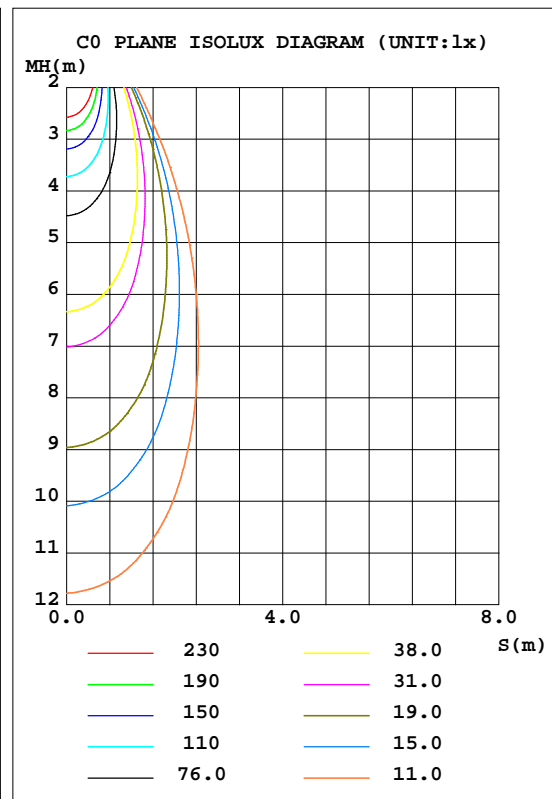
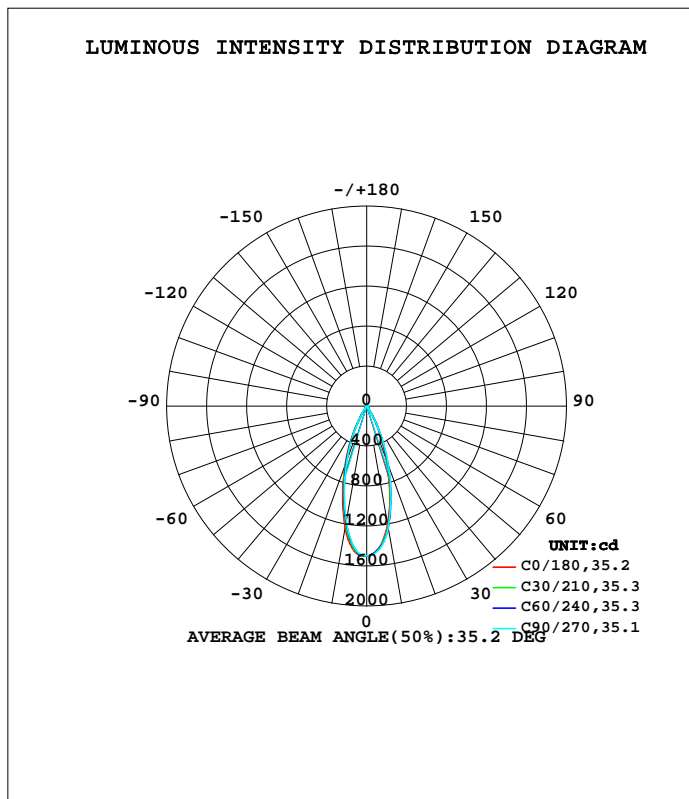


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 98.44 lm/W
MODEL		I <sub>max</sub> (cd)	1504	S/MH(C0/180)		0.59
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)		0.55
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	604.66	η UP, DN(C0-180)		0.0,50.5
NOMINAL FLUX(lm)	604.661	CIE CLASS	DIRECT	η UP, DN(C180-360)		0.0,49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM		0.50
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX		0.60



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:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	1210	1238	1241	1227	1239	1189	1177	1206	0- 10	129.8	129.8	21.5,21.5
20	584.7	629.0	641.7	629.2	640.5	605.0	583.0	585.8	10- 20	248.9	378.7	62.6,62.6
30	146.2	167.3	171.5	150.3	157.0	145.3	150.8	153.0	20- 30	162.4	541.2	89.5,89.5
40	18.00	18.70	20.70	18.47	18.77	18.95	19.37	20.31	30- 40	36.69	577.8	95.6,95.6
50	10.30	10.80	10.23	10.79	11.80	11.24	10.33	10.74	40- 50	10.62	588.5	97.3,97.3
60	7.250	8.254	6.941	7.770	7.894	7.645	6.685	7.523	50- 60	8.004	596.5	98.6,98.6
70	4.874	3.948	2.207	4.533	5.174	3.944	1.549	4.508	60- 70	5.763	602.2	99.6,99.6
80	1.655	0.2184	0.0358	0.1525	1.812	0.1985	0.0298	0.4162	70- 80	2.218	604.4	100,100
90	0	0	0	0	0.0015	0	0	0	80- 90	0.2178	604.7	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): 583.63 lm

%lum = 96.5%  
%lamp = 96.5%

Conical surface Flux(120deg): 596.46 lm

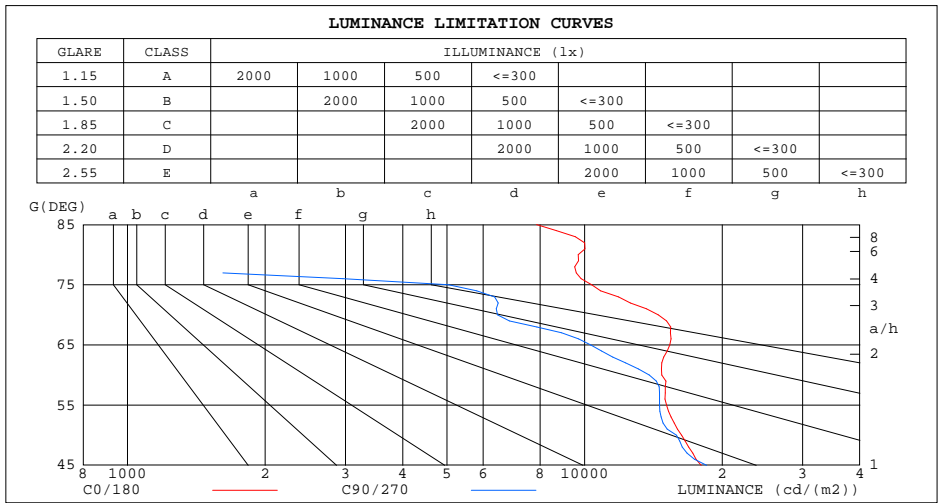
%lum = 98.6%  
%lamp = 98.6%

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:

**LUMINANCE LIMITATION CURVES**

Test:U:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.661x1 lm		
NAME: 486713-MR16-7W-2700K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7848	0
80	9691	206
75	10371	5045
70	14492	6446
65	15360	10311
60	14744	13866
55	15106	14596
50	16298	15892
45	17987	18492

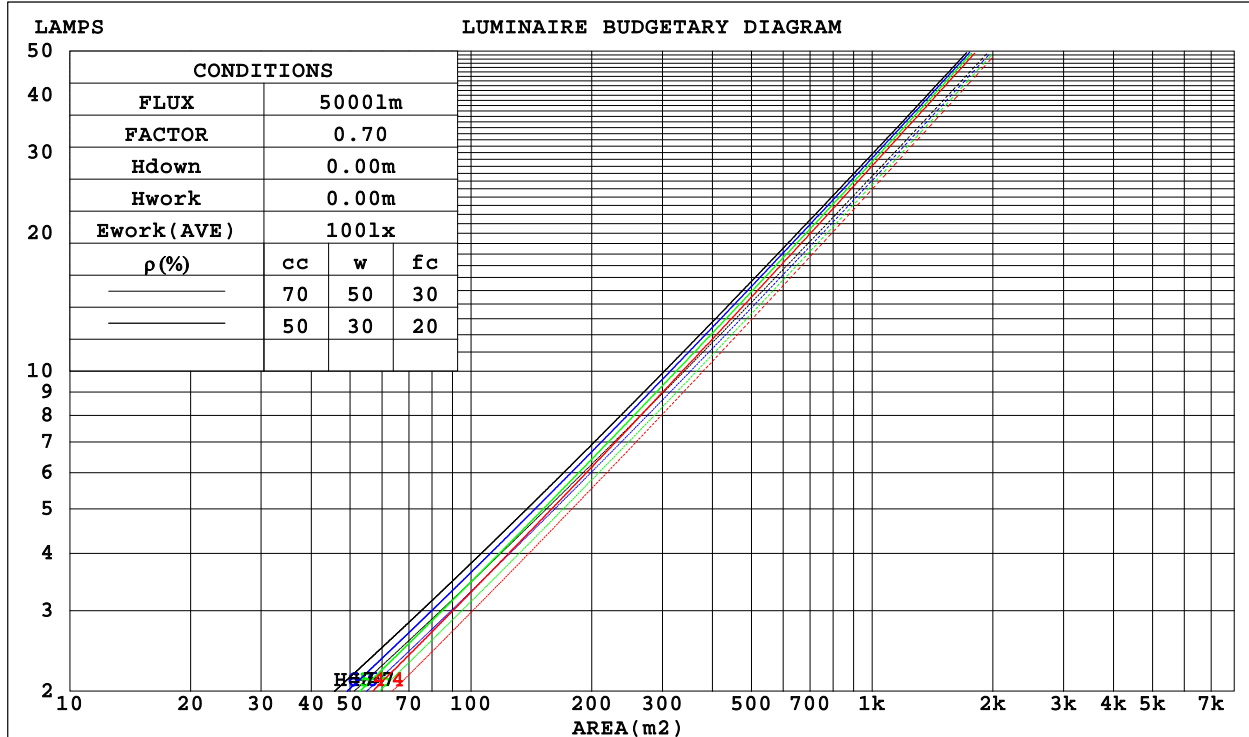
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-05-29

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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.95	.91	.96	.93	.90	.94	.91	.89	.91	.89	.87	.86
4.0	.95	.90	.86	.94	.89	.86	.92	.88	.85	.90	.87	.84	.88	.85	.83	.82
5.0	.90	.85	.82	.89	.85	.81	.88	.84	.81	.86	.83	.80	.85	.82	.79	.78
6.0	.86	.81	.78	.85	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.76	.75
7.0	.82	.77	.74	.82	.77	.74	.81	.76	.73	.80	.76	.73	.79	.75	.73	.72
8.0	.79	.74	.71	.79	.74	.71	.78	.73	.70	.77	.73	.70	.76	.72	.70	.69
9.0	.76	.71	.68	.76	.71	.68	.75	.70	.67	.74	.70	.67	.73	.70	.67	.66
10.0	.73	.68	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.71	.67	.65	.63



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:

**WEC AND CCEC**

Test:U:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.661x1 lm		
NAME: 486713-MR16-7W-2700K-40°	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	.158	.090	.028	.151	.086	.027	.139	.079	.025	.127	.073	.024	.116	.068	.022	
2.0	.148	.081	.025	.143	.079	.024	.132	.074	.023	.123	.069	.022	.114	.064	.020	
3.0	.139	.074	.022	.135	.072	.022	.126	.068	.021	.118	.065	.020	.110	.061	.019	
4.0	.131	.068	.020	.127	.067	.020	.120	.064	.019	.113	.061	.018	.107	.058	.018	
5.0	.124	.063	.018	.121	.062	.018	.114	.060	.018	.108	.057	.017	.103	.055	.017	
6.0	.118	.059	.017	.115	.058	.017	.109	.056	.016	.104	.054	.016	.099	.052	.016	
7.0	.112	.056	.016	.110	.055	.016	.105	.053	.015	.100	.051	.015	.096	.050	.015	
8.0	.107	.052	.015	.105	.052	.015	.101	.050	.014	.097	.049	.014	.093	.048	.014	
9.0	.103	.050	.014	.101	.049	.014	.097	.048	.014	.093	.047	.013	.090	.046	.013	
10.0	.098	.047	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.087	.044	.013	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.075	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.097	.062	.039	.083	.054	.034	.058	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.079	.049	.029	.054	.035	.021	.032	.020	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.661x1 lm										
NAME: 486713-MR16-7W-2700K-40°					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	16.0	16.8	16.3	17.0	17.1	16.2	16.9	16.4	17.1	17.3
3H	17.1	17.8	17.4	18.0	18.2	16.4	17.1	16.6	17.3	17.5
4H	17.4	18.1	17.6	18.3	18.5	16.4	17.1	16.7	17.3	17.5
6H	17.6	18.2	17.8	18.4	18.7	16.3	17.0	16.6	17.2	17.4
8H	17.6	18.3	17.9	18.5	18.8	16.3	16.9	16.6	17.1	17.4
12H	17.7	18.3	18.0	18.5	18.8	16.2	16.8	16.5	17.1	17.4
4H 2H	16.4	17.1	16.7	17.3	17.5	16.5	17.2	16.7	17.4	17.6
3H	17.7	18.3	18.0	18.5	18.8	16.8	17.4	17.1	17.6	17.9
4H	18.0	18.6	18.4	18.9	19.2	16.8	17.4	17.2	17.7	18.0
6H	18.3	18.8	18.7	19.1	19.5	16.7	17.2	17.1	17.5	17.9
8H	18.4	18.9	18.8	19.2	19.6	16.7	17.1	17.1	17.5	17.8
12H	18.5	18.9	18.9	19.2	19.6	16.6	17.0	17.0	17.4	17.8
8H 4H	18.0	18.5	18.4	18.8	19.2	16.9	17.3	17.2	17.7	18.0
6H	18.3	18.7	18.7	19.1	19.5	16.8	17.1	17.2	17.5	17.9
8H	18.5	18.8	18.9	19.2	19.6	16.7	17.0	17.1	17.4	17.9
12H	18.5	18.8	19.0	19.2	19.7	16.6	16.9	17.1	17.4	17.8
12H 4H	18.0	18.4	18.4	18.7	19.1	16.8	17.2	17.2	17.6	18.0
6H	18.3	18.6	18.7	19.0	19.4	16.7	17.0	17.2	17.5	17.9
8H	18.4	18.7	18.9	19.1	19.6	16.7	16.9	17.1	17.4	17.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 1.1 / - 0.9				
1.5H	+ 0.7 / - 0.4					+ 2.1 / - 0.6				
2.0H	+ 0.4 / - 0.6					+ 0.4 / - 0.9				

CIE Pub.117, 604.7 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -1.7)  
Area: 0.001 m2

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

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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

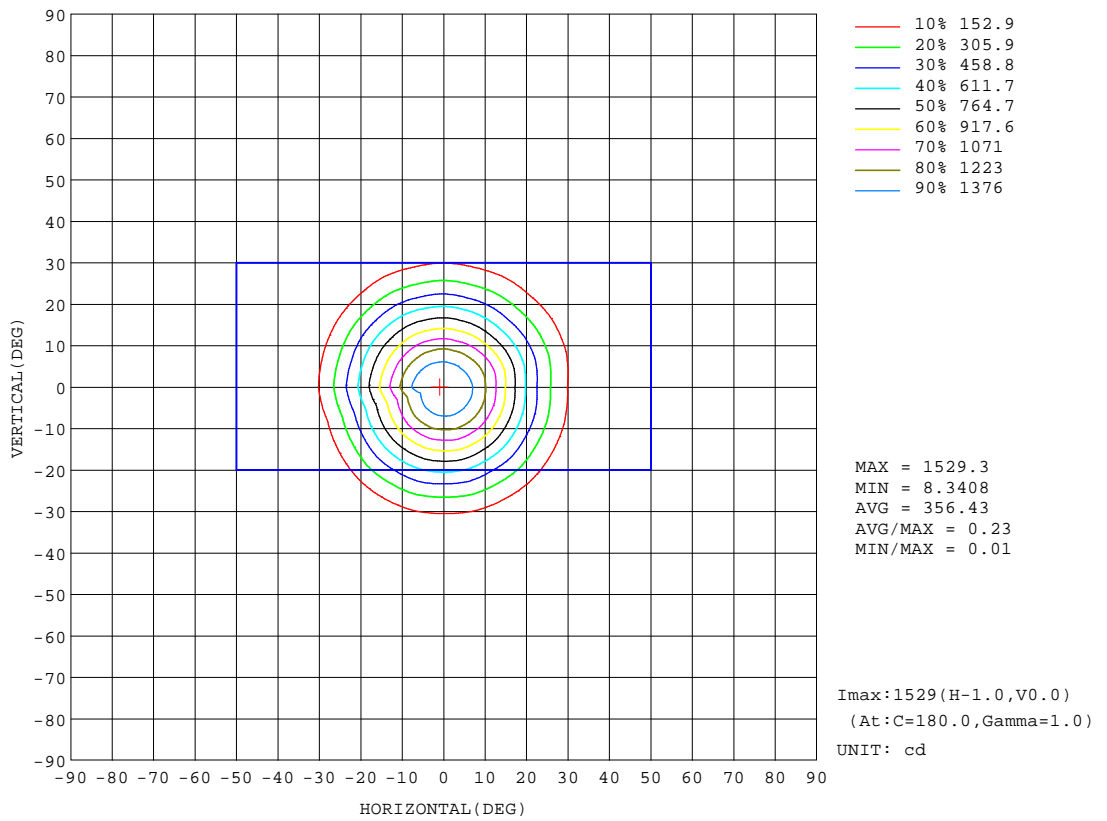
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	89	83	79	88	83	79	88	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	90	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	107	104	101	105	102	99	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	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:2022-05-29

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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	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

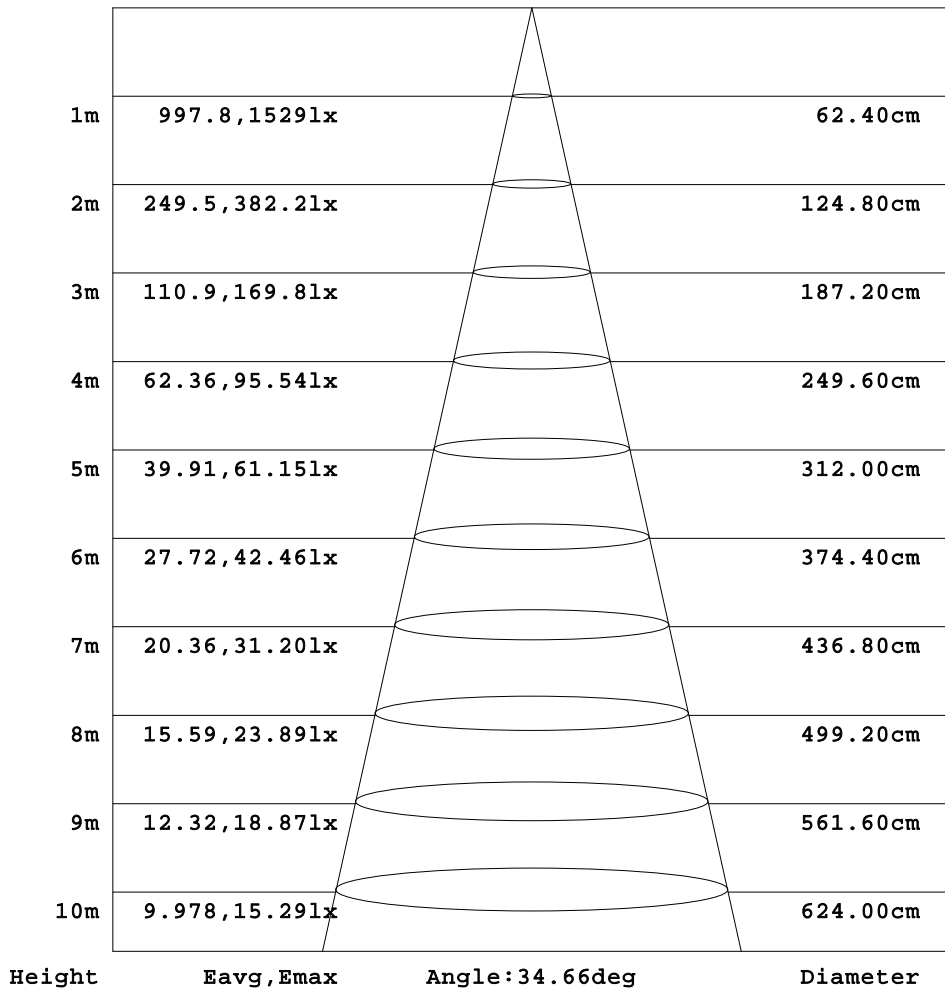
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:330.9 lm



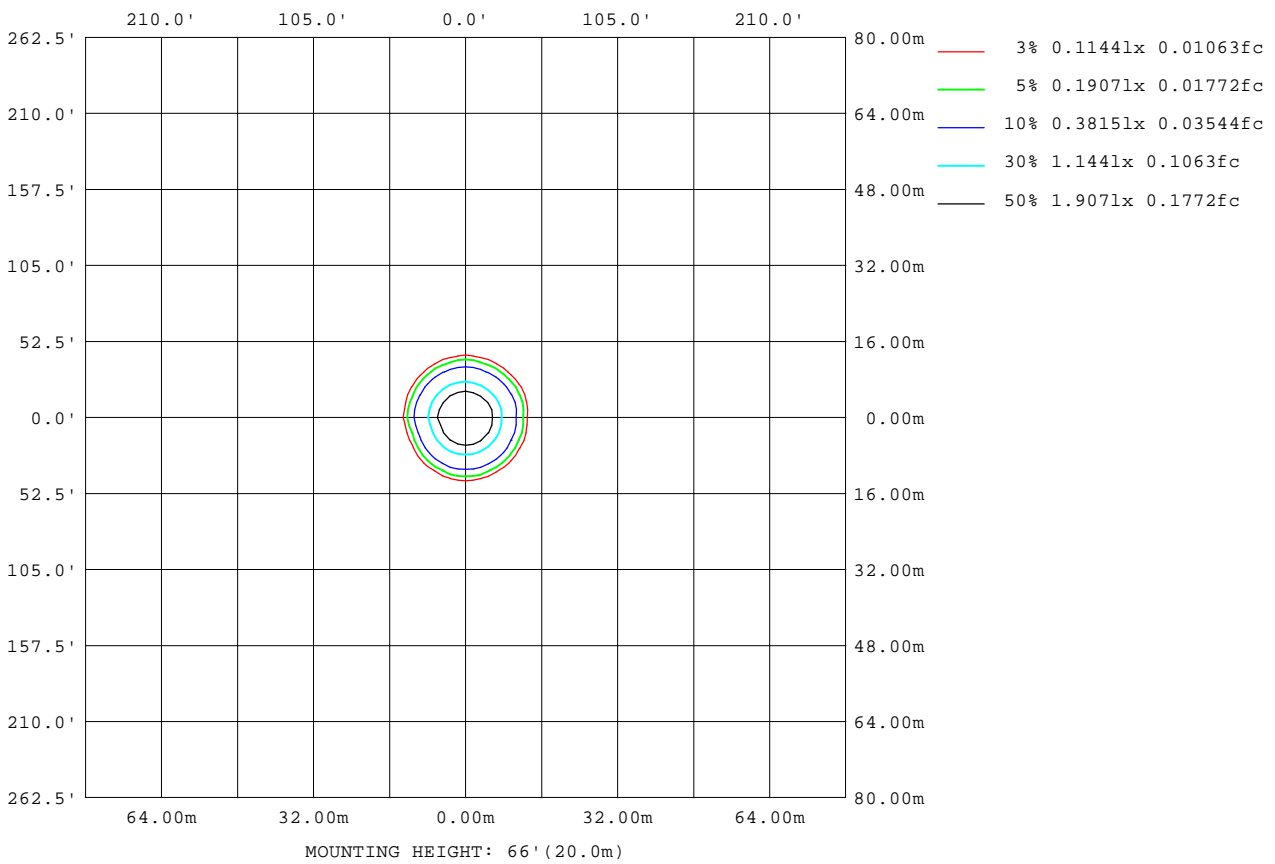
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.66lx1 lm		
NAME: 486713-MR16-7W-2700K-40°	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:11.788V I:0.6864A P:6.1424W PF:0.7591 Freq:60.00Hz Lamp Flux:604.661x1 lm		
NAME: 486713-MR16-7W-2700K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

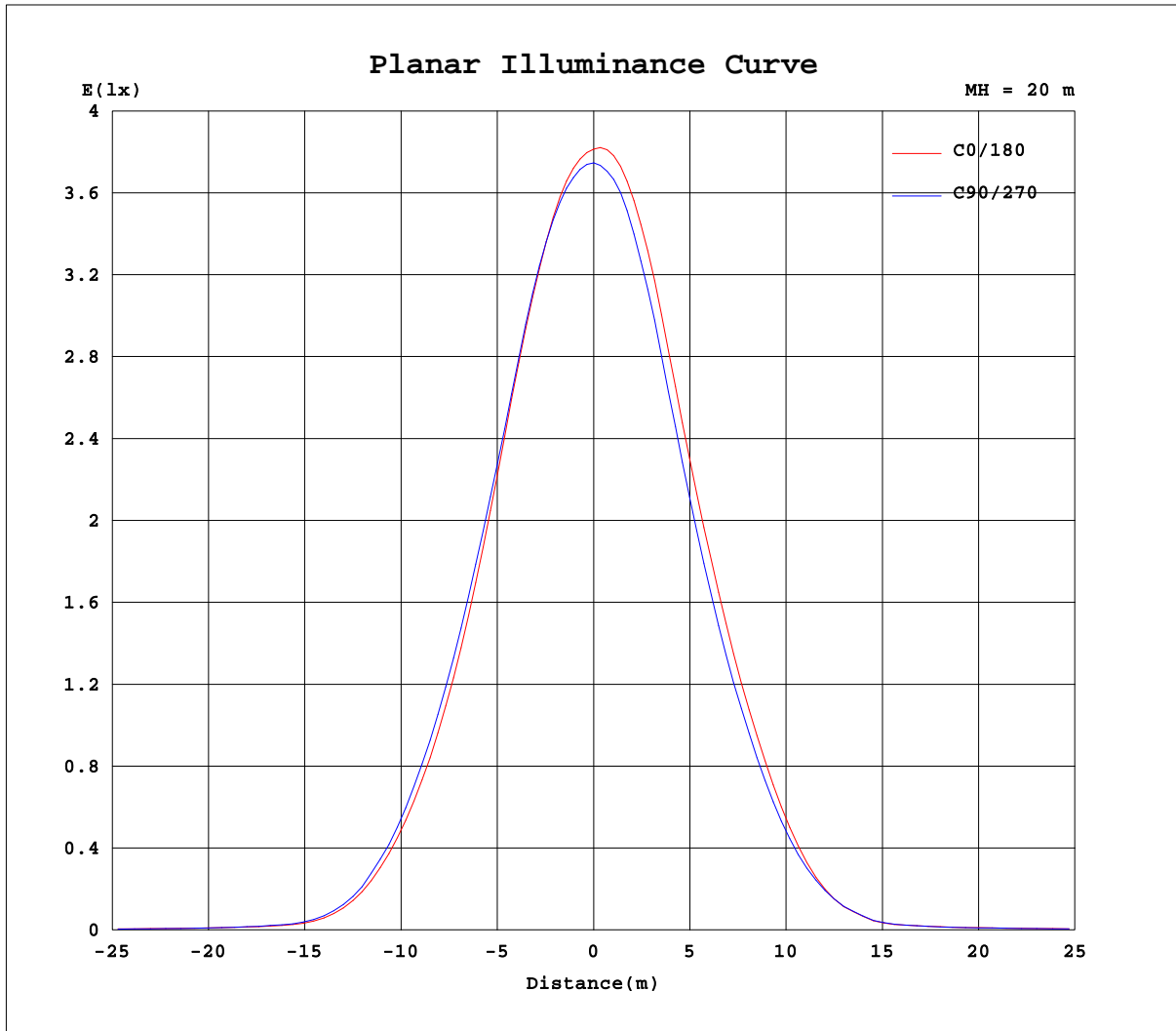
AvgL	cd/m2
L_0~180(65)av	15742
L_0~180(75)av	10593
L_0~180(85)av	7270
L_90~270(65)av	9331
L_90~270(75)av	4350
L_90~270(85)av	0
L_45(65)av	16069
L_45(75)av	7411
L_45(85)av	100

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:



