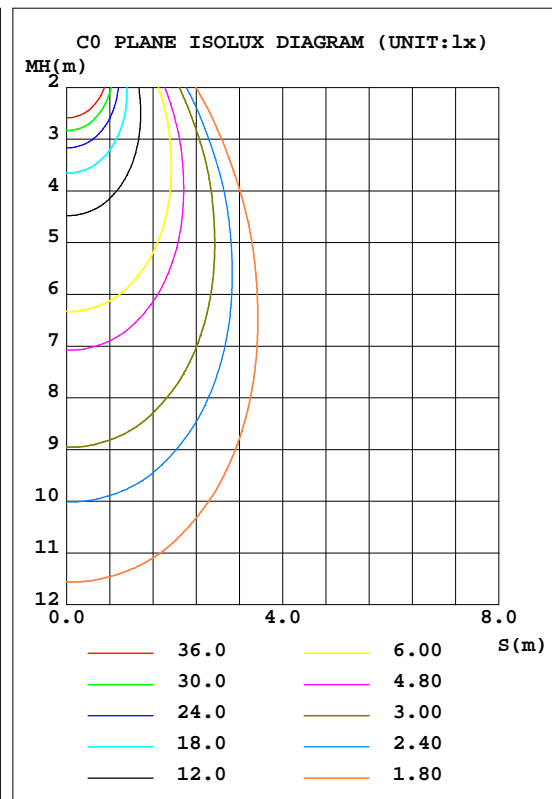
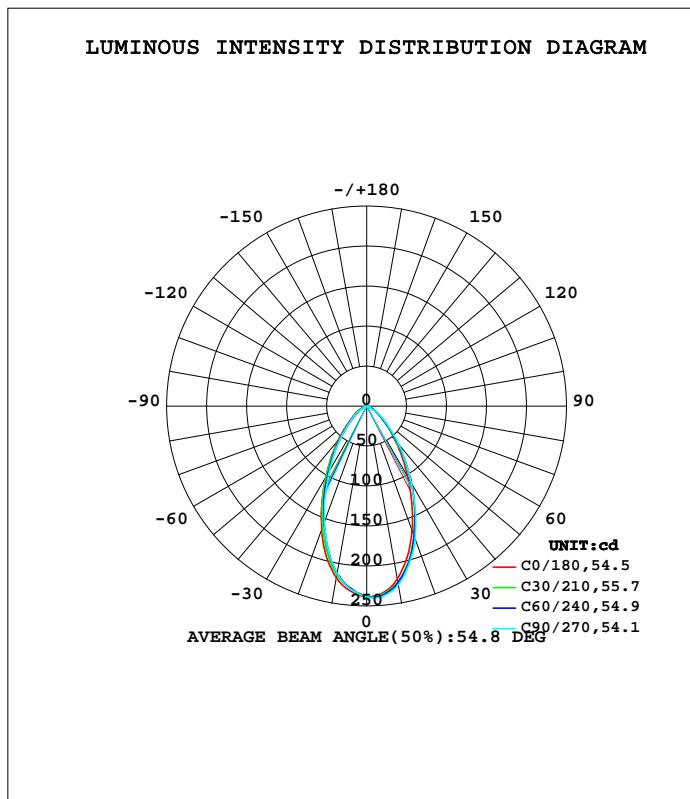


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 102.01 lm/W			
MODEL		I <sub>max</sub> (cd)	240.4	S/MH(C0/180)	0.82
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.78
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	243.11	η UP, DN(C0-180)	0.0,52.2
NOMINAL FLUX(lm)	243.107	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,47.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	0.90



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-29

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:**

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	219.9	224.9	227.2	224.7	218.2	212.9	212.8	217.1	0- 10	21.89	21.89	9,9
20	166.0	175.3	177.0	171.7	164.7	157.4	154.6	164.3	10- 20	54.38	76.26	31.4,31.4
30	102.9	115.1	112.1	116.1	102.3	98.66	92.98	107.6	20- 30	61.92	138.2	56.8,56.8
40	55.07	59.97	62.09	63.32	55.24	49.16	48.77	55.55	30- 40	49.43	187.6	77.2,77.2
50	27.38	26.83	30.20	29.35	26.32	21.90	22.48	25.66	40- 50	30.18	217.8	89.6,89.6
60	13.10	12.10	9.191	13.20	12.71	9.871	7.644	11.53	50- 60	15.88	233.7	96.1,96.1
70	5.213	3.817	2.721	3.993	5.460	3.288	2.526	3.966	60- 70	6.724	240.4	98.9,98.9
80	1.928	0.5092	0.0380	0.4577	2.227	0.2601	0.0327	0.6820	70- 80	2.434	242.8	99.9,99.9
90	0	0	0	0	0	0	0	0	80- 90	0.2812	243.1	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): 204.92 lm

%lum = 84.3%  
%lamp = 84.3%

Conical surface Flux(120deg): 233.67 lm

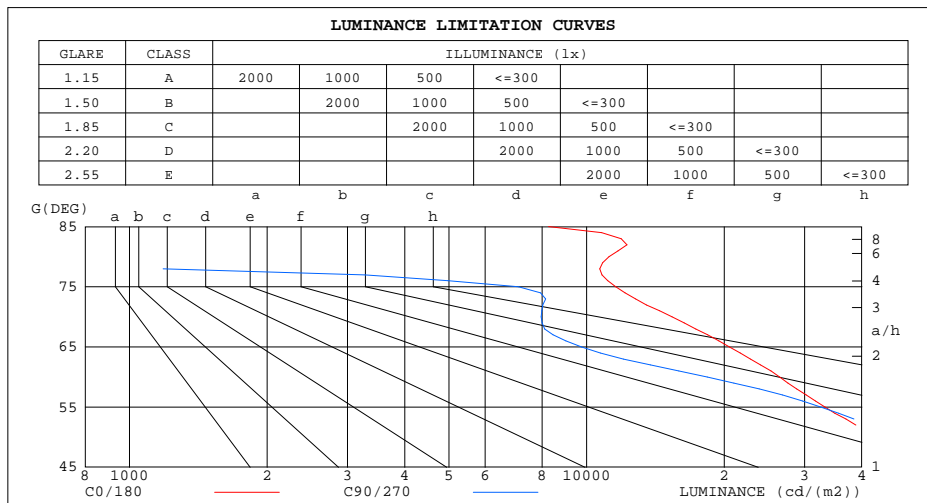
%lum = 96.1%  
%lamp = 96.1%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-29

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:

**LUMINANCE LIMITATION CURVES**

Test:U:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	8263	2
80	11205	219
75	11578	7100
70	15377	7952
65	20535	9748
60	26434	18375
55	33276	32586
50	42974	46967
45	55626	61563

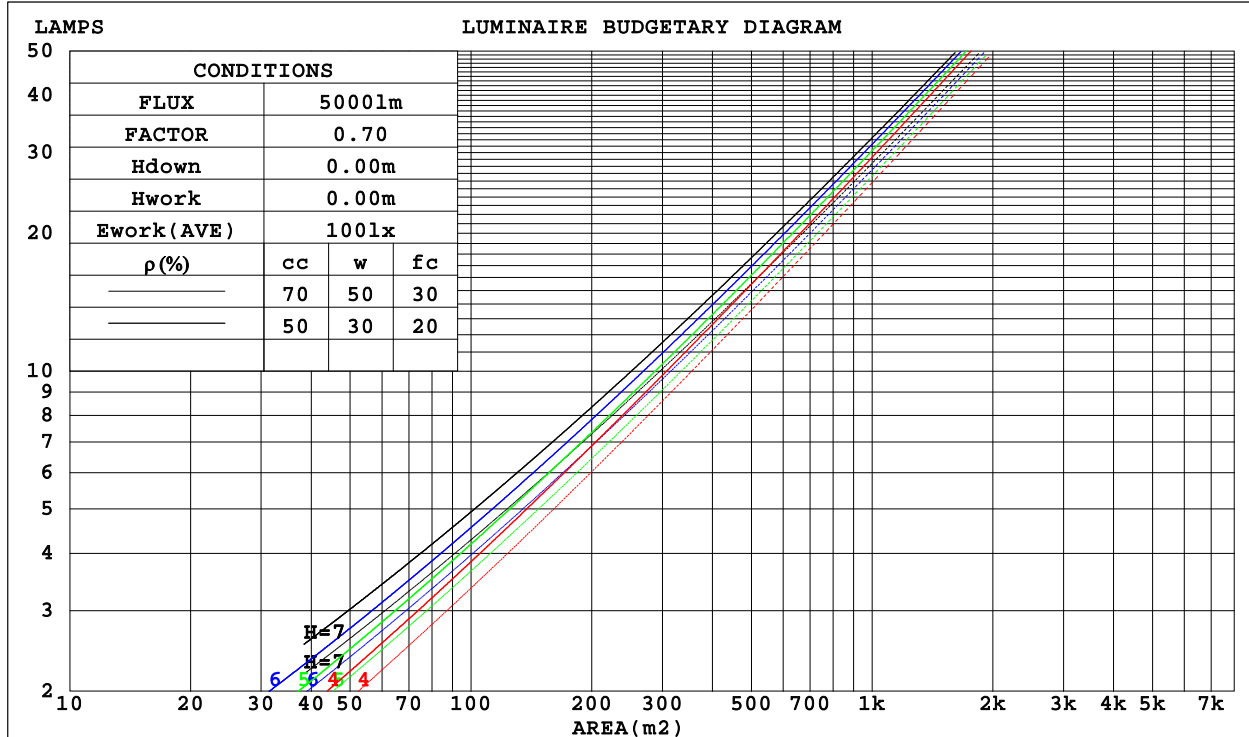
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	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	1.19	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	1.09	1.06	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.94	.93	.91
2.0	1.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.87	.85	.83
3.0	.92	.86	.82	.90	.85	.81	.88	.83	.80	.85	.81	.78	.83	.80	.77	.75
4.0	.85	.78	.73	.83	.78	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.69
5.0	.78	.72	.67	.77	.71	.66	.75	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.65	.61	.70	.65	.60	.69	.64	.60	.67	.63	.59	.58
7.0	.68	.61	.56	.67	.61	.56	.66	.60	.56	.64	.59	.55	.63	.59	.55	.53
8.0	.63	.57	.52	.63	.56	.52	.61	.56	.52	.60	.55	.51	.59	.55	.51	.50
9.0	.59	.53	.48	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.46
10.0	.56	.49	.45	.55	.49	.45	.54	.49	.45	.54	.48	.45	.53	.48	.45	.43



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-29

$\gamma$  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:

WEC AND CCEC

Test:U:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	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	.206	.117	.037	.199	.114	.036	.186	.107	.034	.175	.101	.032	.164	.095	.031	
2.0	.199	.109	.033	.193	.107	.033	.183	.102	.032	.173	.097	.030	.163	.092	.029	
3.0	.190	.101	.030	.185	.099	.030	.175	.095	.029	.167	.091	.028	.159	.088	.027	
4.0	.180	.093	.027	.176	.092	.027	.167	.089	.027	.160	.086	.026	.153	.083	.025	
5.0	.170	.087	.025	.167	.086	.025	.159	.083	.024	.153	.081	.024	.146	.078	.024	
6.0	.161	.081	.023	.158	.080	.023	.152	.078	.023	.146	.076	.022	.140	.074	.022	
7.0	.153	.076	.021	.150	.075	.021	.145	.073	.021	.139	.071	.021	.134	.070	.021	
8.0	.146	.071	.020	.143	.070	.020	.138	.069	.020	.133	.067	.019	.129	.066	.019	
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.063	.018	
10.0	.132	.063	.018	.130	.063	.018	.126	.062	.017	.122	.061	.017	.118	.060	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.140	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.132	.088	.056	.113	.076	.049	.078	.053	.034	.045	.031	.020	.015	.010	.007	
6.0	.125	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.118	.072	.039	.102	.062	.034	.070	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.112	.066	.034	.097	.057	.029	.067	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm										
NAME: 486704-MR16-2W-2700K-60°					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	23.4	24.6	23.7	24.7	24.9	23.4	24.5	23.6	24.6	24.8
3H	23.7	24.7	24.0	24.9	25.2	23.3	24.3	23.6	24.5	24.7
4H	23.8	24.7	24.1	25.0	25.2	23.3	24.2	23.6	24.5	24.7
6H	23.8	24.7	24.1	25.0	25.2	23.2	24.1	23.5	24.3	24.6
8H	23.8	24.7	24.1	25.0	25.2	23.1	24.0	23.5	24.3	24.5
12H	23.8	24.7	24.2	24.9	25.2	23.1	23.9	23.4	24.2	24.5
4H 2H	23.5	24.4	23.7	24.7	24.9	23.4	24.3	23.7	24.6	24.8
3H	23.8	24.7	24.2	24.9	25.2	23.4	24.2	23.7	24.5	24.7
4H	24.0	24.7	24.3	25.0	25.3	23.4	24.1	23.7	24.4	24.7
6H	24.0	24.7	24.4	25.0	25.4	23.3	23.9	23.7	24.3	24.6
8H	24.1	24.7	24.5	25.1	25.4	23.2	23.8	23.6	24.2	24.6
12H	24.1	24.7	24.5	25.0	25.4	23.2	23.7	23.6	24.1	24.5
8H 4H	23.9	24.5	24.3	24.8	25.2	23.3	23.9	23.7	24.3	24.6
6H	24.0	24.5	24.4	24.9	25.3	23.2	23.7	23.6	24.1	24.5
8H	24.1	24.5	24.5	25.0	25.4	23.2	23.6	23.6	24.0	24.5
12H	24.1	24.5	24.6	24.9	25.4	23.1	23.5	23.6	23.9	24.4
12H 4H	23.8	24.4	24.2	24.8	25.2	23.3	23.8	23.7	24.2	24.6
6H	24.0	24.4	24.4	24.8	25.3	23.2	23.6	23.6	24.0	24.5
8H	24.0	24.4	24.5	24.9	25.3	23.1	23.5	23.6	24.0	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 1.1 / - 1.5					+ 1.5 / - 2.4				
1.5H	+ 1.4 / - 1.1					+ 1.7 / - 1.6				
2.0H	+ 2.0 / - 1.6					+ 3.1 / - 4.0				

CIE Pub.117, 243.1 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -4.9)  
Area: 0.001 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

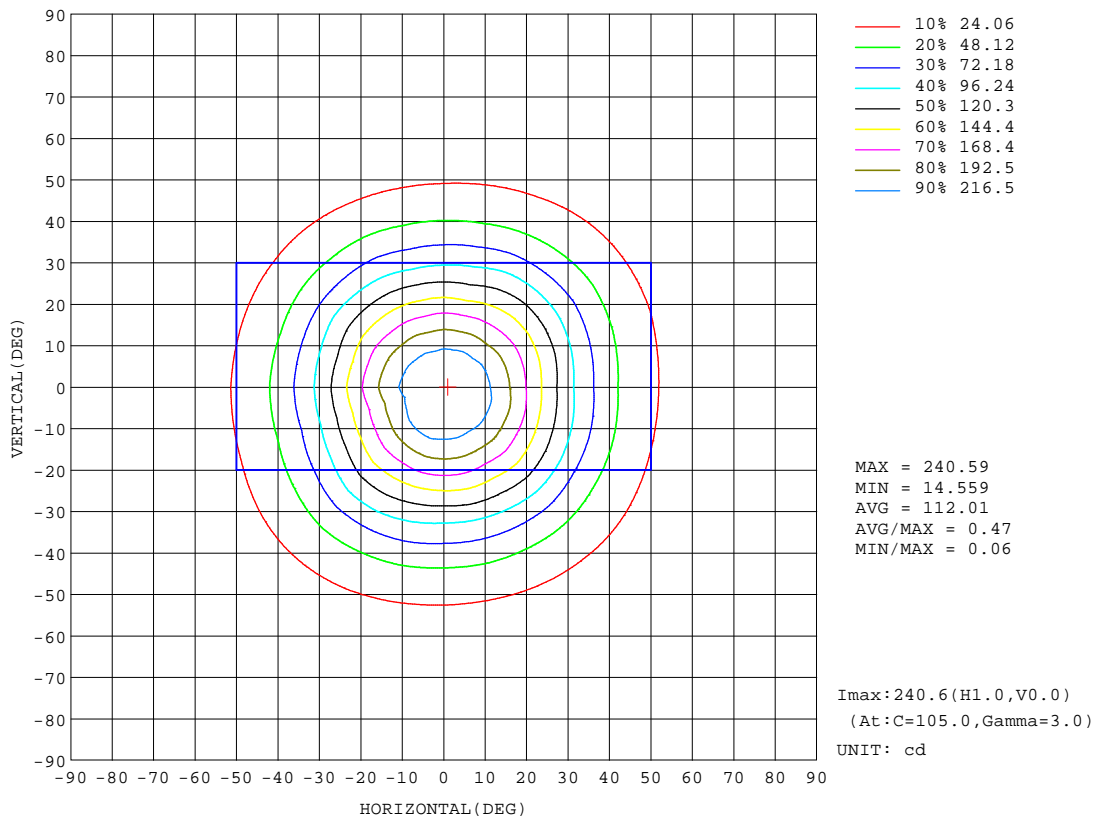
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	77	69	64	76	69	64	76	68	64	59
0.80	86	78	73	85	78	73	84	77	73	68
1.00	92	85	80	91	84	80	89	85	79	74
1.25	97	91	86	96	90	86	94	89	85	80
1.50	101	95	90	100	94	90	97	92	89	84
2.00	105	100	96	103	99	95	101	97	93	88
2.50	107	102	99	106	101	98	102	99	96	89
3.00	109	105	102	107	104	101	104	101	98	91
4.00	112	108	105	110	107	104	106	103	101	94
5.00	113	110	108	111	108	106	107	105	103	95
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:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	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:2022-05-29

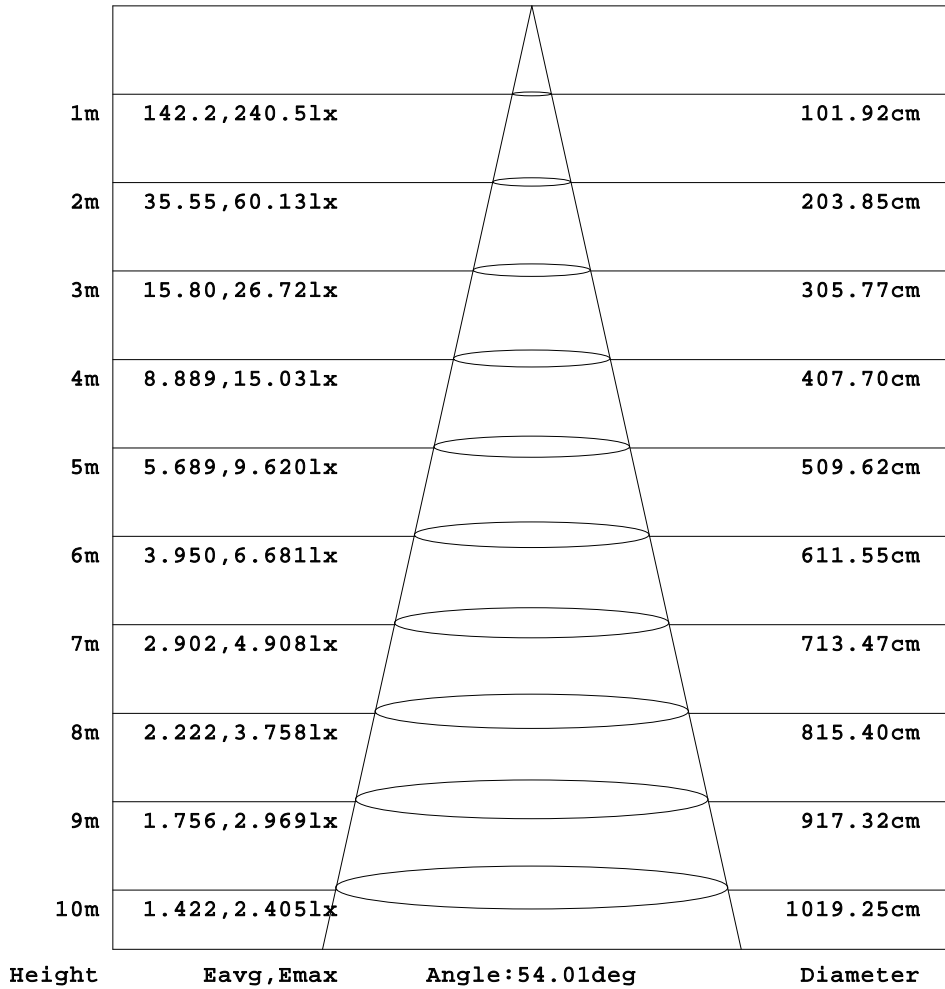
γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:126.3 lm



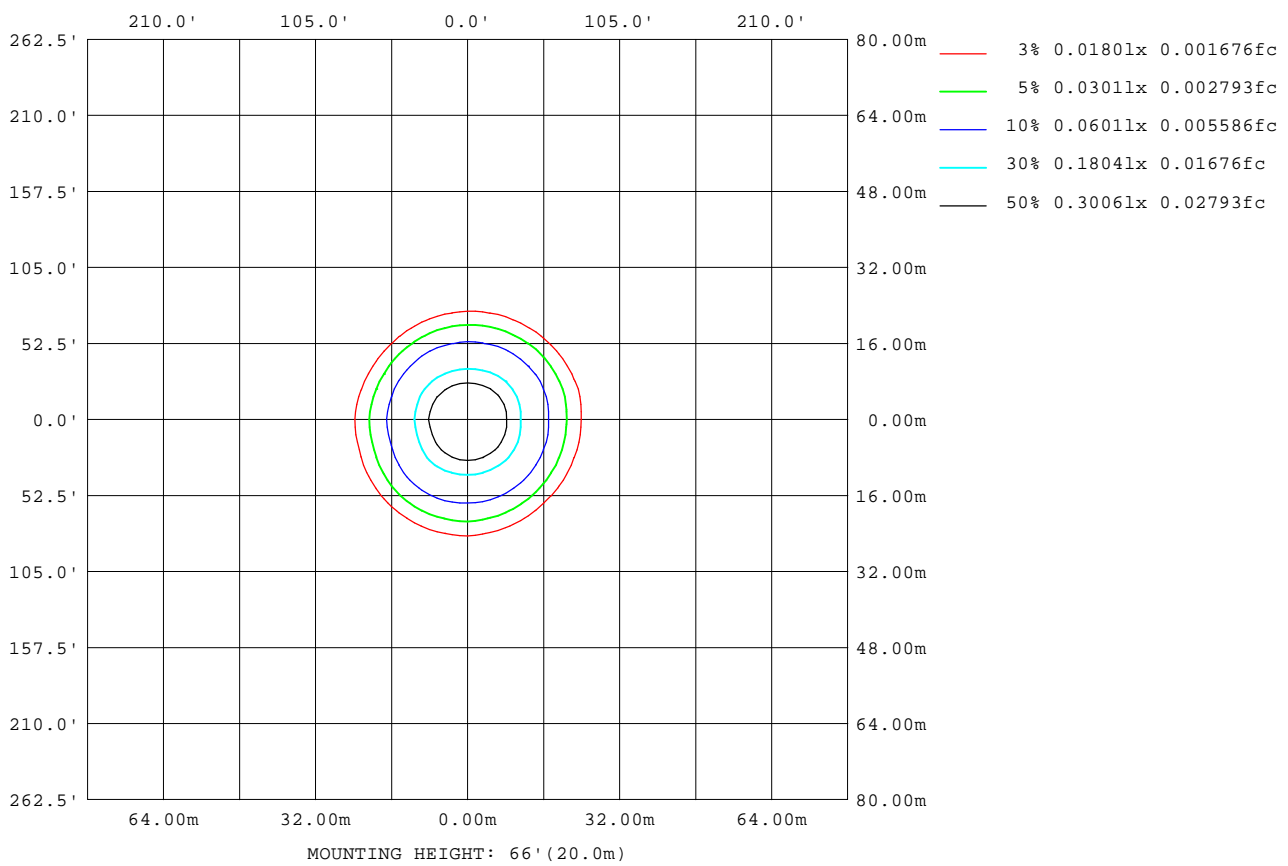
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	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:2022-05-29

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:11.991V I:0.2945A P:2.3831W PF:0.6748 Freq:60.00Hz Lamp Flux:243.107x1 lm		
NAME: 486704-MR16-2W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

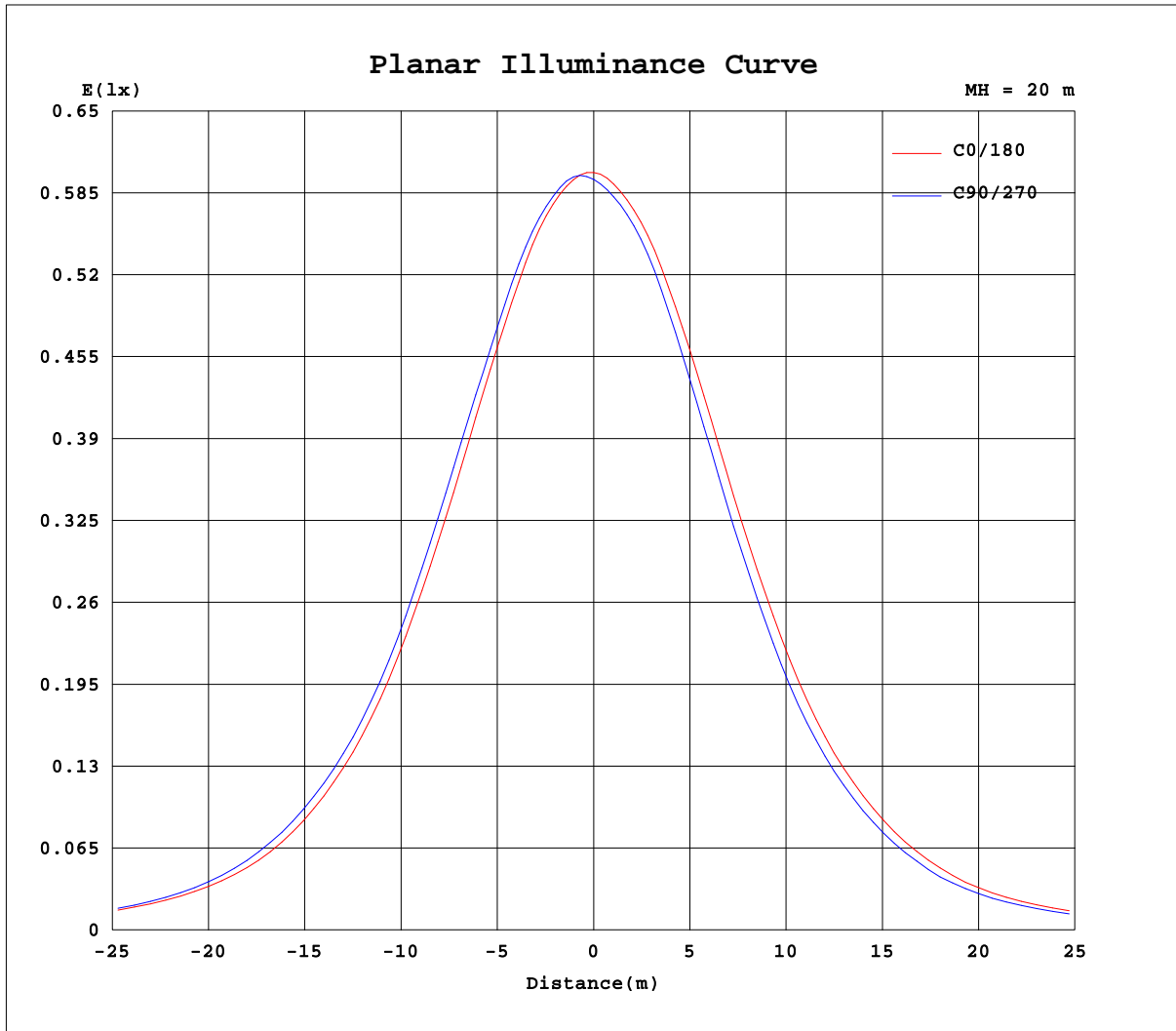
AvgL	cd/m2
L_0~180(65)av	20263
L_0~180(75)av	12102
L_0~180(85)av	10255
L_90~270(65)av	9229
L_90~270(75)av	6348
L_90~270(85)av	1
L_45(65)av	16760
L_45(75)av	8839
L_45(85)av	82

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-05-29

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: 2022-05-29

$\gamma$  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:



