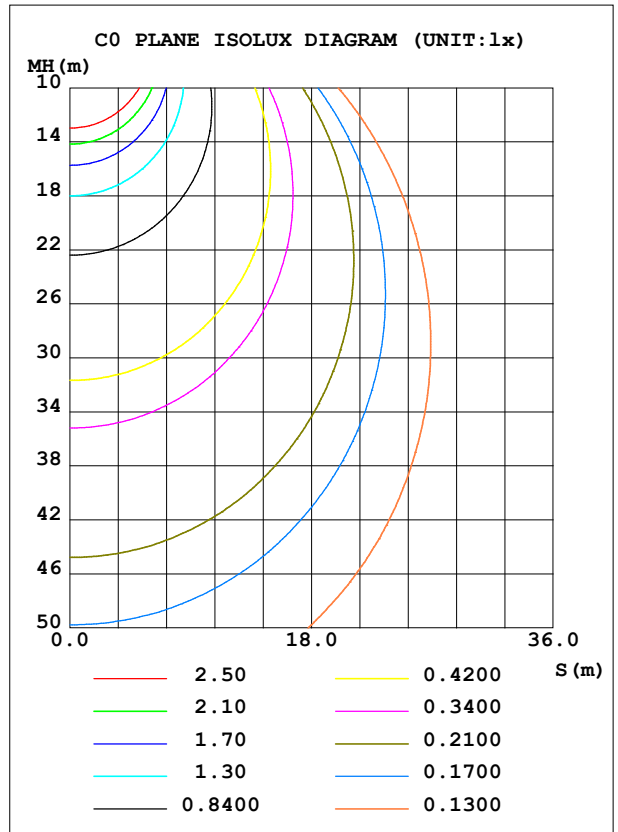
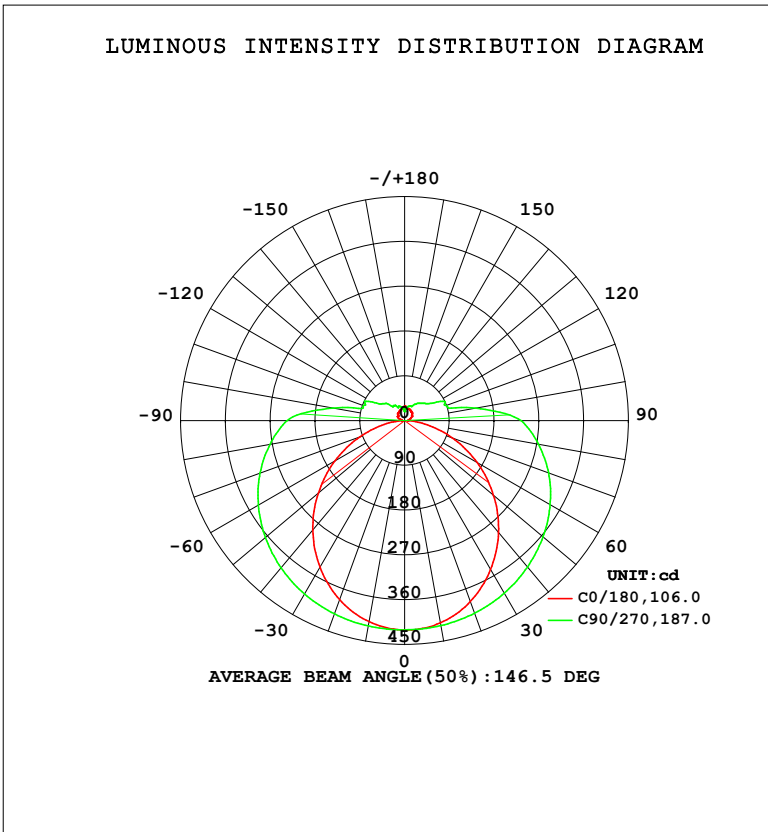


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 81.21 lm/W
MODEL	5000K	I <sub>max</sub> (cd)	421.0	S/MH (C0/180)	1.21	
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	1.44	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	1939.0	η UP, DN (C0-180)	8.5, 41.8	
NOMINAL FLUX (lm)	1939.01	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	8.3, 41.5	
LAMPS INSIDE	1	η up (%)	16.8	CIBSE SHR NOM	1.50	
TEST VOLTAGE (V)	120	η down (%)	83.2	CIBSE SHR MAX	1.55	



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators: DAMIN  
 Test Date: 20 April 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:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	412.8	418.4	410.4	419.1				0- 10	39.90	39.90	2.06,2.06
20	386.7	411.7	382.8	413.2				10- 20	115.4	155.3	8.01,8.01
30	345.8	400.7	340.4	402.3				20- 30	178.4	333.7	17.2,17.2
40	293.8	384.4	287.4	386.4				30- 40	223.0	556.7	28.7,28.7
50	233.3	363.1	226.5	365.4				40- 50	245.8	802.5	41.4,41.4
60	168.4	337.7	161.4	339.5				50- 60	246.0	1049	54.1,54.1
70	102.2	308.1	95.99	309.3				60- 70	225.9	1274	65.7,65.7
80	41.70	273.3	36.99	274.5				70- 80	190.1	1465	75.5,75.5
90	6.432	234.5	5.700	236.5				80- 90	149.4	1614	83.2,83.2
100	8.518	145.8	7.734	146.6				90-100	109.6	1724	88.9,88.9
110	12.32	89.11	12.04	88.43				100-110	61.60	1785	92.1,92.1
120	17.55	74.63	17.16	74.72				110-120	49.84	1835	94.6,94.6
130	20.07	54.01	18.05	53.73				120-130	35.45	1870	96.5,96.5
140	21.90	45.66	20.41	36.21				130-140	26.55	1897	97.8,97.8
150	23.48	35.64	21.99	35.16				140-150	19.12	1916	98.8,98.8
160	25.19	31.35	23.50	30.93				150-160	12.83	1929	99.5,99.5
170	25.40	25.58	24.18	26.54				160-170	7.660	1937	99.9,99.9
180	29.18	18.77	29.20	18.76				170-180	2.417	1939	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 678.13 lm

%lum = 35.0%

%lamp = 35.0%

Conical surface Flux(120deg): 1048.5 lm

%lum = 54.1%

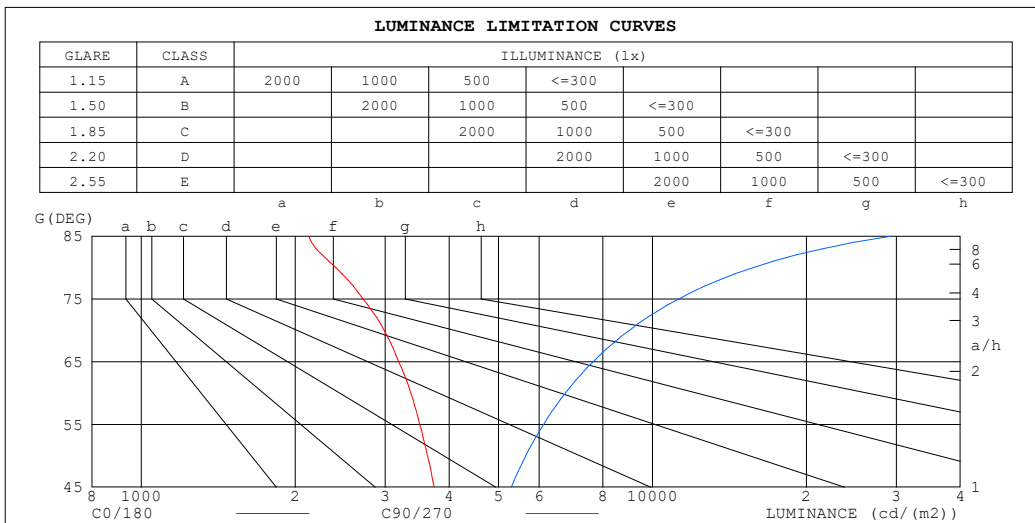
%lamp = 54.1%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:20 April 2026

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



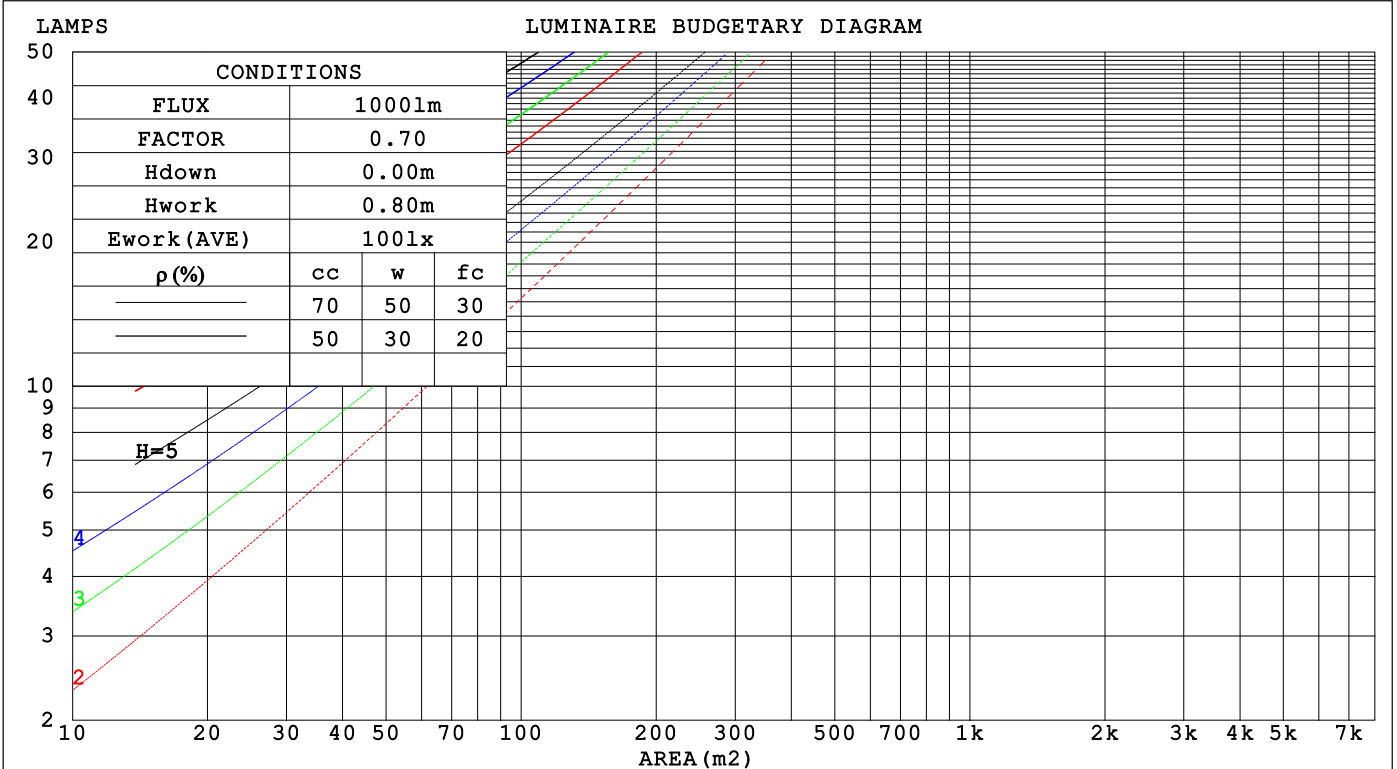
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators: DAMIN  
 Test Date: 20 April 2026

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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 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	1.15	1.15	1.15	1.10	1.10	1.10	1.02	1.02	1.02	.94	.94	.94	.87	.87	.87	.83
1.0	.96	.90	.85	.92	.87	.82	.84	.80	.77	.77	.74	.71	.71	.69	.66	.63
2.0	.82	.74	.67	.78	.71	.65	.72	.66	.61	.66	.61	.57	.61	.57	.53	.50
3.0	.71	.62	.54	.68	.60	.53	.62	.55	.50	.57	.52	.47	.53	.48	.44	.41
4.0	.62	.53	.45	.60	.51	.44	.55	.48	.42	.51	.44	.39	.47	.41	.37	.34
5.0	.55	.46	.38	.53	.44	.37	.49	.41	.35	.45	.39	.34	.42	.36	.32	.29
6.0	.49	.40	.33	.47	.39	.32	.44	.36	.31	.41	.34	.29	.38	.32	.28	.25
7.0	.44	.35	.29	.43	.34	.28	.40	.32	.27	.37	.30	.26	.34	.29	.24	.22
8.0	.40	.32	.26	.39	.31	.25	.36	.29	.24	.34	.27	.23	.31	.26	.22	.19
9.0	.37	.29	.23	.36	.28	.22	.33	.26	.21	.31	.25	.20	.29	.23	.19	.17
10.0	.34	.26	.21	.33	.25	.20	.31	.24	.19	.29	.23	.18	.27	.21	.18	.16



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3 °C  
 Operators:DAMIN  
 Test Date:20 April 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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

$\rho_{CC}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.390	.222	.070	.377	.215	.068	.354	.203	.065	.333	.192	.062	.313	.182	.059	
2.0	.337	.184	.057	.326	.179	.055	.305	.169	.053	.285	.160	.050	.267	.151	.048	
3.0	.299	.159	.048	.289	.155	.047	.270	.146	.044	.252	.138	.042	.236	.131	.040	
4.0	.269	.140	.041	.260	.136	.040	.242	.129	.038	.227	.122	.037	.212	.115	.035	
5.0	.244	.124	.036	.236	.121	.035	.220	.115	.034	.206	.109	.032	.192	.103	.031	
6.0	.223	.112	.032	.216	.109	.031	.202	.103	.030	.189	.098	.029	.176	.093	.028	
7.0	.206	.102	.029	.199	.099	.028	.186	.094	.027	.174	.089	.026	.163	.085	.025	
8.0	.191	.093	.026	.185	.091	.026	.173	.086	.025	.162	.082	.024	.151	.078	.023	
9.0	.178	.086	.024	.172	.084	.024	.161	.080	.023	.151	.076	.022	.141	.072	.021	
10.0	.166	.080	.022	.161	.078	.022	.151	.074	.021	.142	.070	.020	.133	.067	.019	

$\rho_{CC}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.318	.318	.318	.272	.272	.272	.186	.186	.186	.107	.107	.107	.034	.034	.034	
1.0	.315	.284	.257	.269	.244	.221	.184	.168	.153	.106	.097	.089	.034	.031	.029	
2.0	.308	.261	.222	.264	.225	.192	.181	.156	.134	.104	.091	.079	.033	.029	.026	
3.0	.300	.245	.201	.257	.211	.174	.177	.147	.122	.102	.086	.072	.033	.028	.024	
4.0	.293	.232	.186	.251	.201	.162	.173	.140	.114	.100	.082	.067	.032	.027	.022	
5.0	.285	.222	.177	.245	.193	.154	.168	.134	.108	.098	.079	.064	.031	.026	.021	
6.0	.277	.215	.169	.238	.186	.148	.164	.130	.104	.095	.077	.062	.031	.025	.020	
7.0	.270	.208	.164	.232	.180	.143	.161	.126	.101	.093	.074	.060	.030	.024	.020	
8.0	.263	.202	.160	.227	.176	.140	.157	.123	.099	.091	.073	.059	.030	.024	.020	
9.0	.257	.198	.157	.222	.171	.137	.153	.121	.097	.089	.071	.058	.029	.023	.019	
10.0	.251	.193	.155	.217	.168	.135	.150	.118	.096	.088	.070	.057	.028	.023	.019	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:20 April 2026

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 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	13.7	15.1	14.2	15.6	16.2	16.2	17.6	16.7	18.1	18.6
3H	15.2	16.5	15.8	17.1	17.6	19.0	20.3	19.6	20.9	21.4
4H	15.8	17.1	16.4	17.6	18.2	20.7	21.9	21.2	22.4	23.0
6H	16.3	17.4	16.8	18.0	18.6	22.4	23.6	23.0	24.2	24.8
8H	16.4	17.5	17.0	18.1	18.7	23.4	24.6	24.0	25.1	25.8
12H	16.5	17.6	17.1	18.2	18.8	24.6	25.7	25.2	26.2	26.9
4H 2H	14.9	16.2	15.5	16.7	17.3	16.7	17.9	17.2	18.5	19.1
3H	16.7	17.8	17.3	18.4	19.0	19.7	20.8	20.3	21.4	22.1
4H	17.5	18.5	18.1	19.1	19.8	21.5	22.5	22.1	23.1	23.8
6H	18.2	19.1	18.8	19.7	20.4	23.5	24.4	24.1	25.0	25.7
8H	18.4	19.2	19.1	19.9	20.6	24.6	25.5	25.3	26.1	26.9
12H	18.6	19.4	19.2	20.0	20.8	25.9	26.7	26.6	27.4	28.1
8H 4H	18.6	19.4	19.2	20.1	20.8	21.8	22.6	22.4	23.3	24.0
6H	19.6	20.3	20.3	21.0	21.8	24.0	24.7	24.7	25.4	26.2
8H	20.1	20.7	20.8	21.4	22.2	25.4	26.0	26.1	26.7	27.5
12H	20.5	21.0	21.2	21.7	22.6	26.9	27.5	27.6	28.2	29.0
12H 4H	18.9	19.7	19.6	20.4	21.1	21.8	22.6	22.5	23.2	24.0
6H	20.2	20.8	20.9	21.5	22.3	24.1	24.8	24.8	25.5	26.2
8H	20.8	21.4	21.5	22.1	22.9	25.5	26.1	26.3	26.8	27.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 1939 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.3)  
Area: 0.1 m2

C Range: 0 - 360DEG	γ Range: 0 - 180DEG
C Interval: 90.0DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Temperature:25.3℃	Humidity:65.0%
Operators:DAMIN	Test Distance:7.380m [K=1.0000]
Test Date:20 April 2026	Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

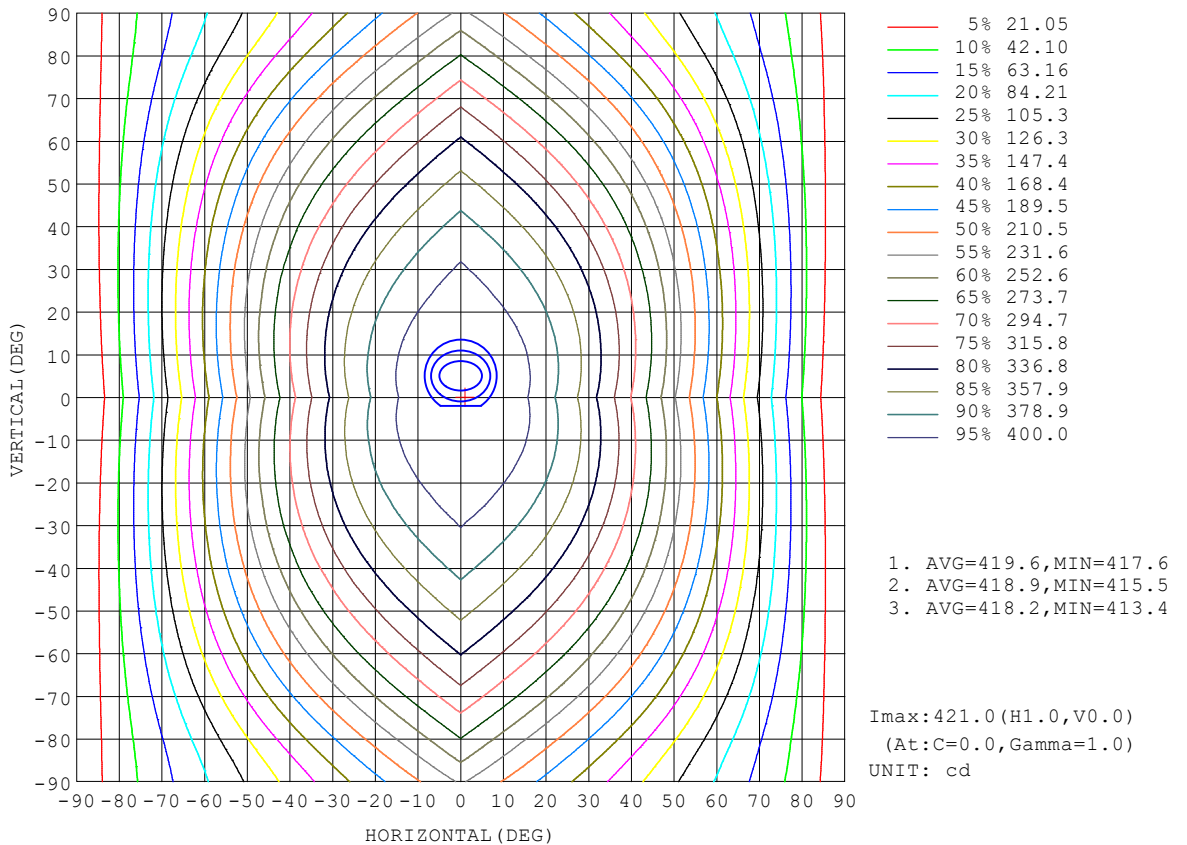
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	35	28	47	35	28	45	34	27	21
0.80	57	44	36	56	43	36	53	42	35	27
1.00	65	52	43	63	51	43	59	51	42	33
1.25	72	59	51	69	58	50	65	55	48	38
1.50	77	65	56	74	63	55	69	60	53	43
2.00	84	73	65	81	71	63	76	67	61	49
2.50	89	78	70	85	76	69	79	72	65	53
3.00	92	83	76	89	80	74	82	75	70	57
4.00	97	89	83	93	86	80	86	80	76	61
5.00	100	93	87	96	90	85	89	84	79	65
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:20 April 2026

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

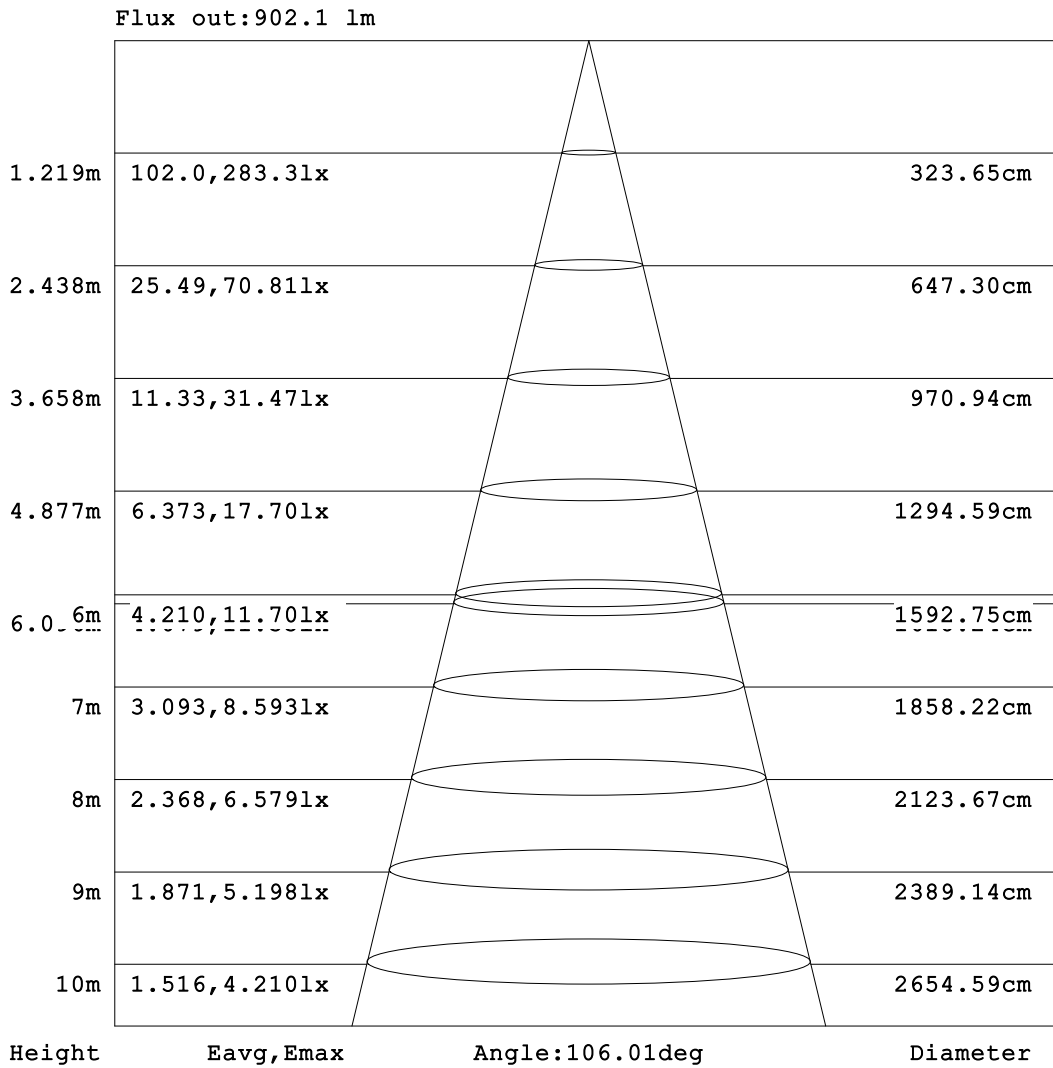


C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 20 April 2026

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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



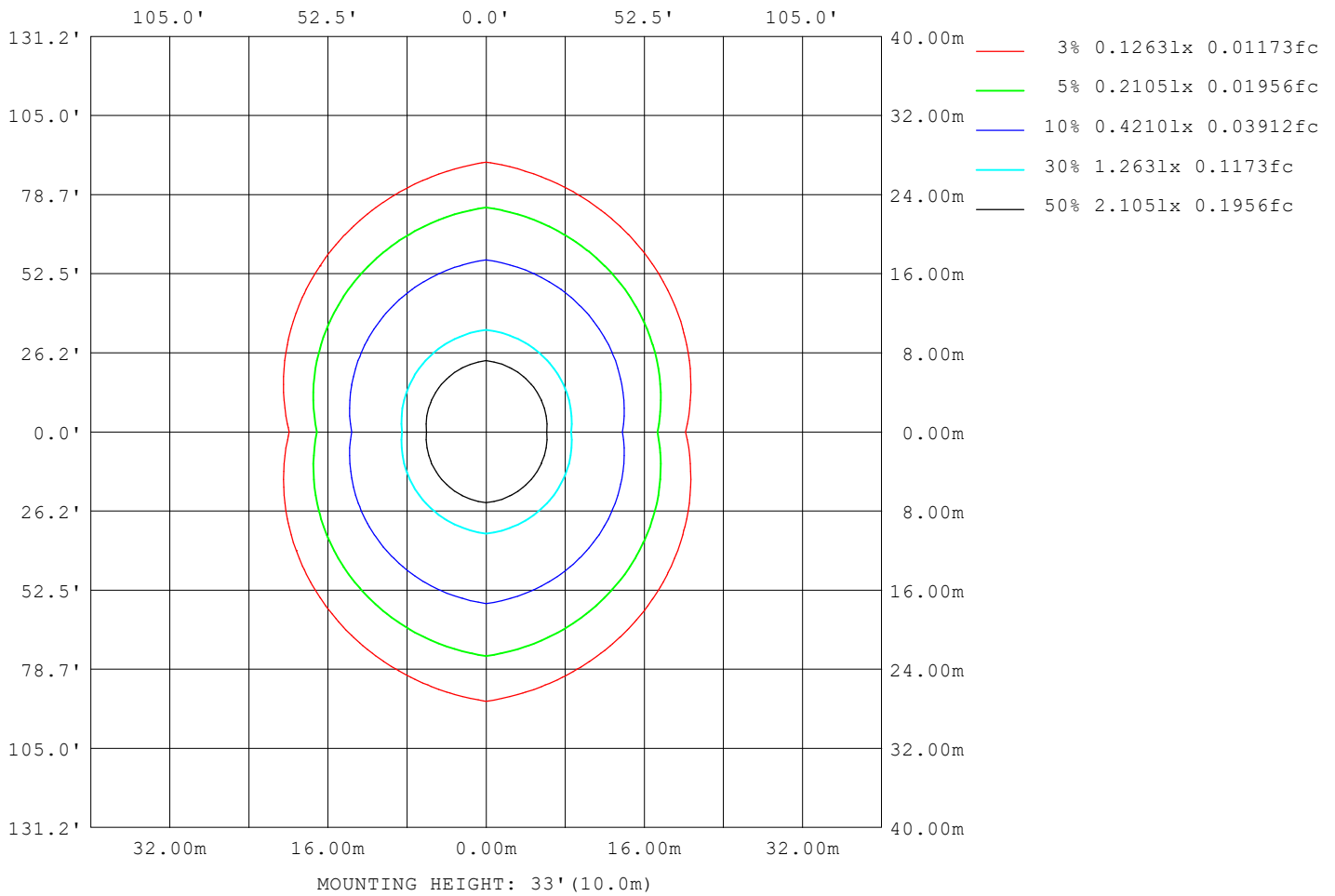
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3 °C  
Operators:DAMIN  
Test Date:20 April 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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 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:20 April 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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 24W 50K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

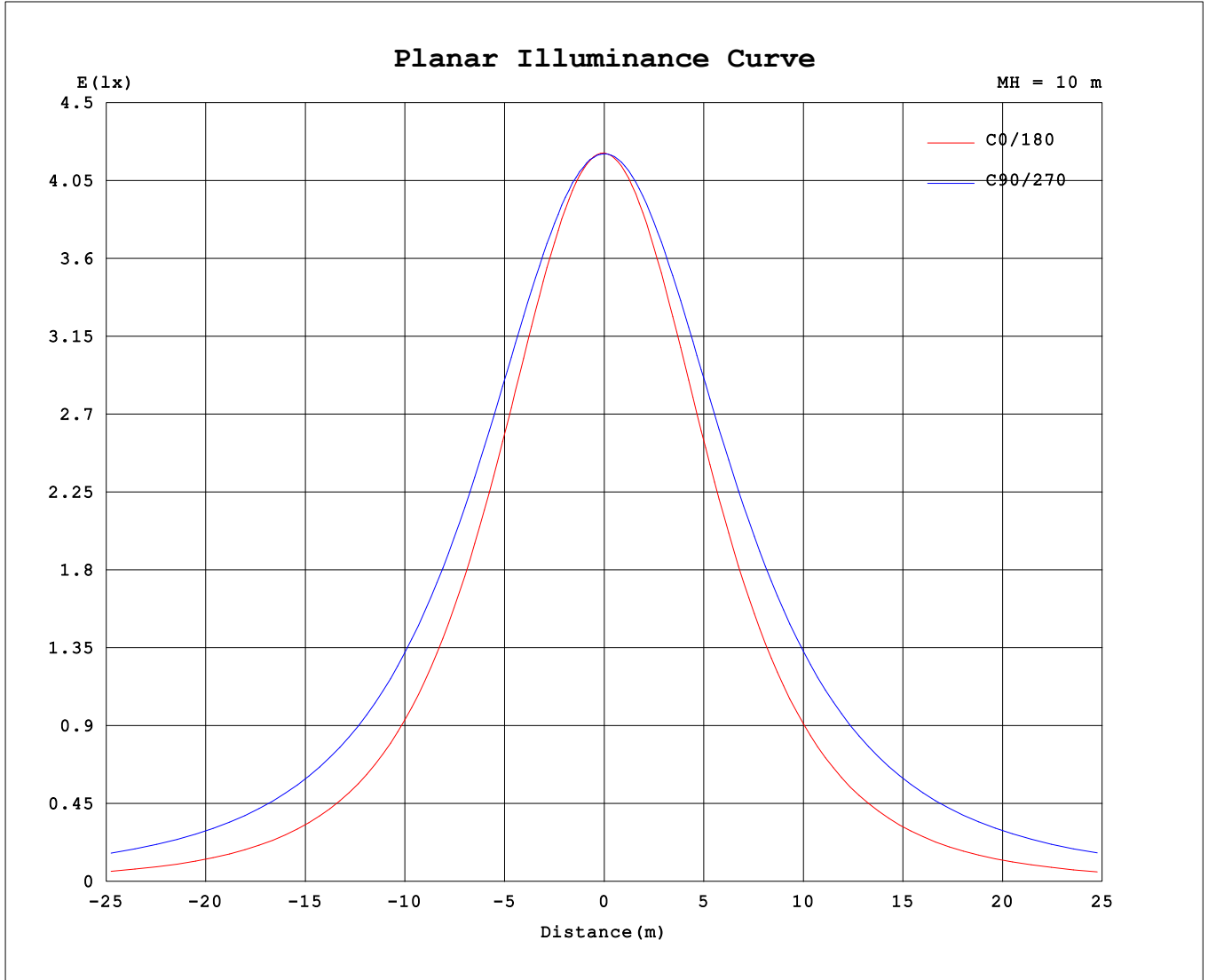
AvgL	cd/m2
L_0~180 (65) av	3114
L_0~180 (75) av	2613
L_0~180 (85) av	1930
L_90~270 (65) av	7673
L_90~270 (75) av	11276
L_90~270 (85) av	29305
L_45 (65) av	5959
L_45 (75) av	8021
L_45 (85) av	19027

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:20 April 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: 20 April 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:119.93V I:0.2182A P:23.875W PF:0.9124 Freq:59.98Hz Lamp Flux:1939.01x1 lm		
NAME: WS24-085-BN 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	421	421	421	421															
5	419	420	418	420															
10	413	418	410	419															
15	402	416	399	417															
20	387	412	383	413															
25	368	407	363	408															
30	346	401	340	402															
35	321	393	315	395															
40	294	384	287	386															
45	264	374	258	376															
50	233	363	227	365															
55	201	351	194	353															
60	168	338	161	340															
65	135	324	128	325															
70	102	308	96.0	309															
75	70.3	291	65.0	292															
80	41.7	273	37.0	275															
85	18.5	255	15.1	256															
90	6.43	235	5.70	236															
95	7.00	193	6.42	197															
100	8.52	146	7.73	147															
105	10.2	97.2	9.61	96.3															
110	12.3	89.1	12.0	88.4															
115	15.0	90.7	14.7	89.2															
120	17.6	74.6	17.2	74.7															
125	17.8	60.4	16.3	59.1															
130	20.1	54.0	18.0	53.7															
135	21.8	49.4	20.0	47.7															
140	21.9	45.7	20.4	36.2															
145	22.5	41.3	21.0	36.8															
150	23.5	35.6	22.0	35.2															
155	24.5	32.0	22.8	30.0															
160	25.2	31.4	23.5	30.9															
165	25.3	29.6	24.0	29.1															
170	25.4	25.6	24.2	26.5															
175	29.2	21.9	27.9	24.0															
180	29.2	18.8	29.2	18.8															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:20 April 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: