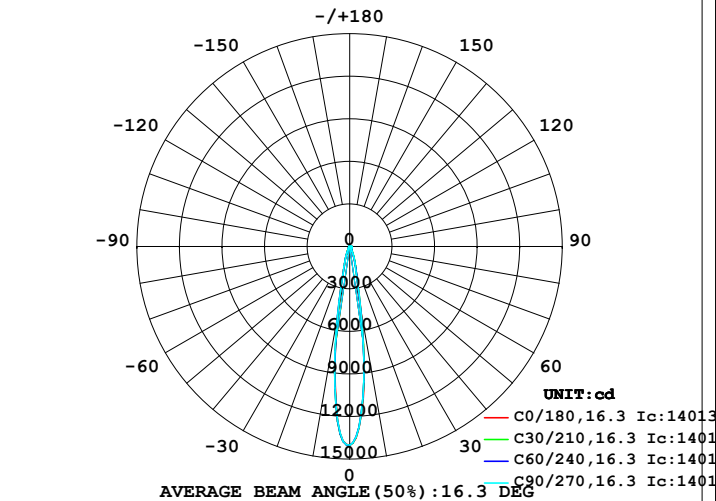


LUMINAIRE PHOTOMETRIC TEST REPORT

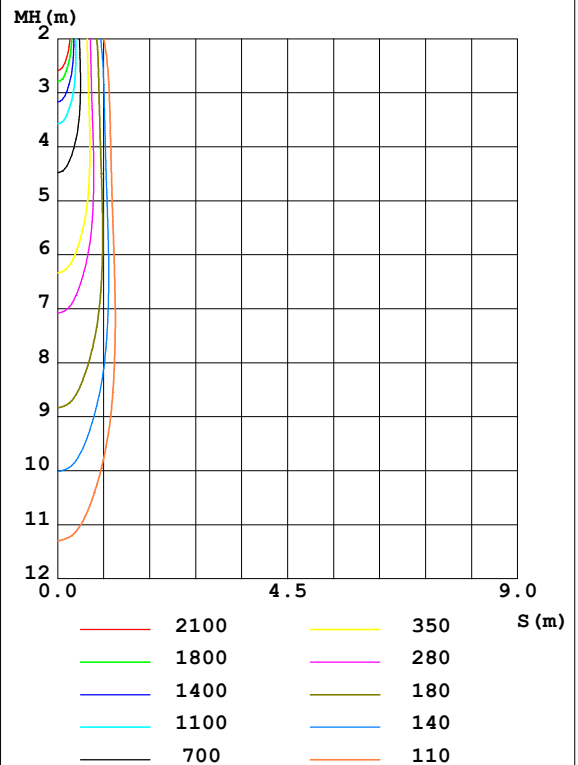
Test:U:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 104.64 lm/W			
MODEL	3000K CRI90	I _{max} (cd)	14013	S/MH(C0/180)	0.28
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.28
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2145.2	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	2145.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-10-29

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	455.7	461.0	448.4	470.7	486.9	470.8	498.4	472.5	0- 10	838.5	838.5	39.1,39.1
20	98.43	100.2	94.10	92.73	89.85	85.87	88.83	93.50	10- 20	540.7	1379	64.3,64.3
30	27.18	27.74	26.20	25.82	25.21	23.90	24.12	24.91	20- 30	233.8	1613	75.2,75.2
40	13.40	13.42	12.98	12.81	12.93	12.80	12.69	13.04	30- 40	109.7	1723	80.3,80.3
50	10.50	10.41	10.23	9.996	9.918	9.986	10.25	10.52	40- 50	86.87	1810	84.4,84.4
60	8.310	8.405	8.468	8.507	8.390	8.435	8.583	8.588	50- 60	85.45	1895	88.3,88.3
70	7.895	7.981	8.070	8.029	7.904	8.014	8.078	8.129	60- 70	80.93	1976	92.1,92.1
80	7.744	7.790	7.886	7.882	7.749	7.847	7.883	7.929	70- 80	83.88	2060	96,96
90	7.736	7.782	7.885	7.876	7.684	7.770	7.793	7.861	80- 90	85.32	2145	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 1766.8 lm

%lum = 82.4%

%lamp = 82.4%

Conical surface Flux(120deg): 1895.1 lm

%lum = 88.3%

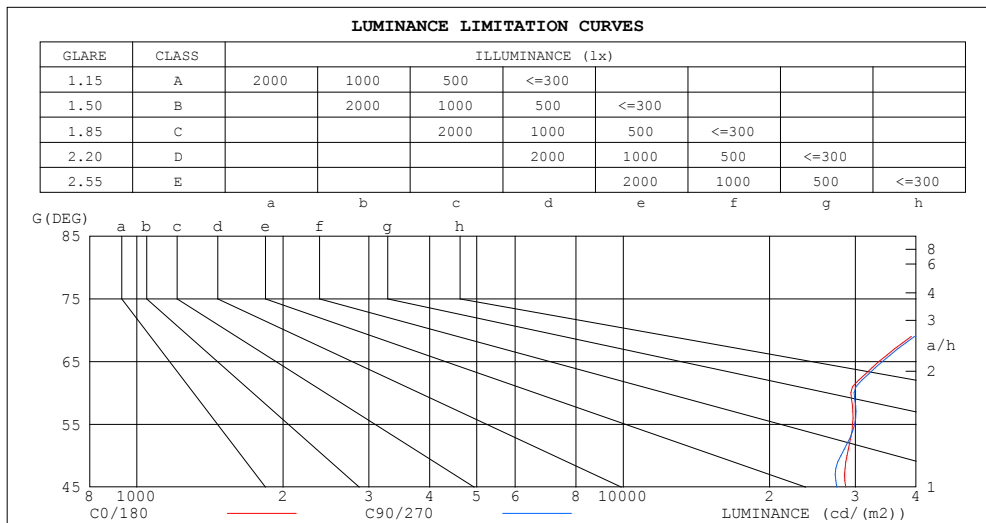
%lamp = 88.3%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	156694	159081
80	78822	80003
75	53438	54249
70	40803	41566
65	33572	34132
60	29376	29838
55	29628	29943
50	28864	28030
45	28671	27491

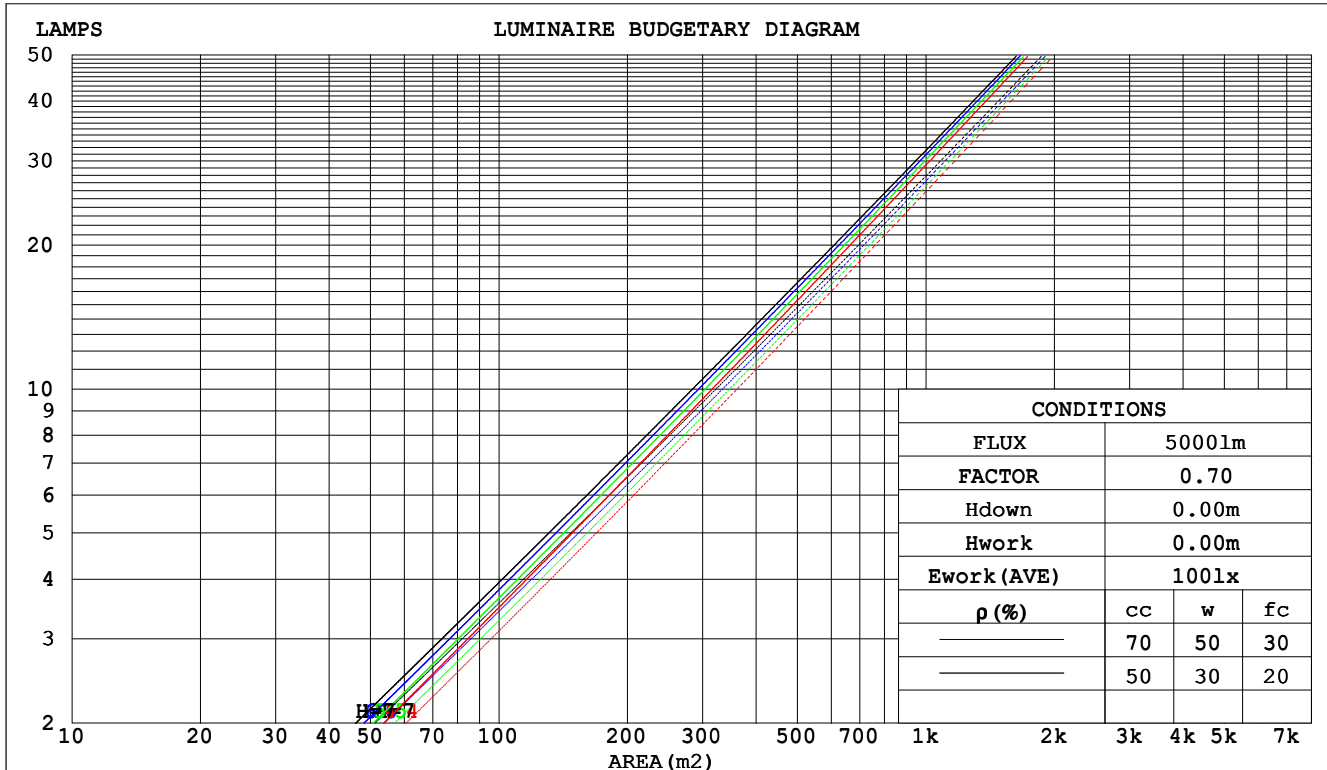
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	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	1.08	1.05	1.03	1.06	1.03	1.01	1.02	.00	.98	.98	.97	.95	.95	.93	.92	.90
2.0	1.01	.97	.93	.99	.95	.92	.96	.93	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.85	.82	.86	.84	.81	.80
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.81	.78	.83	.80	.77	.76
5.0	.86	.81	.77	.85	.80	.76	.84	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.83	.77	.74	.82	.77	.73	.81	.76	.73	.79	.75	.72	.78	.75	.72	.71
7.0	.80	.75	.71	.79	.74	.71	.78	.74	.70	.77	.73	.70	.76	.72	.70	.68
8.0	.77	.72	.69	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.68	.66
9.0	.75	.70	.67	.74	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.66	.65
10.0	.73	.68	.65	.72	.68	.65	.72	.67	.65	.71	.67	.64	.70	.67	.64	.63



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm									
NAME: ALS70-20G30-15					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	.222	.126	.040	.215	.123	.039	.202	.116	.037	.191	.110	.035	.180	.104	.034	
2.0	.190	.104	.032	.185	.102	.031	.174	.097	.030	.164	.092	.029	.155	.088	.028	
3.0	.169	.090	.027	.164	.088	.026	.155	.084	.026	.147	.080	.025	.139	.077	.024	
4.0	.153	.079	.023	.149	.078	.023	.141	.075	.022	.134	.072	.022	.127	.069	.021	
5.0	.140	.071	.021	.136	.070	.020	.129	.067	.020	.123	.065	.019	.117	.063	.019	
6.0	.129	.065	.018	.126	.063	.018	.120	.061	.018	.114	.059	.017	.109	.058	.017	
7.0	.120	.059	.017	.117	.058	.017	.112	.057	.016	.107	.055	.016	.103	.053	.016	
8.0	.112	.055	.015	.109	.054	.015	.105	.052	.015	.101	.051	.015	.097	.050	.014	
9.0	.105	.051	.014	.103	.050	.014	.099	.049	.014	.095	.048	.014	.092	.047	.013	
10.0	.099	.047	.013	.097	.047	.013	.094	.046	.013	.090	.045	.013	.087	.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	.174	.157	.141	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.133	.099	.073	.114	.085	.063	.079	.060	.044	.045	.035	.026	.015	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.113	.077	.051	.098	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.105	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.098	.063	.038	.085	.054	.033	.059	.038	.024	.034	.023	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.045	.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:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm											
NAME: ALS70-20G30-15					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		17.5	18.3	17.7	18.5	18.6	17.5	18.3	17.7	18.5	18.6
	3H	20.1	21.0	20.4	21.2	21.4	20.2	21.0	20.4	21.2	21.4
	4H	21.8	22.6	22.1	22.8	23.0	21.9	22.7	22.2	22.9	23.1
	6H	23.7	24.5	24.0	24.7	25.0	23.8	24.6	24.1	24.8	25.1
	8H	24.8	25.6	25.2	25.8	26.1	24.9	25.7	25.2	25.9	26.2
	12H	26.1	26.8	26.5	27.1	27.4	26.2	26.9	26.5	27.2	27.5
4H	2H	18.4	19.2	18.7	19.4	19.6	18.4	19.2	18.7	19.4	19.6
	3H	21.4	22.1	21.7	22.4	22.6	21.4	22.1	21.7	22.4	22.7
	4H	23.2	23.9	23.6	24.2	24.5	23.3	23.9	23.6	24.2	24.5
	6H	25.3	25.9	25.7	26.3	26.6	25.4	26.0	25.8	26.3	26.7
	8H	26.5	27.1	26.9	27.4	27.8	26.6	27.2	27.0	27.5	27.9
	12H	27.9	28.4	28.3	28.8	29.2	28.0	28.5	28.4	28.9	29.3
8H	4H	24.0	24.6	24.4	24.9	25.3	24.0	24.6	24.4	25.0	25.3
	6H	26.4	26.9	26.8	27.3	27.7	26.4	26.9	26.9	27.3	27.7
	8H	27.8	28.2	28.2	28.6	29.1	27.8	28.3	28.3	28.7	29.1
	12H	29.4	29.8	29.8	30.2	30.7	29.4	29.8	29.9	30.3	30.7
12H	4H	24.2	24.7	24.6	25.1	25.5	24.2	24.8	24.7	25.2	25.5
	6H	26.7	27.2	27.2	27.6	28.0	26.8	27.2	27.2	27.6	28.1
	8H	28.2	28.6	28.7	29.0	29.5	28.3	28.7	28.7	29.1	29.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117, 2145 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

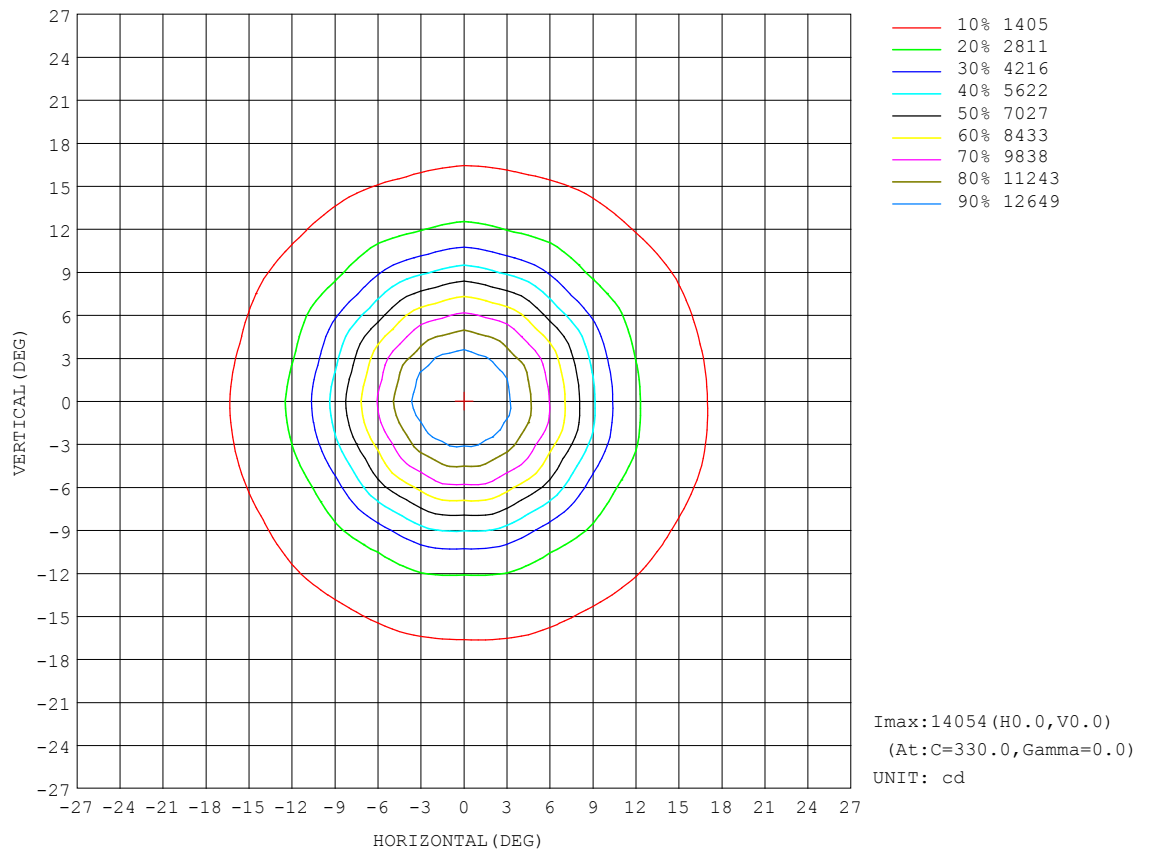
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	72	68	79	72	67	78	72	67	63
0.80	87	80	75	87	79	75	85	79	75	70
1.00	92	85	80	91	84	80	89	85	79	74
1.25	96	90	85	95	89	84	93	88	84	78
1.50	100	93	88	98	92	88	96	91	87	81
2.00	103	97	93	102	96	92	99	94	91	84
2.50	105	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	101	98	102	98	95	88
4.00	110	106	103	108	104	101	104	101	99	91
5.00	112	108	105	110	107	104	105	103	101	92
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:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

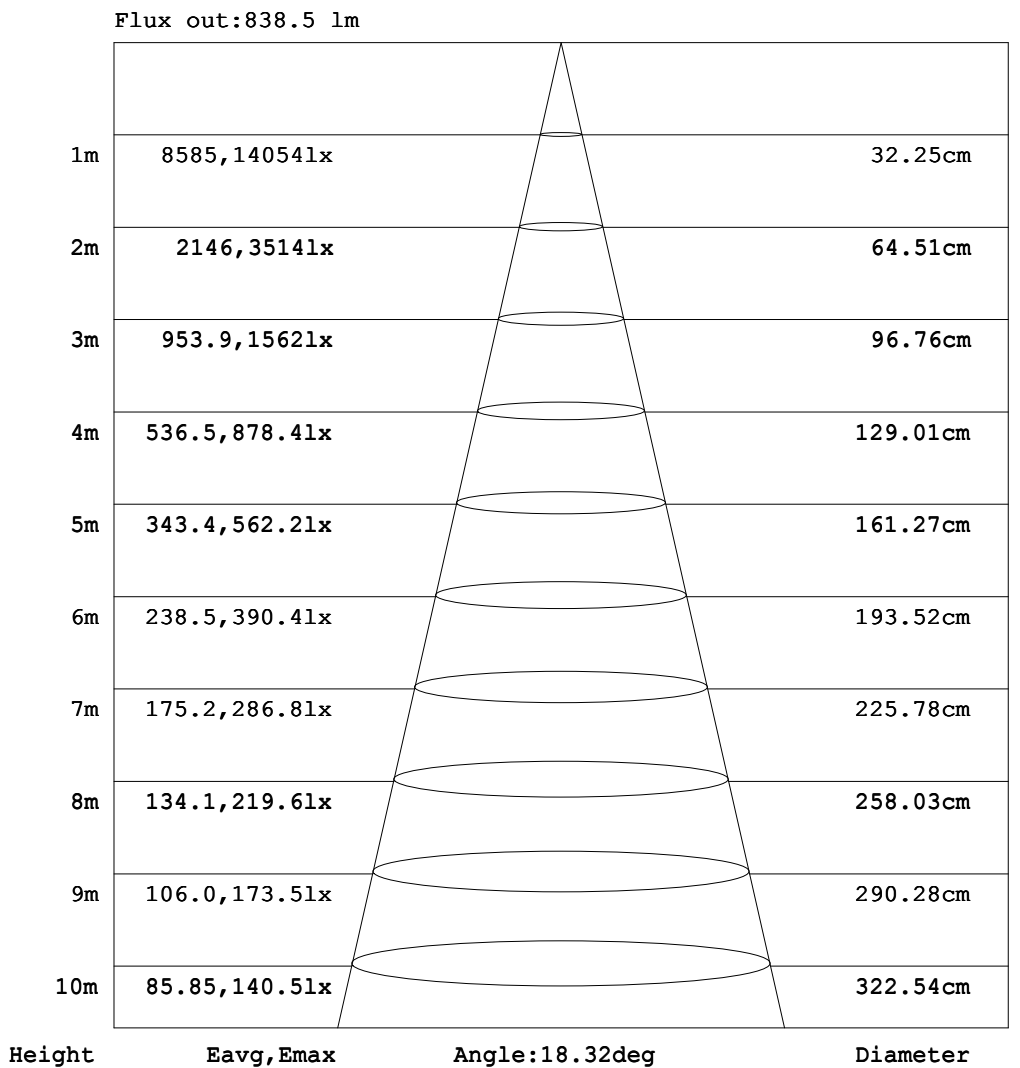


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



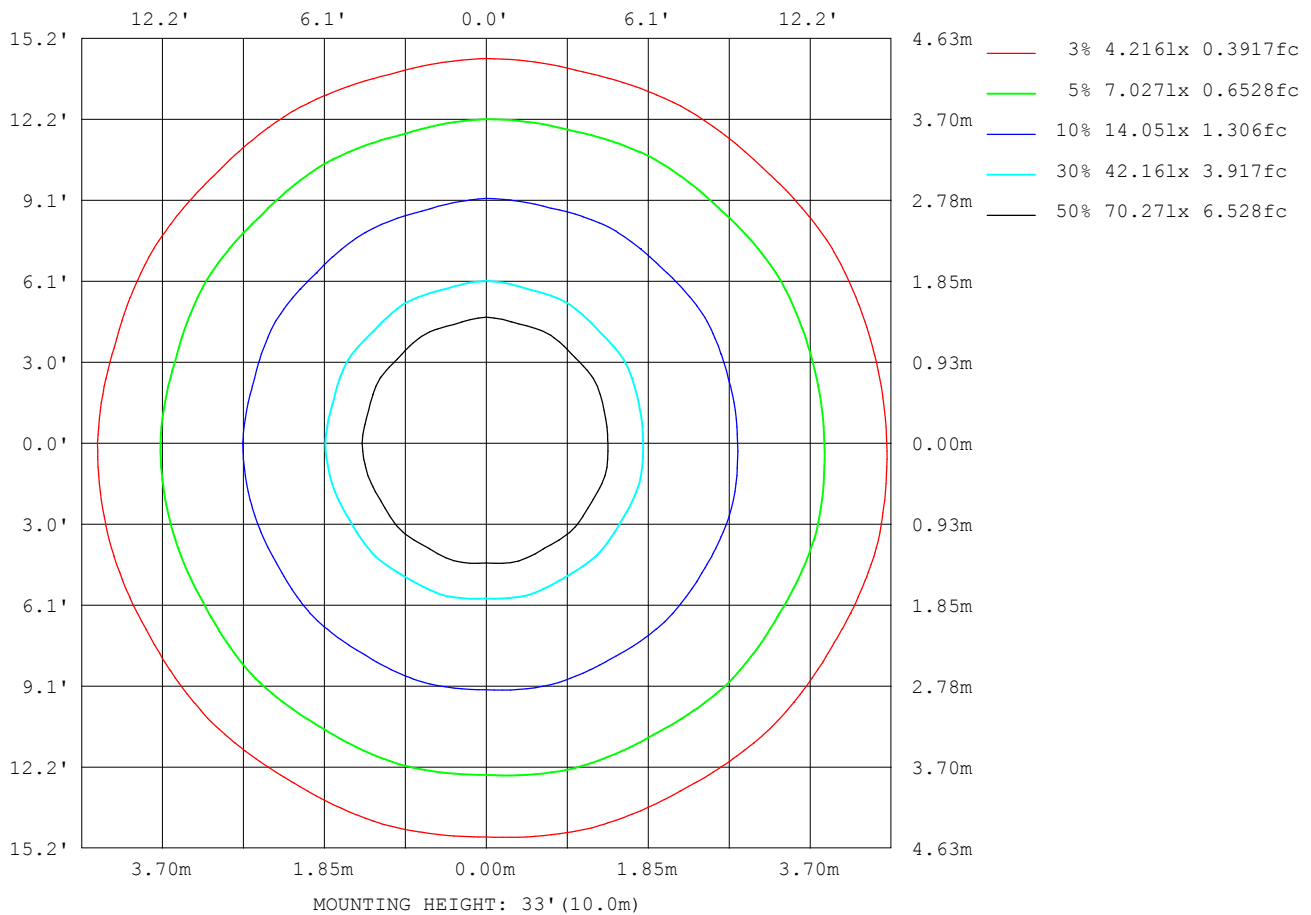
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	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:2020-10-29

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:225.1V I:0.0930A P:20.50W PF:0.9760 Freq:0Hz Lamp Flux:2145.2x1 lm		
NAME: ALS70-20G30-15	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

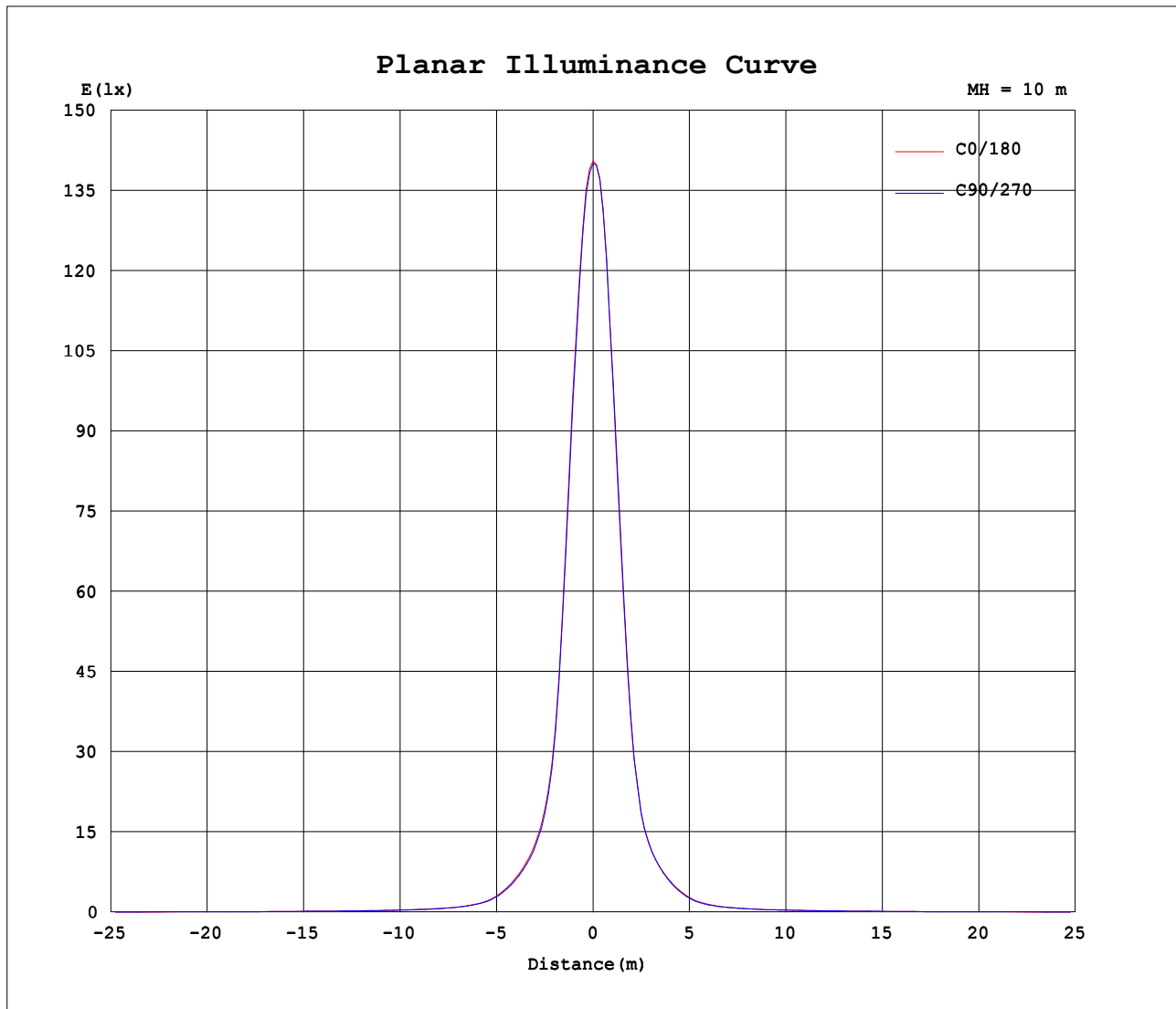
AvgL	cd/m2
L_0~180 (65) av	33520
L_0~180 (75) av	53330
L_0~180 (85) av	155975
L_90~270 (65) av	34170
L_90~270 (75) av	54257
L_90~270 (85) av	158698
L_45 (65) av	34046
L_45 (75) av	54104
L_45 (85) av	158372

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-10-29

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: 2020-10-29

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:

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