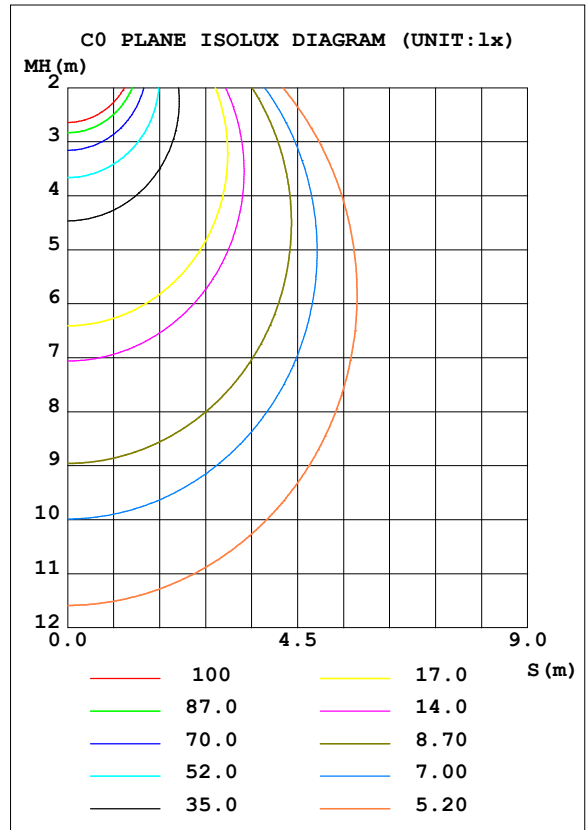
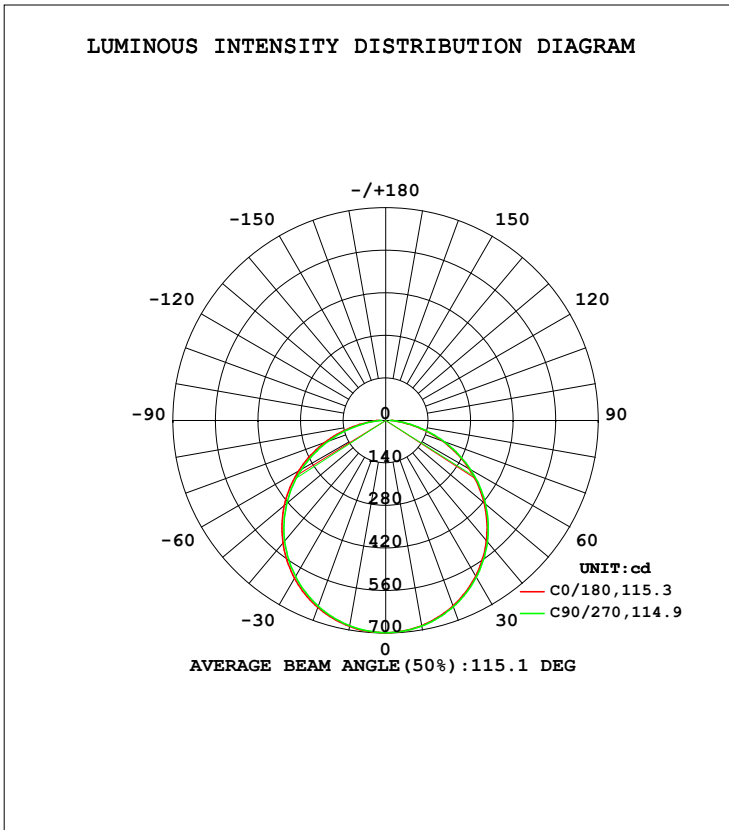


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.20 lm/W			
MODEIAL117-14-20W-AC3-4000K		I <sub>max</sub> (cd)	698.3	S/MH (C0/180)	1.28
NOMINAL POWER (W)	20	LOR (%)	126.4	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	200-240	TOTAL FLUX (lm)	2064.3	η UP, DN (C0-180)	0.0, 62.8
NOMINAL FLUX (lm)	1633.45	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 63.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	126.4	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:

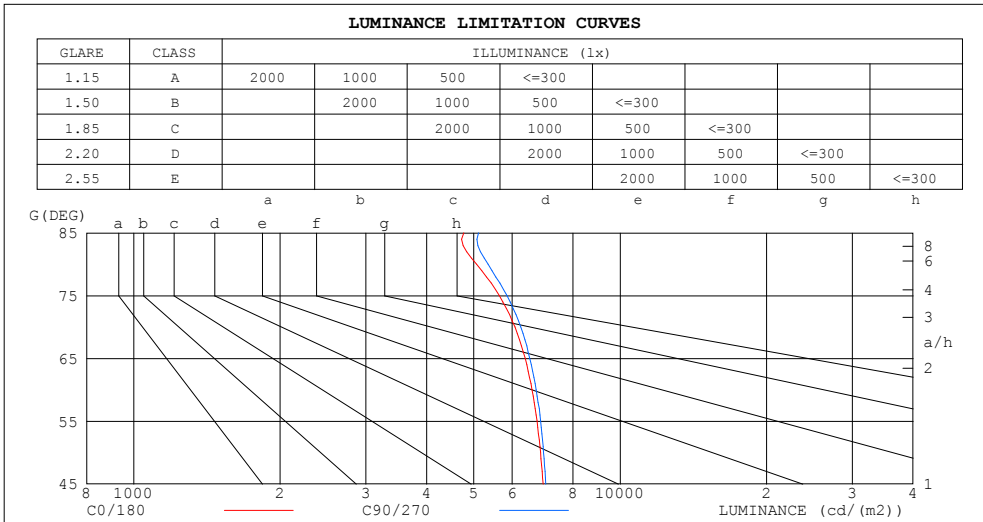
$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	685.3	686.9	688.2	686.0				0- 10	66.09	66.09	3.2,4.05
20	649.1	652.2	654.5	650.3				10- 20	189.6	255.7	12.4,15.7
30	592.0	596.3	600.1	593.5				20- 30	288.6	544.3	26.4,33.3
40	515.8	521.2	526.0	517.6				30- 40	350.4	894.6	43.3,54.8
50	423.4	429.2	435.7	425.0				40- 50	367.3	1262	61.1,77.3
60	316.5	322.3	330.1	318.2				50- 60	336.6	1598	77.4,97.9
70	199.6	205.0	214.2	201.2				60- 70	261.2	1860	90.1,114
80	84.57	89.15	97.28	85.84				70- 80	154.0	2014	97.5,123
90	18.55	13.83	21.22	13.10				80- 90	50.59	2064	100,126
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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:	
SPEC.: 4000K	DIM.:	SERIAL No.:	
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:	



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4771	5115
80	5071	5350
75	5642	5850
70	6078	6246
65	6383	6522
60	6592	6717
55	6745	6863
50	6859	6959
45	6942	7035

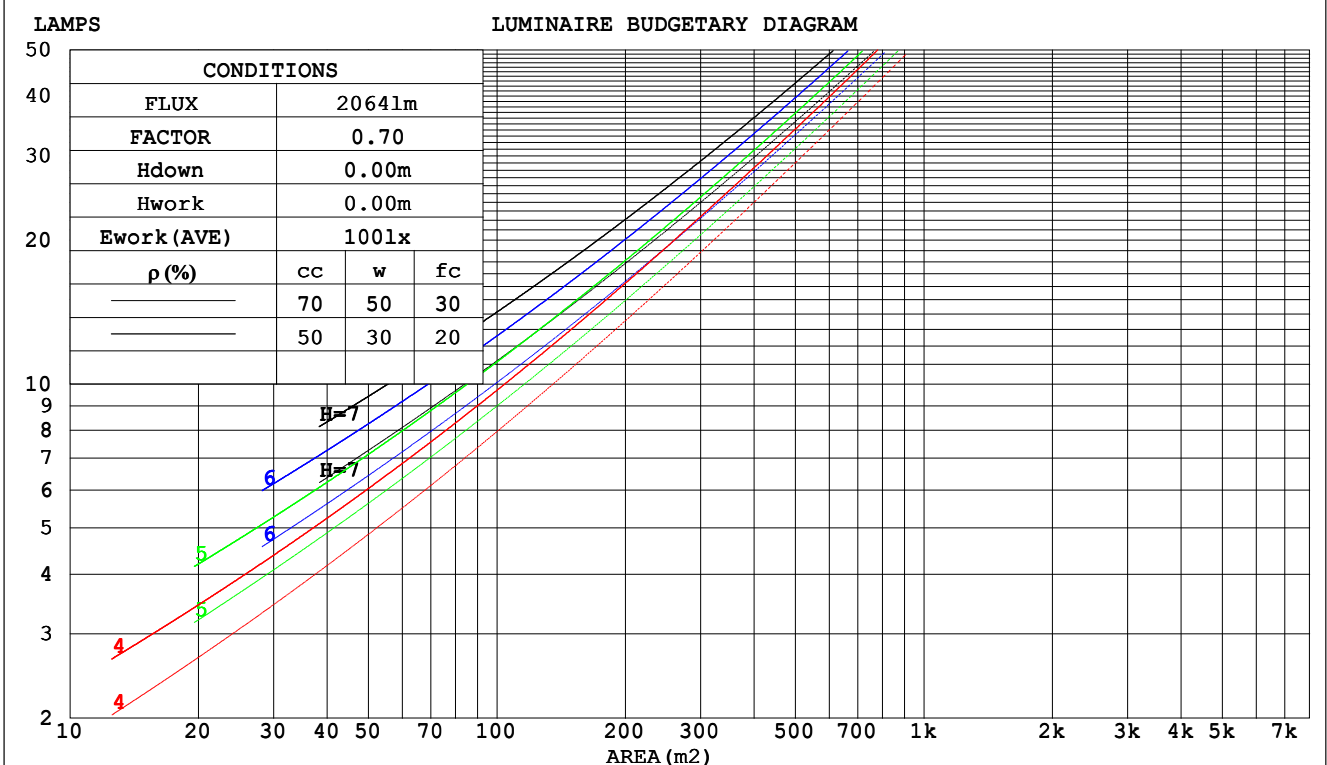
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2020-09-10

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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:	
SPEC.: 4000K	DIM.:	SERIAL No.:	
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:	

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>w</sub>	20%			20%			20%			20%			20%			0
p <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.50	1.50	1.50	1.47	1.47	1.47	1.40	1.40	1.40	1.34	1.34	1.34	1.29	1.29	1.29	1.26
1.0	1.31	1.25	1.20	1.28	1.23	1.18	1.22	1.18	1.14	1.17	1.14	1.11	1.13	1.10	1.07	1.05
2.0	1.13	1.05	.97	1.11	1.03	.96	1.07	.90	.94	1.02	.97	.92	.99	.94	.89	.87
3.0	.99	.89	.80	.97	.88	.80	.94	.85	.78	.90	.83	.77	.87	.81	.75	.73
4.0	.88	.77	.68	.86	.76	.67	.83	.74	.66	.80	.72	.65	.77	.70	.65	.62
5.0	.78	.67	.58	.77	.66	.58	.74	.65	.57	.72	.63	.57	.69	.62	.56	.53
6.0	.70	.59	.51	.69	.58	.50	.67	.57	.50	.65	.56	.50	.63	.55	.49	.46
7.0	.64	.53	.45	.63	.52	.45	.61	.51	.44	.59	.50	.44	.57	.49	.44	.41
8.0	.58	.47	.40	.57	.47	.40	.56	.46	.39	.54	.45	.39	.53	.45	.39	.36
9.0	.53	.43	.36	.53	.43	.36	.51	.42	.35	.50	.41	.35	.48	.41	.35	.33
10.0	.49	.39	.32	.49	.39	.32	.47	.38	.32	.46	.38	.32	.45	.37	.32	.30



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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-AC3-4000K		TYPE: 20W		WEIGHT:	
SPEC.: 4000K		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	.404	.230	.073	.395	.225	.072	.378	.217	.069	.362	.209	.067	.348	.202	.065	
2.0	.377	.206	.063	.369	.203	.063	.354	.197	.061	.340	.191	.060	.328	.185	.058	
3.0	.347	.185	.055	.340	.182	.055	.327	.177	.054	.315	.172	.053	.303	.168	.052	
4.0	.319	.166	.049	.313	.164	.048	.302	.160	.048	.291	.156	.047	.281	.153	.046	
5.0	.295	.150	.044	.289	.148	.043	.279	.145	.043	.269	.142	.042	.260	.139	.042	
6.0	.273	.137	.039	.268	.135	.039	.259	.133	.039	.250	.130	.038	.242	.127	.038	
7.0	.254	.125	.036	.249	.124	.035	.241	.122	.035	.233	.120	.035	.226	.117	.035	
8.0	.237	.116	.033	.233	.115	.032	.225	.113	.032	.219	.111	.032	.212	.109	.032	
9.0	.222	.107	.030	.218	.106	.030	.212	.105	.030	.205	.103	.029	.199	.101	.029	
10.0	.208	.100	.028	.205	.099	.028	.199	.098	.027	.194	.096	.027	.188	.095	.027	

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	.241	.241	.241	.206	.206	.206	.140	.140	.140	.081	.081	.081	.026	.026	.026	
1.0	.229	.197	.169	.196	.169	.145	.134	.116	.101	.077	.067	.058	.025	.022	.019	
2.0	.219	.167	.123	.187	.143	.106	.128	.099	.074	.074	.058	.043	.024	.019	.014	
3.0	.209	.144	.093	.179	.125	.081	.123	.087	.057	.071	.051	.033	.023	.016	.011	
4.0	.199	.128	.073	.171	.110	.063	.118	.077	.045	.068	.045	.026	.022	.015	.009	
5.0	.190	.115	.059	.163	.099	.051	.112	.069	.036	.065	.041	.022	.021	.013	.007	
6.0	.181	.104	.049	.155	.090	.043	.107	.063	.030	.062	.037	.018	.020	.012	.006	
7.0	.172	.095	.042	.148	.083	.036	.102	.058	.026	.059	.034	.015	.019	.011	.005	
8.0	.164	.088	.036	.141	.076	.031	.098	.054	.022	.057	.032	.013	.018	.010	.004	
9.0	.156	.082	.032	.134	.071	.028	.093	.050	.020	.054	.029	.012	.018	.010	.004	
10.0	.149	.076	.028	.128	.066	.025	.089	.047	.017	.052	.028	.010	.017	.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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%		Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	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	19.5	21.0	19.8	21.2	21.5	19.6	21.1	19.8	21.3	21.5
3H	21.1	22.5	21.4	22.7	23.0	21.2	22.6	21.5	22.8	23.1
4H	21.7	23.0	22.0	23.3	23.6	21.8	23.2	22.1	23.4	23.7
6H	22.1	23.4	22.5	23.7	24.0	22.3	23.5	22.6	23.8	24.1
8H	22.3	23.5	22.6	23.8	24.1	22.4	23.7	22.8	23.9	24.2
12H	22.4	23.5	22.7	23.8	24.2	22.5	23.7	22.9	24.0	24.3
4H 2H	20.1	21.5	20.5	21.8	22.0	20.2	21.6	20.5	21.8	22.1
3H	21.9	23.1	22.2	23.4	23.7	22.0	23.2	22.3	23.4	23.8
4H	22.6	23.7	23.0	24.0	24.4	22.7	23.8	23.1	24.1	24.5
6H	23.2	24.2	23.6	24.5	24.9	23.3	24.3	23.7	24.6	25.0
8H	23.4	24.3	23.8	24.7	25.0	23.5	24.4	23.9	24.8	25.2
12H	23.5	24.4	24.0	24.8	25.2	23.7	24.5	24.1	24.9	25.3
8H 4H	22.9	23.8	23.3	24.2	24.6	23.0	23.9	23.4	24.3	24.7
6H	23.6	24.4	24.1	24.8	25.2	23.7	24.5	24.2	24.9	25.3
8H	23.9	24.6	24.4	25.0	25.5	24.0	24.7	24.5	25.1	25.6
12H	24.1	24.7	24.6	25.2	25.6	24.3	24.9	24.8	25.3	25.8
12H 4H	22.9	23.8	23.4	24.1	24.6	23.0	23.8	23.4	24.2	24.6
6H	23.7	24.4	24.2	24.8	25.2	23.8	24.5	24.3	24.9	25.4
8H	24.0	24.6	24.5	25.0	25.5	24.2	24.7	24.6	25.2	25.7
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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%			Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:	
SPEC.: 4000K	DIM.:	SERIAL No.:	
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:	

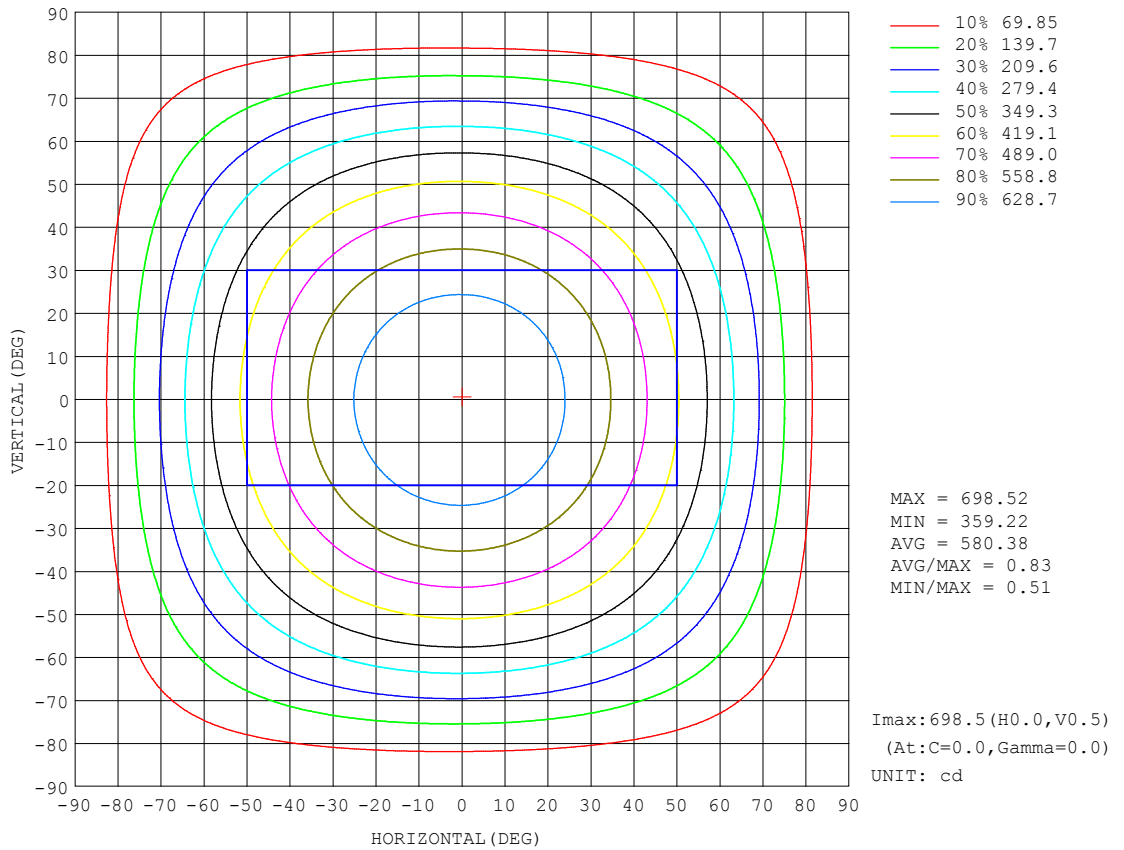
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	72	57	48	71	57	48	69	56	48	39
0.80	84	70	60	83	69	60	81	68	59	51
1.00	95	81	71	94	80	71	91	82	70	61
1.25	104	91	81	102	90	81	99	88	80	70
1.50	110	98	89	108	97	88	104	94	87	77
2.00	119	108	100	117	107	99	112	104	97	87
2.50	124	114	106	122	112	105	117	109	103	92
3.00	129	120	112	126	118	111	121	114	108	97
4.00	134	126	120	131	124	118	125	120	115	104
5.00	137	131	125	134	128	123	128	123	119	108
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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:



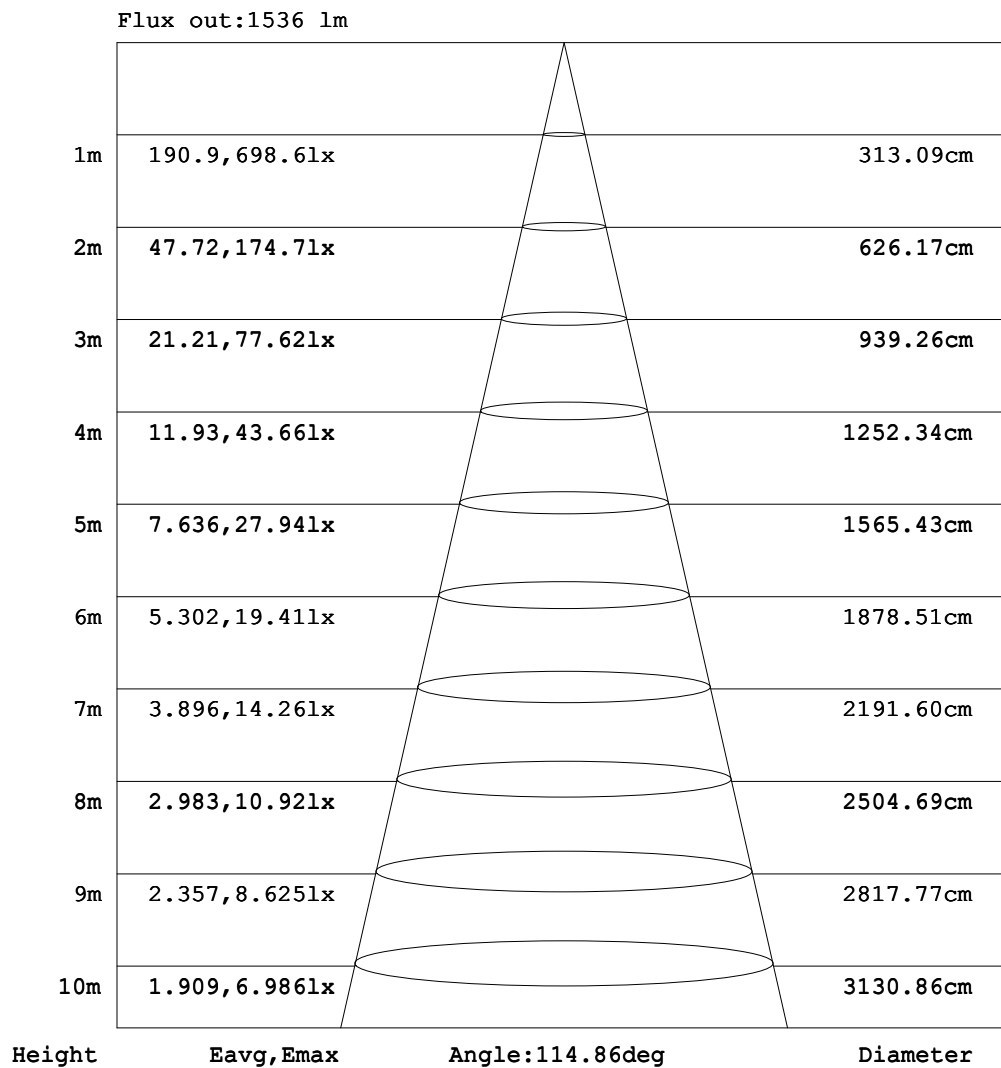
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2020-09-10

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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:



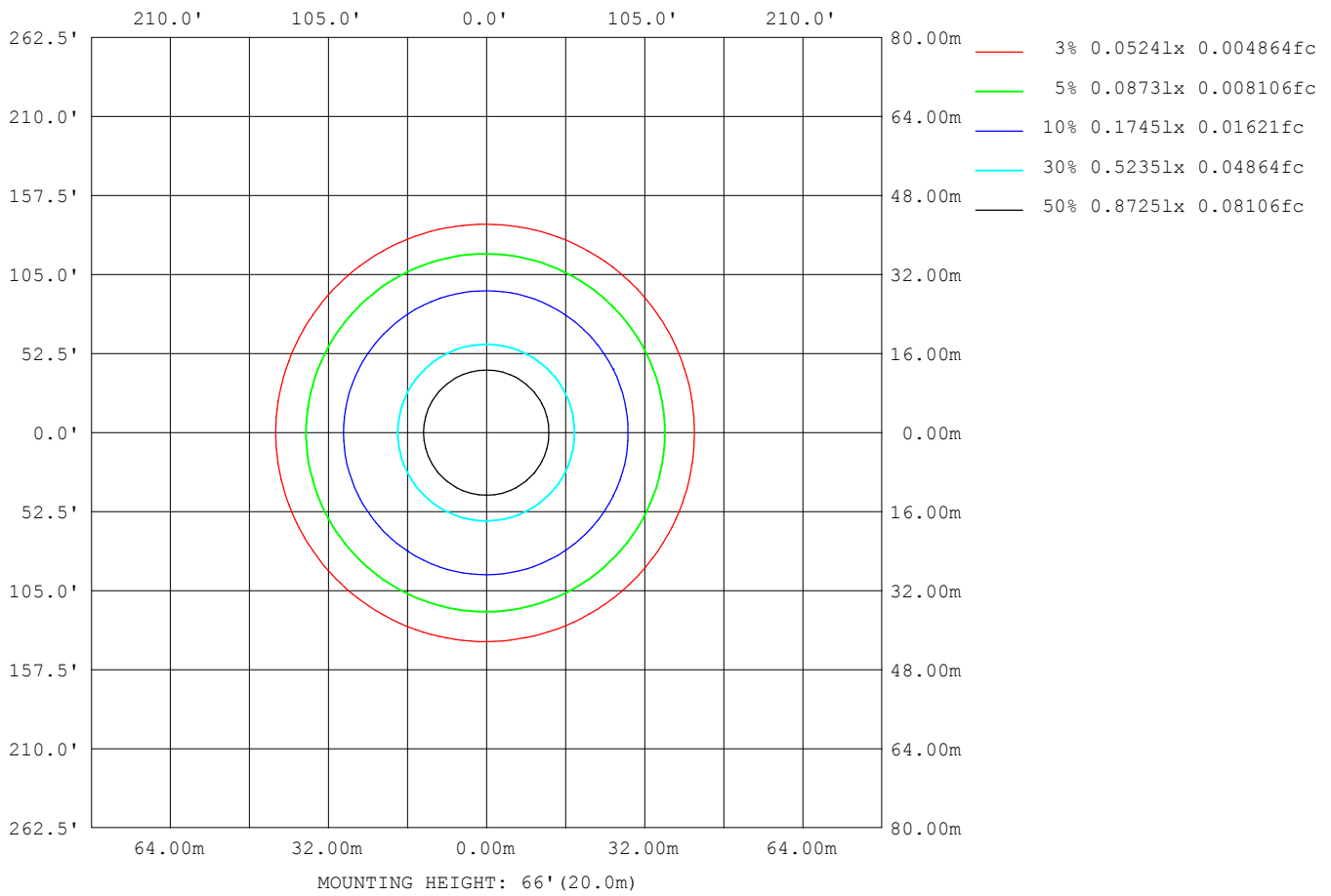
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0%		Lamp Flux:1633.45x1 lm
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	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:230.15V I:0.0865A P:18.905W PF:0.9601 Freq:49.99Hz UTHDi:0% ITHDi:0% Lamp Flux:1633.45x1 lm		
NAME: AL117-14-20W-AC3-4000K	TYPE: 20W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 0.35	Shielding Angle:

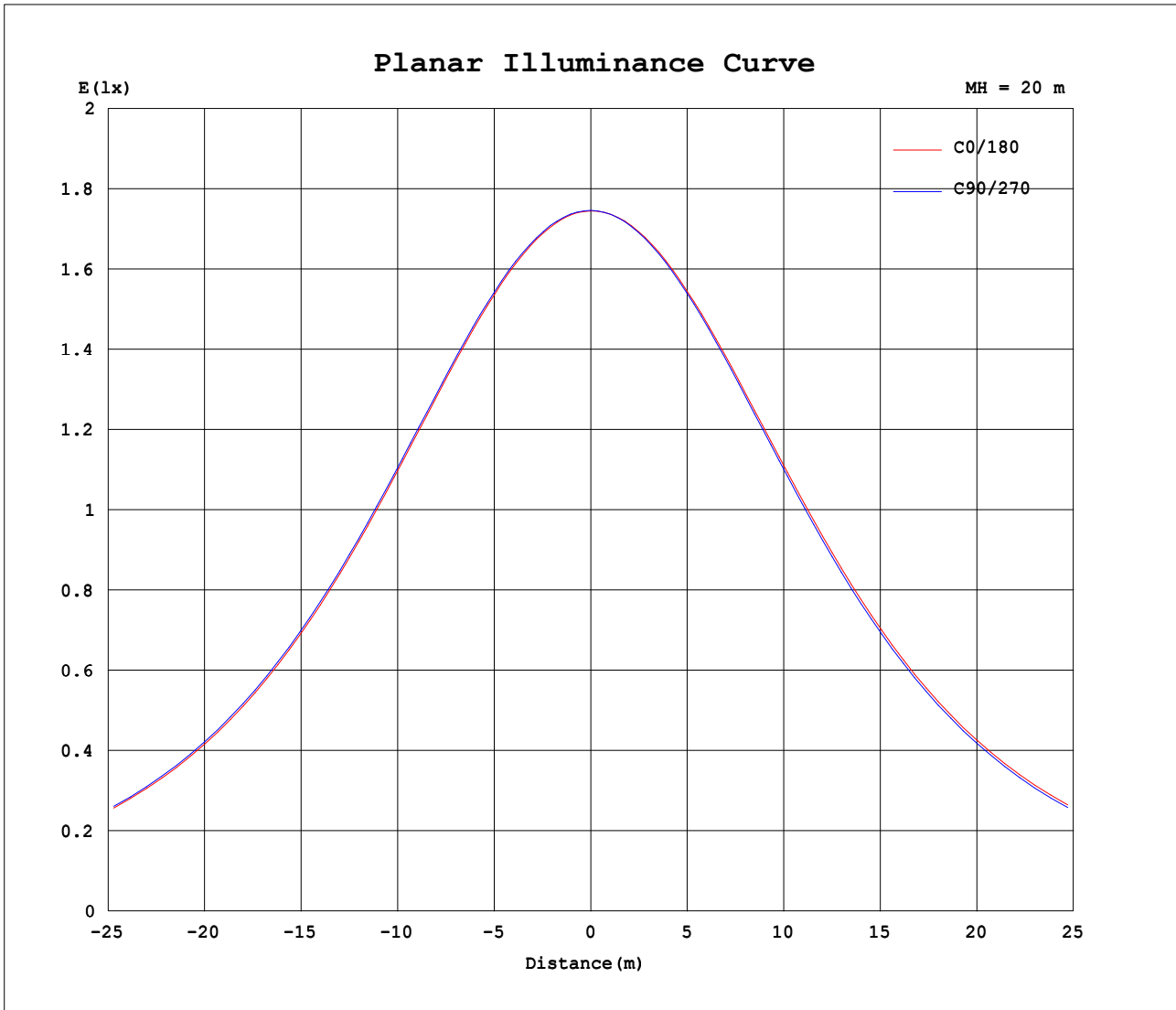
AvgL	cd/m2
L_0~180 (65) av	6557
L_0~180 (75) av	5939
L_0~180 (85) av	5291
L_90~270 (65) av	6472
L_90~270 (75) av	5776
L_90~270 (85) av	4965
L_45 (65) av	6515
L_45 (75) av	5856
L_45 (85) av	5120

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

$\gamma$  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:

