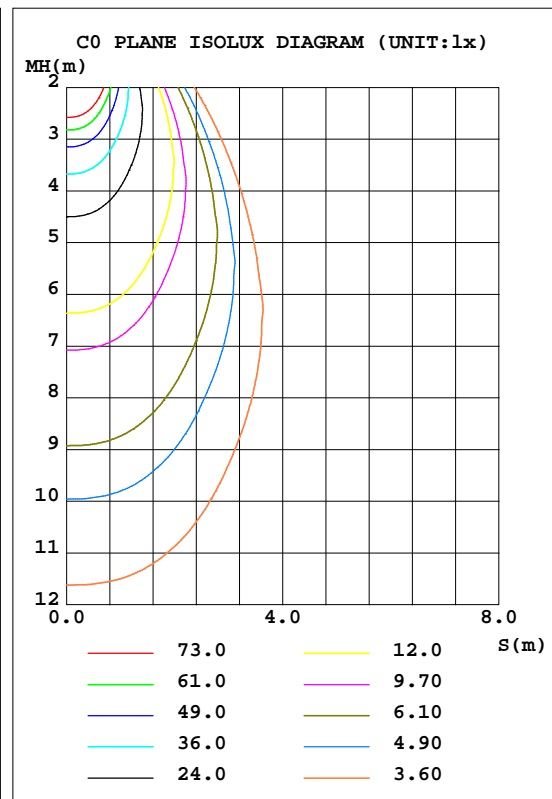
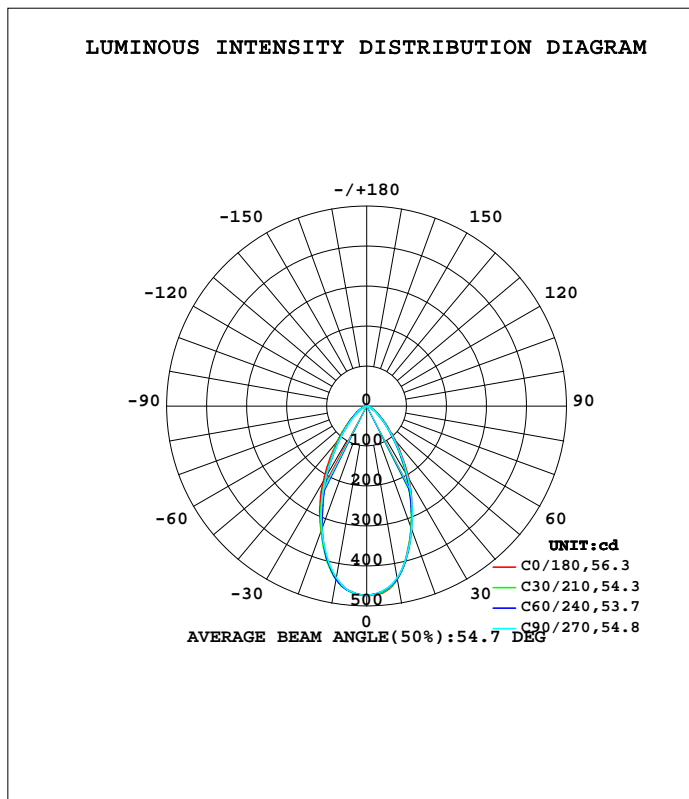


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		I _{max} (cd)	474.2	S/MH(C0/180)	0.84
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.82
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	472.33	η UP, DN(C0-180)	0.0,49.2
NOMINAL FLUX(lm)	472.329	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	0.85



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:

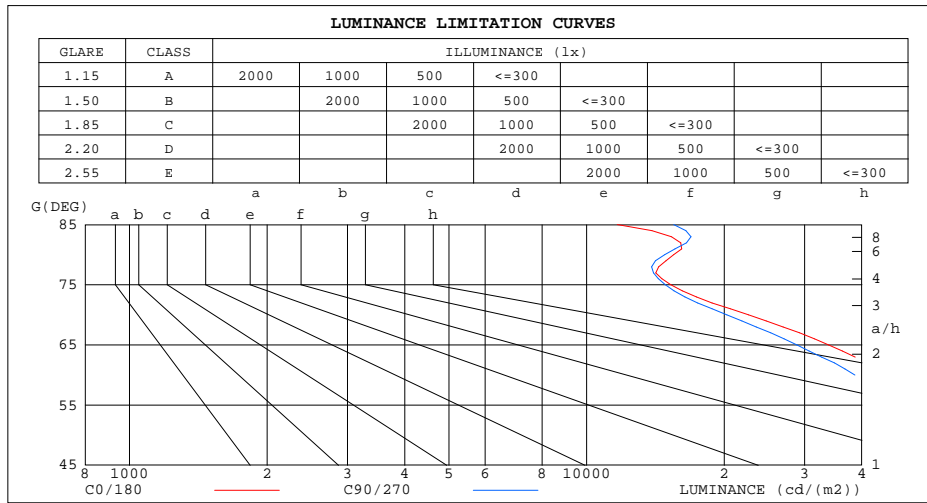
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	\$lum,lamp
10	439.1	439.6	436.8	435.1	438.2	441.0	436.8	445.5	0- 10	43.65	43.65	9.24,9.24
20	325.9	325.3	328.8	318.4	333.0	330.3	328.2	335.7	10- 20	108.0	151.7	32.1,32.1
30	214.1	194.6	205.9	193.5	217.5	198.3	202.1	202.3	20- 30	120.8	272.5	57.7,57.7
40	109.6	100.9	103.4	100.8	113.5	104.9	100.7	108.0	30- 40	93.62	366.1	77.5,77.5
50	51.36	48.41	45.27	47.12	51.83	50.83	44.84	52.95	40- 50	56.46	422.6	89.5,89.5
60	22.76	21.95	19.42	21.32	22.26	24.10	19.66	24.99	50- 60	29.93	452.5	95.8,95.8
70	7.536	7.638	6.970	7.462	7.694	8.575	6.810	8.936	60- 70	13.90	466.4	98.7,98.7
80	2.622	2.617	2.587	2.601	2.600	2.641	2.578	2.777	70- 80	4.613	471.0	99.7,99.7
90	0.0022	0.0007	0.0022	0.0030	0.0217	0.0229	0.0187	0.0227	80- 90	1.299	472.3	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

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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



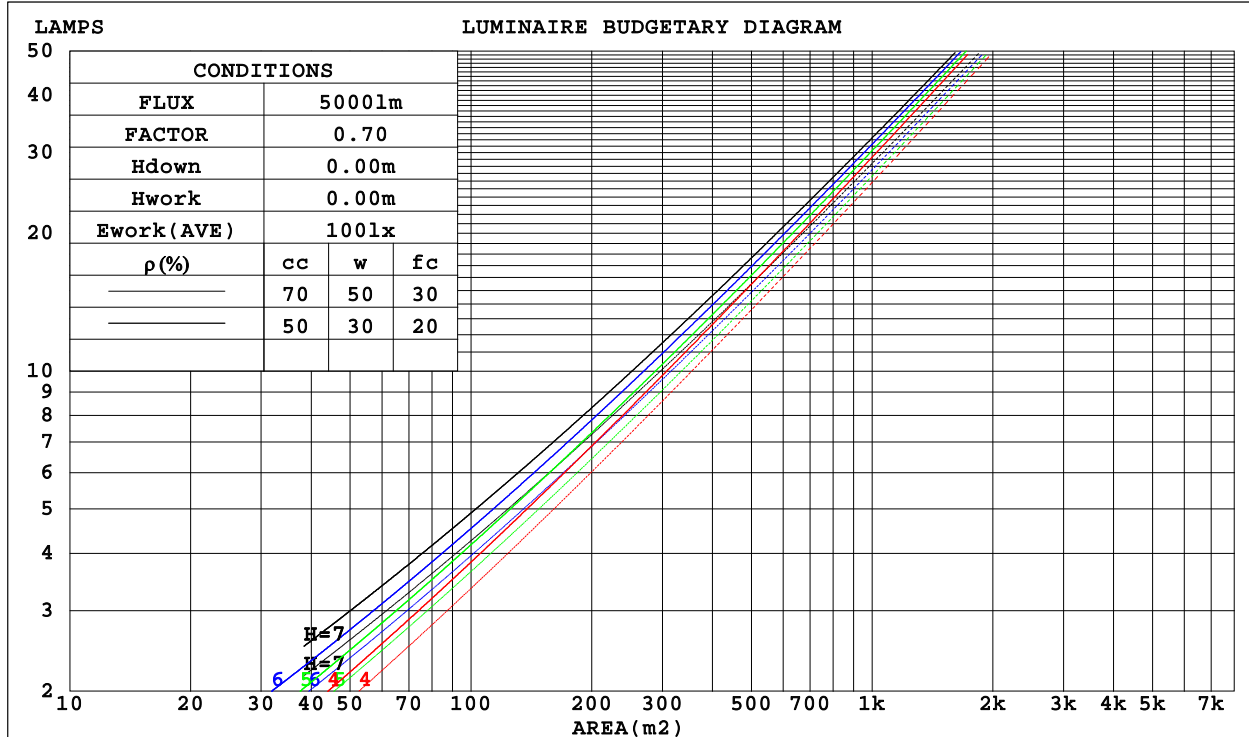
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-04-10

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	1.04	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	.91	.85	.81	.88	.83	.80	.85	.81	.78	.83	.80	.77	.75
4.0	.85	.78	.74	.84	.78	.73	.81	.76	.72	.79	.75	.71	.77	.74	.70	.69
5.0	.78	.72	.67	.77	.71	.67	.76	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.66	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.58
7.0	.68	.61	.56	.67	.61	.56	.66	.60	.56	.65	.59	.56	.63	.59	.55	.54
8.0	.64	.57	.52	.63	.57	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.50
9.0	.60	.53	.49	.59	.53	.49	.58	.52	.48	.57	.52	.48	.56	.52	.48	.47
10.0	.56	.50	.45	.56	.50	.45	.55	.49	.45	.54	.49	.45	.53	.48	.45	.44



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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-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	.207	.118	.037	.200	.114	.036	.187	.107	.034	.176	.101	.032	.165	.095	.031	
2.0	.199	.109	.033	.193	.107	.033	.183	.101	.032	.173	.097	.030	.163	.092	.029	
3.0	.189	.101	.030	.184	.099	.030	.175	.095	.029	.166	.091	.028	.158	.088	.027	
4.0	.179	.093	.027	.175	.092	.027	.167	.088	.026	.159	.085	.026	.152	.083	.025	
5.0	.170	.086	.025	.166	.085	.025	.159	.083	.024	.152	.080	.024	.146	.078	.023	
6.0	.161	.081	.023	.157	.080	.023	.151	.077	.023	.145	.075	.022	.140	.073	.022	
7.0	.152	.075	.021	.150	.074	.021	.144	.073	.021	.139	.071	.021	.134	.069	.020	
8.0	.145	.071	.020	.142	.070	.020	.137	.069	.020	.132	.067	.019	.128	.066	.019	
9.0	.138	.067	.019	.135	.066	.019	.131	.065	.018	.127	.064	.018	.123	.062	.018	
10.0	.131	.063	.017	.129	.062	.017	.125	.061	.017	.121	.060	.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	.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	.035	.045	.031	.020	.015	.010	.007	
6.0	.124	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.118	.072	.040	.101	.062	.034	.070	.044	.024	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.097	.057	.030	.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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm										
NAME: 486761-MR16-5W-3000K-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	25.4	26.5	25.7	26.7	26.9	24.9	26.0	25.2	26.2	26.4
3H	25.6	26.6	25.9	26.8	27.0	25.1	26.1	25.3	26.3	26.5
4H	25.6	26.6	25.9	26.8	27.0	25.1	26.0	25.3	26.2	26.5
6H	25.6	26.5	25.9	26.7	27.0	25.0	25.9	25.4	26.2	26.4
8H	25.6	26.4	25.9	26.7	27.0	25.0	25.9	25.4	26.2	26.4
12H	25.5	26.4	25.9	26.6	26.9	25.0	25.9	25.4	26.1	26.4
4H 2H	25.5	26.4	25.7	26.6	26.9	25.0	26.0	25.3	26.2	26.4
3H	25.7	26.5	26.0	26.8	27.1	25.2	26.0	25.5	26.3	26.6
4H	25.7	26.5	26.1	26.8	27.1	25.2	26.0	25.6	26.3	26.6
6H	25.7	26.4	26.1	26.7	27.1	25.3	25.9	25.6	26.3	26.6
8H	25.8	26.4	26.2	26.7	27.1	25.3	25.9	25.7	26.3	26.6
12H	25.8	26.3	26.2	26.7	27.1	25.3	25.9	25.7	26.2	26.6
8H 4H	25.7	26.3	26.1	26.6	27.0	25.2	25.8	25.6	26.1	26.5
6H	25.7	26.2	26.1	26.6	27.0	25.3	25.8	25.7	26.2	26.6
8H	25.8	26.2	26.2	26.6	27.1	25.3	25.8	25.8	26.2	26.6
12H	25.8	26.2	26.2	26.6	27.1	25.4	25.8	25.8	26.2	26.7
12H 4H	25.6	26.2	26.0	26.5	26.9	25.1	25.7	25.6	26.1	26.5
6H	25.7	26.1	26.1	26.6	27.0	25.2	25.7	25.7	26.1	26.5
8H	25.8	26.1	26.2	26.6	27.0	25.3	25.7	25.8	26.1	26.6
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.7					+ 1.3 / - 2.0				
1.5H	+ 1.7 / - 1.2					+ 1.7 / - 1.2				
2.0H	+ 2.4 / - 1.9					+ 2.4 / - 1.8				

CIE Pub.117, 472.3 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.6)
 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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

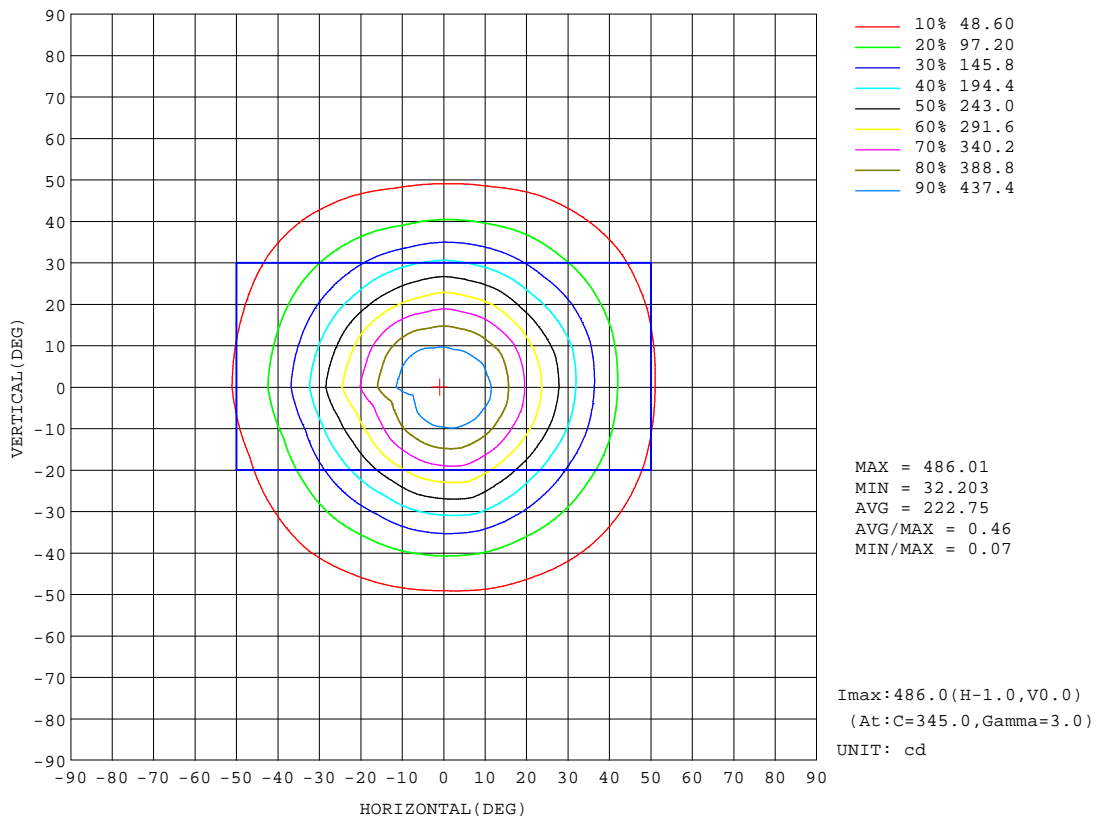
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	77	69	64	77	69	64	76	69	64	60
0.80	86	78	73	85	78	73	84	77	73	68
1.00	92	85	80	91	85	80	90	85	80	75
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	87
2.50	107	102	99	106	101	98	102	99	96	89
3.00	109	105	102	107	104	100	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:2022-04-10

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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



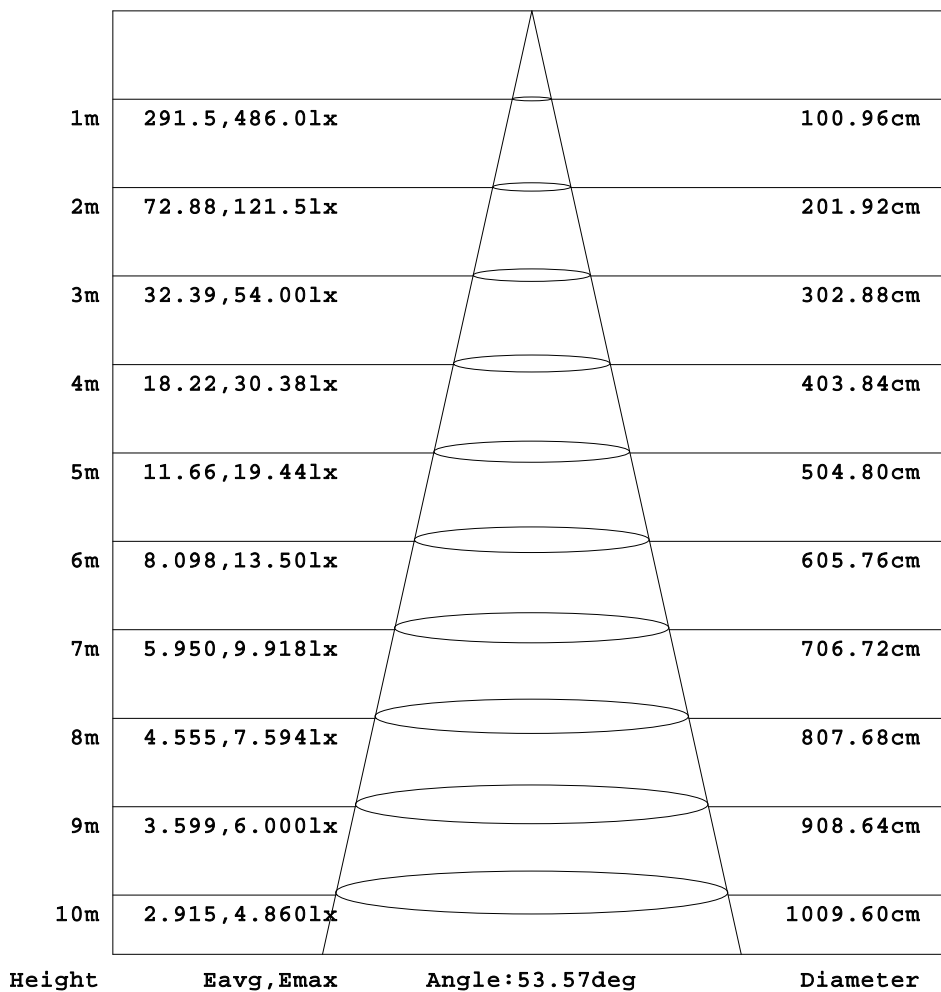
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-04-10

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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:237.8 lm



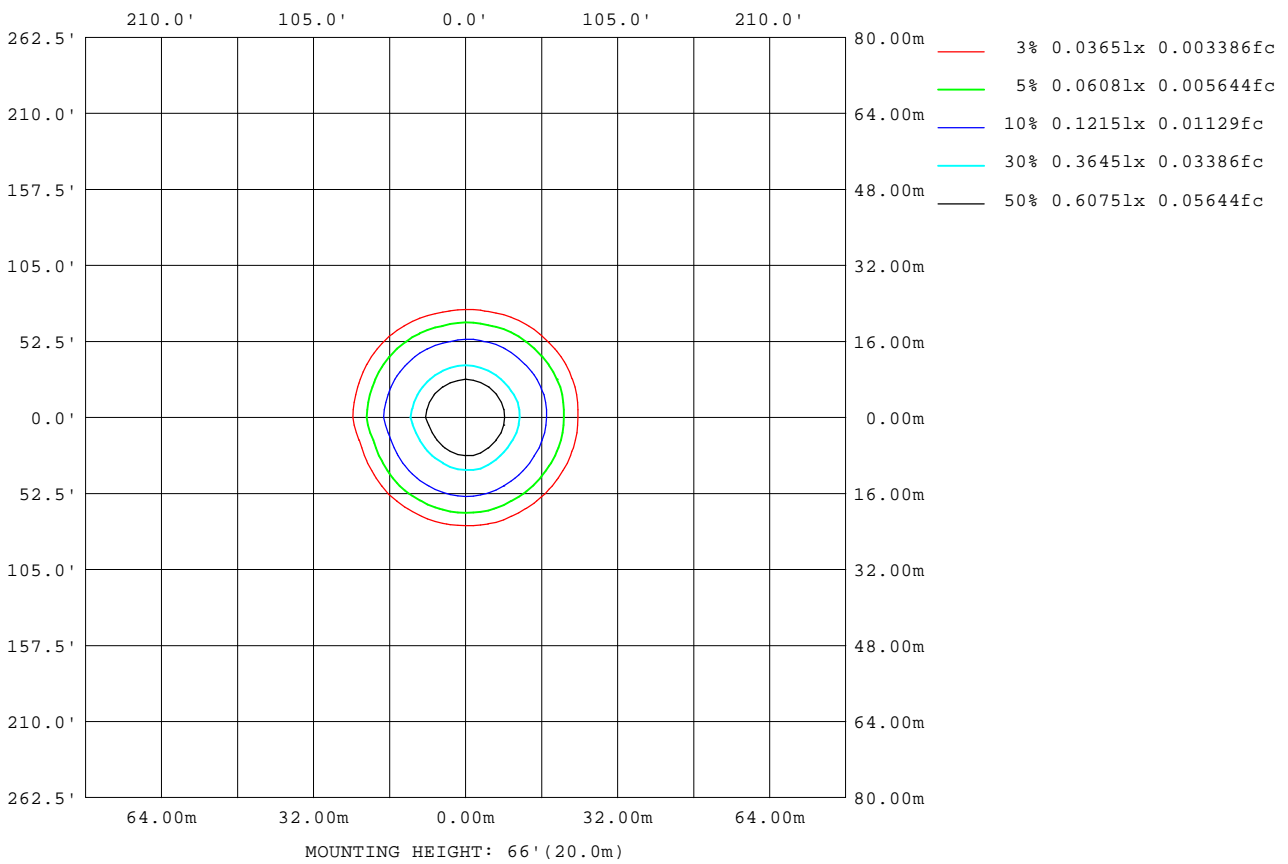
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-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:11.890V I:0.5840A P:5.0662W PF:0.7296 Freq:60.00Hz Lamp Flux:472.329x1 lm		
NAME: 486761-MR16-5W-3000K-60°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

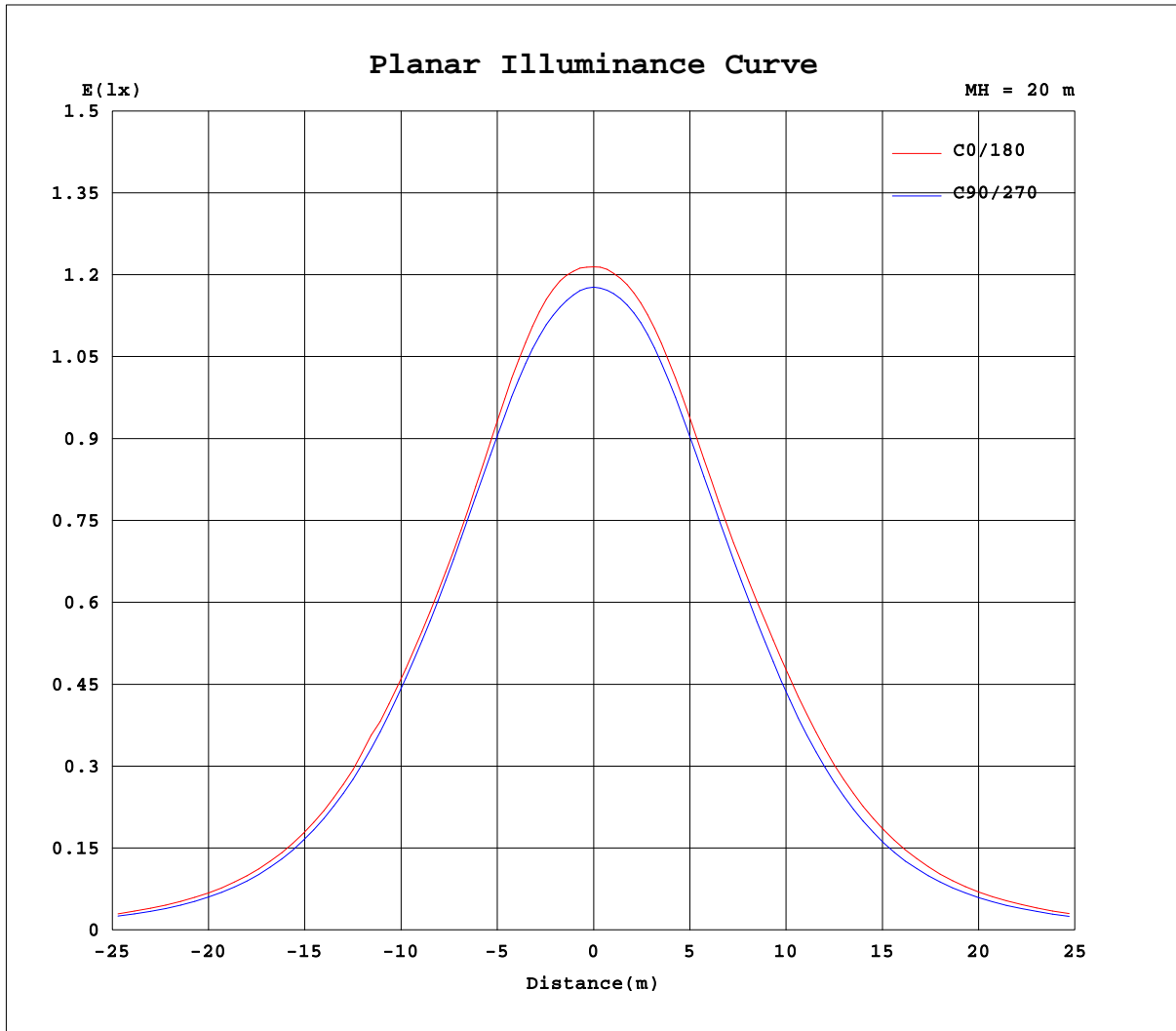
AvgL	cd/m2
L_0~180(65)av	32981
L_0~180(75)av	15210
L_0~180(85)av	13463
L_90~270(65)av	28995
L_90~270(75)av	14874
L_90~270(85)av	13372
L_45(65)av	34331
L_45(75)av	16013
L_45(85)av	13559

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

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:

