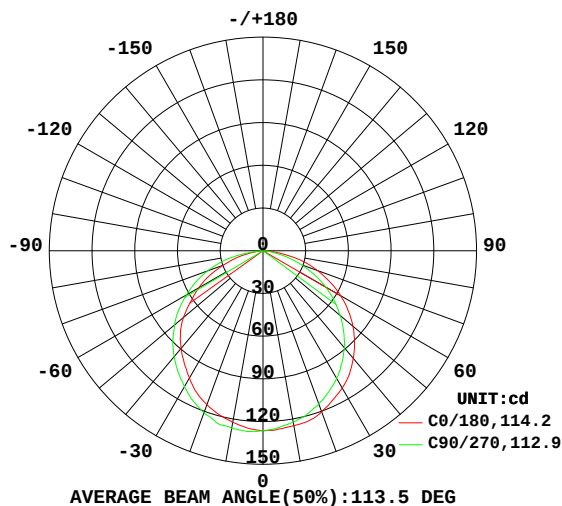


LUMINAIRE PHOTOMETRIC TEST REPORT

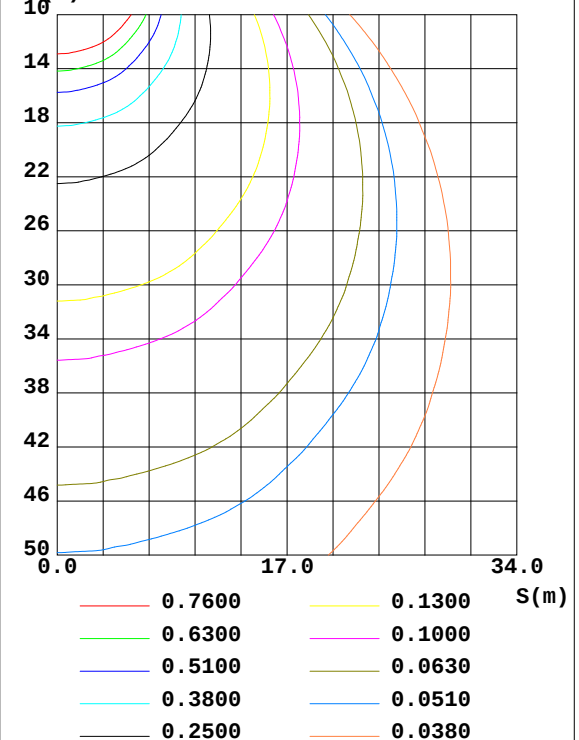
Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 91.67 lm/W			
MODEL	21031151 120V-4W-590nm	I _{max} (cd)	127.4	S/MH(C0/180)	1.22
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	365.19	η UP, DN(C0-180)	0.0, 48.3
NOMINAL FLUX(lm)	365.191	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	124.7	125.9	122.2	123.0	122.3	124.8	126.7	125.2	0- 10	11.98	11.98	3.28,3.28
20	120.5	119.2	114.5	115.2	115.1	118.5	121.2	119.6	10- 20	34.39	46.37	12.7,12.7
30	111.3	109.0	103.4	103.4	103.2	107.9	110.2	110.8	20- 30	52.17	98.54	27,27
40	98.59	95.89	89.00	88.87	89.64	94.75	97.03	97.54	30- 40	63.21	161.8	44.3,44.3
50	82.39	78.90	70.78	71.43	72.93	77.23	81.15	83.39	40- 50	66.34	228.1	62.5,62.5
60	62.80	58.50	50.77	50.41	52.09	58.21	62.06	65.29	50- 60	60.53	288.6	79,79
70	40.62	35.79	28.66	27.72	29.84	36.40	41.53	43.98	60- 70	46.23	334.9	91.7,91.7
80	16.24	13.29	7.923	6.580	8.716	14.42	16.03	21.37	70- 80	25.66	360.5	98.7,98.7
90	0	0	0	0	0	0	0	0.9065	80- 90	4.679	365.2	100,100
100	0	0	0	0	0	0	0	0	90-100	0.0031	365.2	100,100
110	0	0	0	0	0	0	0	0	100-110	0	365.2	100,100
120	0	0	0	0	0	0	0	0	110-120	0	365.2	100,100
130	0	0	0	0	0	0	0	0	120-130	0	365.2	100,100
140	0	0	0	0	0	0	0	0	130-140	0	365.2	100,100
150	0	0	0	0	0	0	0	0	140-150	0	365.2	100,100
160	0	0	0	0	0	0	0	0	150-160	0	365.2	100,100
170	0	0	0	0	0	0	0	0	160-170	0	365.2	100,100
180	0	0	0	0	0	0	0	0	170-180	0	365.2	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 195.08 lm

%lum = 53.4%

%lamp = 53.4%

Conical surface Flux(120deg): 288.62 lm

%lum = 79.0%

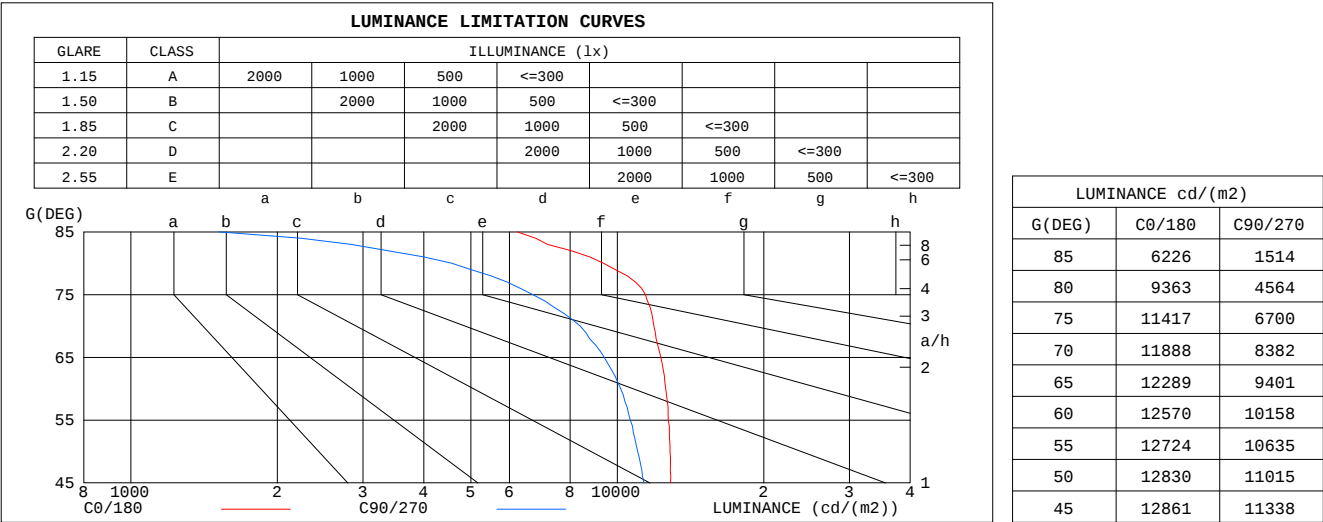
%lamp = 79.0%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

WEC AND CCEC

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm														
NAME:					TYPE:LED					WEIGHT:N/A				
SPEC.:N/A					DIM.:					SERIAL No.:N/A				
MFR.:					SUR.:					Shielding Angle:N/A				

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.305	.173	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.261	.151	.049	
2.0	.290	.159	.049	.284	.156	.048	.272	.151	.047	.261	.147	.046	.251	.142	.045	
3.0	.269	.143	.043	.264	.141	.043	.254	.137	.042	.244	.134	.041	.235	.130	.040	
4.0	.249	.129	.038	.244	.128	.038	.235	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.231	.117	.034	.226	.116	.034	.218	.114	.033	.210	.111	.033	.203	.109	.033	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.199	.098	.028	.196	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.172	.087	.025	.167	.086	.025	
9.0	.174	.084	.024	.172	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.161	.078	.022	.157	.077	.022	.152	.076	.022	.148	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm											
NAME:					TYPE:LED			WEIGHT:N/A			
SPEC.:N/A					DIM.:			SERIAL No.:N/A			
MFR.:					SUR.:			Shielding Angle:N/A			
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	2H	21.9	23.4	22.2	23.6	23.8	21.1	22.6	21.3	22.8	23.0
	3H	23.5	24.9	23.8	25.2	25.4	22.4	23.8	22.7	24.0	24.2
	4H	24.2	25.6	24.5	25.8	26.1	22.8	24.1	23.1	24.3	24.6
	6H	24.7	25.9	25.0	26.2	26.5	22.9	24.2	23.3	24.5	24.7
	8H	24.8	26.0	25.1	26.3	26.6	22.9	24.2	23.3	24.4	24.7
	12H	24.8	26.0	25.2	26.3	26.6	22.9	24.1	23.3	24.4	24.7
4H	2H	22.4	23.8	22.7	24.0	24.3	21.8	23.1	22.1	23.4	23.6
	3H	24.3	25.4	24.6	25.7	26.0	23.3	24.4	23.6	24.7	25.0
	4H	25.1	26.1	25.5	26.5	26.8	23.8	24.8	24.2	25.2	25.5
	6H	25.7	26.6	26.1	27.0	27.3	24.0	25.0	24.4	25.3	25.7
	8H	25.8	26.7	26.2	27.1	27.5	24.1	25.0	24.5	25.3	25.7
	12H	25.9	26.7	26.3	27.1	27.5	24.1	24.9	24.5	25.3	25.7
8H	4H	25.3	26.1	25.7	26.5	26.9	24.1	25.0	24.5	25.4	25.7
	6H	26.0	26.7	26.4	27.1	27.6	24.5	25.2	24.9	25.6	26.1
	8H	26.2	26.9	26.7	27.3	27.8	24.6	25.2	25.0	25.6	26.1
	12H	26.3	26.9	26.8	27.3	27.8	24.6	25.1	25.1	25.6	26.1
12H	4H	25.3	26.1	25.7	26.4	26.9	24.1	24.9	24.6	25.3	25.7
	6H	26.0	26.7	26.5	27.1	27.5	24.6	25.2	25.0	25.6	26.1
	8H	26.3	26.8	26.8	27.3	27.8	24.7	25.2	25.1	25.7	26.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.3					
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.4					
2.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.4					

CIE Pub.117, 365.2 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -3.5$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

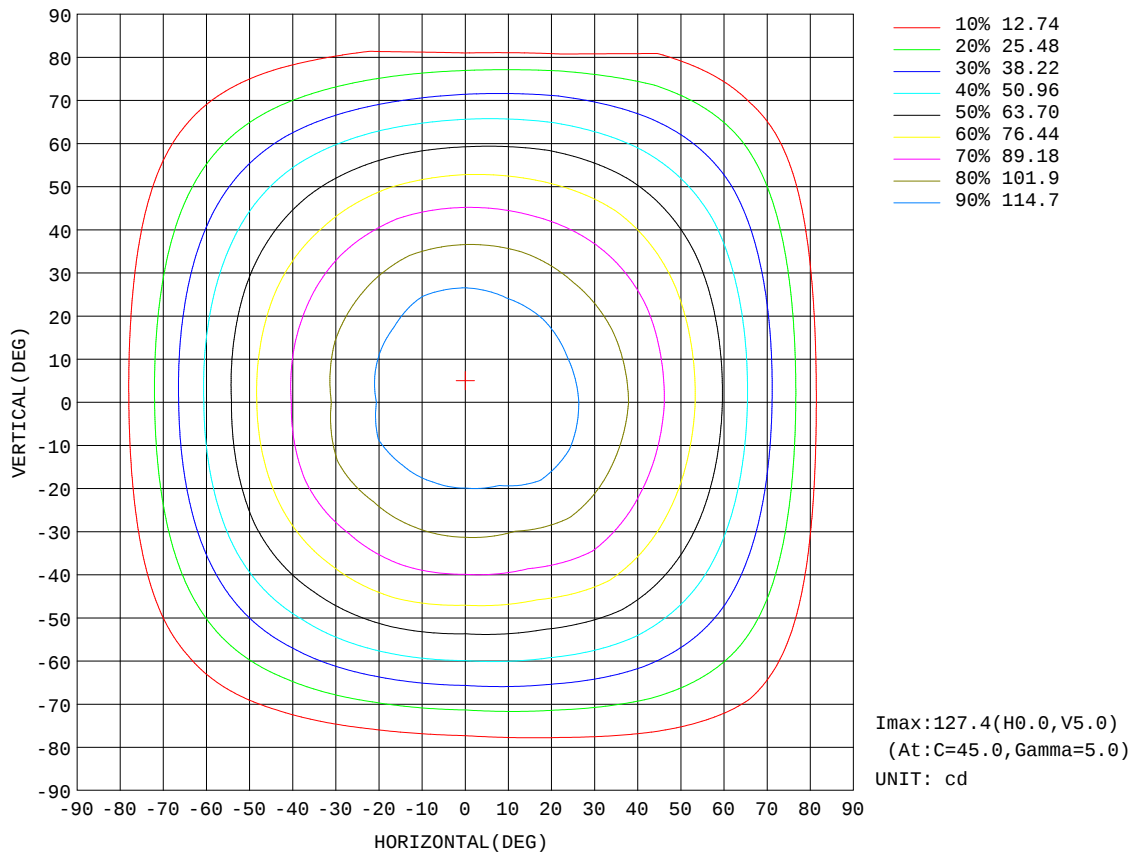
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	45	39	55	45	38	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	66	57	49
1.25	83	73	65	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	76	70	62
2.00	95	87	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	96	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:John Yao
 Test Date:2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
 Humidity:55%
 Test Distance:26.000m [K=1.5850]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

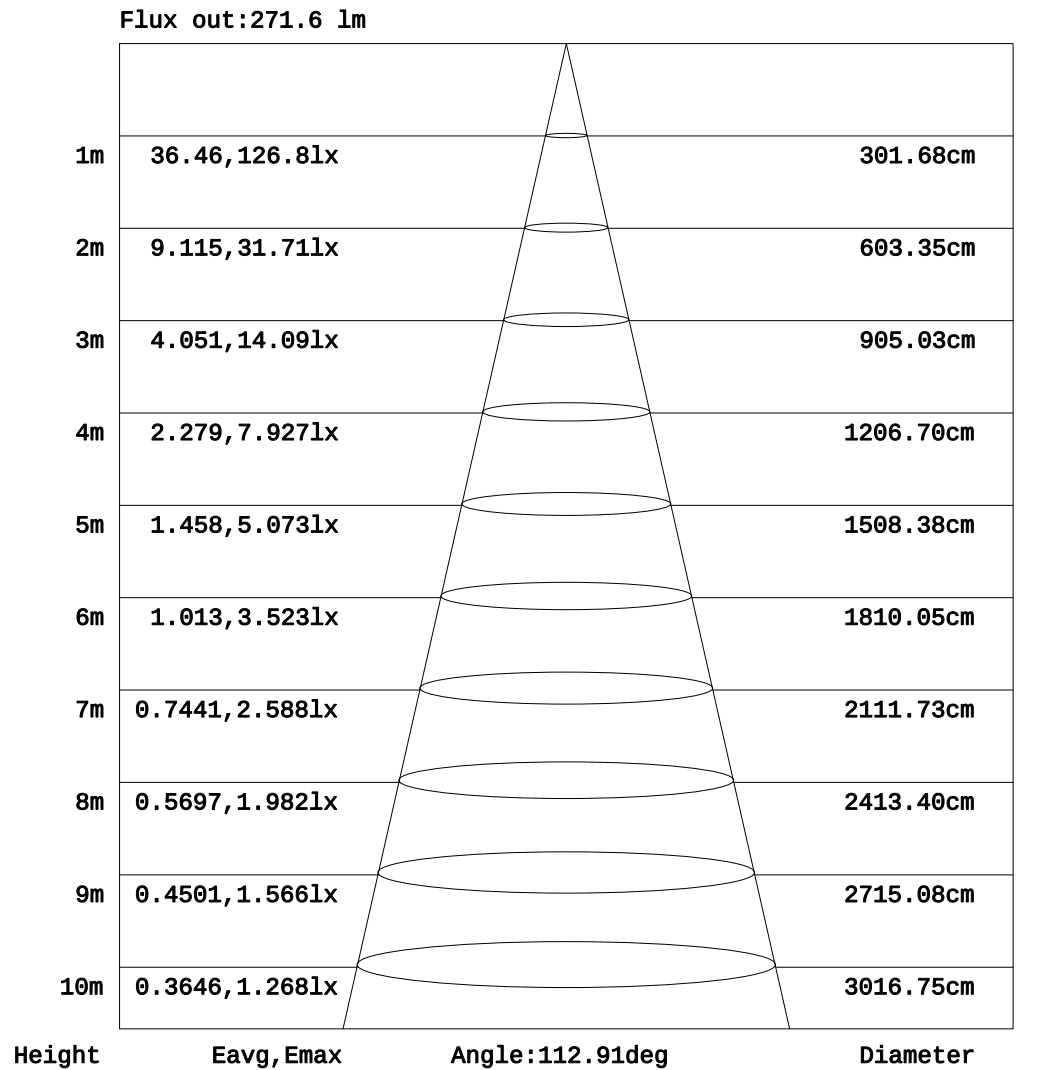


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:John Yao
Test Date:2026-01-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity:55%
Test Distance:26.000m [K=1.5850]
Remarks:

AAI Figure

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.19lx1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

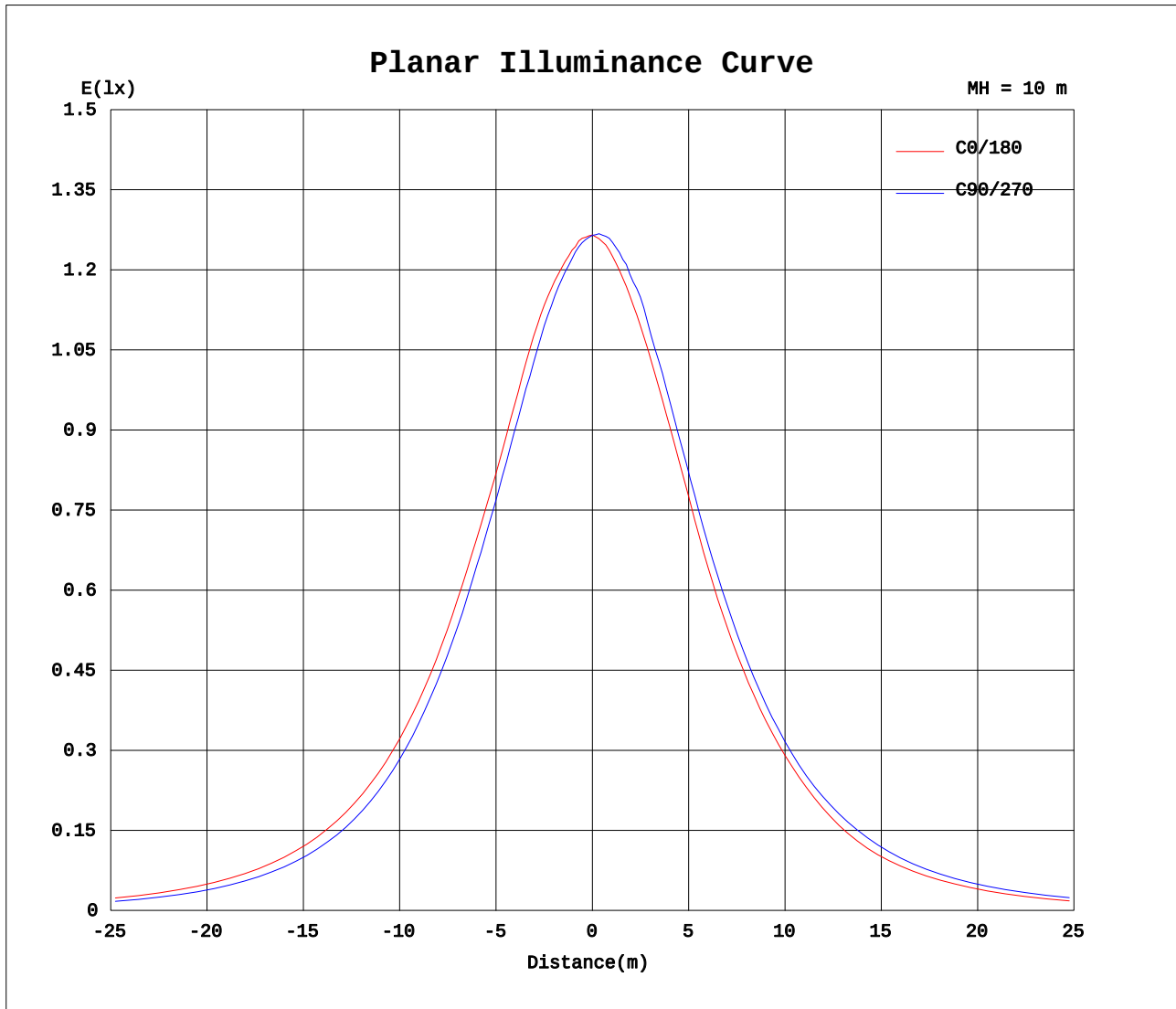


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:John Yao
 Test Date:2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
 Humidity:55%
 Test Distance:26.000m [K=1.5850]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 24.5DEG
Operators: John Yao
Test Date: 2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.366
Humidity: 55%
Test Distance: 26.000m [K=1.5850]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.21V I:0.0364A P:3.9838W PF:0.9099 Freq:60.01Hz Lamp Flux:365.191x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

Table--1

UNIT: cd

C(°) \ γ (°)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126			
5	126	126	127	126	125	125	126	126	125	126	126	127	127	127	127	127			
10	125	126	126	123	122	122	123	124	122	125	125	126	127	126	125	126			
15	124	124	123	120	119	119	120	121	119	121	122	124	125	124	123	123			
20	121	120	119	116	115	114	115	116	115	117	118	121	121	120	120	120			
25	116	116	115	110	109	109	110	112	110	111	114	116	116	115	116	115			
30	111	110	109	105	103	103	103	105	103	105	108	111	110	110	111	110			
35	106	104	103	98.1	96.4	96.3	96.5	98.0	96.4	98.8	101	104	104	104	105	105			
40	98.6	96.8	95.9	90.8	89.0	89.2	88.9	90.4	89.6	91.8	94.8	96.7	97.0	97.3	97.5	99.0			
45	90.9	88.9	87.9	82.1	80.1	80.9	80.8	81.6	82.1	83.7	86.5	89.1	89.4	89.7	91.0	91.4			
50	82.4	80.3	78.9	73.0	70.8	71.7	71.4	72.6	72.9	75.4	77.2	80.3	81.1	82.0	83.4	83.4			
55	72.9	70.7	68.9	63.6	61.0	61.5	61.7	62.9	61.7	65.5	68.5	70.8	72.3	73.5	74.8	74.5			
60	62.8	60.6	58.5	53.7	50.8	50.5	50.4	51.9	52.1	54.9	58.2	60.6	62.1	64.3	65.3	64.7			
65	51.9	49.5	46.9	42.6	39.7	39.1	39.0	40.1	41.6	44.6	47.9	50.3	52.1	54.1	54.8	54.2			
70	40.6	38.6	35.8	31.7	28.7	27.6	27.7	28.7	29.8	32.9	36.4	39.0	41.5	43.4	44.0	43.6			
75	29.5	27.3	24.6	20.4	17.3	16.5	16.1	16.9	19.1	21.7	24.7	27.5	30.2	32.1	32.6	31.8			
80	16.2	15.9	13.3	10.2	7.92	6.99	6.58	7.10	8.72	11.3	14.4	17.0	16.0	17.9	21.4	18.8			
85	5.42	2.01	1.10	2.52	1.32	0.85	0.68	0.10	0.00	2.29	4.56	6.76	2.22	2.68	9.06	3.18			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:John Yao
 Test Date:2026-01-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.366
 Humidity:55%
 Test Distance:26.000m [K=1.5850]
 Remarks: