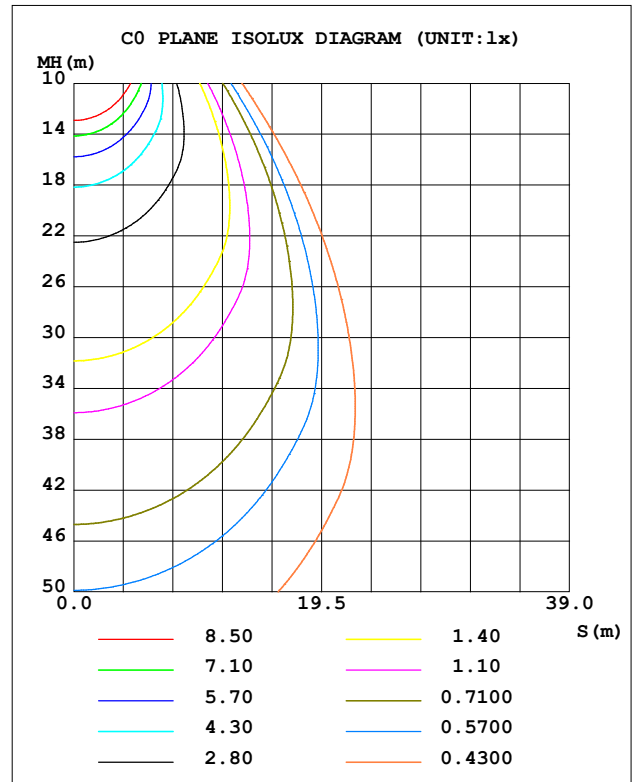
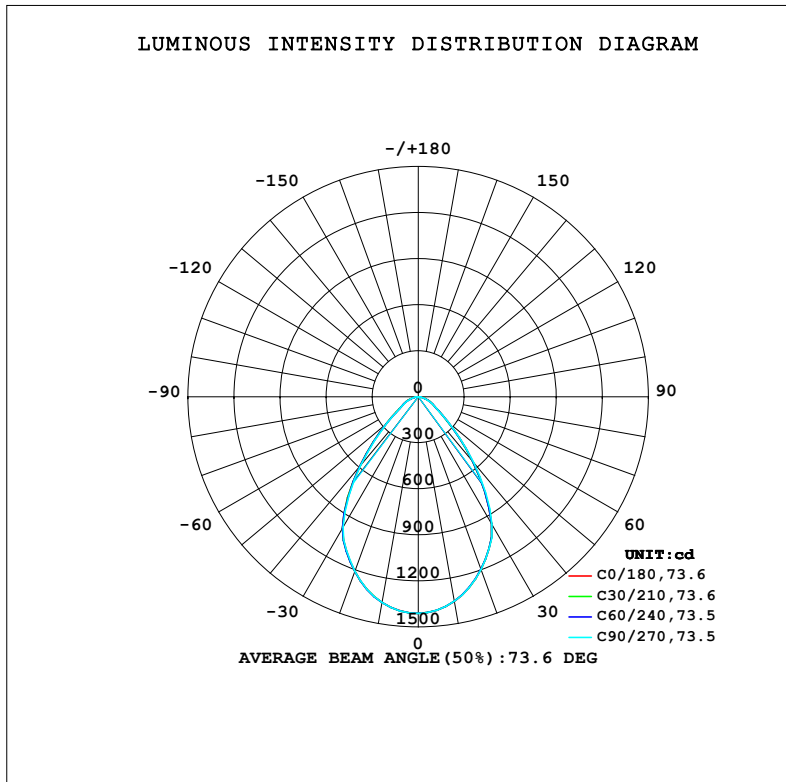


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	92EL62282065/WH	I _{max} (cd)	1411	S/MH (C0/180)	1.08
NOMINAL POWER (W)	20	LOR (%)	116.9	S/MH (C90/270)	1.07
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2104.2	η UP, DN (C0-180)	0.0, 57.9
NOMINAL FLUX (lm)	1800	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 59.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230	η down (%)	116.9	CIBSE SHR MAX	1.10



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 07 December 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	1354	1353	1354	1357	1361	1362	1361	1358	0- 10	132.1	132.1	6.28,7.34
20	1197	1195	1197	1204	1210	1212	1209	1203	10- 20	362.8	494.9	23.5,27.5
30	956.5	953.7	961.9	976.5	989.3	990.9	982.4	968.5	20- 30	504.5	999.4	47.5,55.5
40	555.4	553.7	565.4	582.9	598.2	596.9	584.2	568.7	30- 40	483.4	1483	70.5,82.4
50	248.8	247.0	252.0	261.3	270.7	270.2	263.9	256.1	40- 50	309.6	1792	85.2,99.6
60	121.6	121.1	120.9	124.0	126.5	126.2	123.5	122.4	50- 60	159.4	1952	92.8,108
70	69.56	66.28	63.46	68.71	72.25	70.91	67.56	69.39	60- 70	95.00	2047	97.3,114
80	26.26	22.25	19.75	24.08	26.67	25.57	23.00	25.06	70- 80	47.62	2094	99.5,116
90	0.4846	0.4733	0.4495	0.4663	0.4467	0.4325	0.4386	0.4417	80- 90	9.810	2104	100,117
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): 1661.6 lm

%lum = 79.0%

%lamp = 92.3%

Conical surface Flux(130deg): 2005.2 lm

%lum = 95.3%

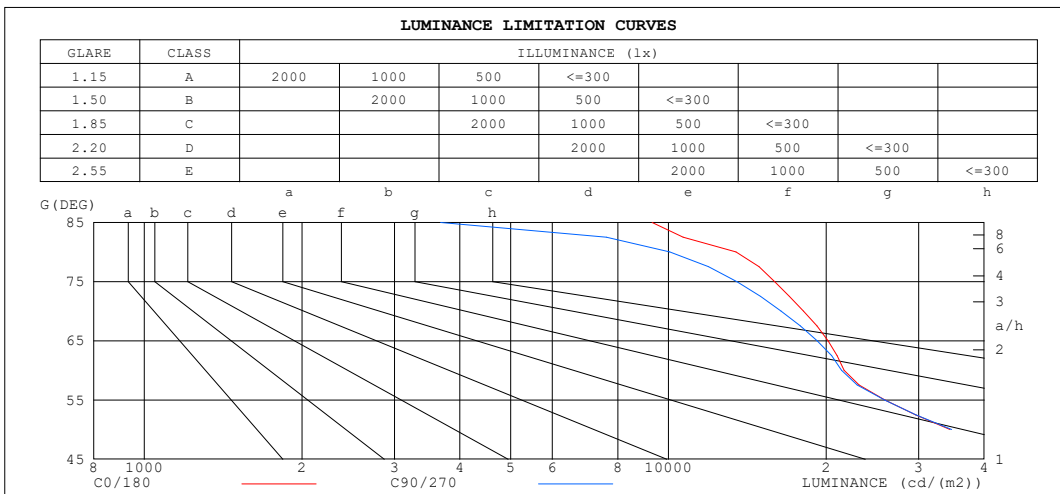
%lamp = 111.4%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 December 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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	9309	3672
80	13452	10056
75	15939	13507
70	18089	16402
65	20155	19223
60	21624	21372
55	25884	25855
50	34435	34659
45	47880	48385

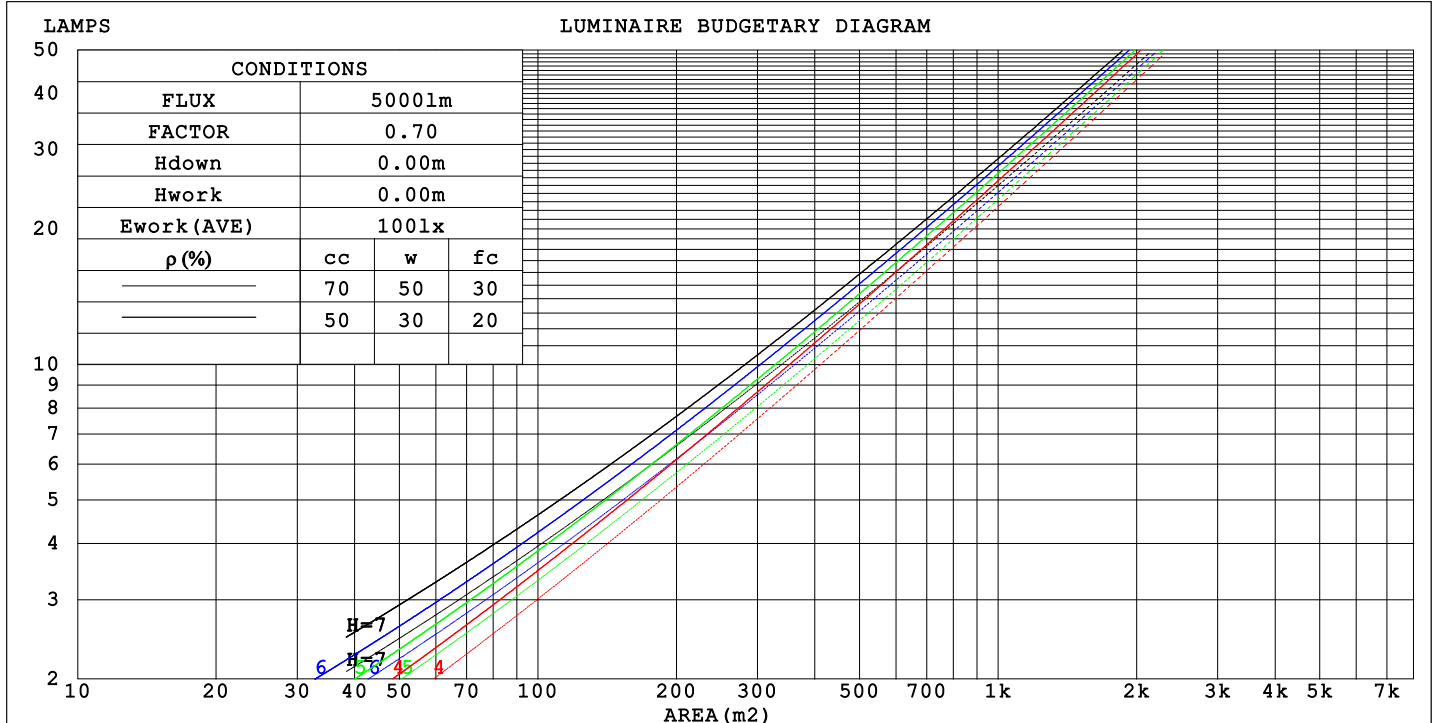
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 07 December 2022

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	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															



WEC AND CCEC

NAME: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	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	.269	.153	.048	.261	.149	.047	.246	.141	.045	.232	.134	.043	.219	.127	.041	
2.0	.258	.142	.043	.251	.139	.043	.239	.133	.041	.227	.127	.040	.216	.122	.038	
3.0	.245	.130	.039	.239	.128	.038	.227	.123	.037	.217	.119	.036	.207	.115	.036	
4.0	.231	.120	.035	.225	.118	.035	.215	.114	.034	.206	.111	.033	.198	.107	.033	
5.0	.217	.111	.032	.213	.109	.032	.204	.106	.031	.196	.103	.031	.188	.101	.030	
6.0	.205	.103	.029	.201	.102	.029	.193	.099	.029	.186	.097	.028	.179	.094	.028	
7.0	.194	.096	.027	.190	.095	.027	.183	.093	.027	.177	.091	.026	.171	.089	.026	
8.0	.184	.090	.025	.180	.089	.025	.174	.087	.025	.168	.085	.025	.163	.084	.024	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.080	.023	.156	.079	.023	
10.0	.166	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	

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	.223	.223	.223	.190	.190	.190	.130	.130	.130	.075	.075	.075	.024	.024	.024	
1.0	.204	.183	.164	.175	.157	.142	.120	.108	.098	.069	.063	.057	.022	.020	.018	
2.0	.190	.155	.125	.163	.133	.108	.112	.092	.075	.064	.054	.044	.021	.017	.014	
3.0	.179	.133	.097	.153	.115	.084	.105	.080	.059	.061	.047	.035	.020	.015	.011	
4.0	.168	.117	.077	.144	.101	.067	.099	.070	.047	.057	.041	.028	.018	.013	.009	
5.0	.159	.104	.063	.137	.090	.055	.094	.063	.039	.055	.037	.023	.018	.012	.008	
6.0	.151	.094	.052	.130	.081	.045	.090	.057	.032	.052	.033	.019	.017	.011	.006	
7.0	.144	.085	.044	.124	.074	.038	.085	.052	.027	.050	.030	.016	.016	.010	.005	
8.0	.137	.078	.038	.118	.068	.033	.082	.048	.023	.047	.028	.014	.015	.009	.005	
9.0	.131	.072	.033	.113	.063	.029	.078	.044	.020	.045	.026	.012	.015	.009	.004	
10.0	.125	.067	.029	.108	.058	.025	.075	.041	.018	.044	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 December 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: 92EL62282065/WH					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: F 160 x 90			SERIAL No.: 0			
MFR.: Elmark Industries JSC					SUR.: Round			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	21.0	22.2	21.3	22.4	22.6	21.0	22.2	21.2	22.4	22.6	
	3H	21.6	22.7	21.9	22.9	23.2	21.5	22.6	21.8	22.8	23.0
	4H	21.9	22.9	22.1	23.1	23.4	21.7	22.7	22.0	23.0	23.2
	6H	22.0	23.0	22.3	23.3	23.5	21.7	22.7	22.1	23.0	23.2
	8H	22.0	23.0	22.4	23.3	23.5	21.7	22.7	22.1	22.9	23.2
12H	22.0	23.0	22.4	23.2	23.5	21.7	22.6	22.0	22.9	23.2	
4H	2H	21.2	22.2	21.5	22.4	22.7	21.1	22.2	21.4	22.4	22.7
	3H	21.9	22.9	22.3	23.1	23.4	21.8	22.7	22.2	23.0	23.3
	4H	22.3	23.1	22.7	23.4	23.7	22.1	22.9	22.4	23.2	23.5
	6H	22.5	23.3	22.9	23.6	24.0	22.2	23.0	22.6	23.3	23.6
	8H	22.6	23.3	23.0	23.7	24.0	22.2	22.9	22.6	23.3	23.6
12H	22.6	23.3	23.1	23.6	24.0	22.2	22.8	22.6	23.2	23.6	
8H	4H	22.4	23.0	22.8	23.4	23.8	22.1	22.8	22.5	23.2	23.6
	6H	22.7	23.2	23.1	23.6	24.1	22.4	22.9	22.8	23.3	23.7
	8H	22.8	23.3	23.3	23.7	24.2	22.4	22.9	22.8	23.3	23.8
	12H	22.9	23.3	23.3	23.7	24.2	22.4	22.8	22.8	23.2	23.7
12H	4H	22.3	22.9	22.7	23.3	23.7	22.1	22.7	22.5	23.1	23.5
	6H	22.7	23.2	23.1	23.6	24.0	22.4	22.9	22.8	23.3	23.7
	8H	22.8	23.2	23.3	23.7	24.1	22.4	22.8	22.9	23.3	23.7
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.8 / - 1.1					+ 0.9 / - 1.2					
1.5H	+ 1.2 / - 1.0					+ 1.3 / - 1.2					
2.0H	+ 1.8 / - 0.9					+ 2.0 / - 1.0					

CIE Pub.117, 1800 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.0)
Area: 0.011304 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 December 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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

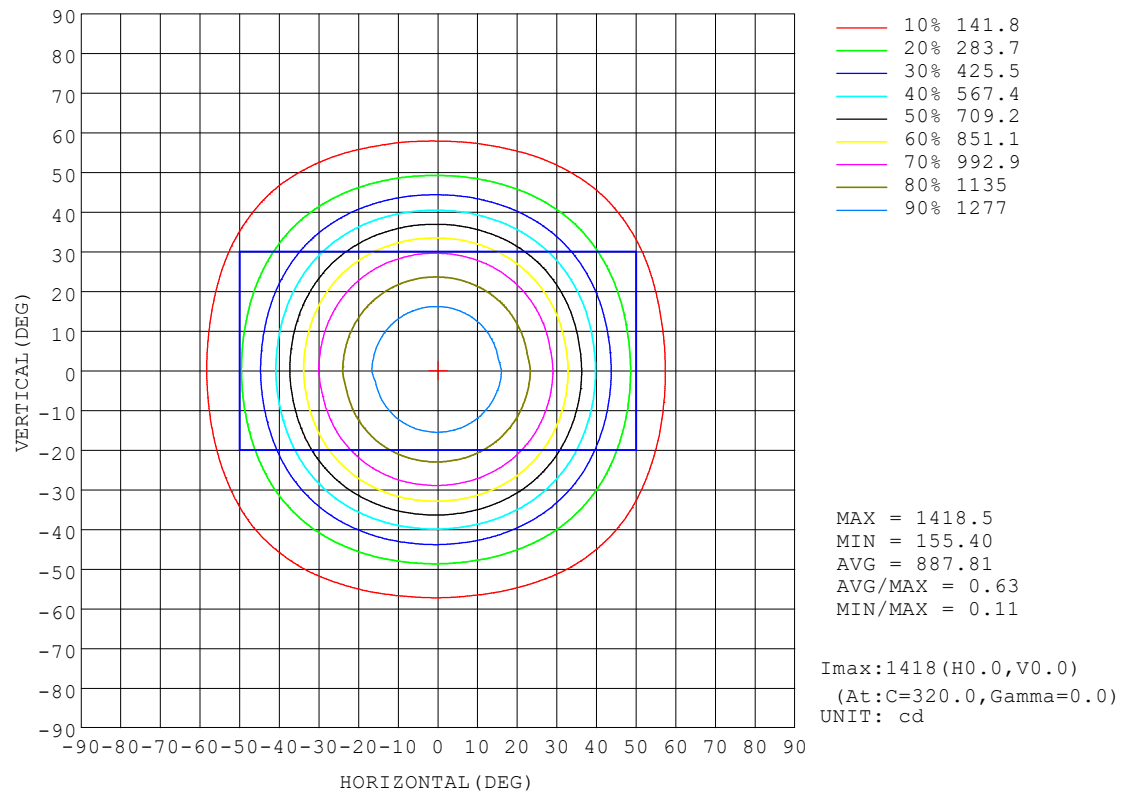
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	75	69	85	75	69	84	74	69	63
0.80	96	86	80	95	86	80	93	85	79	73
1.00	104	95	88	103	94	88	101	95	87	81
1.25	111	102	96	109	101	95	106	100	95	88
1.50	115	107	101	113	106	101	110	104	99	93
2.00	120	113	108	119	112	107	115	110	106	98
2.50	123	117	112	121	116	111	117	113	109	101
3.00	126	121	116	124	119	115	120	116	112	104
4.00	129	125	121	127	123	119	122	119	116	107
5.00	131	127	124	129	125	122	124	121	119	109
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: 07 December 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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

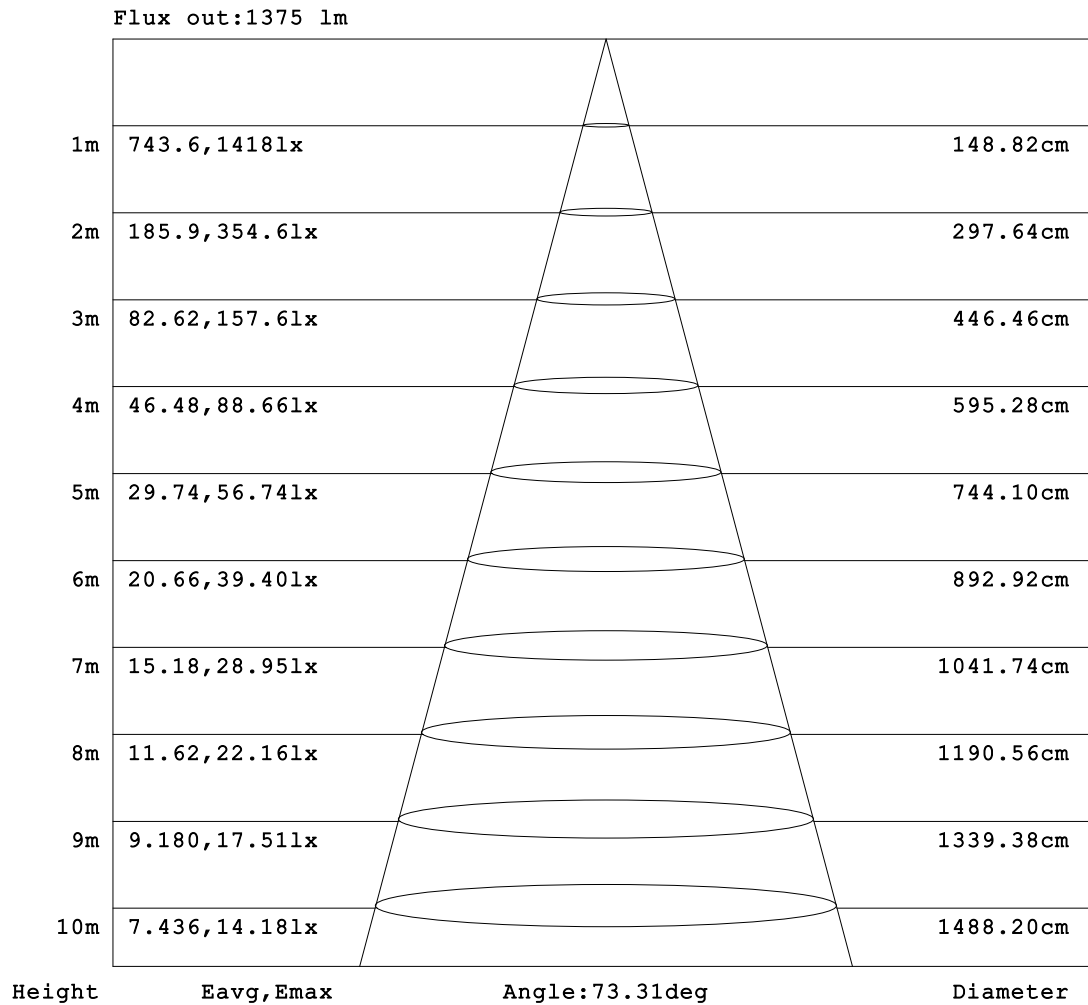


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 December 2022

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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



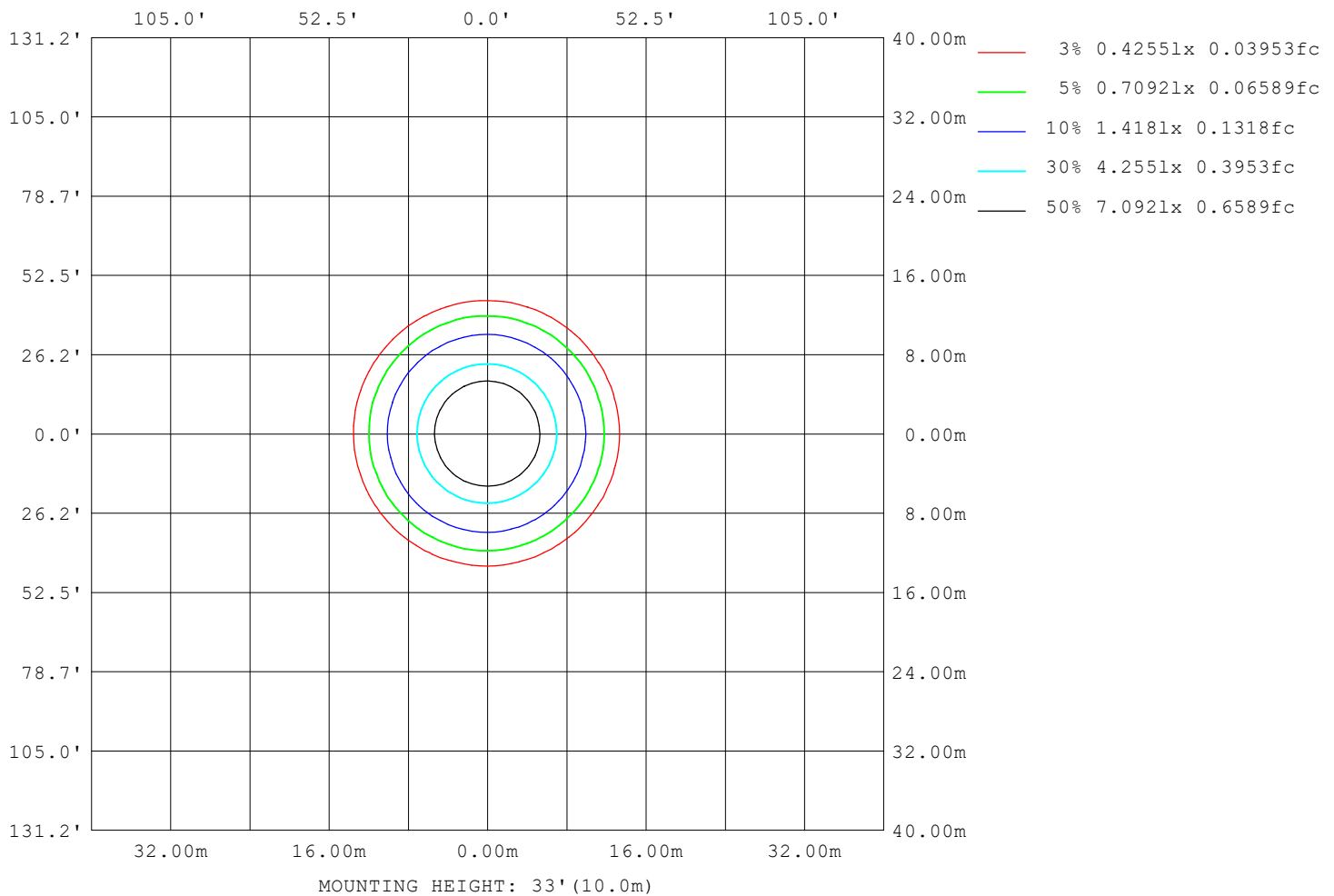
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 07 December 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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 07 December 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: 92EL62282065/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

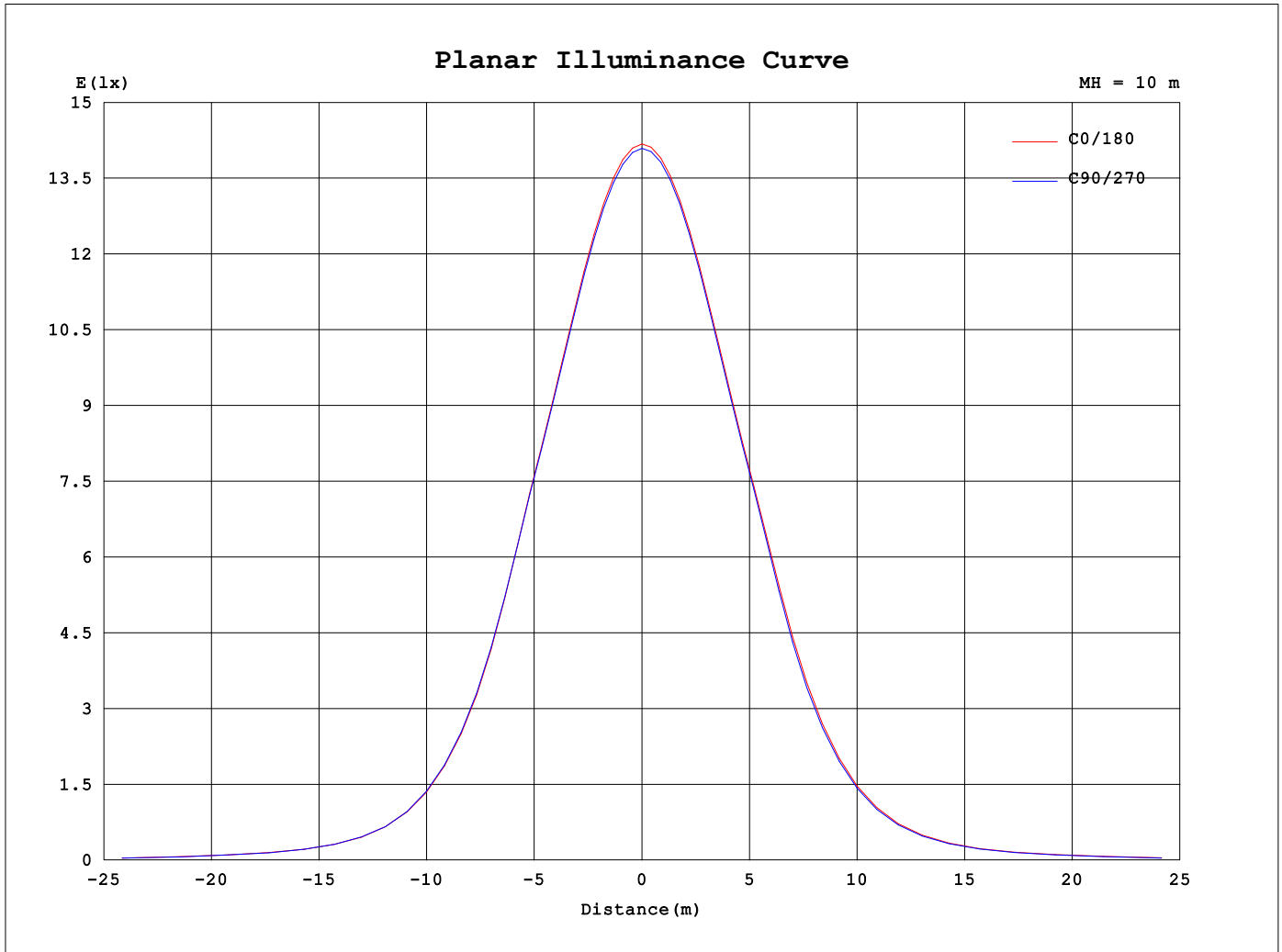
AvgL	cd/m2
L_0~180 (65) av	20459
L_0~180 (75) av	16200
L_0~180 (85) av	9650
L_90~270 (65) av	19625
L_90~270 (75) av	14146
L_90~270 (85) av	5115
L_45 (65) av	20200
L_45 (75) av	15219
L_45 (85) av	7706

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:07 December 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: 07 December 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:

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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:

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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:

```