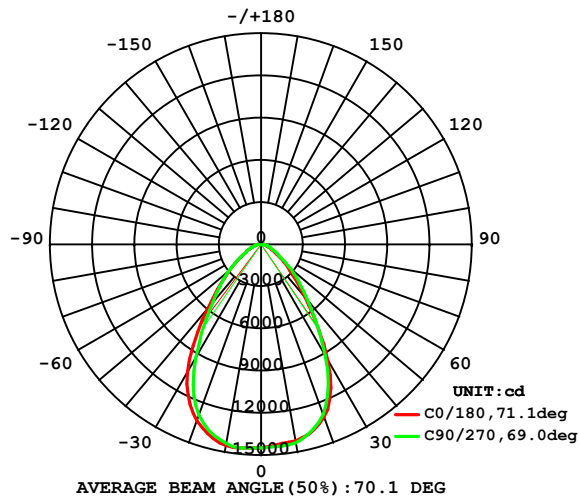


LUMINAIRE PHOTOMETRIC TEST REPORT

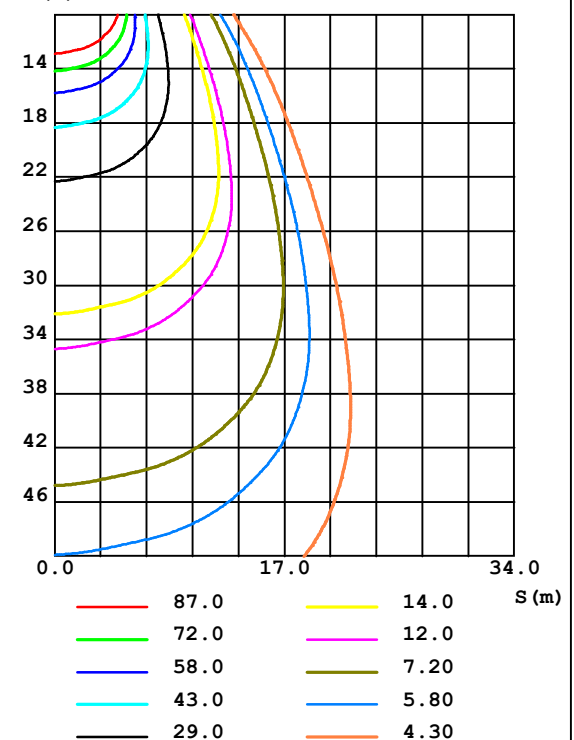
Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 150.17 lm/W			
MODEL: 2512232波兰U11-150W-4000K		Imax(cd)	14578	S/MH(C0/180)	1.01
NOMINAL POWER(W)	148	LOR(%)	103.5	S/MH(C90/270)	1.01
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	21732	η UP,DN(C0-180)	0.2,49.5
NOMINAL FLUX(lm)	20996.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,53.7
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	229.8	η down(%)	103.1	CIBSE SHR MAX	1.05

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



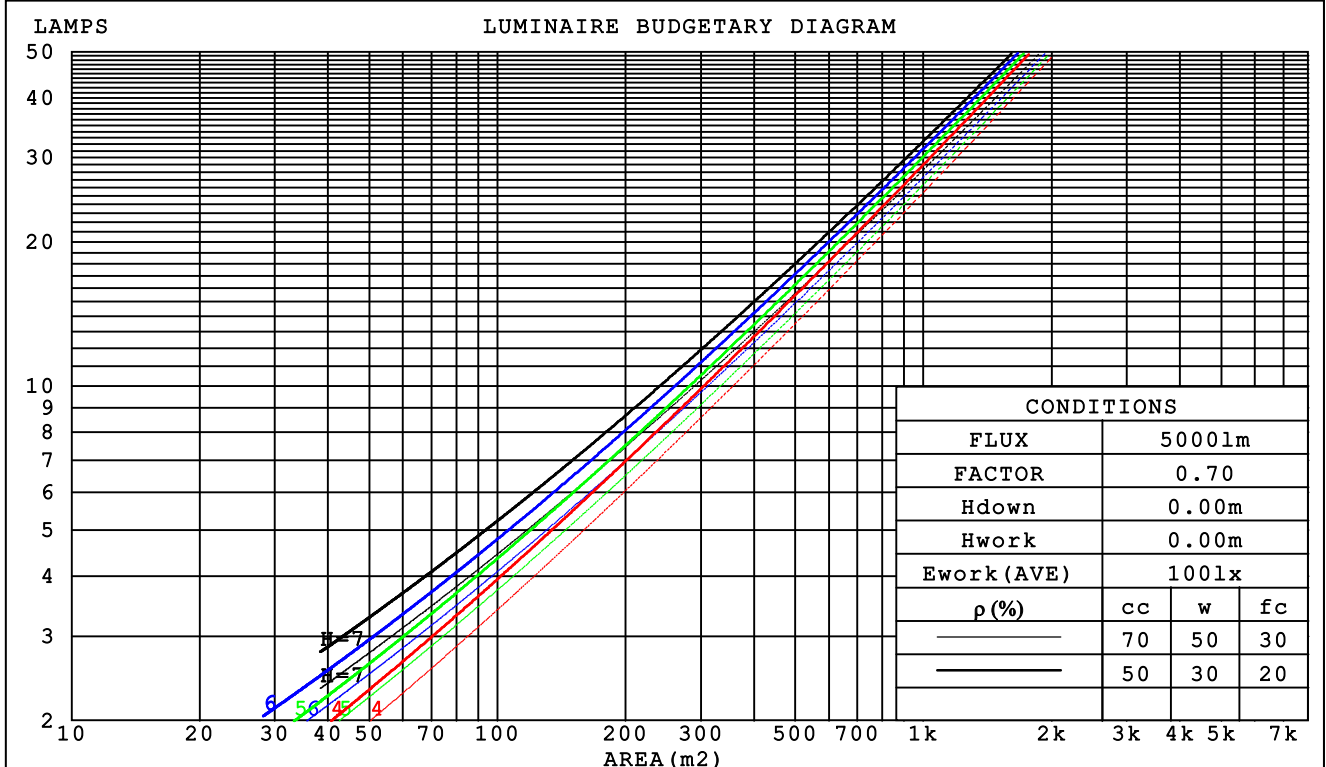
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 65.0%
Test Distance: 18.400m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION 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: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:

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	.243	.138	.044	.235	.134	.043	.222	.127	.041	.209	.121	.039	.198	.115	.037															
2.0	.231	.127	.039	.225	.124	.038	.213	.118	.037	.202	.114	.036	.192	.109	.034															
3.0	.218	.116	.035	.212	.114	.034	.202	.110	.033	.193	.106	.032	.184	.102	.032															
4.0	.205	.106	.031	.200	.105	.031	.191	.101	.030	.183	.098	.030	.175	.095	.029															
5.0	.193	.098	.028	.188	.097	.028	.181	.094	.028	.173	.091	.027	.166	.089	.027															
6.0	.182	.091	.026	.178	.090	.026	.171	.088	.025	.164	.085	.025	.158	.083	.025															
7.0	.171	.085	.024	.168	.084	.024	.162	.082	.024	.156	.080	.023	.151	.078	.023															
8.0	.162	.079	.022	.159	.078	.022	.154	.077	.022	.149	.075	.022	.144	.074	.021															
9.0	.154	.074	.021	.151	.074	.021	.146	.072	.020	.141	.071	.020	.137	.070	.020															
10.0	.146	.070	.019	.144	.069	.019	.139	.068	.019	.135	.067	.019	.131	.066	.019															

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.200	.200	.200	.171	.171	.171	.117	.117	.117	.067	.067	.067	.021	.021	.021	
1.0	.184	.165	.148	.157	.142	.127	.108	.097	.088	.062	.056	.051	.020	.018	.017	
2.0	.172	.140	.113	.147	.120	.098	.101	.083	.068	.058	.048	.040	.019	.016	.013	
3.0	.161	.121	.088	.138	.104	.077	.095	.072	.054	.055	.042	.032	.018	.014	.010	
4.0	.152	.106	.071	.131	.092	.062	.090	.064	.044	.052	.037	.026	.017	.012	.008	
5.0	.144	.095	.058	.124	.082	.051	.085	.057	.036	.049	.034	.021	.016	.011	.007	
6.0	.137	.086	.049	.118	.074	.043	.081	.052	.030	.047	.031	.018	.015	.010	.006	
7.0	.130	.078	.042	.112	.068	.037	.077	.048	.026	.045	.028	.015	.015	.009	.005	
8.0	.124	.072	.036	.107	.063	.032	.074	.044	.023	.043	.026	.013	.014	.008	.004	
9.0	.118	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
10.0	.113	.062	.029	.098	.054	.025	.068	.038	.018	.040	.023	.011	.013	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm											
NAME: 2512232波兰U11-150W-4000K						TYPE:			WEIGHT:		
SPEC.:						DIM.:			SERIAL No.:036		
MFR.:						SUR.:			PROTECTION 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	18.6	19.8	18.8	20.0	20.2	19.0	20.2	19.2	20.4	20.6	
	3H	19.0	20.1	19.3	20.3	20.5	19.4	20.5	19.7	20.8	
	4H	19.2	20.2	19.5	20.5	20.7	19.6	20.7	19.9	20.9	
	6H	19.3	20.3	19.6	20.6	20.8	19.8	20.8	20.1	21.1	
	8H	19.4	20.3	19.7	20.6	20.9	19.9	20.9	20.2	21.1	
	12H	19.4	20.3	19.7	20.6	20.9	20.0	20.9	20.3	21.2	
4H	2H	18.7	19.8	19.0	20.0	20.3	19.1	20.1	19.4	20.6	
	3H	19.3	20.2	19.6	20.5	20.8	19.7	20.6	20.0	20.9	
	4H	19.6	20.4	19.9	20.7	21.0	20.0	20.8	20.4	21.2	
	6H	19.8	20.6	20.2	20.9	21.3	20.3	21.1	20.7	21.4	
	8H	20.0	20.6	20.4	21.0	21.4	20.5	21.1	20.9	21.5	
	12H	20.0	20.7	20.5	21.0	21.5	20.6	21.2	21.0	21.6	
8H	4H	19.7	20.3	20.1	20.7	21.1	20.1	20.8	20.5	21.1	
	6H	20.0	20.6	20.5	21.0	21.4	20.5	21.1	20.9	21.5	
	8H	20.2	20.7	20.7	21.2	21.6	20.7	21.2	21.2	21.6	
	12H	20.4	20.8	20.9	21.3	21.8	20.9	21.3	21.4	21.8	
12H	4H	19.7	20.3	20.1	20.7	21.1	20.1	20.7	20.5	21.1	
	6H	20.1	20.6	20.5	21.0	21.5	20.5	21.0	21.0	21.4	
	8H	20.3	20.7	20.8	21.2	21.7	20.8	21.2	21.2	21.6	
Variations with the observer position at spacings:											
S = 1.0H		+ 0.7 / - 1.0					+ 0.6 / - 0.8				
1.5H		+ 0.7 / - 0.6					+ 0.7 / - 0.6				
2.0H		+ 1.5 / - 1.1					+ 1.6 / - 1.1				

CIE Pub.117 Corrected 20997 lm Total Lamp Luminous Flux. (8log(F/F0) = 10.6)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:

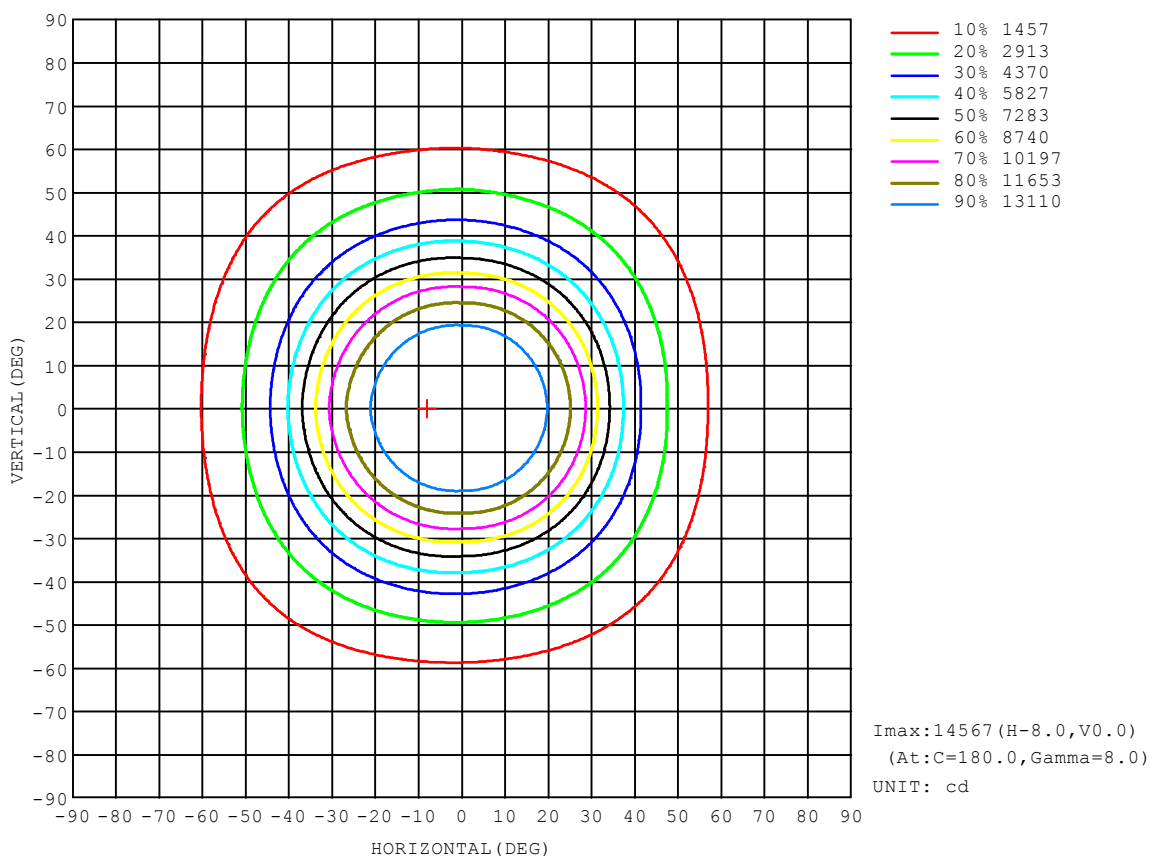
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	66	60	74	66	60	73	65	60	55
0.80	85	76	70	84	75	70	82	74	69	64
1.00	92	83	78	90	83	77	89	83	77	71
1.25	97	90	84	96	89	84	94	88	83	77
1.50	101	94	89	100	93	88	97	92	87	81
2.00	106	100	95	105	99	94	101	97	93	86
2.50	109	103	99	107	102	98	103	99	96	88
3.00	111	106	102	109	105	101	105	102	99	91
4.00	114	110	107	112	108	105	108	105	102	94
5.00	116	112	109	114	110	108	109	107	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:

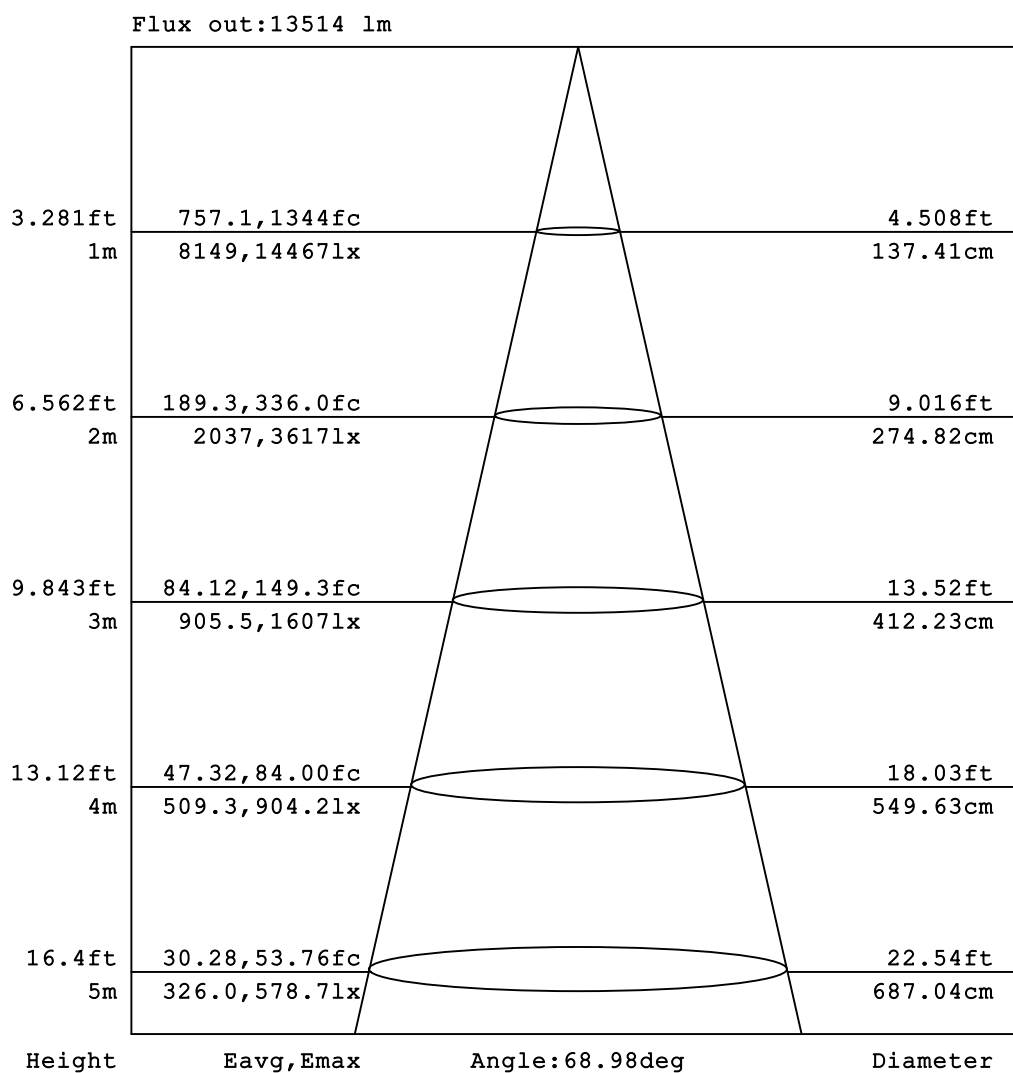


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

AAI Figure

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:



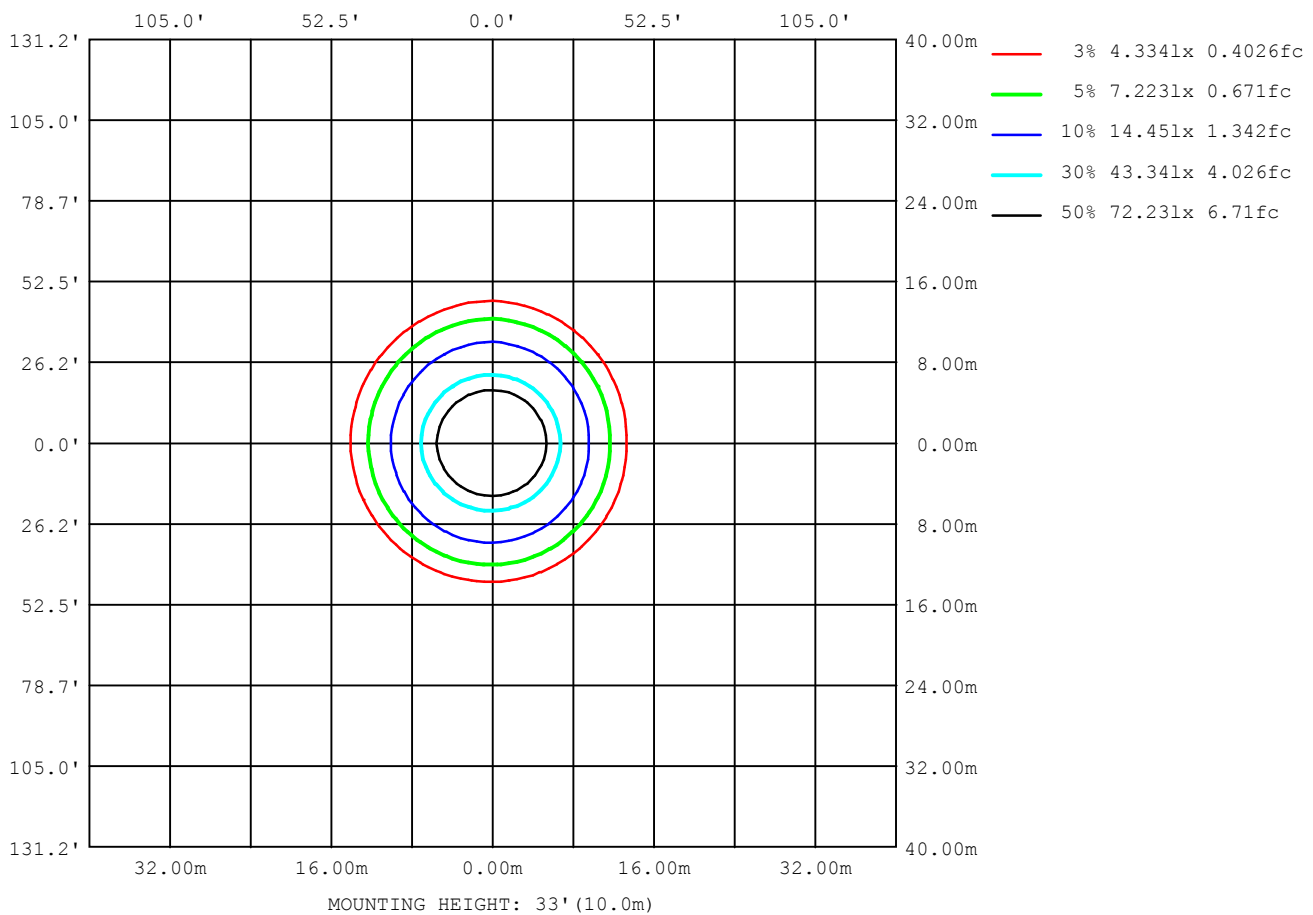
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2026-04-11

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 65.0%
Test Distance: 18.400m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

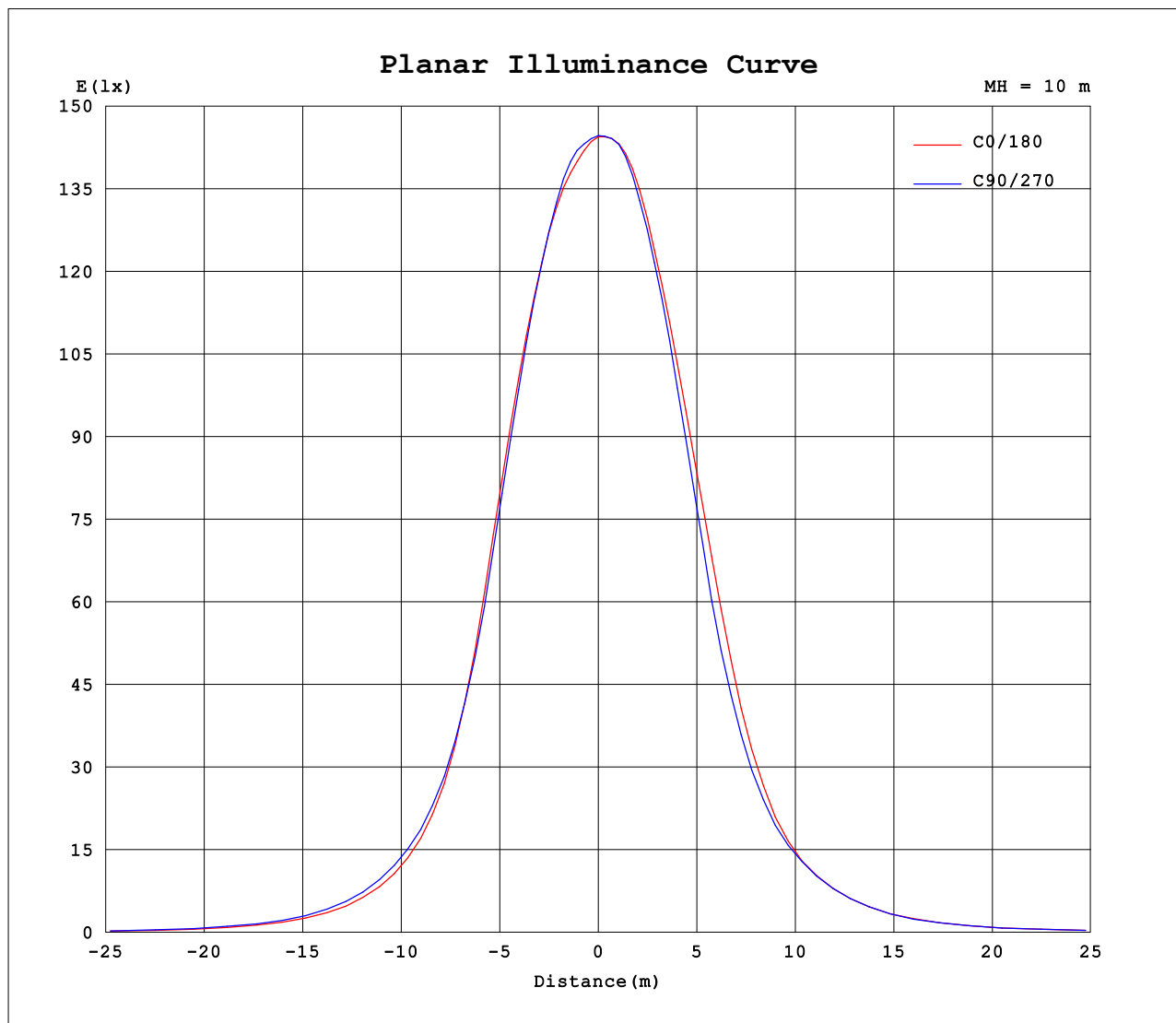
Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2026-04-11

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 65.0%
Test Distance: 18.400m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:229.7V I:0.6444A P:144.7W PF:0.9776 Lamp Flux:20996.9x1 lm		
NAME: 2512232波兰U11-150W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:036
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: ×10cd

C (DEG) γ (DEG)	0	90	180	270															
0	1446	1446	1446	1446															
5	1432	1441	1453	1451															
10	1417	1432	1453	1438															
15	1392	1391	1421	1396															
20	1308	1290	1336	1293															
25	1207	1173	1248	1179															
30	951	912	1053	930															
35	738	735	870	758															
40	481	515	594	537															
45	367	411	446	427															
50	244	281	307	303															
55	181	211	232	233															
60	114	131	149	148															
65	85.5	98.3	112	112															
70	55.2	64.3	74.9	74.6															
75	41.2	47.4	56.8	56.1															
80	24.2	29.0	35.9	35.7															
85	14.6	18.4	24.5	24.6															
90	0.19	3.82	11.2	9.82															
95	0.14	0.15	0.17	0.22															
100	0.19	0.21	0.14	0.14															
105	0.25	0.26	0.16	0.16															
110	0.38	0.39	0.22	0.22															
115	0.50	0.49	0.28	0.28															
120	0.73	0.71	0.39	0.40															
125	0.95	0.91	0.50	0.51															
130	1.38	1.28	0.72	0.75															
135	1.72	1.60	0.93	0.96															
140	2.24	2.12	1.33	1.33															
145	2.58	2.46	1.65	1.63															
150	3.07	2.96	2.12	2.11															
155	3.37	3.27	2.44	2.40															
160	3.75	3.67	2.86	2.83															
165	3.95	3.89	3.09	2.98															
170	4.13	4.12	3.52	3.41															
175	4.15	4.11	3.72	3.62															
180	3.86	3.84	3.85	3.80															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2026-04-11

γ Range: 0 - 180DEG
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
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Test Distance:18.400m [K=1.0000]
Remarks: