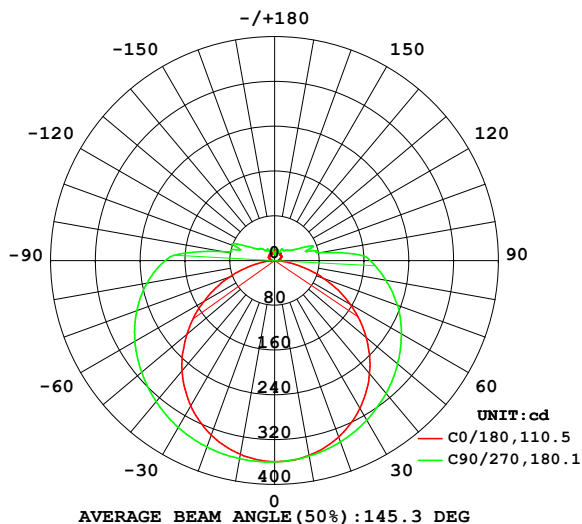


LUMINAIRE PHOTOMETRIC TEST REPORT

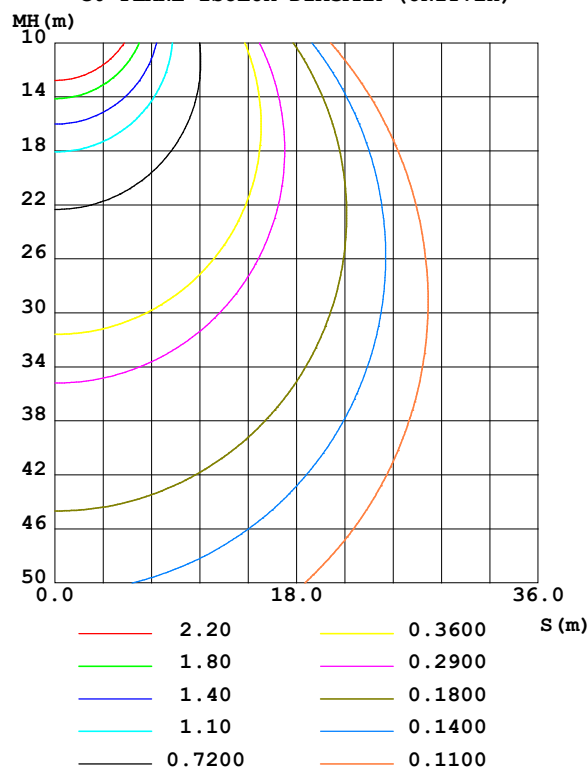
Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 65.23 lm/W
MODEL	5000K	I _{max} (cd)	360.2	S/MH(C0/180)	1.24	
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	1.44	
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1586.2	η UP,DN(C0-180)	6.9,42.0	
NOMINAL FLUX(lm)	1586.19	CIE CLASS	SEMI-D.	η UP,DN(C180-360)	7.5,43.7	
LAMPS INSIDE	1	η up(%)	14.3	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	120	η down(%)	85.7	CIBSE SHR MAX	1.55	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	353.5	354.8	351.5	359.3					0- 10	34.09	34.09	2.15,2.15
20	335.3	344.4	331.4	354.1					10- 20	98.67	132.8	8.37,8.37
30	304.9	329.2	299.8	344.3					20- 30	153.0	285.7	18,18
40	264.0	309.6	257.7	329.0					30- 40	191.4	477.2	30.1,30.1
50	214.0	287.1	204.8	310.2					40- 50	210.6	687.8	43.4,43.4
60	156.1	261.6	146.3	288.3					50- 60	209.5	897.3	56.6,56.6
70	93.62	233.5	85.31	262.1					60- 70	189.5	1087	68.5,68.5
80	34.81	201.7	29.75	231.5					70- 80	154.4	1241	78.2,78.2
90	6.398	171.0	7.088	195.8					80- 90	117.6	1359	85.7,85.7
100	7.921	82.60	7.453	94.94					90-100	83.25	1442	90.9,90.9
110	10.71	73.19	10.16	75.18					100-110	43.13	1485	93.6,93.6
120	13.57	39.63	13.05	46.90					110-120	36.88	1522	96,96
130	14.48	28.72	13.11	33.74					120-130	22.00	1544	97.3,97.3
140	16.24	24.19	14.72	23.96					130-140	16.04	1560	98.3,98.3
150	16.10	18.28	14.82	22.75					140-150	12.38	1572	99.1,99.1
160	15.01	16.88	13.92	18.28					150-160	7.637	1580	99.6,99.6
170	15.03	16.38	14.42	20.54					160-170	4.672	1585	99.9,99.9
180	18.92	12.92	18.92	12.90					170-180	1.495	1586	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 581.4 lm

%lum = 36.7%

%lamp = 36.7%

Conical surface Flux(120deg): 897.29 lm

%lum = 56.6%

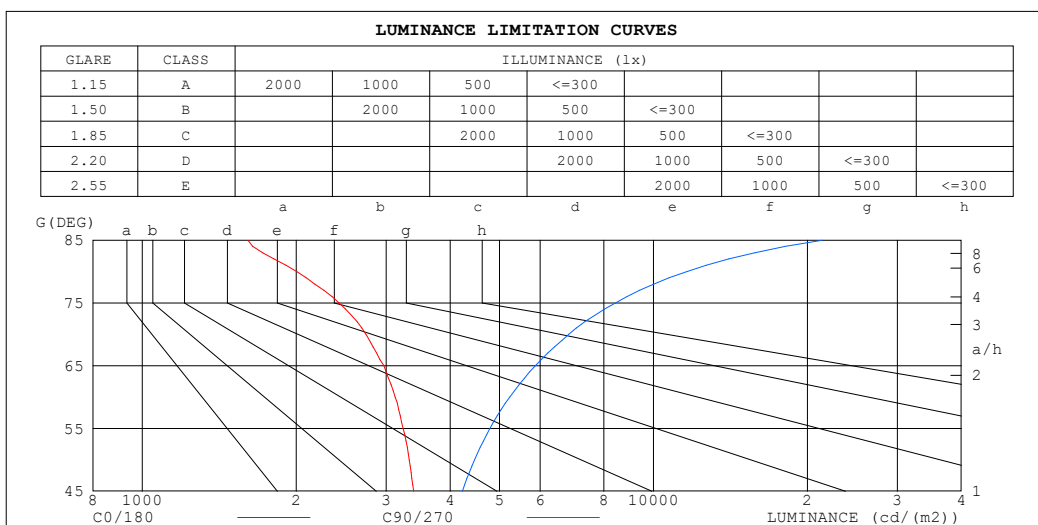
%lamp = 56.6%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:10 February 2026

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
 Humidity:65.0%
 Test Distance:7.380m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1609	21374
80	2005	11615
75	2426	8417
70	2737	6828
65	2971	5874
60	3123	5232
55	3239	4788
50	3328	4466
45	3395	4226

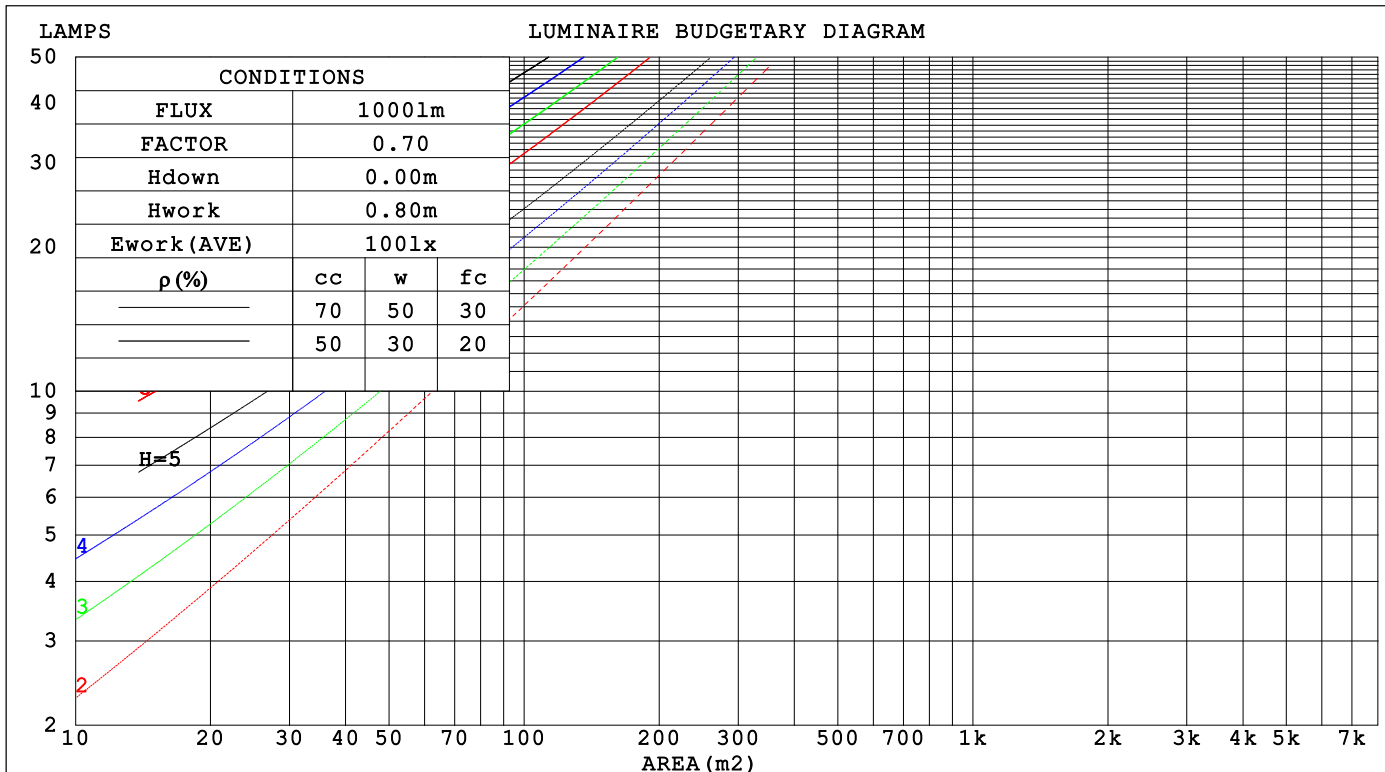
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding 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															Coefficients of Utilization(CU)														
0.0	1.16	1.16	1.16	1.11	1.11	1.11	1.03	1.03	1.03	.96	.96	.96	.89	.89	.89	.86														
1.0	.96	.91	.86	.93	.88	.83	.86	.82	.78	.79	.76	.73	.73	.71	.69	.65														
2.0	.82	.75	.68	.79	.72	.66	.73	.67	.62	.68	.63	.59	.63	.59	.55	.52														
3.0	.71	.62	.55	.69	.60	.54	.64	.57	.51	.59	.53	.48	.54	.50	.46	.43														
4.0	.63	.53	.46	.60	.52	.45	.56	.49	.43	.52	.46	.41	.48	.43	.38	.36														
5.0	.56	.46	.39	.54	.45	.38	.50	.42	.36	.46	.40	.35	.43	.37	.33	.30														
6.0	.50	.40	.34	.48	.39	.33	.45	.37	.31	.42	.35	.30	.39	.33	.29	.26														
7.0	.45	.36	.29	.43	.35	.29	.41	.33	.28	.38	.31	.26	.35	.30	.25	.23														
8.0	.41	.32	.26	.40	.31	.25	.37	.30	.24	.35	.28	.23	.32	.27	.22	.20														
9.0	.37	.29	.23	.36	.28	.23	.34	.27	.22	.32	.26	.21	.30	.24	.20	.18														
10.0	.34	.26	.21	.33	.26	.20	.31	.24	.20	.29	.23	.19	.28	.22	.18	.16														



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding 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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.386	.220	.070	.375	.214	.068	.353	.202	.065	.333	.192	.062	.314	.182	.059		
2.0	.335	.184	.056	.325	.179	.055	.305	.170	.053	.287	.161	.050	.270	.153	.048		
3.0	.298	.159	.048	.289	.155	.047	.271	.147	.045	.255	.140	.043	.239	.133	.041		
4.0	.269	.140	.041	.260	.136	.040	.244	.129	.039	.229	.123	.037	.215	.117	.036		
5.0	.244	.124	.036	.236	.121	.035	.222	.116	.034	.208	.110	.033	.196	.105	.031		
6.0	.224	.112	.032	.217	.109	.032	.204	.104	.030	.191	.099	.029	.180	.095	.028		
7.0	.206	.102	.029	.200	.100	.028	.188	.095	.027	.177	.091	.026	.166	.086	.025		
8.0	.191	.093	.026	.186	.091	.026	.175	.087	.025	.164	.083	.024	.154	.079	.023		
9.0	.178	.086	.024	.173	.084	.024	.163	.081	.023	.153	.077	.022	.144	.073	.021		
10.0	.167	.080	.022	.162	.078	.022	.153	.075	.021	.144	.071	.020	.136	.068	.020		

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	.300	.300	.300	.256	.256	.256	.175	.175	.175	.100	.100	.100	.032	.032	.032		
1.0	.296	.266	.238	.253	.228	.205	.173	.157	.142	.100	.091	.083	.032	.029	.027		
2.0	.289	.243	.204	.247	.209	.176	.170	.144	.123	.098	.084	.072	.031	.027	.023		
3.0	.281	.226	.182	.241	.195	.158	.166	.135	.111	.096	.079	.065	.031	.026	.021		
4.0	.274	.213	.167	.235	.184	.145	.161	.129	.102	.093	.075	.061	.030	.025	.020		
5.0	.266	.204	.158	.228	.176	.137	.157	.123	.097	.091	.072	.057	.029	.024	.019		
6.0	.258	.196	.150	.222	.169	.131	.153	.119	.093	.089	.070	.055	.029	.023	.018		
7.0	.251	.189	.145	.216	.164	.127	.149	.115	.090	.087	.068	.053	.028	.022	.018		
8.0	.244	.183	.141	.210	.159	.123	.146	.112	.087	.085	.066	.052	.027	.022	.017		
9.0	.238	.178	.138	.205	.155	.120	.142	.109	.086	.083	.064	.051	.027	.021	.017		
10.0	.232	.174	.136	.200	.151	.118	.139	.106	.084	.081	.063	.050	.026	.021	.017		

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:10 February 2026

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459

Humidity:65.0%

Test Distance:7.380m [K=1.0000]

Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm										
NAME: WS24-033B-BK 24W 50K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.: 1		
MFR.: EVERFINE					SUR.:			Shielding 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	14.3	15.7	14.7	16.1	16.6	16.0	17.5	16.5	17.9	18.4
3H	15.8	17.1	16.3	17.6	18.1	18.8	20.1	19.3	20.6	21.1
4H	16.3	17.6	16.8	18.1	18.6	20.3	21.5	20.8	22.0	22.6
6H	16.7	17.9	17.2	18.4	19.0	22.0	23.1	22.5	23.7	24.3
8H	16.8	18.0	17.4	18.5	19.1	22.9	24.1	23.5	24.6	25.2
12H	16.9	18.0	17.4	18.5	19.1	24.0	25.1	24.6	25.7	26.3
4H 2H	15.3	16.5	15.8	17.0	17.6	16.6	17.9	17.1	18.4	18.9
3H	17.0	18.2	17.6	18.7	19.3	19.5	20.6	20.0	21.1	21.8
4H	17.8	18.8	18.4	19.4	20.0	21.2	22.2	21.7	22.7	23.4
6H	18.4	19.3	19.0	19.9	20.6	23.1	24.0	23.7	24.6	25.2
8H	18.6	19.4	19.2	20.1	20.7	24.1	25.0	24.7	25.6	26.3
12H	18.7	19.5	19.4	20.1	20.8	25.4	26.2	26.0	26.8	27.5
8H 4H	18.7	19.6	19.3	20.2	20.9	21.4	22.3	22.1	22.9	23.6
6H	19.6	20.4	20.3	21.0	21.7	23.6	24.3	24.2	24.9	25.7
8H	20.0	20.7	20.7	21.3	22.1	24.8	25.5	25.5	26.1	26.9
12H	20.4	20.9	21.0	21.6	22.4	26.4	26.9	27.0	27.6	28.4
12H 4H	19.0	19.8	19.6	20.4	21.1	21.5	22.2	22.1	22.9	23.6
6H	20.1	20.8	20.8	21.4	22.2	23.7	24.3	24.3	25.0	25.7
8H	20.7	21.3	21.4	21.9	22.7	25.0	25.6	25.7	26.3	27.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.2 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 1586 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.6)
Area: 0.1 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

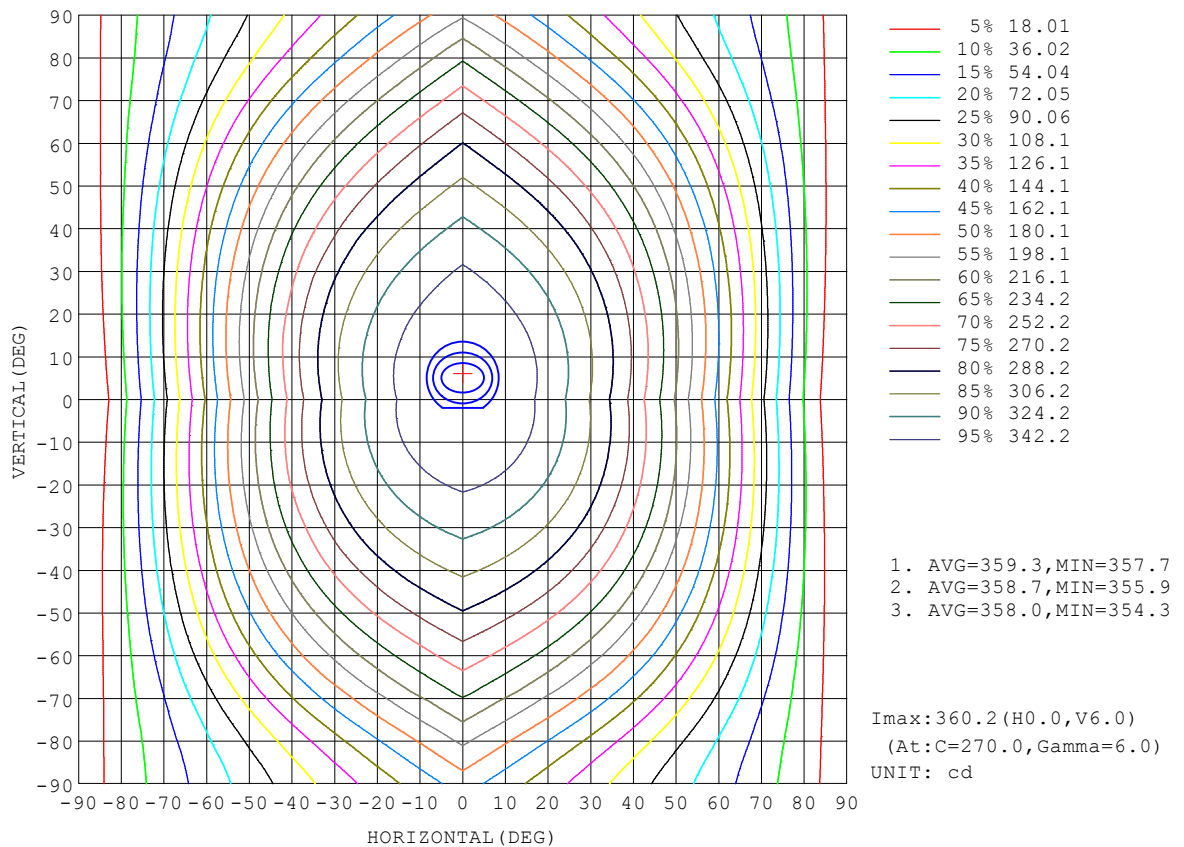
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	49	36	29	48	36	29	46	35	28	22
0.80	58	45	37	57	44	37	54	43	36	28
1.00	66	53	45	64	52	44	61	53	43	35
1.25	73	60	52	71	59	51	67	57	50	40
1.50	78	66	57	75	64	56	71	61	55	45
2.00	85	74	66	82	72	65	77	69	62	51
2.50	90	80	72	86	77	70	81	73	67	55
3.00	93	84	77	90	82	75	84	77	71	59
4.00	98	90	84	94	87	81	88	82	77	64
5.00	101	94	88	97	91	86	90	85	81	67
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: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

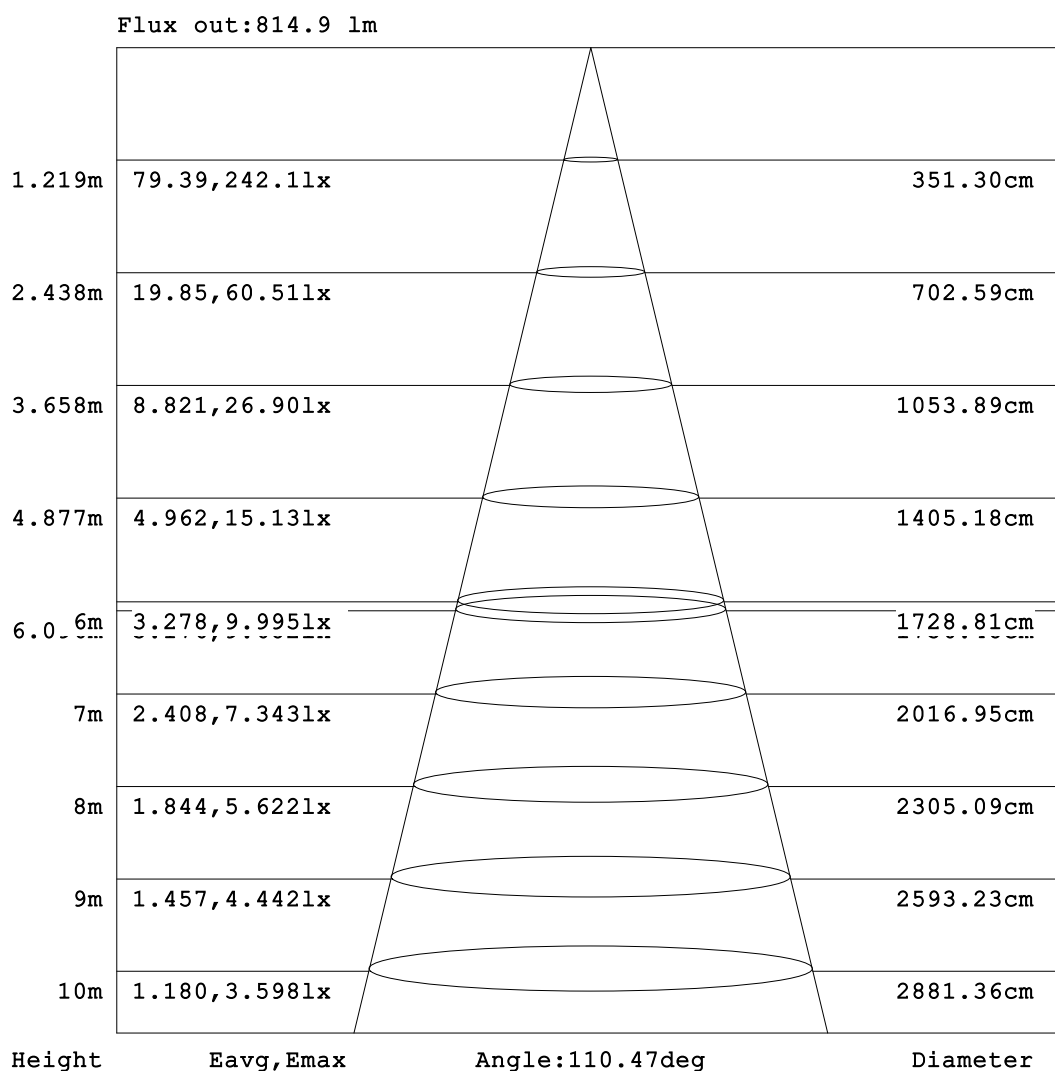


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



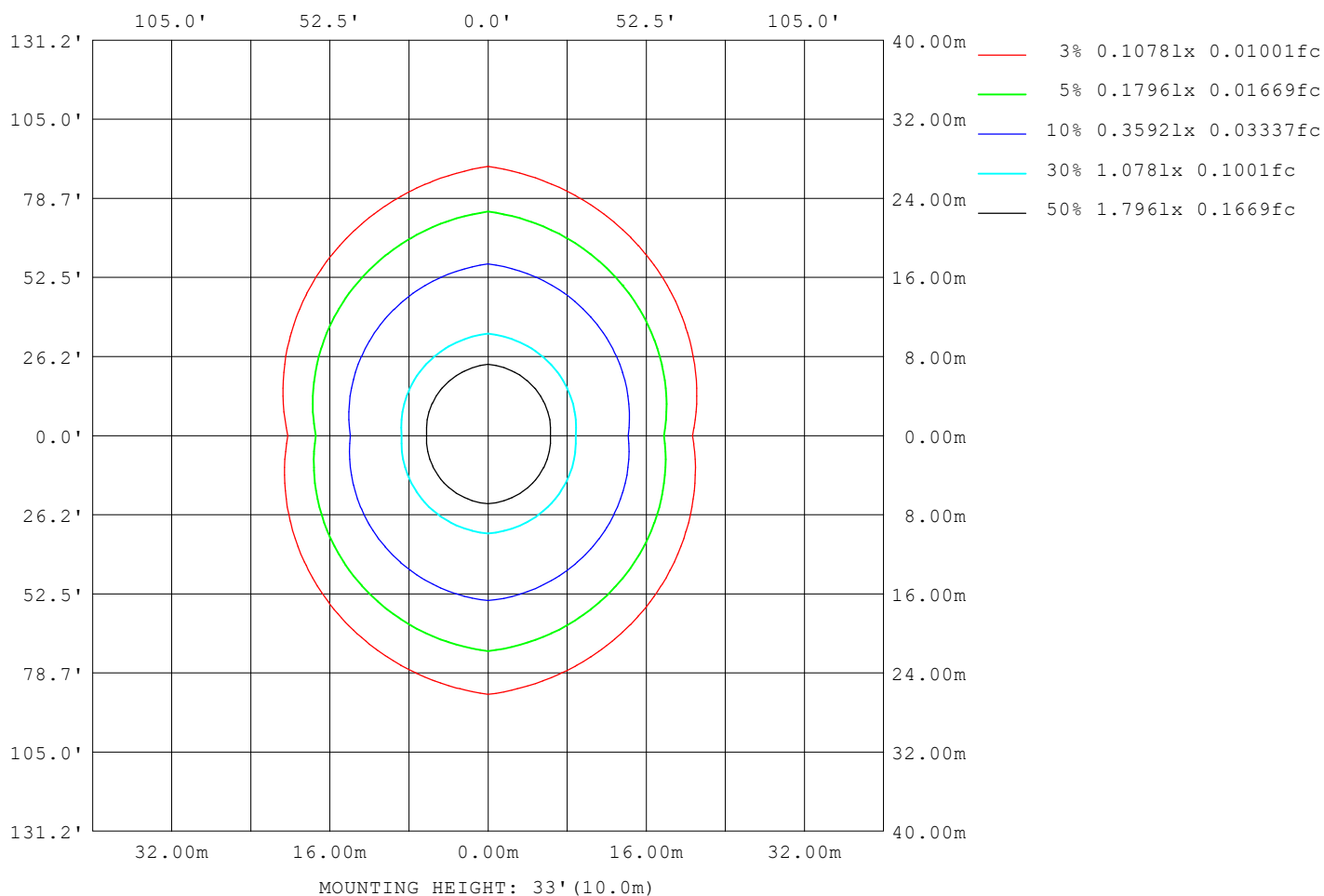
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

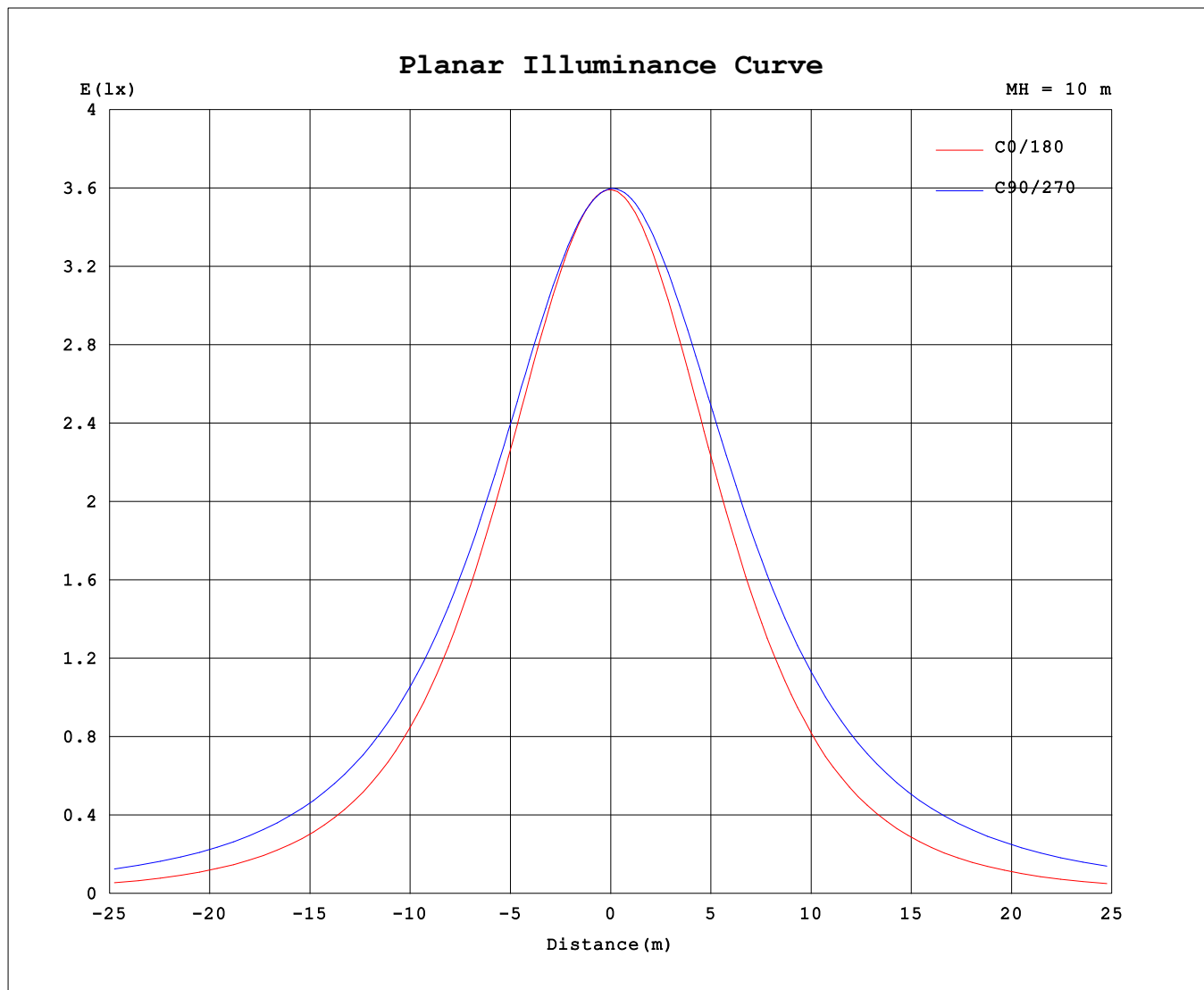
AvgL	cd/m2
L_0~180 (65) av	2856
L_0~180 (75) av	2292
L_0~180 (85) av	1530
L_90~270 (65) av	6200
L_90~270 (75) av	8987
L_90~270 (85) av	22986
L_45 (65) av	4939
L_45 (75) av	6468
L_45 (85) av	14935

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.11V I:0.2157A P:24.317W PF:0.9385 Freq:59.98Hz Lamp Flux:1586.19x1 lm		
NAME: WS24-033B-BK 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	359	360	359	360														
5	358	358	357	360														
10	354	355	351	359														
15	346	350	343	358														
20	335	344	331	354														
25	321	337	317	350														
30	305	329	300	344														
35	286	320	280	337														
40	264	310	258	329														
45	240	299	232	320														
50	214	287	205	310														
55	186	275	176	300														
60	156	262	146	288														
65	126	248	116	276														
70	93.6	234	85.3	262														
75	62.8	218	55.8	247														
80	34.8	202	29.8	232														
85	14.0	186	12.6	214														
90	6.40	171	7.09	196														
95	6.91	142	7.01	160														
100	7.92	82.6	7.45	94.9														
105	9.21	66.7	8.52	78.6														
110	10.7	73.2	10.2	75.2														
115	12.1	56.1	11.9	68.5														
120	13.6	39.6	13.0	46.9														
125	14.4	32.2	13.2	35.4														
130	14.5	28.7	13.1	33.7														
135	14.5	25.8	13.2	28.6														
140	16.2	24.2	14.7	24.0														
145	16.9	23.7	15.4	23.2														
150	16.1	18.3	14.8	22.7														
155	15.8	16.7	14.6	18.7														
160	15.0	16.9	13.9	18.3														
165	14.3	19.9	13.3	20.6														
170	15.0	16.4	14.4	20.5														
175	17.5	12.0	16.8	14.0														
180	18.9	12.9	18.9	12.9														

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:10 February 2026

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459

Humidity:65.0%

Test Distance:7.380m [K=1.0000]

Remarks: