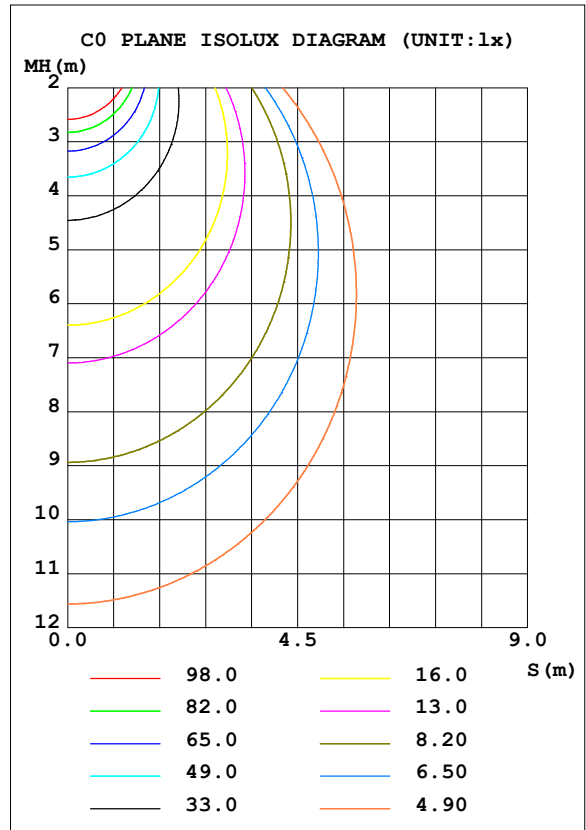
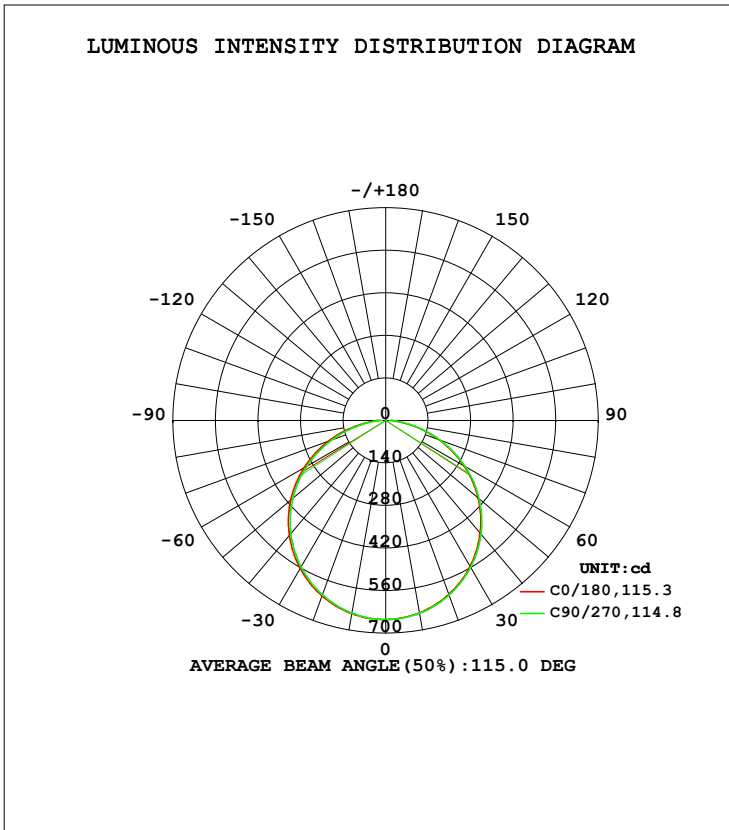


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.72 lm/W			
MODEL	AL117-14-20W-3000K	I <sub>max</sub> (cd)	655.2	S/MH (C0/180)	1.28
NOMINAL POWER (W)	20	LOR (%)	118.6	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	200-240	TOTAL FLUX (lm)	1936.9	η UP, DN (C0-180)	0.0, 58.9
NOMINAL FLUX (lm)	1633.45	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 59.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	118.6	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 8.692m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

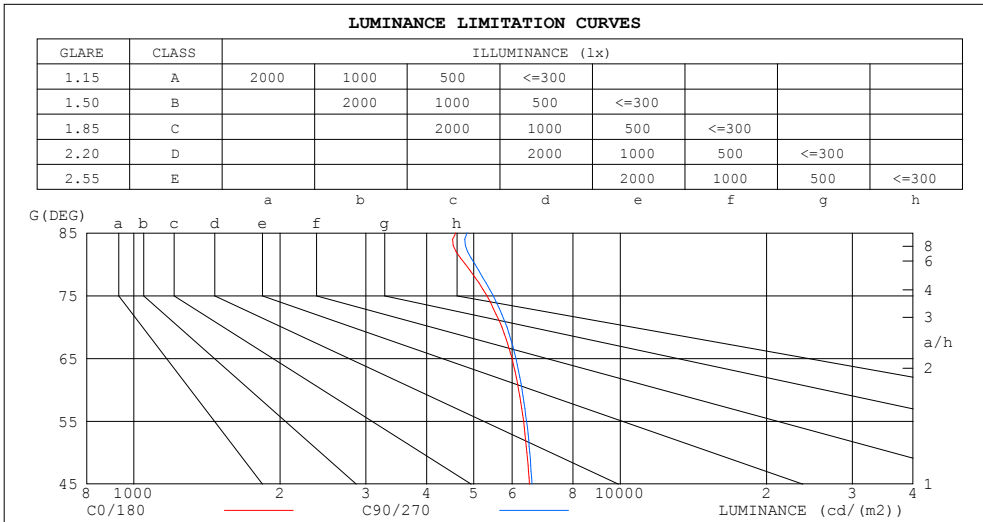
$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	642.8	644.2	645.5	643.6				0- 10	62.00	62.00	3.2,3.8
20	609.0	611.5	613.9	610.3				10- 20	177.9	239.9	12.4,14.7
30	555.2	558.8	562.6	556.8				20- 30	270.6	510.5	26.4,31.3
40	483.8	488.4	493.1	485.6				30- 40	328.6	839.1	43.3,51.4
50	397.0	402.0	408.2	399.0				40- 50	344.3	1183	61.1,72.4
60	296.9	301.6	309.4	298.7				50- 60	315.5	1499	77.4,91.8
70	187.5	192.0	200.8	189.1				60- 70	245.0	1744	90,107
80	80.17	83.79	91.78	81.19				70- 80	144.8	1889	97.5,116
90	18.40	13.36	20.72	12.91				80- 90	48.21	1937	100,119
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: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:	
SPEC.: 3000K	DIM.:	SERIAL No.:	
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:	



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4592	4842
80	4808	5028
75	5320	5482
70	5709	5849
65	5992	6106
60	6184	6285
55	6328	6420
50	6432	6517
45	6513	6588

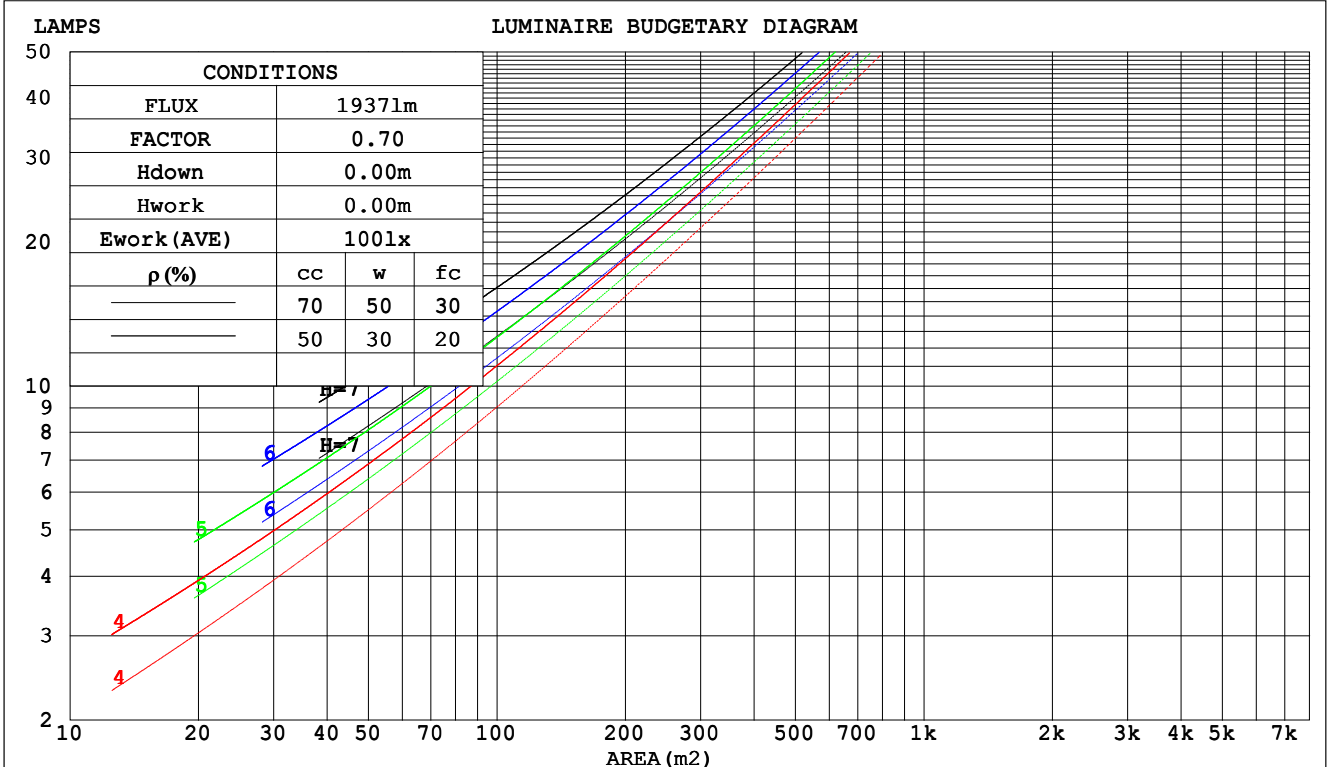
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding 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															
	Coefficients of Utilization(CU)															
0.0	1.41	1.41	1.41	1.38	1.38	1.38	1.32	1.32	1.32	1.26	1.26	1.26	1.21	1.21	1.21	1.19
1.0	1.23	1.17	1.13	1.20	1.15	1.11	1.15	1.11	1.07	1.10	1.07	1.04	1.06	1.03	1.01	.98
2.0	1.06	.98	.91	1.04	.97	.90	.90	.93	.88	.96	.91	.86	.92	.88	.84	.81
3.0	.93	.83	.75	.91	.82	.75	.88	.80	.73	.84	.78	.72	.81	.76	.71	.68
4.0	.82	.72	.64	.81	.71	.63	.78	.69	.62	.75	.68	.61	.72	.66	.61	.58
5.0	.74	.63	.55	.72	.62	.54	.70	.61	.54	.67	.59	.53	.65	.58	.53	.50
6.0	.66	.55	.48	.65	.55	.47	.63	.54	.47	.61	.53	.46	.59	.52	.46	.44
7.0	.60	.49	.42	.59	.49	.42	.57	.48	.41	.55	.47	.41	.54	.46	.41	.38
8.0	.55	.44	.37	.54	.44	.37	.52	.43	.37	.51	.43	.37	.49	.42	.36	.34
9.0	.50	.40	.34	.49	.40	.33	.48	.39	.33	.47	.39	.33	.45	.38	.33	.31
10.0	.46	.37	.30	.46	.36	.30	.44	.36	.30	.43	.35	.30	.42	.35	.30	.28



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K		TYPE: 20W		WEIGHT:	
SPEC.: 3000K		DIM.:		SERIAL No.:	
MFR.: EVERFINE		SUR.: 0.35		Shielding 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	.379	.216	.068	.371	.211	.067	.355	.204	.065	.340	.196	.063	.327	.190	.061	
2.0	.354	.194	.059	.346	.191	.059	.332	.185	.057	.319	.179	.056	.308	.174	.055	
3.0	.326	.173	.052	.319	.171	.051	.307	.166	.051	.296	.162	.050	.285	.158	.049	
4.0	.300	.156	.046	.294	.154	.045	.283	.150	.045	.273	.147	.044	.263	.143	.044	
5.0	.277	.141	.041	.271	.139	.041	.262	.136	.040	.253	.133	.040	.244	.131	.039	
6.0	.256	.128	.037	.252	.127	.037	.243	.124	.036	.235	.122	.036	.227	.120	.036	
7.0	.238	.118	.033	.234	.117	.033	.226	.114	.033	.219	.112	.033	.212	.110	.032	
8.0	.222	.109	.031	.218	.108	.030	.212	.106	.030	.205	.104	.030	.199	.102	.030	
9.0	.208	.101	.028	.205	.100	.028	.199	.098	.028	.193	.097	.028	.187	.095	.027	
10.0	.195	.094	.026	.192	.093	.026	.187	.092	.026	.182	.090	.026	.177	.089	.025	

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	.226	.226	.226	.193	.193	.193	.132	.132	.132	.076	.076	.076	.024	.024	.024	
1.0	.215	.185	.158	.184	.159	.136	.126	.109	.094	.072	.063	.055	.023	.020	.018	
2.0	.205	.156	.115	.176	.135	.100	.120	.093	.070	.069	.054	.041	.022	.018	.013	
3.0	.196	.136	.087	.168	.117	.076	.115	.081	.053	.067	.047	.031	.021	.015	.010	
4.0	.187	.120	.069	.161	.104	.060	.110	.072	.042	.064	.042	.025	.021	.014	.008	
5.0	.178	.108	.055	.153	.093	.048	.105	.065	.034	.061	.038	.020	.020	.012	.007	
6.0	.170	.098	.046	.146	.085	.040	.101	.059	.028	.058	.035	.017	.019	.011	.006	
7.0	.161	.089	.039	.139	.078	.034	.096	.054	.024	.056	.032	.014	.018	.010	.005	
8.0	.154	.083	.034	.132	.072	.029	.092	.050	.021	.053	.030	.012	.017	.010	.004	
9.0	.146	.077	.030	.126	.067	.026	.087	.047	.018	.051	.028	.011	.016	.009	.004	
10.0	.140	.072	.026	.120	.062	.023	.083	.044	.016	.049	.026	.010	.016	.009	.003	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0%		Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	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	19.3	20.8	19.5	21.0	21.2	19.3	20.9	19.6	21.1	21.3
3H	20.8	22.3	21.1	22.5	22.7	20.9	22.4	21.2	22.6	22.8
4H	21.5	22.8	21.8	23.1	23.3	21.6	22.9	21.9	23.2	23.4
6H	21.9	23.2	22.2	23.5	23.7	22.0	23.3	22.4	23.6	23.9
8H	22.1	23.3	22.4	23.6	23.9	22.2	23.4	22.5	23.7	24.0
12H	22.2	23.3	22.5	23.6	24.0	22.3	23.5	22.7	23.8	24.1
4H 2H	19.9	21.3	20.2	21.5	21.8	20.0	21.3	20.3	21.6	21.8
3H	21.7	22.9	22.0	23.1	23.5	21.7	22.9	22.1	23.2	23.5
4H	22.4	23.5	22.8	23.8	24.2	22.5	23.6	22.9	23.9	24.2
6H	23.0	24.0	23.4	24.3	24.7	23.1	24.1	23.5	24.4	24.8
8H	23.2	24.1	23.6	24.5	24.8	23.3	24.2	23.7	24.6	25.0
12H	23.3	24.2	23.8	24.6	25.0	23.5	24.3	23.9	24.7	25.1
8H 4H	22.7	23.6	23.1	24.0	24.4	22.8	23.7	23.2	24.0	24.4
6H	23.4	24.2	23.9	24.6	25.0	23.5	24.3	24.0	24.7	25.1
8H	23.7	24.4	24.2	24.8	25.3	23.8	24.5	24.3	24.9	25.4
12H	24.0	24.5	24.4	25.0	25.5	24.1	24.7	24.6	25.1	25.6
12H 4H	22.7	23.5	23.1	23.9	24.3	22.8	23.6	23.2	24.0	24.4
6H	23.5	24.2	23.9	24.6	25.0	23.6	24.3	24.0	24.7	25.1
8H	23.8	24.4	24.3	24.9	25.3	23.9	24.5	24.4	25.0	25.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1633 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 1.7)  
 Area: 0.096 m2

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:	
SPEC.: 3000K	DIM.:	SERIAL No.:	
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:	

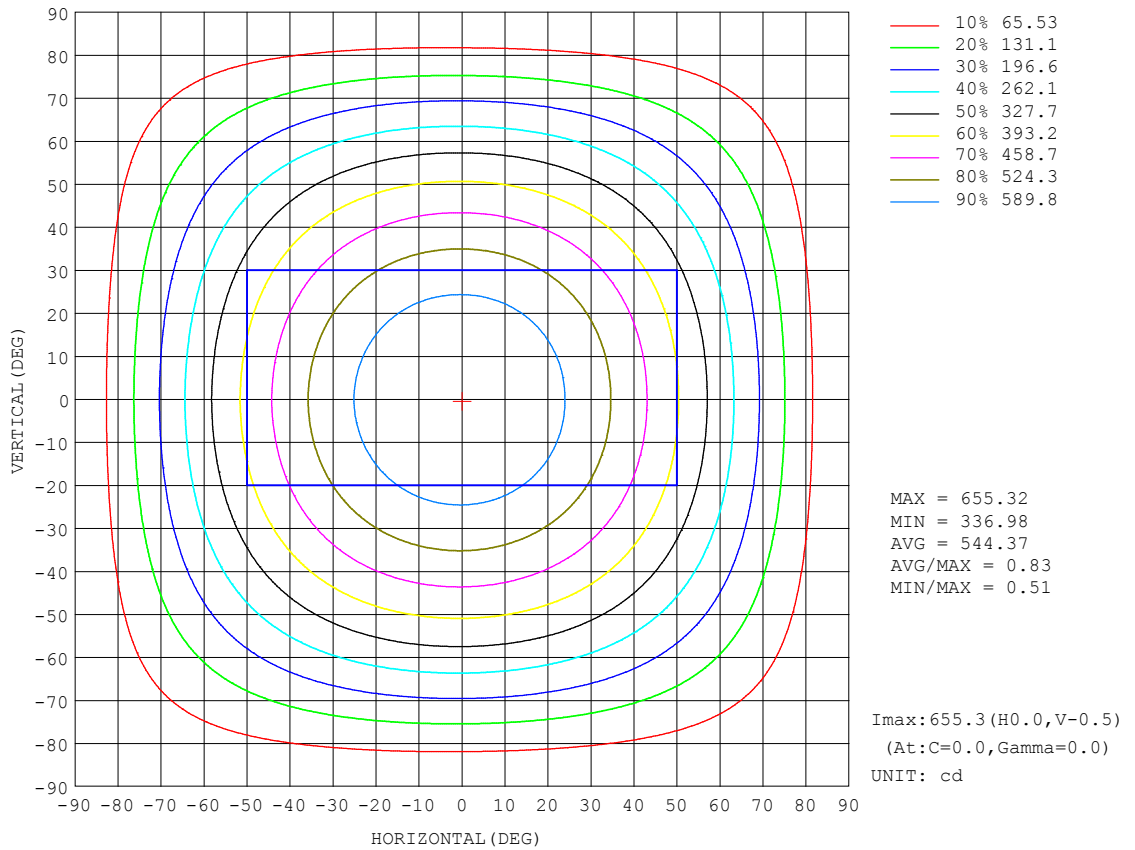
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	67	53	45	66	53	45	65	53	45	37
0.80	79	65	56	78	65	56	76	64	56	47
1.00	89	76	67	88	75	67	85	77	66	57
1.25	98	85	76	96	84	76	93	82	75	66
1.50	104	92	83	102	91	83	98	88	81	72
2.00	112	101	94	110	100	93	105	97	91	81
2.50	117	107	100	114	105	99	109	102	96	86
3.00	121	112	105	118	110	104	113	107	102	91
4.00	125	118	113	123	116	111	118	112	108	97
5.00	128	122	117	125	120	116	120	116	112	101
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:2020-09-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:



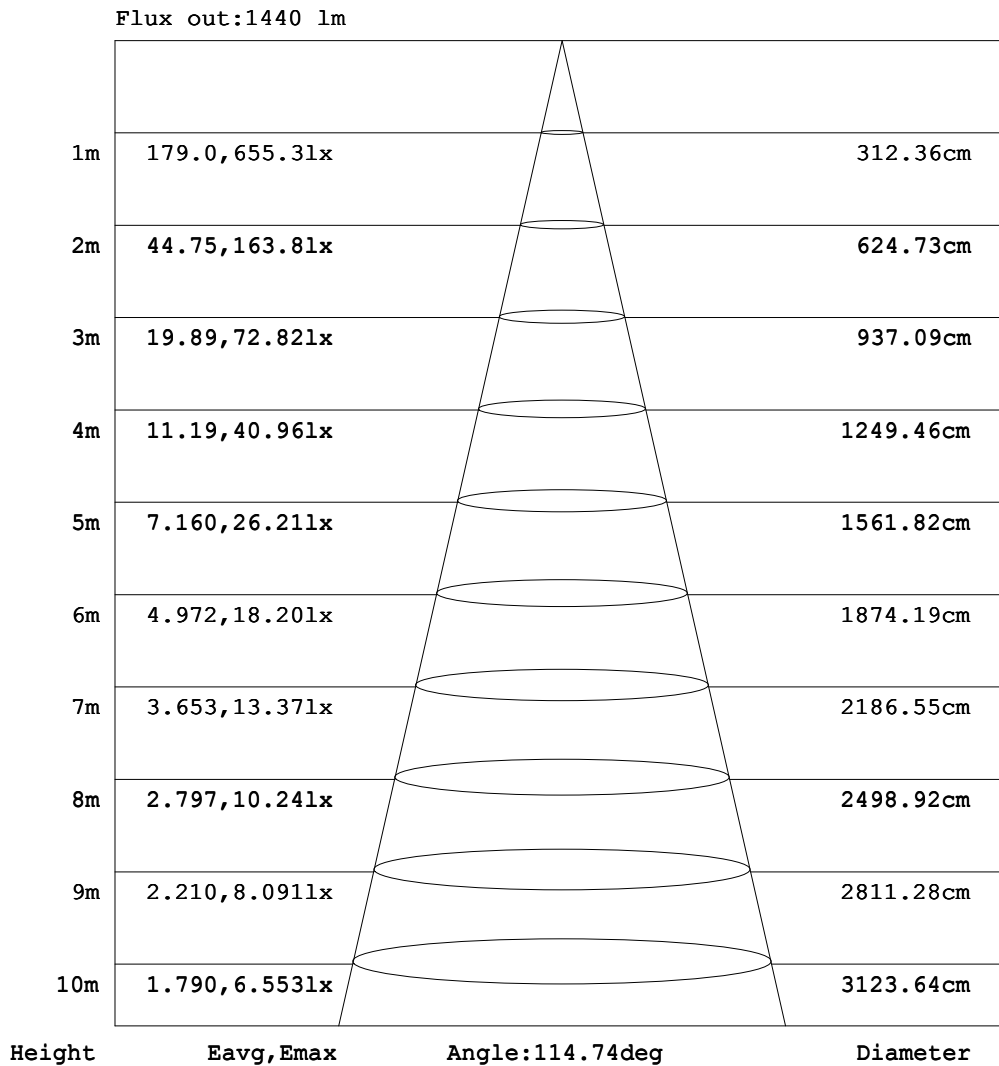
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 8.692m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:



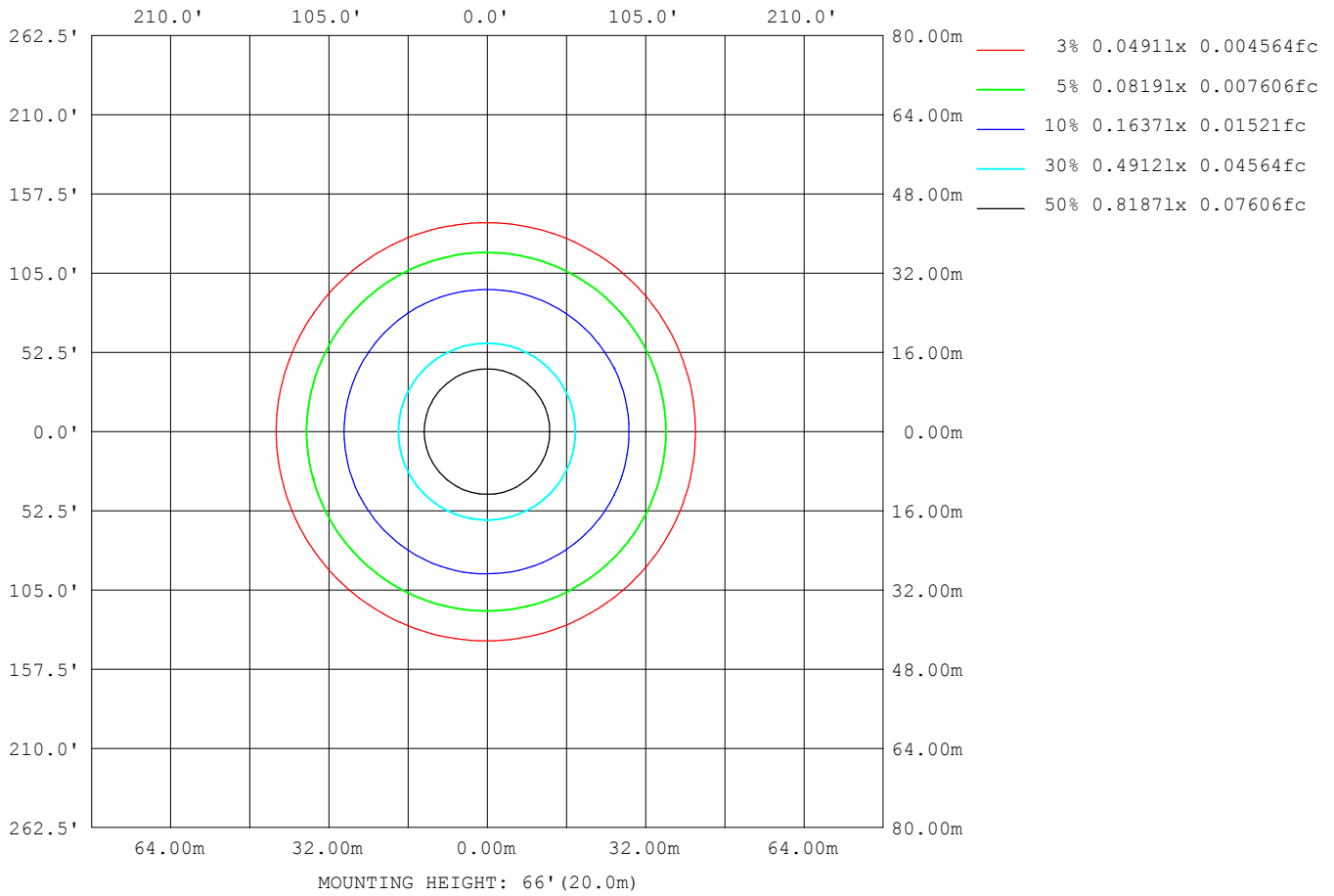
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0%		Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

LED Avg.L Report

Test:U:230.13V I:0.0895A P:19.822W PF:0.9622 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-3000K	TYPE: 20W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:

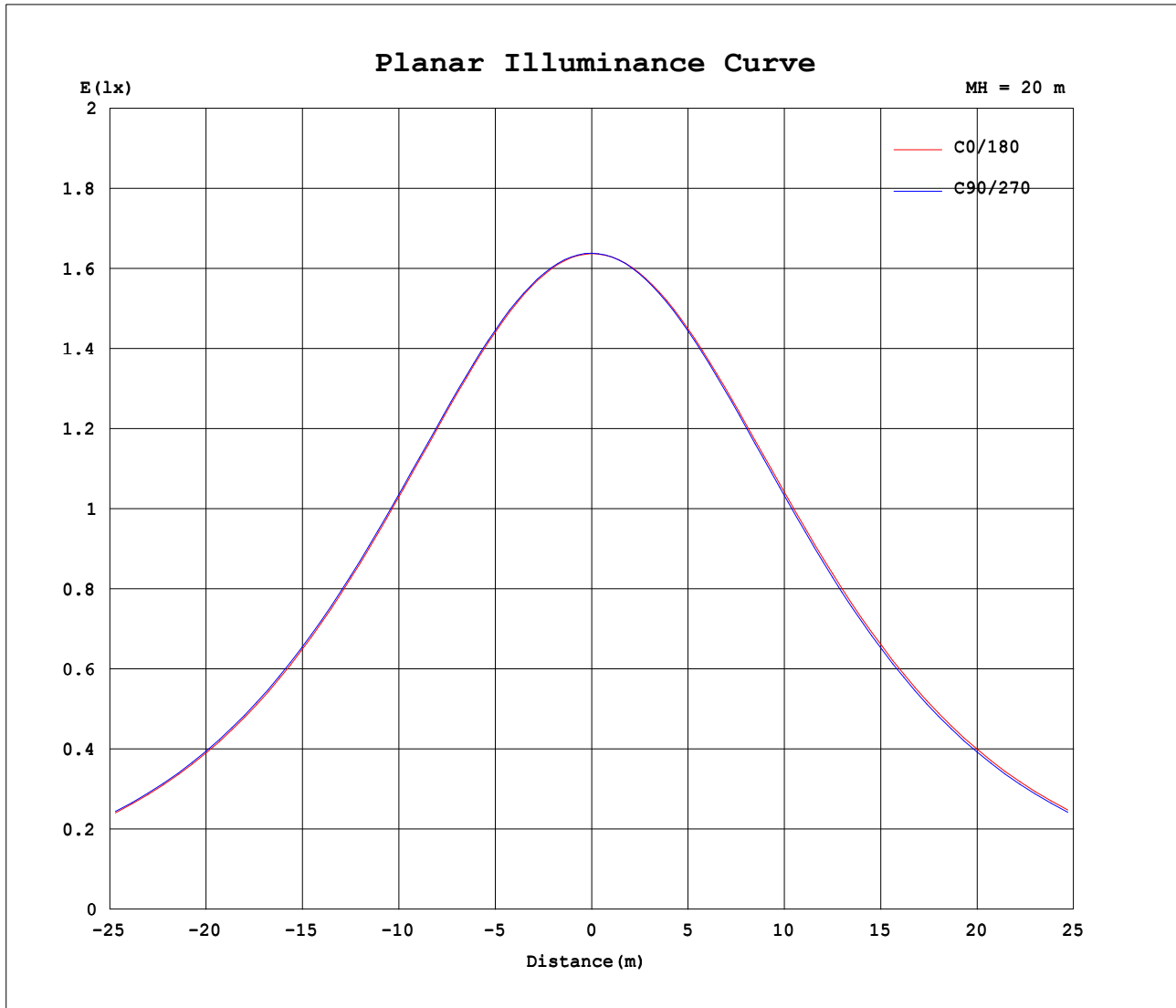
AvgL	cd/m2
L_0~180 (65) av	6152
L_0~180 (75) av	5590
L_0~180 (85) av	5068
L_90~270 (65) av	6069
L_90~270 (75) av	5425
L_90~270 (85) av	4723
L_45 (65) av	6110
L_45 (75) av	5504
L_45 (85) av	4882

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.692m [K=1.0000]  
 Remarks:

**Planar Illuminance Curve**



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2020-09-10

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 8.692m [K=1.0000]  
 Remarks:

