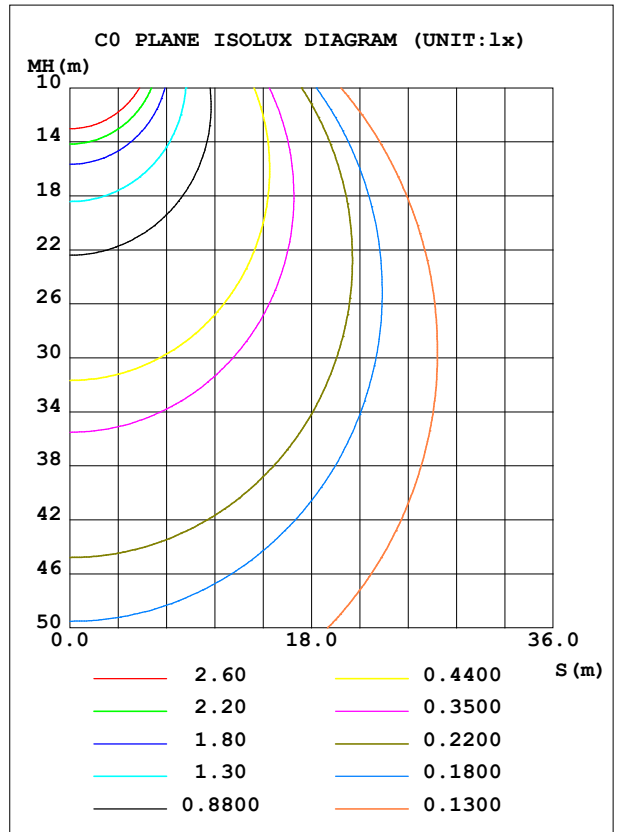
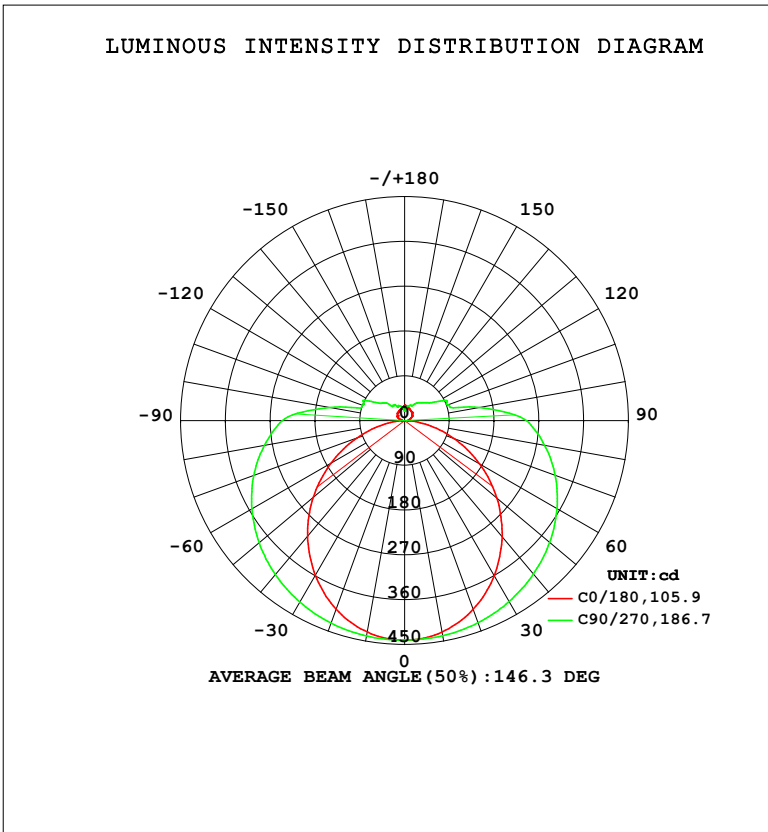


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 85.02 lm/W
MODEL	3000K	I <sub>max</sub> (cd)	441.4	S/MH (C0/180)	1.22	
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	1.44	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	2027.3	η UP, DN (C0-180)	8.5, 41.7	
NOMINAL FLUX (lm)	2027.26	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	8.3, 41.6	
LAMPS INSIDE	1	η up (%)	16.7	CIBSE SHR NOM	1.50	
TEST VOLTAGE (V)	120	η down (%)	83.3	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	431.7	439.0	431.5	439.6				0- 10	41.84	41.84	2.06,2.06
20	403.4	432.1	403.0	433.0				10- 20	121.0	162.8	8.03,8.03
30	360.1	420.1	358.9	421.3				20- 30	187.0	349.8	17.3,17.3
40	305.2	402.7	303.6	404.2				30- 40	233.6	583.3	28.8,28.8
50	242.1	380.5	240.0	381.7				40- 50	257.3	840.7	41.5,41.5
60	174.3	353.5	170.7	354.4				50- 60	257.4	1098	54.2,54.2
70	105.6	322.0	101.6	322.5				60- 70	236.1	1334	65.8,65.8
80	43.08	285.8	39.17	286.1				70- 80	198.6	1533	75.6,75.6
90	6.728	245.0	5.940	245.9				80- 90	155.9	1689	83.3,83.3
100	8.837	152.4	8.087	152.6				90-100	114.3	1803	88.9,88.9
110	12.76	93.27	12.58	91.49				100-110	64.15	1867	92.1,92.1
120	18.13	78.15	18.03	77.34				110-120	51.90	1919	94.7,94.7
130	20.74	56.51	18.84	55.44				120-130	36.93	1956	96.5,96.5
140	22.75	47.78	21.30	37.34				130-140	27.60	1984	97.8,97.8
150	24.41	37.29	22.91	36.35				140-150	19.88	2003	98.8,98.8
160	26.24	32.82	24.47	32.02				150-160	13.35	2017	99.5,99.5
170	26.48	26.70	25.22	27.58				160-170	7.981	2025	99.9,99.9
180	30.39	19.40	30.39	19.41				170-180	2.515	2027	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 710.53 lm

%lum = 35.0%

%lamp = 35.0%

Conical surface Flux(120deg): 1098.1 lm

%lum = 54.2%

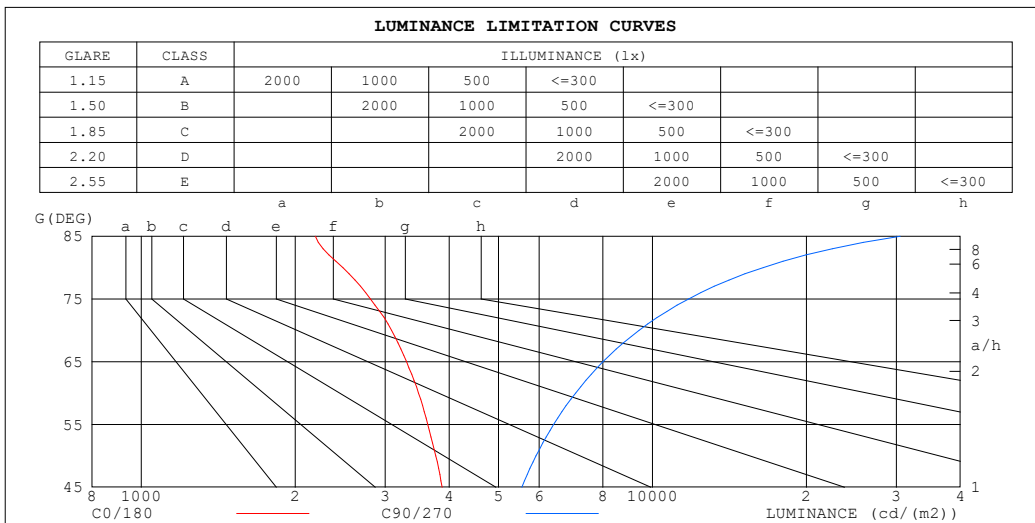
%lamp = 54.2%

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:

LUMINANCE LIMITATION CURVES

Test:U:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	2190	30544
80	2481	16456
75	2805	11765
70	3088	9415
65	3302	8001
60	3486	7069
55	3633	6408
50	3766	5919
45	3879	5549

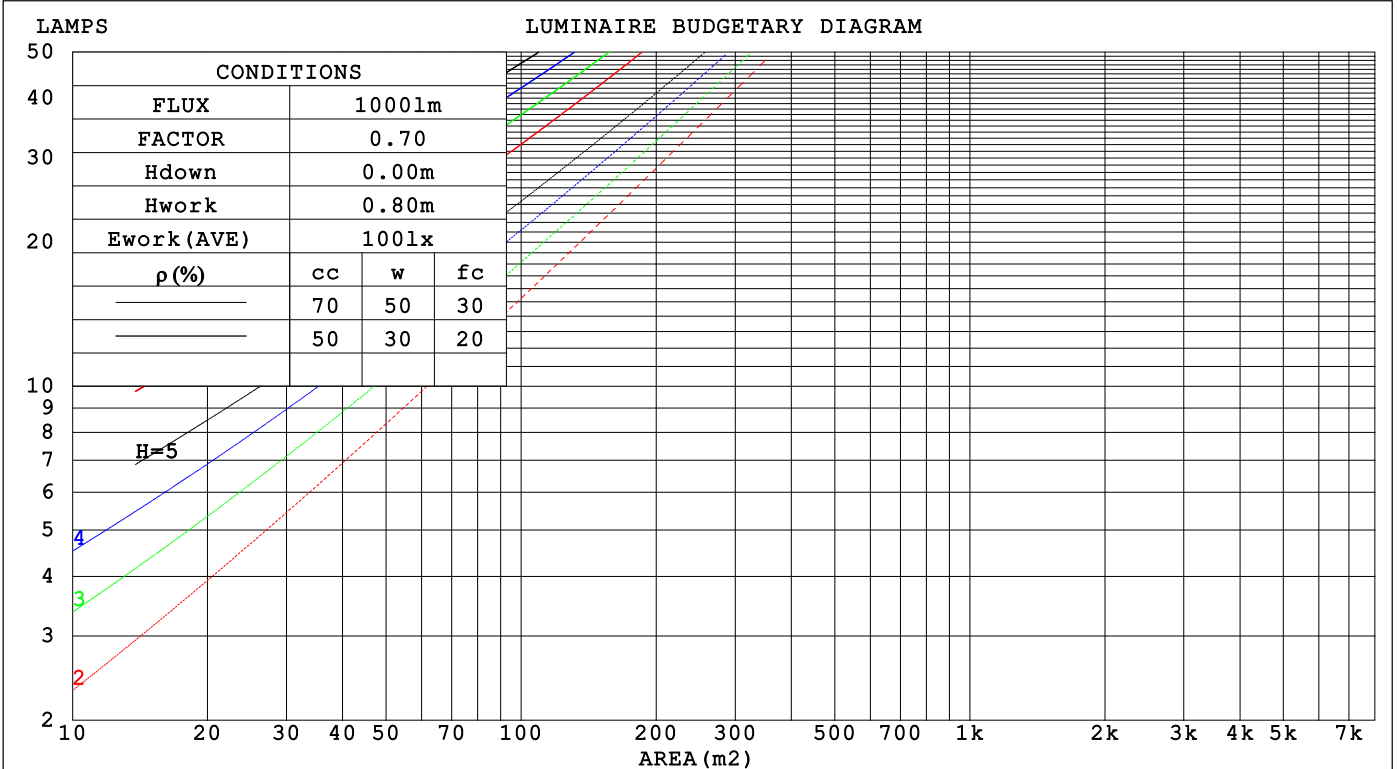
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3 °C  
 Operators:DAMIN  
 Test Date:20 April 2026

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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	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						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	.78	.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	.55	.68	.60	.53	.62	.56	.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	.36	.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	.45	.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

$\gamma$  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:

WEC AND CCEC

Test:U:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	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	.389	.221	.070	.377	.215	.068	.354	.203	.065	.333	.192	.062	.313	.181	.059	
2.0	.336	.184	.057	.325	.179	.055	.304	.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	.268	.140	.041	.259	.136	.040	.242	.129	.038	.226	.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	.185	.185	.185	.106	.106	.106	.034	.034	.034	
1.0	.314	.284	.256	.269	.244	.221	.184	.168	.153	.106	.097	.089	.034	.031	.029	
2.0	.307	.261	.222	.263	.225	.192	.180	.155	.134	.104	.090	.078	.033	.029	.026	
3.0	.300	.244	.200	.257	.211	.174	.176	.146	.122	.102	.086	.072	.033	.028	.023	
4.0	.292	.232	.186	.251	.200	.161	.172	.140	.114	.100	.082	.067	.032	.027	.022	
5.0	.284	.222	.176	.244	.192	.153	.168	.134	.108	.097	.079	.064	.031	.026	.021	
6.0	.277	.214	.169	.238	.185	.147	.164	.130	.104	.095	.076	.062	.031	.025	.020	
7.0	.270	.207	.164	.232	.180	.143	.160	.126	.101	.093	.074	.060	.030	.024	.020	
8.0	.263	.202	.160	.226	.175	.139	.157	.123	.099	.091	.073	.059	.029	.024	.020	
9.0	.257	.197	.157	.221	.171	.137	.153	.120	.097	.089	.071	.058	.029	.023	.019	
10.0	.251	.193	.154	.216	.168	.135	.150	.118	.096	.087	.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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	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	16.1	16.2	17.6	16.7	18.1	18.6
3H	15.2	16.5	15.7	17.0	17.6	19.0	20.3	19.6	20.9	21.4
4H	15.8	17.0	16.3	17.6	18.2	20.7	21.9	21.2	22.4	23.0
6H	16.2	17.4	16.8	17.9	18.6	22.4	23.6	23.0	24.2	24.8
8H	16.4	17.5	16.9	18.1	18.7	23.4	24.6	24.0	25.1	25.8
12H	16.4	17.5	17.0	18.1	18.8	24.6	25.7	25.2	26.2	26.9
4H 2H	14.9	16.1	15.4	16.7	17.3	16.7	17.9	17.2	18.5	19.1
3H	16.7	17.8	17.3	18.3	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	18.1	19.0	18.8	19.7	20.4	23.5	24.4	24.1	25.0	25.7
8H	18.4	19.2	19.0	19.8	20.6	24.6	25.5	25.3	26.1	26.8
12H	18.5	19.3	19.2	20.0	20.7	25.9	26.7	26.6	27.4	28.1
8H 4H	18.6	19.4	19.2	20.0	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	20.4	21.0	21.2	21.7	22.5	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	25.4	26.2
8H	20.8	21.4	21.5	22.1	22.9	25.5	26.1	26.2	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, 2027 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.5)  
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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

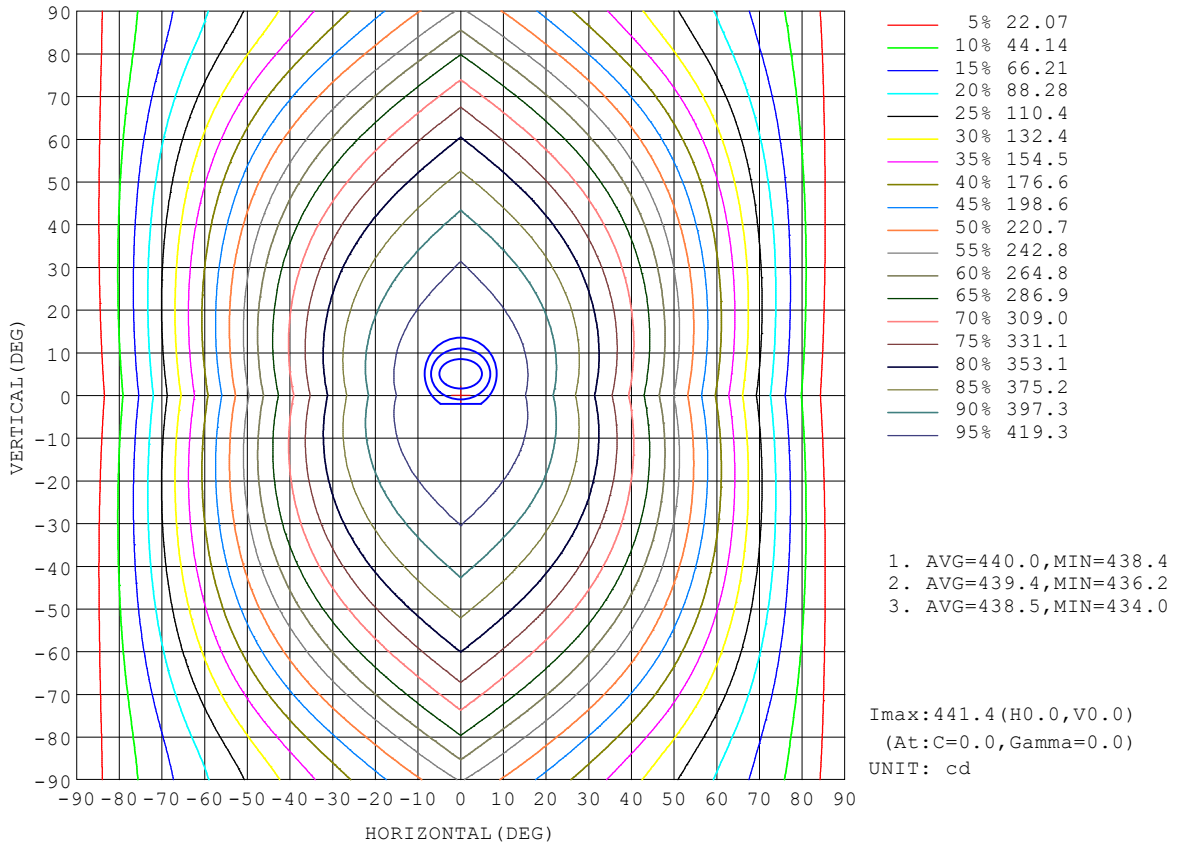
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	28	47	35	28	45	34	28	21
0.80	57	44	36	56	43	36	53	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	39
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	76	70	57
4.00	97	89	83	93	86	80	86	81	76	62
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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

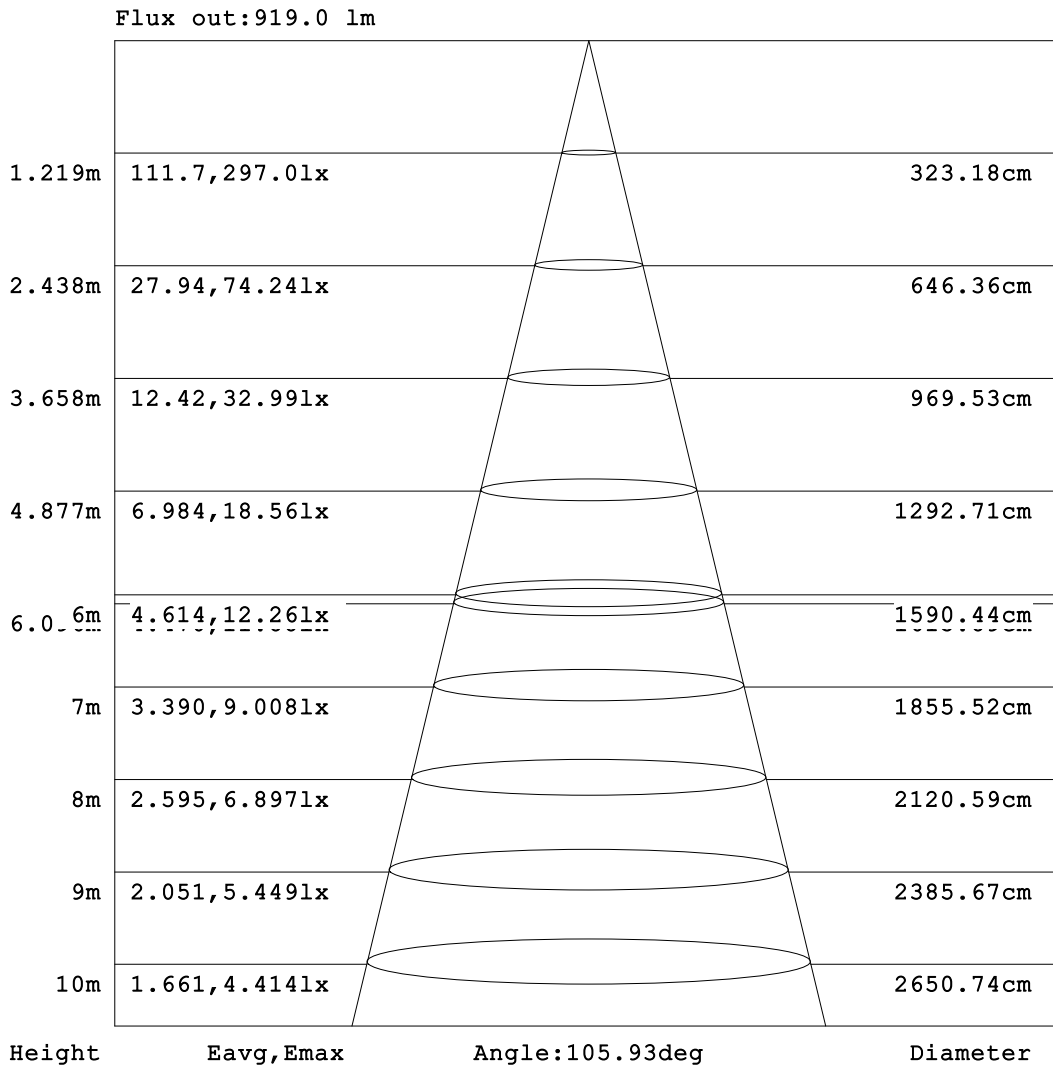


C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 20 April 2026

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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



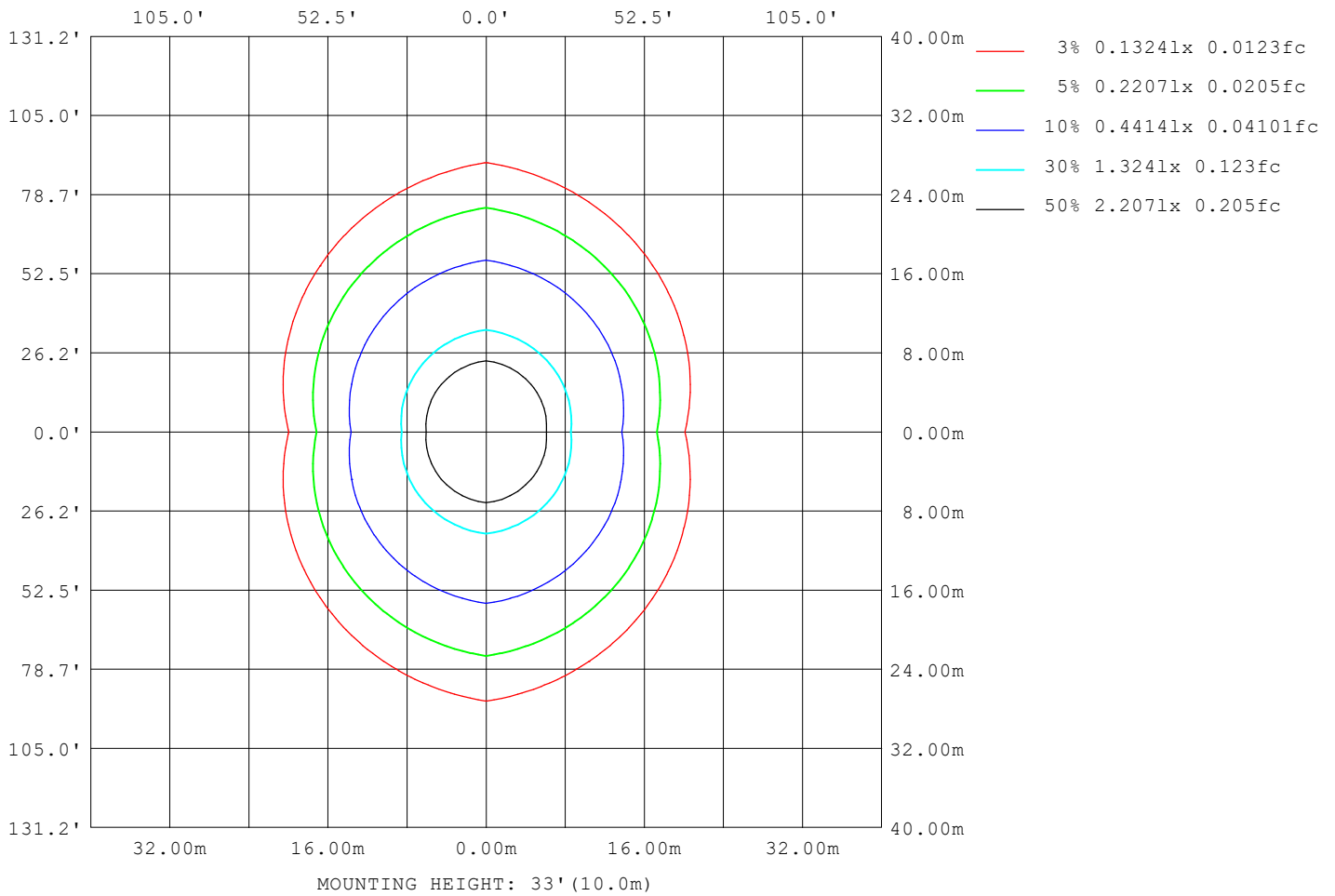
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

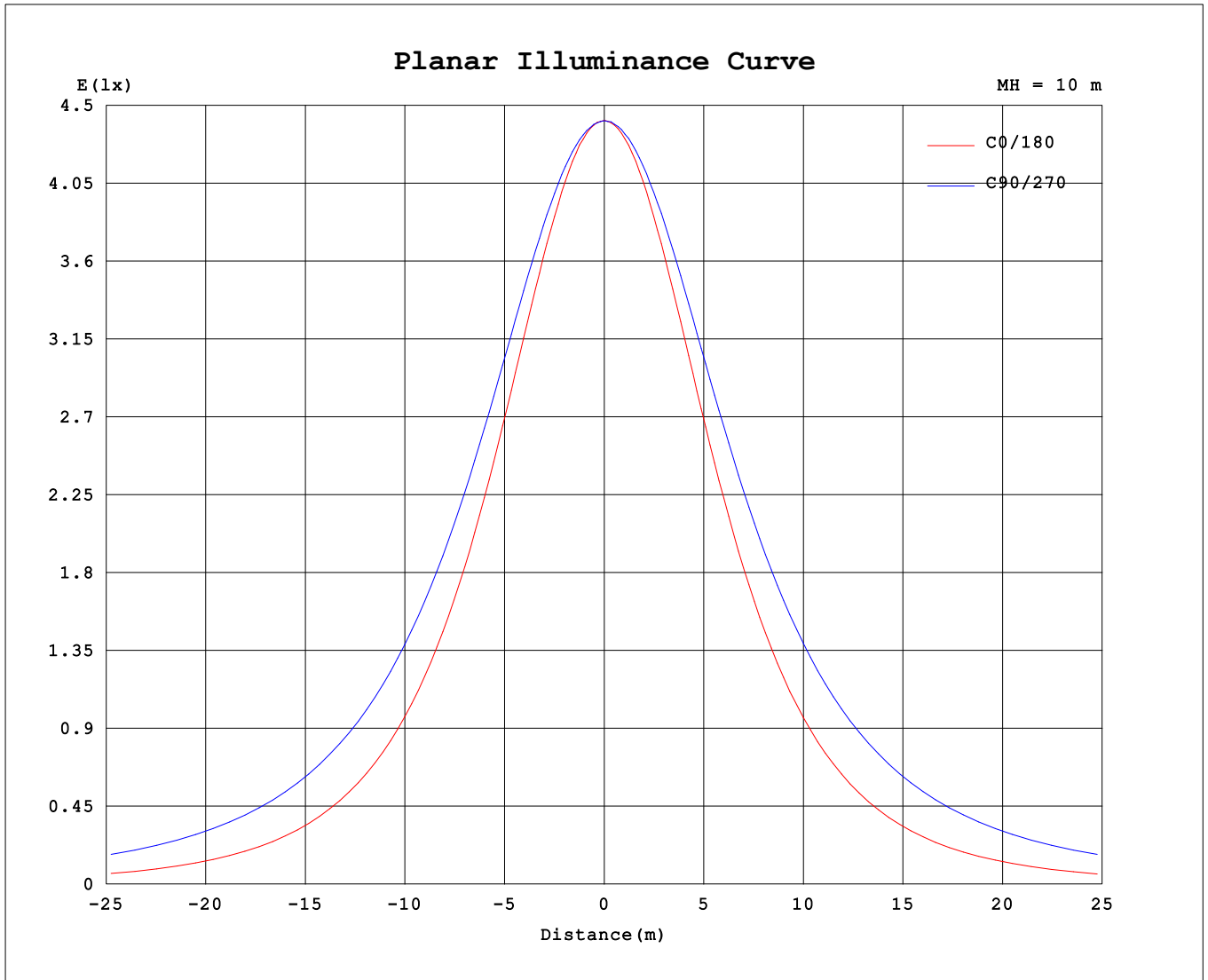
AvgL	cd/m2
L_0~180 (65) av	3259
L_0~180 (75) av	2732
L_0~180 (85) av	2012
L_90~270 (65) av	8010
L_90~270 (75) av	11774
L_90~270 (85) av	30577
L_45 (65) av	6226
L_45 (75) av	8379
L_45 (85) av	19854

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:119.94V I:0.2176A P:23.846W PF:0.9135 Freq:59.98Hz Lamp Flux:2027.26x1 lm		
NAME: WS24-085-BN 24W 30K	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	441	441	441	441															
5	439	440	439	441															
10	432	439	431	440															
15	420	436	419	437															
20	403	432	403	433															
25	383	427	383	428															
30	360	420	359	421															
35	334	412	333	413															
40	305	403	304	404															
45	274	392	273	394															
50	242	380	240	382															
55	208	368	205	369															
60	174	353	171	354															
65	140	338	136	339															
70	106	322	102	323															
75	72.6	305	68.8	305															
80	43.1	286	39.2	286															
85	19.1	266	16.0	267															
90	6.73	245	5.94	246															
95	7.28	201	6.70	205															
100	8.84	152	8.09	153															
105	10.6	102	10.0	99.8															
110	12.8	93.3	12.6	91.5															
115	15.5	94.8	15.4	92.5															
120	18.1	78.2	18.0	77.3															
125	18.5	63.1	17.1	61.2															
130	20.7	56.5	18.8	55.4															
135	22.6	51.7	20.9	49.3															
140	22.7	47.8	21.3	37.3															
145	23.4	43.2	21.9	37.9															
150	24.4	37.3	22.9	36.3															
155	25.5	33.5	23.8	31.0															
160	26.2	32.8	24.5	32.0															
165	26.4	31.0	24.9	30.2															
170	26.5	26.7	25.2	27.6															
175	30.5	22.7	29.0	24.9															
180	30.4	19.4	30.4	19.4															

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: