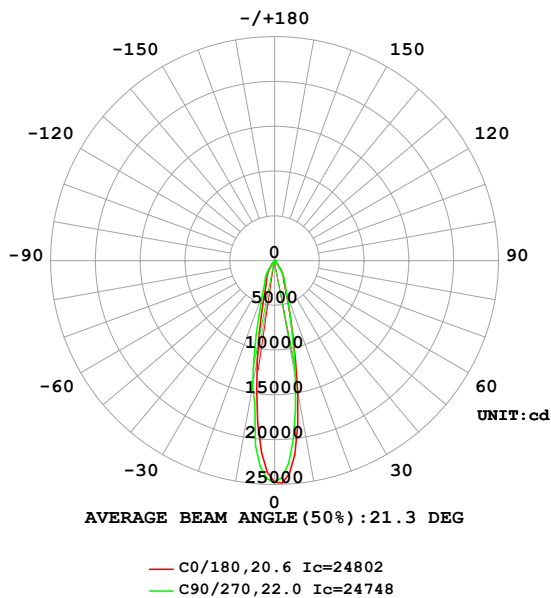


LUMINAIRE PHOTOMETRIC TEST REPORT

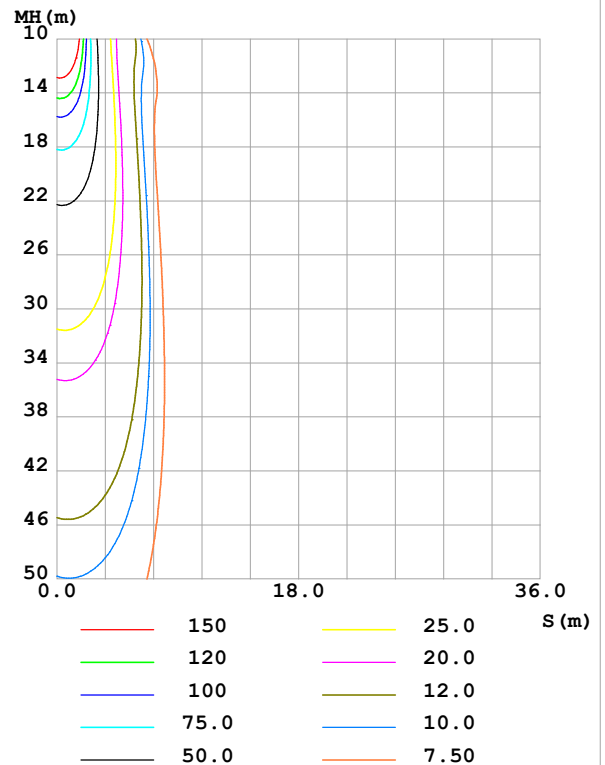
Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.98 lm/W			
MODEL		I _{max} (cd)	24802	S/MH(C0/180)	0.32
NOMINAL POWER(W)	35	LOR(%)	97.2	S/MH(C90/270)	0.39
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	5591.8	η UP,DN(C0-180)	0.0,49.5
NOMINAL FLUX(lm)	5753.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	34.9	η down (%)	97.2	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.0°C
Operators: ZJW
Test Date: 2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity: 60.0%
Test Distance: 7.710m [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	1486	1387	1350	1256	1113	1196	1433	1576	0- 10	1792	1792	32,31.1
20	373.7	355.3	392.2	378.3	292.0	308.4	402.2	456.8	10- 20	1974	3766	67.4,65.5
30	191.5	197.4	193.5	184.7	153.6	175.4	198.1	211.2	20- 30	1187	4954	88.6,86.1
40	22.13	15.35	10.09	10.18	6.973	6.900	13.27	23.24	30- 40	572.3	5526	98.8,96
50	2.719	2.378	1.985	2.408	2.044	1.935	1.596	3.164	40- 50	36.67	5563	99.5,96.7
60	0.9745	0.9469	0.7768	0.8115	0.9840	0.8632	0.6150	1.082	50- 60	12.53	5575	99.7,96.9
70	0.6096	0.7465	0.8172	0.7018	0.6595	0.4746	0.4209	0.4882	60- 70	7.139	5582	99.8,97
80	0.5091	0.5946	0.6283	0.5193	0.4686	0.2971	0.2705	0.2532	70- 80	5.573	5588	99.9,97.1
90	0.3001	0.3787	0.2675	0.1589	0.1536	0.0733	0.0800	0.0873	80- 90	3.884	5592	100,97.2
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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 5553.4 lm

%lum = 99.3%

%lamp = 96.5%

Conical surface Flux(130deg): 5579.7 lm

%lum = 99.8%

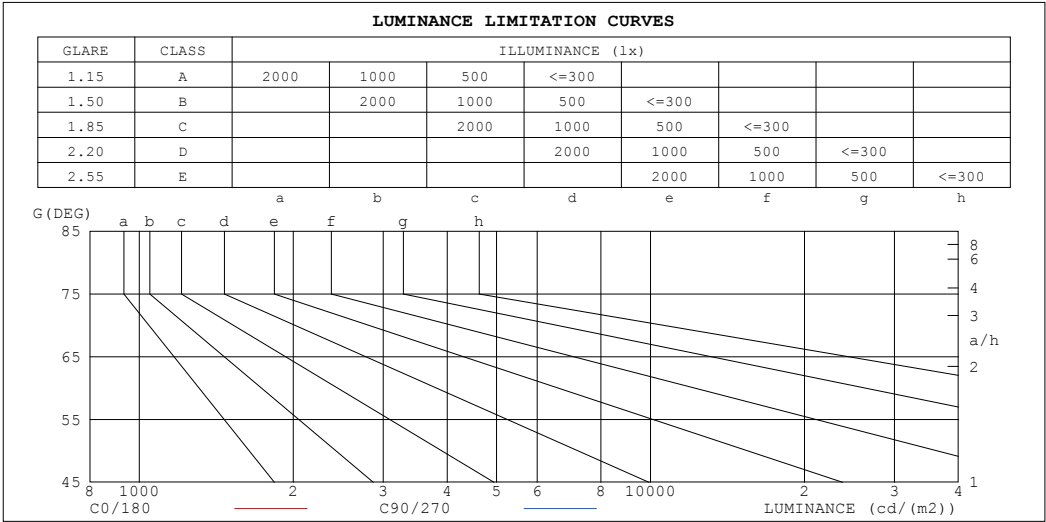
%lamp = 97.0%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-13

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12	17
80	8	9
75	6	7
70	5	6
65	5	5
60	5	4
55	8	5
50	11	8
45	17	15

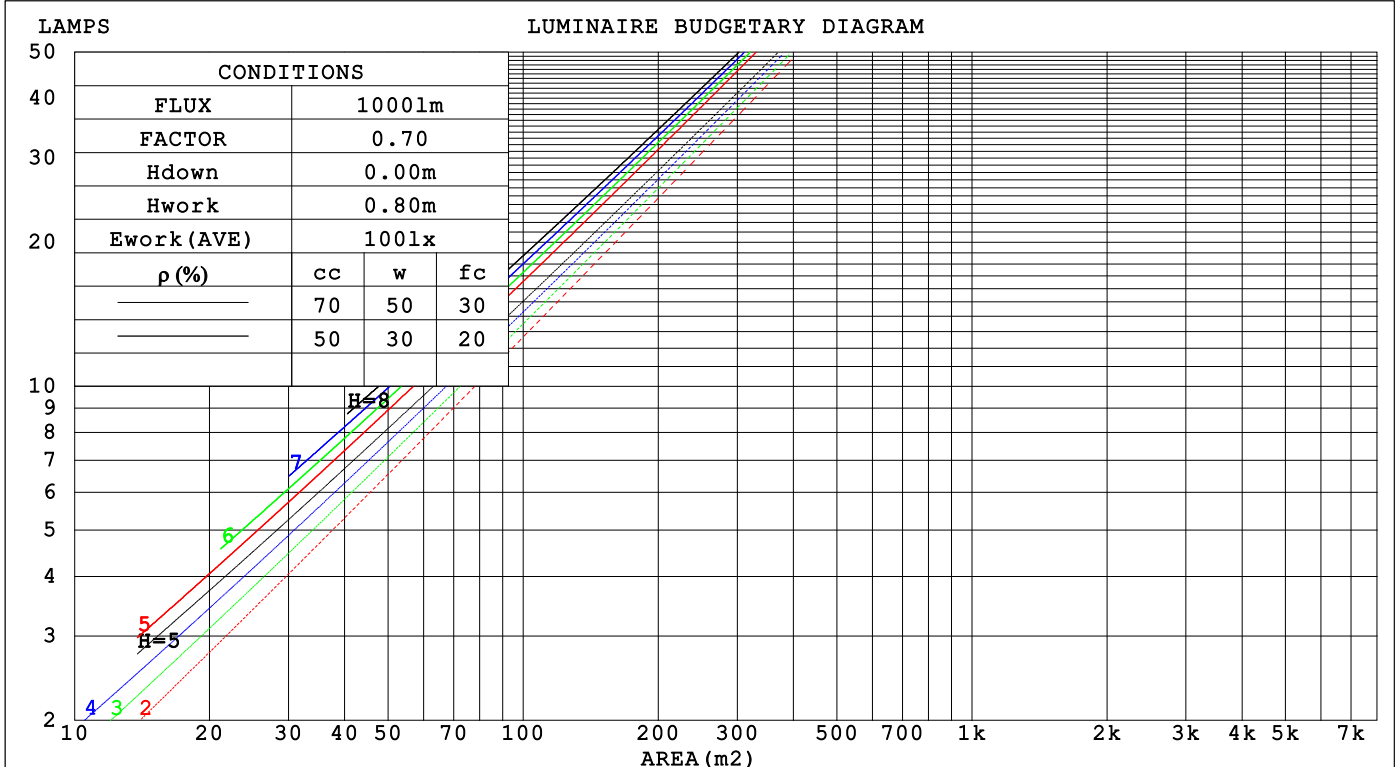
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-13

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
γ Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2			Test NO: 20260813-C013			Report NO: 20260813-B013		
LED HOLDER: 92.70.549.00			DIM.: ϕ 111 H70			Lamp No.: 1		
LampCAT: CITIZEN CLU048			MFR.: NATA					

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.16	1.16	1.16	1.13	1.13	1.13	1.08	1.08	1.08	1.03	1.03	1.03	.99	.99	.99	.97
1.0	1.09	1.07	1.05	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96	.96	.95	.93
2.0	1.04	1.00	.98	1.02	.99	.97	.99	.97	.95	.96	.94	.93	.94	.92	.91	.89
3.0	.99	.95	.92	.97	.94	.91	.95	.92	.90	.93	.90	.88	.91	.89	.87	.86
4.0	.94	.90	.87	.93	.89	.86	.91	.88	.85	.89	.87	.84	.88	.85	.84	.82
5.0	.90	.86	.83	.89	.85	.82	.88	.84	.82	.86	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.79	.86	.82	.79	.85	.81	.78	.83	.80	.78	.82	.80	.77	.76
7.0	.83	.79	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.80	.77	.75	.74
8.0	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.72	.77	.74	.72	.71
9.0	.78	.73	.70	.77	.73	.70	.76	.73	.70	.76	.72	.70	.75	.72	.70	.69
10.0	.75	.71	.68	.75	.71	.68	.74	.70	.68	.73	.70	.68	.73	.70	.67	.67



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.0℃
 Operators:ZJW
 Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
 Humidity:60.0%
 Test Distance:7.710m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2			Test NO: 20260813-C013			Report NO: 20260813-B013		
LED HOLDER: 92.70.549.00			DIM.: ϕ 111 H70			Lamp No.: 1		
LampCAT: CITIZEN CLU048			MFR.: NATA					

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	.142	.081	.026	.136	.077	.025	.123	.071	.023	.112	.065	.021	.102	.059	.019															
2.0	.133	.073	.022	.127	.070	.022	.117	.065	.020	.108	.061	.019	.100	.056	.018															
3.0	.124	.066	.020	.120	.064	.019	.112	.060	.018	.104	.057	.017	.097	.053	.017															
4.0	.117	.061	.018	.113	.059	.018	.106	.056	.017	.100	.054	.016	.094	.051	.015															
5.0	.111	.056	.016	.108	.055	.016	.101	.053	.016	.096	.051	.015	.091	.048	.015															
6.0	.105	.053	.015	.102	.052	.015	.097	.050	.014	.092	.048	.014	.088	.046	.014															
7.0	.100	.050	.014	.098	.049	.014	.093	.047	.014	.089	.046	.013	.085	.044	.013															
8.0	.096	.047	.013	.093	.046	.013	.089	.045	.013	.086	.043	.013	.082	.042	.012															
9.0	.091	.044	.012	.090	.044	.012	.086	.043	.012	.083	.041	.012	.079	.040	.012															
10.0	.088	.042	.012	.086	.042	.012	.083	.041	.011	.080	.040	.011	.077	.039	.011															

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	.185	.185	.185	.158	.158	.158	.108	.108	.108	.062	.062	.062	.020	.020	.020	
1.0	.164	.153	.143	.141	.131	.123	.096	.090	.085	.055	.052	.050	.018	.017	.016	
2.0	.147	.129	.114	.126	.111	.098	.086	.077	.068	.050	.045	.040	.016	.014	.013	
3.0	.133	.110	.092	.114	.095	.080	.078	.066	.056	.045	.039	.033	.015	.013	.011	
4.0	.122	.095	.075	.104	.082	.065	.072	.057	.046	.042	.034	.027	.013	.011	.009	
5.0	.112	.084	.063	.096	.072	.055	.066	.050	.038	.038	.030	.023	.012	.010	.008	
6.0	.104	.074	.053	.089	.064	.046	.061	.045	.033	.036	.026	.019	.011	.009	.006	
7.0	.096	.066	.045	.083	.057	.039	.057	.040	.028	.033	.024	.017	.011	.008	.005	
8.0	.090	.060	.039	.078	.052	.034	.054	.036	.024	.031	.021	.014	.010	.007	.005	
9.0	.085	.054	.034	.073	.047	.029	.051	.033	.021	.030	.020	.012	.010	.006	.004	
10.0	.080	.050	.030	.069	.043	.026	.048	.030	.018	.028	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.0℃
 Operators:ZJW
 Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
 Humidity:60.0%
 Test Distance:7.710m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm										
LumCAT: 4-2412-LM2					Test NO: 20260813-C013			Report NO: 20260813-B013		
LED HOLDER: 92.70.549.00					DIM.: ϕ 111 H70			Lamp No.: 1		
LampCAT: CITIZEN CLU048					MFR.: NATA					
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	2.0	2.7	2.2	2.9	3.0	1.3	2.0	1.5	2.2	2.3
3H	1.9	2.5	2.1	2.7	2.9	1.2	1.9	1.4	2.0	2.2
4H	1.8	2.4	2.1	2.7	2.9	1.1	1.8	1.4	2.0	2.2
6H	1.7	2.3	2.0	2.6	2.8	1.1	1.7	1.4	1.9	2.2
8H	1.7	2.3	2.0	2.5	2.8	1.1	1.6	1.4	1.9	2.1
12H	1.7	2.2	2.0	2.5	2.8	1.1	1.6	1.4	1.9	2.1
4H 2H	1.8	2.4	2.1	2.6	2.8	1.1	1.7	1.4	1.9	2.2
3H	1.6	2.2	1.9	2.5	2.7	1.0	1.5	1.3	1.8	2.0
4H	1.6	2.1	1.9	2.4	2.7	0.9	1.4	1.2	1.7	2.0
6H	1.5	2.0	1.9	2.3	2.6	0.9	1.3	1.2	1.6	2.0
8H	1.5	1.9	1.9	2.2	2.6	0.9	1.3	1.2	1.6	2.0
12H	1.5	1.8	1.9	2.2	2.6	0.9	1.3	1.3	1.6	2.0
8H 4H	1.4	1.8	1.8	2.2	2.6	0.8	1.2	1.2	1.5	1.9
6H	1.4	1.7	1.8	2.1	2.5	0.7	1.1	1.2	1.5	1.9
8H	1.4	1.7	1.8	2.1	2.5	0.8	1.1	1.2	1.5	1.9
12H	1.4	1.6	1.8	2.1	2.5	0.8	1.1	1.3	1.5	2.0
12H 4H	1.4	1.8	1.8	2.1	2.5	0.7	1.1	1.1	1.5	1.9
6H	1.3	1.6	1.8	2.1	2.5	0.7	1.0	1.2	1.4	1.9
8H	1.3	1.6	1.8	2.0	2.5	0.7	1.0	1.2	1.5	1.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 5.5 / - 6.5					+ 4.7 / - 3.5				
1.5H	+ 8.2 / - 6.2					+ 7.3 / - 3.3				
2.0H	+ 1.4 / - 0.5					+ 0.8 / - 0.4				

CIE Pub.117, 5754 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.1$)
 Area: 3.868 m²

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.0℃
 Operators:ZJW
 Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
 Humidity:60.0%
 Test Distance:7.710m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	

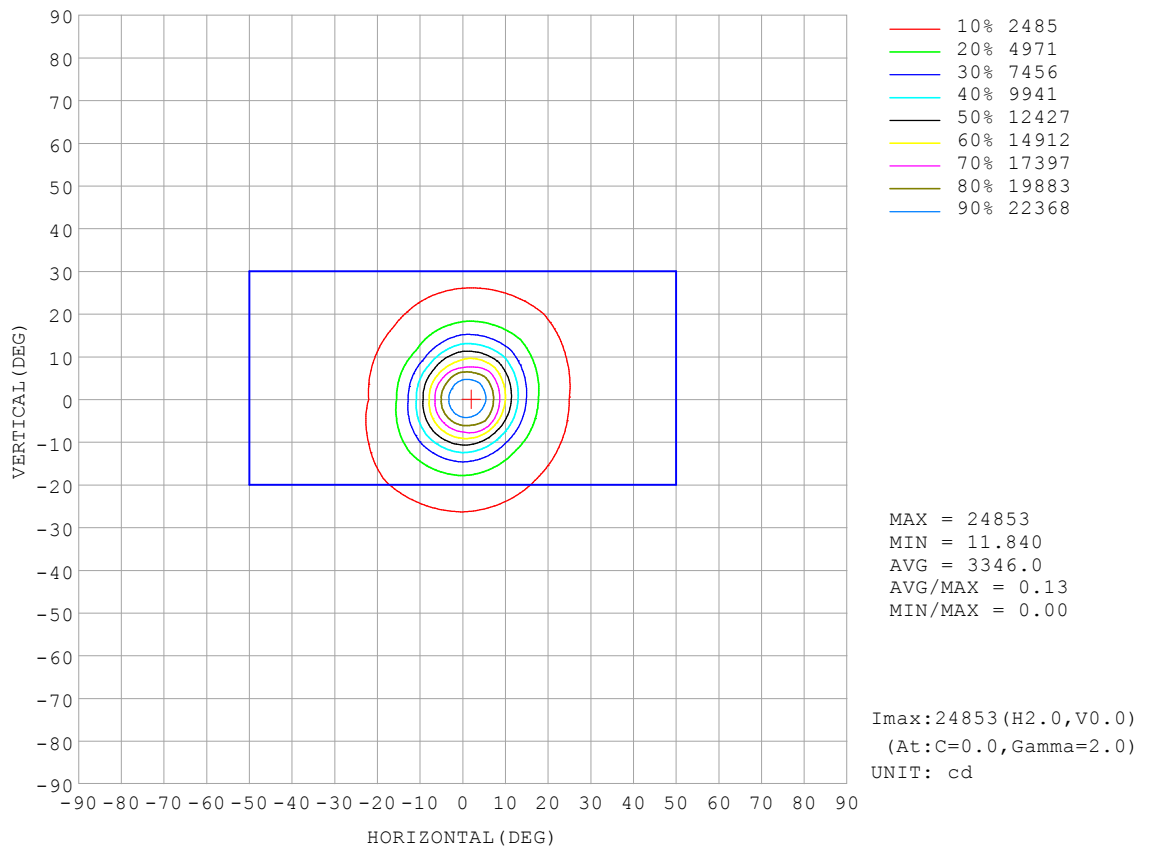
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	83	79	88	83	79	87	82	79	76
0.80	95	90	87	94	90	87	93	89	86	83
1.00	99	94	91	98	93	90	96	93	90	86
1.25	102	98	95	101	97	94	99	96	93	90
1.50	105	100	97	103	100	97	101	98	96	92
2.00	107	103	100	105	102	99	103	100	98	93
2.50	108	105	102	107	104	101	104	101	99	94
3.00	109	106	104	108	105	103	104	102	101	95
4.00	111	109	107	109	107	106	106	104	103	96
5.00	112	110	109	110	109	107	107	105	104	97
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.0°C
 Operators: ZJW
 Test Date: 2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.491
 Humidity: 60.0%
 Test Distance: 7.710m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	

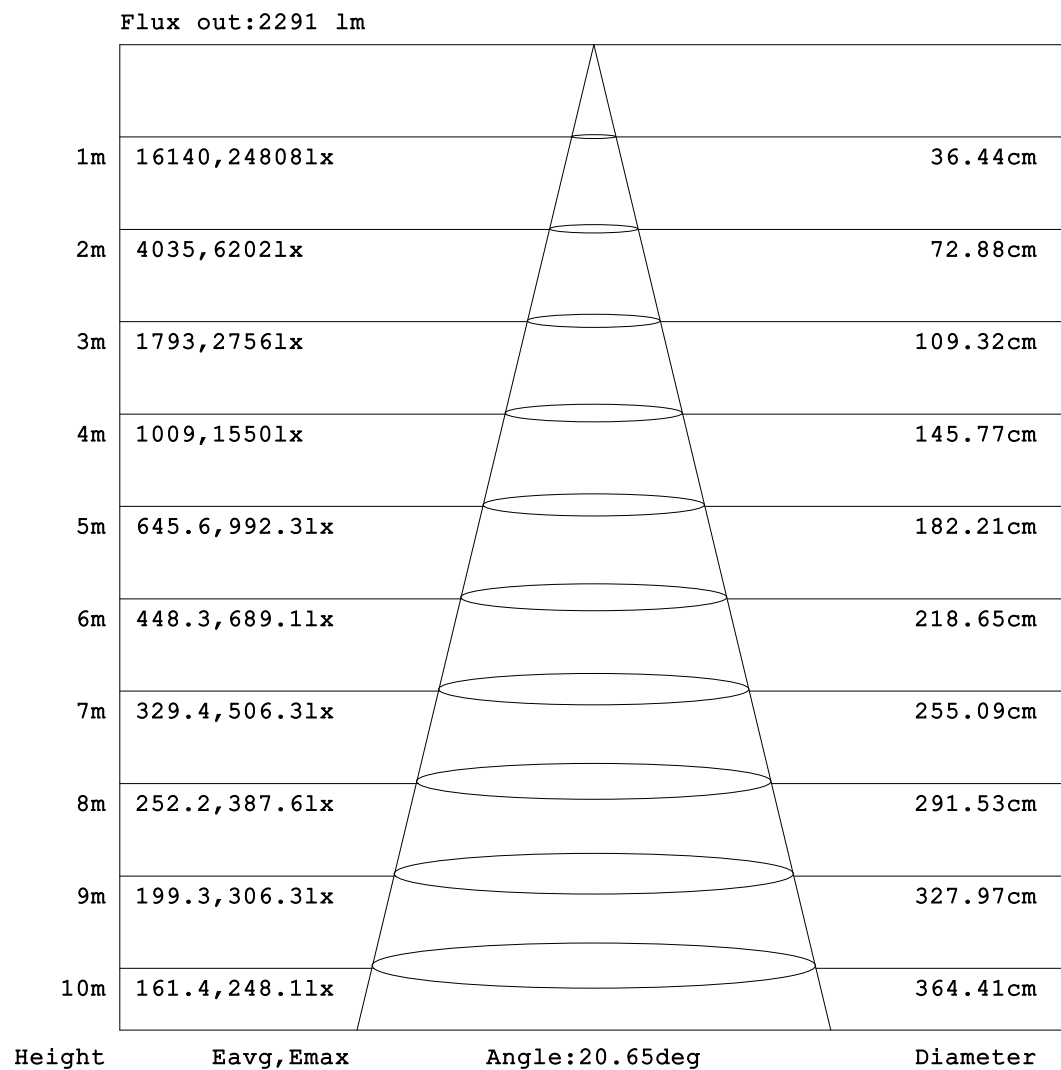


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0°C
Operators:ZJW
Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	



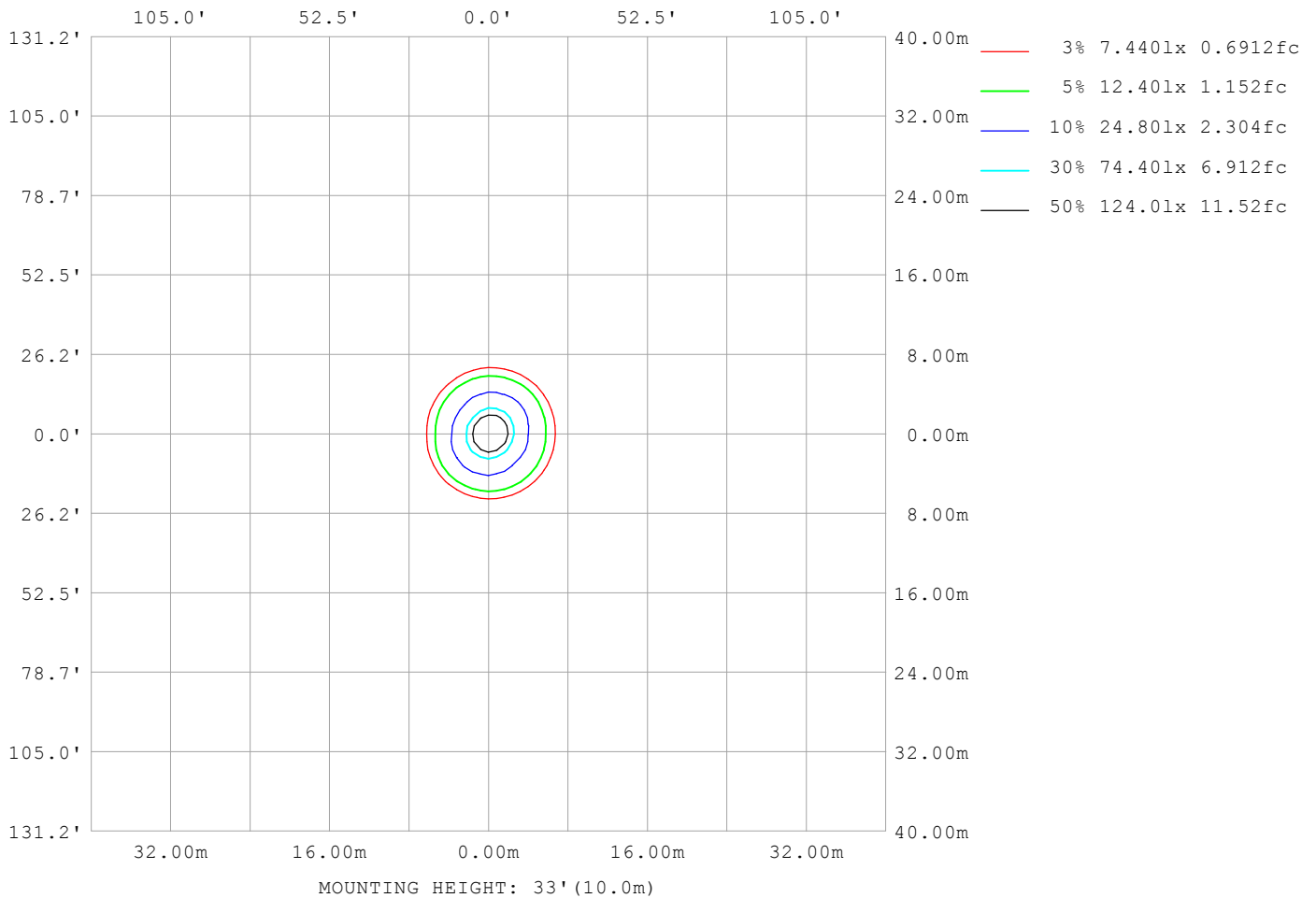
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0°C
Operators:ZJW
Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.0°C
Operators: ZJW
Test Date: 2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 γ Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity: 60.0%
Test Distance: 7.710m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: ϕ 111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	

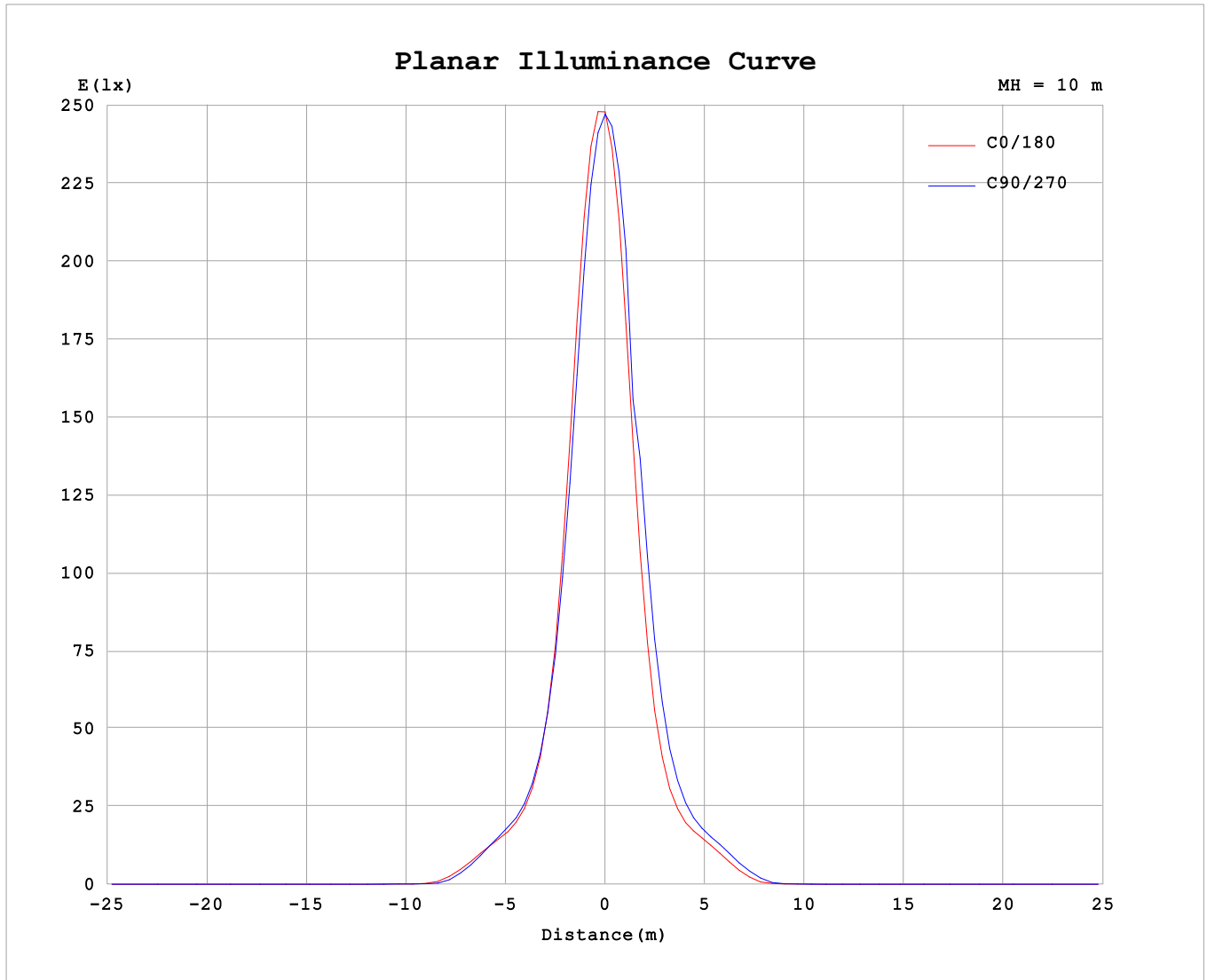
AvgL	cd/m2
L_0~180 (65) av	5
L_0~180 (75) av	6
L_0~180 (85) av	11
L_90~270 (65) av	4
L_90~270 (75) av	5
L_90~270 (85) av	12
L_45 (65) av	4
L_45 (75) av	5
L_45 (85) av	11

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.0°C
 Operators: ZJW
 Test Date: 2026-08-13

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.491
 Humidity: 60.0%
 Test Distance: 7.710m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.32V I:0.1993A P:39.946W PF:0.8702 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5753.8x1 lm		
LumCAT: 4-2412-LM2	Test NO: 20260813-C013	Report NO: 20260813-B013
LED HOLDER: 92.70.549.00	DIM.: φ111 H70	Lamp No.: 1
LampCAT: CITIZEN CLU048	MFR.: NATA	

Table--1

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.0°C
Operators: ZJW
Test Date: 2026-08-13

```

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.491
Humidity:60.0%
Test Distance:7.710m [K=1.0000]
Remarks:

```