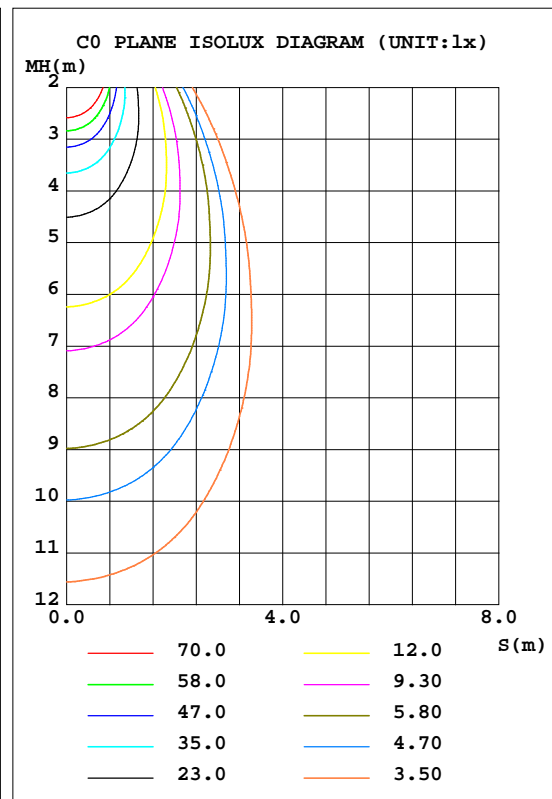
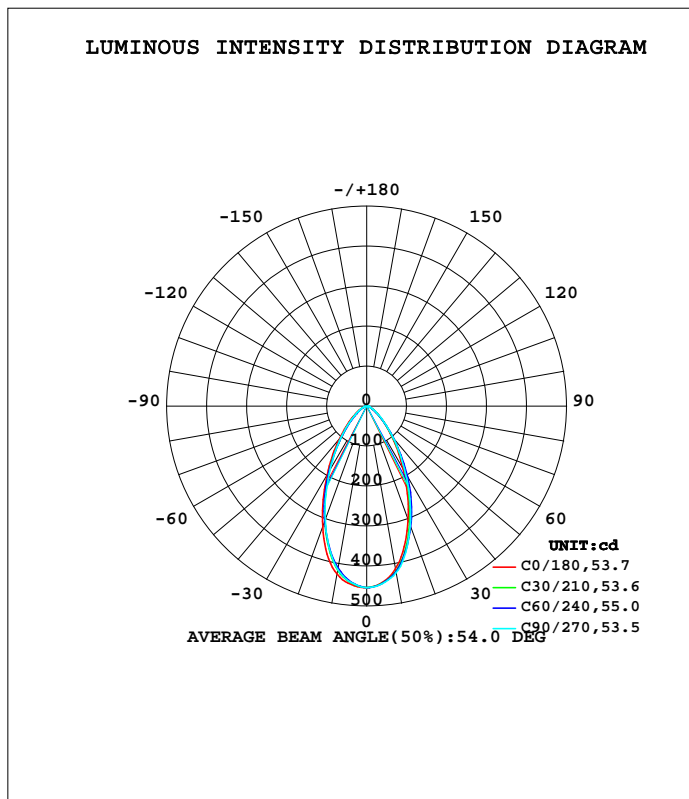


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 91.61 lm/W
MODEL		I <sub>max</sub> (cd)	454.5	S/MH(C0/180)	0.84	
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.80	
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	455.17	η UP, DN(C0-180)	0.0,50.2	
NOMINAL FLUX(lm)	455.173	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.8	
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:2022-04-10

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:**

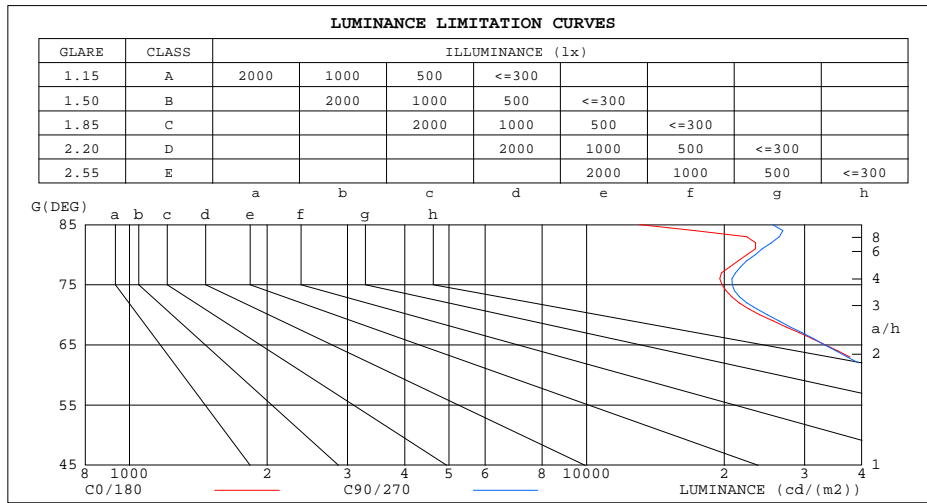
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	\$lum,lamp
10	414.3	421.3	423.7	420.4	426.9	412.4	415.3	422.5	0- 10	41.73	41.73	9.17,9.17
20	303.3	322.4	319.0	316.6	321.3	307.1	304.0	311.7	10- 20	103.1	144.8	31.8,31.8
30	182.4	206.4	194.8	206.2	197.9	189.7	182.5	203.0	20- 30	115.3	260.1	57.1,57.1
40	96.60	104.2	103.3	105.0	105.7	93.10	96.55	104.9	30- 40	89.99	350.1	76.9,76.9
50	46.75	46.71	48.06	47.85	51.31	41.82	45.39	50.01	40- 50	54.69	404.8	88.9,88.9
60	22.06	20.17	22.03	20.89	23.85	19.09	20.76	22.95	50- 60	28.93	433.7	95.3,95.3
70	7.954	7.874	8.545	7.914	9.207	7.491	7.549	8.191	60- 70	13.81	447.5	98.3,98.3
80	3.782	4.053	4.082	3.769	4.099	4.115	3.744	3.780	70- 80	5.792	453.3	99.6,99.6
90	0.0130	0.0088	0.0127	0.0083	0.0303	0.0295	0.0292	0.0295	80- 90	1.841	455.2	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		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-04-10

$\gamma$  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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	13061	25525
80	22430	23398
75	19771	20834
70	23952	24870
65	33329	33226
60	45434	43850
55	58206	56047
50	74915	74425
45	98788	100685

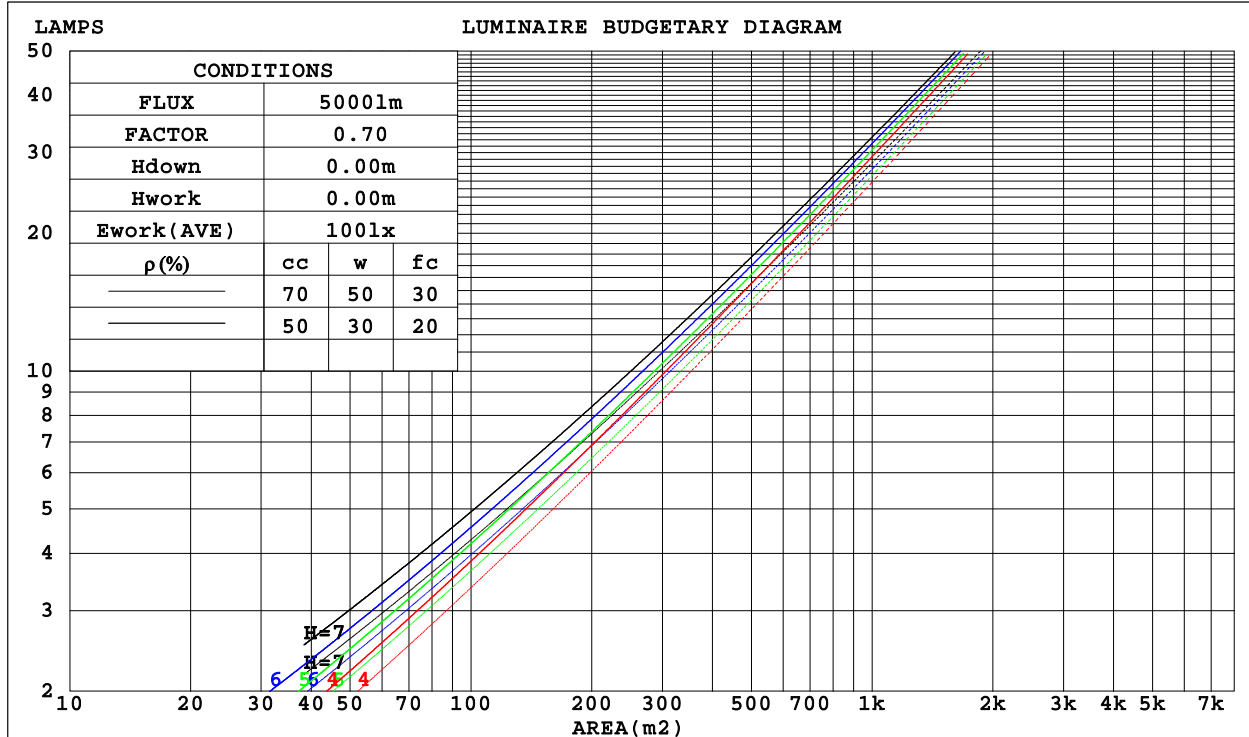
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	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	.00
1.0	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.96	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.86	.84	.83
3.0	.92	.86	.81	.90	.85	.80	.87	.83	.79	.85	.81	.78	.83	.79	.77	.75
4.0	.84	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.68
5.0	.78	.71	.66	.77	.71	.66	.75	.70	.66	.74	.69	.65	.72	.68	.64	.63
6.0	.73	.66	.61	.72	.65	.61	.70	.64	.60	.69	.64	.60	.67	.63	.59	.58
7.0	.68	.61	.56	.67	.60	.56	.66	.60	.56	.64	.59	.55	.63	.58	.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	.53	.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:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-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	.210	.120	.038	.203	.116	.037	.191	.109	.035	.179	.103	.033	.168	.097	.031	
2.0	.202	.111	.034	.196	.108	.033	.185	.103	.032	.175	.098	.031	.166	.094	.030	
3.0	.191	.102	.030	.186	.100	.030	.177	.096	.029	.168	.092	.028	.160	.089	.027	
4.0	.181	.094	.028	.176	.092	.027	.168	.089	.027	.161	.086	.026	.154	.083	.025	
5.0	.171	.087	.025	.167	.086	.025	.160	.083	.025	.153	.081	.024	.147	.079	.024	
6.0	.162	.081	.023	.158	.080	.023	.152	.078	.023	.146	.076	.022	.141	.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	.138	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.063	.018	
10.0	.132	.063	.018	.130	.063	.017	.126	.062	.017	.122	.061	.017	.118	.059	.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	.142	.148	.135	.122	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.038	.017	.015	.013	
3.0	.149	.114	.085	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.140	.099	.068	.120	.086	.060	.083	.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:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm										
NAME: 486756-MR16-5W-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	25.2	26.3	25.4	26.5	26.6	25.1	26.2	25.4	26.4	26.6
3H	25.4	26.4	25.7	26.6	26.8	25.3	26.4	25.6	26.6	26.8
4H	25.4	26.4	25.7	26.6	26.9	25.4	26.4	25.7	26.6	26.8
6H	25.5	26.4	25.8	26.7	26.9	25.5	26.4	25.8	26.6	26.9
8H	25.6	26.4	25.9	26.7	27.0	25.5	26.4	25.9	26.7	27.0
12H	25.5	26.4	25.9	26.7	26.9	25.6	26.4	25.9	26.7	27.0
4H 2H	25.2	26.2	25.5	26.4	26.6	25.2	26.1	25.5	26.4	26.6
3H	25.5	26.3	25.8	26.6	26.9	25.5	26.3	25.8	26.6	26.9
4H	25.6	26.4	26.0	26.7	27.0	25.6	26.4	26.0	26.7	27.0
6H	25.8	26.4	26.2	26.8	27.1	25.8	26.5	26.2	26.8	27.2
8H	25.9	26.5	26.3	26.9	27.2	25.9	26.5	26.3	26.9	27.3
12H	25.9	26.5	26.3	26.9	27.2	26.0	26.6	26.4	27.0	27.4
8H 4H	25.6	26.2	26.0	26.6	27.0	25.6	26.2	26.0	26.6	27.0
6H	25.9	26.4	26.3	26.8	27.2	25.9	26.4	26.3	26.8	27.2
8H	26.1	26.5	26.5	26.9	27.4	26.1	26.6	26.6	27.0	27.4
12H	26.1	26.5	26.6	27.0	27.4	26.3	26.7	26.8	27.1	27.6
12H 4H	25.6	26.2	26.0	26.5	26.9	25.6	26.1	26.0	26.5	26.9
6H	25.9	26.3	26.3	26.8	27.2	25.9	26.4	26.4	26.8	27.2
8H	26.1	26.5	26.6	26.9	27.4	26.2	26.5	26.6	27.0	27.5
Variations with the observer position at spacings:										
S = 1.0H	+ 1.0 / - 1.4					+ 1.1 / - 1.4				
1.5H	+ 1.3 / - 1.0					+ 1.4 / - 1.2				
2.0H	+ 2.0 / - 1.5					+ 2.2 / - 1.5				

CIE Pub.117, 455.2 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.7)  
 Area: 0.001 m2

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

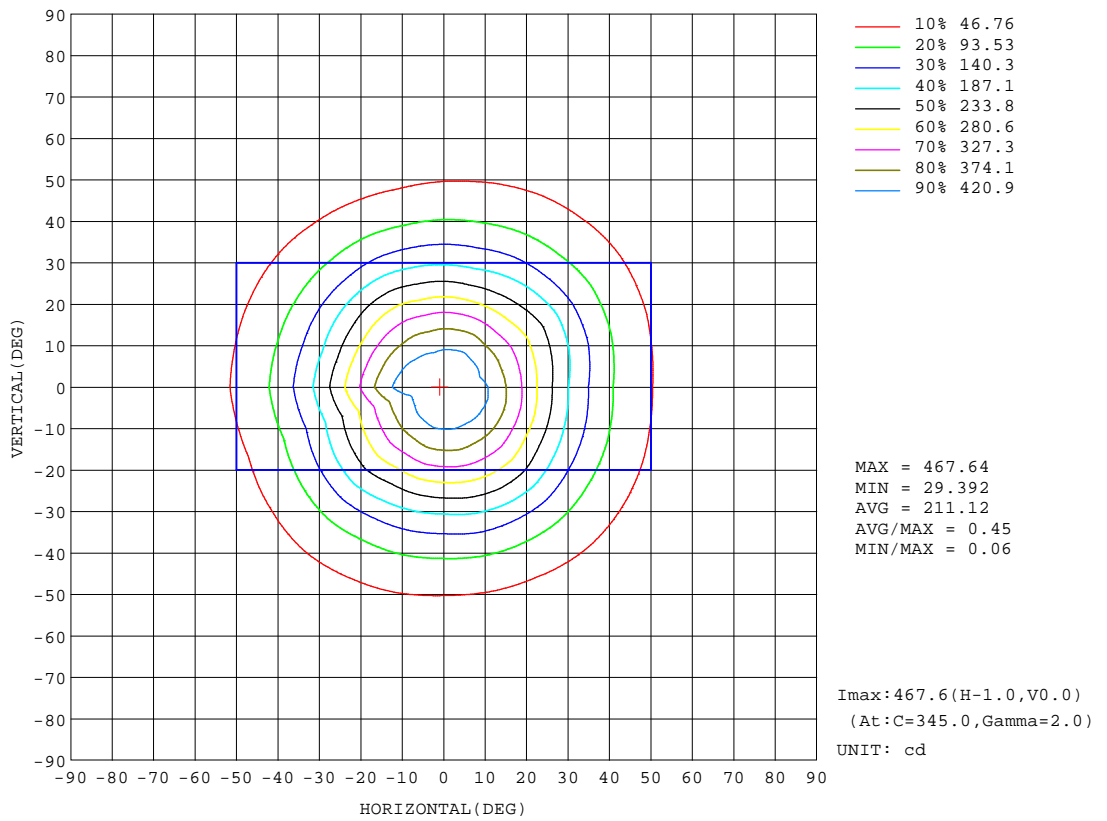
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	77	69	64	76	69	64	75	68	64	59
0.80	86	78	73	85	78	73	84	77	72	68
1.00	92	85	80	91	84	80	89	84	79	74
1.25	97	90	86	96	90	85	94	89	85	80
1.50	101	94	90	99	94	90	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	109	106	104	106	103	101	93
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:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-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:2022-04-10

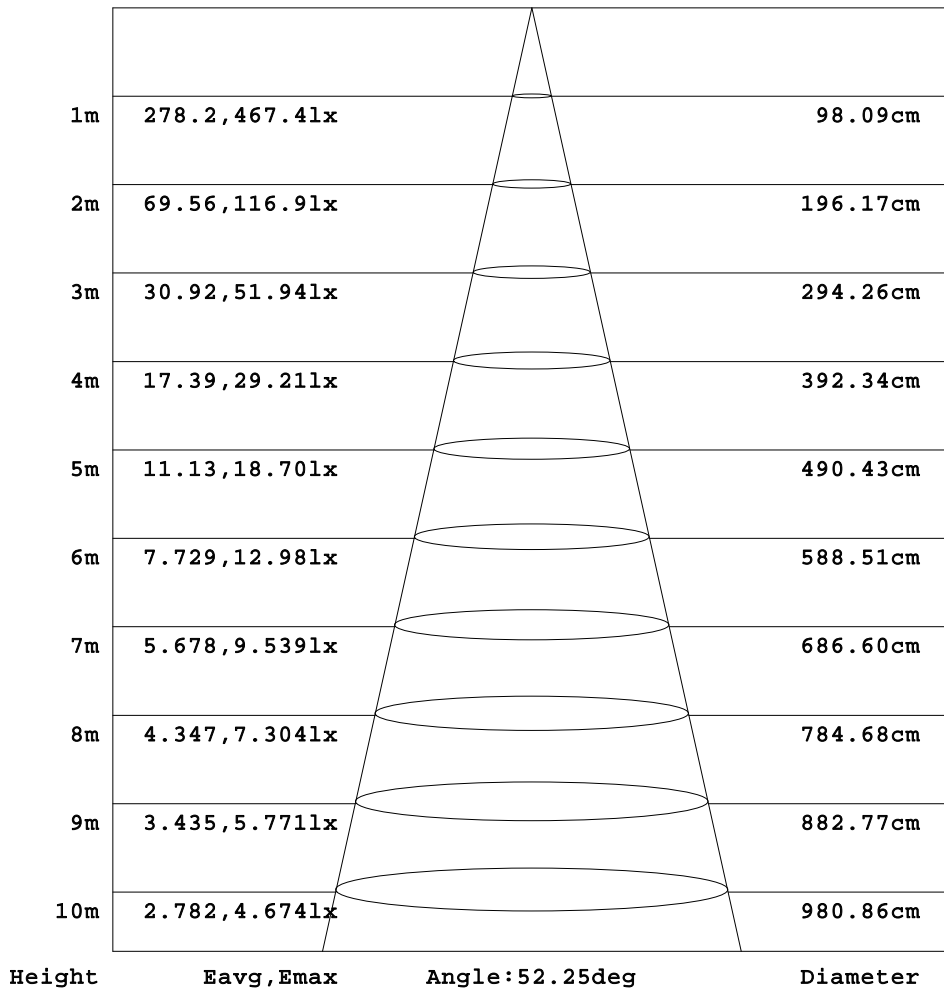
γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:226.9 lm



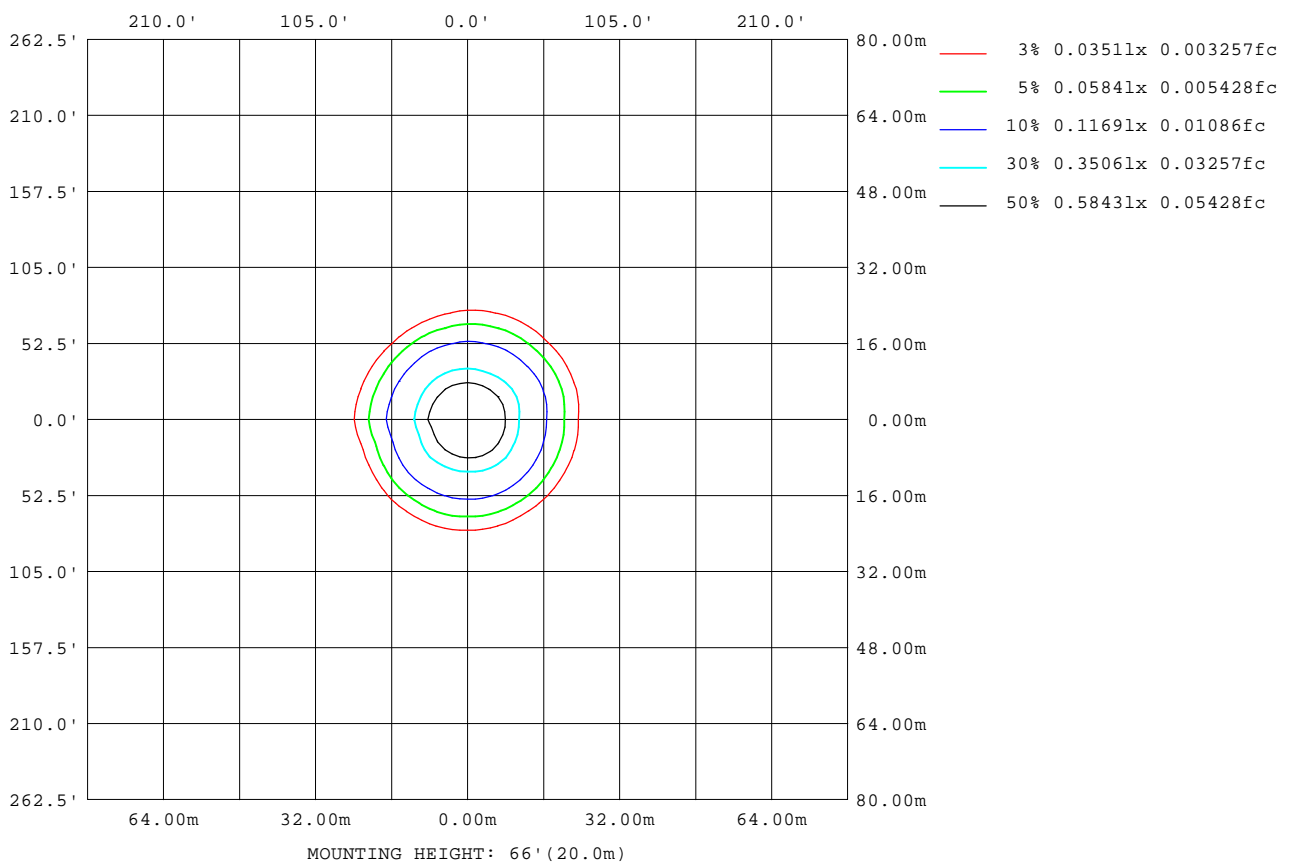
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-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:2022-04-10

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:11.876V I:0.5727A P:4.9689W PF:0.7306 Freq:60.00Hz Lamp Flux:455.173x1 lm		
NAME: 486756-MR16-5W-2700K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

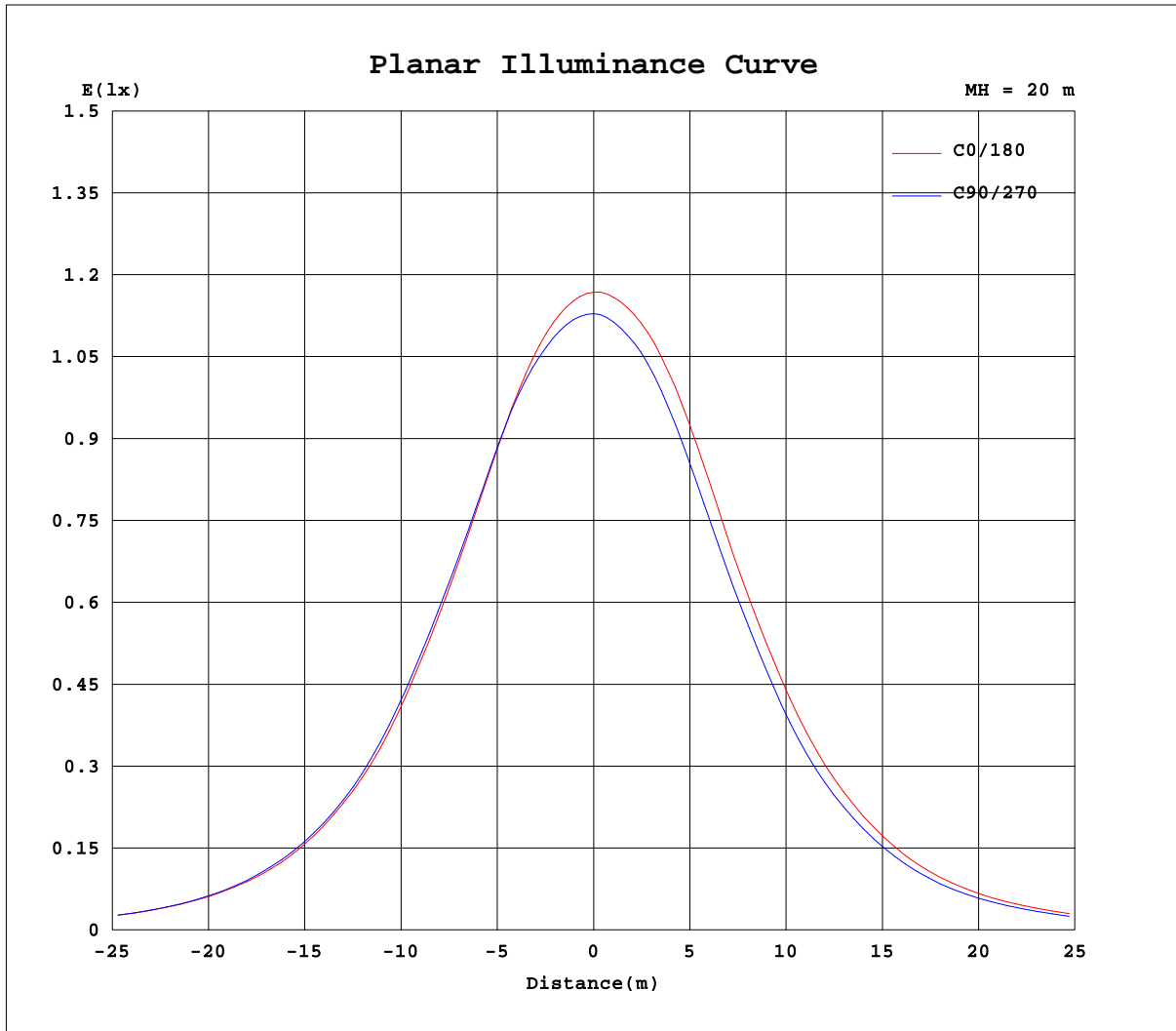
AvgL	cd/m2
L_0~180(65)av	34379
L_0~180(75)av	20354
L_0~180(85)av	17423
L_90~270(65)av	32064
L_90~270(75)av	19720
L_90~270(85)av	17697
L_45(65)av	31274
L_45(75)av	20114
L_45(85)av	18150

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-04-10

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: 2022-04-10

$\gamma$  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:



