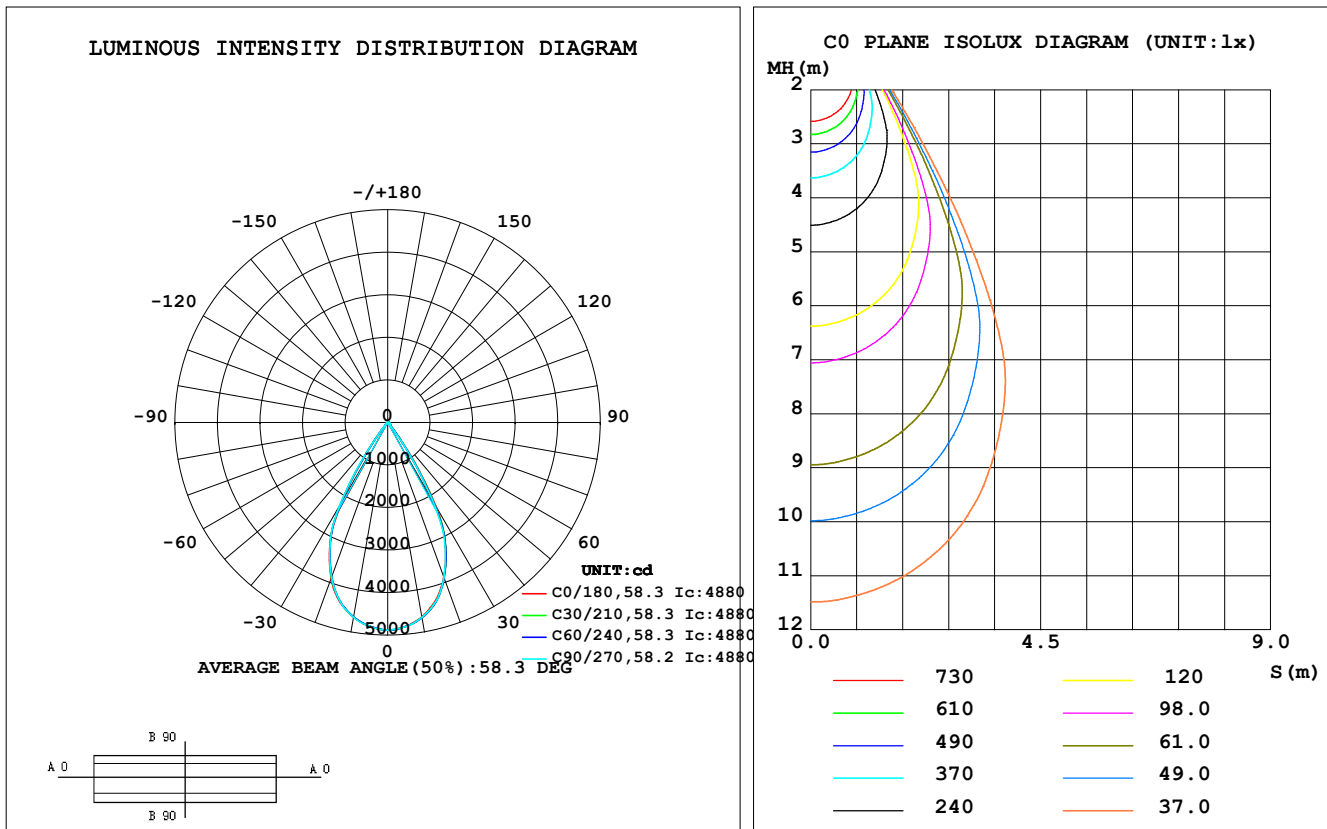


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.74 lm/W			
MODEL	3000K CRI90	I _{max} (cd)	4881	S/MH(C0/180)	0.85
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	0.86
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	3780.2	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	3780.24	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	0.0	η down(%)	100.0	CIBSE SHR MAX	0.85



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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	4639	4667	4651	4683	4645	4626	4648	4602	0- 10	454.4	454.4	12,12
20	3868	3927	3870	3918	3900	3822	3866	3740	10- 20	1212	1666	44.1,44.1
30	2244	2214	2105	2180	2179	2168	2290	2066	20- 30	1433	3099	82,82
40	176.1	170.3	147.5	151.7	158.6	169.8	184.2	143.0	30- 40	570.2	3670	97.1,97.1
50	51.55	51.79	49.52	50.51	50.35	51.30	53.94	50.63	40- 50	62.26	3732	98.7,98.7
60	23.21	21.26	21.22	20.04	21.36	23.35	23.21	23.60	50- 60	32.28	3764	99.6,99.6
70	4.665	4.422	4.179	4.243	4.296	4.635	4.836	4.584	60- 70	10.56	3775	99.9,99.9
80	2.547	2.520	2.508	2.444	2.087	2.097	2.099	2.080	70- 80	2.845	3778	99.9,99.9
90	3.256	3.300	3.332	3.209	2.411	2.379	2.359	2.351	80- 90	2.705	3780	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): 3707.3 lm

%lum = 98.1%

%lamp = 98.1%

Conical surface Flux(120deg): 3764.1 lm

%lum = 99.6%

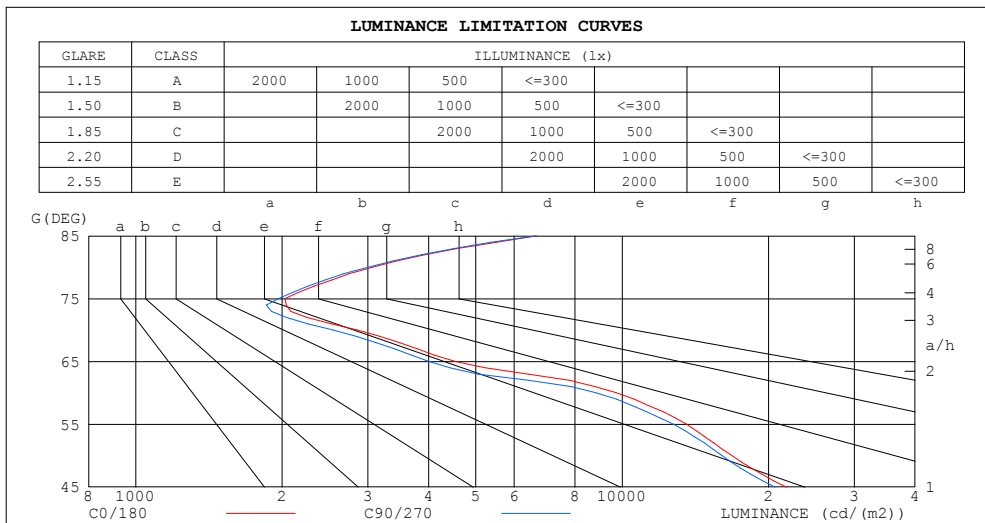
%lamp = 99.6%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6666	6645
80	3072	3006
75	2028	1966
70	2856	2542
65	4530	4001
60	9721	8830
55	13543	12734
50	16794	16027
45	21778	20628

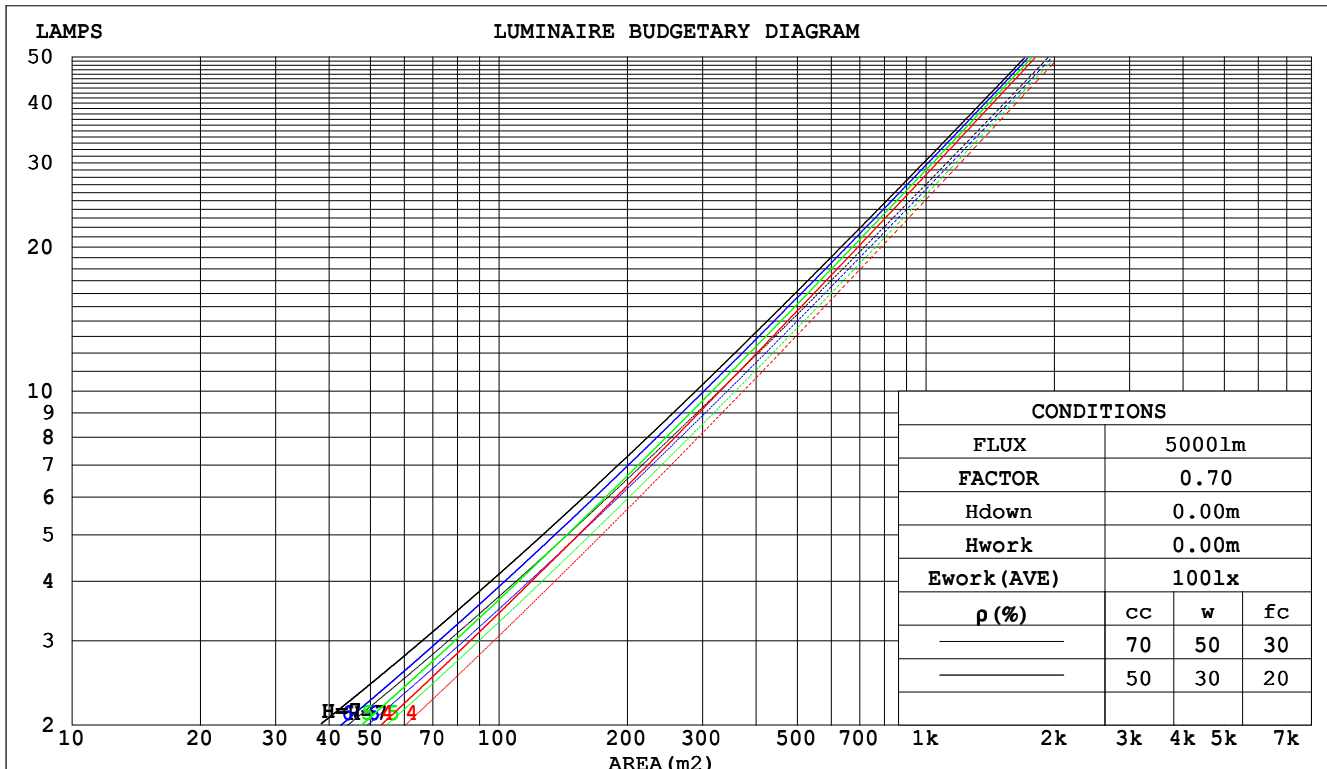
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	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	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3.0	.98	.93	.89	.96	.92	.89	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.80	.85	.82	.79	.78
5.0	.87	.81	.77	.86	.81	.77	.84	.79	.76	.82	.78	.75	.81	.77	.75	.73
6.0	.82	.76	.72	.81	.76	.72	.80	.75	.71	.78	.74	.71	.77	.73	.70	.69
7.0	.77	.72	.68	.77	.71	.68	.75	.71	.67	.74	.70	.67	.73	.69	.67	.65
8.0	.73	.68	.64	.73	.67	.64	.72	.67	.63	.71	.66	.63	.70	.66	.63	.62
9.0	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.58
10.0	.66	.61	.57	.66	.60	.57	.65	.60	.57	.64	.60	.57	.63	.59	.56	.55



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm					
NAME: ALT85Z-40G30-Z2-Max			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:78		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	.169	.096	.030	.162	.093	.029	.150	.086	.027	.138	.080	.026	.128	.074	.024		
2.0	.161	.088	.027	.155	.085	.026	.145	.080	.025	.135	.076	.024	.126	.071	.022		
3.0	.153	.081	.024	.148	.079	.024	.139	.075	.023	.131	.072	.022	.123	.068	.021		
4.0	.145	.075	.022	.141	.074	.022	.133	.071	.021	.126	.068	.020	.120	.065	.020		
5.0	.138	.071	.020	.135	.069	.020	.128	.067	.020	.122	.064	.019	.116	.062	.019		
6.0	.132	.066	.019	.129	.065	.019	.123	.063	.018	.118	.061	.018	.113	.059	.018		
7.0	.127	.063	.018	.124	.062	.018	.119	.060	.017	.114	.058	.017	.109	.057	.017		
8.0	.121	.059	.017	.119	.059	.017	.114	.057	.016	.110	.056	.016	.106	.054	.016		
9.0	.117	.056	.016	.114	.056	.016	.110	.054	.015	.106	.053	.015	.103	.052	.015		
10.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.103	.051	.015	.100	.050	.014		

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	.171	.157	.145	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.033	.015	.013	.011	
4.0	.131	.099	.074	.113	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.105	.075	.053	.072	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.039	.028	.019	.013	.009	.006	
7.0	.108	.070	.043	.093	.061	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.102	.064	.037	.088	.055	.032	.061	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.097	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.080	.047	.024	.056	.033	.017	.032	.019	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm											
NAME: ALT85Z-40G30-Z2-Max					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:78			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		16.9	17.8	17.2	18.0	18.2	16.4	17.3	16.6	17.4	17.6
	3H	16.8	17.6	17.0	17.8	18.0	16.2	17.0	16.5	17.2	17.4
	4H	16.7	17.5	17.0	17.7	17.9	16.1	16.9	16.4	17.1	17.3
	6H	16.6	17.3	16.9	17.6	17.8	16.1	16.8	16.3	17.0	17.3
	8H	16.6	17.3	16.9	17.5	17.8	16.0	16.7	16.3	17.0	17.2
	12H	16.5	17.2	16.8	17.5	17.7	16.0	16.6	16.3	16.9	17.2
4H	2H	16.7	17.5	17.0	17.7	17.9	16.1	16.9	16.4	17.1	17.4
	3H	16.5	17.2	16.9	17.5	17.7	16.0	16.6	16.3	16.9	17.2
	4H	16.4	17.0	16.8	17.3	17.6	15.9	16.5	16.2	16.8	17.1
	6H	16.4	16.9	16.7	17.2	17.6	15.8	16.3	16.2	16.7	17.0
	8H	16.3	16.8	16.7	17.2	17.5	15.8	16.3	16.2	16.6	17.0
	12H	16.3	16.7	16.7	17.1	17.5	15.7	16.2	16.1	16.5	16.9
8H	4H	16.3	16.8	16.7	17.1	17.5	15.7	16.2	16.1	16.6	17.0
	6H	16.2	16.6	16.6	17.0	17.4	15.7	16.1	16.1	16.5	16.9
	8H	16.2	16.5	16.6	16.9	17.4	15.6	16.0	16.1	16.4	16.8
	12H	16.1	16.4	16.6	16.9	17.4	15.6	15.9	16.1	16.3	16.8
12H	4H	16.2	16.7	16.7	17.1	17.5	15.7	16.1	16.1	16.5	16.9
	6H	16.2	16.5	16.6	16.9	17.4	15.6	16.0	16.0	16.4	16.8
	8H	16.1	16.4	16.6	16.9	17.3	15.6	15.9	16.0	16.3	16.8
Variations with the observer position at spacings:											
S = 1.0H		+ 4.4 / - 6.4					+ 4.0 / - 5.8				
1.5H		+ 6.7 / - 4.8					+ 6.3 / - 4.0				
2.0H		+ 2.3 / - 3.7					+ 2.2 / - 3.9				

CIE Pub.117, 3780 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.6$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:

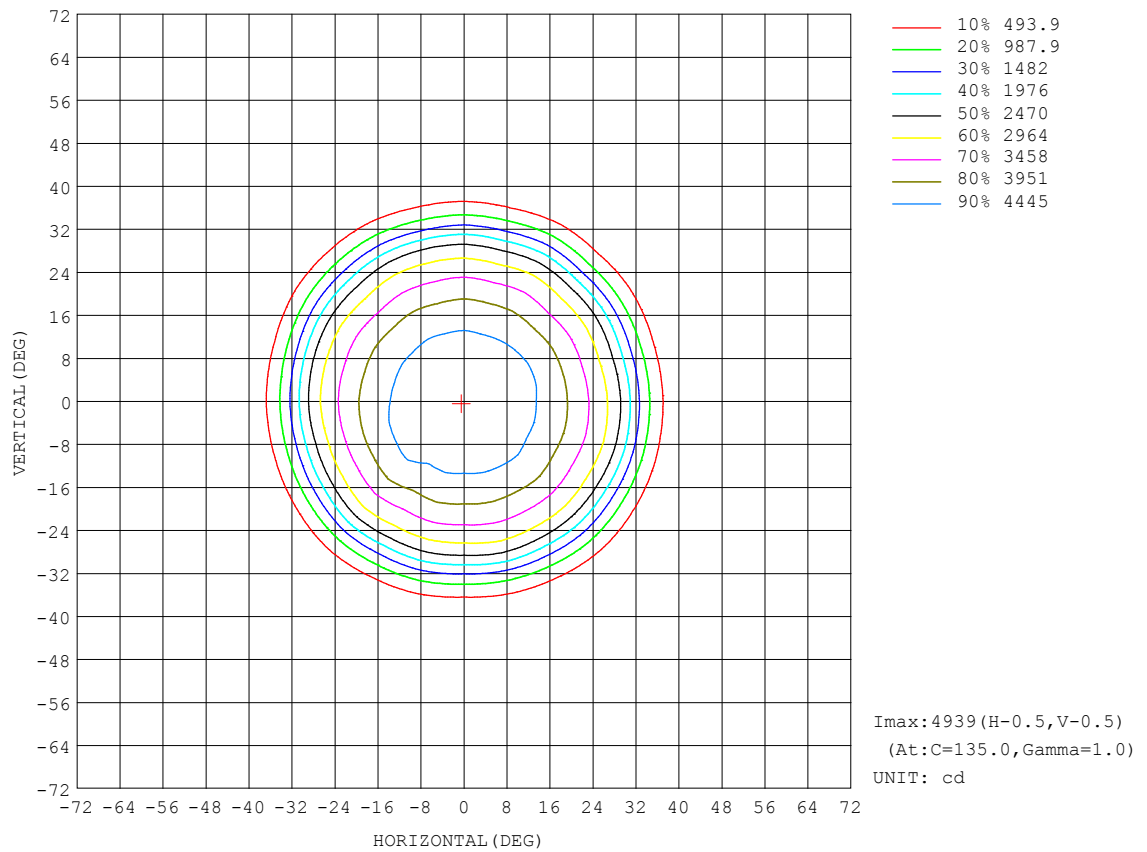
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	80	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	105	100	96	104	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	98	94
2.00	109	105	103	108	104	102	105	102	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	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:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:

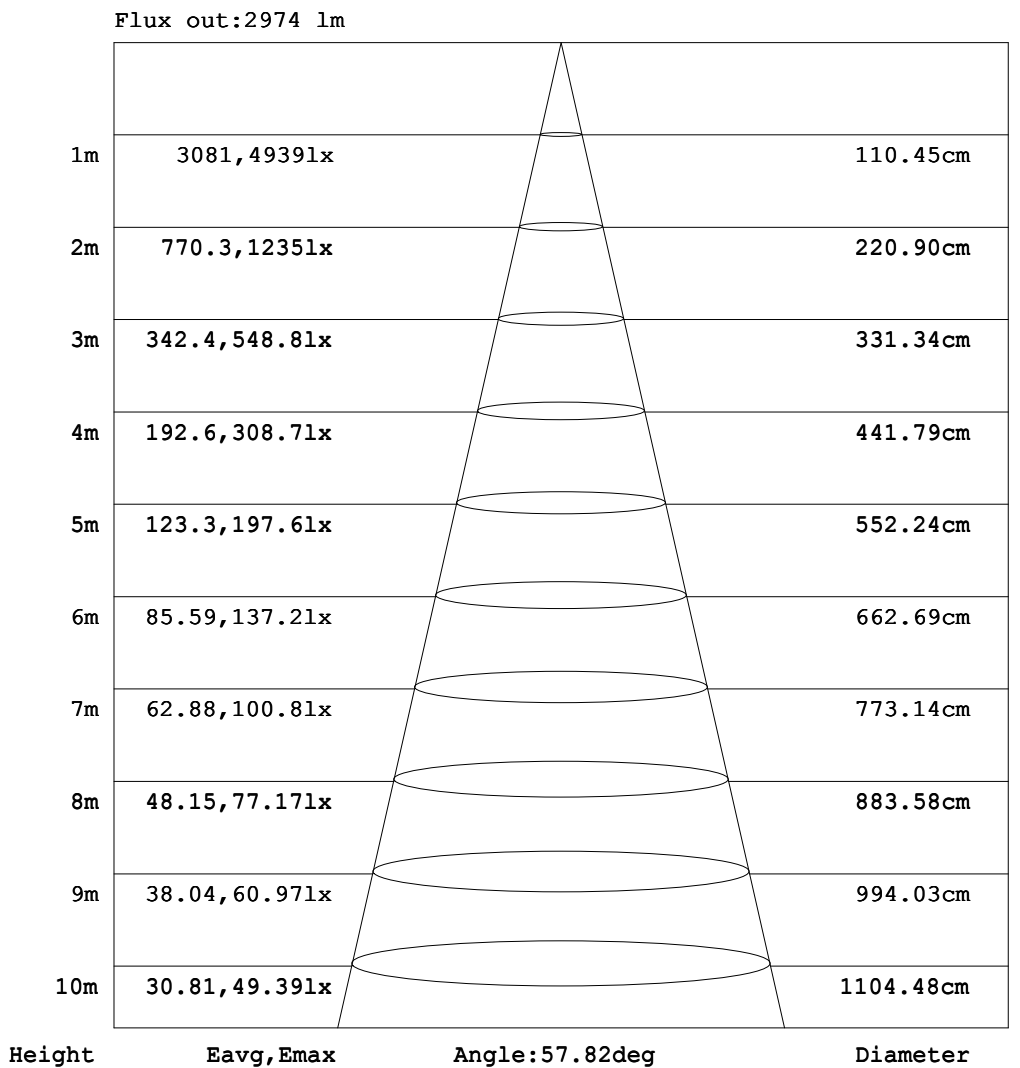


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:



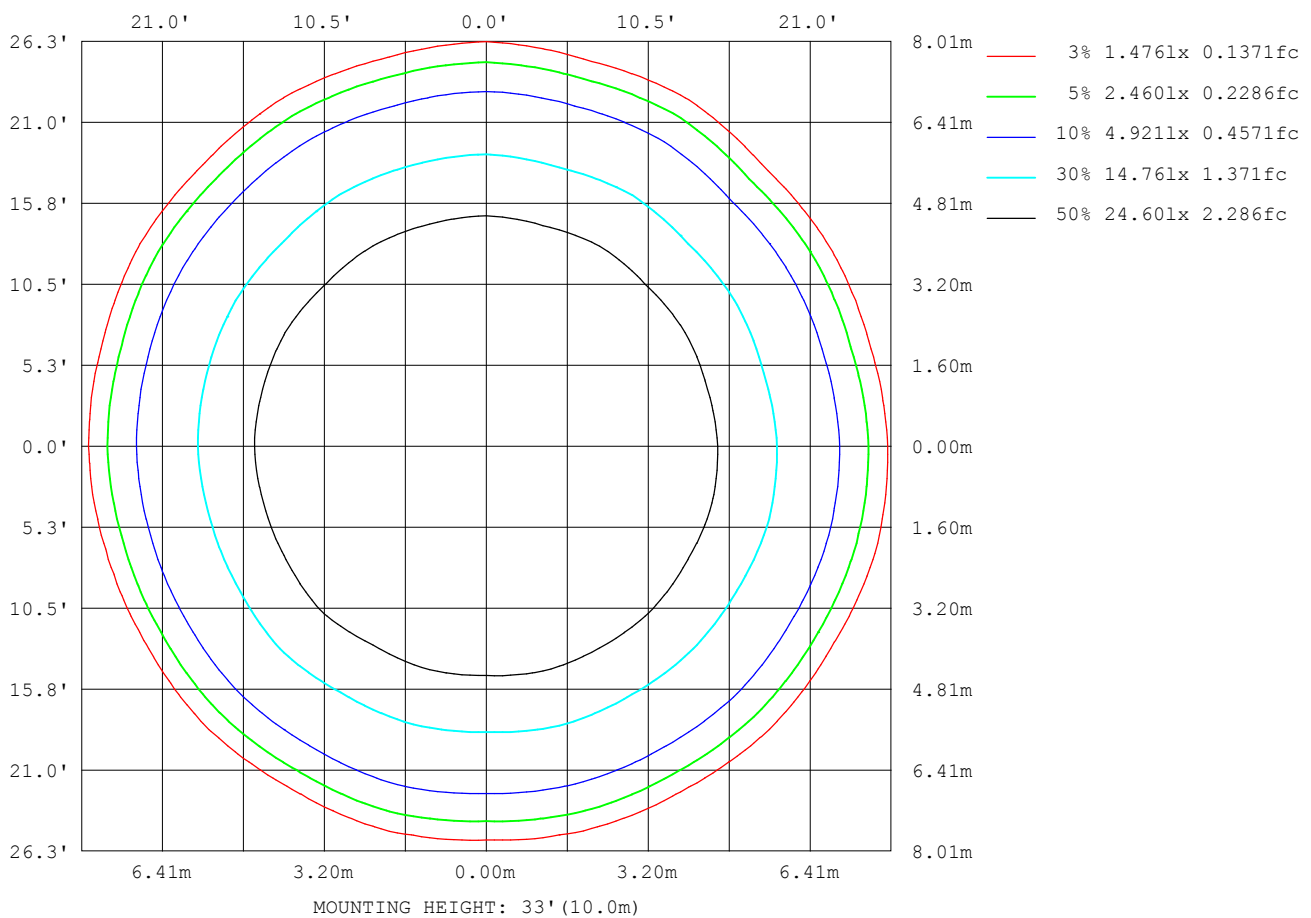
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-05-29

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:225.2V I:0.1830A P:39.90W PF:0.9670 Freq:50.00Hz Lamp Flux:3780.24x1 lm		
NAME: ALT85Z-40G30-Z2-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:78	Shielding Angle:

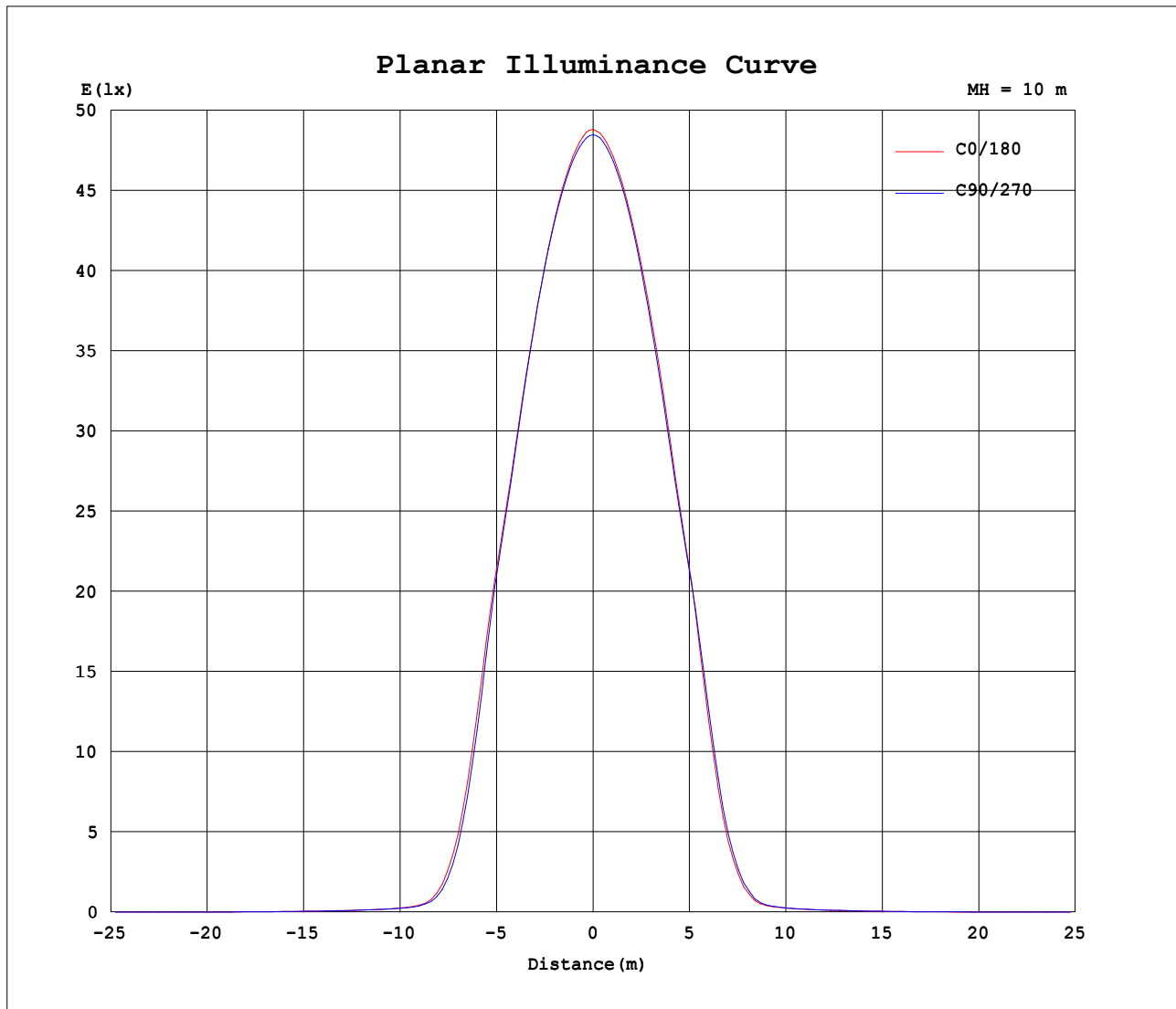
AvgL	cd/m2
L_0~180 (65) av	4344
L_0~180 (75) av	1893
L_0~180 (85) av	5886
L_90~270 (65) av	4491
L_90~270 (75) av	1896
L_90~270 (85) av	5886
L_45 (65) av	4296
L_45 (75) av	1871
L_45 (85) av	5846

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-05-29

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: 2020-05-29

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:

```