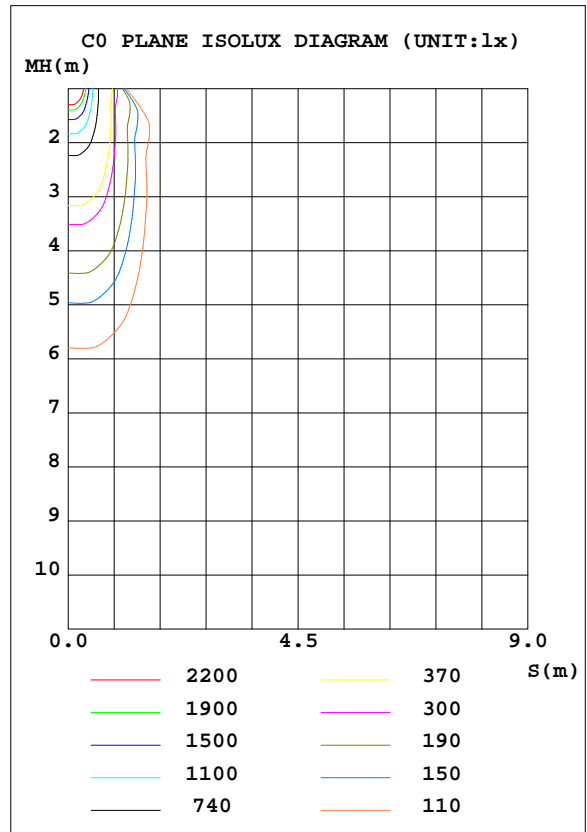
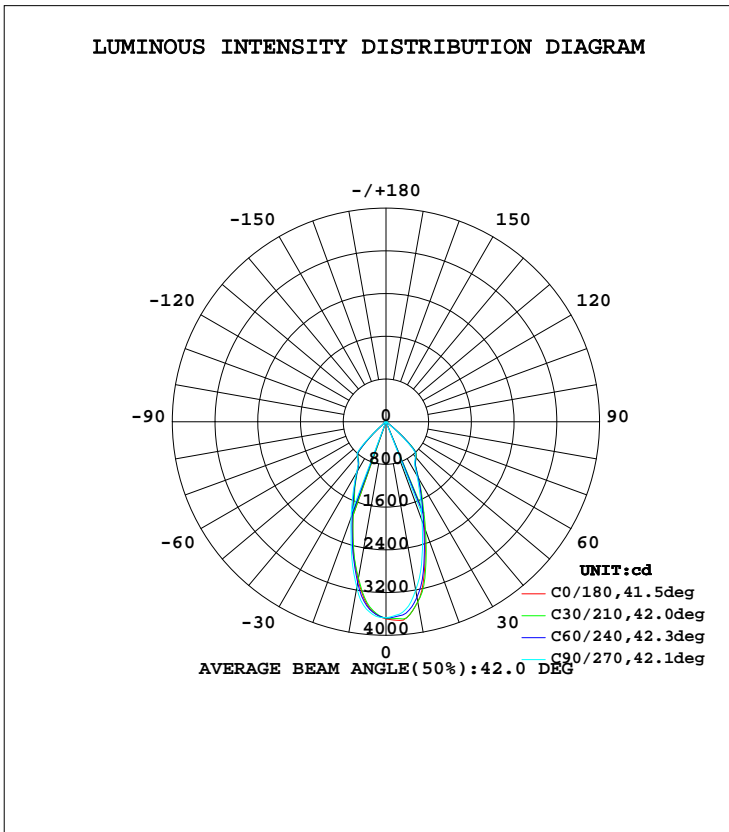


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 111.67 lm/W			
MODEL	LED-SN25W-NW	I <sub>max</sub> (cd)	3730	S/MH(C0/180)	0.70
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	0.67
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	2892.2	η UP, DN(C0-180)	0.0, 51.3
NOMINAL FLUX(lm)	2892.25	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	240.4	η down(%)	100.0	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	3427	3383	3204	3056	3005	3015	3151	3350	0- 10	330.0	330.0	11.4,11.4
20	2117	2117	1975	1845	1804	1821	1912	2027	10- 20	711.9	1042	36,36
30	1195	1215	1160	1102	1093	1076	1110	1165	20- 30	686.7	1729	59.8,59.8
40	876.0	872.8	855.6	831.8	836.2	825.2	841.1	859.4	30- 40	593.9	2323	80.3,80.3
50	235.7	261.9	174.7	97.47	86.54	82.30	113.2	194.7	40- 50	446.6	2769	95.7,95.7
60	34.69	33.26	33.82	37.03	37.89	38.00	35.25	33.42	50- 60	49.64	2819	97.5,97.5
70	34.26	34.40	35.28	34.14	33.95	34.34	33.95	33.90	60- 70	35.38	2854	98.7,98.7
80	18.15	17.37	17.89	15.25	17.23	15.25	17.20	16.52	70- 80	27.56	2882	99.6,99.6
90	0	0	0	0	0.0539	0.0748	0.0598	0	80- 90	10.54	2892	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

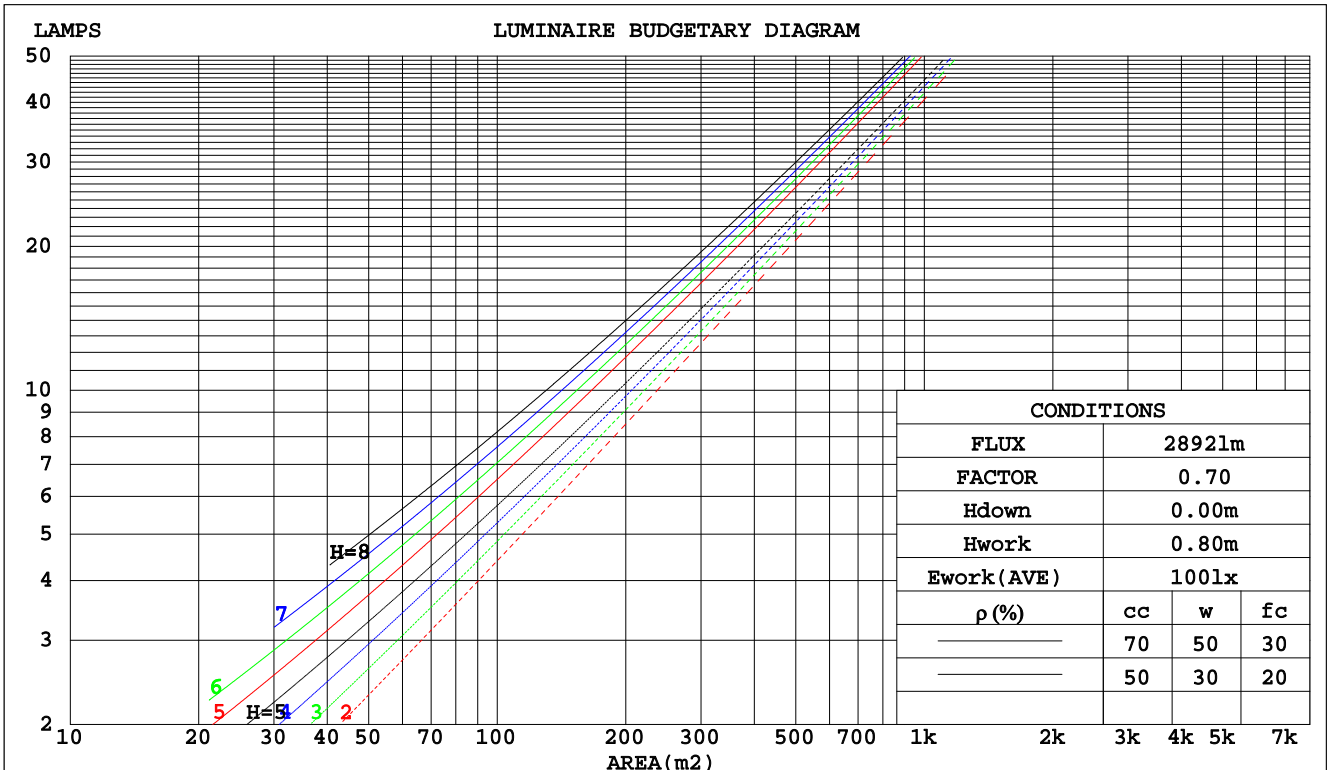
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.97	.93	.99	.95	.92	.96	.93	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.94	.88	.84	.92	.87	.83	.90	.85	.82	.87	.83	.80	.85	.82	.79	.78
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.81	.74	.70	.80	.74	.69	.78	.73	.69	.76	.72	.68	.75	.71	.68	.66
6.0	.75	.69	.64	.75	.68	.64	.73	.68	.64	.71	.67	.63	.70	.66	.63	.61
7.0	.70	.64	.59	.70	.64	.59	.68	.63	.59	.67	.62	.59	.66	.62	.58	.57
8.0	.66	.60	.55	.66	.59	.55	.64	.59	.55	.63	.58	.55	.62	.58	.54	.53
9.0	.62	.56	.52	.62	.56	.52	.61	.55	.51	.60	.55	.51	.59	.54	.51	.50
10.0	.59	.53	.48	.58	.52	.48	.57	.52	.48	.57	.52	.48	.56	.51	.48	.47



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.197	.112	.035	.190	.108	.034	.177	.102	.033	.166	.096	.031	.155	.090	.029	
2.0	.188	.103	.032	.183	.101	.031	.172	.096	.030	.162	.091	.028	.153	.086	.027	
3.0	.179	.095	.028	.174	.093	.028	.165	.089	.027	.156	.085	.026	.148	.082	.025	
4.0	.170	.088	.026	.165	.086	.026	.157	.083	.025	.150	.080	.024	.143	.078	.024	
5.0	.161	.082	.024	.157	.081	.024	.150	.078	.023	.144	.076	.023	.137	.073	.022	
6.0	.153	.077	.022	.150	.076	.022	.143	.074	.021	.138	.072	.021	.132	.070	.021	
7.0	.146	.072	.020	.143	.071	.020	.137	.069	.020	.132	.068	.020	.127	.066	.019	
8.0	.139	.068	.019	.136	.067	.019	.131	.066	.019	.127	.064	.018	.122	.063	.018	
9.0	.132	.064	.018	.130	.063	.018	.126	.062	.018	.121	.061	.017	.117	.060	.017	
10.0	.126	.061	.017	.124	.060	.017	.120	.059	.017	.117	.058	.016	.113	.057	.016	

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	.172	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.136	.114	.096	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.057	.111	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.105	.068	.042	.072	.048	.030	.042	.028	.018	.014	.009	.006	
7.0	.115	.071	.040	.099	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.110	.065	.035	.094	.057	.030	.065	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.104	.060	.030	.090	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.100	.056	.026	.086	.048	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

Uncorrected UGR Table

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm										
NAME: LED-SN25W-NW					TYPE:25W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.047			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	25.1	26.2	25.3	26.3	26.5	24.9	25.9	25.1	26.1	26.3
3H	25.0	26.0	25.3	26.2	26.4	24.8	25.8	25.1	26.0	26.2
4H	25.1	26.0	25.3	26.2	26.4	24.8	25.8	25.1	26.0	26.2
6H	25.1	25.9	25.4	26.2	26.4	24.9	25.7	25.2	25.9	26.2
8H	25.1	25.9	25.4	26.1	26.4	24.8	25.7	25.2	25.9	26.2
12H	25.1	25.8	25.4	26.1	26.4	24.9	25.6	25.2	25.9	26.2
4H 2H	24.9	25.8	25.2	26.0	26.2	24.7	25.6	24.9	25.8	26.0
3H	24.9	25.7	25.2	25.9	26.2	24.7	25.5	25.0	25.7	26.0
4H	24.9	25.7	25.3	26.0	26.3	24.7	25.4	25.1	25.7	26.1
6H	25.0	25.6	25.4	26.0	26.3	24.8	25.4	25.2	25.8	26.1
8H	25.0	25.6	25.4	26.0	26.4	24.8	25.4	25.2	25.8	26.1
12H	25.1	25.6	25.5	26.0	26.4	24.9	25.4	25.3	25.8	26.2
8H 4H	24.9	25.5	25.3	25.8	26.2	24.7	25.3	25.1	25.6	26.0
6H	25.0	25.5	25.5	25.9	26.3	24.8	25.3	25.2	25.7	26.1
8H	25.1	25.5	25.5	25.9	26.4	24.9	25.3	25.3	25.7	26.1
12H	25.2	25.5	25.7	26.0	26.5	24.9	25.3	25.4	25.7	26.2
12H 4H	24.9	25.4	25.3	25.8	26.1	24.6	25.2	25.1	25.6	25.9
6H	25.0	25.4	25.5	25.8	26.3	24.8	25.2	25.2	25.6	26.1
8H	25.1	25.5	25.6	25.9	26.4	24.9	25.2	25.3	25.7	26.1
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / - 4.8					+ 2.7 / - 5.0				
1.5H	+ 2.3 / - 6.2					+ 2.2 / - 6.2				
2.0H	+ 6.2 / - 4.5					+ 6.3 / - 4.4				

CIE Pub.117 Corrected 2892 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.7)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:

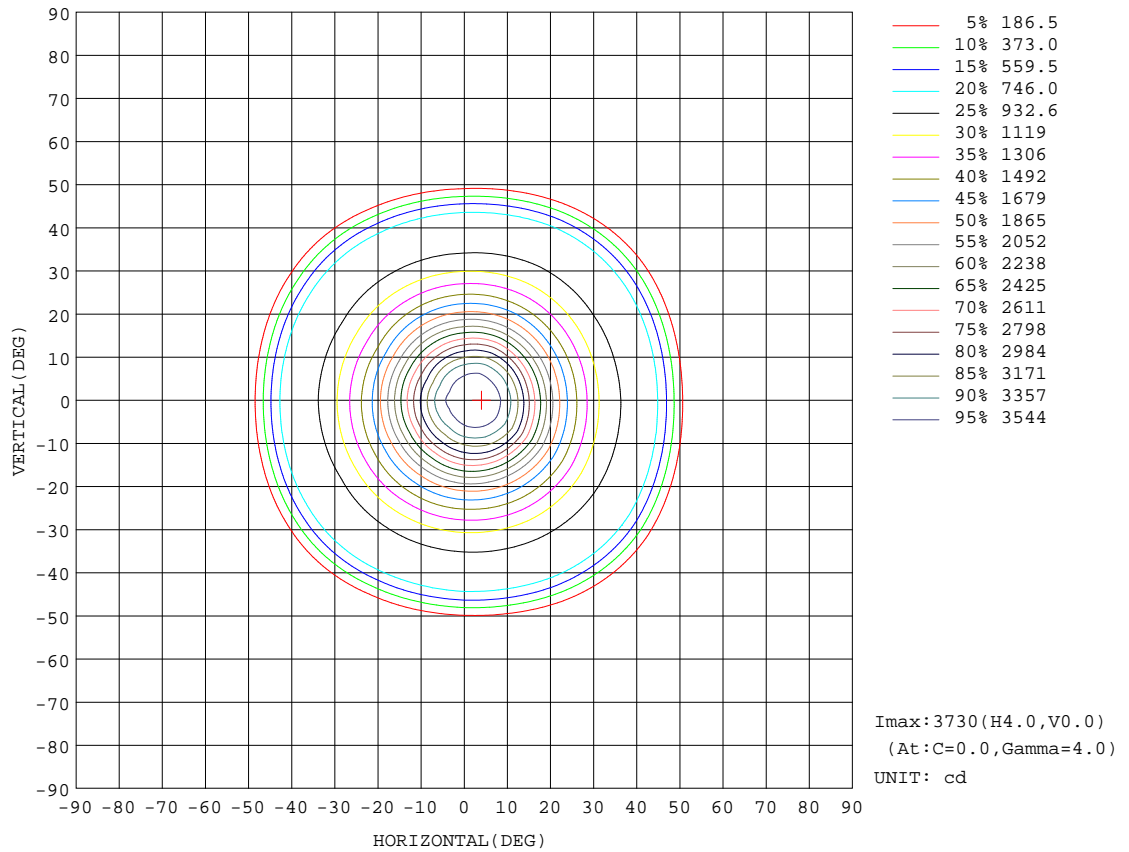
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	72	67	79	71	67	78	71	67	62
0.80	88	81	76	87	80	76	86	80	75	71
1.00	94	87	83	93	87	82	91	87	82	77
1.25	99	93	88	98	92	88	96	91	87	82
1.50	102	96	92	101	96	92	98	94	91	86
2.00	106	101	97	104	100	96	102	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	102	108	104	101	105	102	99	92
4.00	112	109	106	110	107	105	106	104	102	95
5.00	114	111	108	111	109	107	107	105	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:

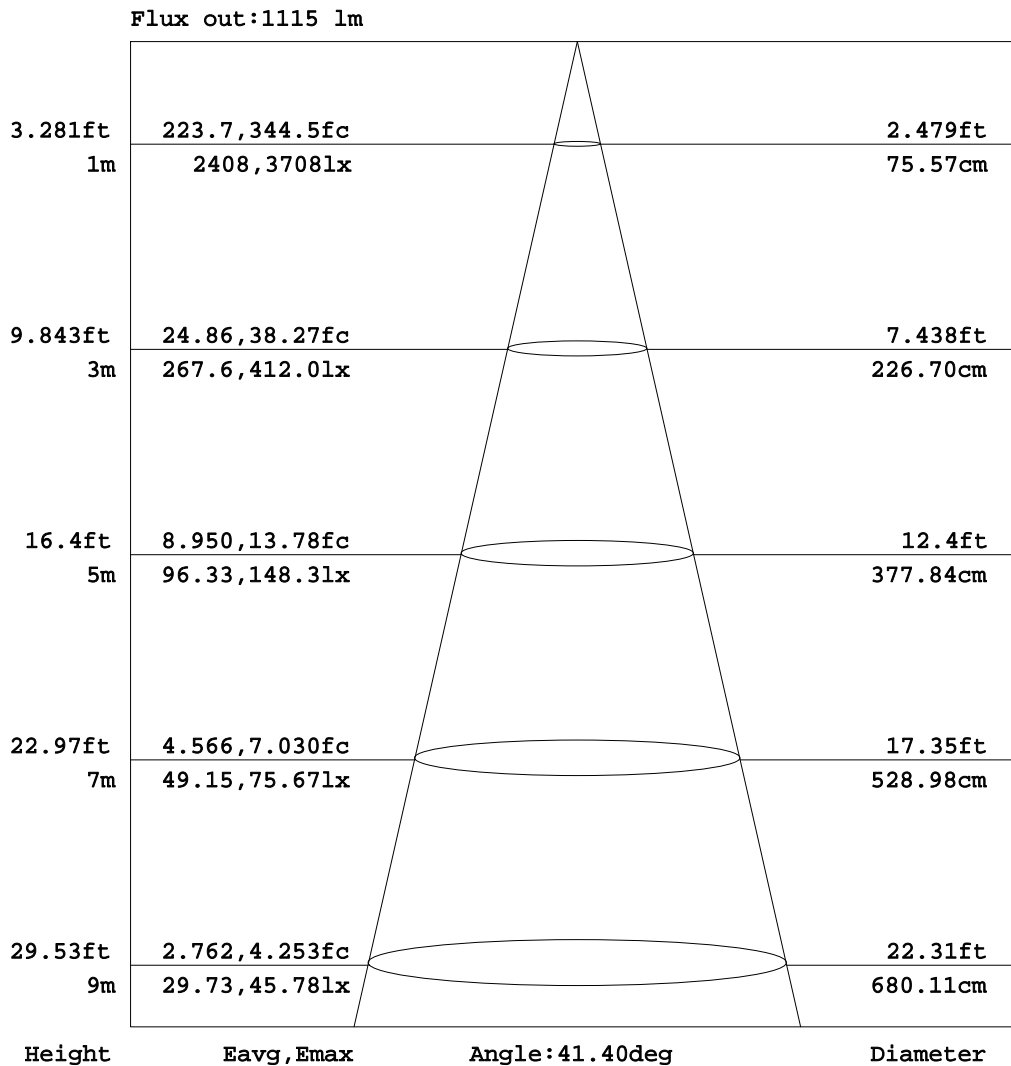


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 9.443m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:



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

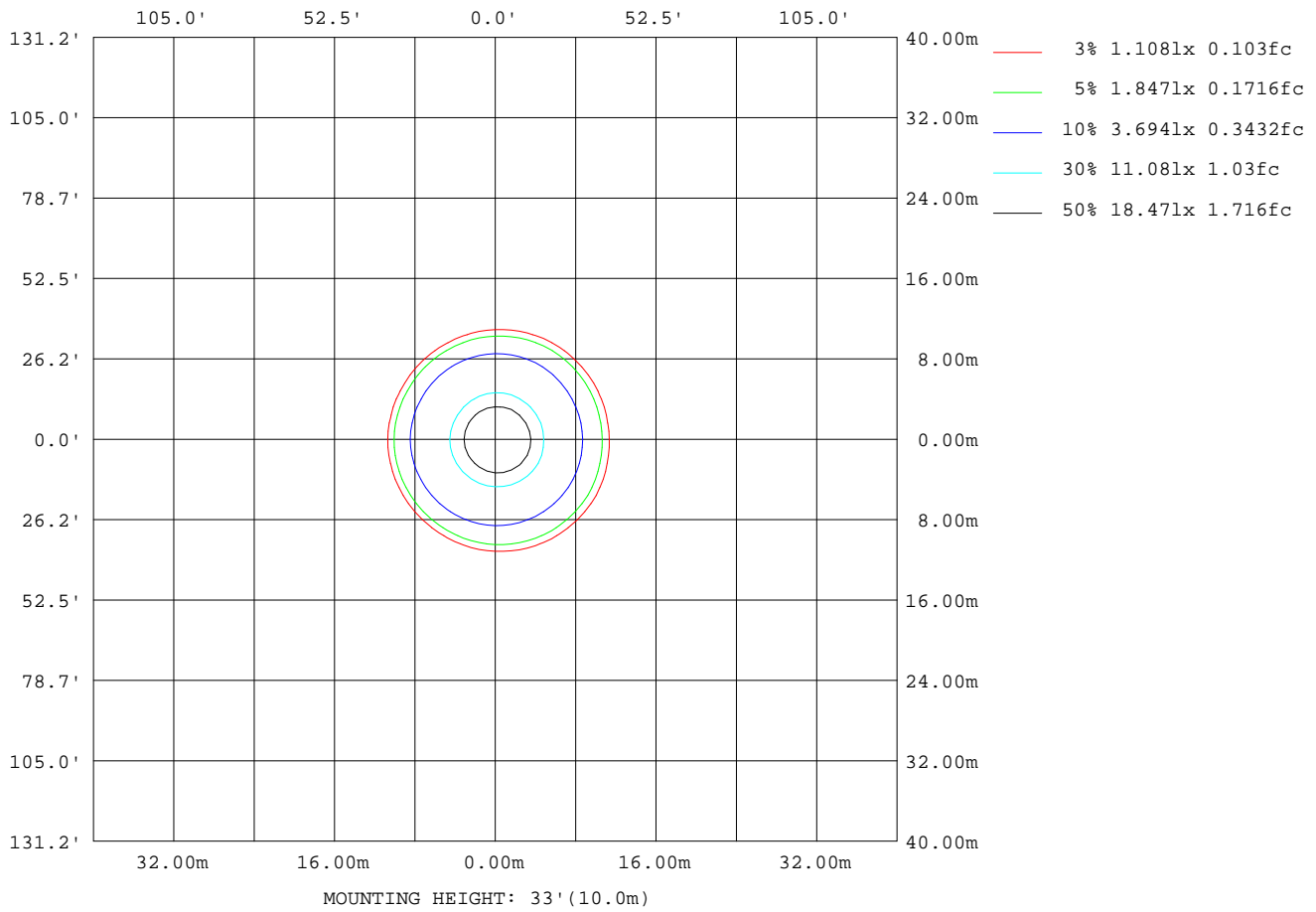
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:



**ISOLUX DIAGRAM**

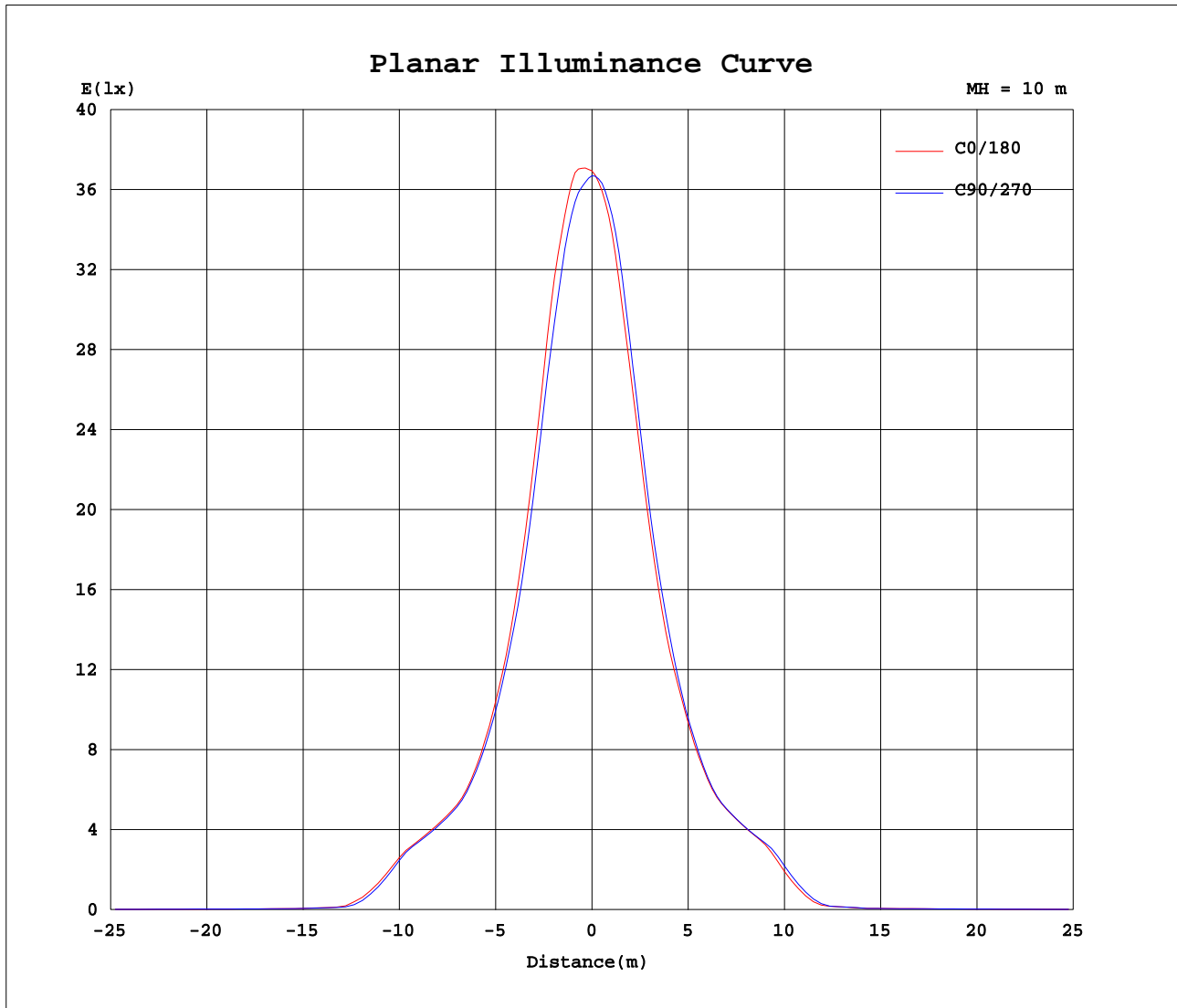
Test:U:240.4V I:0.1080A P:25.90W PF:0.9900 Lamp Flux:2892.25x1 lm		
NAME: LED-SN25W-NW	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.047	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-12-15

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2018-12-15

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 9.443m [K=1.0000]  
 Remarks:

