.043	.253	.137	.042	
5.0	.270	.138	.040	.265	.136	.040	.255	.133	.039	.246	.130	.039	.237	.127	.038	
6.0	.252	.126	.036	.247	.125	.036	.239	.122	.036	.230	.120	.035	.223	.117	.035	
7.0	.236	.117	.033	.232	.115	.033	.224	.113	.033	.216	.111	.032	.209	.109	.032	
8.0	.221	.108	.030	.217	.107	.030	.210	.105	.030	.204	.103	.030	.197	.101	.030	
9.0	.208	.101	.028	.205	.100	.028	.198	.098	.028	.192	.096	.028	.187	.095	.027	
10.0	.196	.094	.026	.193	.093	.026	.187	.092	.026	.182	.090	.026	.177	.089	.026	

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	.238	.238	.238	.203	.203	.203	.139	.139	.139	.080	.080	.080	.025	.025	.025	
1.0	.222	.195	.171	.190	.168	.147	.130	.115	.102	.075	.067	.059	.024	.021	.019	
2.0	.211	.165	.126	.180	.142	.109	.124	.098	.076	.071	.057	.045	.023	.018	.015	
3.0	.200	.142	.096	.172	.123	.084	.118	.085	.059	.068	.050	.035	.022	.016	.011	
4.0	.191	.126	.076	.164	.108	.066	.112	.076	.046	.065	.044	.027	.021	.014	.009	
5.0	.181	.112	.061	.156	.097	.053	.107	.068	.038	.062	.040	.022	.020	.013	.007	
6.0	.173	.102	.051	.148	.088	.044	.102	.062	.031	.059	.036	.019	.019	.012	.006	
7.0	.164	.093	.043	.141	.081	.038	.098	.057	.027	.057	.033	.016	.018	.011	.005	
8.0	.157	.086	.037	.135	.074	.032	.093	.052	.023	.054	.031	.014	.018	.010	.005	
9.0	.149	.080	.033	.129	.069	.028	.089	.049	.020	.052	.029	.012	.017	.009	.004	
10.0	.142	.074	.029	.123	.064	.025	.085	.045	.018	.050	.027	.011	.016	.009	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
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: 93M20FL3030/BL					TYPE:			WEIGHT: 1		
SPEC.:					DIM.: 900 x 20 x 40			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: paralelepiped			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	21.8	23.3	22.1	23.4	23.6	23.8	25.3	24.1	25.5	25.7
3H	22.6	23.9	22.9	24.2	24.4	25.3	26.6	25.6	26.8	27.1
4H	22.8	24.0	23.1	24.3	24.5	25.9	27.1	26.2	27.4	27.6
6H	22.8	23.9	23.1	24.2	24.5	26.3	27.5	26.6	27.8	28.0
8H	22.7	23.9	23.1	24.1	24.4	26.4	27.6	26.8	27.9	28.1
12H	22.7	23.8	23.0	24.0	24.3	26.5	27.6	26.9	27.9	28.2
4H 2H	22.5	23.8	22.8	24.0	24.3	24.1	25.4	24.4	25.6	25.9
3H	23.4	24.5	23.8	24.8	25.1	25.8	26.9	26.1	27.2	27.5
4H	23.7	24.7	24.0	25.0	25.3	26.5	27.5	26.9	27.8	28.1
6H	23.7	24.6	24.1	24.9	25.3	27.1	27.9	27.5	28.3	28.6
8H	23.6	24.4	24.0	24.8	25.2	27.2	28.1	27.7	28.4	28.8
12H	23.6	24.3	24.0	24.7	25.1	27.4	28.1	27.8	28.5	28.9
8H 4H	23.9	24.7	24.3	25.1	25.5	26.5	27.3	26.9	27.7	28.1
6H	24.0	24.6	24.4	25.0	25.5	27.2	27.8	27.6	28.2	28.7
8H	23.9	24.5	24.4	24.9	25.4	27.4	28.0	27.9	28.4	28.9
12H	23.9	24.4	24.4	24.8	25.3	27.6	28.1	28.0	28.5	29.0
12H 4H	23.9	24.7	24.3	25.0	25.5	26.5	27.2	26.9	27.6	28.0
6H	24.0	24.6	24.4	25.0	25.5	27.1	27.7	27.6	28.2	28.6
8H	24.0	24.5	24.4	24.9	25.4	27.4	27.9	27.9	28.3	28.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.4 / - 0.4					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.2				
2.0H	+ 0.5 / - 0.7					+ 0.4 / - 0.4				

CIE Pub.117, 1525 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.5)
Area: 0.018 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
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: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

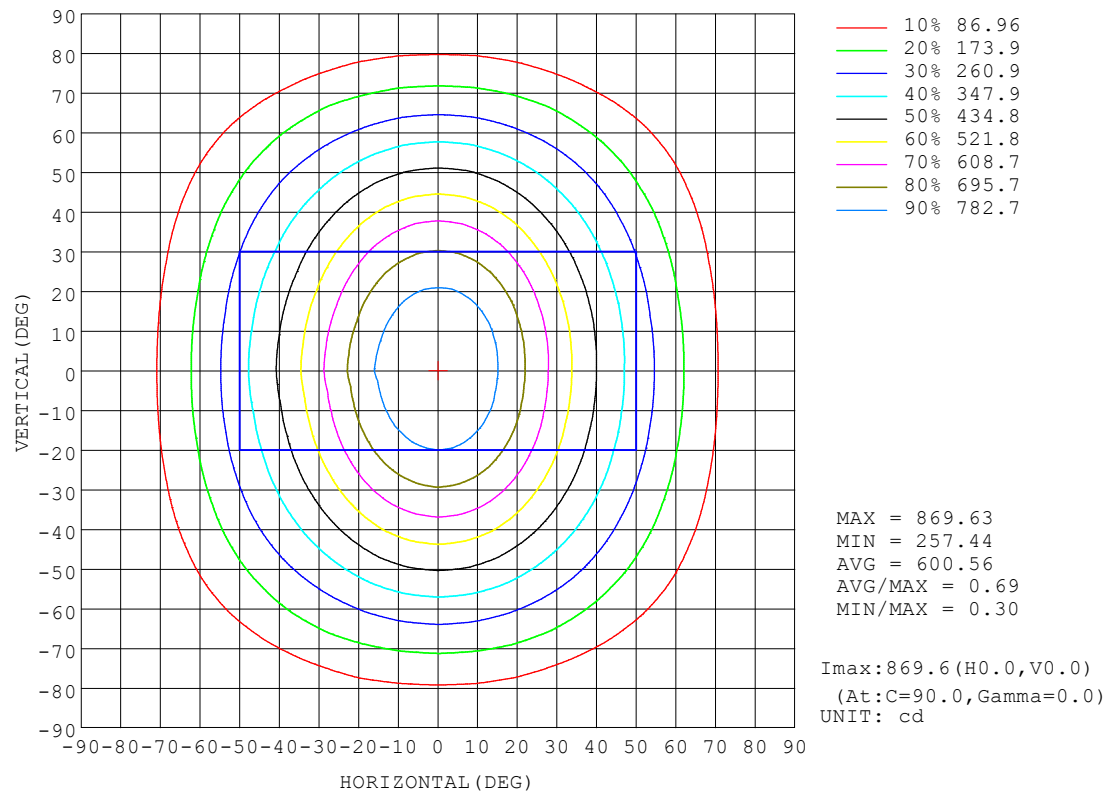
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	77	63	55	76	63	55	75	62	55	47
0.80	89	76	67	88	75	67	86	74	67	59
1.00	100	87	78	98	86	78	95	88	77	69
1.25	108	96	88	106	95	87	103	93	86	78
1.50	114	103	95	112	102	94	108	100	93	84
2.00	122	112	105	120	111	104	115	108	102	93
2.50	126	117	111	124	116	110	119	113	107	97
3.00	130	122	116	127	120	115	123	117	112	102
4.00	135	128	123	132	126	121	127	122	118	107
5.00	137	132	127	134	129	125	129	125	122	111
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

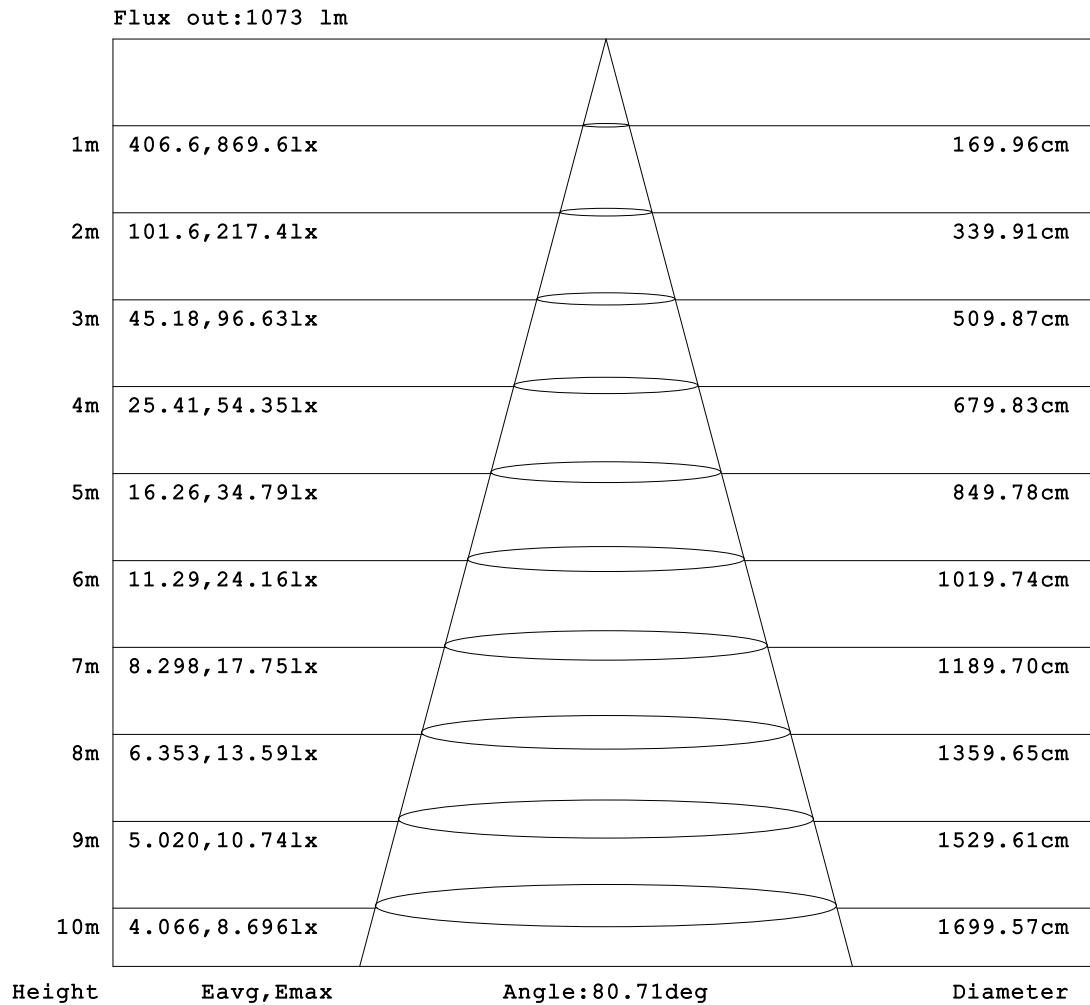


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

AAI Figure

NAME: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



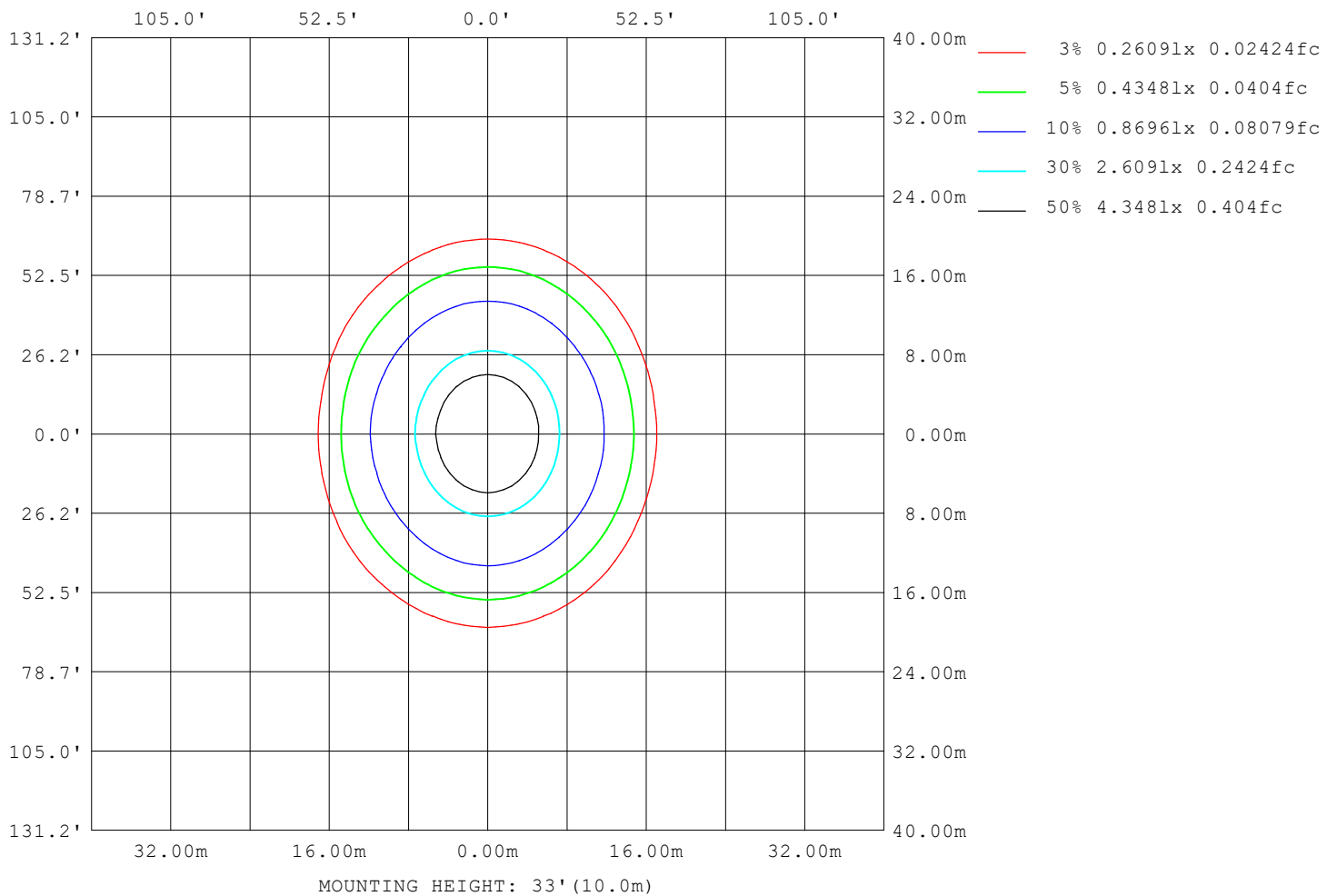
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:03 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:6.265m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
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: 93M20FL3030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 900 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

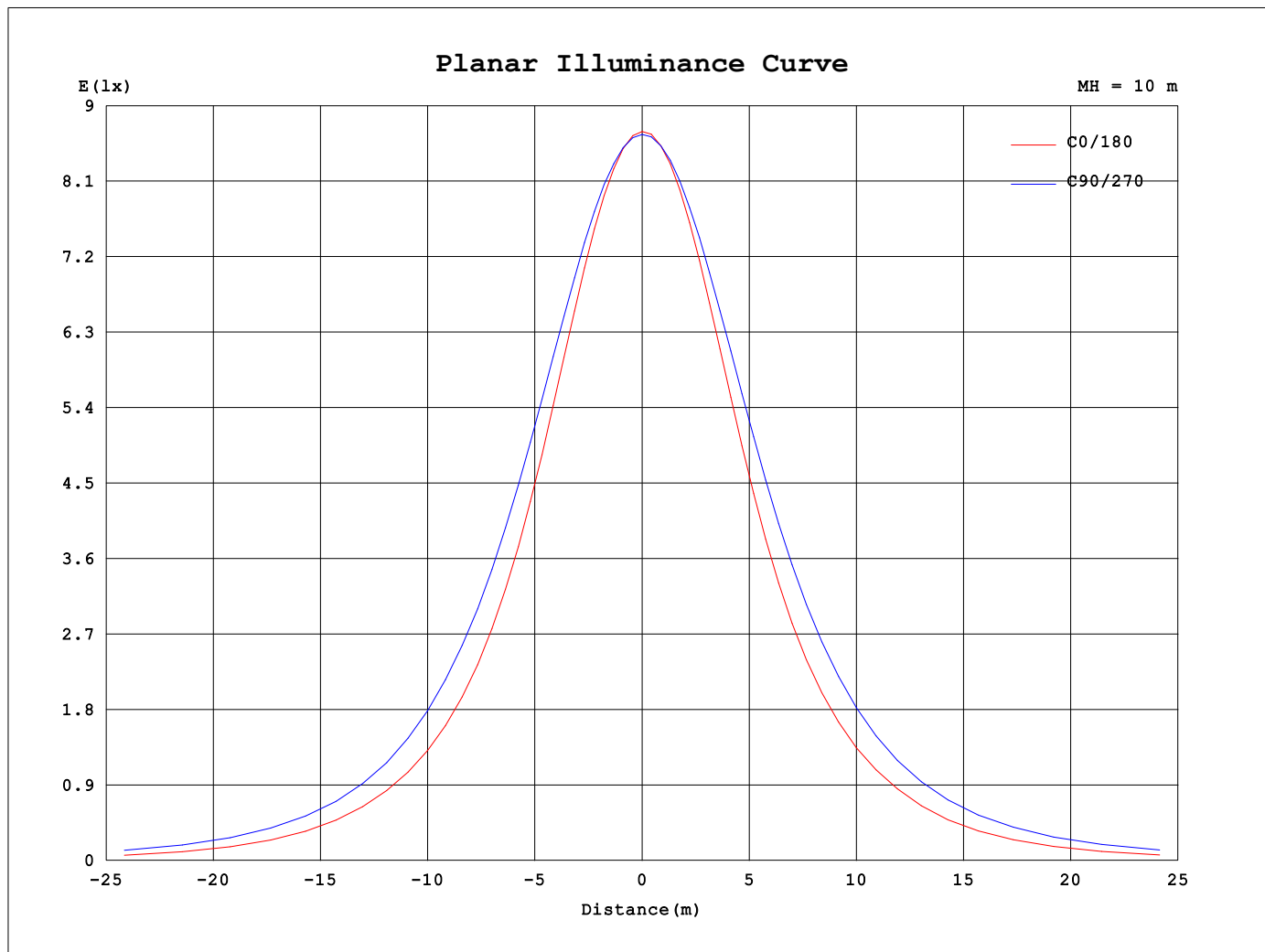
AvgL	cd/m2
L_0~180 (65) av	18791
L_0~180 (75) av	10766
L_0~180 (85) av	675
L_90~270 (65) av	33127
L_90~270 (75) av	28984
L_90~270 (85) av	22663
L_45 (65) av	25083
L_45 (75) av	17263
L_45 (85) av	2826

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:03 November 2022

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 03 November 2022

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [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:6.265m [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:6.265m [K=1.0000]
Remarks:

```