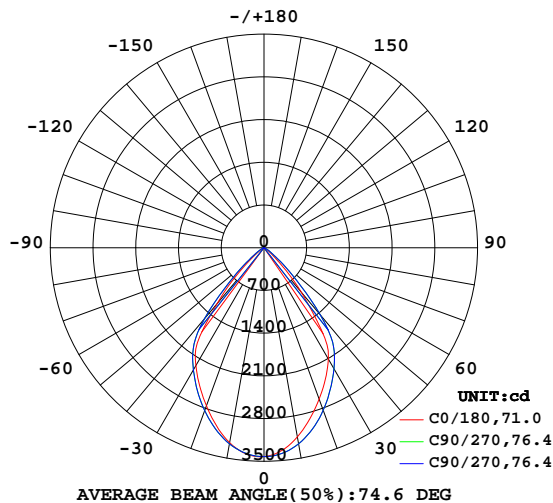


LUMINAIRE PHOTOMETRIC TEST REPORT

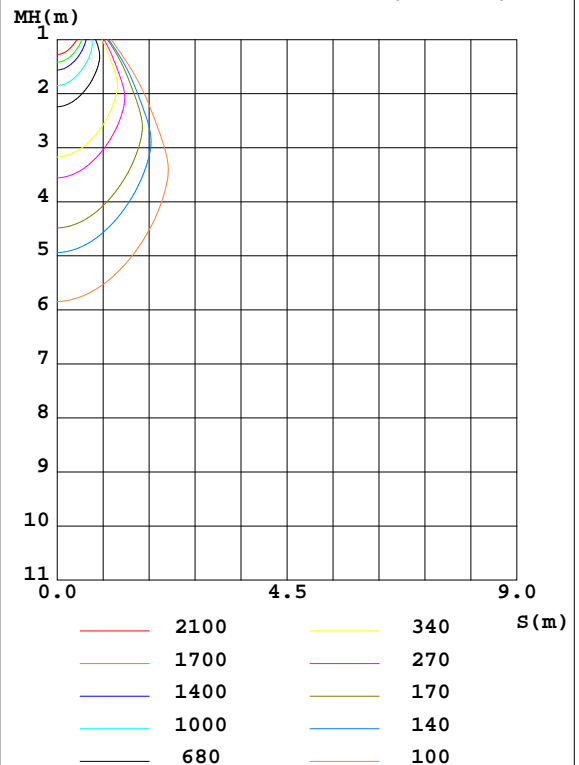
Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 117.16 lm/W			
MODEL	LED542 B34 (35W/4K)	Imax(cd)	3426	S/MH(C0/180)	1.01
NOMINAL POWER(W)	35	LOR(%)	100.0	S/MH(C90/270)	1.04
RATED VOLTAGE(V)		TOTAL FLUX(lm)	4160.0	$\eta$ UP,DN(C0-180)	0.0,48.5
NOMINAL FLUX(lm)	4160.02	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,51.5
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)		$\eta$ down(%)	100.0	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	3149	3263	3244	3262					0- 10	317.4	317.4	7.63,7.63
20	2641	2836	2758	2840					10- 20	846.5	1164	28,28
30	2110	2292	2233	2313					20- 30	1152	2316	55.7,55.7
40	955.2	1440	1192	1520					30- 40	1142	3458	83.1,83.1
50	169.5	352.9	230.6	377.1					40- 50	533.6	3991	95.9,95.9
60	36.34	77.32	46.43	82.11					50- 60	123.1	4115	98.9,98.9
70	8.542	20.35	10.43	21.24					60- 70	31.81	4146	99.7,99.7
80	2.521	8.749	3.254	8.957					70- 80	10.37	4157	99.9,99.9
90	0.2500	0.7183	0.3354	0.6123					80- 90	3.318	4160	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): 3811.5 lm

%lum = 91.6%

%lamp = 91.6%

Conical surface Flux(120deg): 4114.5 lm

%lum = 98.9%

%lamp = 98.9%

0 - 45 DEG Zonal Flux:3811.5      %lum: 91.6%

0 - 60 DEG Zonal Flux:4114.5      %lum: 98.9%

All measured values may vary less than 35 %

from the average measured value in the 0 to 130 deg. zone: 7.4%

All measured values in the 0 to 130 deg. zone

may vary less than 50% from the average value of itself: 11.3%

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:

Test Date:2021-12-09

$\gamma$  Range: 0 - 90DEG

$\gamma$  Interval: 1.0DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446

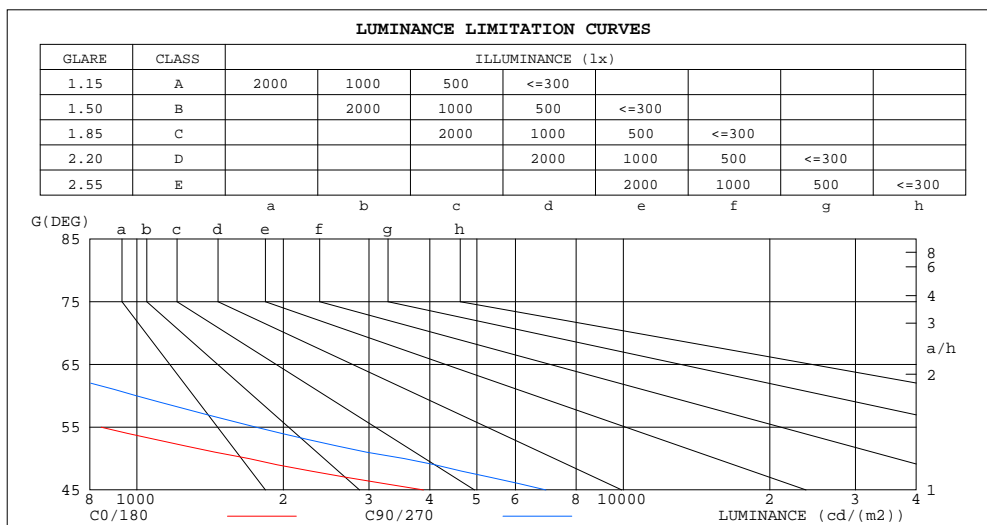
Humidity:65.0%

Test Distance:8.690m [K=1.0000]

Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



LUMINANCE cd/(m2)		
G(°)	C0/180	C90/270
85	70	336
80	94	325
75	124	334
70	161	384
65	257	580
60	468	999
55	845	1759
50	1700	3545
45	3882	6931

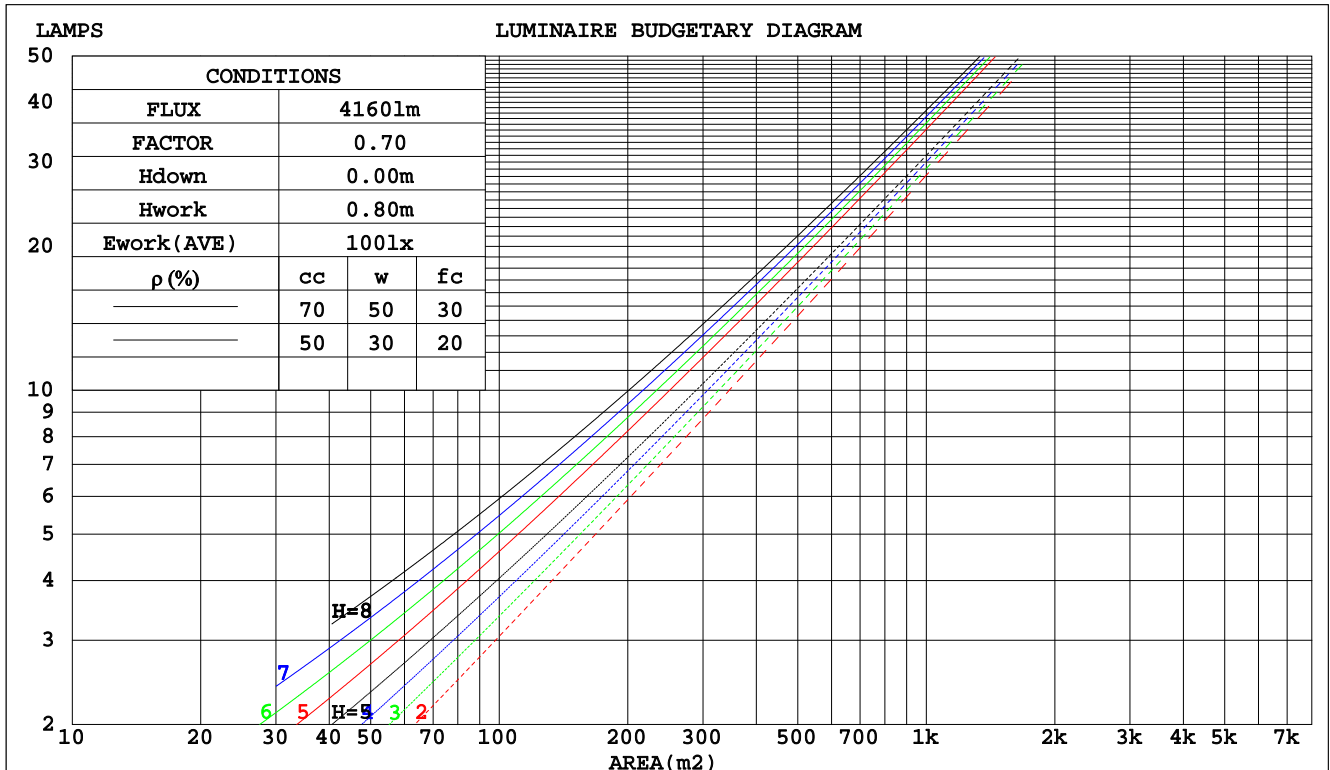
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-12-09

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 8.690m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	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	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.97	.93	.99	.95	.92	.96	.93	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.88	.83	.92	.87	.82	.89	.85	.81	.86	.83	.80	.84	.81	.79	.77
4.0	.86	.80	.75	.85	.79	.75	.83	.78	.74	.80	.76	.73	.79	.75	.72	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.67	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.67	.62	.71	.66	.62	.70	.65	.61	.68	.64	.61	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.57	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.53	.49	.59	.53	.49	.58	.52	.48	.57	.52	.48	.56	.52	.48	.47
10.0	.56	.49	.45	.55	.49	.45	.55	.49	.45	.54	.48	.45	.53	.48	.45	.43



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	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	.196	.111	.035	.189	.108	.034	.177	.101	.032	.165	.095	.031	.154	.089	.029		
2.0	.190	.104	.032	.184	.101	.031	.173	.096	.030	.164	.092	.029	.154	.087	.028		
3.0	.182	.097	.029	.177	.095	.029	.168	.091	.028	.159	.087	.027	.151	.084	.026		
4.0	.174	.090	.027	.170	.089	.026	.161	.086	.026	.154	.083	.025	.147	.080	.024		
5.0	.166	.085	.024	.162	.083	.024	.155	.081	.024	.148	.078	.023	.142	.076	.023		
6.0	.158	.079	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.137	.072	.021		
7.0	.151	.075	.021	.148	.074	.021	.142	.072	.021	.137	.070	.020	.132	.069	.020		
8.0	.144	.070	.020	.142	.070	.020	.137	.068	.019	.132	.067	.019	.127	.065	.019		
9.0	.138	.067	.019	.135	.066	.019	.131	.065	.018	.127	.064	.018	.123	.062	.018		
10.0	.132	.063	.018	.130	.063	.017	.126	.062	.017	.122	.060	.017	.118	.059	.017		

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	.172	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016		
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.067	.054	.046	.039	.017	.015	.013		
3.0	.148	.114	.087	.126	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010		
4.0	.138	.099	.070	.119	.086	.060	.082	.060	.043	.047	.035	.025	.015	.011	.008		
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007		
6.0	.123	.079	.047	.106	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006		
7.0	.117	.072	.040	.101	.062	.035	.070	.044	.025	.041	.026	.015	.013	.008	.005		
8.0	.112	.066	.034	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004		
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004		
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.007	.003		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm										
NAME: LED542 B34 (35W 4000K)					TYPE: 35W			WEIGHT:		
SPEC.: 4000K					DIM.:			SERIAL No.: #1		
MFR.:					SUR.: 0.155			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	14.1	15.2	14.3	15.4	15.5	15.3	16.4	15.6	16.6	16.8
3H	13.9	14.9	14.2	15.1	15.3	15.2	16.2	15.5	16.4	16.6
4H	13.8	14.8	14.1	15.0	15.2	15.1	16.0	15.4	16.3	16.5
6H	13.8	14.6	14.1	14.9	15.1	15.0	15.9	15.3	16.2	16.4
8H	13.7	14.5	14.0	14.8	15.1	15.0	15.8	15.3	16.1	16.4
12H	13.7	14.5	14.0	14.7	15.0	15.0	15.8	15.3	16.0	16.3
4H 2H	13.9	14.8	14.2	15.0	15.3	15.1	16.0	15.4	16.3	16.5
3H	13.7	14.5	14.0	14.8	15.1	15.0	15.8	15.3	16.0	16.3
4H	13.6	14.3	14.0	14.6	15.0	14.9	15.6	15.2	15.9	16.2
6H	13.5	14.2	13.9	14.5	14.8	14.8	15.4	15.2	15.8	16.1
8H	13.5	14.1	13.9	14.4	14.8	14.8	15.3	15.2	15.7	16.1
12H	13.4	14.0	13.9	14.3	14.7	14.7	15.3	15.1	15.6	16.0
8H 4H	13.5	14.1	13.9	14.4	14.8	14.7	15.3	15.1	15.7	16.0
6H	13.4	13.9	13.8	14.3	14.7	14.7	15.1	15.1	15.5	16.0
8H	13.4	13.8	13.8	14.2	14.6	14.6	15.0	15.1	15.5	15.9
12H	13.3	13.7	13.8	14.1	14.6	14.6	15.0	15.1	15.4	15.9
12H 4H	13.4	14.0	13.9	14.3	14.7	14.7	15.2	15.1	15.6	16.0
6H	13.4	13.8	13.8	14.2	14.6	14.6	15.0	15.1	15.5	15.9
8H	13.3	13.7	13.8	14.1	14.6	14.6	14.9	15.1	15.4	15.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.5 / -10.4					+ 2.8 / - 8.3				
1.5H	+ 4.1 / - 7.2					+ 4.4 / - 7.3				
2.0H	+ 5.5 / - 6.9					+ 6.5 / - 7.3				

CIE Pub.117, 4160 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 5.0$ )  
Area: 0.155 m<sup>2</sup>

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

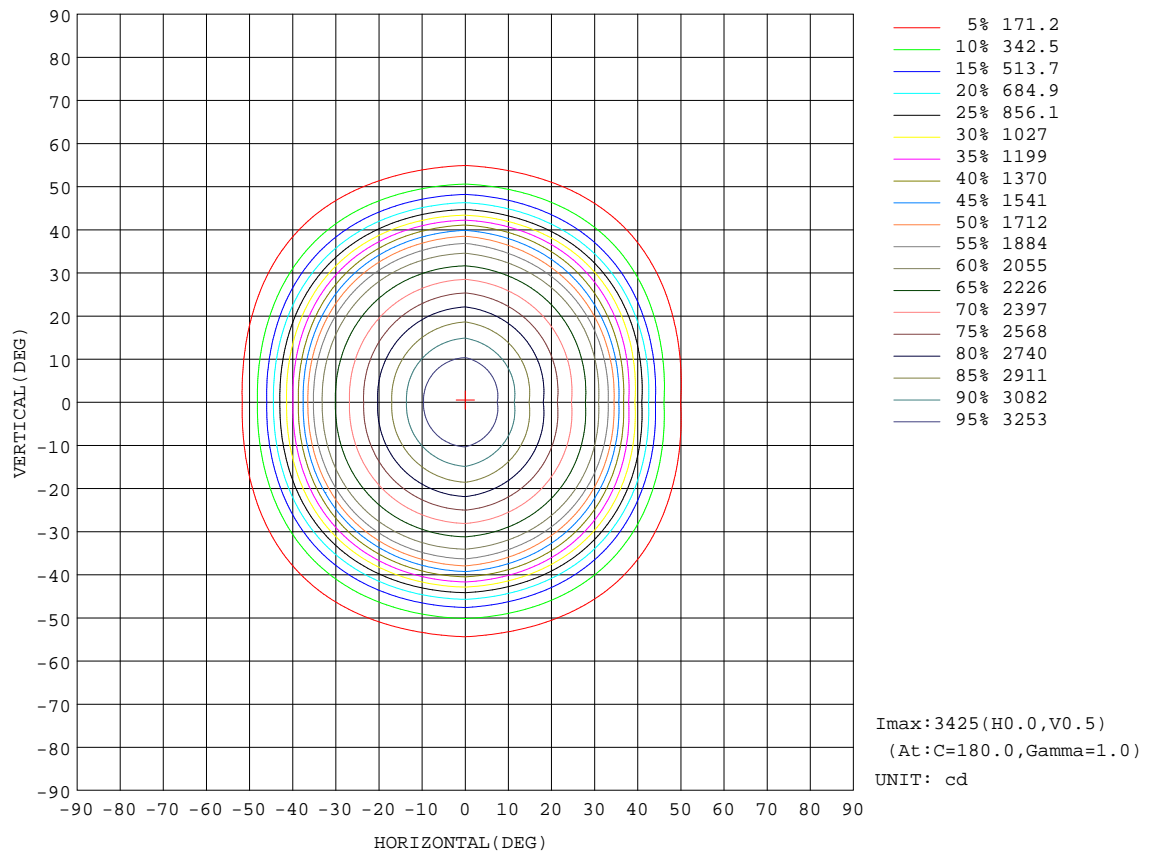
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	81	73	69	80	73	69	79	73	69	64
0.80	89	82	78	89	82	78	87	81	77	73
1.00	95	89	84	94	88	84	93	88	84	79
1.25	100	94	90	99	93	90	97	92	89	84
1.50	103	98	94	102	97	93	100	95	92	87
2.00	107	102	98	105	101	98	102	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	104	109	105	102	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	109	108	108	106	104	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



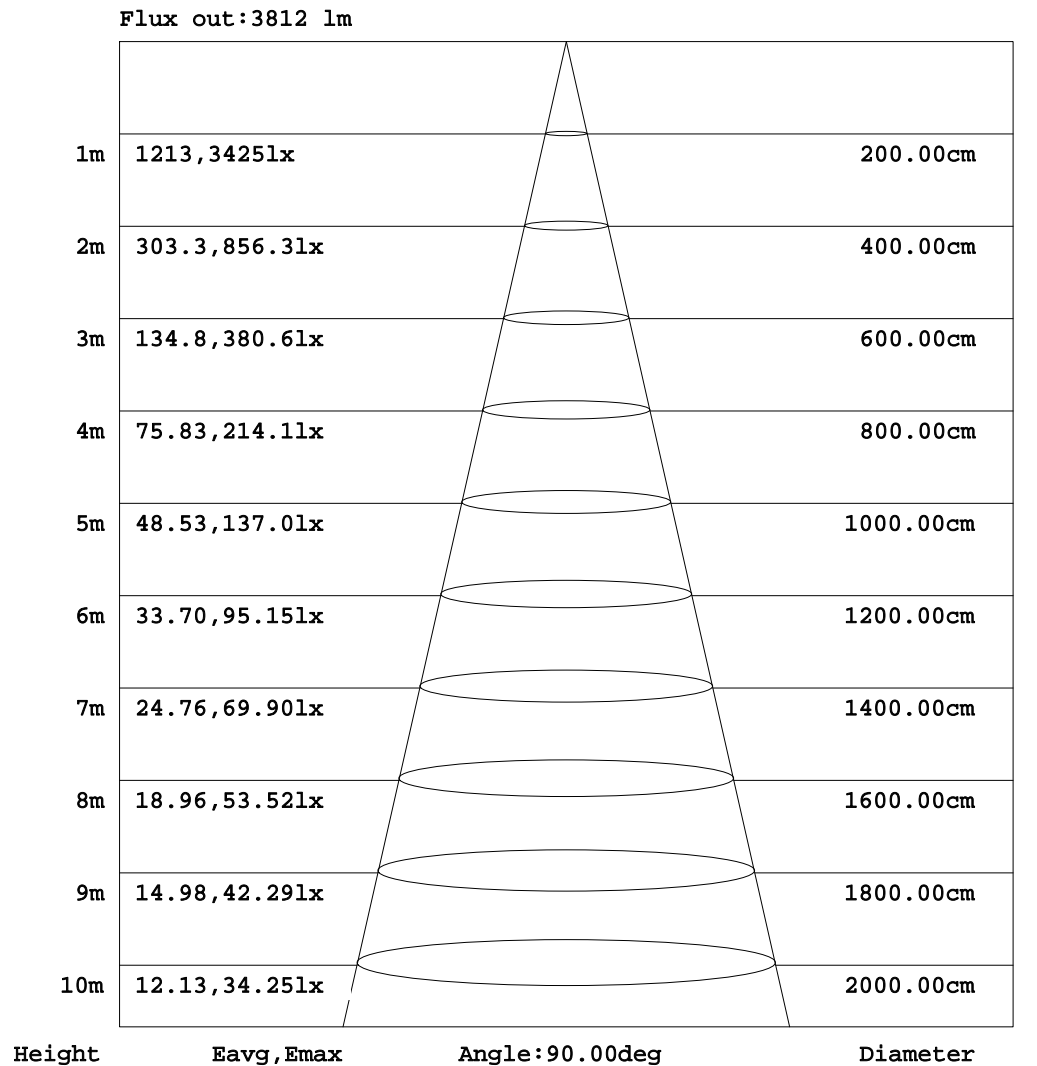
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:



AAI Figure

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



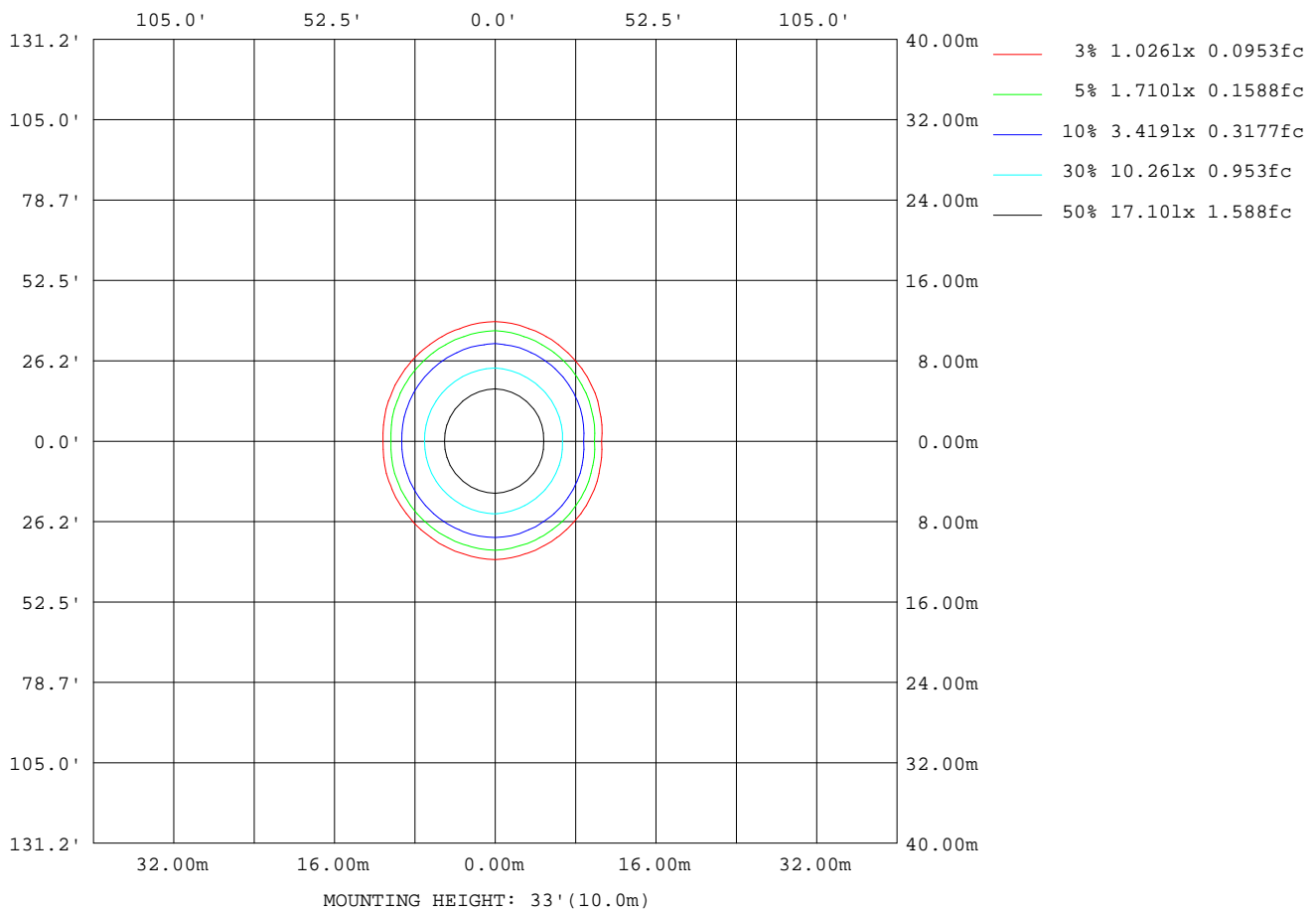
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

ISOLUX DIAGRAM

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-12-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 8.690m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:230.16V I:0.1630A P:35.508W PF:0.9467 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:4160.02x1 lm		
NAME: LED542 B34 (35W 4000K)	TYPE: 35W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

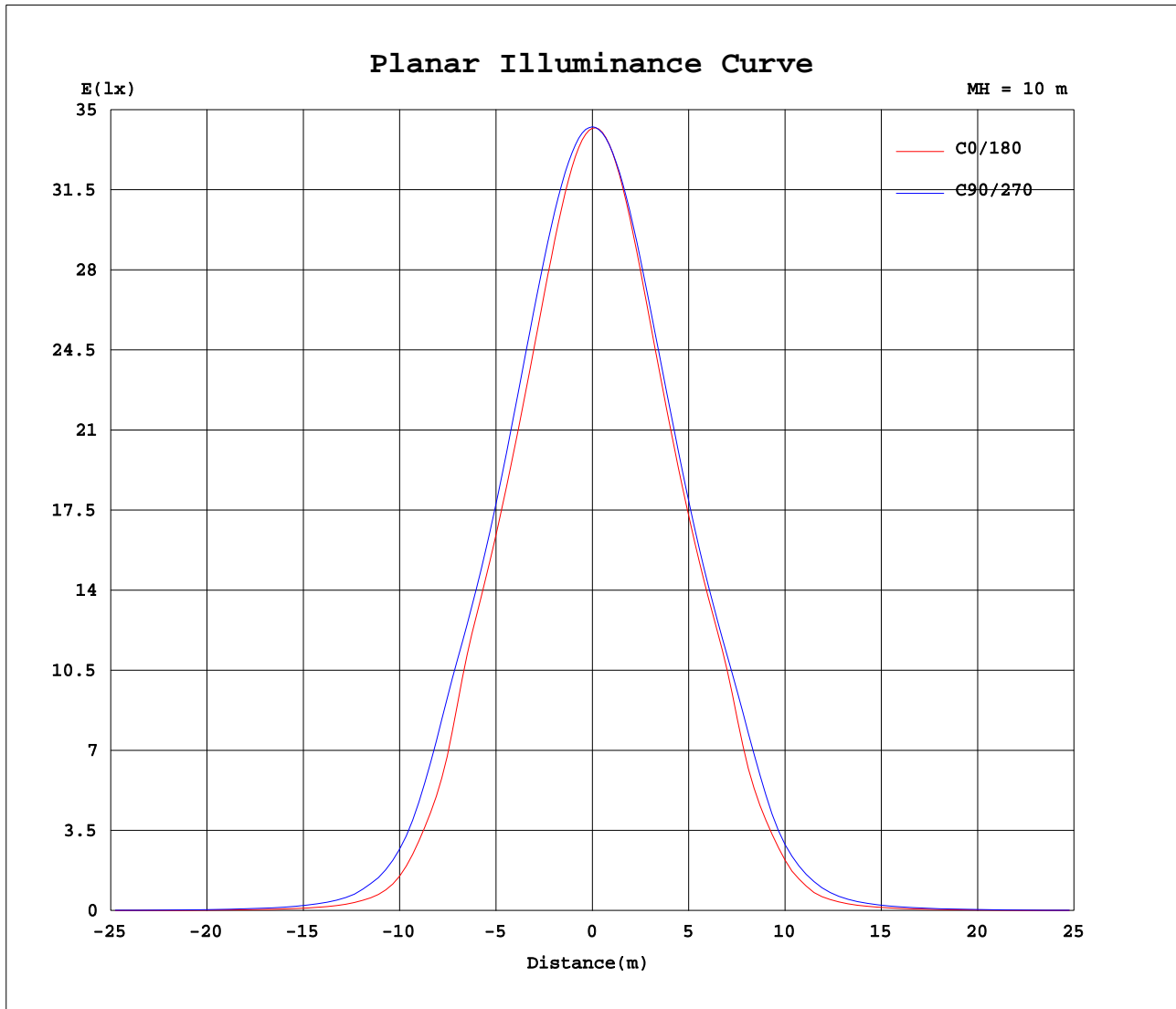
AvgL	cd/m2
L_0~180(65)av	294
L_0~180(75)av	138
L_0~180(85)av	84
L_90~270(65)av	607
L_90~270(75)av	340
L_90~270(85)av	347
L_45(65)av	492
L_45(75)av	265
L_45(85)av	249

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-12-09

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-12-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 8.690m [K=1.0000]  
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:8.690m [K=1.0000]
Remarks:

```