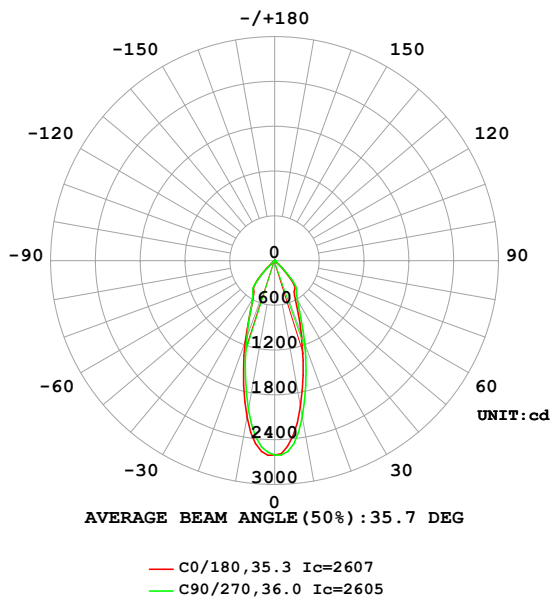


LUMINAIRE PHOTOMETRIC TEST REPORT

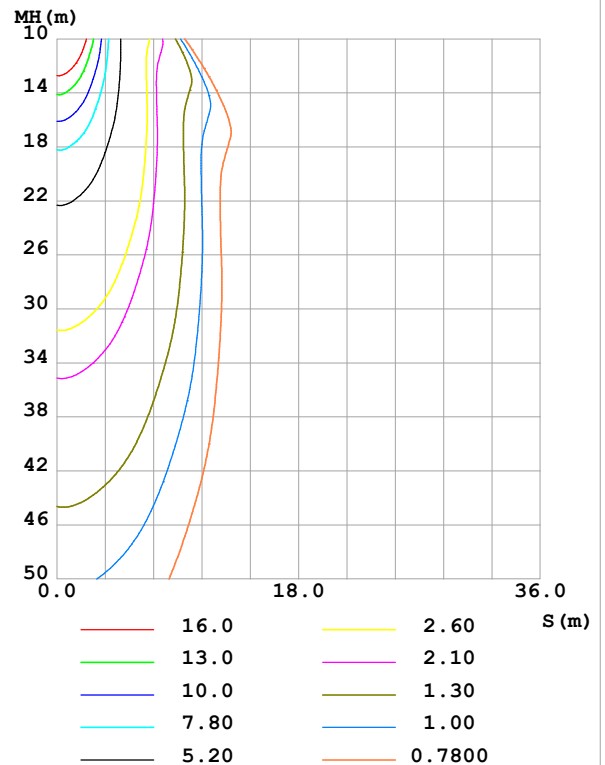
Test:U:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 104.70 lm/W
MODEL		Imax (cd)	2607	S/MH(C0/180)		0.59
NOMINAL POWER(W)	10	LOR(%)	93.0	S/MH(C90/270)		0.57
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1496.7	η UP,DN(C0-180)		0.0,46.9
NOMINAL FLUX(lm)	1609.3	CIE CLASS	DIRECT	η UP,DN(C180-360)		0.0,46.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM		0.50
TEST VOLTAGE(V)	34.9	η down (%)	93.0	CIBSE SHR MAX		0.60

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	1989	2083	2129	2091	2130	2068	2026	1988	0- 10	223.3	223.3	14.9,13.9
20	1043	1157	1181	1173	1159	1093	1087	1046	10- 20	432.1	655.4	43.8,40.7
30	536.6	610.2	609.7	612.8	588.9	582.4	598.6	588.8	20- 30	367.3	1023	68.3,63.6
40	374.2	428.4	437.1	440.3	419.8	421.7	411.8	415.3	30- 40	317.0	1340	89.5,83.3
50	22.66	22.44	24.27	25.33	28.72	19.19	17.62	17.93	40- 50	145.7	1485	99.3,92.3
60	3.229	2.876	3.207	2.811	3.343	2.413	2.580	2.538	50- 60	8.294	1494	99.8,92.8
70	1.060	0.8671	1.166	0.8790	1.221	1.052	1.084	1.017	60- 70	1.626	1495	99.9,92.9
80	0.6223	0.4816	0.6110	0.5294	0.9079	0.4088	0.6310	0.4203	70- 80	0.8424	1496	100,93
90	0.3867	0.0536	0.0801	0.1732	0.2219	0.1373	0.1135	0.0733	80- 90	0.4516	1497	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): 1464.1 lm

%lum = 97.8%

%lamp = 91.0%

Conical surface Flux(130deg): 1494.9 lm

%lum = 99.9%

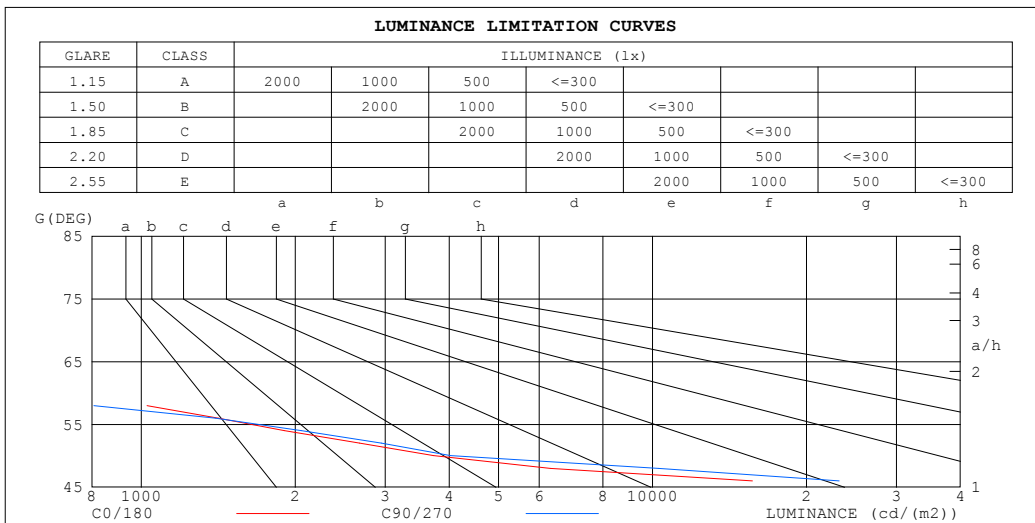
%lamp = 92.9%

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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
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	491	633
80	379	375
75	362	381
70	328	363
65	431	452
60	683	684
55	1951	2107
50	3730	4025
45	28011	38041

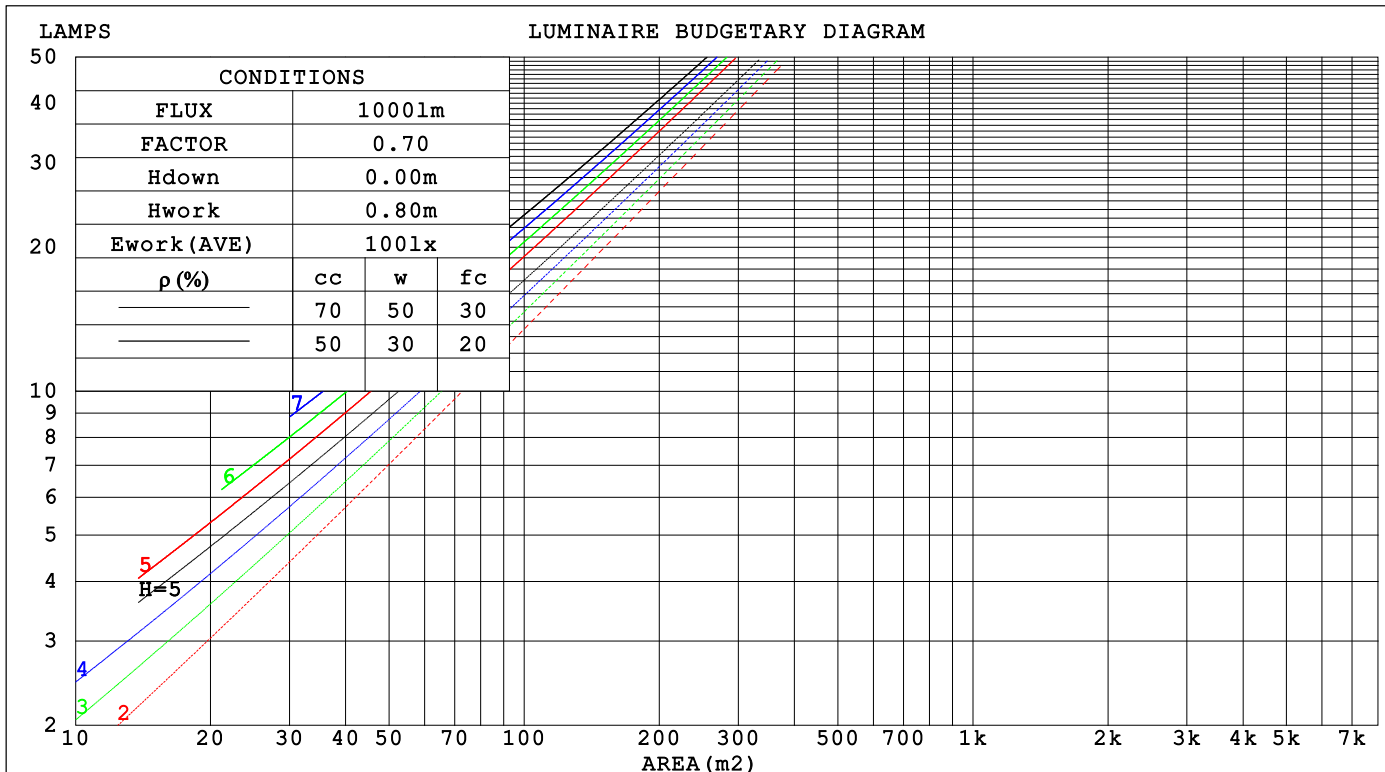
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.0℃
 Operators:ZJW
 Test Date:2026-08-26

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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A			Test NO: 20260826-C018			Report NO: 20260826-B018		
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	1.01	.99	1.01	.99	.97	.97	.96	.94	.94	.93	.91	.91	.90	.89	.87
2.0	.96	.92	.89	.95	.91	.88	.92	.89	.86	.89	.87	.85	.86	.84	.83	.81
3.0	.90	.85	.82	.88	.84	.81	.86	.83	.80	.84	.81	.78	.82	.79	.77	.76
4.0	.84	.79	.75	.83	.78	.75	.81	.77	.74	.79	.76	.73	.77	.75	.72	.71
5.0	.79	.74	.70	.78	.73	.69	.76	.72	.69	.75	.71	.68	.73	.70	.67	.66
6.0	.74	.69	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.70	.66	.63	.62
7.0	.70	.64	.61	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.59	.58
8.0	.66	.61	.57	.66	.60	.57	.65	.60	.57	.64	.59	.56	.63	.59	.56	.55
9.0	.63	.57	.54	.62	.57	.54	.61	.57	.53	.60	.56	.53	.60	.56	.53	.52
10.0	.59	.54	.51	.59	.54	.51	.58	.54	.50	.58	.53	.50	.57	.53	.50	.49



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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A			Test NO: 20260826-C018			Report NO: 20260826-B018		
LED HOLDER: 92.70.481.00			DIM.: ø55 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	.163	.092	.029	.156	.089	.028	.145	.083	.027	.134	.077	.025	.124	.072	.023															
2.0	.156	.085	.026	.151	.083	.026	.141	.078	.024	.132	.074	.023	.123	.070	.022															
3.0	.149	.079	.024	.144	.077	.023	.136	.074	.022	.128	.070	.022	.121	.067	.021															
4.0	.142	.074	.022	.138	.072	.021	.131	.069	.021	.124	.067	.020	.118	.064	.019															
5.0	.135	.069	.020	.132	.068	.020	.126	.065	.019	.120	.063	.019	.114	.061	.018															
6.0	.129	.065	.019	.126	.064	.018	.121	.062	.018	.115	.060	.018	.110	.058	.017															
7.0	.123	.061	.017	.121	.060	.017	.116	.059	.017	.111	.057	.017	.107	.055	.016															
8.0	.118	.058	.016	.116	.057	.016	.111	.056	.016	.107	.054	.016	.103	.053	.015															
9.0	.113	.055	.015	.111	.054	.015	.107	.053	.015	.103	.052	.015	.100	.051	.015															
10.0	.108	.052	.014	.106	.051	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014															

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	.159	.146	.135	.136	.126	.116	.093	.086	.080	.054	.050	.047	.017	.016	.015	
2.0	.145	.123	.105	.124	.106	.091	.085	.073	.063	.049	.043	.037	.016	.014	.012	
3.0	.133	.106	.084	.114	.091	.072	.078	.063	.051	.045	.037	.030	.015	.012	.010	
4.0	.124	.092	.068	.106	.079	.059	.073	.055	.041	.042	.032	.024	.014	.011	.008	
5.0	.116	.081	.056	.099	.070	.048	.068	.049	.034	.040	.029	.020	.013	.009	.007	
6.0	.109	.072	.046	.093	.063	.040	.064	.044	.029	.037	.026	.017	.012	.008	.006	
7.0	.103	.065	.039	.088	.057	.034	.061	.040	.024	.035	.023	.014	.011	.008	.005	
8.0	.097	.060	.034	.084	.052	.029	.058	.036	.021	.034	.021	.012	.011	.007	.004	
9.0	.093	.055	.029	.080	.048	.025	.055	.033	.018	.032	.020	.011	.010	.006	.004	
10.0	.088	.051	.026	.076	.044	.022	.053	.031	.016	.031	.018	.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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm										
LumCAT: 2-3283-A					Test NO: 20260826-C018			Report NO: 20260826-B018		
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	23.9	24.8	24.1	25.0	25.1	24.4	25.4	24.7	25.5	25.7
3H	23.7	24.5	23.9	24.7	24.9	24.3	25.1	24.5	25.3	25.5
4H	23.6	24.4	23.9	24.6	24.9	24.2	25.0	24.5	25.2	25.4
6H	23.5	24.3	23.8	24.5	24.8	24.1	24.9	24.4	25.1	25.3
8H	23.5	24.2	23.8	24.5	24.7	24.1	24.8	24.4	25.0	25.3
12H	23.4	24.1	23.7	24.4	24.7	24.0	24.7	24.3	25.0	25.3
4H 2H	23.6	24.4	23.9	24.6	24.9	24.2	25.0	24.5	25.2	25.4
3H	23.4	24.1	23.7	24.4	24.7	24.0	24.7	24.3	25.0	25.3
4H	23.3	24.0	23.7	24.3	24.6	23.9	24.5	24.3	24.8	25.2
6H	23.2	23.8	23.6	24.1	24.5	23.8	24.4	24.2	24.7	25.1
8H	23.2	23.7	23.6	24.1	24.4	23.8	24.3	24.2	24.6	25.0
12H	23.1	23.6	23.5	24.0	24.4	23.7	24.2	24.1	24.6	25.0
8H 4H	23.2	23.7	23.6	24.1	24.4	23.8	24.3	24.2	24.6	25.0
6H	23.1	23.5	23.5	23.9	24.3	23.7	24.1	24.1	24.5	24.9
8H	23.0	23.4	23.5	23.8	24.3	23.6	24.0	24.1	24.4	24.8
12H	23.0	23.3	23.4	23.7	24.2	23.6	23.9	24.0	24.3	24.8
12H 4H	23.1	23.6	23.5	24.0	24.4	23.7	24.2	24.1	24.6	24.9
6H	23.0	23.4	23.5	23.8	24.3	23.6	24.0	24.1	24.4	24.8
8H	23.0	23.3	23.4	23.7	24.2	23.6	23.9	24.0	24.3	24.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.6 / -19.6					+ 2.7 / -20.9				
1.5H	+ 5.0 / -17.6					+ 4.8 / -18.2				
2.0H	+ 8.1 / -13.9					+ 8.7 / -15.7				

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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: φ55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

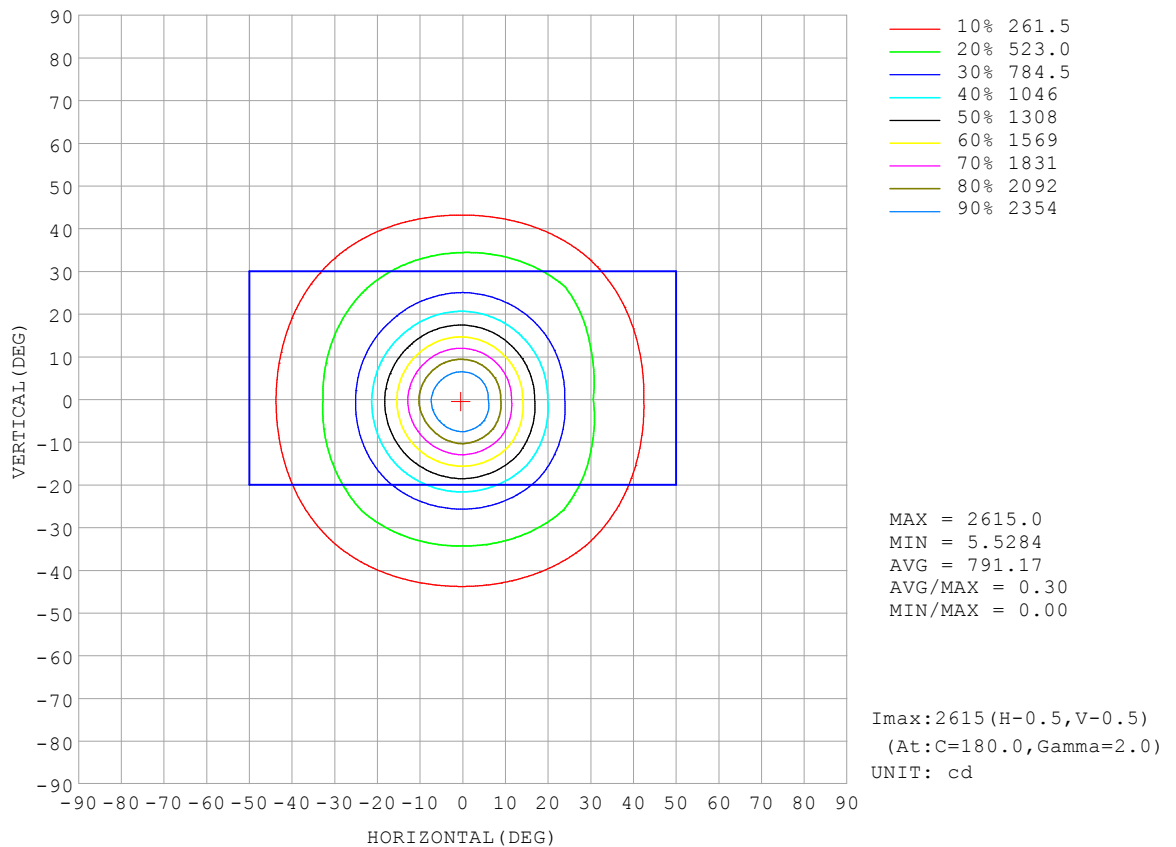
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	79	73	69	79	73	69	78	72	69	65
0.80	86	81	77	86	80	77	85	80	76	73
1.00	91	86	82	90	85	82	89	85	81	78
1.25	95	90	87	94	90	86	92	88	86	82
1.50	98	93	90	97	93	90	95	91	89	84
2.00	101	97	94	99	96	93	97	94	91	86
2.50	102	98	96	101	97	95	98	95	93	87
3.00	104	100	98	102	99	97	99	97	95	89
4.00	106	103	101	104	101	99	100	98	97	90
5.00	107	104	103	105	103	101	101	100	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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

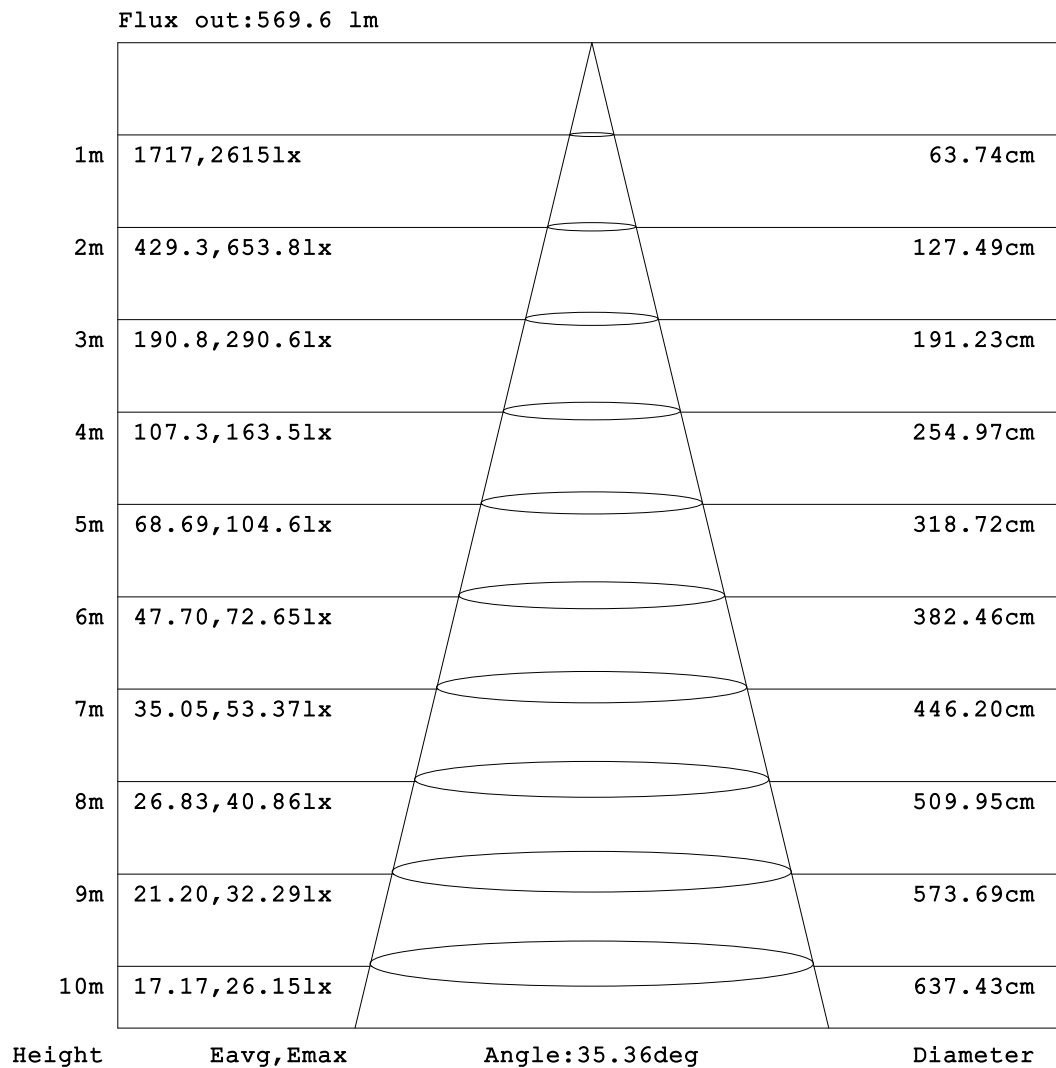


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0°C
Operators:ZJW
Test Date:2026-08-26

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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: ϕ 55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	



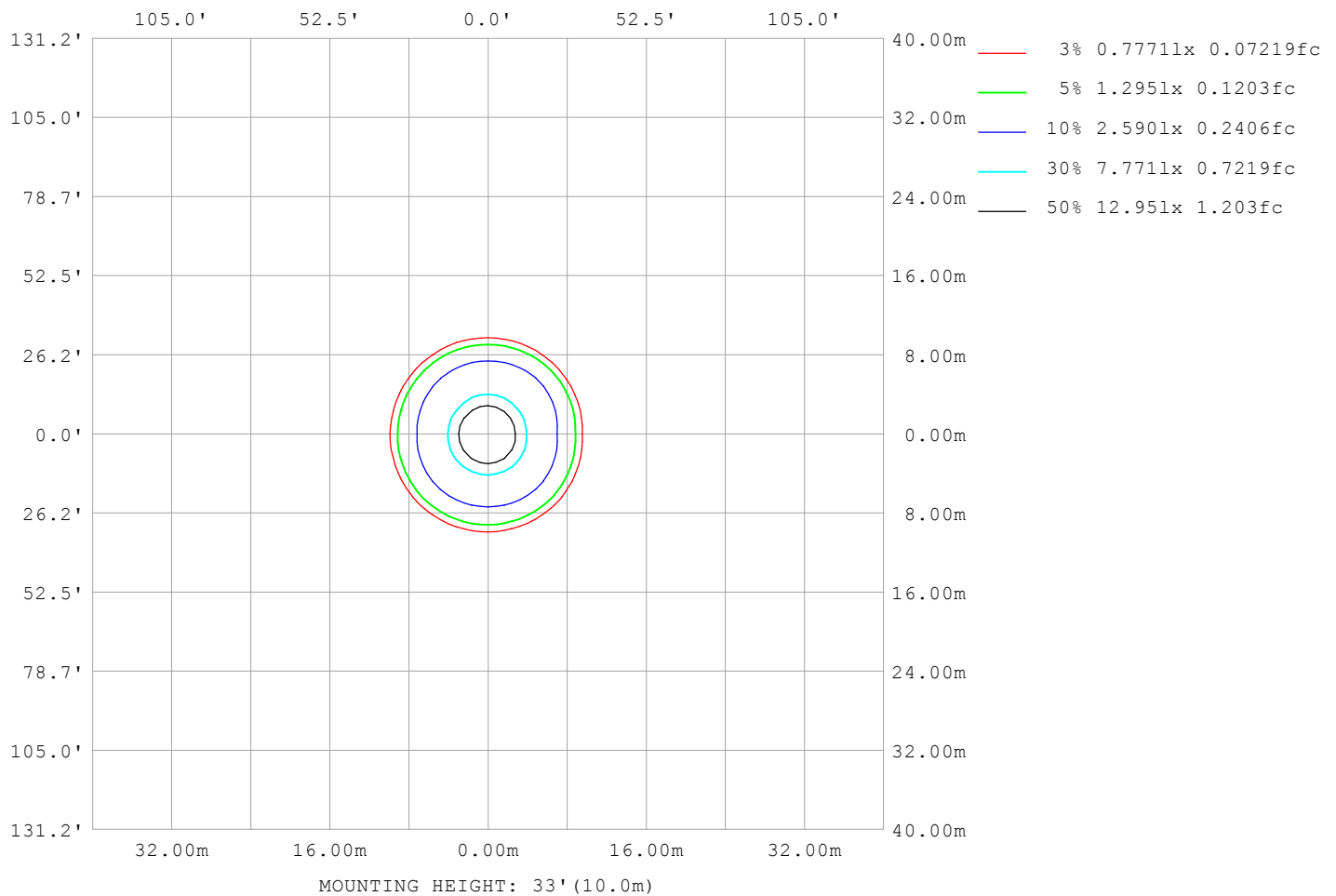
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.0℃
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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: $\phi 55$ 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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
LED HOLDER: 92.70.481.00	DIM.: φ55 H22	Lamp No.: 1
LampCAT: CITIZEN CLU028	MFR.: NATA	

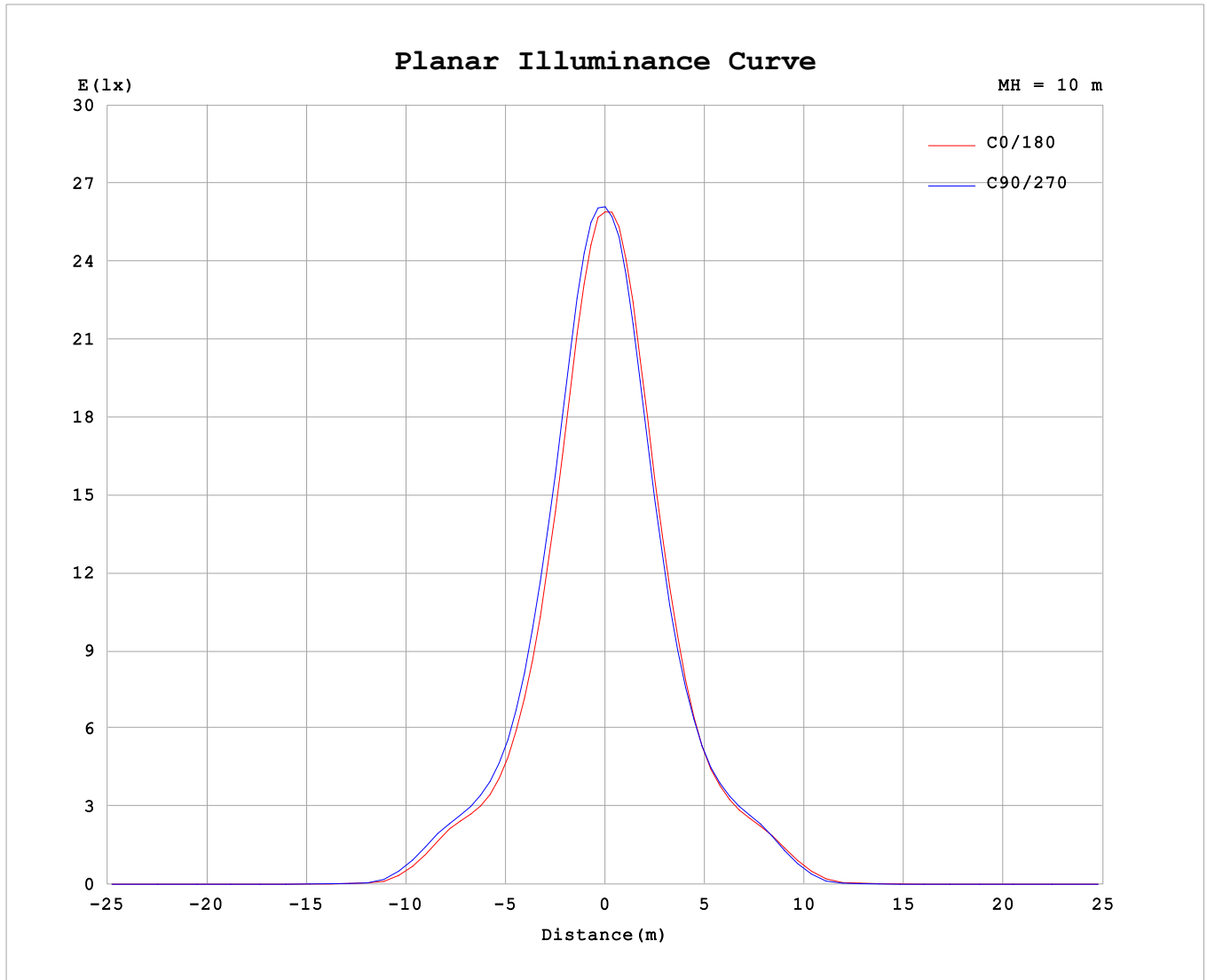
AvgL	cd/m2
L_0~180 (65) av	396
L_0~180 (75) av	394
L_0~180 (85) av	502
L_90~270 (65) av	392
L_90~270 (75) av	336
L_90~270 (85) av	701
L_45 (65) av	342
L_45 (75) av	285
L_45 (85) av	379

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:230.46V I:0.0701A P:14.295W PF:0.8848 Freq:50.18Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1609.3x1 lm		
LumCAT: 2-3283-A	Test NO: 20260826-C018	Report NO: 20260826-B018
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:

```