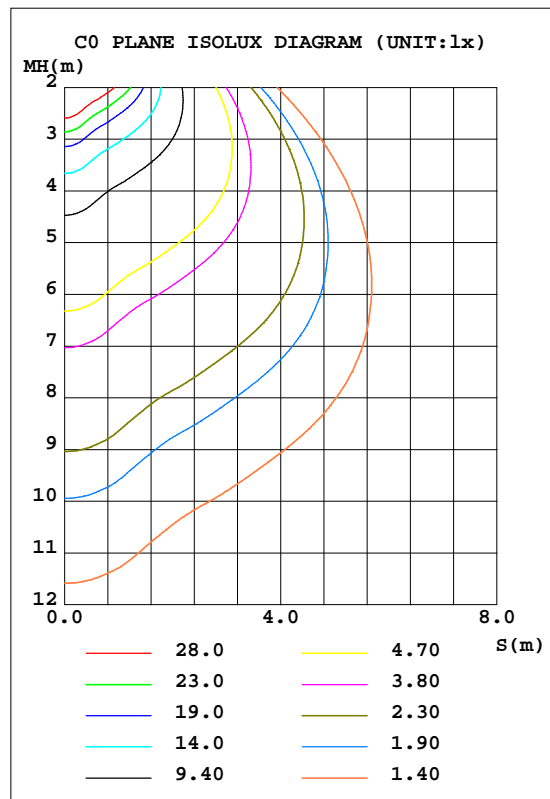
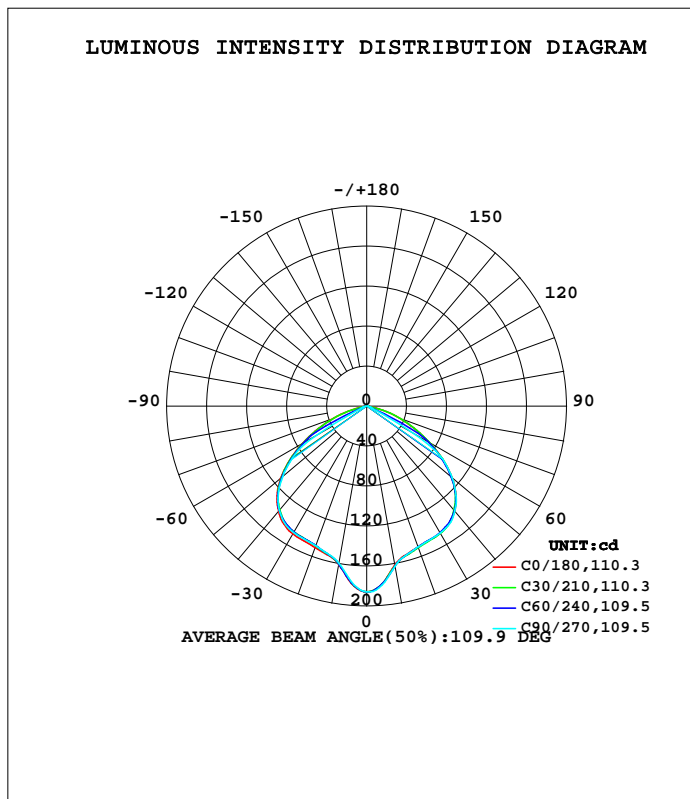


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.77 lm/W			
MODEL		I _{max} (cd)	185.9	S/MH(C0/180)	1.20
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	447.29	η UP, DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	447.291	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

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	161.8	163.6	162.9	162.7	161.2	160.0	159.9	160.5	0- 10	16.42	16.42	3.67,3.67
20	150.0	150.6	150.2	150.5	150.7	148.7	148.8	149.1	10- 20	43.53	59.96	13.4,13.4
30	147.0	147.0	146.8	147.2	147.7	145.4	146.2	146.0	20- 30	68.44	128.4	28.7,28.7
40	137.1	136.8	137.3	137.7	137.2	135.5	136.0	135.9	30- 40	89.53	217.9	48.7,48.7
50	111.6	111.7	111.8	112.4	112.4	110.6	109.7	110.4	40- 50	96.73	314.7	70.3,70.3
60	71.82	72.75	49.77	72.83	73.68	71.21	55.35	71.17	50- 60	82.05	396.7	88.7,88.7
70	34.84	20.95	5.212	22.23	34.96	24.93	5.095	27.16	60- 70	40.49	437.2	97.7,97.7
80	3.030	1.478	0.3882	1.280	2.847	1.055	0.1877	1.387	70- 80	9.627	446.8	99.9,99.9
90	0.0287	0.0156	0	0.0075	0.0883	0.0644	0.0380	0.0712	80- 90	0.4714	447.3	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		

Conical surface Flux(90deg): 266.63 lm

%lum = 59.6%
%lamp = 59.6%

Conical surface Flux(120deg): 396.7 lm

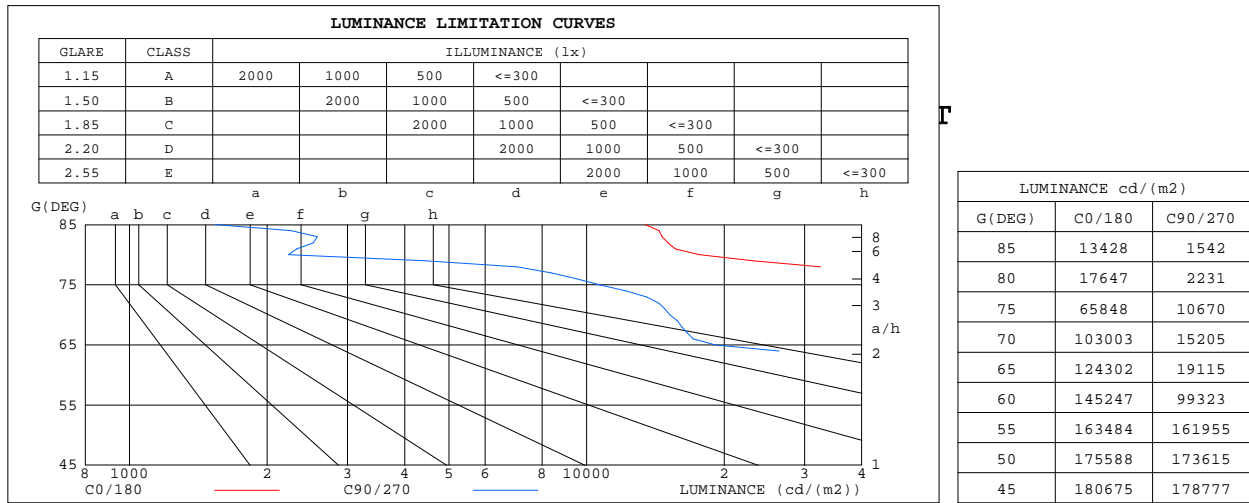
%lum = 88.7%
%lamp = 88.7%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.291x1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



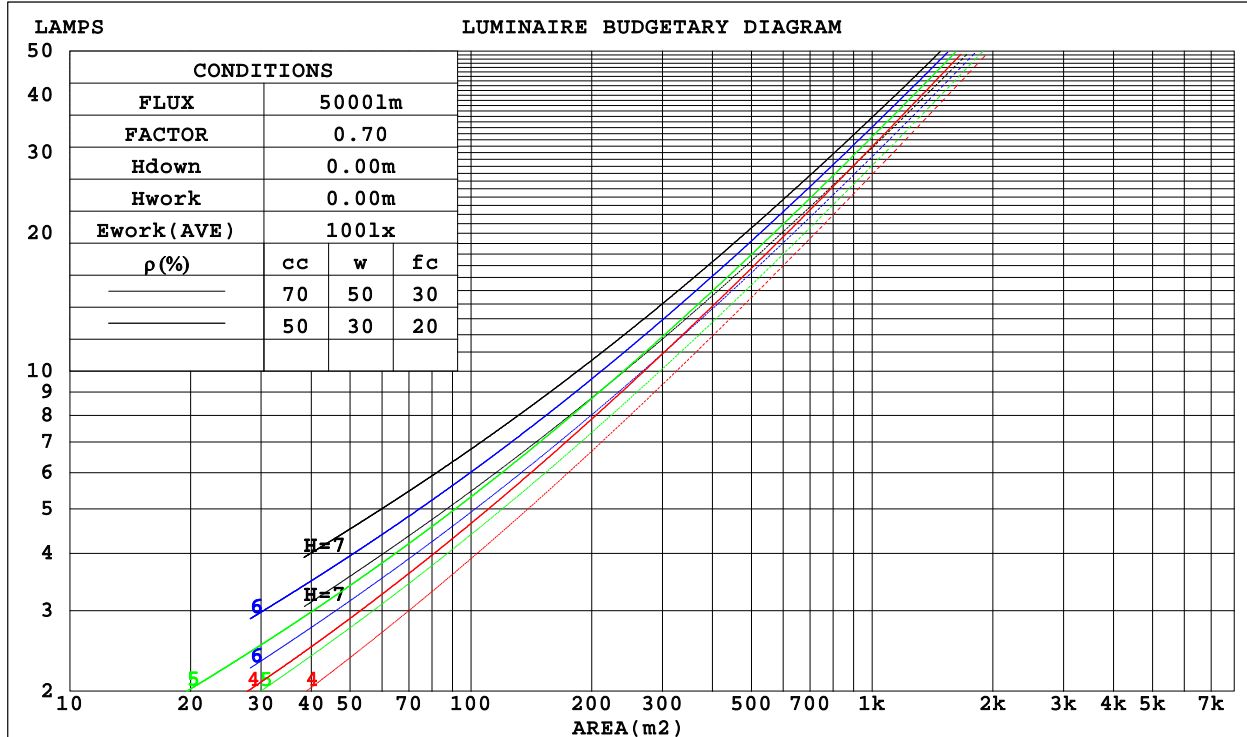
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm		
NAME: 486757-MR16-5W-2700K-120°	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	1.06	1.03	.99	1.04	1.01	.98	.90	.97	.95	.96	.94	.92	.93	.91	.89	.87
2.0	.94	.88	.83	.92	.87	.82	.89	.84	.80	.85	.82	.78	.82	.79	.76	.74
3.0	.83	.76	.70	.82	.75	.69	.79	.73	.68	.76	.71	.67	.73	.69	.66	.64
4.0	.74	.66	.59	.73	.65	.59	.70	.63	.58	.68	.62	.57	.66	.61	.57	.55
5.0	.66	.58	.51	.65	.57	.51	.63	.56	.50	.61	.55	.50	.59	.54	.49	.47
6.0	.59	.51	.45	.59	.50	.45	.57	.50	.44	.55	.49	.44	.54	.48	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.52	.44	.39	.50	.44	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.28	.41	.33	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.291x1 lm		
NAME: 486757-MR16-5W-2700K-120°	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	.262	.149	.047	.255	.146	.046	.242	.139	.044	.230	.133	.043	.219	.127	.041	
2.0	.258	.141	.043	.252	.139	.043	.241	.134	.042	.230	.129	.040	.220	.125	.039	
3.0	.246	.131	.039	.241	.129	.039	.230	.125	.038	.221	.121	.037	.213	.118	.036	
4.0	.232	.120	.035	.227	.119	.035	.218	.116	.035	.210	.113	.034	.202	.110	.033	
5.0	.217	.111	.032	.213	.109	.032	.205	.107	.031	.198	.104	.031	.191	.102	.031	
6.0	.204	.102	.029	.200	.101	.029	.193	.099	.029	.187	.097	.028	.180	.095	.028	
7.0	.191	.095	.027	.188	.094	.027	.182	.092	.026	.176	.090	.026	.170	.088	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.170	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.152	.077	.022	
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.144	.073	.021	

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	.177	.157	.138	.151	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.098	.067	.094	.068	.047	.054	.040	.028	.017	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.041	.119	.071	.035	.082	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm										
NAME: 486757-MR16-5W-2700K-120°					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	30.9	32.3	31.2	32.5	32.7	30.2	31.6	30.5	31.8	32.0
3H	31.8	33.1	32.1	33.4	33.6	30.0	31.3	30.3	31.6	31.8
4H	32.0	33.3	32.3	33.5	33.7	29.9	31.2	30.2	31.4	31.7
6H	32.0	33.1	32.3	33.4	33.7	29.8	31.0	30.1	31.3	31.5
8H	31.9	33.0	32.2	33.3	33.6	29.8	30.9	30.1	31.2	31.5
12H	31.9	32.9	32.2	33.2	33.5	29.7	30.8	30.1	31.1	31.4
4H 2H	31.3	32.5	31.6	32.7	33.0	30.6	31.9	30.9	32.1	32.4
3H	32.3	33.4	32.6	33.7	34.0	30.5	31.5	30.8	31.8	32.1
4H	32.5	33.5	32.9	33.8	34.2	30.4	31.4	30.8	31.7	32.0
6H	32.5	33.4	32.9	33.7	34.1	30.3	31.2	30.7	31.5	31.9
8H	32.5	33.3	32.9	33.6	34.0	30.3	31.1	30.7	31.4	31.8
12H	32.4	33.2	32.9	33.6	34.0	30.2	30.9	30.6	31.3	31.7
8H 4H	32.4	33.2	32.8	33.6	34.0	30.4	31.2	30.8	31.5	31.9
6H	32.4	33.1	32.9	33.5	33.9	30.3	30.9	30.7	31.3	31.8
8H	32.4	33.0	32.8	33.4	33.8	30.3	30.8	30.7	31.2	31.7
12H	32.4	32.8	32.8	33.3	33.8	30.2	30.7	30.7	31.1	31.6
12H 4H	32.4	33.1	32.8	33.5	33.9	30.3	31.1	30.8	31.4	31.8
6H	32.4	33.0	32.8	33.4	33.8	30.3	30.8	30.7	31.3	31.7
8H	32.4	32.8	32.8	33.3	33.8	30.2	30.7	30.7	31.2	31.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.2 / - 0.4				
1.5H	+ 0.4 / - 0.7					+ 1.0 / - 1.8				
2.0H	+ 0.6 / - 0.8					+ 1.2 / - 2.5				

CIE Pub.117, 447.3 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.8)
 Area: 0.001 m2

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.291x1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

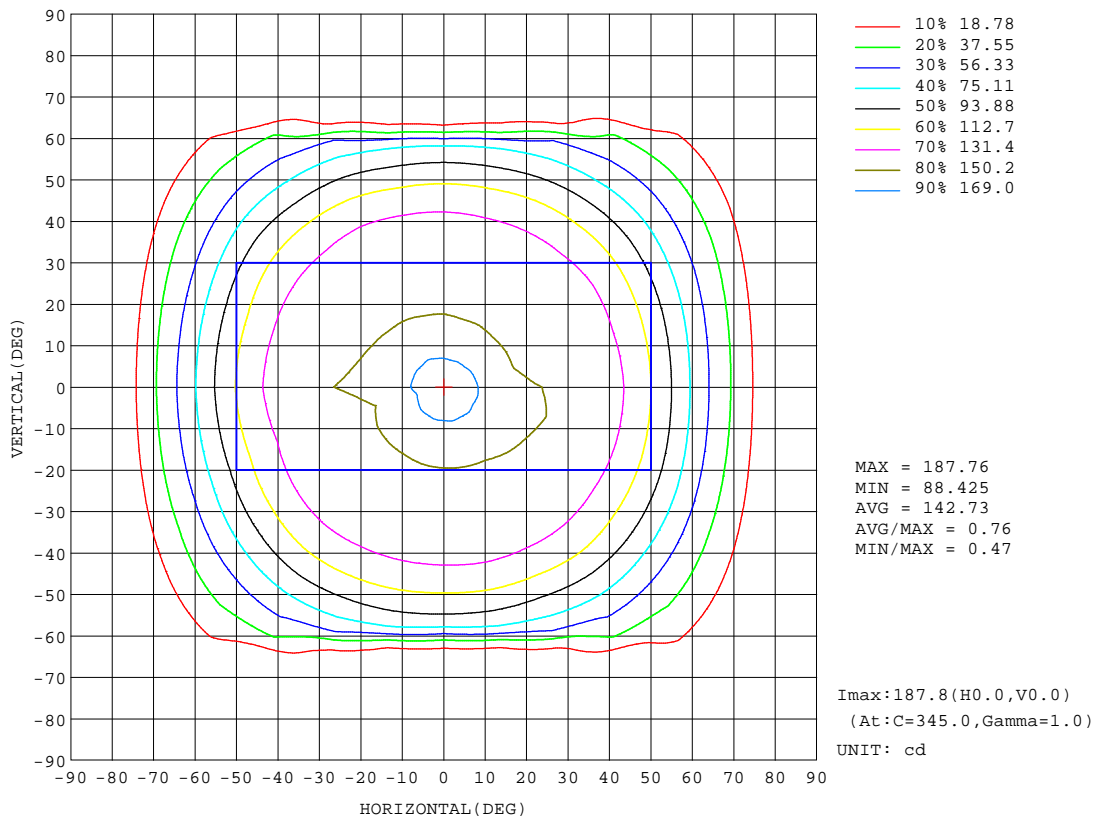
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	59	48	41	58	47	41	57	47	40	34
0.80	70	59	52	69	58	52	67	58	51	44
1.00	79	69	62	78	68	62	76	69	61	55
1.25	87	77	70	85	76	70	83	75	69	63
1.50	92	83	76	90	82	76	87	80	75	68
2.00	98	91	85	96	90	84	93	87	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	103	97	93	99	94	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	103	108	104	101	104	101	98	89
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:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



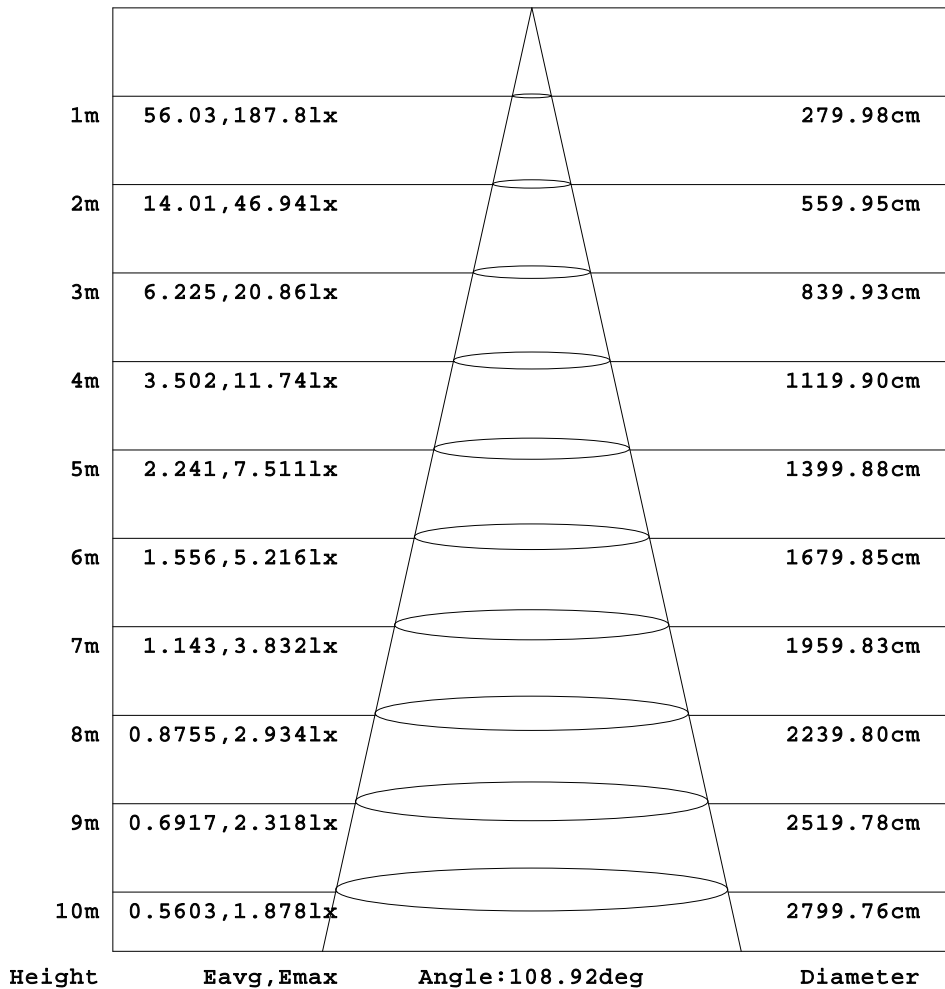
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:359.0 lm



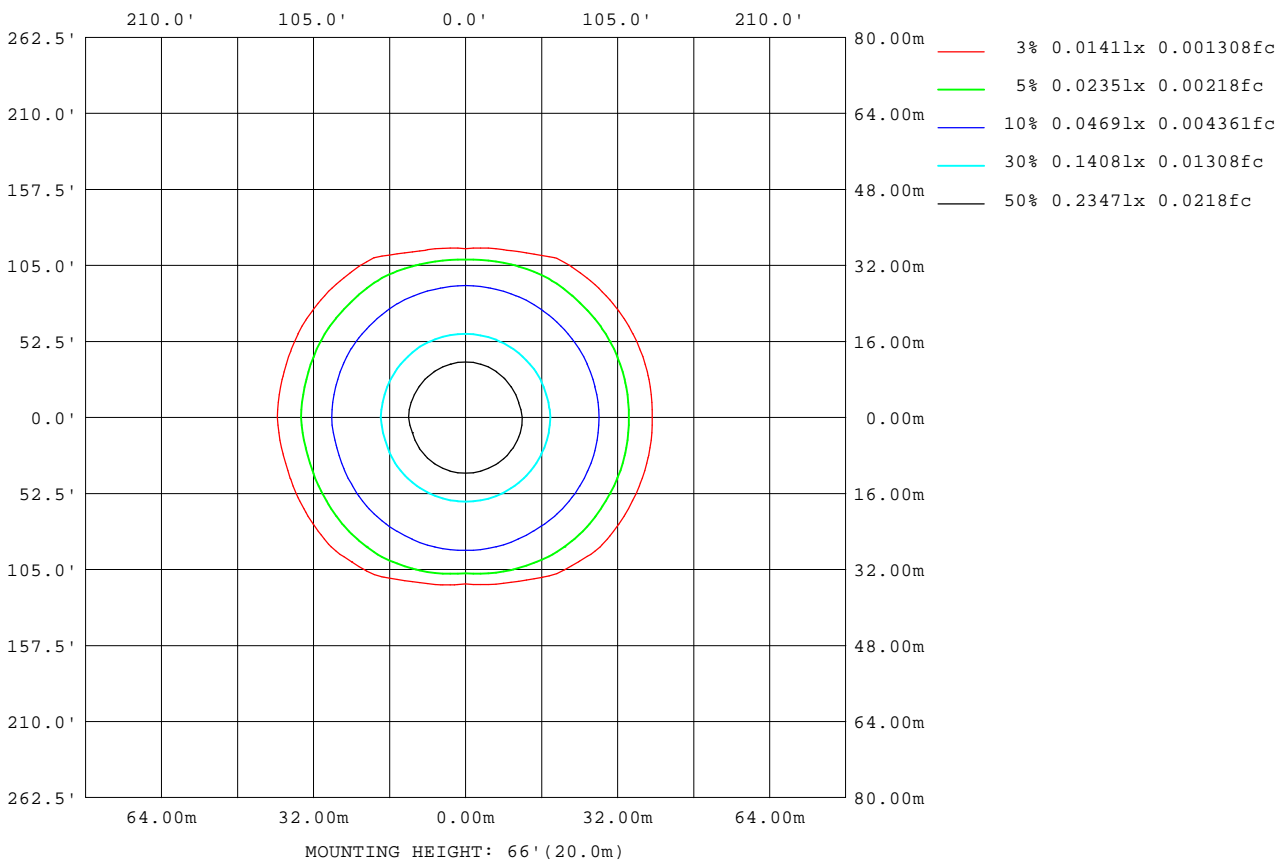
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.29lx1 lm		
NAME: 486757-MR16-5W-2700K-120°	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: 2022-06-01

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:11.957V I:0.5866A P:5.0387W PF:0.7183 Freq:60.00Hz Lamp Flux:447.291x1 lm		
NAME: 486757-MR16-5W-2700K-120°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

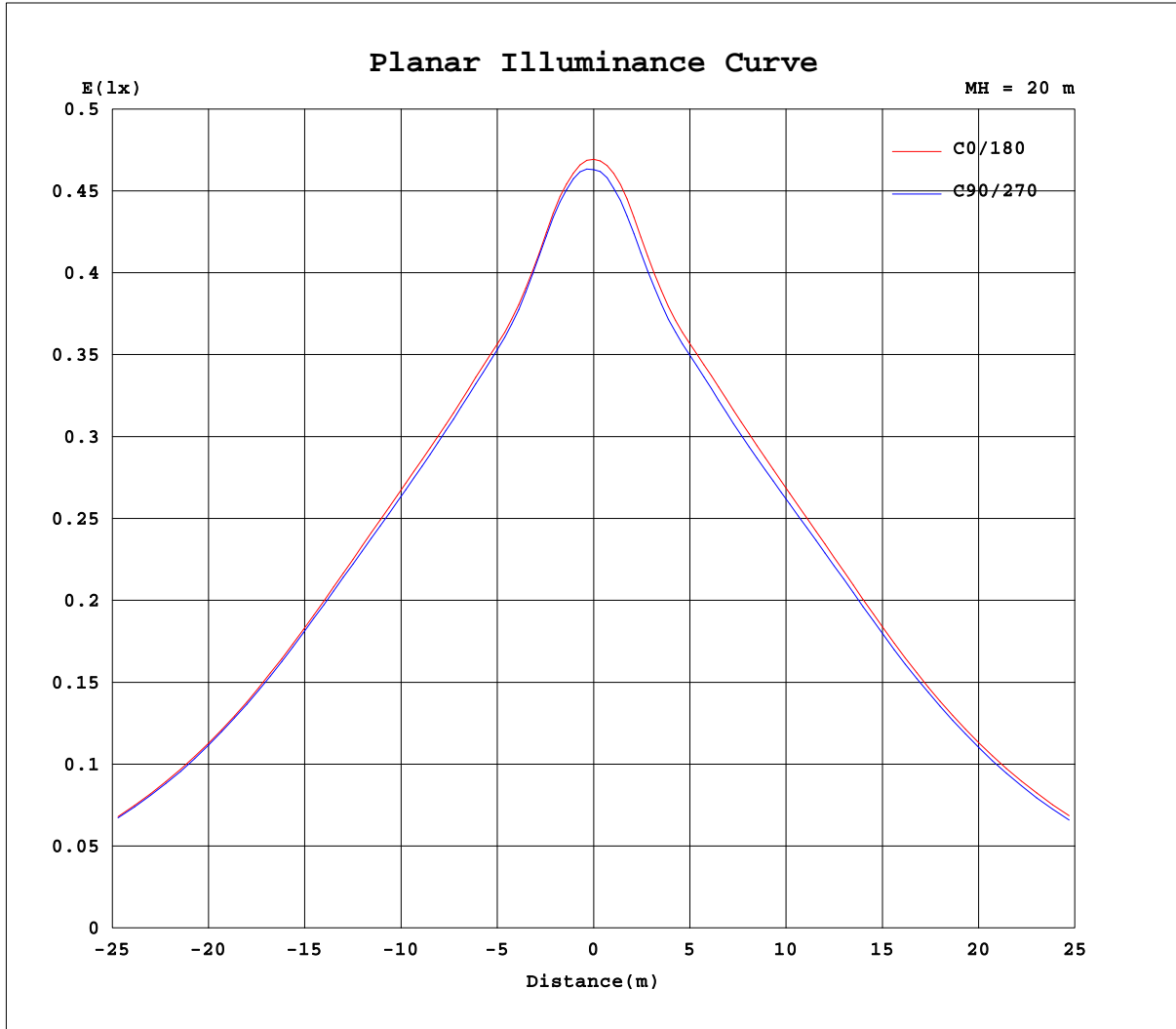
AvgL	cd/m2
L_0~180(65)av	124754
L_0~180(75)av	62427
L_0~180(85)av	12886
L_90~270(65)av	20048
L_90~270(75)av	10128
L_90~270(85)av	862
L_45(65)av	123603
L_45(75)av	13763
L_45(85)av	1373

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-01

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: 2022-06-01

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:

