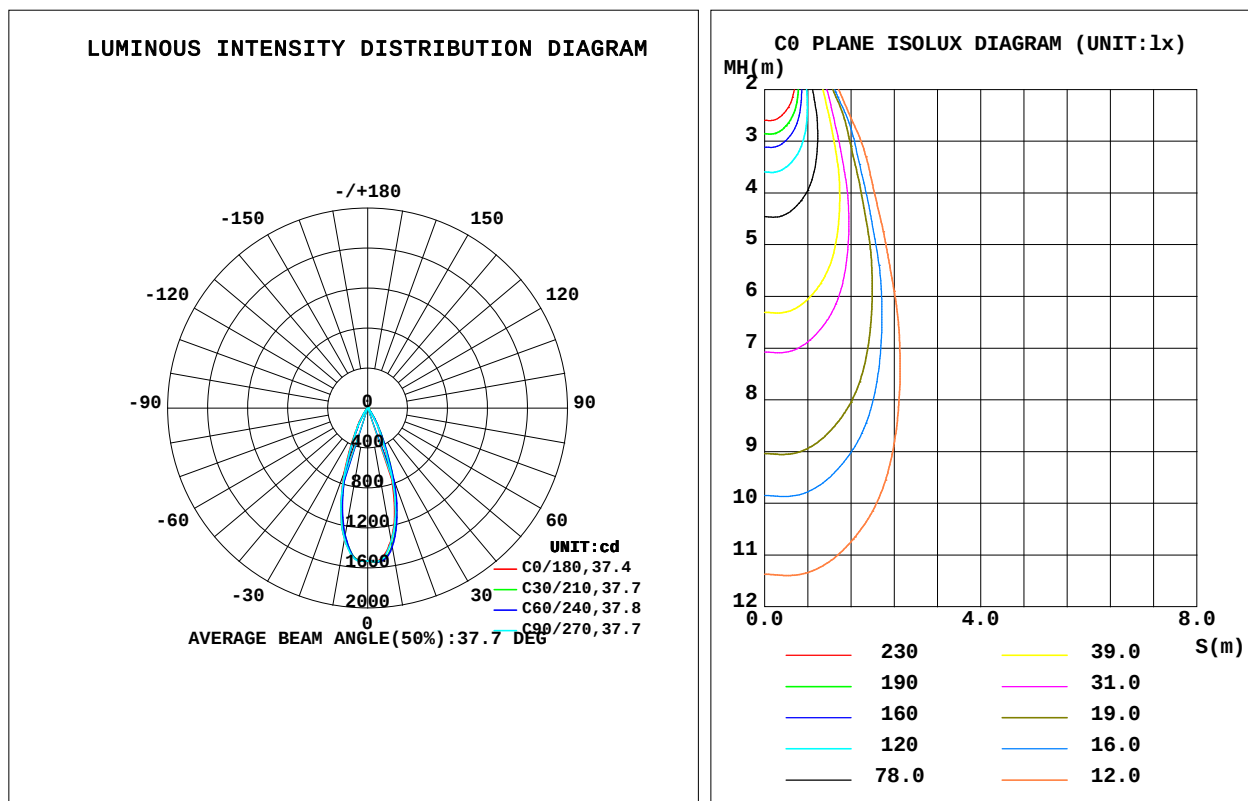


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.79 lm/W			
MODEL		I _{max} (cd)	1544	S/MH(C0/180)	0.60
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.58
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	665.90	η UP, DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	665.902	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.6
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: 2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-3000H_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	1346	1422	1355	1307	1331	1295	1334	1387	0- 10	139.3	139.3	20.9, 20.9
20	671.8	769.1	695.9	625.1	684.1	609.5	657.4	735.9	10- 20	284.6	423.9	63.7, 63.7
30	187.7	227.2	190.7	176.7	189.8	162.6	173.8	206.9	20- 30	171.7	595.6	89.4, 89.4
40	32.27	41.88	32.02	31.10	34.54	31.94	32.78	42.36	30- 40	54.99	650.6	97.7, 97.7
50	5.089	5.890	4.224	4.841	5.575	4.864	4.994	7.529	40- 50	12.48	663.1	99.6, 99.6
60	0.8852	0.9872	0.8545	0.9886	1.055	0.9555	0.9373	1.304	50- 60	2.172	665.2	99.9, 99.9
70	0.3339	0.3299	0.1543	0.2818	0.3002	0.2387	0.1434	0.3221	60- 70	0.5378	665.8	100, 100
80	0.0303	0.0192	0.0164	0.0186	0.0521	0.0127	0.0037	0.0233	70- 80	0.1269	665.9	100, 100
90	0	0	0	0	0.0000	0	0	0.0008	80- 90	0.0060	665.9	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): 659.29 lm

%lum = 99.0%

%lamp = 99.0%

Conical surface Flux(120deg): 665.23 lm

%lum = 99.9%

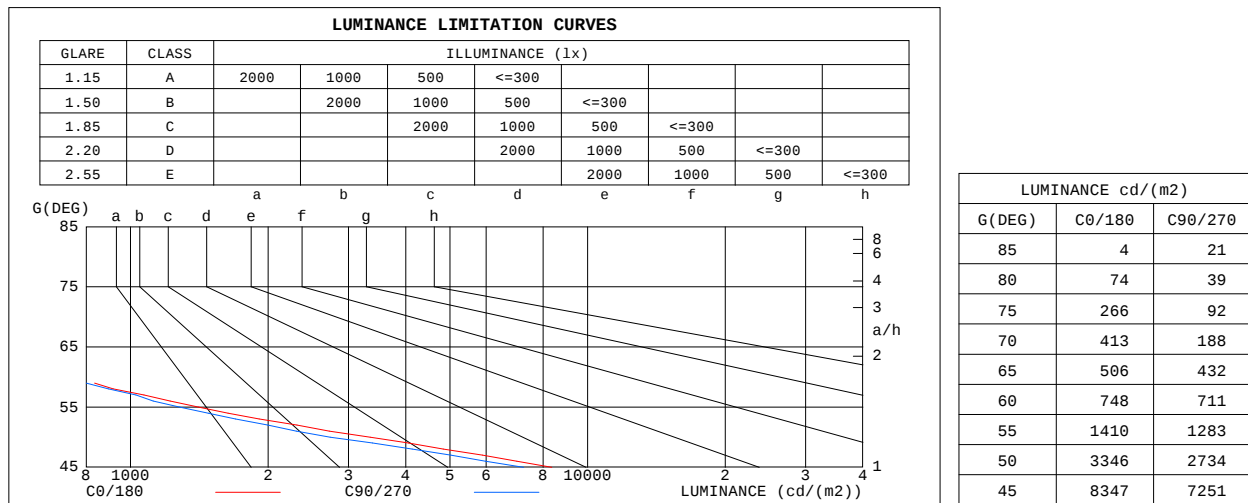
%lamp = 99.9%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-3000H_V1 SYSTEM V2.00.411
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:



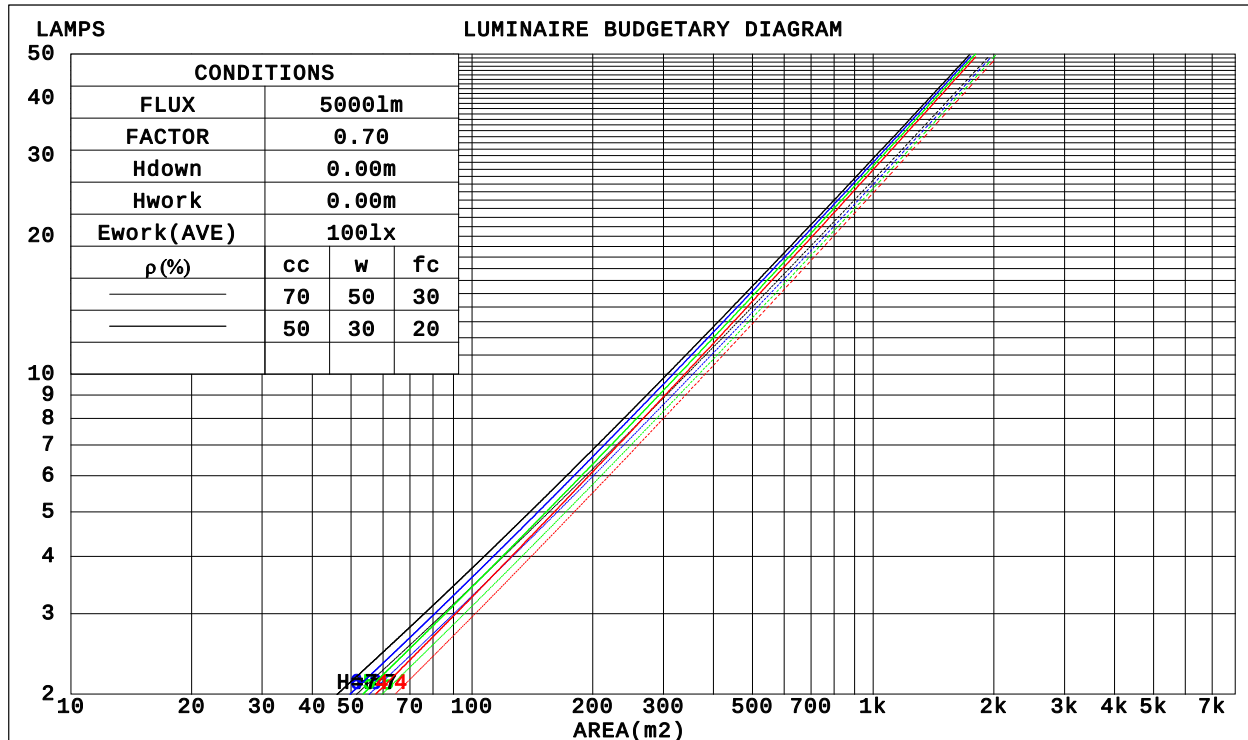
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	1.00	.99	.98	.97	.95
2.0	1.06	1.03	.99	1.04	1.01	.99	1.01	.99	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.97	.93	.91	.94	.92	.89	.92	.90	.88	.87
4.0	.95	.91	.87	.94	.90	.87	.92	.89	.86	.90	.87	.85	.89	.86	.84	.83
5.0	.91	.86	.83	.90	.86	.82	.88	.85	.82	.87	.84	.81	.85	.83	.80	.79
6.0	.87	.82	.78	.86	.82	.78	.85	.81	.78	.83	.80	.77	.82	.79	.77	.76
7.0	.83	.78	.75	.83	.78	.75	.81	.77	.74	.80	.77	.74	.79	.76	.73	.72
8.0	.80	.75	.71	.79	.75	.71	.78	.74	.71	.77	.73	.71	.76	.73	.70	.69
9.0	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.71	.68	.74	.70	.68	.67
10.0	.74	.69	.66	.73	.69	.66	.72	.68	.65	.72	.68	.65	.71	.68	.65	.64



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	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						Wall Exitance Coefficients(WEC)												
0.0																			
1.0	.153	.087	.027	.146	.083	.026	.133	.077	.024	.122	.070	.023	.111	.065	.021				
2.0	.143	.079	.024	.138	.076	.023	.128	.071	.022	.118	.066	.021	.109	.062	.019				
3.0	.135	.072	.022	.131	.070	.021	.122	.066	.020	.114	.062	.019	.106	.059	.018				
4.0	.128	.067	.020	.124	.065	.019	.117	.062	.018	.110	.059	.018	.103	.056	.017				
5.0	.122	.062	.018	.118	.061	.018	.112	.058	.017	.106	.056	.017	.100	.054	.016				
6.0	.116	.058	.017	.113	.057	.016	.107	.055	.016	.102	.053	.016	.097	.051	.015				
7.0	.111	.055	.015	.108	.054	.015	.103	.052	.015	.098	.050	.015	.094	.049	.014				
8.0	.106	.052	.015	.104	.051	.014	.099	.050	.014	.095	.048	.014	.091	.047	.014				
9.0	.101	.049	.014	.099	.048	.014	.096	.047	.013	.092	.046	.013	.089	.045	.013				
10.0	.097	.047	.013	.096	.046	.013	.092	.045	.013	.089	.044	.013	.086	.043	.012				

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			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.169	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.131	.114	.100	.089	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.063	.101	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.109	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.096	.062	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.078	.049	.029	.054	.035	.021	.032	.020	.012	.010	.007	.004	
10.0	.086	.052	.030	.074	.045	.026	.051	.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:2022-06-15

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:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm											
NAME: 7W COB Downlight					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:55mm			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	13.9	14.7	14.1	14.9	15.0	13.9	14.6	14.1	14.8	15.0	
	3H	13.8	14.5	14.0	14.7	14.9	13.7	14.4	14.0	14.6	14.8
	4H	13.7	14.4	14.0	14.6	14.8	13.6	14.3	13.9	14.5	14.7
	6H	13.6	14.3	13.9	14.5	14.7	13.5	14.2	13.8	14.4	14.7
	8H	13.6	14.2	13.9	14.4	14.7	13.5	14.1	13.8	14.4	14.6
	12H	13.5	14.1	13.8	14.4	14.6	13.5	14.0	13.8	14.3	14.6
4H	2H	13.7	14.4	14.0	14.6	14.8	13.6	14.3	13.9	14.5	14.7
	3H	13.5	14.1	13.8	14.4	14.7	13.5	14.0	13.8	14.3	14.6
	4H	13.4	14.0	13.8	14.3	14.6	13.4	13.9	13.7	14.2	14.5
	6H	13.3	13.8	13.7	14.1	14.5	13.3	13.7	13.6	14.1	14.4
	8H	13.3	13.7	13.7	14.1	14.4	13.2	13.7	13.6	14.0	14.4
	12H	13.2	13.6	13.6	14.0	14.4	13.2	13.6	13.6	13.9	14.3
8H	4H	13.3	13.7	13.7	14.1	14.4	13.2	13.7	13.6	14.0	14.4
	6H	13.2	13.5	13.6	13.9	14.3	13.1	13.5	13.5	13.9	14.3
	8H	13.1	13.4	13.6	13.9	14.3	13.0	13.4	13.5	13.8	14.2
	12H	13.1	13.3	13.5	13.8	14.2	13.0	13.3	13.5	13.7	14.2
12H	4H	13.2	13.6	13.6	14.0	14.4	13.2	13.6	13.6	13.9	14.3
	6H	13.1	13.4	13.6	13.9	14.3	13.0	13.4	13.5	13.8	14.2
	8H	13.1	13.3	13.5	13.8	14.2	13.0	13.3	13.5	13.7	14.2
Variations with the observer position at spacings:											
S = 1.0H	+ 2.8 / -13.9					+ 2.8 / -14.7					
1.5H	+ 5.0 / -10.9					+ 5.1 / -11.5					
2.0H	+ 6.5 / - 9.1					+ 6.3 / - 8.7					

CIE Pub.117, 665.9 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -1.4$)
Area: 0.0024 m²

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:

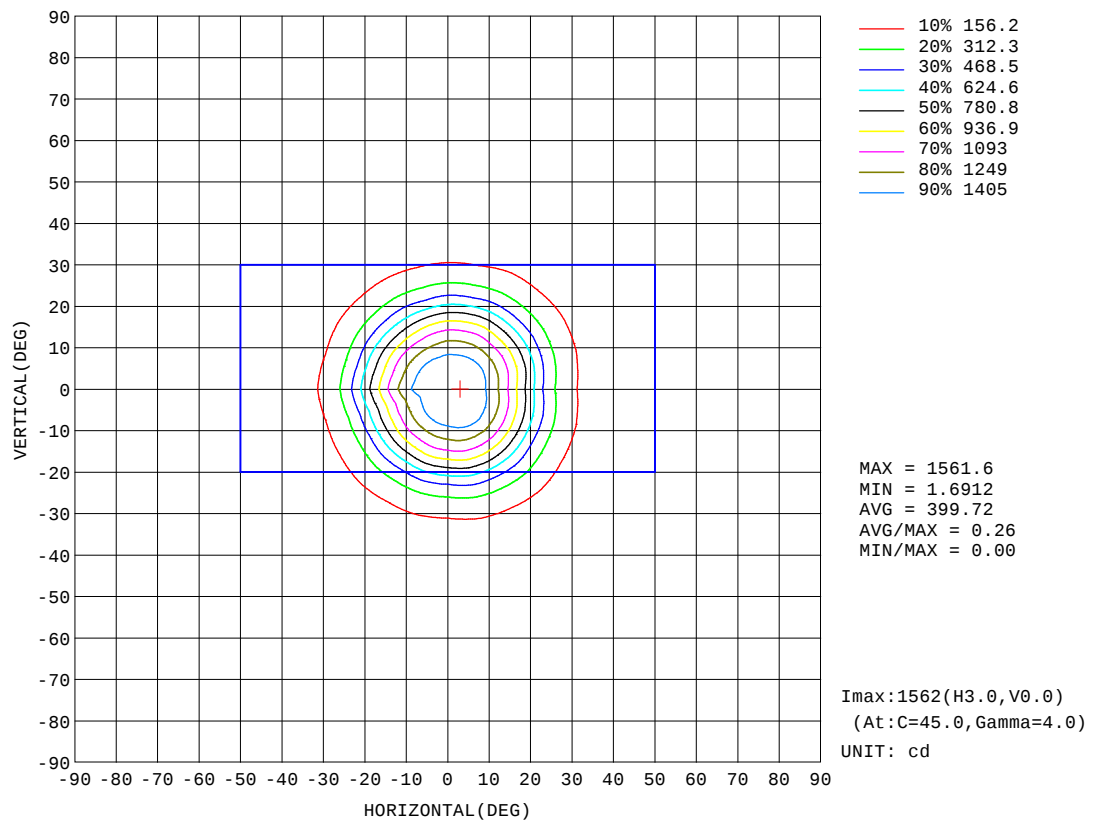
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	81	90	84	81	89	84	81	77
0.80	97	92	88	97	92	88	95	91	88	85
1.00	101	96	93	100	96	92	99	95	92	88
1.25	105	100	97	104	100	97	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	114	112	113	112	110	110	108	107	100
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:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:

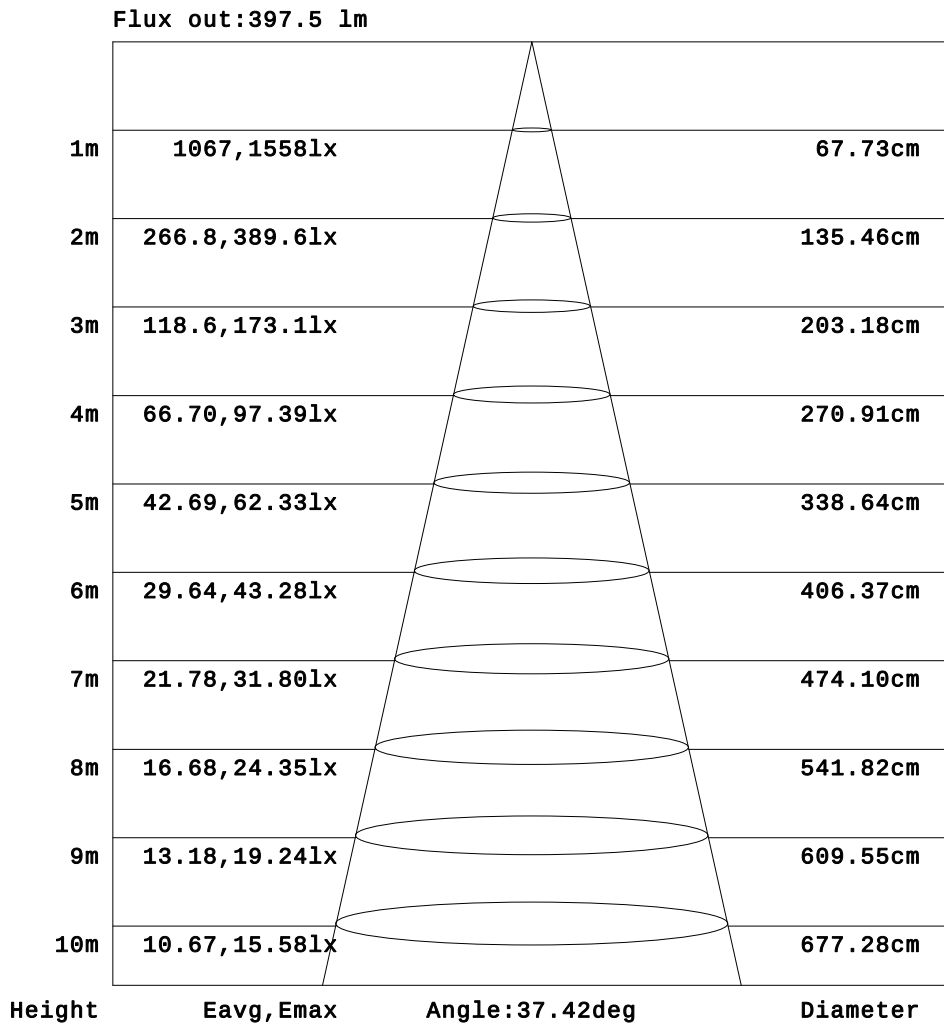


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

AAI Figure

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:



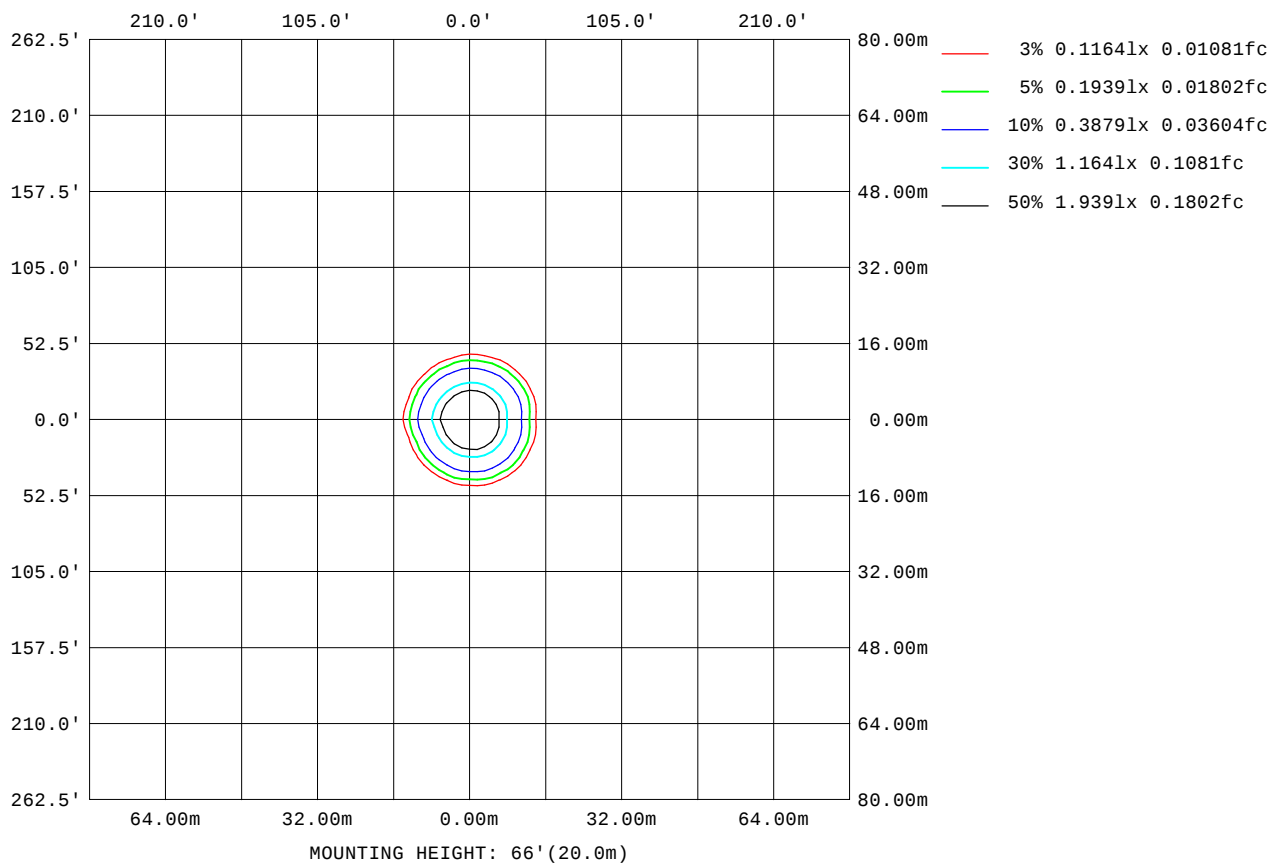
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-06-15

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-3000H_V1 SYSTEM V2.00.411
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:

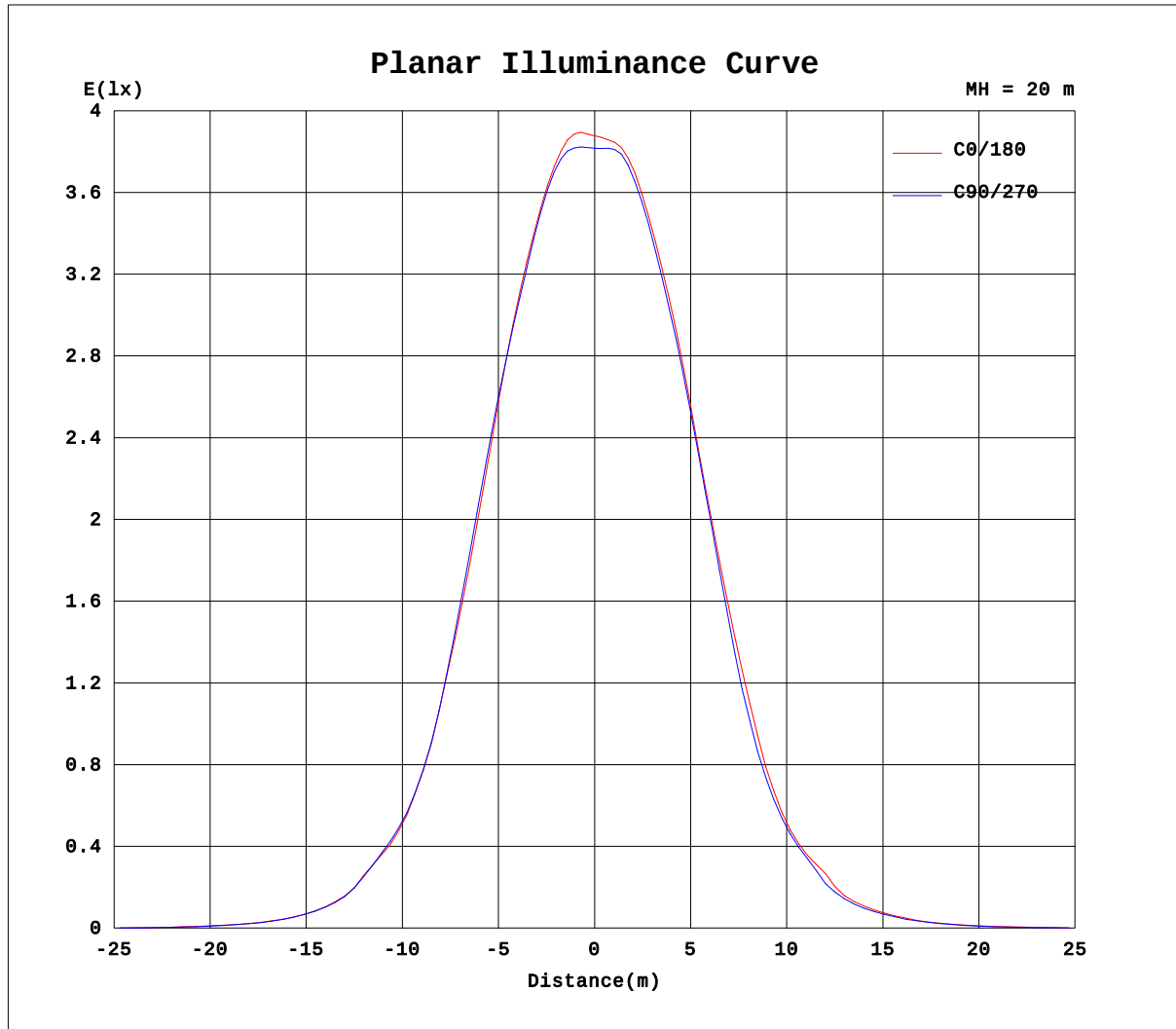
AvgL	cd/m2
L_0~180(65)av	504
L_0~180(75)av	280
L_0~180(85)av	35
L_90~270(65)av	414
L_90~270(75)av	81
L_90~270(85)av	11
L_45(65)av	538
L_45(75)av	137
L_45(85)av	9

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-3000H_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: 2022-06-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-3000H_V1 SYSTEM V2.00.411
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.00V I:0.0698A P:7.4993W PF:0.4885 Freq:50.00Hz Lamp Flux:665.902x1 lm		
NAME: 7W COB Downlight	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:55mm	Shielding Angle:

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UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-06-15

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Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

```

