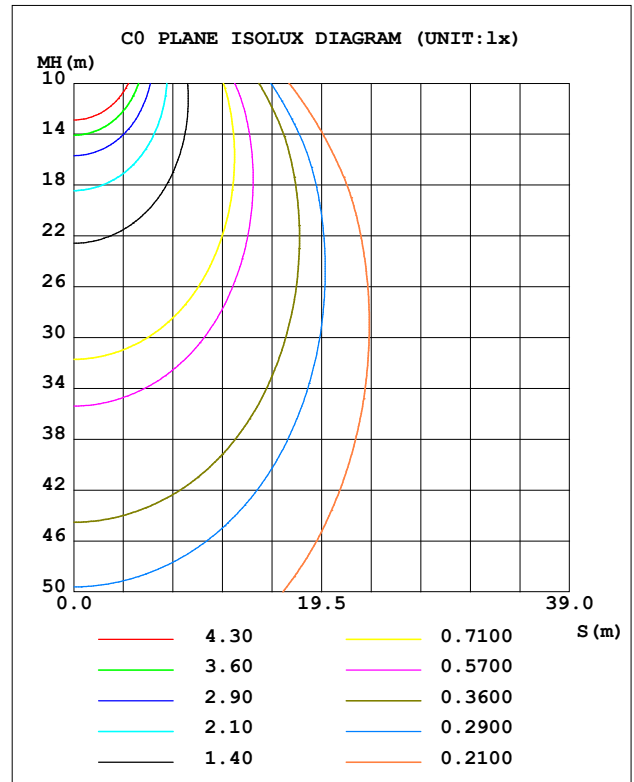
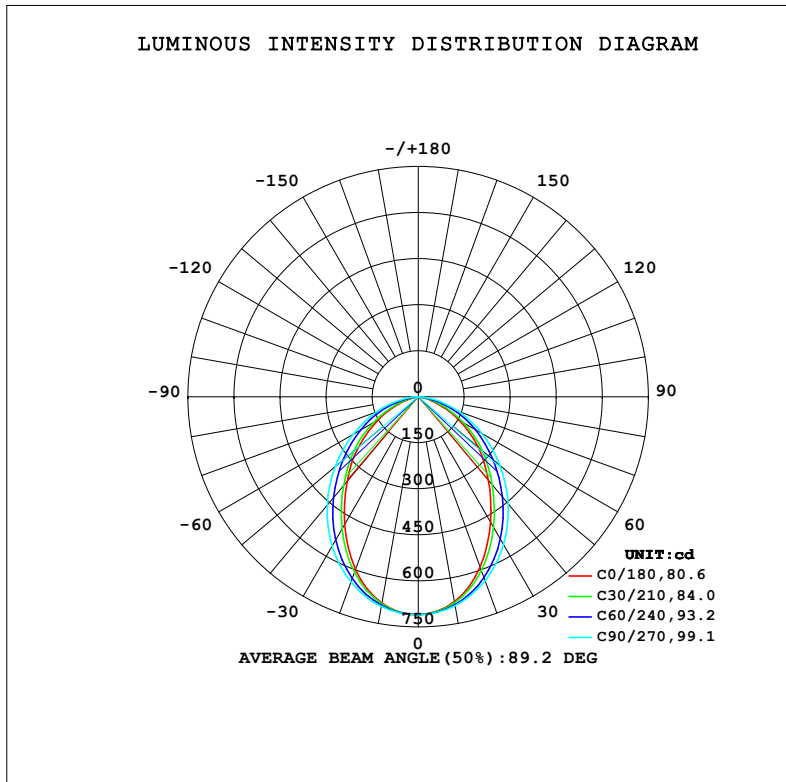


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	93M20FL2040/BL	Imax (cd)	710.1	S/MH (C0/180)	1.05
NOMINAL POWER (W)	20	LOR (%)	130.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1507.8	η UP, DN (C0-180)	0.0, 64.5
NOMINAL FLUX (lm)	1160	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 65.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	48	η down (%)	130.0	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 08 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	677.9	684.9	690.8	684.8	682.9	687.5	693.5	687.7	0- 10	66.64	66.64	4.42, 5.75
20	590.1	615.1	637.5	614.7	598.6	619.3	641.8	620.5	10- 20	184.6	251.3	16.7, 21.7
30	471.3	512.9	555.8	511.6	479.6	517.2	562.0	519.7	20- 30	261.6	512.9	34, 44.2
40	356.2	399.4	455.5	397.1	361.2	402.7	461.8	406.4	30- 40	288.0	800.9	53.1, 69
50	256.3	292.9	347.1	289.3	253.4	294.2	353.1	299.2	40- 50	270.8	1072	71.1, 92.4
60	153.8	192.9	239.8	191.2	151.1	194.3	245.3	196.7	50- 60	220.0	1292	85.7, 111
70	67.37	95.25	139.8	93.93	65.21	95.97	144.1	98.25	60- 70	145.3	1437	95.3, 124
80	4.866	17.67	50.97	16.39	4.289	18.00	54.50	19.92	70- 80	62.96	1500	99.5, 129
90	0.4035	0.5579	0.7853	0.5836	0.3412	0.4654	0.6681	0.4581	80- 90	7.857	1508	100, 130
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): 940.68 lm

%lum = 62.4%

%lamp = 81.1%

Conical surface Flux(130deg): 1374.6 lm

%lum = 91.2%

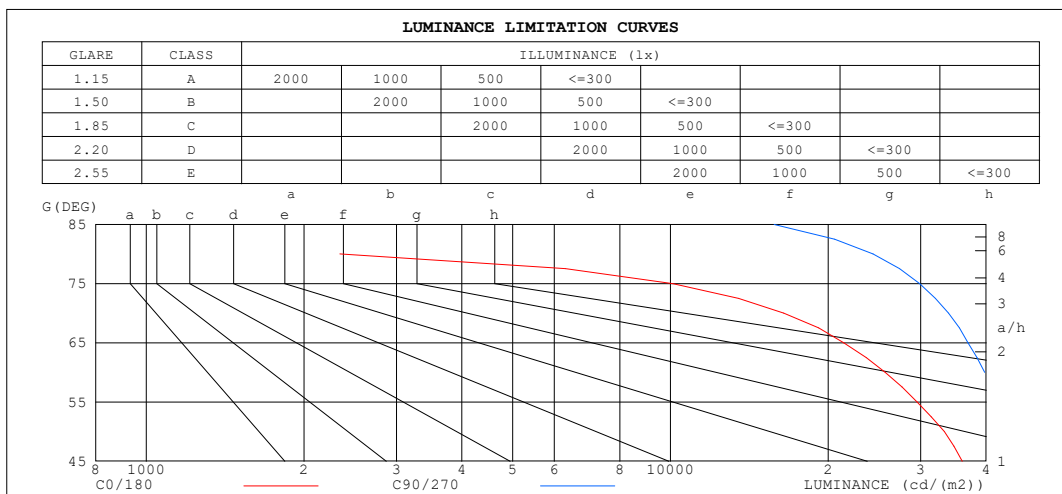
%lamp = 118.5%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 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	680	15752
80	2340	24335
75	10115	29870
70	16446	33893
65	21404	36970
60	25676	39762
55	29551	42328
50	33289	44768
45	36005	47095

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 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	.350	.199	.063	.341	.194	.062	.324	.186	.059	.308	.178	.057	.294	.170	.055	
2.0	.338	.185	.057	.330	.182	.056	.315	.175	.054	.301	.169	.053	.289	.163	.051	
3.0	.318	.169	.051	.311	.167	.050	.298	.161	.049	.286	.157	.048	.275	.152	.047	
4.0	.297	.154	.045	.291	.152	.045	.279	.148	.044	.269	.144	.044	.259	.141	.043	
5.0	.277	.141	.041	.272	.140	.041	.262	.136	.040	.252	.133	.040	.243	.130	.039	
6.0	.259	.130	.037	.254	.129	.037	.245	.126	.037	.237	.123	.036	.229	.120	.036	
7.0	.243	.120	.034	.239	.119	.034	.230	.116	.034	.223	.114	.033	.216	.112	.033	
8.0	.228	.111	.031	.224	.110	.031	.217	.108	.031	.210	.106	.031	.204	.105	.030	
9.0	.215	.104	.029	.211	.103	.029	.205	.101	.029	.199	.100	.028	.193	.098	.028	
10.0	.203	.097	.027	.200	.096	.027	.194	.095	.027	.188	.093	.027	.183	.092	.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	.248	.248	.248	.212	.212	.212	.144	.144	.144	.083	.083	.083	.027	.027	.027	
1.0	.231	.203	.179	.197	.175	.154	.135	.120	.106	.078	.070	.062	.025	.022	.020	
2.0	.218	.172	.132	.187	.148	.114	.128	.102	.080	.074	.059	.047	.024	.019	.015	
3.0	.207	.148	.101	.178	.128	.088	.122	.089	.062	.071	.052	.036	.023	.017	.012	
4.0	.197	.131	.080	.169	.113	.069	.116	.079	.049	.067	.046	.029	.022	.015	.009	
5.0	.188	.117	.065	.161	.101	.056	.111	.071	.040	.064	.041	.024	.021	.014	.008	
6.0	.179	.106	.054	.154	.092	.047	.106	.064	.033	.061	.038	.020	.020	.012	.006	
7.0	.170	.097	.045	.146	.084	.039	.101	.059	.028	.059	.035	.017	.019	.011	.006	
8.0	.162	.089	.039	.140	.077	.034	.097	.054	.024	.056	.032	.014	.018	.010	.005	
9.0	.155	.083	.034	.133	.072	.030	.092	.050	.021	.054	.030	.013	.017	.010	.004	
10.0	.148	.077	.030	.127	.067	.026	.088	.047	.019	.051	.028	.011	.017	.009	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FL2040/BL					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: 605 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	23.5	24.9	23.7	25.1	25.3	25.3	26.7	25.6	26.9	27.1
	3H	24.1	25.4	24.4	25.7	25.9	26.7	28.0	27.0	28.2	28.4
	4H	24.2	25.4	24.5	25.7	25.9	27.2	28.4	27.5	28.6	28.9
	6H	24.2	25.3	24.5	25.6	25.8	27.5	28.6	27.8	28.9	29.2
	8H	24.1	25.2	24.4	25.5	25.8	27.5	28.7	27.9	28.9	29.2
	12H	24.0	25.1	24.4	25.4	25.7	27.5	28.6	27.9	28.9	29.2
4H	2H	24.1	25.3	24.4	25.6	25.8	25.6	26.8	25.9	27.1	27.3
	3H	24.9	25.9	25.2	26.2	26.5	27.1	28.2	27.5	28.5	28.8
	4H	25.0	26.0	25.4	26.3	26.6	27.7	28.7	28.1	29.0	29.3
	6H	25.0	25.8	25.3	26.2	26.5	28.1	29.0	28.5	29.3	29.7
	8H	24.9	25.7	25.3	26.1	26.4	28.2	29.0	28.6	29.4	29.8
	12H	24.9	25.6	25.3	26.0	26.4	28.3	29.0	28.7	29.4	29.8
8H	4H	25.2	26.0	25.6	26.3	26.7	27.7	28.5	28.1	28.9	29.3
	6H	25.1	25.8	25.6	26.2	26.6	28.2	28.8	28.6	29.2	29.7
	8H	25.1	25.7	25.6	26.1	26.5	28.3	28.9	28.8	29.3	29.8
	12H	25.1	25.6	25.5	26.0	26.5	28.4	28.8	28.8	29.3	29.8
12H	4H	25.2	25.9	25.6	26.3	26.7	27.7	28.4	28.1	28.8	29.2
	6H	25.1	25.7	25.6	26.1	26.6	28.1	28.7	28.6	29.1	29.6
	8H	25.1	25.6	25.6	26.0	26.5	28.3	28.8	28.7	29.2	29.7
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.4 / - 0.5					+ 0.2 / - 0.3				
1.5H		+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H		+ 0.6 / - 0.8					+ 0.5 / - 0.4				

CIE Pub.117, 1160 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.5)
Area: 0.01204 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

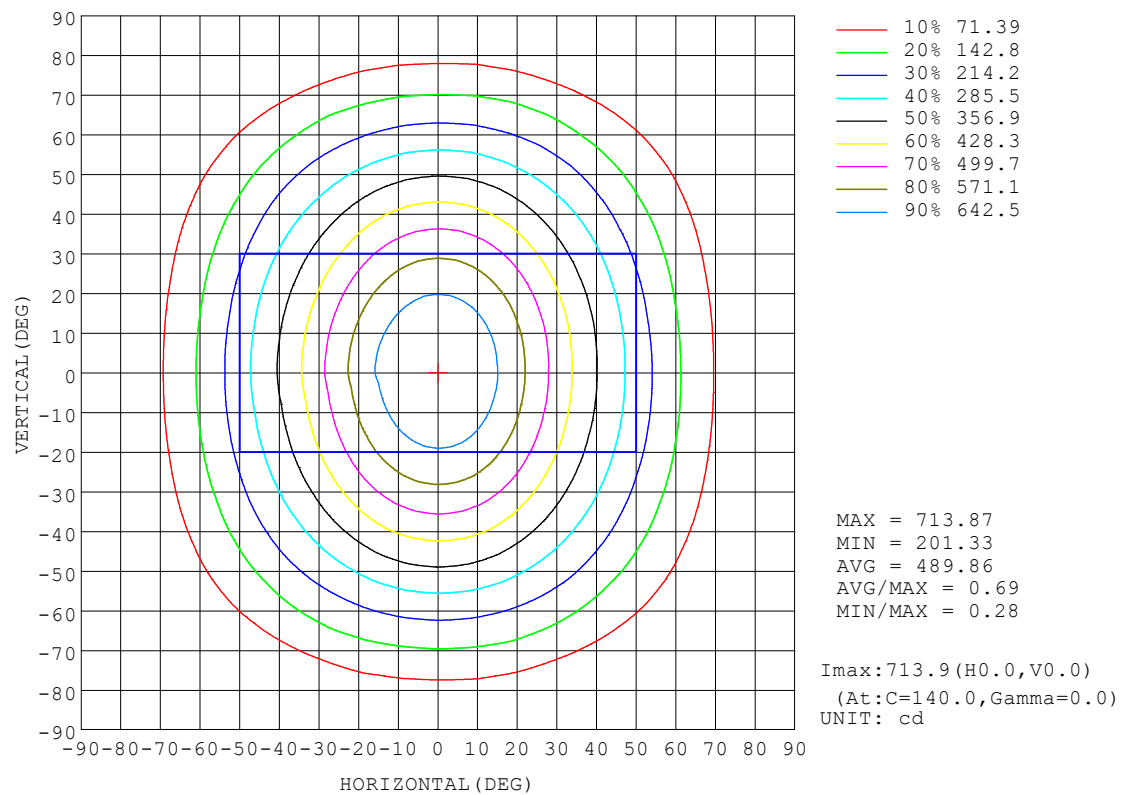
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	81	67	59	80	67	58	79	66	58	51
0.80	94	80	72	93	80	71	91	79	71	63
1.00	105	92	83	103	91	83	101	92	82	74
1.25	114	101	93	112	101	93	109	99	92	83
1.50	120	108	100	118	107	100	114	105	98	89
2.00	128	118	111	125	117	110	121	114	108	98
2.50	132	123	117	130	122	115	125	118	113	103
3.00	136	128	122	133	126	121	128	123	118	108
4.00	141	134	129	138	132	127	132	128	124	113
5.00	143	138	134	140	136	131	135	131	127	116
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: 08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

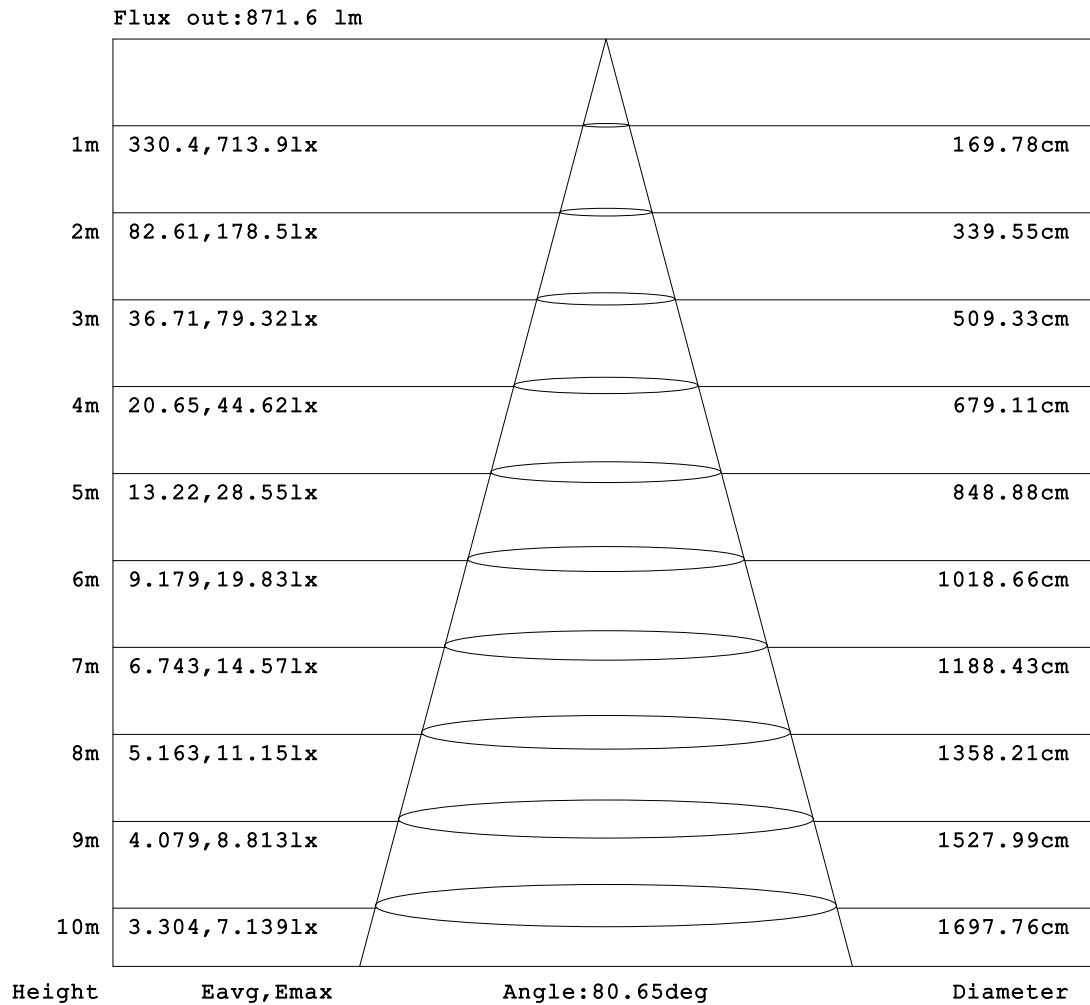


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:08 November 2022

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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:



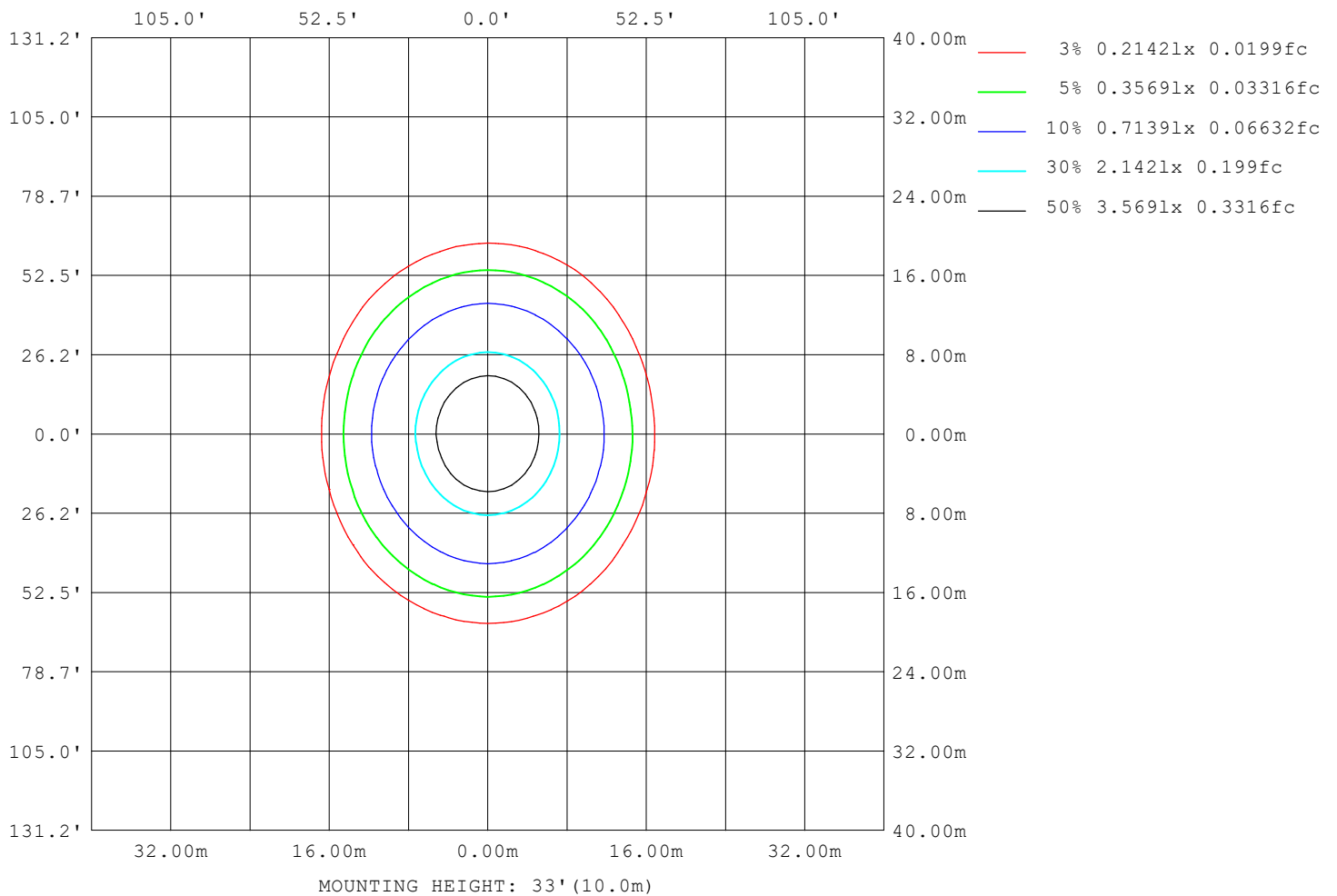
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 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: 08 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: 93M20FL2040/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 605 x 20 x 40	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: paralelepiped	Shielding Angle:

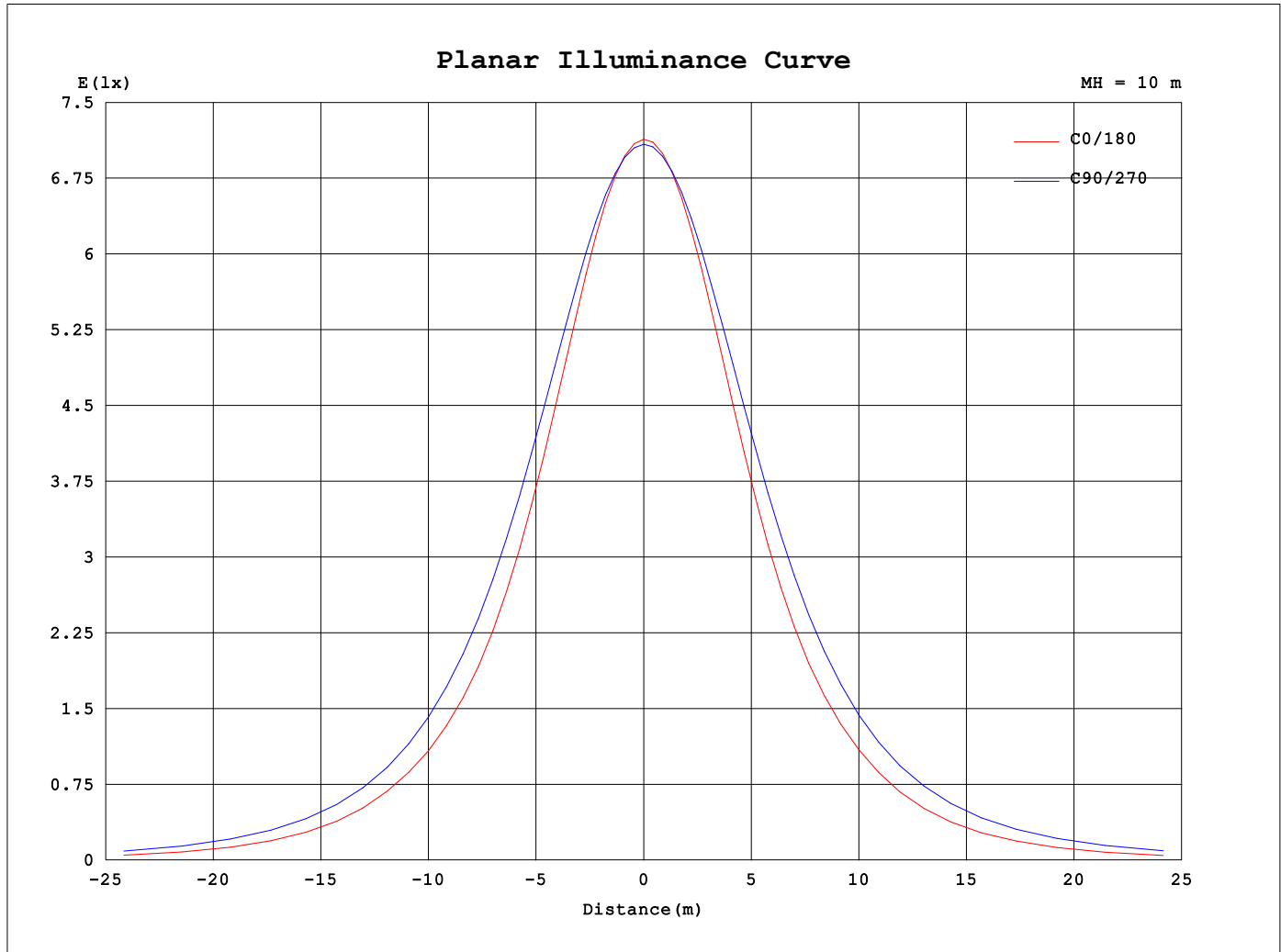
AvgL	cd/m2
L_0~180 (65) av	21065
L_0~180 (75) av	9825
L_0~180 (85) av	641
L_90~270 (65) av	37555
L_90~270 (75) av	30542
L_90~270 (85) av	16930
L_45 (65) av	28096
L_45 (75) av	16891
L_45 (85) av	746

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:08 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: 08 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:

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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:

```