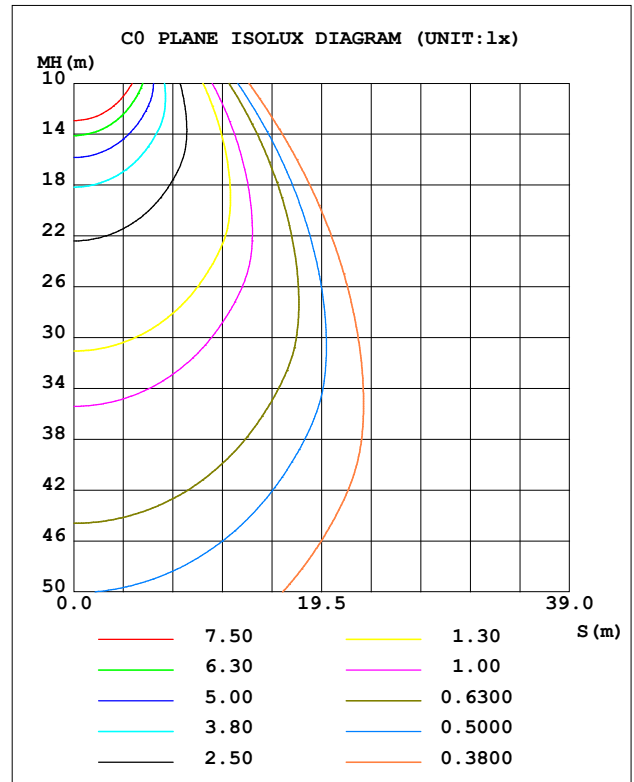
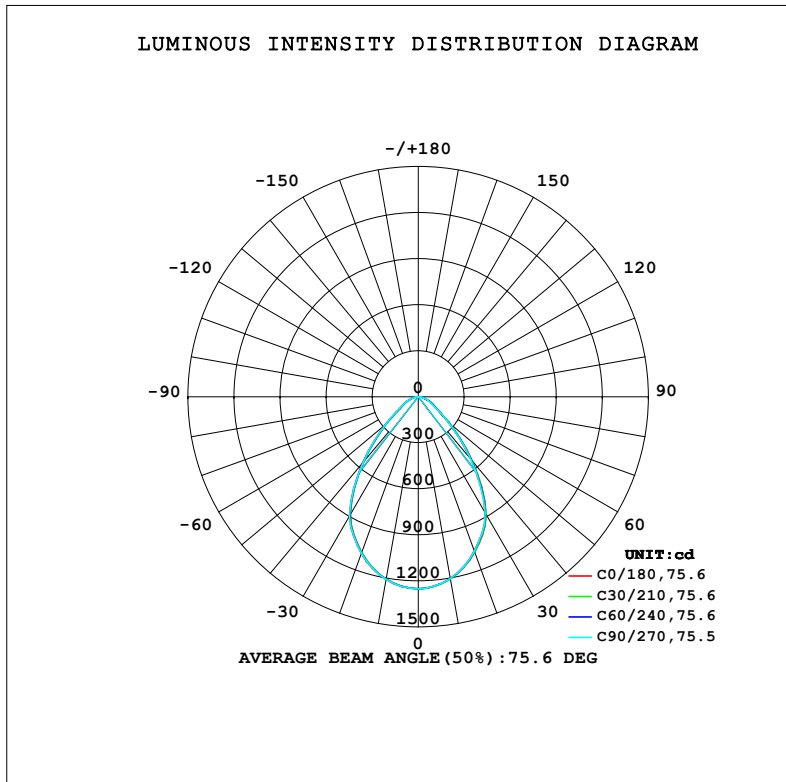


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 92EL62282030/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	92EL62282030/WH	Imax (cd)	1251	S/MH (C0/180)	1.09
NOMINAL POWER (W)	20	LOR (%)	108.6	S/MH (C90/270)	1.10
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1955.2	η UP, DN (C0-180)	0.0, 53.5
NOMINAL FLUX (lm)	1800	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 55.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230	η down (%)	108.6	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 06 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	1205	1203	1203	1204	1207	1209	1209	1208	0- 10	117.3	117.3	6,6,51
20	1077	1072	1070	1072	1079	1084	1084	1082	10- 20	323.5	440.8	22.5,24.5
30	885.9	877.0	871.4	874.0	884.4	893.3	896.4	894.2	20- 30	454.9	895.6	45.8,49.8
40	548.2	538.3	533.9	538.8	551.8	561.7	563.9	559.3	30- 40	448.8	1344	68.8,74.7
50	261.5	252.7	248.7	251.8	261.4	270.1	272.7	270.2	40- 50	303.7	1648	84.3,91.6
60	121.1	117.4	114.2	115.6	119.6	123.7	125.1	124.8	50- 60	159.3	1807	92.4,100
70	68.65	63.90	59.89	64.05	68.11	69.24	67.46	69.62	60- 70	92.24	1900	97.2,106
80	26.17	21.62	18.64	22.21	25.01	24.87	22.74	25.18	70- 80	46.09	1946	99.5,108
90	0.4589	0.4515	0.4410	0.4578	0.4127	0.4025	0.3920	0.4019	80- 90	9.505	1955	100,109
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): 1517.5 lm

%lum = 77.6%

%lamp = 84.3%

Conical surface Flux(130deg): 1859.2 lm

%lum = 95.1%

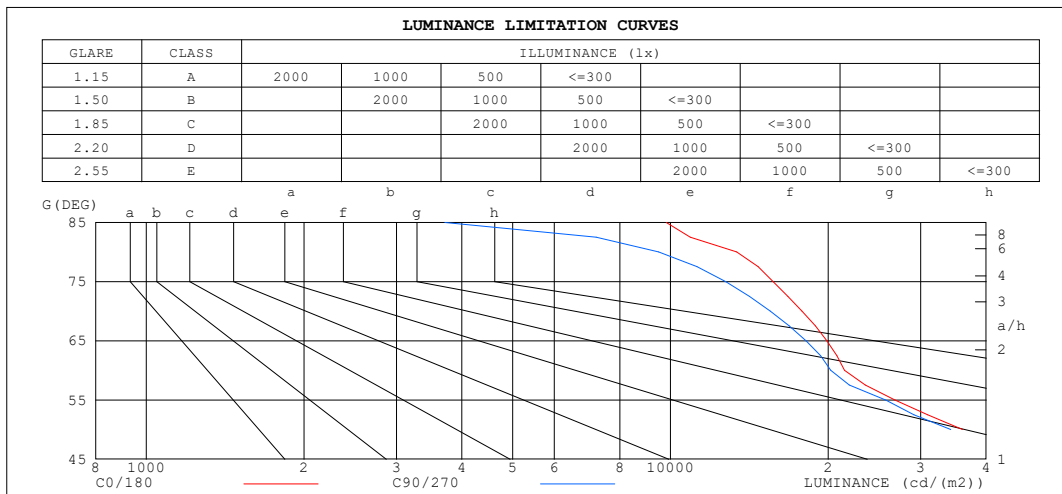
%lamp = 103.3%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:06 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: 92EL62282030/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	9816	3709
80	13367	9494
75	15703	12743
70	17802	15490
65	19874	18142
60	21484	20202
55	26796	25730
50	36077	34226
45	48886	47033

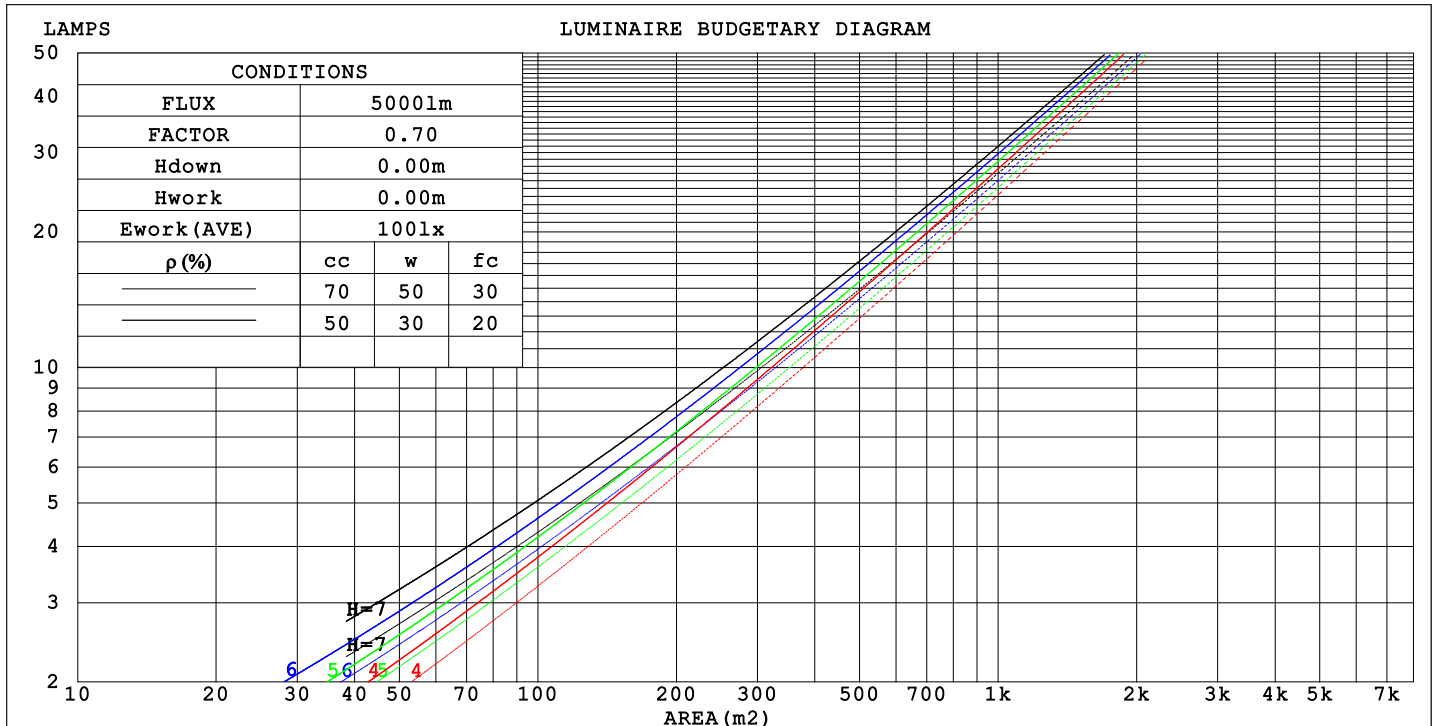
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 06 December 2022

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: 92EL62282030/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															



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:06 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:

WEC AND CCEC

NAME: 92EL62282030/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	.253	.144	.046	.246	.140	.045	.232	.133	.042	.219	.126	.040	.207	.120	.039	
2.0	.244	.133	.041	.237	.131	.040	.225	.125	.039	.214	.120	.038	.204	.115	.036	
3.0	.231	.123	.037	.225	.120	.036	.214	.116	.035	.205	.112	.034	.196	.108	.034	
4.0	.217	.113	.033	.212	.111	.033	.203	.108	.032	.195	.105	.032	.187	.101	.031	
5.0	.205	.104	.030	.200	.103	.030	.192	.100	.029	.185	.097	.029	.178	.095	.029	
6.0	.193	.097	.028	.189	.096	.028	.182	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.182	.090	.026	.179	.089	.025	.173	.087	.025	.167	.085	.025	.161	.084	.025	
8.0	.173	.084	.024	.170	.084	.024	.164	.082	.023	.159	.080	.023	.153	.079	.023	
9.0	.164	.079	.022	.161	.078	.022	.156	.077	.022	.151	.076	.022	.146	.074	.021	
10.0	.156	.075	.021	.153	.074	.021	.148	.073	.020	.144	.072	.020	.140	.070	.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	.207	.207	.207	.177	.177	.177	.121	.121	.121	.069	.069	.069	.022	.022	.022	
1.0	.190	.170	.153	.163	.146	.131	.111	.101	.091	.064	.058	.053	.021	.019	.017	
2.0	.177	.144	.115	.152	.124	.100	.104	.086	.070	.060	.050	.041	.019	.016	.013	
3.0	.167	.124	.090	.143	.107	.078	.098	.074	.054	.057	.043	.032	.018	.014	.011	
4.0	.157	.109	.071	.135	.094	.062	.093	.065	.044	.054	.038	.026	.017	.012	.008	
5.0	.149	.097	.058	.128	.084	.050	.088	.058	.036	.051	.034	.021	.016	.011	.007	
6.0	.141	.087	.048	.121	.075	.042	.084	.053	.030	.049	.031	.018	.016	.010	.006	
7.0	.134	.079	.041	.116	.069	.035	.080	.048	.025	.046	.028	.015	.015	.009	.005	
8.0	.128	.073	.035	.110	.063	.030	.076	.044	.022	.044	.026	.013	.014	.009	.004	
9.0	.122	.067	.030	.105	.059	.026	.073	.041	.019	.043	.024	.011	.014	.008	.004	
10.0	.117	.063	.027	.101	.054	.023	.070	.038	.017	.041	.023	.010	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:06 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: 92EL62282030/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	21.2	22.5	21.5	22.6	22.8	21.0	22.3	21.3	22.4	22.6	
	21.8	22.9	22.1	23.2	23.4	21.5	22.6	21.8	22.9	23.1	
	22.0	23.1	22.3	23.3	23.6	21.7	22.7	22.0	23.0	23.2	
	22.2	23.2	22.5	23.5	23.7	21.7	22.7	22.0	23.0	23.3	
	22.2	23.2	22.6	23.5	23.7	21.7	22.7	22.0	23.0	23.2	
12H	22.2	23.2	22.6	23.4	23.7	21.7	22.6	22.0	22.9	23.2	
4H	2H	21.4	22.4	21.6	22.7	22.9	21.2	22.3	21.5	22.5	22.7
	3H	22.1	23.0	22.4	23.3	23.6	21.8	22.8	22.2	23.0	23.3
	4H	22.5	23.3	22.8	23.6	23.9	22.1	22.9	22.4	23.2	23.5
	6H	22.7	23.5	23.1	23.8	24.2	22.2	23.0	22.6	23.3	23.6
	8H	22.8	23.5	23.2	23.8	24.2	22.2	22.9	22.6	23.3	23.6
12H	22.8	23.4	23.2	23.8	24.2	22.2	22.8	22.6	23.2	23.6	
8H	4H	22.5	23.2	22.9	23.6	23.9	22.1	22.8	22.5	23.2	23.6
	6H	22.8	23.4	23.3	23.8	24.2	22.4	22.9	22.8	23.3	23.7
	8H	23.0	23.5	23.4	23.9	24.3	22.4	22.9	22.8	23.3	23.7
	12H	23.0	23.5	23.5	23.9	24.4	22.4	22.8	22.8	23.2	23.7
12H	4H	22.5	23.1	22.9	23.5	23.9	22.1	22.8	22.5	23.1	23.5
	6H	22.8	23.3	23.3	23.8	24.2	22.4	22.9	22.8	23.3	23.7
	8H	23.0	23.4	23.4	23.8	24.3	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 / - 1.0					+ 0.9 / - 1.2					
1.5H	+ 1.0 / - 1.0					+ 1.1 / - 1.2					
2.0H	+ 1.9 / - 1.0					+ 2.0 / - 1.1					

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:06 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: 92EL62282030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

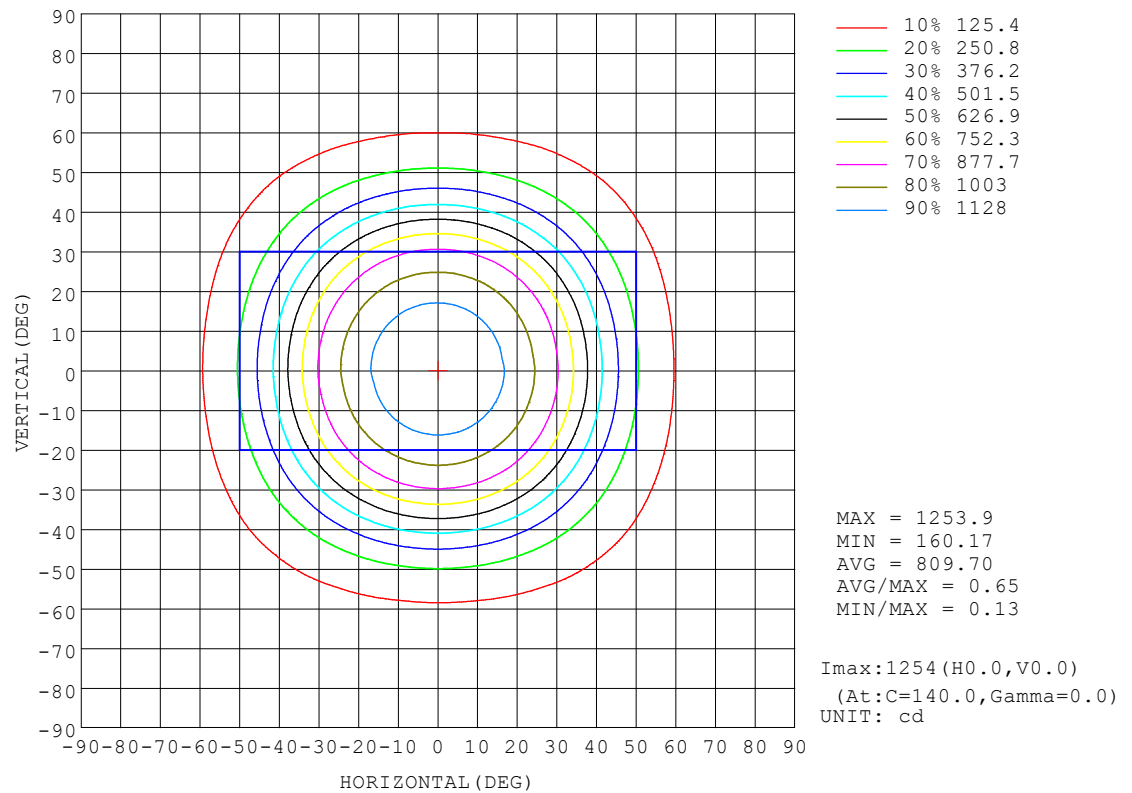
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	68	62	77	68	62	76	68	62	57
0.80	88	79	73	87	78	73	86	78	72	66
1.00	96	87	81	95	86	81	93	87	80	74
1.25	102	94	88	101	93	88	98	92	87	81
1.50	106	99	93	105	98	93	102	96	91	85
2.00	111	105	100	110	104	99	106	101	97	90
2.50	114	108	104	112	107	103	109	104	101	93
3.00	117	112	107	115	110	106	111	107	104	96
4.00	120	116	112	118	114	110	113	110	108	99
5.00	122	118	115	119	116	113	115	112	110	101
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: 06 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: 92EL62282030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

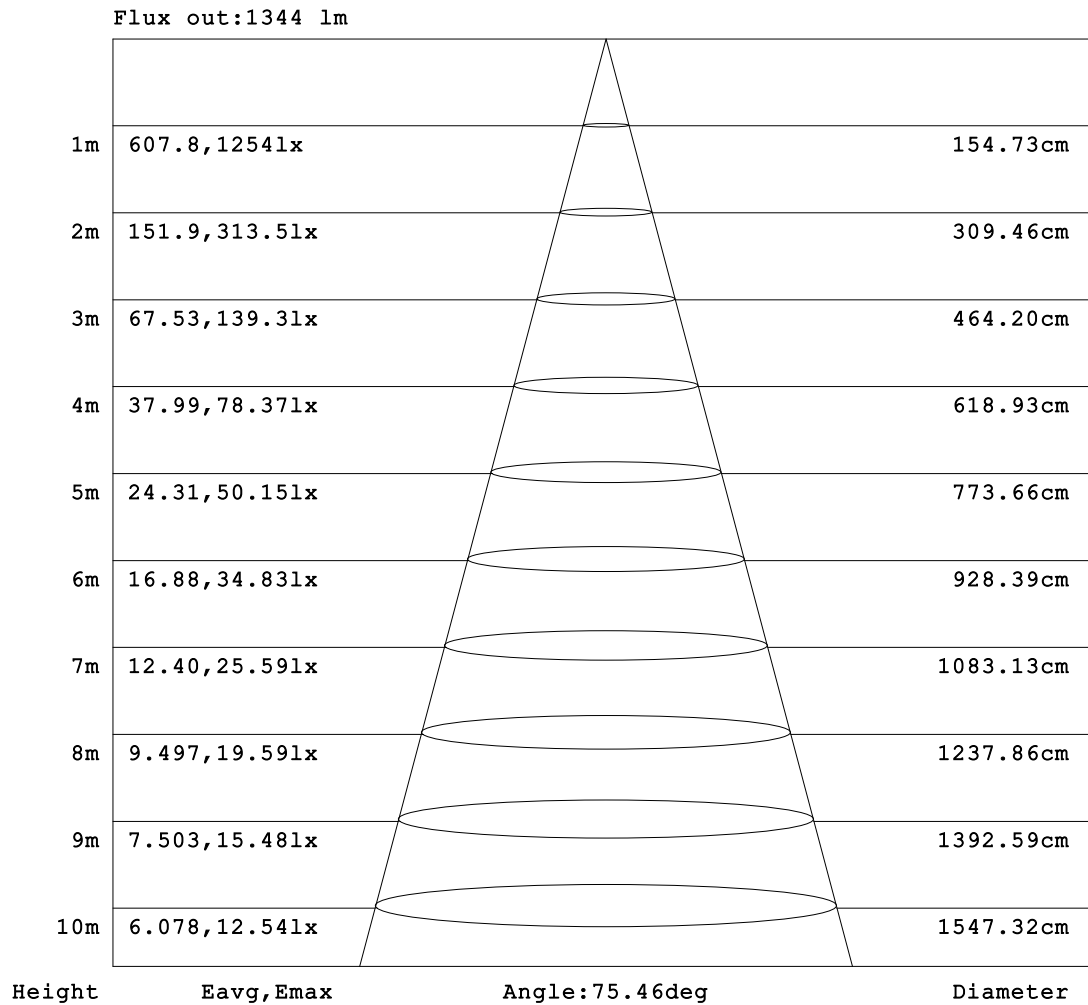


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:25.3°C
 Operators:
 Test Date:06 December 2022

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: 92EL62282030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:



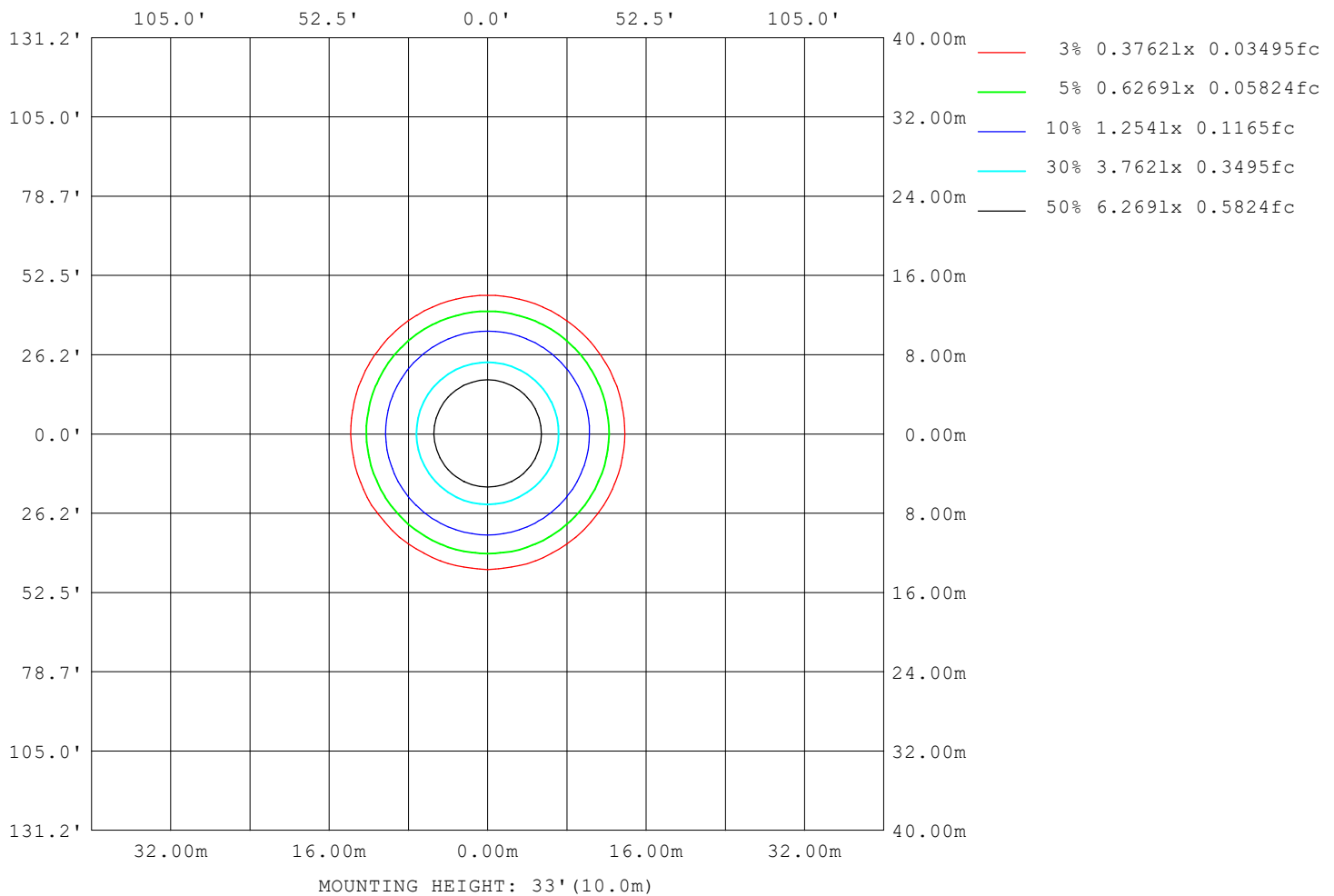
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 06 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: 92EL62282030/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: 06 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: 92EL62282030/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F 160 x 90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: Round	Shielding Angle:

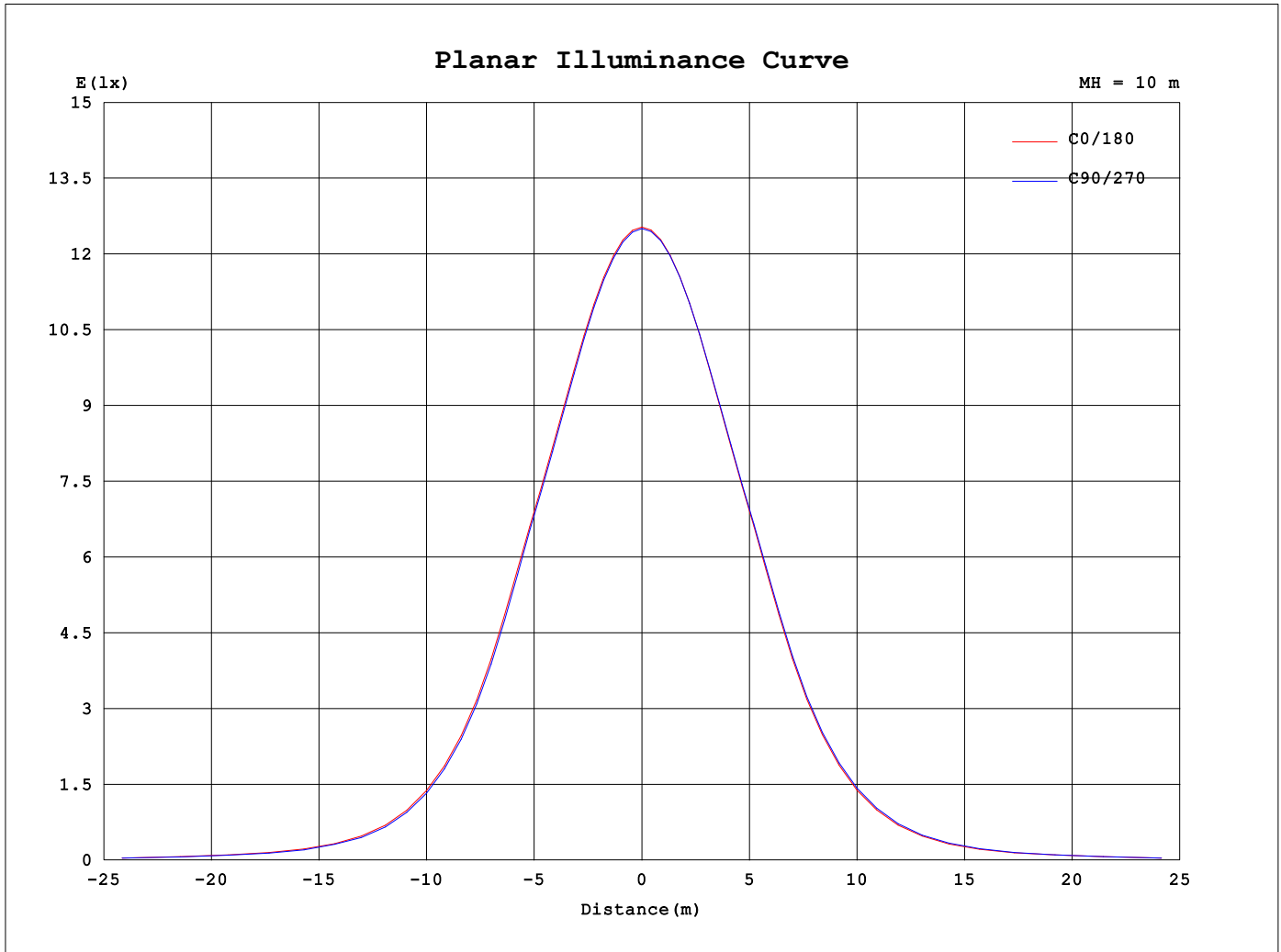
AvgL	cd/m2
L_0~180 (65) av	19740
L_0~180 (75) av	15624
L_0~180 (85) av	9543
L_90~270 (65) av	19117
L_90~270 (75) av	13716
L_90~270 (85) av	5074
L_45 (65) av	19596
L_45 (75) av	14736
L_45 (85) av	7475

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:06 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: 06 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:

```