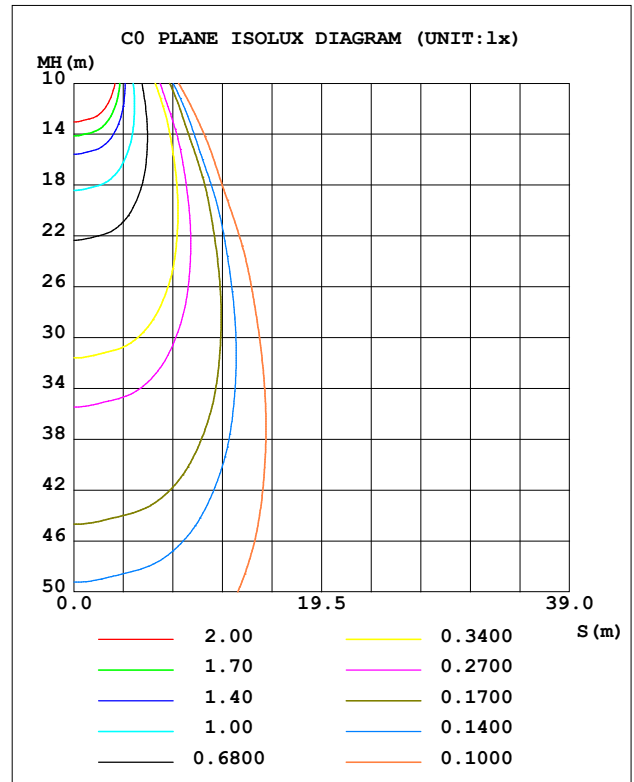
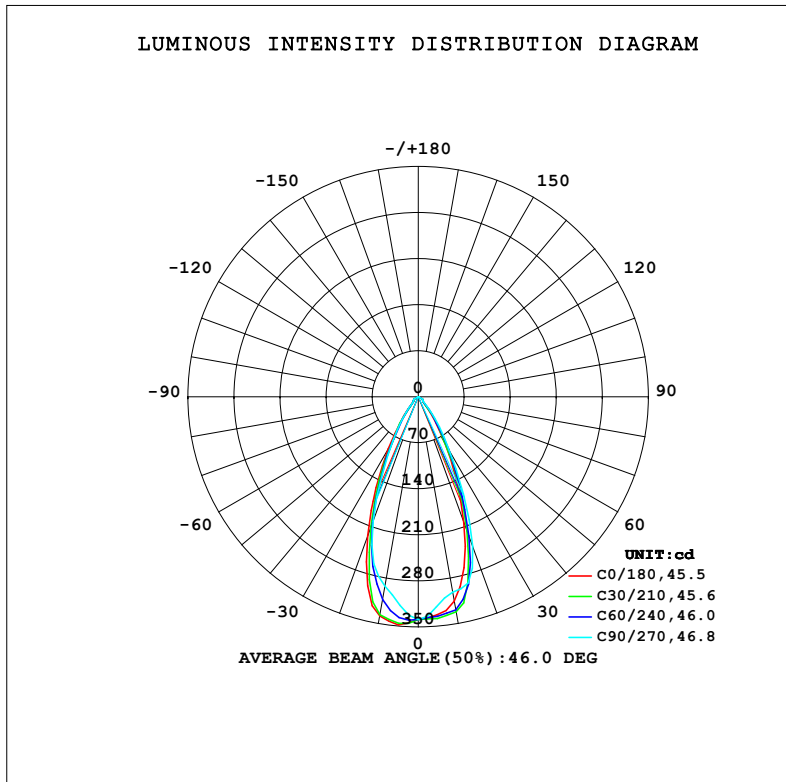


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99LWL03/WH	I _{max} (cd)	349.5	S/MH (C0/180)	0.73
NOMINAL POWER (W)	3	LOR (%)	114.6	S/MH (C90/270)	0.69
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	223.53	η UP, DN (C0-180)	0.0, 59.8
NOMINAL FLUX (lm)	195	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 54.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230	η down (%)	114.6	CIBSE SHR MAX	0.75



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 16 December 2022

γ Range: 0 - 60DEG
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	315.4	333.7	301.8	298.4	338.4	326.8	292.5	289.9	0- 10	30.89	30.89	13.8,15.8
20	203.0	221.2	241.6	244.8	224.6	206.3	201.6	201.3	10- 20	76.34	107.2	48,55
30	82.18	89.69	94.94	94.85	91.75	79.60	76.96	78.53	20- 30	66.39	173.6	77.7,89
40	20.01	21.08	28.35	30.53	23.97	18.70	22.11	22.43	30- 40	31.05	204.7	91.6,105
50	9.635	9.330	9.219	9.319	9.458	9.686	9.777	9.781	40- 50	10.19	214.9	96.1,110
60	7.597	7.550	7.583	7.672	7.792	7.740	7.754	7.683	50- 60	7.748	222.6	99.6,114
70	0	0	0	0	0	0	0	0	60- 70	0.9220	223.5	100,115
80	0	0	0	0	0	0	0	0	70- 80	0	223.5	100,115
90	0	0	0	0	0	0	0	0	80- 90	0	223.5	100,115
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): 210.75 lm

%lum = 94.3%

%lamp = 108.1%

Conical surface Flux(130deg): 223.53 lm

%lum = 100.0%

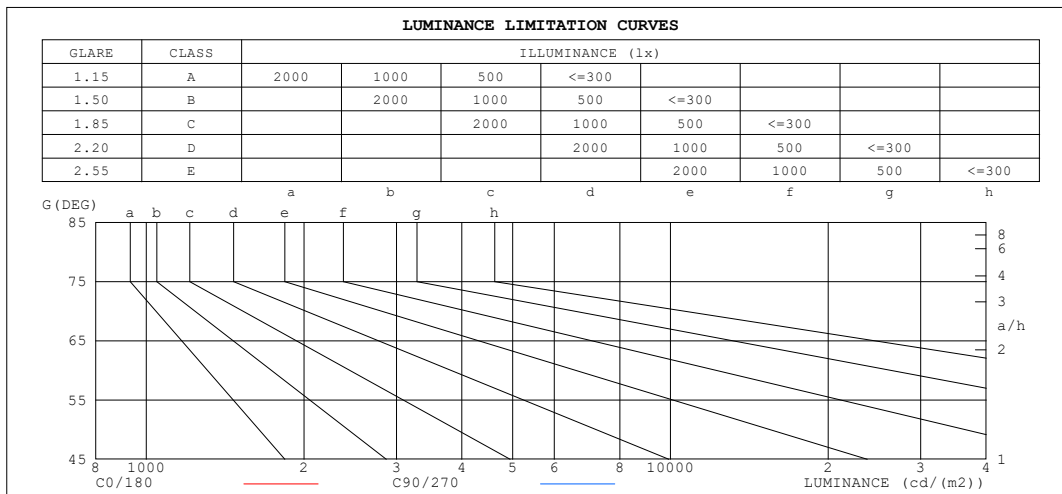
%lamp = 114.6%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:16 December 2022

γ Range: 0 - 60DEG
 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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	0
70	0	0
65	0	0
60	67056	66816
55	66702	64680
50	66154	63186
45	65573	78145

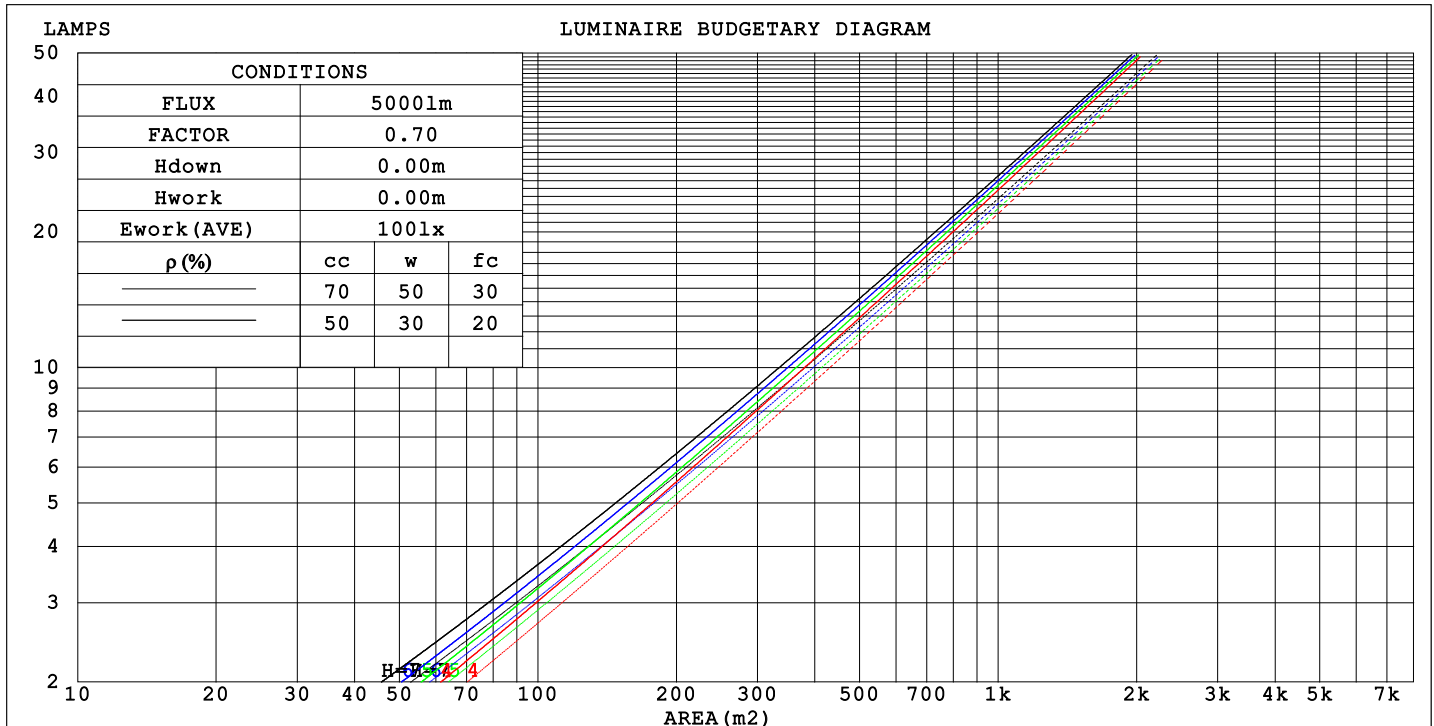
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	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:16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	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	.197	.112	.035	.189	.108	.034	.174	.100	.032	.161	.093	.030	.149	.086	.028	
2.0	.188	.103	.032	.182	.100	.031	.170	.094	.029	.158	.089	.028	.148	.084	.026	
3.0	.179	.095	.029	.173	.093	.028	.163	.088	.027	.154	.084	.026	.145	.080	.025	
4.0	.170	.088	.026	.165	.087	.026	.157	.083	.025	.148	.080	.024	.141	.076	.023	
5.0	.162	.082	.024	.158	.081	.024	.150	.078	.023	.143	.075	.022	.136	.073	.022	
6.0	.154	.077	.022	.151	.076	.022	.144	.074	.021	.138	.071	.021	.132	.069	.021	
7.0	.147	.073	.021	.144	.072	.020	.138	.070	.020	.132	.068	.020	.127	.066	.019	
8.0	.141	.069	.019	.138	.068	.019	.133	.066	.019	.128	.065	.019	.123	.063	.018	
9.0	.135	.065	.018	.132	.064	.018	.127	.063	.018	.123	.062	.018	.119	.060	.017	
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017	

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	.218	.218	.218	.187	.187	.187	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.196	.180	.167	.167	.155	.143	.115	.107	.099	.066	.062	.058	.021	.020	.019	
2.0	.178	.152	.130	.152	.131	.112	.104	.090	.078	.060	.053	.046	.019	.017	.015	
3.0	.163	.130	.104	.140	.112	.090	.096	.078	.063	.056	.046	.037	.018	.015	.012	
4.0	.151	.113	.084	.130	.098	.073	.089	.068	.051	.052	.040	.030	.017	.013	.010	
5.0	.141	.100	.069	.121	.086	.060	.083	.060	.043	.048	.035	.025	.016	.012	.008	
6.0	.132	.089	.058	.114	.077	.050	.078	.054	.036	.046	.032	.021	.015	.010	.007	
7.0	.125	.080	.049	.107	.070	.043	.074	.049	.030	.043	.029	.018	.014	.009	.006	
8.0	.118	.073	.042	.102	.063	.037	.070	.044	.026	.041	.026	.016	.013	.009	.005	
9.0	.112	.067	.037	.097	.058	.032	.067	.041	.023	.039	.024	.013	.013	.008	.004	
10.0	.107	.062	.032	.092	.054	.028	.064	.038	.020	.037	.022	.012	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: 170 x 30 x 30			SERIAL No.: 0			
MFR.: Elmark Industries JSC					SUR.: circular			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	29.1	30.0	29.3	30.2	30.3	29.6	30.6	29.9	30.7	30.9	
	28.9	29.7	29.2	29.9	30.1	29.5	30.3	29.7	30.5	30.7	
	28.8	29.6	29.1	29.8	30.1	29.4	30.2	29.7	30.4	30.6	
	28.7	29.5	29.0	29.7	30.0	29.3	30.0	29.6	30.3	30.5	
	28.7	29.4	29.0	29.7	29.9	29.3	30.0	29.6	30.2	30.5	
	28.6	29.3	29.0	29.6	29.9	29.2	29.9	29.5	30.2	30.4	
4H	2H	29.1	29.9	29.4	30.1	30.3	29.6	30.4	29.9	30.6	30.8
	3H	28.9	29.6	29.2	29.9	30.1	29.4	30.1	29.8	30.4	30.7
	4H	28.8	29.4	29.2	29.7	30.0	29.3	30.0	29.7	30.3	30.6
	6H	28.7	29.3	29.1	29.6	29.9	29.2	29.8	29.6	30.1	30.5
	8H	28.7	29.2	29.1	29.5	29.9	29.2	29.7	29.6	30.0	30.4
	12H	28.6	29.1	29.0	29.4	29.8	29.1	29.6	29.5	30.0	30.4
8H	4H	28.7	29.2	29.1	29.5	29.9	29.2	29.7	29.6	30.0	30.4
	6H	28.6	29.0	29.0	29.4	29.8	29.1	29.5	29.5	29.9	30.3
	8H	28.5	28.9	28.9	29.3	29.7	29.0	29.4	29.5	29.8	30.3
	12H	28.4	28.8	28.9	29.2	29.7	29.0	29.3	29.4	29.7	30.2
12H	4H	28.6	29.1	29.0	29.4	29.8	29.1	29.6	29.5	30.0	30.4
	6H	28.5	28.9	28.9	29.3	29.7	29.0	29.4	29.5	29.8	30.3
	8H	28.4	28.8	28.9	29.2	29.7	29.0	29.3	29.4	29.7	30.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 3.2 / - 3.5					+ 2.1 / - 4.5					
1.5H	+ 3.2 / - 3.4					+ 4.3 / - 4.2					
2.0H	+ 4.6 / - 1.5					+ 4.6 / - 1.5					

CIE Pub.117, 195.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.7)
Area: 0.000227 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:

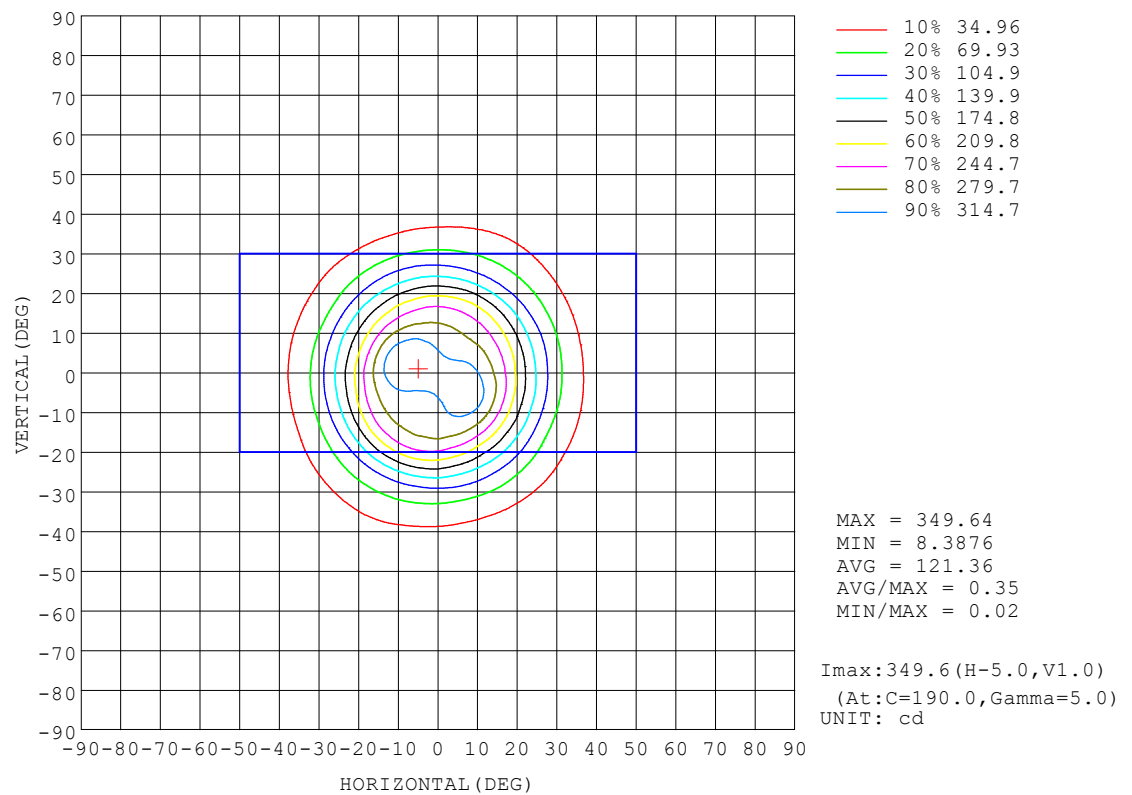
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	99	91	86	98	91	86	97	90	86	82
0.80	107	100	96	107	100	96	105	99	95	91
1.00	113	106	102	112	106	102	110	106	101	97
1.25	118	112	108	117	111	107	114	110	106	101
1.50	121	115	112	120	115	111	117	113	110	105
2.00	124	119	116	123	118	115	119	116	113	107
2.50	126	122	118	124	120	117	121	118	115	108
3.00	128	124	121	126	122	120	122	119	117	110
4.00	130	127	125	128	125	123	124	122	120	112
5.00	132	129	127	129	127	125	125	123	122	113
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: 16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:

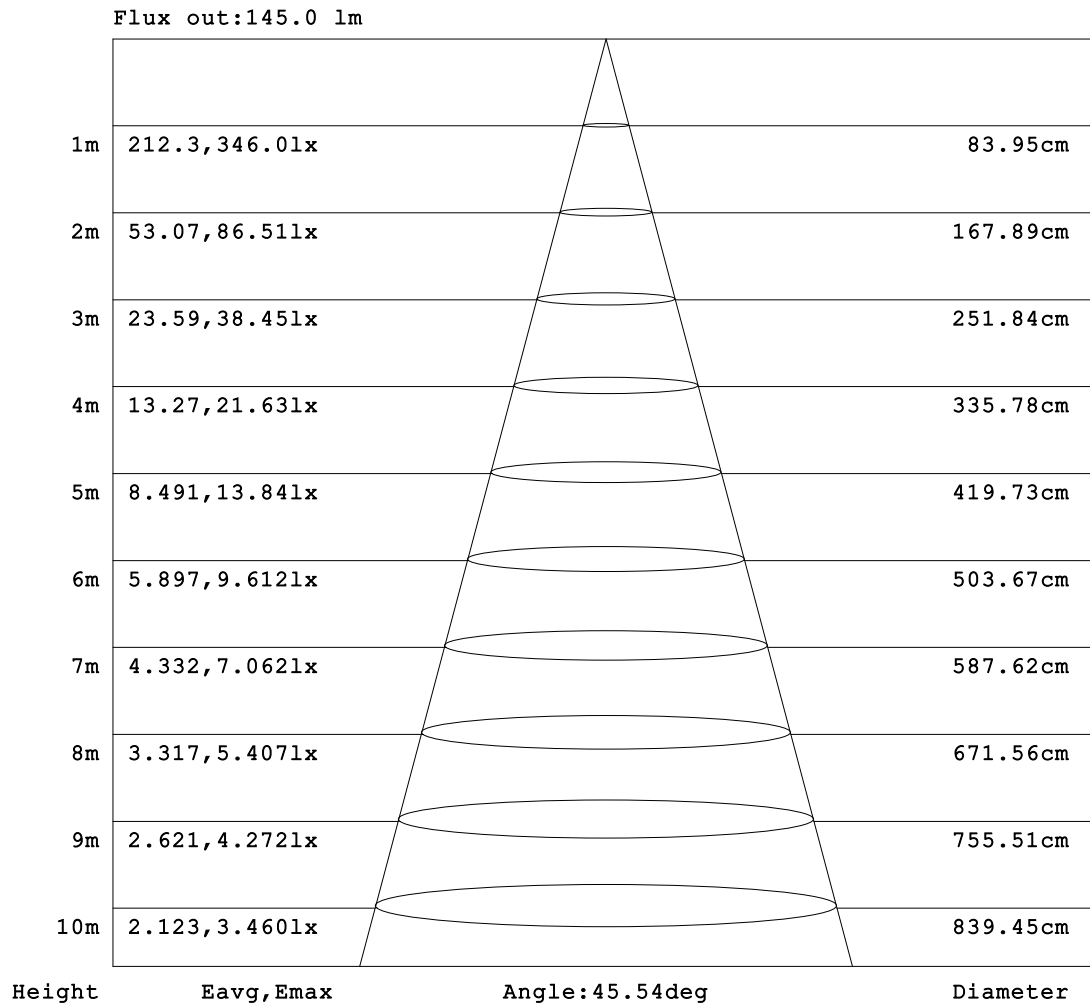


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:



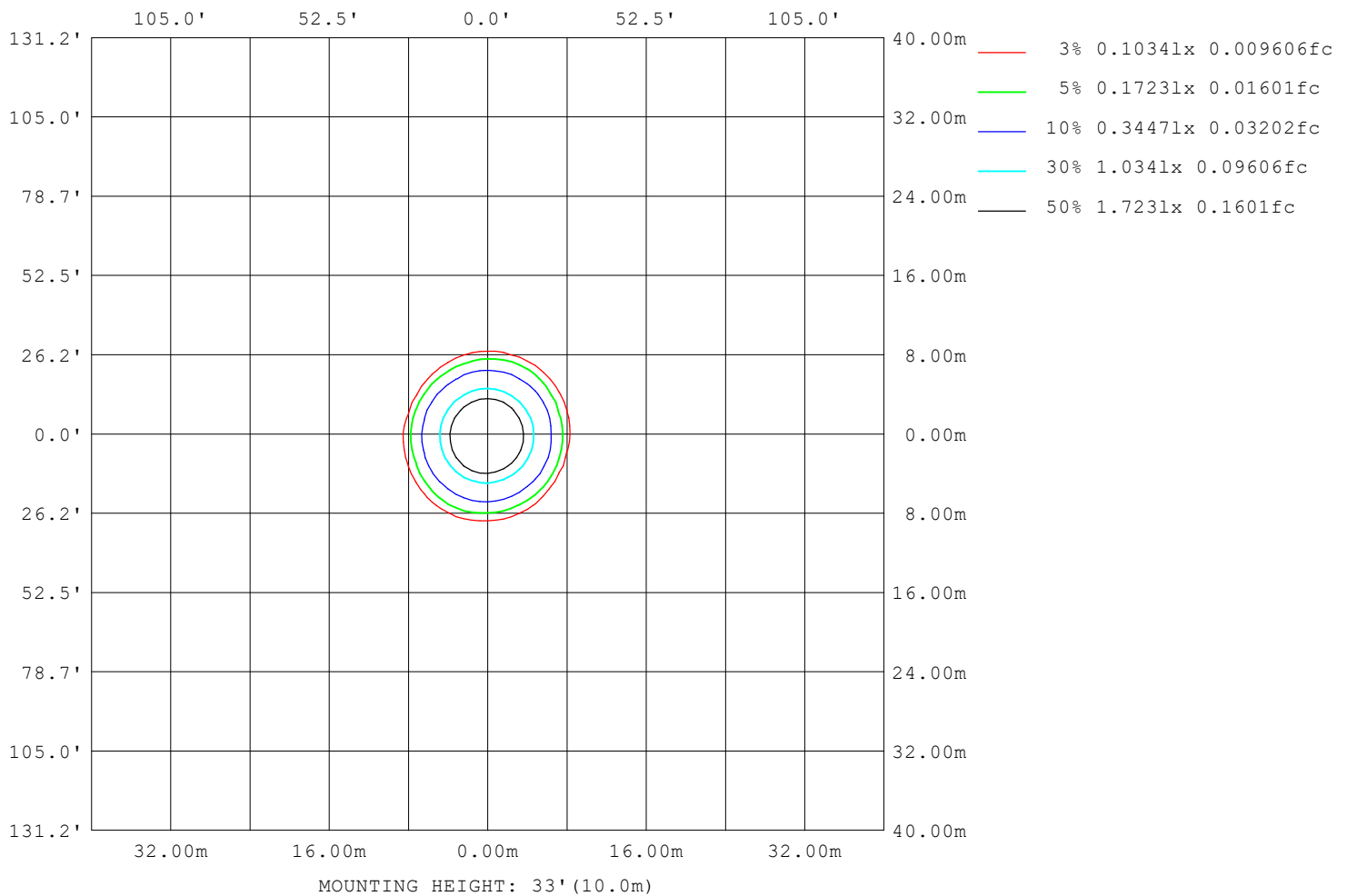
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 16 December 2022

γ Range: 0 - 60DEG
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: 99LWL03/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 170 x 30 x 30	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: circular	Shielding Angle:

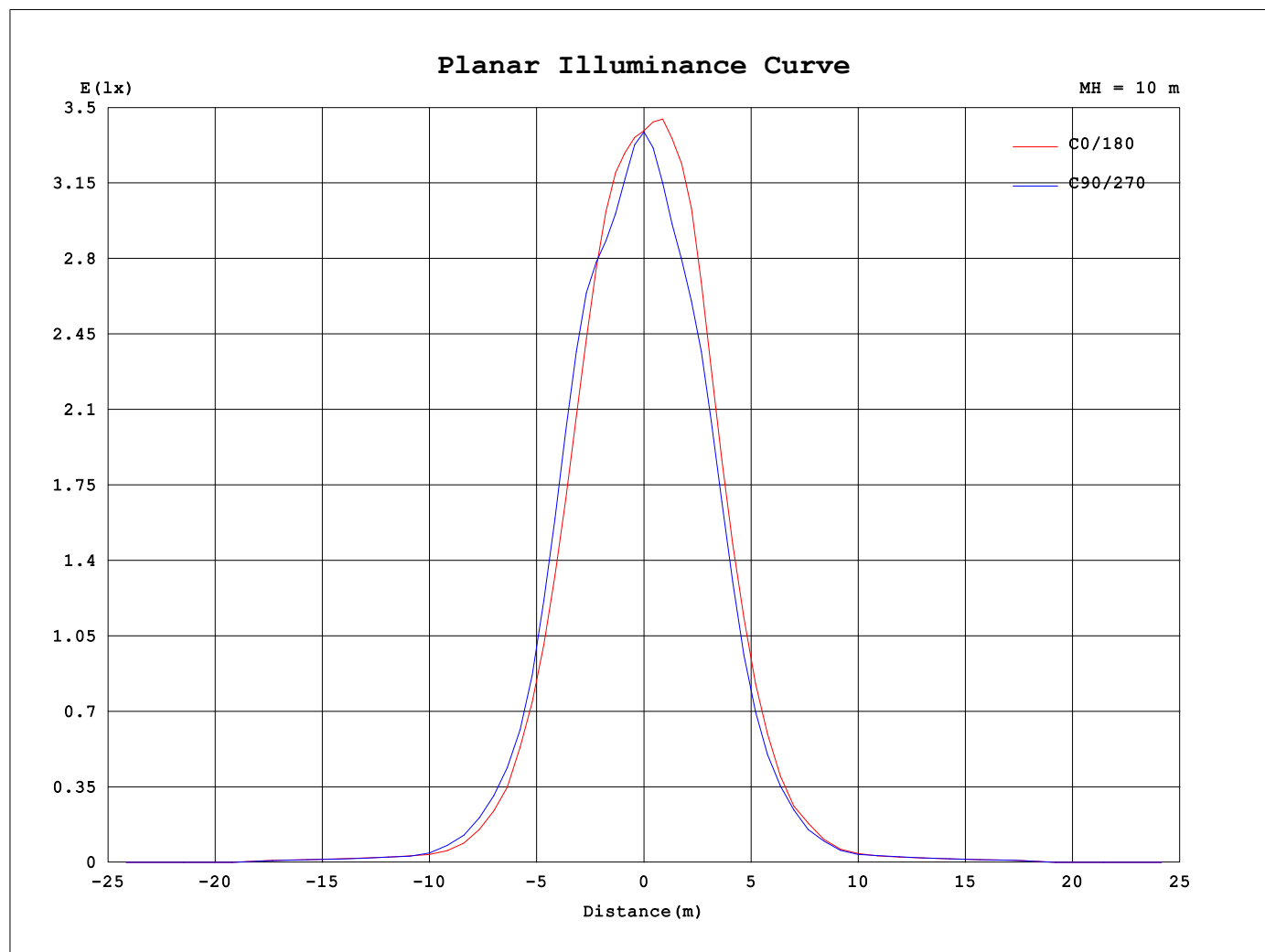
AvgL	cd/m2
L_0~180 (65) av	0
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	0
L_90~270 (75) av	0
L_90~270 (85) av	0
L_45 (65) av	0
L_45 (75) av	0
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:16 December 2022

γ Range: 0 - 60DEG
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: 16 December 2022

γ Range: 0 - 60DEG
 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 - 60DEG
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 - 60DEG
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:

```