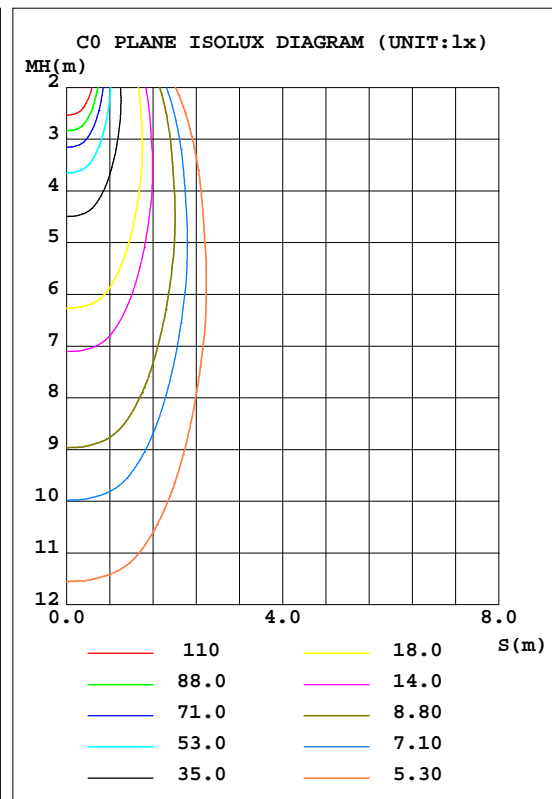
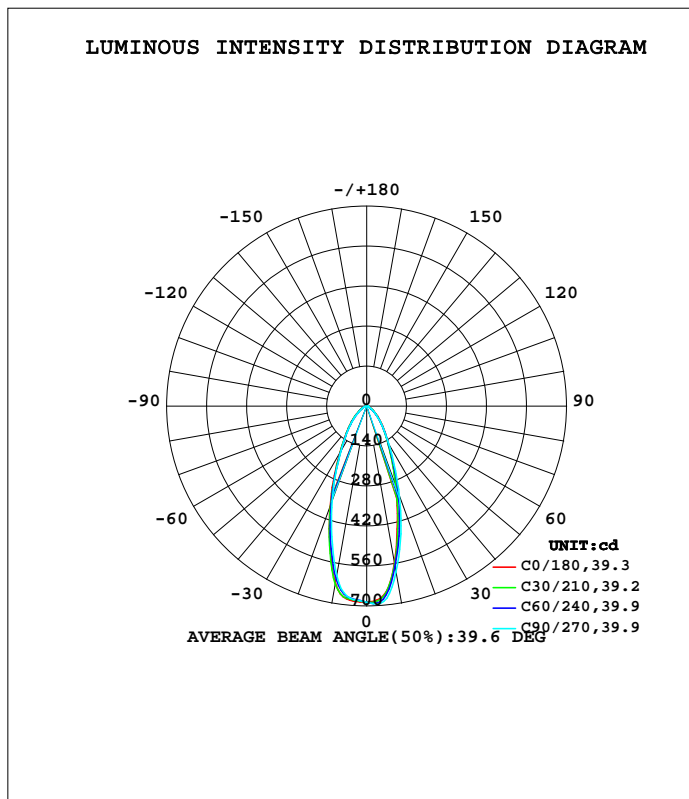


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	693.3	S/MH(C0/180)	0.68
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.65
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	473.56	η UP,DN(C0-180)	0.0,47.7
NOMINAL FLUX(lm)	473.561	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	0.70



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:

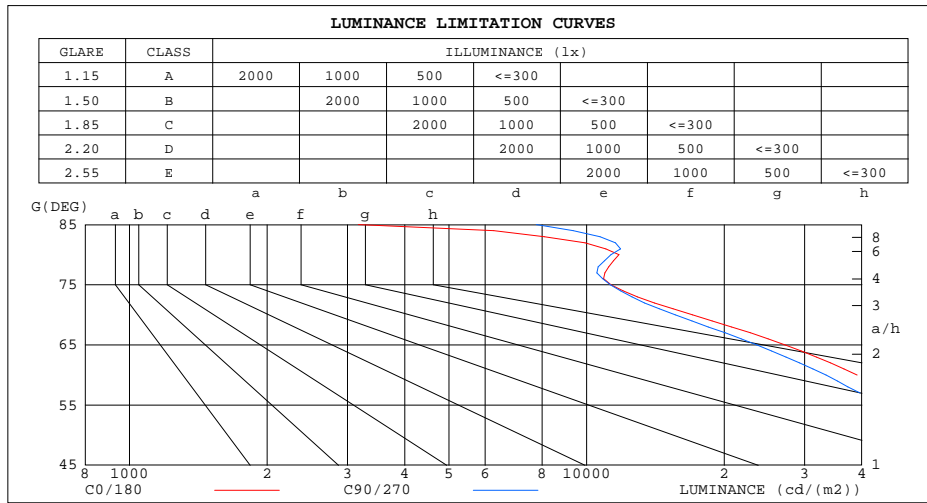
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	\$lum,lamp
10	559.6	567.6	590.9	611.3	631.6	623.8	604.1	589.4	0- 10	62.21	62.21	13.1,13.1
20	299.9	313.6	336.2	347.4	375.7	363.7	354.2	329.4	10- 20	128.3	190.5	40.2,40.2
30	150.9	153.1	157.4	166.0	187.0	179.0	179.9	169.4	20- 30	110.7	301.2	63.6,63.6
40	82.65	79.31	79.10	87.15	99.56	94.59	94.69	92.24	30- 40	76.75	377.9	79.8,79.8
50	42.34	37.99	37.71	44.52	51.43	49.16	46.72	48.72	40- 50	49.86	427.8	90.3,90.3
60	18.95	17.10	16.80	20.69	23.48	23.59	20.84	23.06	50- 60	27.95	455.8	96.2,96.2
70	5.665	5.331	5.378	6.920	8.323	8.319	6.936	7.378	60- 70	12.78	468.5	98.9,98.9
80	1.983	1.958	1.972	2.289	2.359	2.266	2.302	2.263	70- 80	4.016	472.5	99.8,99.8
90	0.0029	0.0029	0.0015	0.0008	0.0332	0.0250	0.0165	0.0204	80- 90	1.012	473.6	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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.561x1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3168	7760
80	11765	11300
75	11302	11269
70	17064	15648
65	27174	23584
60	39045	33427
55	52077	44121
50	67868	58378
45	87572	77935

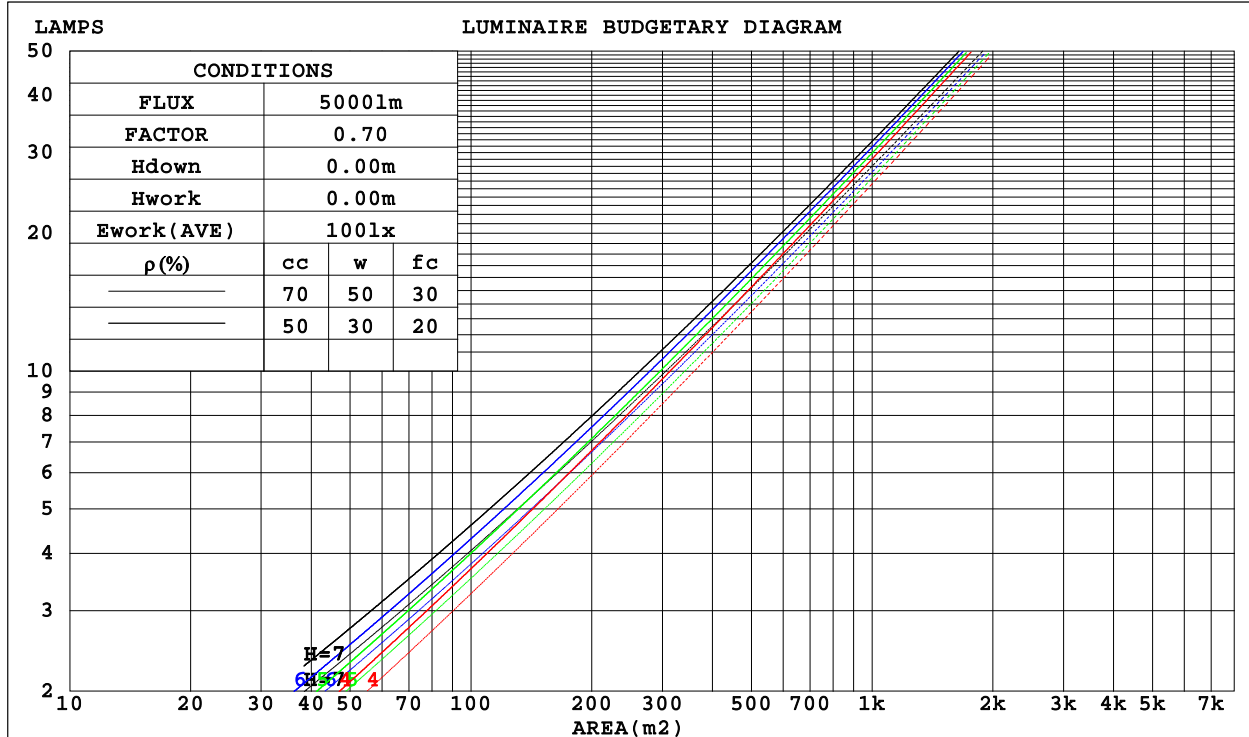
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-04-10

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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.561x1 lm		
NAME: 486760-MR16-5W-3000K-40°	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	.00
1.0	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.97	.93	.99	.95	.92	.96	.93	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.94	.88	.84	.92	.87	.83	.89	.85	.82	.87	.83	.80	.85	.82	.79	.77
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.80	.76	.73	.71
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.76	.72	.68	.75	.71	.68	.66
6.0	.76	.69	.65	.75	.69	.65	.73	.68	.64	.72	.67	.64	.71	.66	.63	.62
7.0	.71	.65	.60	.70	.64	.60	.69	.64	.60	.68	.63	.59	.67	.62	.59	.58
8.0	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
9.0	.63	.57	.53	.63	.57	.53	.62	.56	.53	.61	.56	.53	.60	.56	.52	.51
10.0	.60	.54	.50	.60	.54	.50	.59	.53	.50	.58	.53	.50	.57	.53	.49	.48



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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.561x1 lm		
NAME: 486760-MR16-5W-3000K-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	.197	.112	.035	.190	.108	.034	.177	.102	.032	.166	.095	.031	.155	.090	.029	
2.0	.189	.103	.032	.183	.101	.031	.172	.096	.030	.162	.091	.029	.153	.087	.027	
3.0	.179	.095	.029	.174	.093	.028	.165	.089	.027	.156	.086	.026	.148	.082	.025	
4.0	.169	.088	.026	.165	.086	.026	.157	.083	.025	.150	.080	.024	.143	.078	.024	
5.0	.160	.082	.024	.156	.080	.023	.149	.078	.023	.143	.075	.022	.137	.073	.022	
6.0	.152	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020	
7.0	.144	.071	.020	.141	.070	.020	.135	.068	.020	.130	.067	.019	.125	.065	.019	
8.0	.137	.067	.019	.134	.066	.019	.129	.064	.018	.124	.063	.018	.120	.062	.018	
9.0	.130	.063	.018	.128	.062	.017	.123	.061	.017	.119	.060	.017	.115	.059	.017	
10.0	.124	.059	.016	.122	.059	.016	.118	.058	.016	.114	.057	.016	.111	.056	.016	

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	.172	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.058	.111	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.115	.071	.041	.099	.062	.035	.068	.043	.025	.040	.025	.015	.013	.008	.005	
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.103	.060	.030	.089	.052	.027	.062	.036	.019	.036	.022	.011	.012	.007	.004	
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm										
NAME: 486760-MR16-5W-3000K-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	23.8	24.9	24.1	25.0	25.2	23.2	24.2	23.4	24.4	24.6
3H	24.0	24.9	24.3	25.1	25.3	23.3	24.3	23.6	24.5	24.7
4H	24.0	24.9	24.2	25.1	25.3	23.3	24.2	23.6	24.4	24.7
6H	23.9	24.8	24.2	25.0	25.3	23.3	24.1	23.6	24.4	24.6
8H	23.9	24.7	24.2	25.0	25.3	23.3	24.1	23.6	24.4	24.6
12H	23.9	24.7	24.2	24.9	25.2	23.3	24.0	23.6	24.3	24.6
4H 2H	23.8	24.7	24.1	25.0	25.2	23.3	24.2	23.6	24.4	24.6
3H	24.1	24.8	24.4	25.1	25.4	23.5	24.2	23.8	24.5	24.8
4H	24.1	24.8	24.4	25.1	25.4	23.5	24.2	23.8	24.5	24.8
6H	24.1	24.7	24.4	25.0	25.4	23.5	24.1	23.9	24.5	24.8
8H	24.1	24.6	24.5	25.0	25.4	23.5	24.1	23.9	24.4	24.8
12H	24.0	24.6	24.4	24.9	25.3	23.5	24.0	23.9	24.4	24.8
8H 4H	24.0	24.6	24.4	24.9	25.3	23.4	24.0	23.8	24.3	24.7
6H	24.0	24.5	24.5	24.9	25.3	23.5	23.9	23.9	24.3	24.8
8H	24.0	24.4	24.5	24.9	25.3	23.5	23.9	23.9	24.3	24.8
12H	24.0	24.4	24.5	24.8	25.3	23.5	23.9	24.0	24.3	24.8
12H 4H	23.9	24.5	24.3	24.8	25.2	23.4	23.9	23.8	24.3	24.7
6H	24.0	24.4	24.4	24.8	25.3	23.4	23.9	23.9	24.3	24.7
8H	24.0	24.4	24.5	24.8	25.3	23.5	23.8	23.9	24.3	24.8
Variations with the observer position at spacings:										
S = 1.0H	+ 1.1 / - 1.6					+ 1.2 / - 1.8				
1.5H	+ 1.3 / - 1.0					+ 1.5 / - 1.2				
2.0H	+ 2.4 / - 2.3					+ 2.4 / - 2.2				

CIE Pub.117, 473.6 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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

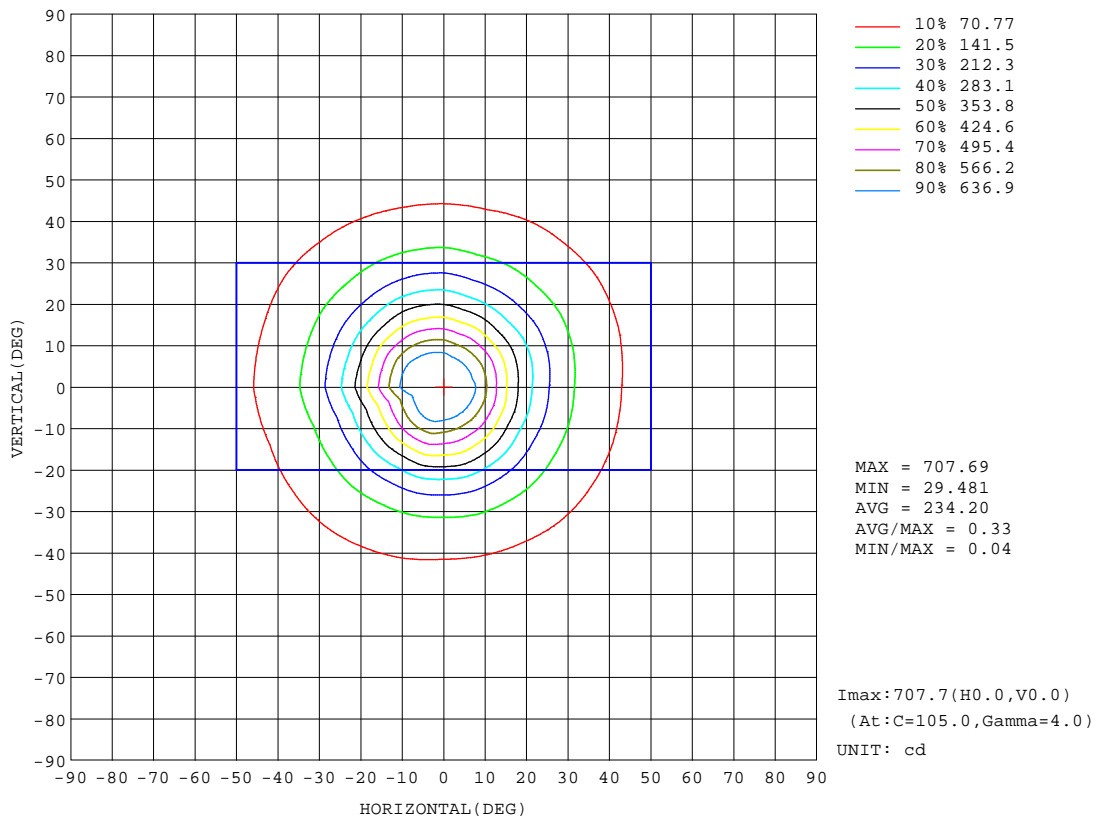
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	79	71	66	78	71	66	77	70	66	62
0.80	87	80	75	87	79	75	85	79	75	70
1.00	93	86	82	92	86	81	91	86	81	76
1.25	98	92	87	97	91	87	95	90	86	81
1.50	102	96	92	100	95	91	98	93	90	85
2.00	106	100	96	104	99	96	101	97	94	88
2.50	108	103	99	106	102	98	103	99	97	90
3.00	110	106	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	114	111	108	111	109	107	107	105	104	96
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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:



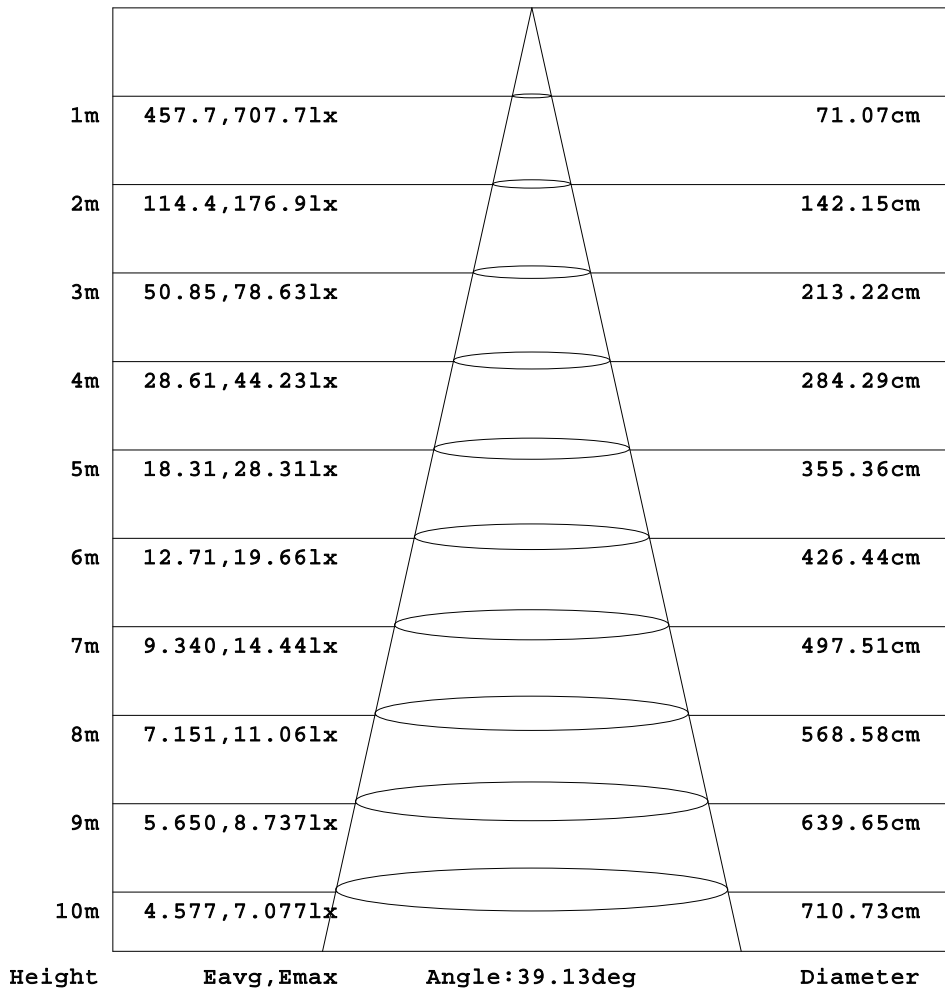
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-04-10

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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

Flux out:190.5 lm



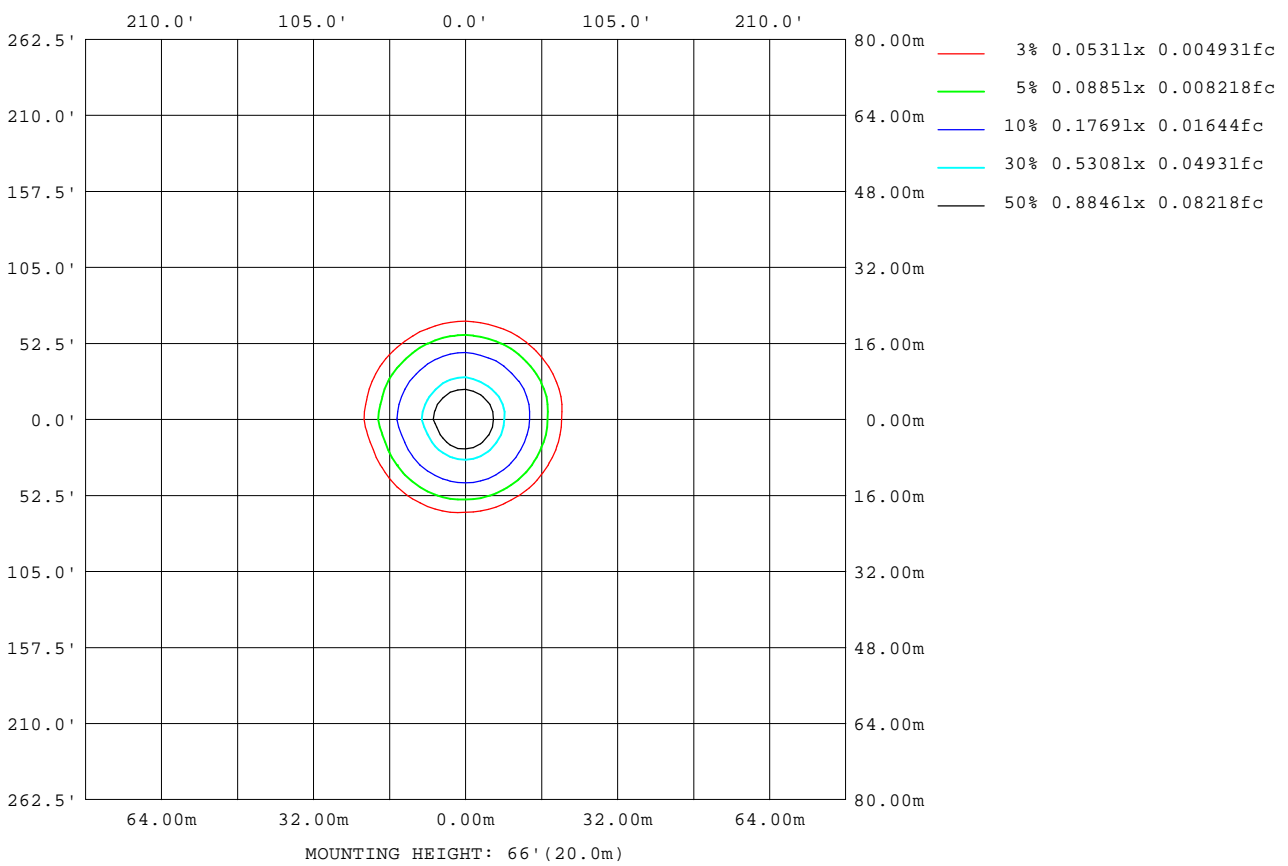
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.56lx1 lm		
NAME: 486760-MR16-5W-3000K-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:2022-04-10

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:11.888V I:0.5778A P:5.0041W PF:0.7285 Freq:60.00Hz Lamp Flux:473.561x1 lm		
NAME: 486760-MR16-5W-3000K-40°	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:35mm	Shielding Angle:

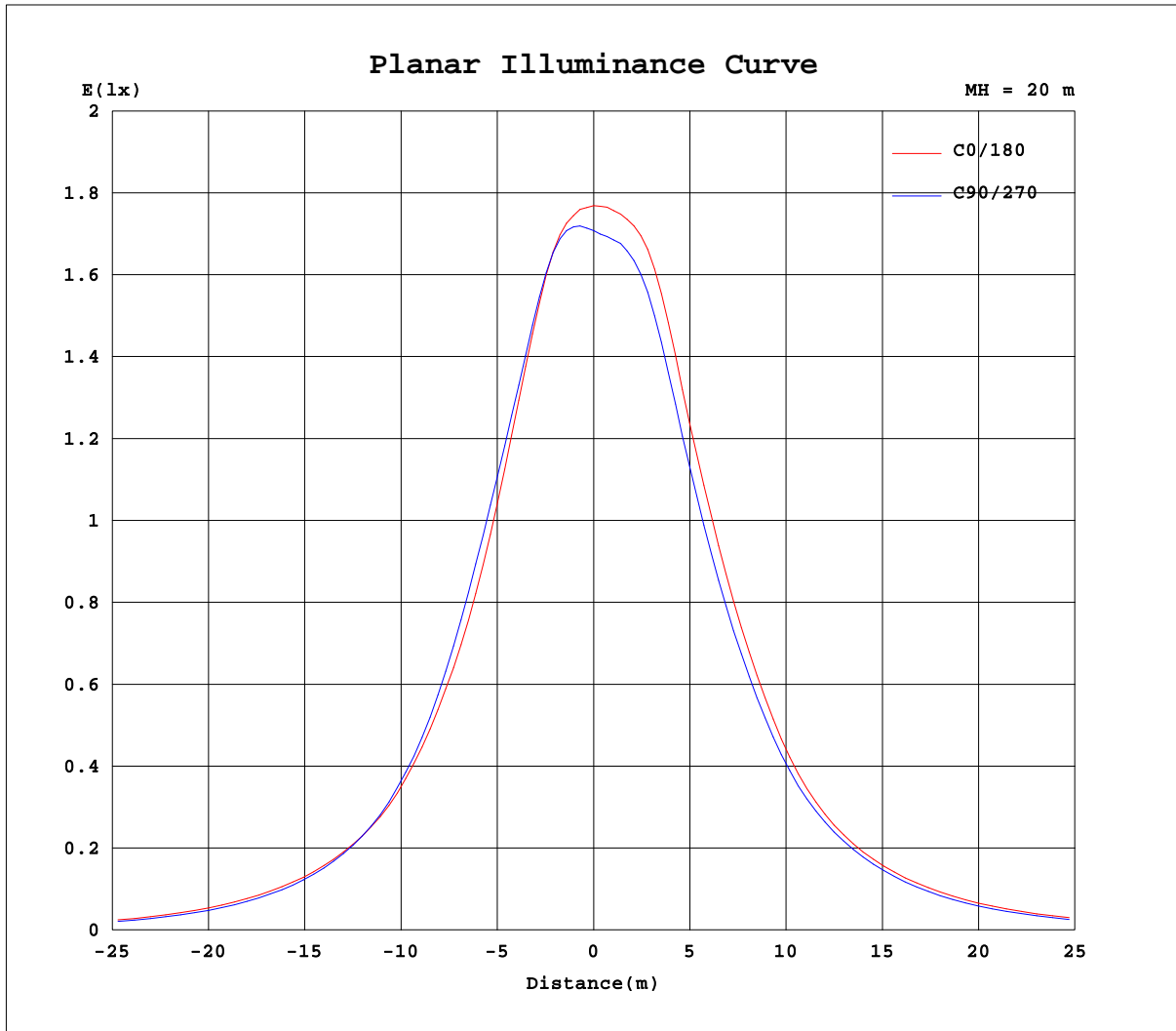
AvgL	cd/m2
L_0~180(65)av	30877
L_0~180(75)av	13605
L_0~180(85)av	9229
L_90~270(65)av	26994
L_90~270(75)av	12762
L_90~270(85)av	9791
L_45(65)av	30524
L_45(75)av	13578
L_45(85)av	9578

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:

