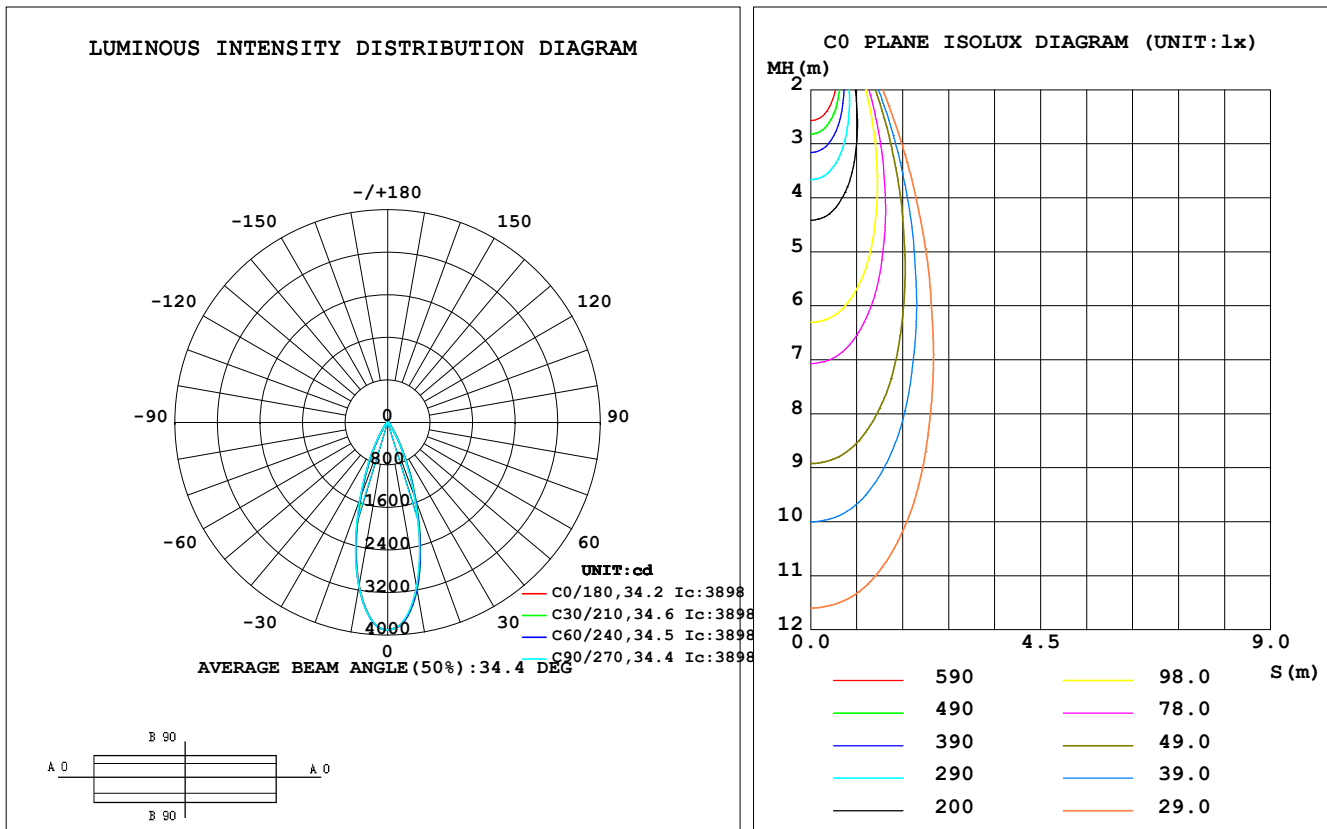


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 77.34 lm/W			
MODEL	3000K CRI90	I _{max} (cd)	3898	S/MH(C0/180)	0.56
NOMINAL POWER(W)	20.3	LOR(%)	100.0	S/MH(C90/270)	0.57
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1577.7	η UP,DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	1577.68	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [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	3148	3212	3140	3113	3111	3093	3129	3099	0- 10	335.3	335.3	21.2, 21.2
20	1516	1574	1477	1477	1476	1463	1537	1507	10- 20	632.1	967.3	61.3, 61.3
30	454.6	449.4	414.5	410.7	417.6	428.6	457.7	460.4	20- 30	399.7	1367	86.6, 86.6
40	114.6	107.4	99.27	97.13	100.8	106.3	111.3	116.0	30- 40	137.9	1505	95.4, 95.4
50	33.96	33.15	29.25	28.37	29.93	30.09	31.65	33.24	40- 50	45.44	1550	98.3, 98.3
60	9.788	9.518	8.897	8.797	9.769	9.877	9.972	9.872	50- 60	17.03	1567	99.3, 99.3
70	4.614	4.295	4.228	4.066	4.496	4.724	4.749	4.765	60- 70	6.397	1574	99.8, 99.8
80	1.192	1.113	1.119	1.169	1.184	1.219	1.190	1.150	70- 80	2.956	1577	99.9, 99.9
90	1.181	1.189	1.194	1.214	0.7156	0.7000	0.6930	0.6814	80- 90	0.9790	1578	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): 1533.5 lm

%lum = 97.2%

%lamp = 97.2%

Conical surface Flux(120deg): 1567.4 lm

%lum = 99.3%

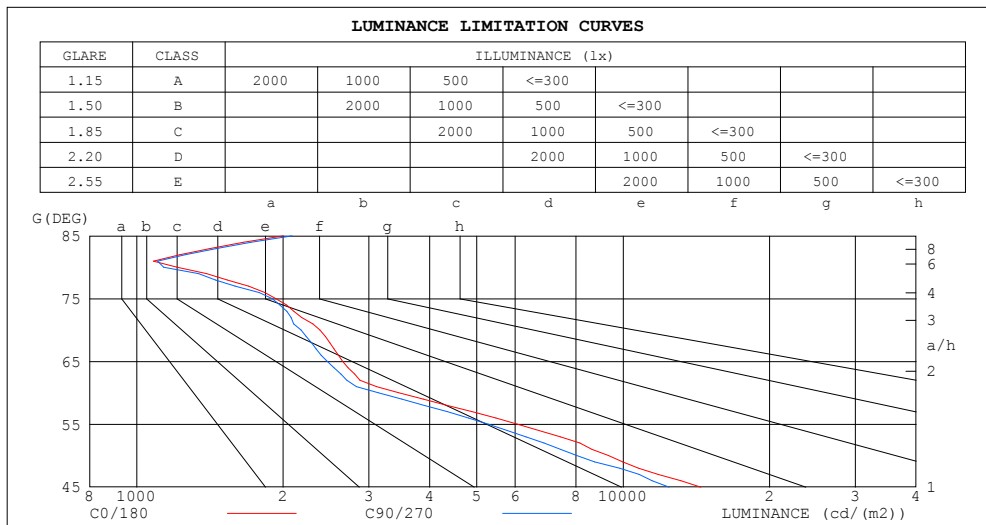
%lamp = 99.3%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: AE
 Test Date: 2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2002	2085
80	1211	1136
75	1932	1900
70	2379	2177
65	2651	2465
60	3452	3134
55	6050	5273
50	9318	8015
45	14438	12422

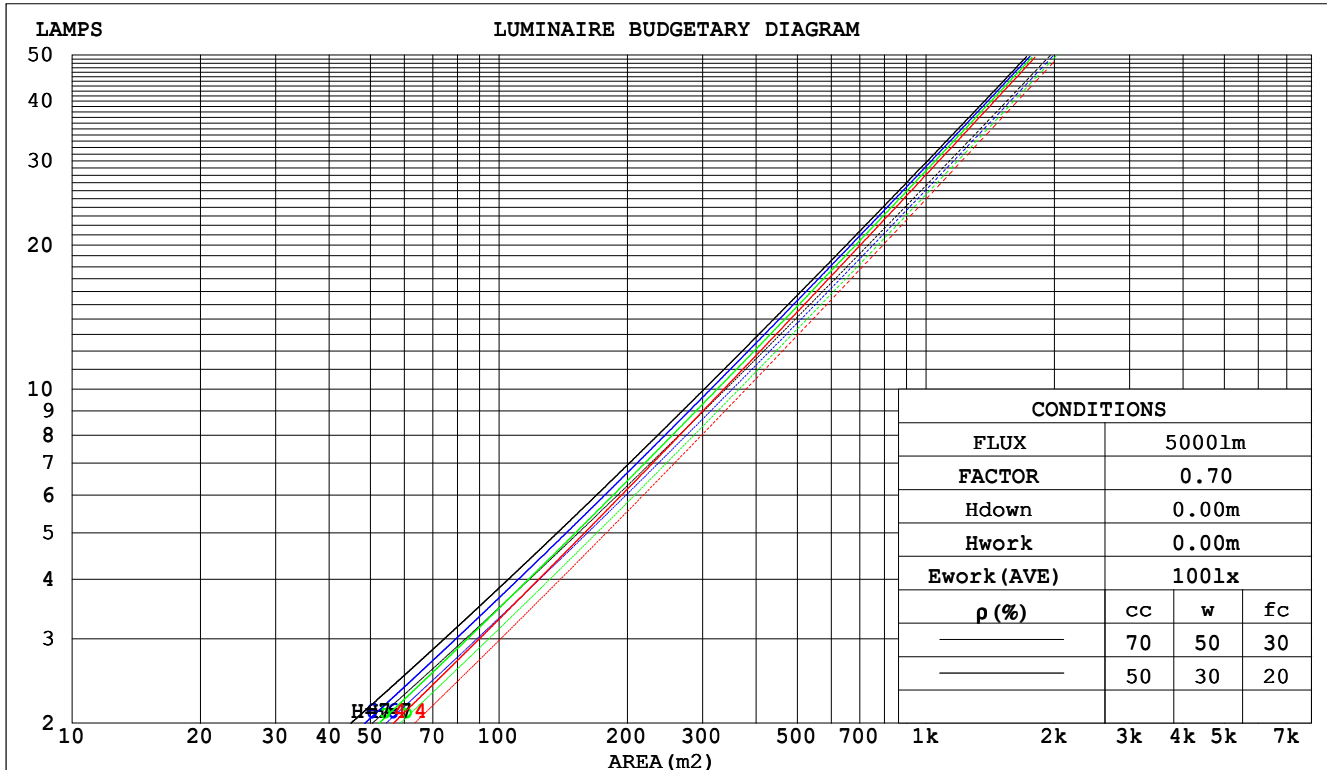
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	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						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	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.94	.91	.96	.93	.90	.93	.91	.88	.91	.89	.87	.86
4.0	.95	.90	.86	.93	.89	.86	.91	.88	.85	.89	.86	.84	.88	.85	.83	.82
5.0	.90	.85	.81	.89	.84	.81	.87	.83	.80	.86	.82	.80	.84	.81	.79	.78
6.0	.86	.81	.77	.85	.80	.77	.84	.79	.76	.82	.79	.76	.81	.78	.75	.74
7.0	.82	.77	.73	.81	.77	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.71
8.0	.79	.74	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.67	.72	.69	.66	.65
10.0	.72	.68	.64	.72	.67	.64	.71	.67	.64	.71	.67	.64	.70	.66	.64	.63



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm					
NAME: ALS70-20G30-36			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:60		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	.158	.090	.028	.151	.086	.027	.139	.079	.025	.127	.073	.024	.116	.067	.022	
2.0	.149	.081	.025	.143	.079	.024	.133	.074	.023	.123	.069	.022	.114	.065	.020	
3.0	.140	.074	.022	.135	.072	.022	.127	.069	.021	.118	.065	.020	.111	.061	.019	
4.0	.132	.069	.020	.128	.067	.020	.121	.064	.019	.114	.061	.018	.107	.058	.018	
5.0	.125	.064	.019	.122	.063	.018	.116	.060	.018	.110	.058	.017	.104	.056	.017	
6.0	.119	.060	.017	.116	.059	.017	.111	.057	.016	.105	.055	.016	.100	.053	.016	
7.0	.114	.056	.016	.111	.055	.016	.106	.054	.015	.102	.052	.015	.097	.050	.015	
8.0	.109	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014	
9.0	.104	.050	.014	.102	.050	.014	.098	.048	.014	.094	.047	.014	.091	.046	.013	
10.0	.100	.048	.013	.098	.047	.013	.094	.046	.013	.091	.045	.013	.088	.044	.013	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.120	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.095	.066	.046	.065	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm										
NAME: ALS70-20G30-36					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:60			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	13.3	14.1	13.5	14.3	14.4	12.8	13.6	13.0	13.7	13.9
3H	13.3	14.0	13.5	14.2	14.4	12.7	13.5	13.0	13.7	13.9
4H	13.2	13.9	13.5	14.2	14.4	12.7	13.4	13.0	13.6	13.8
6H	13.2	13.8	13.5	14.1	14.3	12.7	13.3	12.9	13.5	13.8
8H	13.1	13.8	13.4	14.0	14.3	12.6	13.3	12.9	13.5	13.8
12H	13.1	13.7	13.4	14.0	14.3	12.6	13.2	12.9	13.5	13.7
4H 2H	13.2	13.9	13.4	14.1	14.3	12.6	13.3	12.9	13.6	13.8
3H	13.1	13.7	13.4	14.0	14.3	12.6	13.2	12.9	13.5	13.8
4H	13.1	13.7	13.5	14.0	14.3	12.6	13.2	12.9	13.5	13.8
6H	13.1	13.5	13.4	13.9	14.2	12.6	13.0	12.9	13.4	13.7
8H	13.0	13.5	13.4	13.8	14.2	12.5	13.0	12.9	13.3	13.7
12H	13.0	13.4	13.4	13.8	14.2	12.5	12.9	12.9	13.3	13.7
8H 4H	13.0	13.5	13.4	13.8	14.2	12.5	13.0	12.9	13.3	13.7
6H	12.9	13.3	13.4	13.7	14.1	12.4	12.8	12.9	13.2	13.6
8H	12.9	13.2	13.4	13.7	14.1	12.4	12.8	12.9	13.2	13.6
12H	12.9	13.2	13.4	13.6	14.1	12.4	12.7	12.9	13.1	13.6
12H 4H	12.9	13.4	13.4	13.7	14.1	12.4	12.9	12.9	13.2	13.6
6H	12.9	13.2	13.3	13.6	14.1	12.4	12.7	12.8	13.1	13.6
8H	12.9	13.1	13.3	13.6	14.1	12.4	12.7	12.8	13.1	13.6
Variations with the observer position at spacings:										
S = 1.0H	+ 2.7 / - 4.7					+ 2.3 / - 4.6				
1.5H	+ 4.1 / - 3.6					+ 3.7 / - 3.3				
2.0H	+ 3.9 / - 3.9					+ 3.5 / - 3.4				

CIE Pub.117, 1578 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.6)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

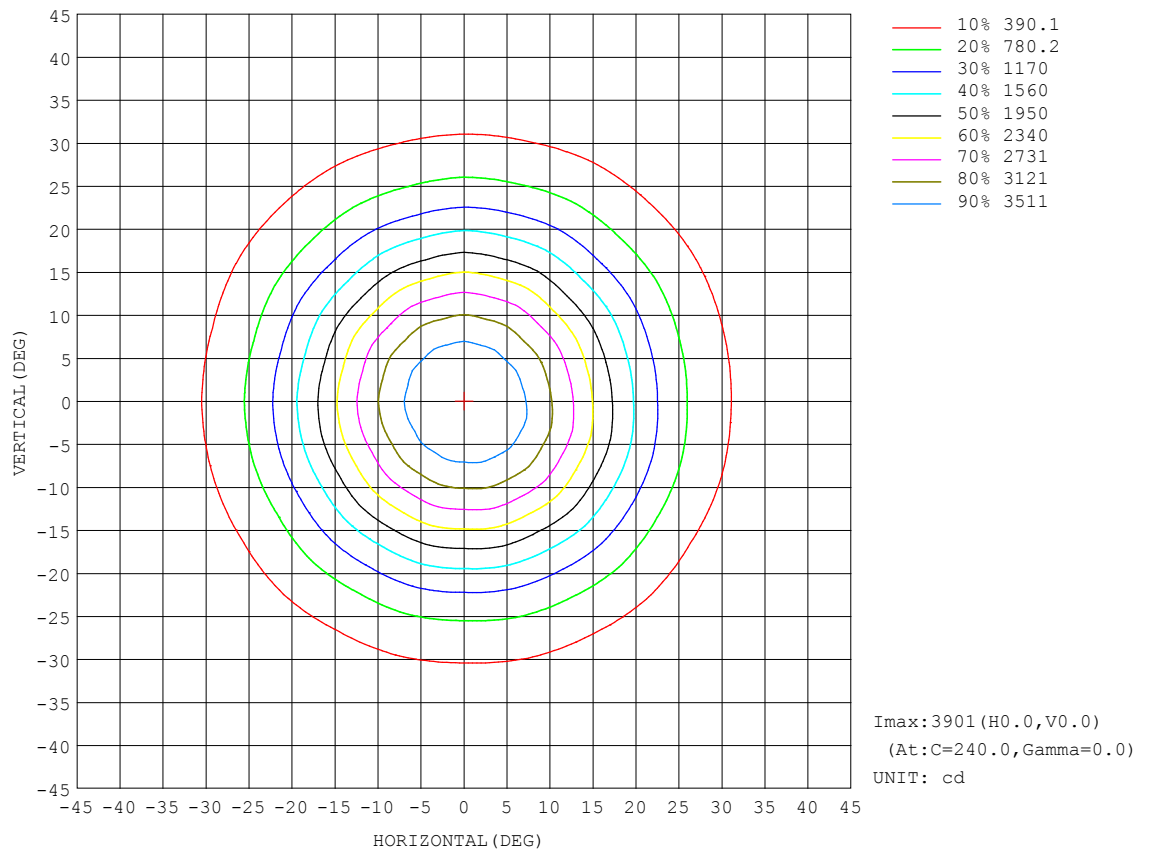
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	90	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

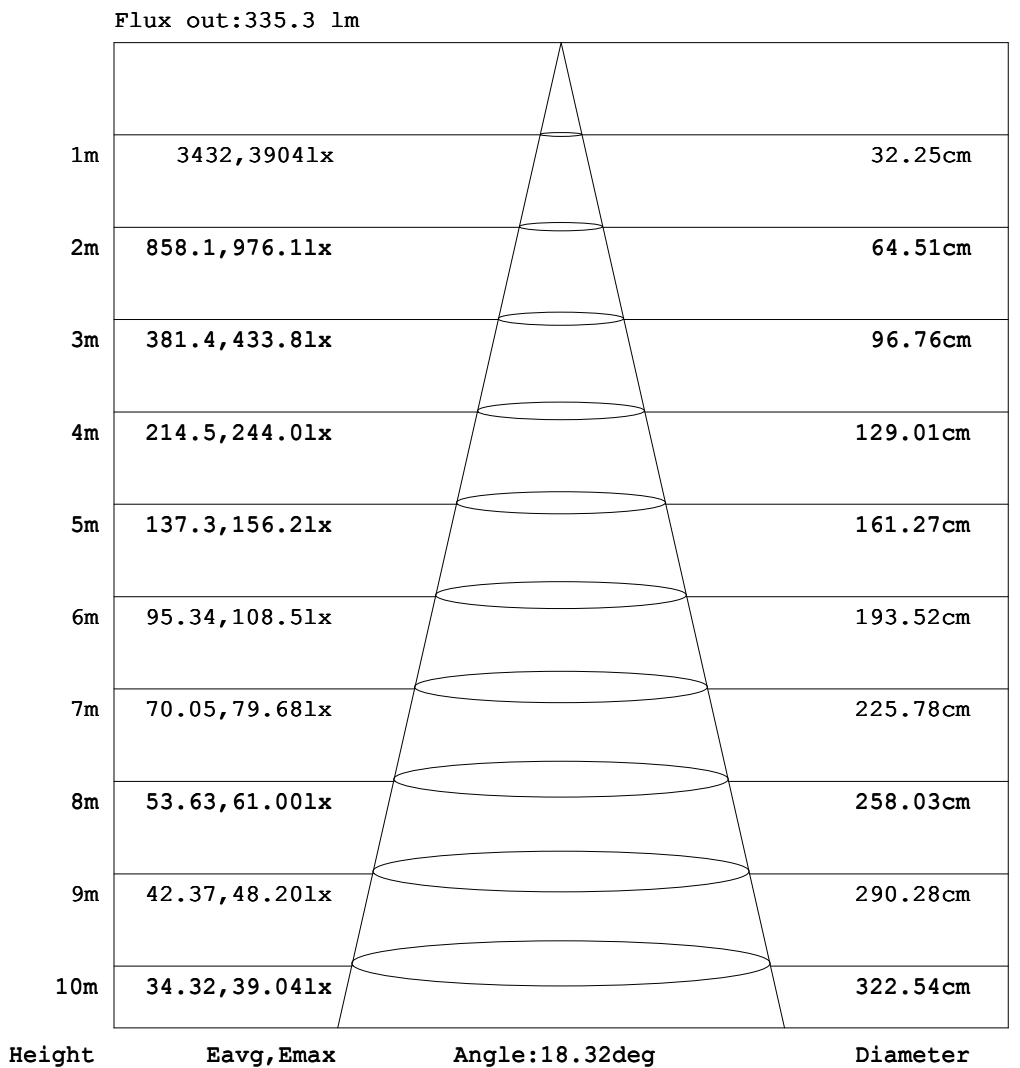


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



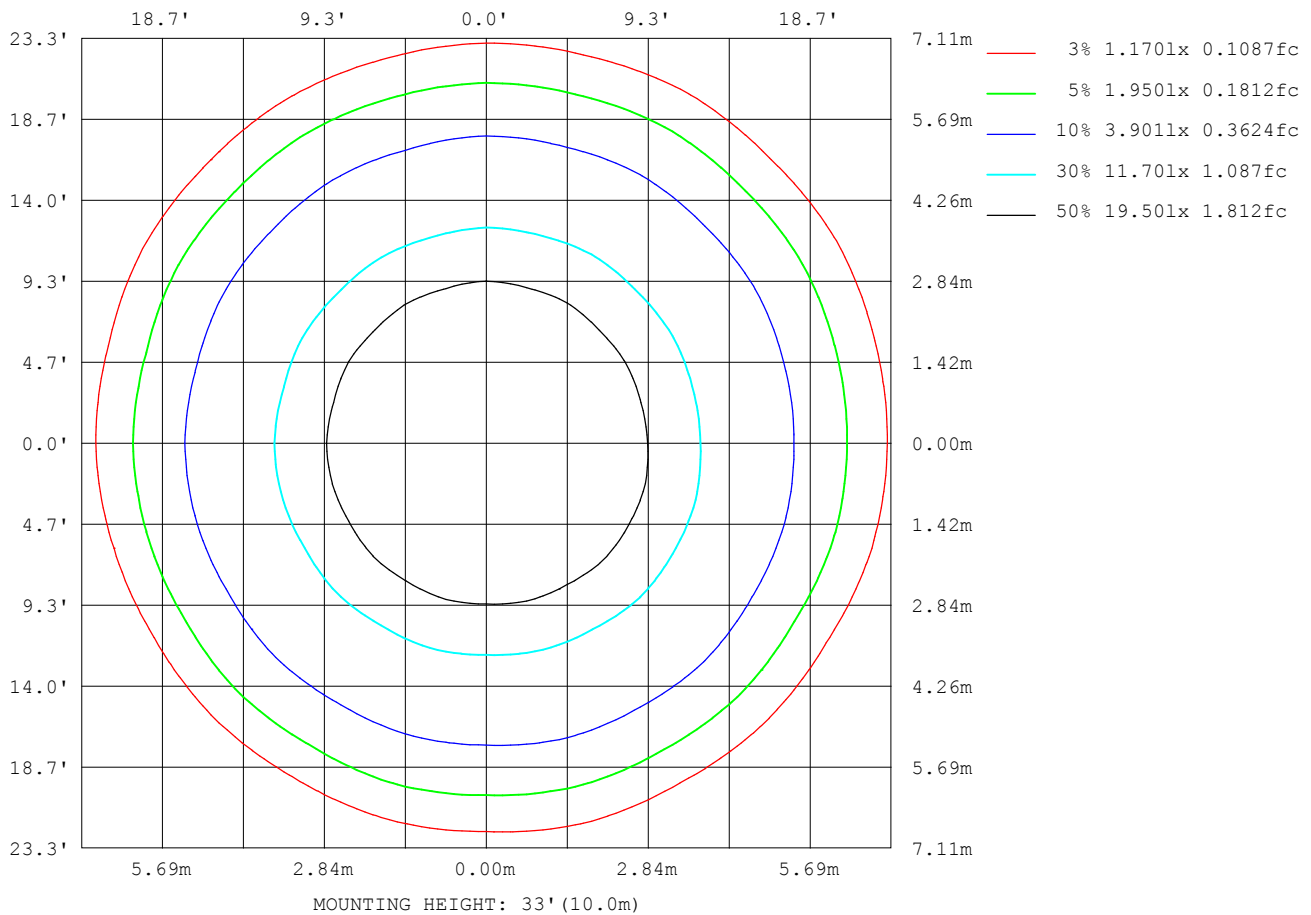
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:225.0V I:0.0920A P:20.40W PF:0.9780 Freq:0Hz Lamp Flux:1577.68x1 lm		
NAME: ALS70-20G30-36	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

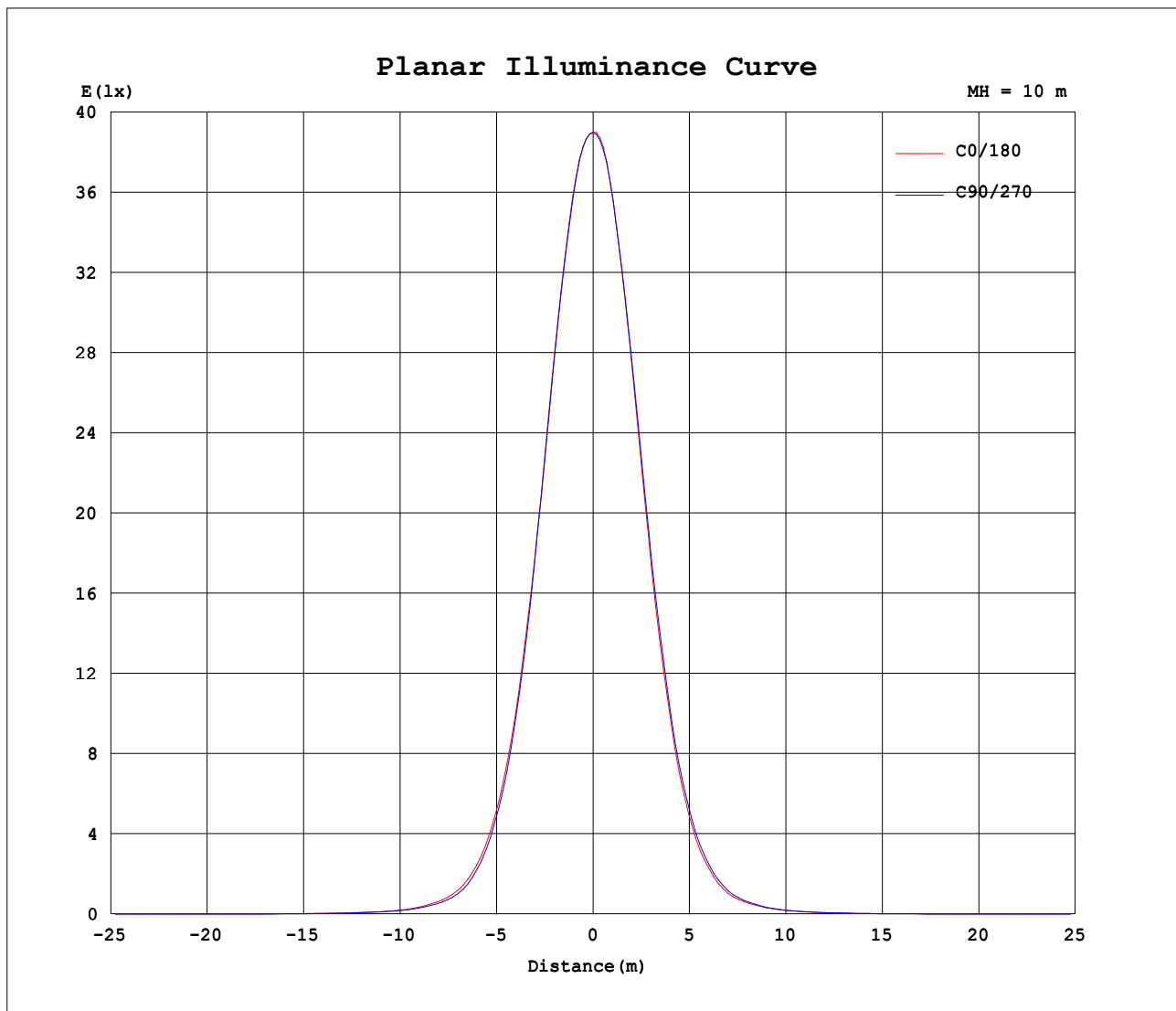
AvgL	cd/m2
L_0~180 (65) av	2657
L_0~180 (75) av	1899
L_0~180 (85) av	1741
L_90~270 (65) av	2612
L_90~270 (75) av	1941
L_90~270 (85) av	1750
L_45 (65) av	2615
L_45 (75) av	1906
L_45 (85) av	1742

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```