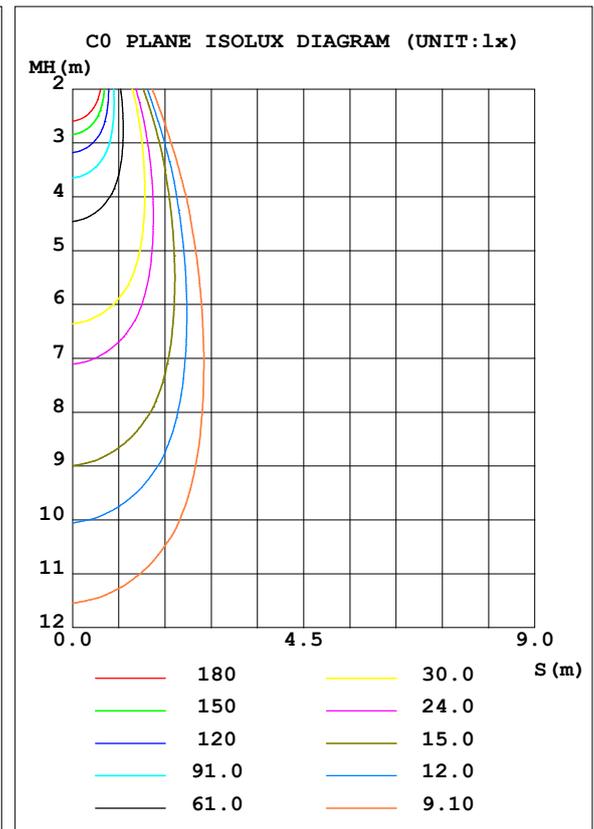
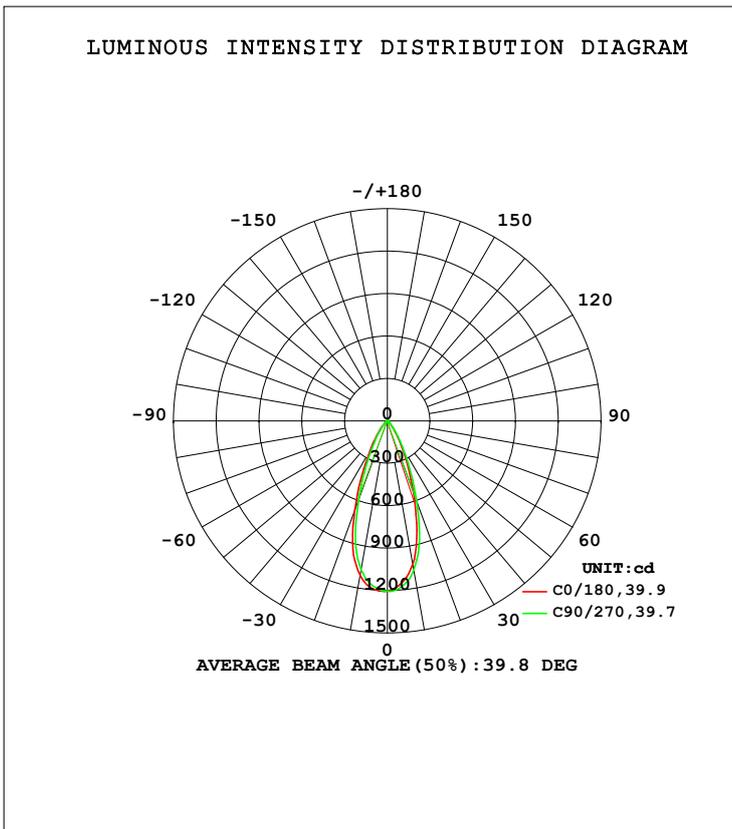


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: /	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 95.57 lm/W			
MODEL		I _{max} (cd)	1220	S/MH (C0/180)	0.67
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	0.63
RATED VOLTAGE (V)		TOTAL FLUX (lm)	636.97	η UP, DN (C0-180)	0.0, 51.0
NOMINAL FLUX (lm)	636.974	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)		η down (%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Testing Room
 Test Date: 2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.350m [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	1028	1017	1071	1140	1106	1111	1067	1002	0- 10	108.7	108.7	17.1,17.1
20	537.4	514.5	602.7	740.8	668.7	668.4	589.0	498.7	10- 20	235.7	344.3	54.1,54.1
30	188.2	175.1	217.0	287.8	244.9	243.2	206.1	175.1	20- 30	173.5	517.9	81.3,81.3
40	56.02	51.20	64.59	96.63	78.05	77.02	62.23	56.73	30- 40	79.20	597.1	93.7,93.7
50	9.220	8.851	11.24	20.23	16.80	18.29	12.32	9.171	40- 50	26.97	624.0	98,98
60	4.295	4.083	4.827	6.157	5.827	5.794	4.999	4.355	50- 60	7.062	631.1	99.1,99.1
70	2.229	2.091	2.498	2.932	2.826	2.870	2.524	2.171	60- 70	3.505	634.6	99.6,99.6
80	0.8417	0.7703	1.057	1.379	1.233	1.286	1.010	0.7789	70- 80	1.844	636.4	99.9,99.9
90	0.0378	0.0305	0.0383	0.1989	0.1287	0.1524	0.0306	0.0306	80- 90	0.5313	637.0	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): 615.22 lm

%lum = 96.6%

%lamp = 96.6%

Conical surface Flux(120deg): 631.09 lm

%lum = 99.1%

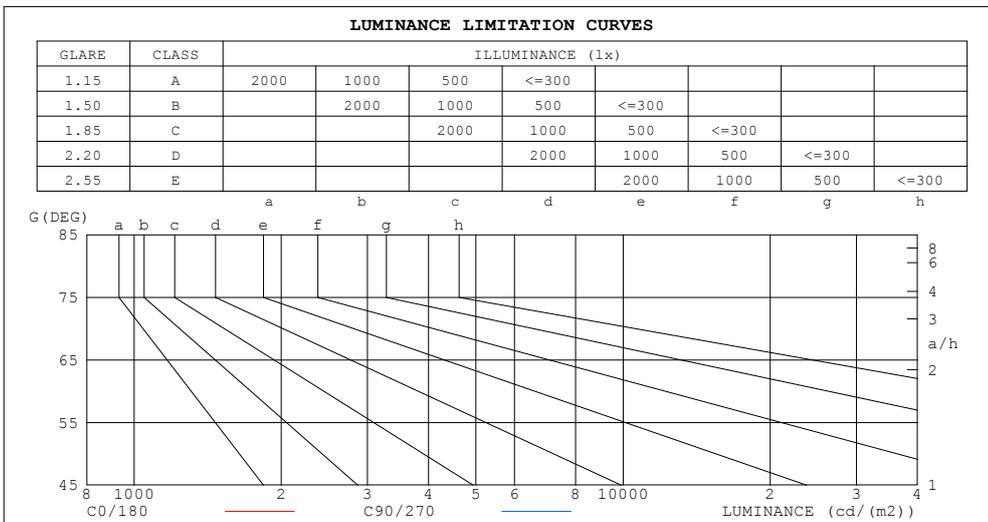
%lamp = 99.1%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16	26
80	22	28
75	26	30
70	30	33
65	33	36
60	39	44
55	51	56
50	66	79
45	145	186

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.166	.095	.030	.160	.091	.029	.147	.084	.027	.135	.078	.025	.125	.072	.023	
2.0	.157	.086	.026	.152	.084	.026	.141	.079	.024	.132	.074	.023	.123	.069	.022	
3.0	.149	.079	.024	.144	.077	.023	.135	.073	.022	.127	.070	.021	.119	.066	.020	
4.0	.141	.073	.022	.137	.072	.021	.129	.069	.020	.122	.066	.020	.116	.063	.019	
5.0	.134	.068	.020	.130	.067	.019	.124	.064	.019	.118	.062	.018	.112	.060	.018	
6.0	.127	.064	.018	.124	.063	.018	.119	.061	.018	.113	.059	.017	.108	.057	.017	
7.0	.122	.060	.017	.119	.059	.017	.114	.058	.017	.109	.056	.016	.105	.054	.016	
8.0	.116	.057	.016	.114	.056	.016	.109	.055	.016	.105	.053	.015	.101	.052	.015	
9.0	.111	.054	.015	.109	.053	.015	.105	.052	.015	.101	.051	.015	.098	.050	.014	
10.0	.107	.051	.014	.105	.051	.014	.101	.050	.014	.098	.049	.014	.095	.048	.014	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.091	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.074	.112	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.121	.087	.062	.104	.075	.054	.072	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.113	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.090	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	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	0.9	1.8	1.2	2.0	2.1	1.7	2.6	1.9	2.7	2.9
3H	0.9	1.7	1.2	1.9	2.1	1.7	2.5	1.9	2.7	2.8
4H	0.9	1.6	1.2	1.9	2.1	1.7	2.4	1.9	2.6	2.8
6H	0.9	1.6	1.2	1.8	2.0	1.6	2.3	1.9	2.6	2.8
8H	0.8	1.5	1.1	1.8	2.0	1.6	2.3	1.9	2.5	2.8
12H	0.8	1.4	1.1	1.7	2.0	1.6	2.2	1.9	2.5	2.8
4H 2H	0.8	1.5	1.0	1.7	2.0	1.5	2.3	1.8	2.5	2.7
3H	0.8	1.4	1.1	1.7	2.0	1.5	2.2	1.8	2.4	2.7
4H	0.8	1.4	1.1	1.7	2.0	1.5	2.1	1.9	2.4	2.7
6H	0.8	1.3	1.1	1.6	2.0	1.5	2.0	1.9	2.4	2.7
8H	0.8	1.2	1.1	1.6	1.9	1.5	2.0	1.9	2.3	2.7
12H	0.7	1.2	1.1	1.5	1.9	1.5	1.9	1.9	2.3	2.7
8H 4H	0.7	1.2	1.1	1.5	1.9	1.4	1.9	1.8	2.2	2.6
6H	0.7	1.1	1.1	1.5	1.9	1.4	1.8	1.8	2.2	2.6
8H	0.7	1.0	1.1	1.4	1.9	1.4	1.8	1.9	2.2	2.6
12H	0.7	1.0	1.1	1.4	1.9	1.4	1.7	1.9	2.1	2.6
12H 4H	0.6	1.1	1.1	1.5	1.8	1.4	1.8	1.8	2.2	2.6
6H	0.7	1.0	1.1	1.4	1.9	1.4	1.7	1.8	2.1	2.6
8H	0.6	0.9	1.1	1.4	1.9	1.4	1.7	1.8	2.1	2.6
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / - 5.0					+ 3.1 / - 5.1				
1.5H	+ 5.0 / - 4.4					+ 5.2 / - 4.7				
2.0H	+ 4.3 / - 1.9					+ 5.1 / - 2.3				

CIE Pub.117, 637.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

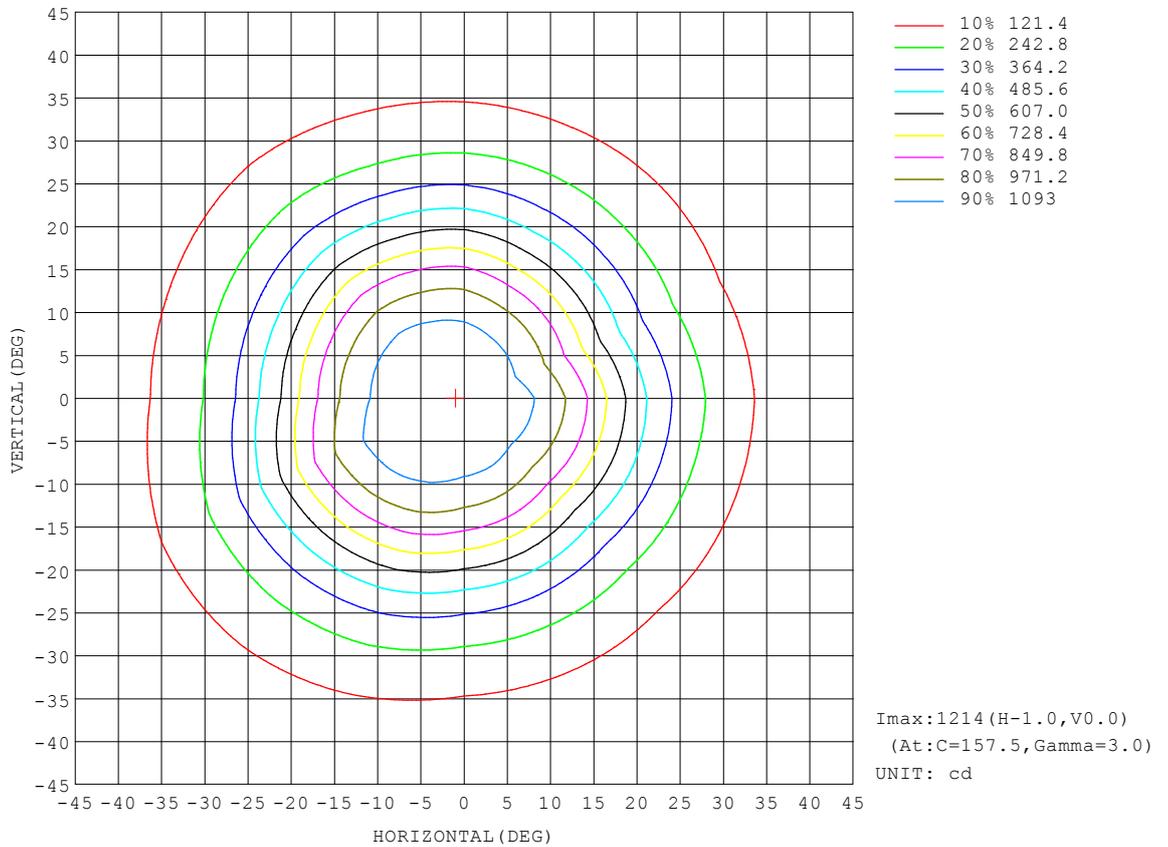
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	88	81	78	87	81	77	86	81	77	74
0.80	95	89	86	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	90	86
1.25	103	98	95	102	98	94	100	97	94	90
1.50	106	101	98	105	101	98	103	99	97	92
2.00	109	105	101	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	108	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

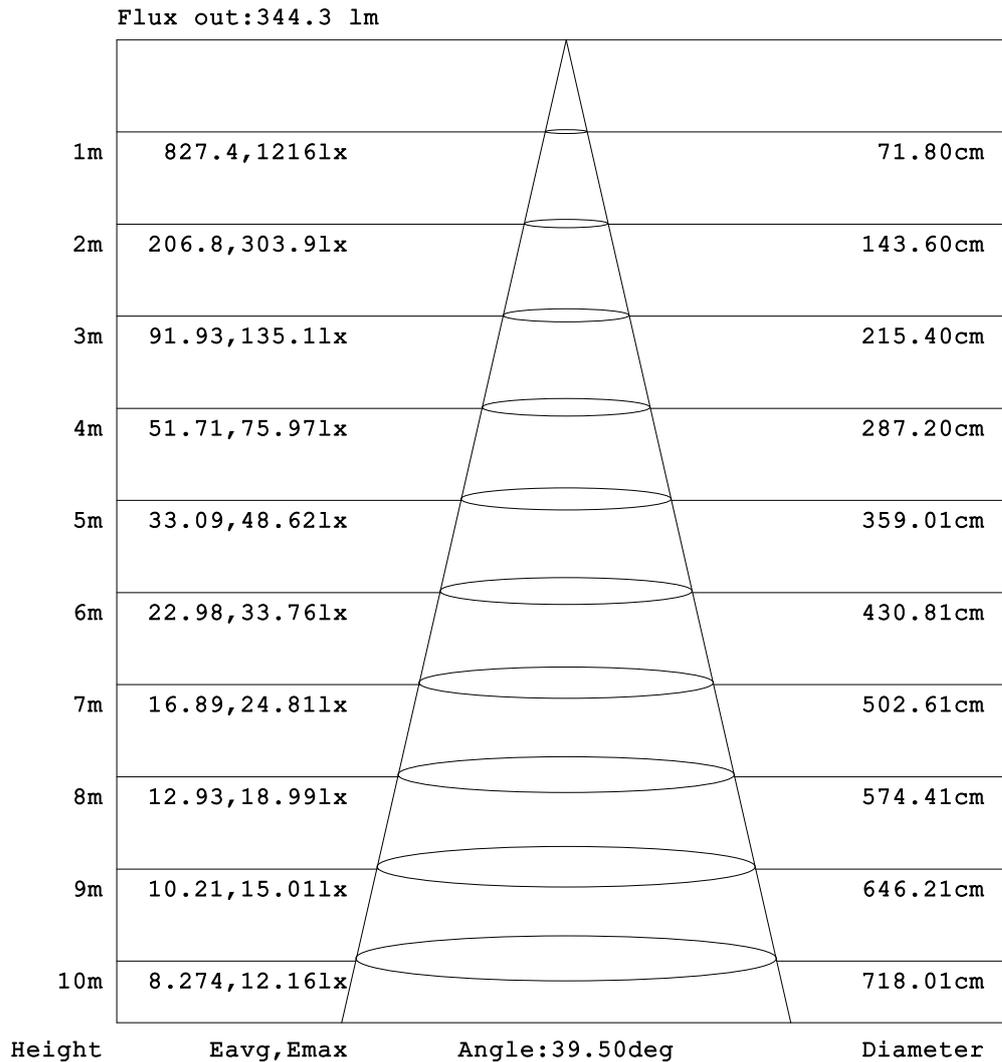


C Range: 0 - 360DEG
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 Test Speed: HIGH
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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

AAI Figure

Test:U:230.0V I:0.0313A P:6.665W PF:0.9271 Freq:59.98Hz Lamp Flux:636.974x1 lm		
SGSO SKU: 0017440112	TYPE:	WEIGHT:
SPEC.:LED Downlight,7W 700lm,100lm/W,CRI>80, CCT2700/3000/4000K,Beam Angle 38°	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

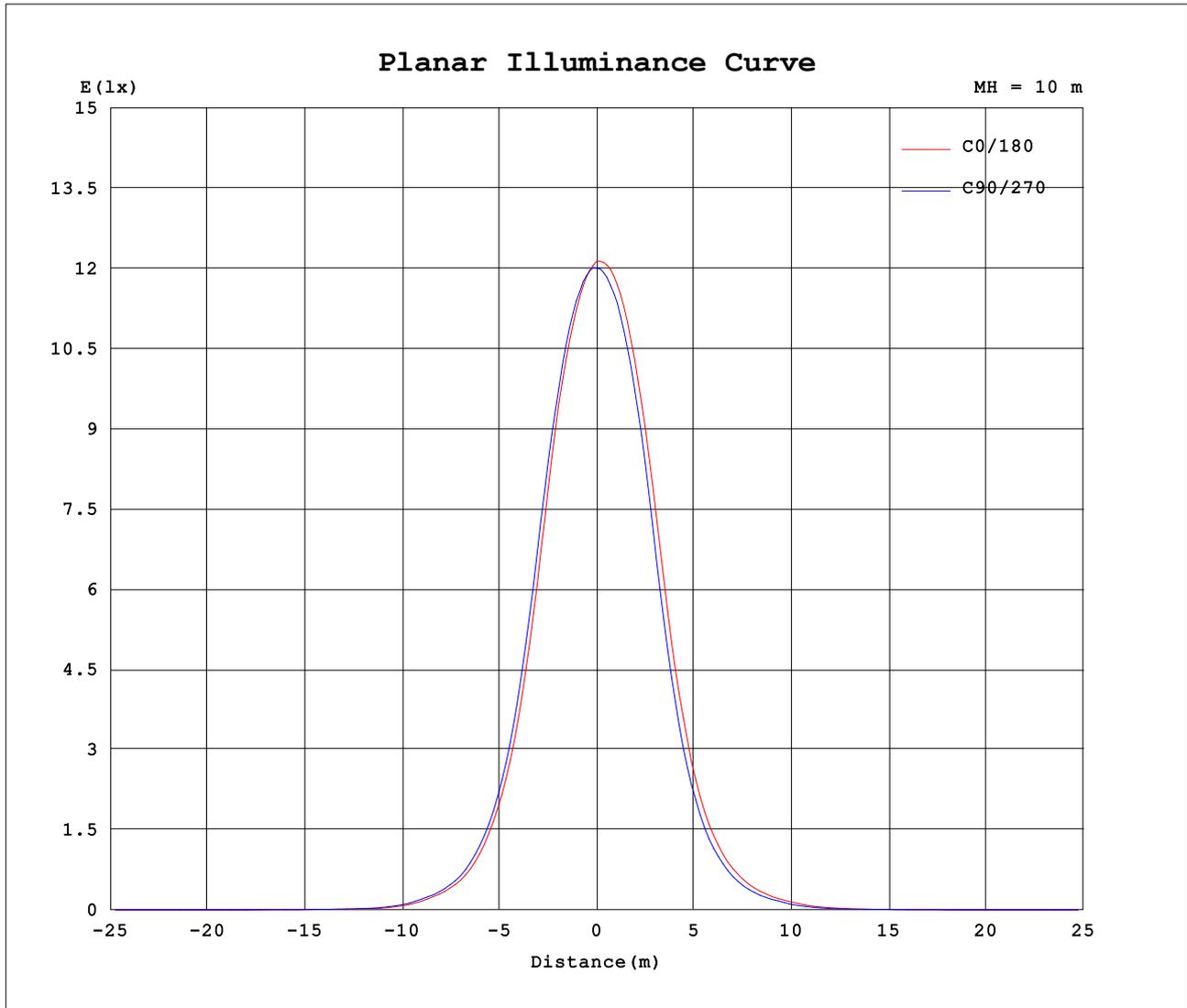


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.350m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
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 Test Date: 2022-05-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.350m [K=1.0000]
 Remarks:

