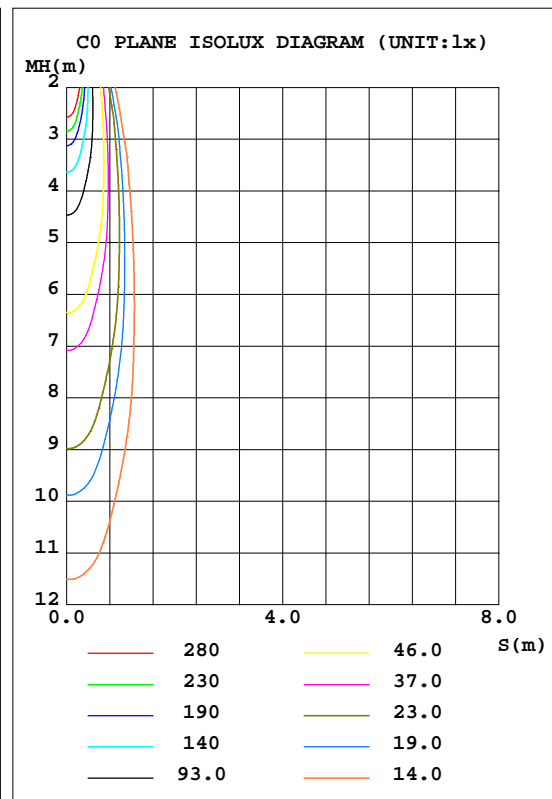
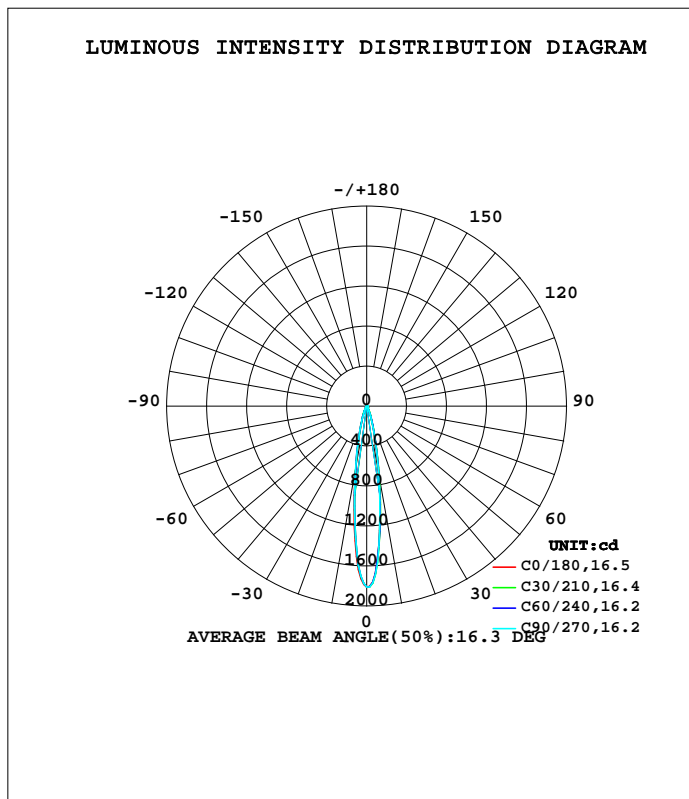


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.58 lm/W			
MODEL		I <sub>max</sub> (cd)	1831	S/MH(C0/180)	0.28
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.27
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	255.18	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	255.18	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

**ZONAL FLUX DIAGRAM:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	713.4	741.2	703.3	640.1	643.4	623.9	650.1	745.8	0- 10	107.8	107.8	42.2,42.2
20	137.0	153.5	136.7	138.5	127.8	133.9	125.3	153.0	10- 20	88.69	196.5	77,77
30	33.56	38.27	32.17	33.47	29.48	34.34	30.48	41.14	20- 30	32.84	229.3	89.9,89.9
40	10.78	11.14	10.39	10.47	9.620	10.12	10.28	12.12	30- 40	11.90	241.2	94.5,94.5
50	6.183	6.301	5.758	5.890	5.415	5.678	5.940	6.693	40- 50	6.090	247.3	96.9,96.9
60	3.593	3.644	3.340	3.638	3.325	3.459	3.525	3.838	50- 60	4.163	251.5	98.5,98.5
70	2.105	1.914	1.236	2.024	1.923	1.901	1.439	2.182	60- 70	2.655	254.1	99.6,99.6
80	0.7685	0.0628	0	0.0847	0.6920	0.0749	0	0.1579	70- 80	0.9955	255.1	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0732	255.2	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		

Conical surface Flux(90deg): 244.53 lm

%lum = 95.8%  
%lamp = 95.8%

Conical surface Flux(120deg): 251.46 lm

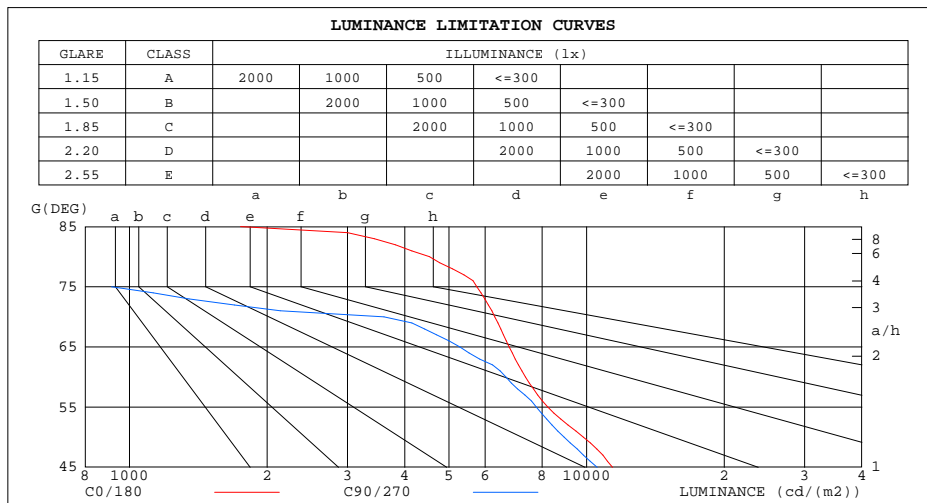
%lum = 98.5%  
%lamp = 98.5%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-27

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



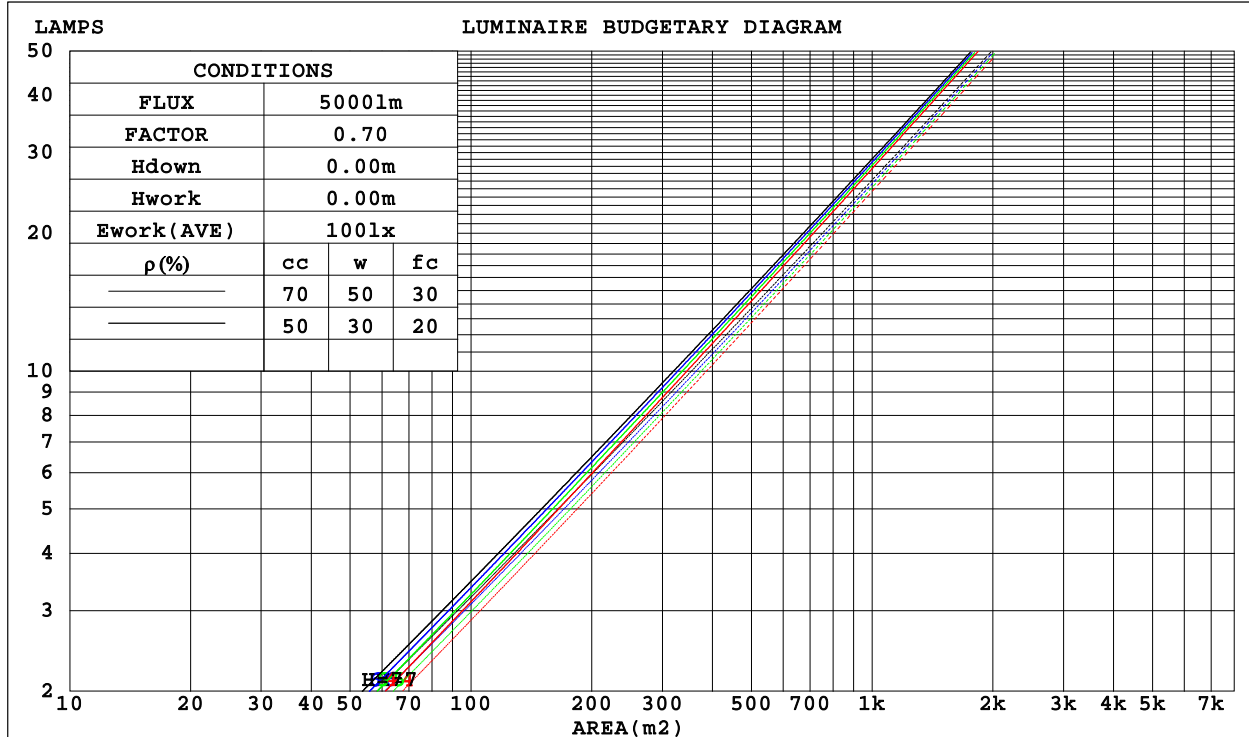
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

ρ <sub>cc</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	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	1.13	1.11	1.09	1.10	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.99	.99	.98	.96
2.0	1.07	1.04	1.01	1.05	1.03	1.00	1.02	1.00	.98	.99	.98	.96	.97	.95	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.93	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.92	.89	.87	.86
5.0	.95	.90	.87	.94	.90	.87	.92	.89	.86	.91	.88	.85	.89	.87	.85	.84
6.0	.91	.87	.84	.91	.87	.84	.89	.86	.83	.88	.85	.83	.87	.84	.82	.81
7.0	.88	.84	.81	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.79
8.0	.86	.82	.79	.85	.81	.79	.84	.81	.78	.84	.80	.78	.83	.80	.78	.77
9.0	.84	.79	.77	.83	.79	.77	.82	.79	.76	.82	.78	.76	.81	.78	.76	.75
10.0	.81	.77	.75	.81	.77	.75	.80	.77	.74	.80	.77	.74	.79	.76	.74	.73



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

**WEC AND CCEC**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.142	.081	.026	.135	.077	.025	.123	.071	.023	.112	.064	.021	.101	.059	.019	
2.0	.132	.072	.022	.127	.070	.022	.116	.065	.020	.107	.060	.019	.098	.056	.018	
3.0	.123	.065	.020	.118	.063	.019	.110	.060	.018	.102	.056	.017	.095	.052	.016	
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.049	.015	
5.0	.108	.055	.016	.104	.054	.016	.098	.051	.015	.092	.049	.015	.087	.047	.014	
6.0	.101	.051	.015	.098	.050	.014	.093	.048	.014	.088	.046	.013	.084	.044	.013	
7.0	.096	.047	.013	.093	.046	.013	.089	.045	.013	.084	.043	.013	.080	.042	.012	
8.0	.091	.044	.012	.089	.044	.012	.085	.042	.012	.081	.041	.012	.077	.040	.012	
9.0	.086	.042	.012	.084	.041	.012	.081	.040	.011	.077	.039	.011	.074	.038	.011	
10.0	.082	.039	.011	.081	.039	.011	.077	.038	.011	.074	.037	.011	.072	.036	.010	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.117	.129	.114	.101	.089	.079	.071	.051	.046	.041	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.096	.068	.047	.083	.059	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.090	.061	.041	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.084	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004	
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.028	.018	.012	.009	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm										
NAME: 486701-MR16-2W-2700K-15°					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:35mm			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	13.6	14.3	13.8	14.4	14.6	13.2	13.8	13.4	14.0	14.1
3H	14.5	15.1	14.7	15.3	15.5	13.6	14.2	13.8	14.4	14.6
4H	14.9	15.5	15.1	15.7	15.9	13.5	14.1	13.8	14.3	14.6
6H	15.1	15.7	15.4	15.9	16.2	13.5	14.0	13.7	14.3	14.5
8H	15.2	15.7	15.5	16.0	16.2	13.4	14.0	13.7	14.2	14.5
12H	15.1	15.7	15.5	15.9	16.2	13.4	13.9	13.7	14.2	14.4
4H 2H	13.9	14.5	14.2	14.7	15.0	13.5	14.1	13.8	14.4	14.6
3H	15.0	15.5	15.3	15.8	16.1	14.1	14.6	14.4	14.9	15.1
4H	15.5	16.0	15.8	16.3	16.6	14.0	14.5	14.3	14.8	15.1
6H	15.8	16.2	16.2	16.6	16.9	13.9	14.3	14.3	14.7	15.0
8H	15.9	16.3	16.3	16.6	17.0	13.9	14.3	14.2	14.6	15.0
12H	15.8	16.2	16.3	16.6	17.0	13.8	14.2	14.2	14.5	14.9
8H 4H	15.5	15.9	15.8	16.2	16.6	14.0	14.4	14.4	14.8	15.1
6H	15.8	16.1	16.2	16.5	16.9	13.9	14.3	14.4	14.7	15.1
8H	15.8	16.1	16.3	16.6	17.0	13.9	14.2	14.3	14.6	15.0
12H	15.8	16.1	16.3	16.5	17.0	13.8	14.1	14.3	14.5	15.0
12H 4H	15.4	15.8	15.8	16.1	16.5	14.0	14.4	14.4	14.7	15.1
6H	15.7	16.0	16.2	16.4	16.9	13.9	14.2	14.3	14.6	15.0
8H	15.8	16.0	16.3	16.5	16.9	13.8	14.1	14.3	14.5	15.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.7					+ 0.7 / - 1.0				
1.5H	+ 0.8 / - 0.4					+ 0.9 / - 1.0				
2.0H	+ 0.8 / - 0.6					+ 0.8 / - 0.8				

CIE Pub.117, 255.2 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -4.7)  
Area: 0.001 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-27

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

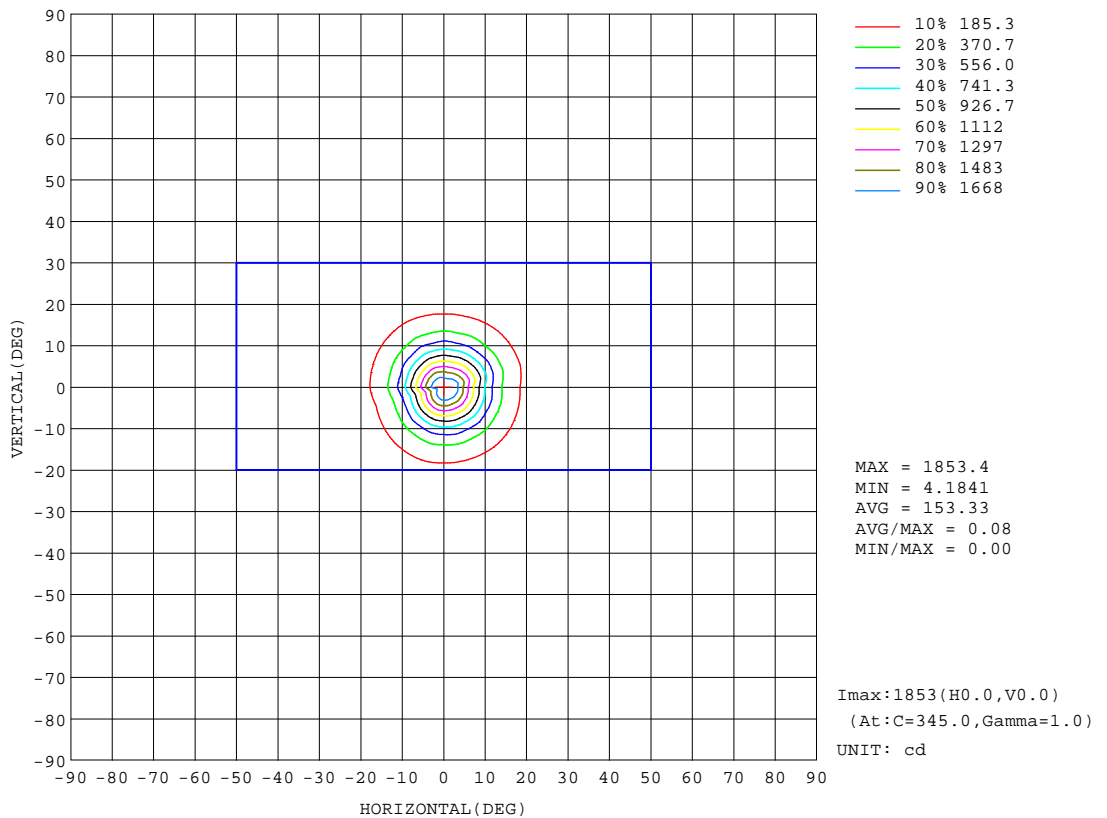
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	88	82	78	88	82	78	87	81	78	75
0.80	95	90	86	95	89	86	94	89	86	82
1.00	100	94	91	99	94	90	97	94	90	86
1.25	103	98	95	102	98	95	101	97	94	90
1.50	106	101	98	105	101	98	103	99	97	92
2.00	109	105	101	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-27

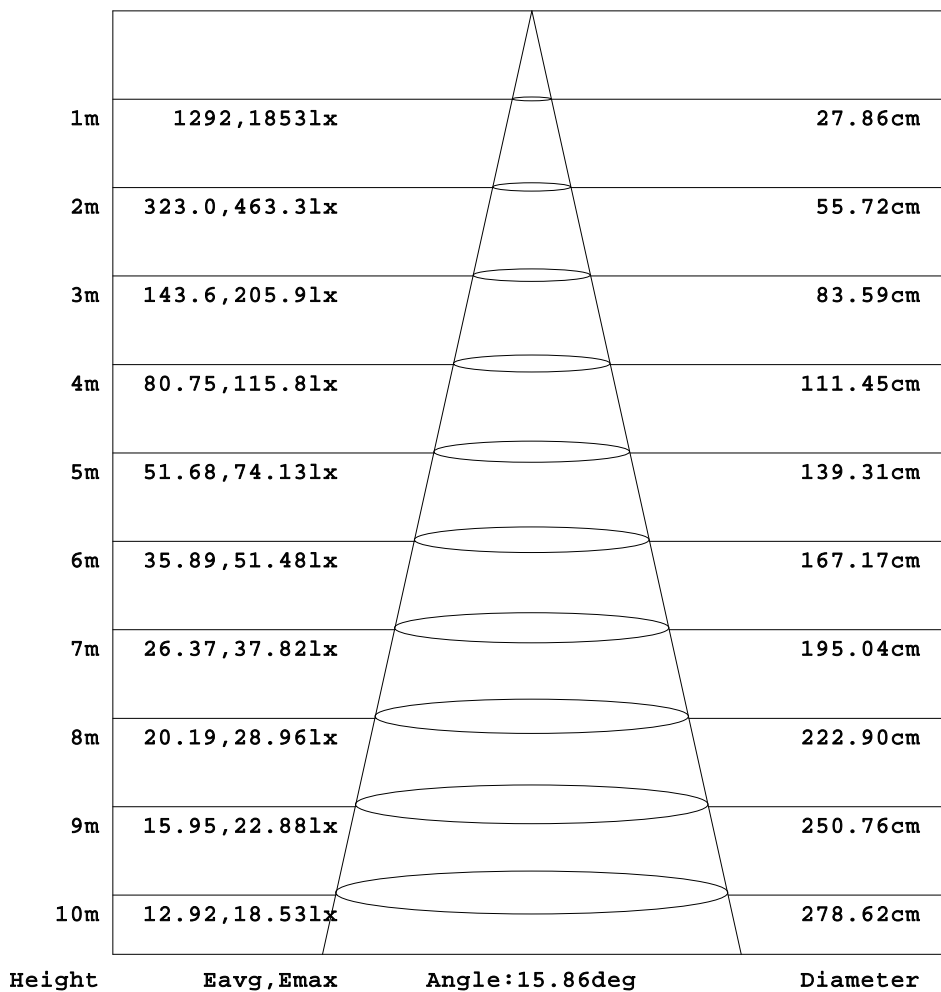
γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:80.17 lm



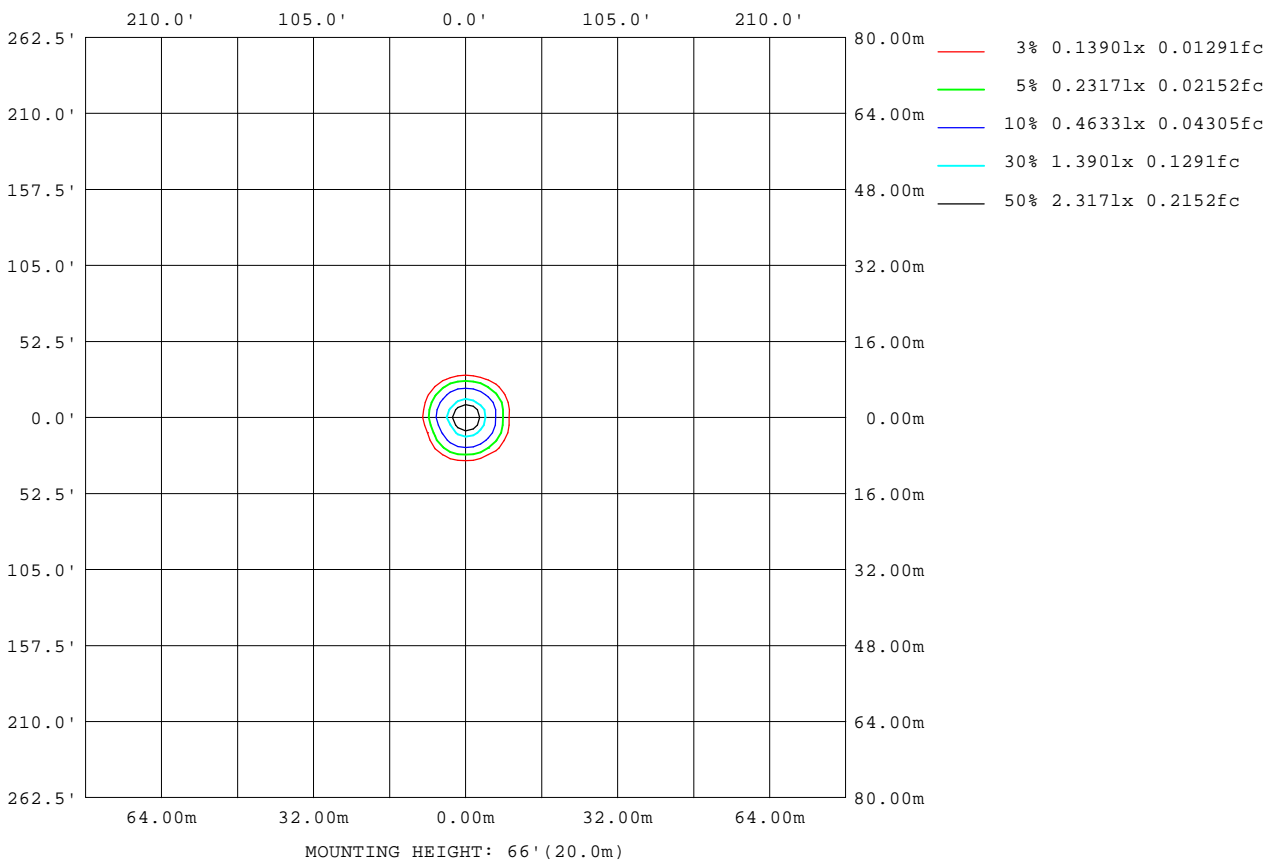
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-27

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-27

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

LED Avg.L Report

Test:U:12.022V I:0.2934A P:2.3501W PF:0.6664 Freq:60.00Hz Lamp Flux:255.18x1 lm		
NAME: 486701-MR16-2W-2700K-15°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

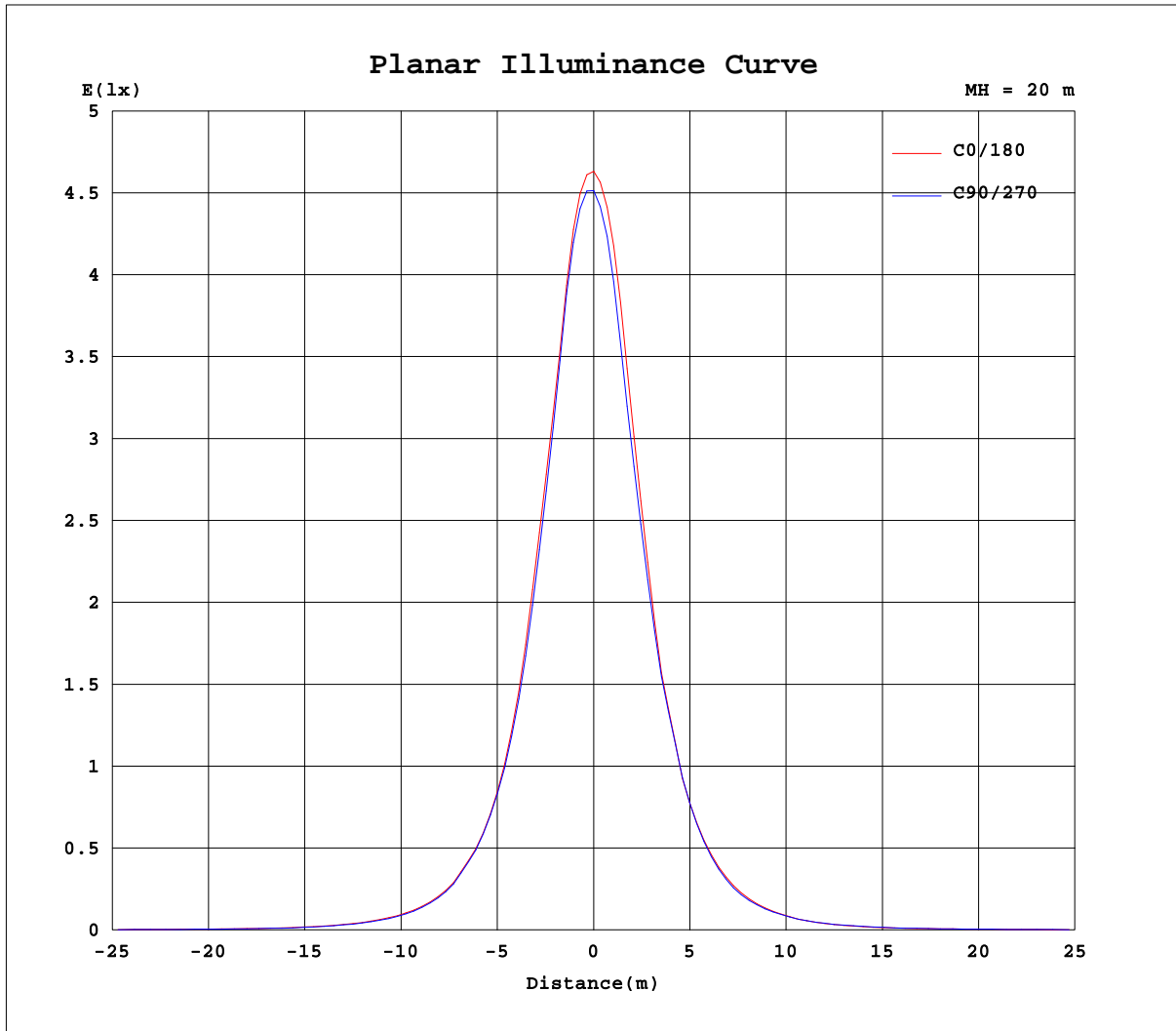
AvgL	cd/m2
L_0~180(65)av	6368
L_0~180(75)av	5348
L_0~180(85)av	1604
L_90~270(65)av	5563
L_90~270(75)av	1007
L_90~270(85)av	0
L_45(65)av	6671
L_45(75)av	3811
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-27

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2022-05-27

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:



