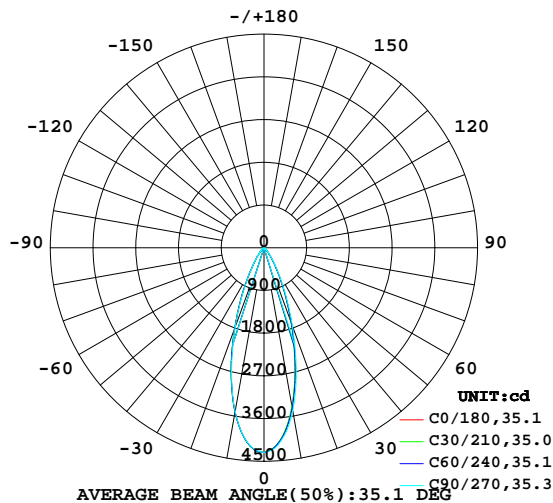


LUMINAIRE PHOTOMETRIC TEST REPORT

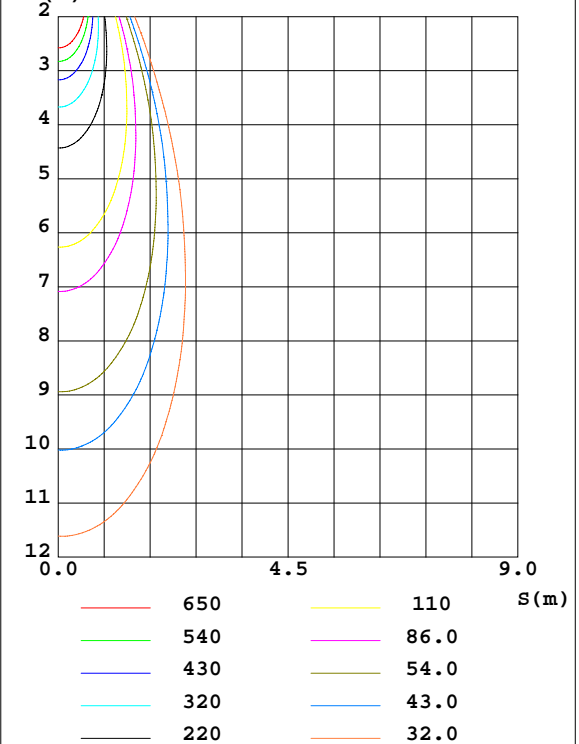
Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 69.38 lm/W
MODEL	ALT70-27G30-36	I _{max} (cd)	4313	S/MH(C0/180)	0.57	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.58	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1908.0	η UP,DN(C0-180)	0.0,50.6	
NOMINAL FLUX(lm)	1908.04	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.4	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.1	η down(%)	100.0	CIBSE SHR MAX	0.60	

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:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

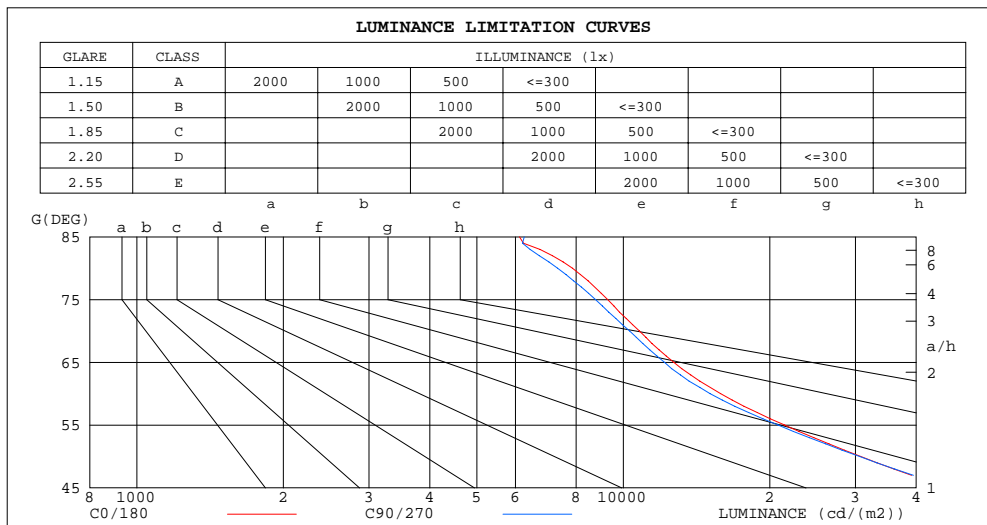
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	3512	3542	3505	3484	3413	3375	3489	3505	0- 10	370.9	370.9	19.4,19.4
20	1807	1850	1777	1767	1692	1640	1748	1795	10- 20	716.4	1087	57,57
30	602.3	602.6	589.4	580.5	550.9	541.5	582.4	600.5	20- 30	491.9	1579	82.8,82.8
40	169.0	164.6	169.7	165.9	153.8	152.8	161.4	166.6	30- 40	200.9	1780	93.3,93.3
50	55.79	54.58	55.54	56.09	52.45	50.25	52.53	54.83	40- 50	73.75	1854	97.2,97.2
60	22.38	21.57	21.31	22.04	21.02	19.92	20.17	21.77	50- 60	30.85	1885	98.8,98.8
70	10.41	10.11	9.957	10.17	9.638	9.257	9.361	10.16	60- 70	14.63	1899	99.5,99.5
80	3.852	3.799	3.594	3.473	3.055	2.920	3.117	3.521	70- 80	6.794	1906	99.9,99.9
90	1.618	1.624	1.616	1.680	1.110	1.088	1.100	1.089	80- 90	1.916	1908	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:AE
 Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6117	6258
80	7858	7324
75	9282	8769
70	10786	10300
65	12701	12150
60	15855	15082
55	21466	20807
50	30748	30571
45	46539	47209

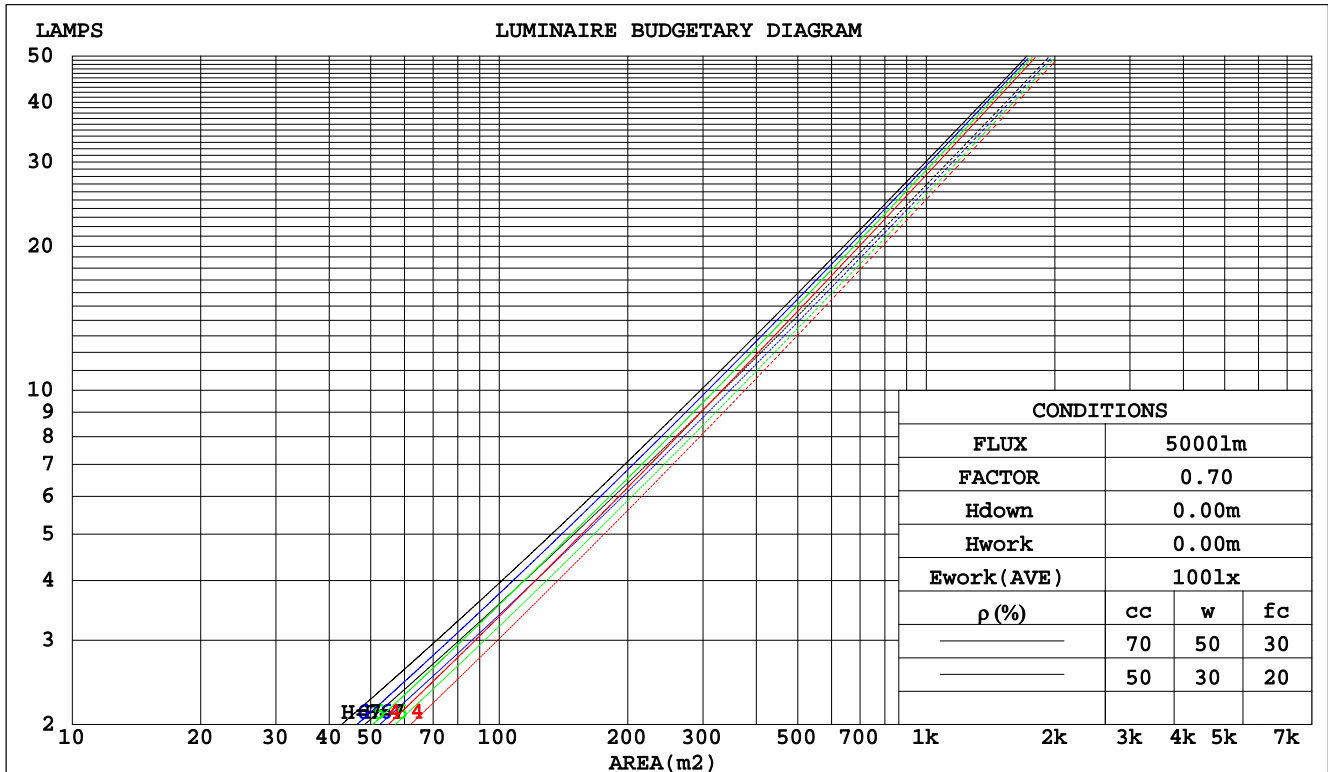
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.91	.88	.92	.89	.87	.90	.88	.86	.84
4.0	.93	.88	.84	.92	.88	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.80
5.0	.88	.83	.79	.87	.83	.79	.86	.82	.78	.84	.81	.78	.83	.80	.77	.76
6.0	.84	.79	.75	.83	.78	.75	.82	.77	.74	.80	.77	.74	.79	.76	.73	.72
7.0	.80	.75	.71	.79	.74	.71	.78	.74	.71	.77	.73	.70	.76	.72	.70	.69
8.0	.76	.71	.68	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.67	.65
9.0	.73	.68	.64	.73	.68	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.63
10.0	.70	.65	.62	.70	.65	.62	.69	.65	.61	.68	.64	.61	.68	.64	.61	.60



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm								
NAME:			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	.165	.094	.030	.158	.090	.029	.145	.083	.027	.134	.077	.025	.123	.072	.023	
2.0	.156	.085	.026	.150	.083	.025	.140	.078	.024	.130	.073	.023	.121	.068	.022	
3.0	.147	.078	.023	.142	.076	.023	.133	.072	.022	.125	.069	.021	.117	.065	.020	
4.0	.139	.072	.021	.135	.071	.021	.127	.067	.020	.120	.065	.019	.114	.062	.019	
5.0	.132	.067	.019	.128	.066	.019	.121	.063	.019	.115	.061	.018	.110	.059	.018	
6.0	.125	.063	.018	.122	.062	.018	.116	.060	.017	.111	.058	.017	.106	.056	.017	
7.0	.119	.059	.017	.116	.058	.017	.111	.056	.016	.107	.055	.016	.102	.053	.016	
8.0	.114	.056	.016	.111	.055	.015	.107	.053	.015	.103	.052	.015	.099	.051	.015	
9.0	.109	.053	.015	.107	.052	.015	.103	.051	.014	.099	.050	.014	.095	.048	.014	
10.0	.104	.050	.014	.102	.049	.014	.099	.048	.014	.095	.047	.013	.092	.046	.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	.146	.135	.126	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.090	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.112	.077	.052	.096	.067	.045	.067	.047	.032	.039	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.055	.033	.059	.038	.023	.034	.023	.014	.011	.007	.005	
9.0	.094	.058	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm											
NAME:			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	2H	17.4	18.2	17.6	18.4	18.6	17.4	18.2	17.6	18.4	18.5
	3H	17.5	18.3	17.7	18.4	18.6	17.4	18.2	17.7	18.4	18.6
	4H	17.5	18.2	17.8	18.5	18.7	17.5	18.2	17.7	18.4	18.6
	6H	17.5	18.2	17.8	18.4	18.7	17.4	18.1	17.7	18.4	18.6
	8H	17.5	18.2	17.8	18.4	18.7	17.4	18.1	17.7	18.3	18.6
	12H	17.5	18.1	17.8	18.4	18.6	17.4	18.0	17.7	18.3	18.6
4H	2H	17.3	18.0	17.6	18.3	18.5	17.3	18.0	17.6	18.2	18.5
	3H	17.5	18.1	17.8	18.4	18.6	17.4	18.0	17.7	18.3	18.6
	4H	17.5	18.1	17.9	18.4	18.7	17.5	18.0	17.8	18.3	18.6
	6H	17.6	18.1	17.9	18.4	18.7	17.5	18.0	17.9	18.3	18.7
	8H	17.6	18.0	18.0	18.4	18.8	17.5	18.0	17.9	18.3	18.7
	12H	17.5	18.0	17.9	18.3	18.7	17.5	17.9	17.9	18.3	18.7
8H	4H	17.5	17.9	17.8	18.3	18.6	17.4	17.9	17.8	18.2	18.6
	6H	17.5	17.9	18.0	18.3	18.7	17.5	17.9	17.9	18.3	18.7
	8H	17.6	17.9	18.0	18.3	18.8	17.5	17.8	17.9	18.2	18.7
	12H	17.5	17.8	18.0	18.3	18.8	17.5	17.8	17.9	18.2	18.7
12H	4H	17.4	17.9	17.8	18.2	18.6	17.4	17.8	17.8	18.2	18.6
	6H	17.5	17.8	17.9	18.3	18.7	17.4	17.8	17.9	18.2	18.6
	8H	17.5	17.8	18.0	18.3	18.7	17.5	17.8	17.9	18.2	18.7
Variations with the observer position at spacings:											
S = 1.0H	+ 2.1 / - 2.9					+ 2.1 / - 3.0					
1.5H	+ 3.4 / - 2.5					+ 3.4 / - 2.6					
2.0H	+ 3.0 / - 2.0					+ 3.1 / - 2.1					

CIE Pub.117, 1908 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.2$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

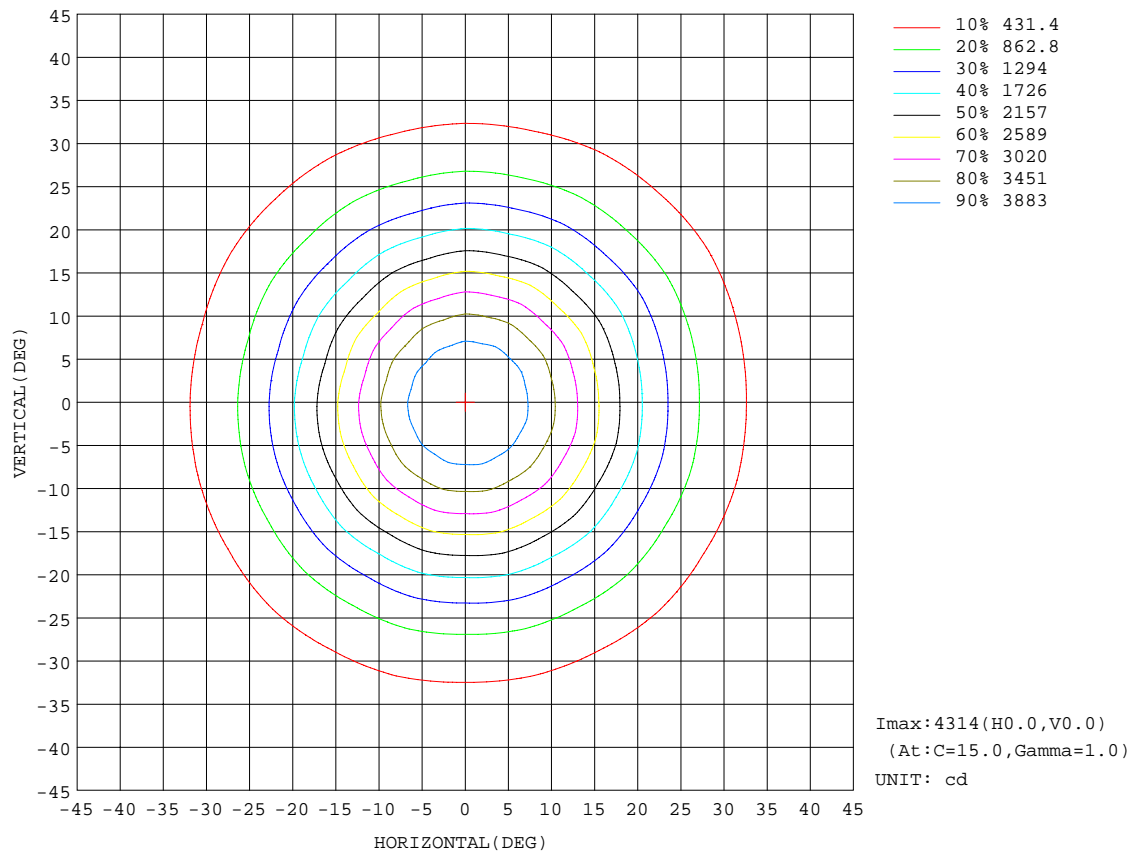
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	95	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	103	105	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	107	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: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

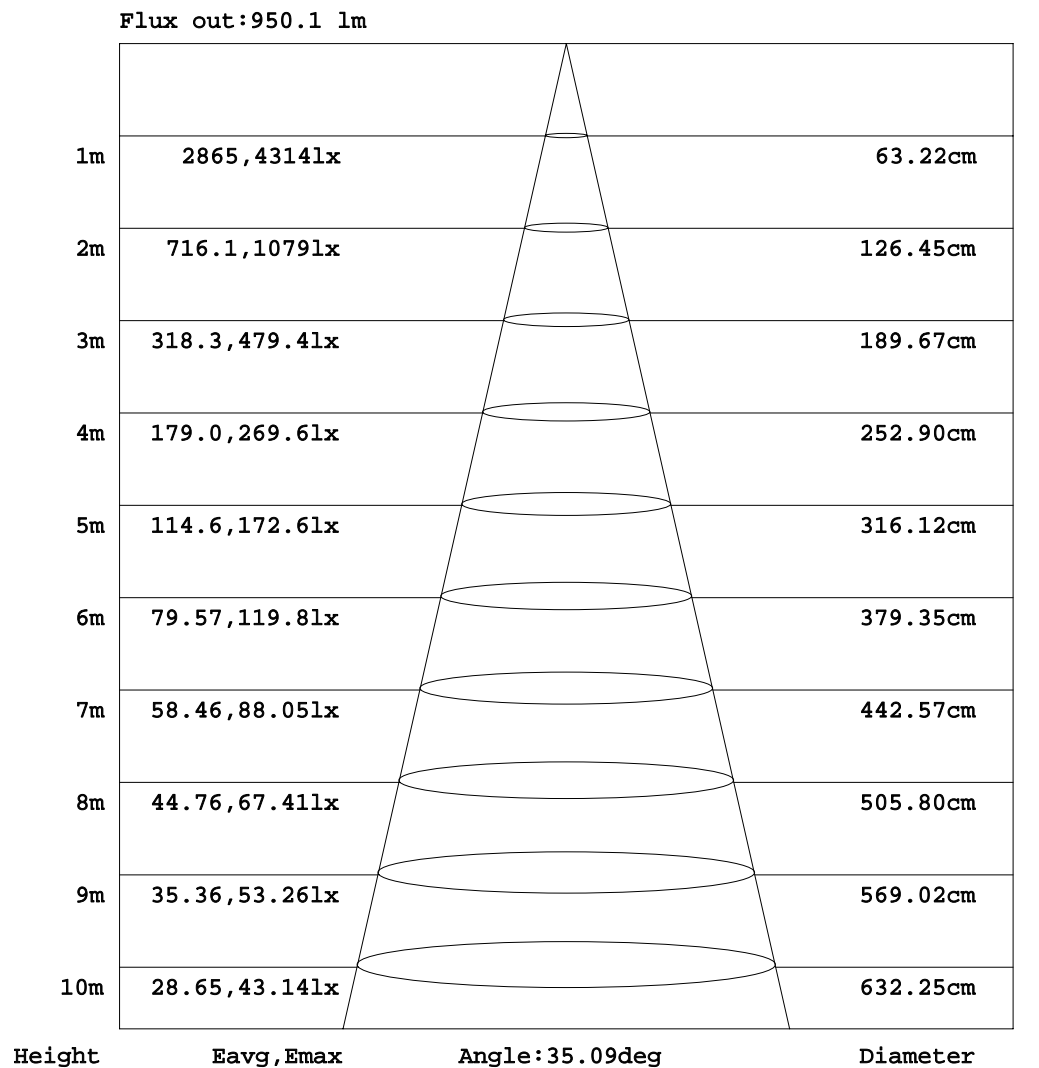


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



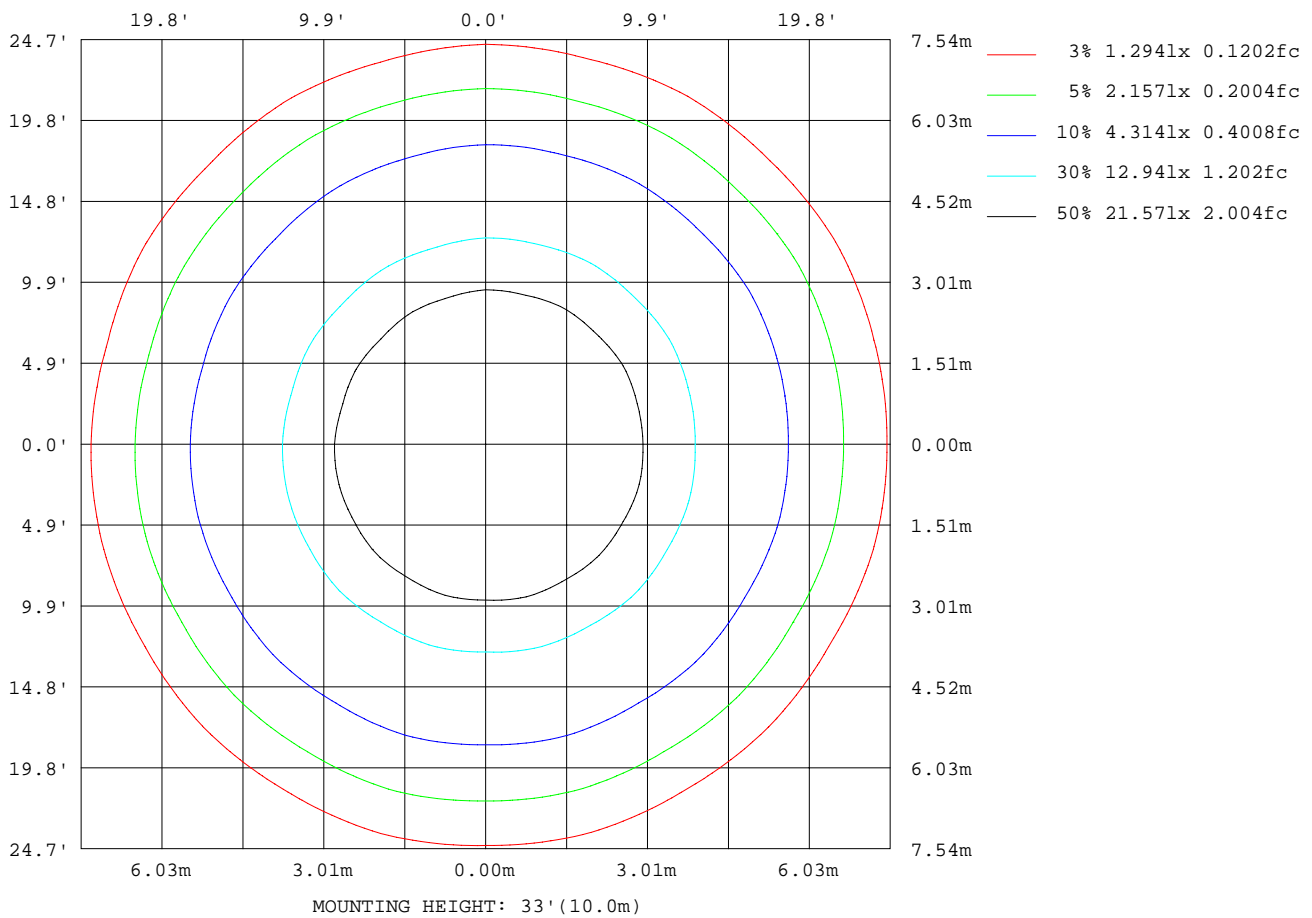
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	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: 2020-06-16

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1908.04x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

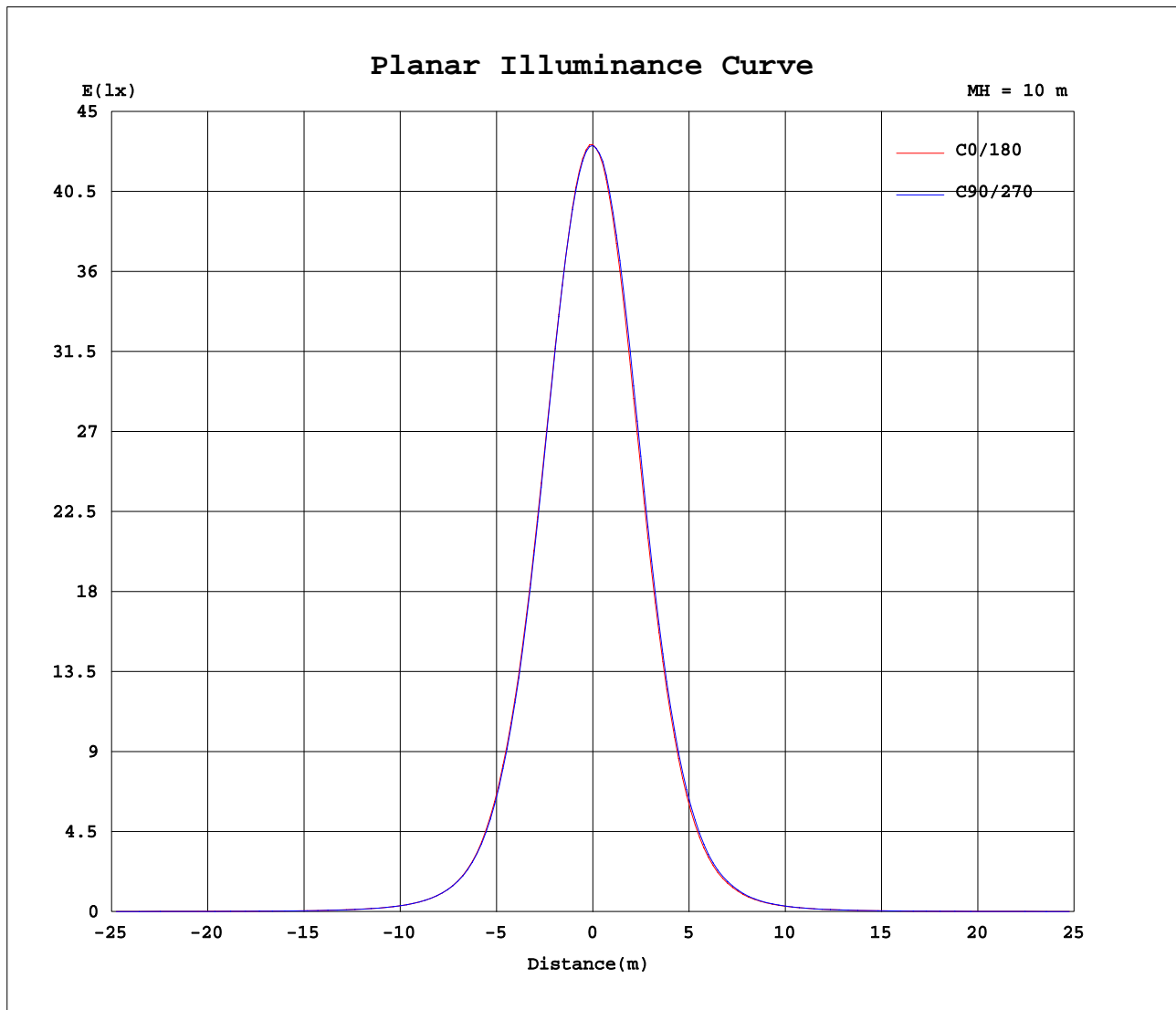
AvgL	cd/m2
L_0~180(65)av	12334
L_0~180(75)av	8752
L_0~180(85)av	5166
L_90~270(65)av	11794
L_90~270(75)av	8471
L_90~270(85)av	5235
L_45(65)av	12106
L_45(75)av	8739
L_45(85)av	5193

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 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: 2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
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 V2.0.265
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 V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```