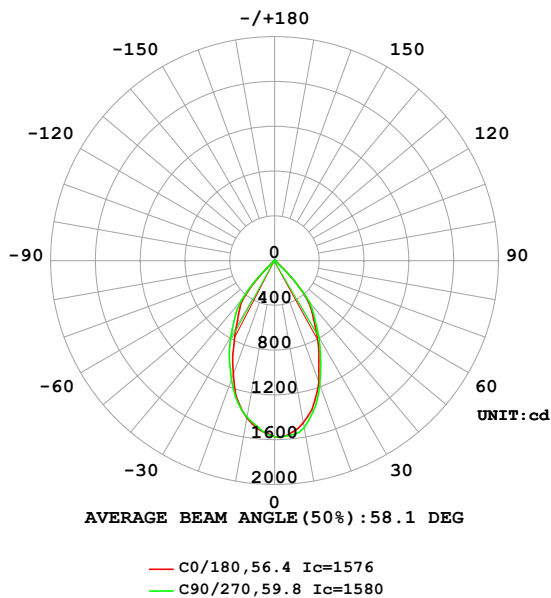


LUMINAIRE PHOTOMETRIC TEST REPORT

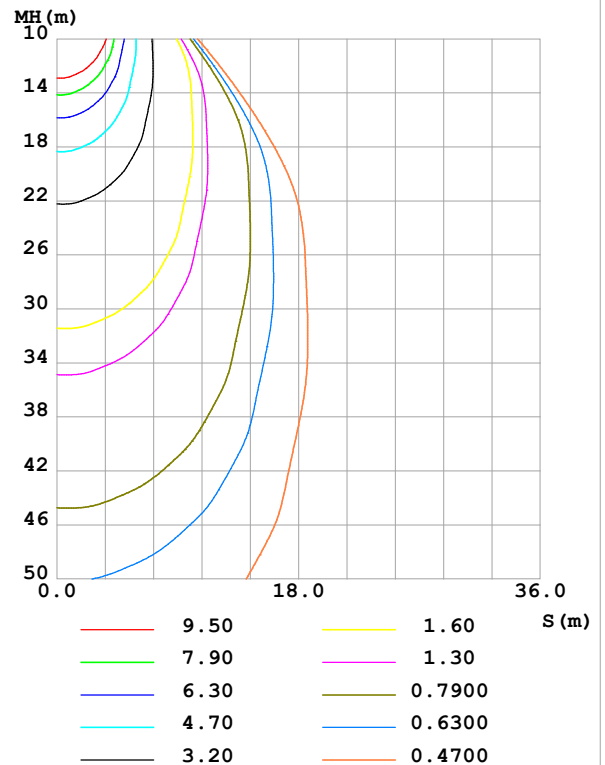
Test:U:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 104.68 lm/W
MODEL		I _{max} (cd)	1581	S/MH(C0/180)		0.82
NOMINAL POWER(W)	10	LOR(%)	93.0	S/MH(C90/270)		0.87
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1495.9	η UP,DN(C0-180)		0.0,48.2
NOMINAL FLUX(lm)	1609.3	CIE CLASS	DIRECT	η UP,DN(C180-360)		0.0,44.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM		0.75
TEST VOLTAGE(V)	34.9	η down (%)	93.0	CIBSE SHR MAX		0.95

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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	1472	1505	1516	1516	1427	1369	1422	1439	0- 10	144.4	144.4	9.65,8.97
20	1157	1184	1180	1199	1082	1040	1129	1095	10- 20	367.5	511.9	34.2,31.8
30	754.1	789.7	789.9	797.7	689.7	718.6	784.6	735.0	20- 30	429.6	941.4	62.9,58.5
40	456.4	488.9	480.9	493.9	418.5	449.6	470.1	451.2	30- 40	379.9	1321	88.3,82.1
50	33.59	31.08	24.90	29.18	24.22	24.25	22.58	20.72	40- 50	159.8	1481	99,92
60	5.554	4.619	4.795	5.277	4.940	4.256	3.756	3.201	50- 60	10.29	1491	99.7,92.7
70	1.790	1.270	1.456	1.383	1.939	1.900	1.761	1.429	60- 70	2.586	1494	99.9,92.8
80	1.076	0.9042	0.8663	0.7588	0.9101	0.7484	0.9056	0.6120	70- 80	1.294	1495	100,92.9
90	0.3893	0.1064	0.1347	0.1075	0.3560	0.3226	0.0775	0.1579	80- 90	0.6201	1496	100,93
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): 1457.3 lm

%lum = 97.4%

%lamp = 90.6%

Conical surface Flux(130deg): 1493.2 lm

%lum = 99.8%

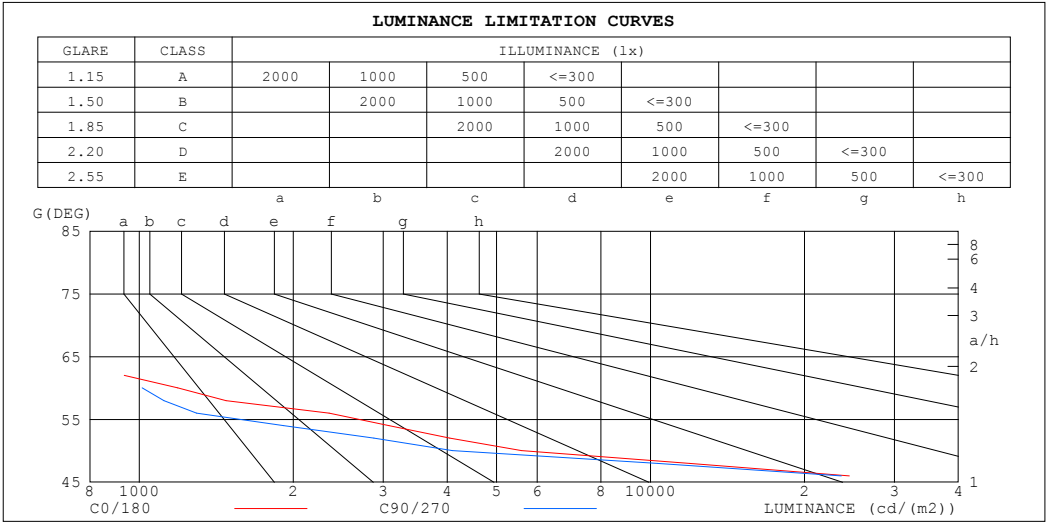
%lamp = 92.8%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ø55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	888	756
80	663	527
75	620	510
70	560	450
65	749	588
60	1188	1013
55	3154	1964
50	5589	4093
45	39393	39540

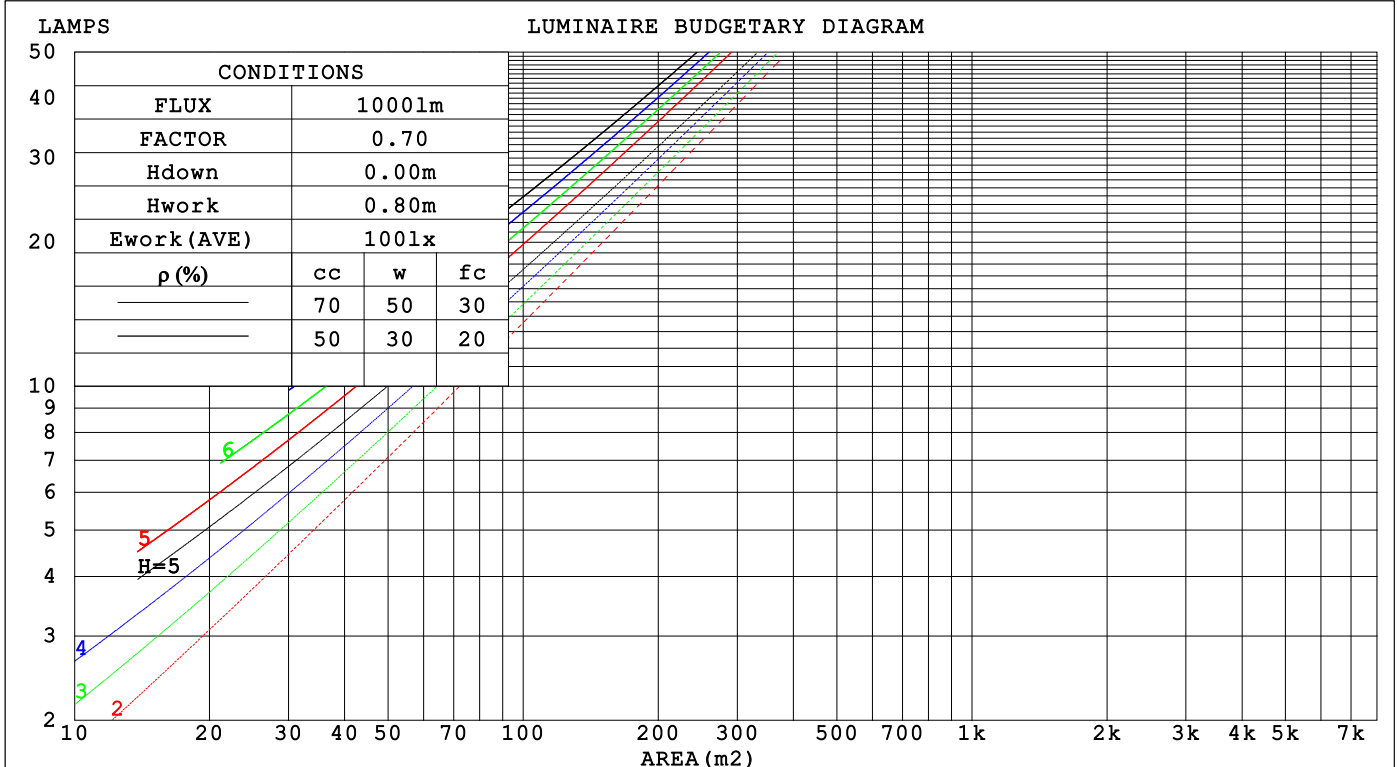
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A			Test NO: 20260826-C020			Report NO: 20260826-B020		
LED HOLDER: 92.70.481.00			DIM.: ø55 H22			Lamp No.: 1		
LampCAT: CITIZEN CLU028			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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	.99	.99	.99	.95	.95	.95	.93
1.0	1.03	1.00	.98	1.01	.98	.97	.97	.95	.94	.93	.92	.91	.90	.89	.88	.86
2.0	.95	.91	.88	.94	.90	.87	.91	.88	.85	.88	.85	.83	.85	.83	.82	.80
3.0	.88	.83	.80	.87	.83	.79	.85	.81	.78	.82	.79	.76	.80	.78	.75	.74
4.0	.82	.77	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.75	.72	.70	.68
5.0	.76	.71	.67	.76	.70	.66	.74	.69	.66	.72	.68	.65	.71	.67	.65	.63
6.0	.71	.66	.61	.71	.65	.61	.69	.64	.61	.68	.64	.60	.67	.63	.60	.59
7.0	.67	.61	.57	.66	.61	.57	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
8.0	.63	.57	.53	.62	.57	.53	.61	.56	.52	.60	.56	.52	.59	.55	.52	.51
9.0	.59	.53	.49	.58	.53	.49	.57	.52	.49	.57	.52	.49	.56	.52	.49	.47
10.0	.55	.50	.46	.55	.50	.46	.54	.49	.46	.53	.49	.46	.53	.49	.46	.44



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: φ55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	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	.171	.097	.031	.165	.094	.030	.153	.088	.028	.142	.082	.026	.132	.077	.025															
2.0	.165	.090	.028	.160	.088	.027	.150	.083	.026	.141	.079	.025	.132	.075	.024															
3.0	.158	.084	.025	.153	.082	.025	.145	.079	.024	.137	.075	.023	.130	.072	.022															
4.0	.151	.078	.023	.147	.077	.023	.140	.074	.022	.133	.071	.022	.126	.069	.021															
5.0	.144	.073	.021	.141	.072	.021	.134	.070	.021	.128	.068	.020	.123	.066	.020															
6.0	.138	.069	.020	.135	.068	.020	.129	.066	.019	.124	.064	.019	.119	.063	.019															
7.0	.132	.065	.018	.129	.064	.018	.124	.063	.018	.119	.061	.018	.115	.060	.018															
8.0	.126	.062	.017	.124	.061	.017	.119	.060	.017	.115	.058	.017	.111	.057	.017															
9.0	.121	.058	.016	.119	.058	.016	.115	.057	.016	.111	.056	.016	.107	.054	.016															
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.107	.053	.015	.103	.052	.015															

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	.177	.177	.177	.151	.151	.151	.103	.103	.103	.059	.059	.059	.019	.019	.019	
1.0	.160	.146	.134	.136	.125	.115	.093	.086	.080	.054	.050	.046	.017	.016	.015	
2.0	.146	.123	.104	.125	.106	.090	.086	.073	.063	.049	.043	.037	.016	.014	.012	
3.0	.135	.106	.082	.116	.091	.071	.079	.063	.050	.046	.037	.029	.015	.012	.010	
4.0	.126	.092	.066	.108	.080	.058	.074	.055	.041	.043	.032	.024	.014	.011	.008	
5.0	.118	.081	.054	.102	.070	.047	.070	.049	.033	.041	.029	.020	.013	.009	.007	
6.0	.112	.073	.045	.096	.063	.039	.066	.044	.028	.038	.026	.017	.012	.009	.005	
7.0	.106	.066	.038	.091	.057	.033	.063	.040	.024	.037	.024	.014	.012	.008	.005	
8.0	.101	.060	.033	.087	.052	.028	.060	.037	.020	.035	.022	.012	.011	.007	.004	
9.0	.096	.056	.028	.083	.048	.025	.057	.034	.017	.033	.020	.010	.011	.007	.003	
10.0	.092	.052	.025	.079	.045	.022	.055	.032	.015	.032	.019	.009	.010	.006	.003	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm										
LumCAT: 2-3284-A					Test NO: 20260826-C020			Report NO: 20260826-B020		
LED HOLDER: 92.70.481.00					DIM.: ϕ 55 H22			Lamp No.: 1		
LampCAT: CITIZEN CLU028					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	25.4	26.4	25.6	26.6	26.7	25.5	26.5	25.7	26.7	26.8
3H	25.2	26.1	25.5	26.3	26.5	25.3	26.2	25.6	26.4	26.6
4H	25.1	26.0	25.4	26.2	26.4	25.2	26.1	25.5	26.3	26.5
6H	25.0	25.9	25.3	26.1	26.3	25.1	25.9	25.4	26.2	26.4
8H	25.0	25.8	25.3	26.0	26.3	25.1	25.9	25.4	26.1	26.4
12H	25.0	25.7	25.3	26.0	26.2	25.0	25.8	25.4	26.0	26.3
4H 2H	25.1	26.0	25.4	26.2	26.4	25.2	26.1	25.5	26.3	26.5
3H	25.0	25.7	25.3	26.0	26.2	25.0	25.8	25.4	26.0	26.3
4H	24.9	25.5	25.2	25.8	26.1	24.9	25.6	25.3	25.9	26.2
6H	24.8	25.4	25.1	25.7	26.0	24.8	25.4	25.2	25.8	26.1
8H	24.7	25.3	25.1	25.6	26.0	24.8	25.3	25.2	25.7	26.1
12H	24.7	25.2	25.1	25.5	25.9	24.7	25.2	25.2	25.6	26.0
8H 4H	24.7	25.3	25.1	25.6	26.0	24.8	25.3	25.2	25.7	26.1
6H	24.6	25.1	25.0	25.5	25.9	24.7	25.1	25.1	25.5	26.0
8H	24.6	25.0	25.0	25.4	25.8	24.6	25.0	25.1	25.5	25.9
12H	24.5	24.9	25.0	25.3	25.8	24.6	24.9	25.1	25.4	25.8
12H 4H	24.7	25.2	25.1	25.5	25.9	24.7	25.2	25.2	25.6	26.0
6H	24.6	25.0	25.0	25.4	25.8	24.6	25.0	25.1	25.5	25.9
8H	24.5	24.9	25.0	25.3	25.8	24.6	24.9	25.1	25.4	25.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.6 / -17.6					+ 2.6 / -19.1				
1.5H	+ 4.7 / -15.0					+ 4.8 / -16.3				
2.0H	+ 8.3 / -12.8					+ 8.4 / -13.4				

CIE Pub.117, 1609 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.7$)
 Area: 0.0094 m²

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.0℃
 Operators:ZJW
 Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: φ55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

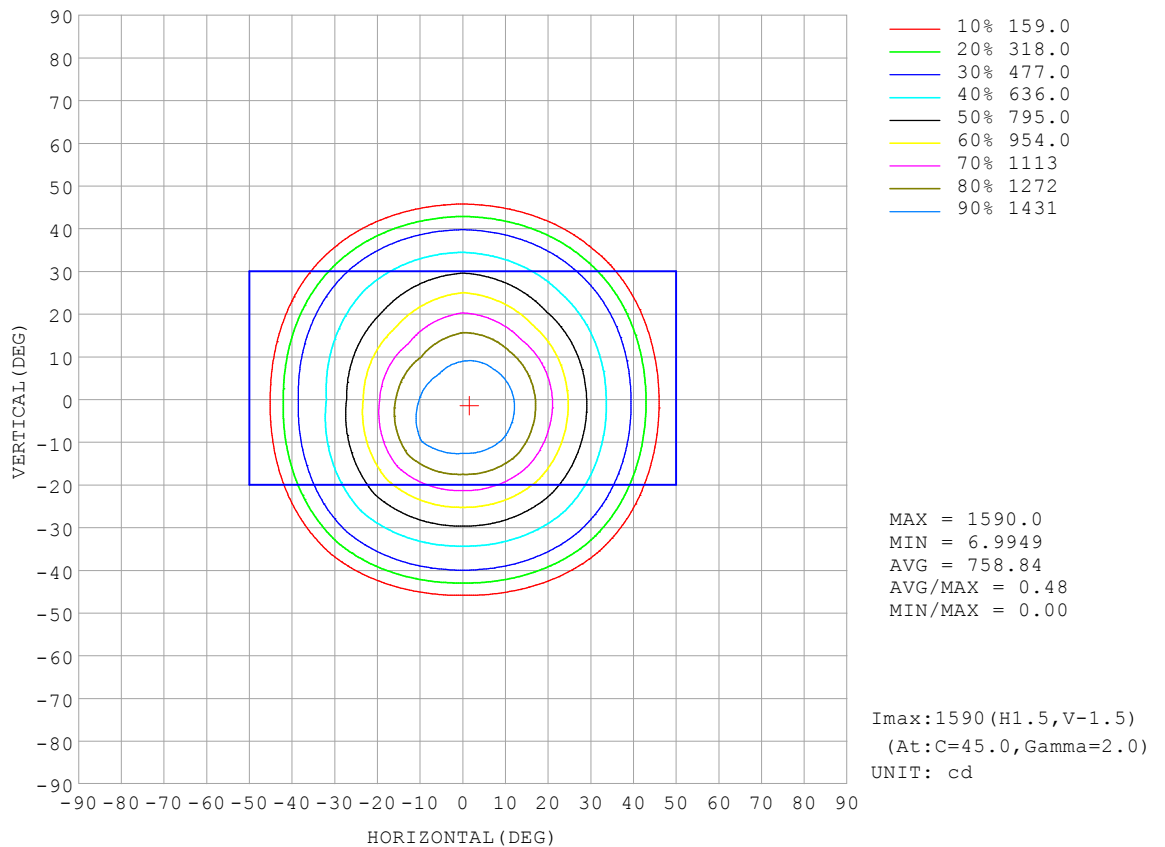
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	72	68	78	72	68	77	71	68	64
0.80	86	80	76	85	80	76	84	79	76	72
1.00	91	85	81	90	85	81	88	85	81	77
1.25	95	90	86	94	89	86	92	88	85	81
1.50	97	93	89	96	92	89	94	91	88	84
2.00	100	96	93	99	95	92	96	93	91	86
2.50	102	98	95	100	97	94	97	95	93	87
3.00	103	100	97	102	99	96	99	96	94	88
4.00	105	103	100	103	101	99	100	98	97	90
5.00	107	104	102	105	103	101	101	99	98	91
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: 2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

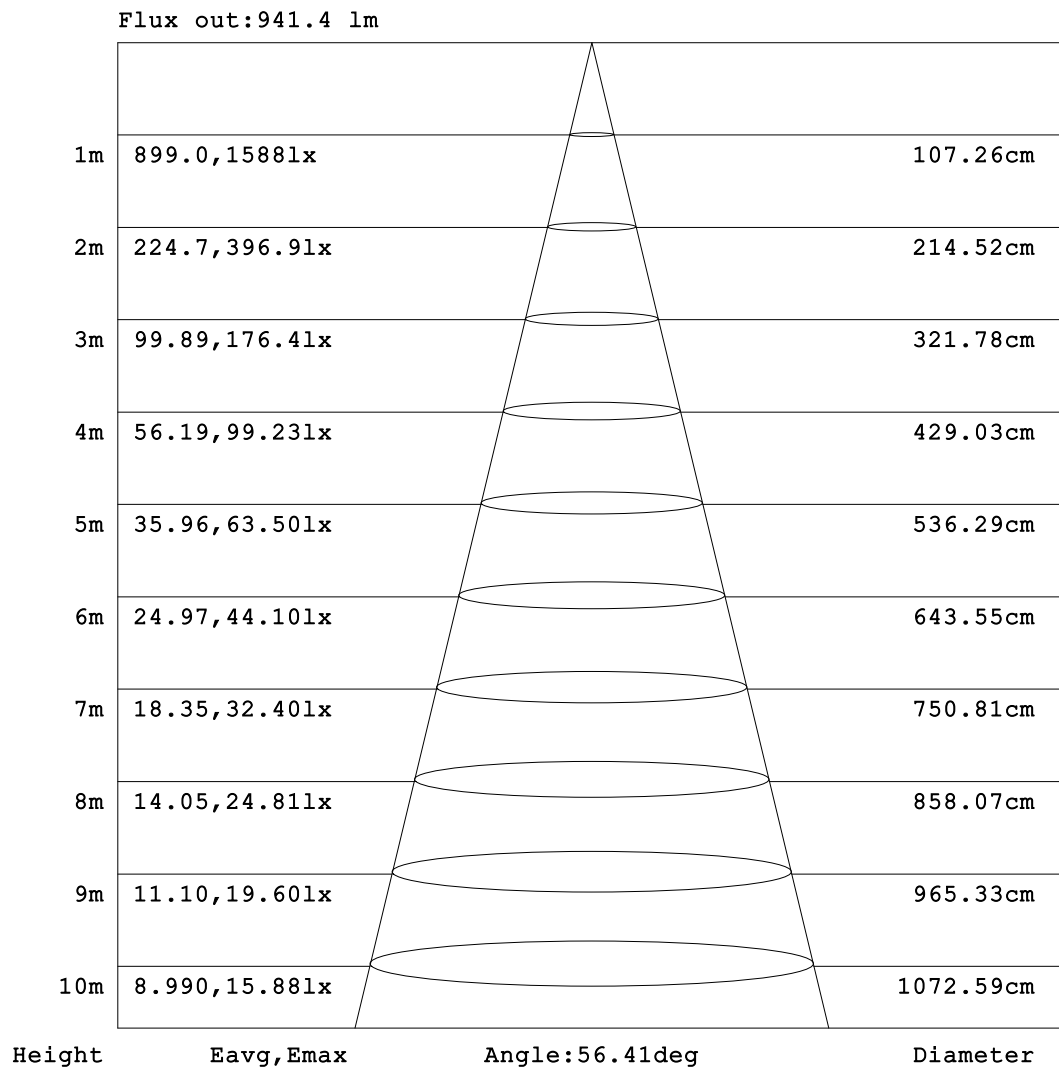


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0°C
Operators:ZJW
Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	



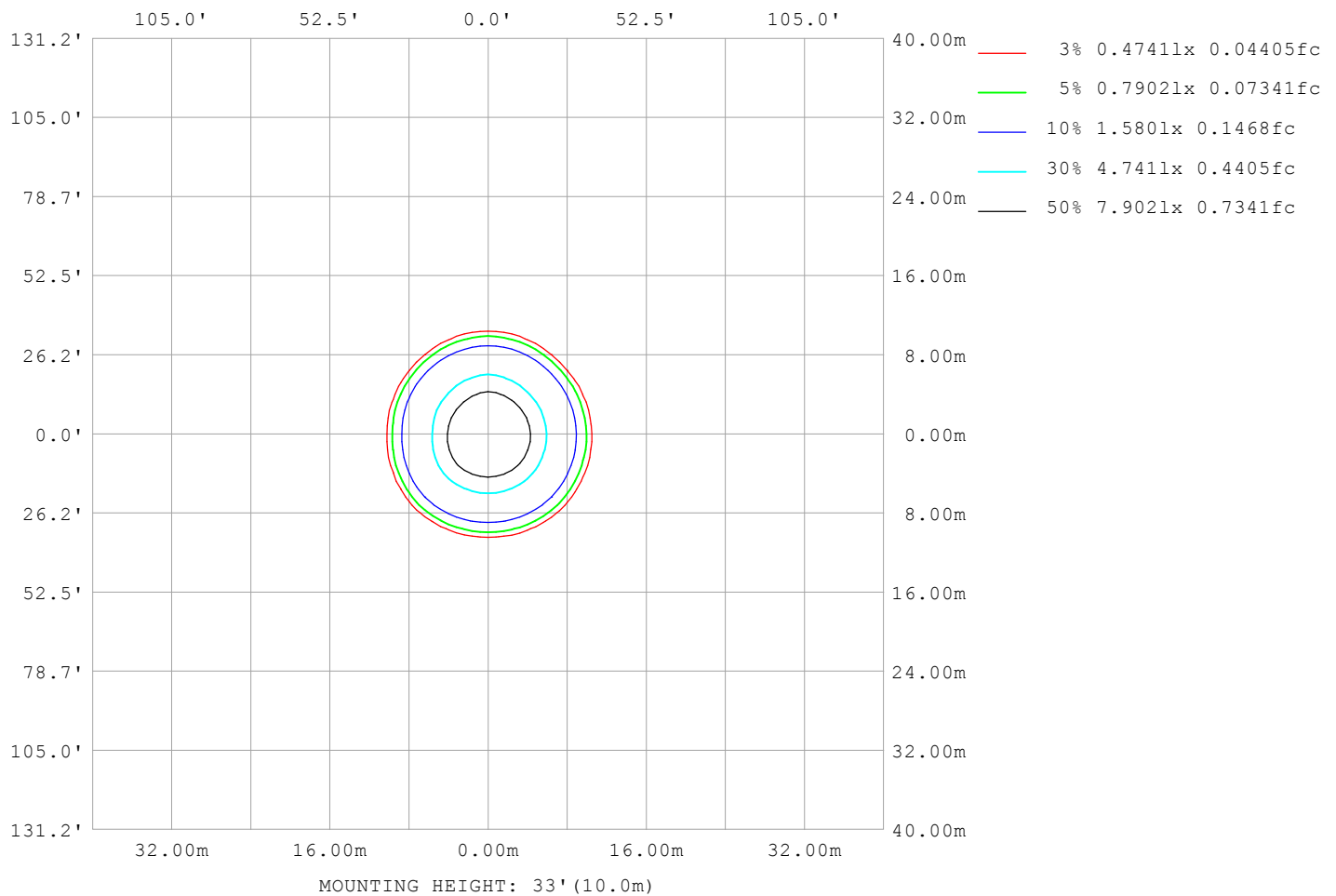
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0°C
Operators:ZJW
Test Date:2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.0°C
 Operators: ZJW
 Test Date: 2026-08-26

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:

LED Avg.L Report

Test:U:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: φ55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

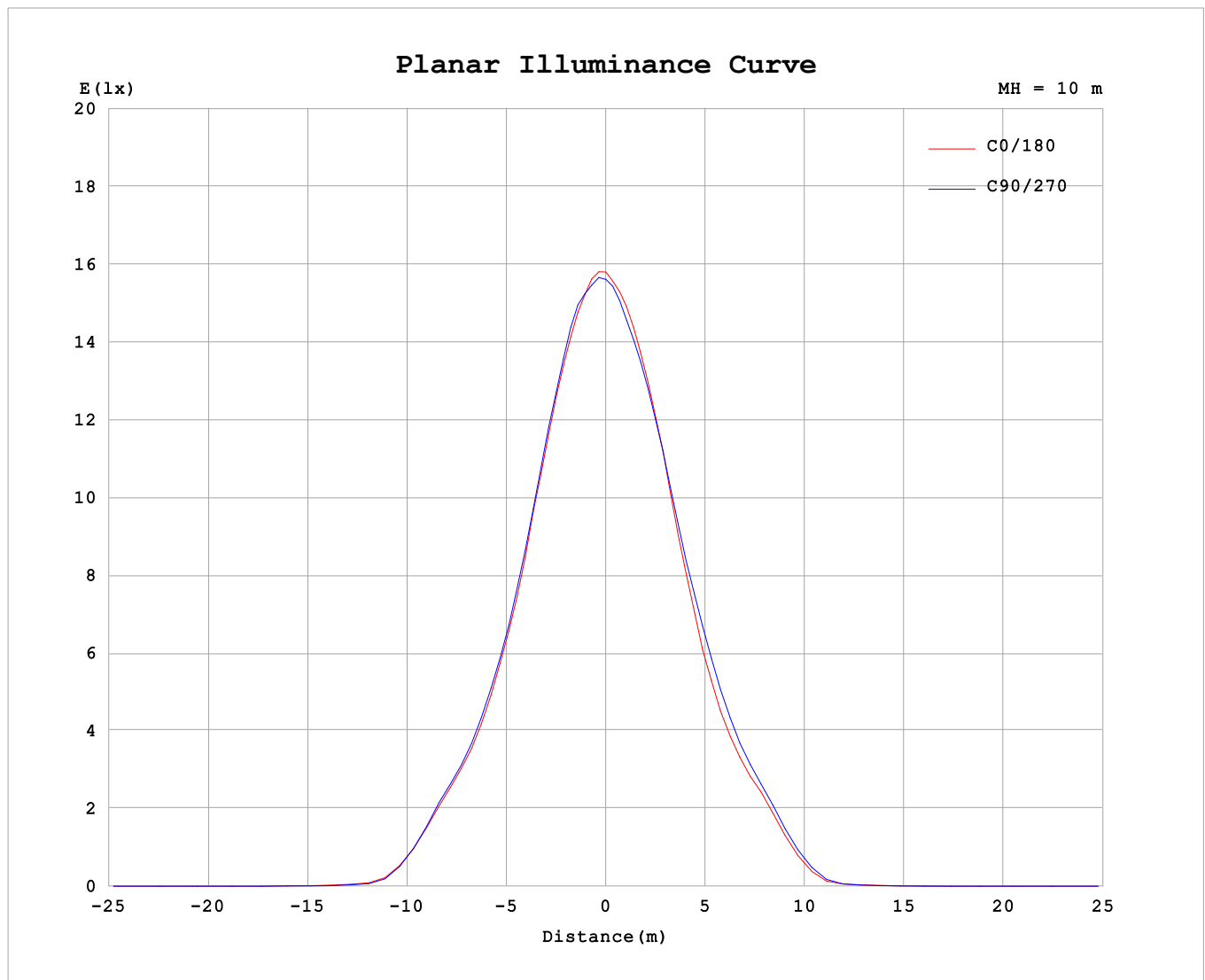
AvgL	cd/m2
L_0~180 (65) av	687
L_0~180 (75) av	586
L_0~180 (85) av	659
L_90~270 (65) av	562
L_90~270 (75) av	512
L_90~270 (85) av	825
L_45 (65) av	553
L_45 (75) av	457
L_45 (85) av	587

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
Operators:ZJW
Test Date:2026-08-26

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: 2026-08-26

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:230.43V I:0.0701A P:14.290W PF:0.8841 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3284-A	Test NO: 20260826-C020	Report NO: 20260826-B020
LED HOLDER: 92.70.481.00	DIM.: ø55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.0°C
Operators: ZJW
Test Date: 2026-08-26

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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:

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