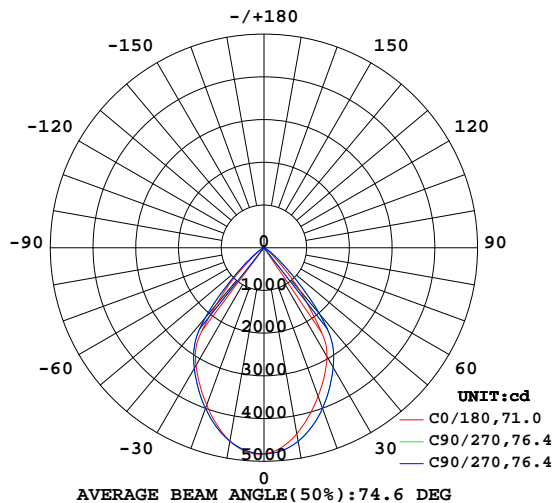


LUMINAIRE PHOTOMETRIC TEST REPORT

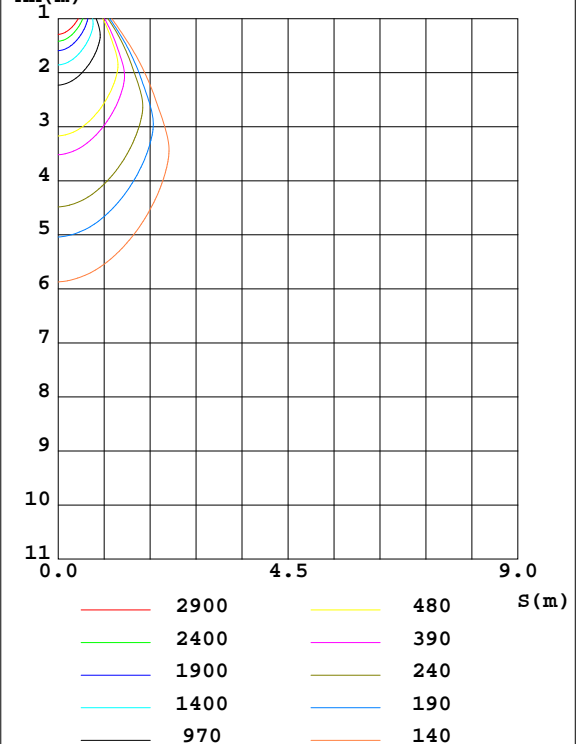
Test:U:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 114.61 lm/W			
MODEL	LED542 B34 (50W/4K)	I _{max} (cd)	4832	S/MH(C0/180)	1.02
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.04
RATED VOLTAGE(V)		TOTAL FLUX(lm)	5874.6	η UP,DN(C0-180)	0.0,48.1
NOMINAL FLUX(lm)	5874.6	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)		η 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

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	4422	4602	4597	4600					0- 10	447.6	447.6	7.62,7.62
20	3703	4004	3916	4005					10- 20	1194	1642	27.9,27.9
30	2951	3238	3182	3264					20- 30	1626	3268	55.6,55.6
40	1300	2030	1743	2141					30- 40	1611	4879	83.1,83.1
50	223.8	485.2	365.1	533.6					40- 50	754.6	5634	95.9,95.9
60	49.28	109.7	69.50	116.5					50- 60	175.6	5809	98.9,98.9
70	11.88	28.71	15.66	30.42					60- 70	45.36	5855	99.7,99.7
80	3.432	12.29	4.916	13.51					70- 80	14.88	5870	99.9,99.9
90	0.3654	1.036	0.5481	1.652					80- 90	4.942	5875	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): 5379 lm

%lum = 91.6%

%lamp = 91.6%

Conical surface Flux(120deg): 5809.4 lm

%lum = 98.9%

%lamp = 98.9%

0 - 45 DEG Zonal Flux:5379 %lum: 91.6%

0 - 60 DEG Zonal Flux:5809.4 %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

γ Range: 0 - 90DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446

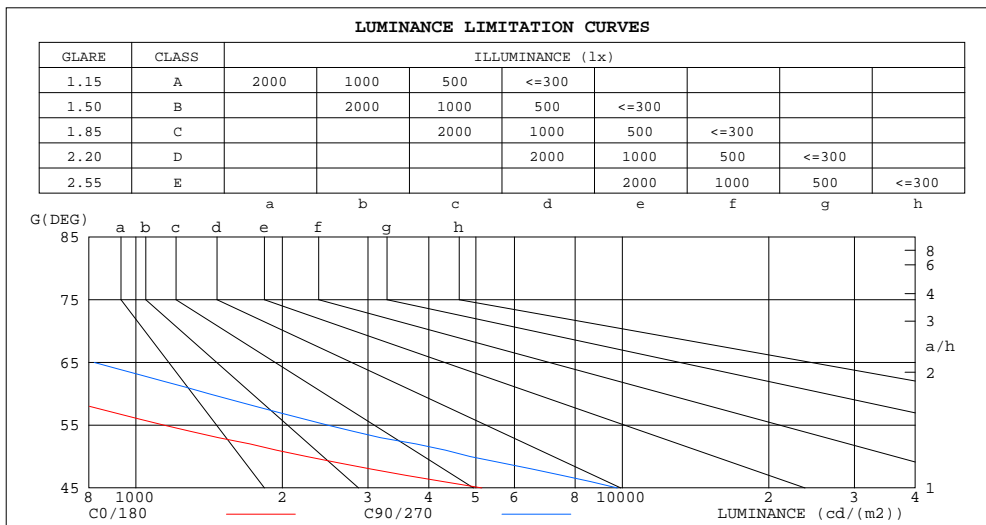
Humidity:65.0%

Test Distance:8.690m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	93	469
80	128	457
75	172	474
70	224	541
65	352	821
60	636	1415
55	1143	2482
50	2247	4868
45	5141	9765

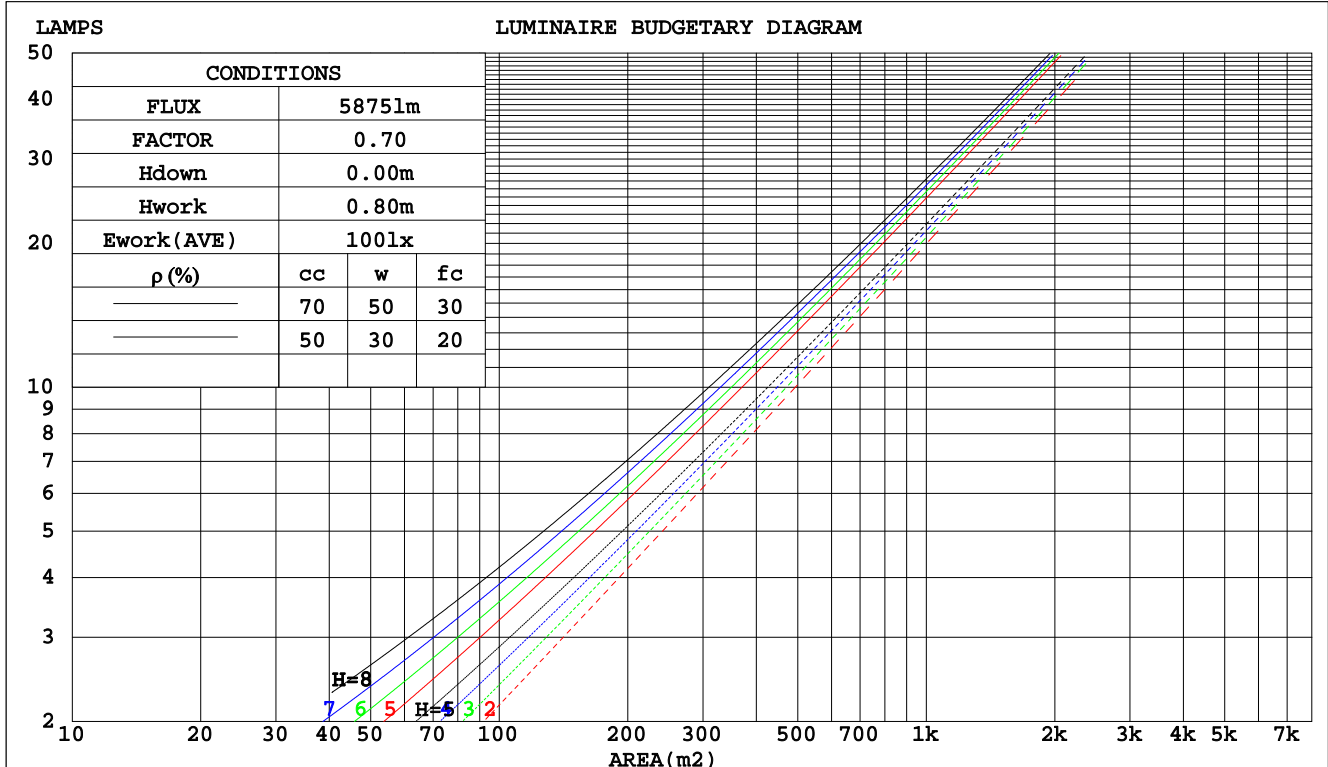
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2021-12-09

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:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	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	.82	.78	.74	.80	.76	.73	.78	.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	.51	.48	.47
10.0	.56	.49	.45	.55	.49	.45	.54	.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:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	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	.112	.035	.189	.108	.034	.177	.101	.032	.165	.095	.031	.154	.089	.029		
2.0	.190	.104	.032	.184	.102	.031	.174	.097	.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	.162	.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	.143	.072	.021	.137	.070	.020	.132	.069	.020		
8.0	.144	.071	.020	.142	.070	.020	.137	.068	.019	.132	.067	.019	.127	.065	.019		
9.0	.138	.067	.019	.136	.066	.019	.131	.065	.018	.127	.064	.018	.123	.062	.018		
10.0	.132	.063	.018	.130	.063	.017	.126	.062	.017	.122	.061	.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	.127	.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	.124	.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:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm										
NAME: LED542 B34 (50W 4000K)					TYPE: 50W			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	15.1	16.2	15.4	16.4	16.6	16.5	17.6	16.7	17.7	17.9
3H	15.0	16.0	15.2	16.2	16.4	16.3	17.3	16.6	17.5	17.7
4H	14.9	15.8	15.2	16.0	16.3	16.3	17.2	16.5	17.4	17.6
6H	14.8	15.7	15.1	15.9	16.2	16.2	17.0	16.5	17.3	17.5
8H	14.7	15.6	15.1	15.8	16.1	16.1	17.0	16.4	17.2	17.5
12H	14.7	15.5	15.0	15.8	16.1	16.1	16.9	16.4	17.2	17.4
4H 2H	14.9	15.8	15.2	16.1	16.3	16.2	17.2	16.5	17.4	17.6
3H	14.7	15.5	15.1	15.8	16.1	16.1	16.9	16.4	17.2	17.4
4H	14.7	15.4	15.0	15.7	16.0	16.0	16.7	16.4	17.0	17.3
6H	14.6	15.2	14.9	15.5	15.9	15.9	16.6	16.3	16.9	17.3
8H	14.5	15.1	14.9	15.5	15.8	15.9	16.5	16.3	16.8	17.2
12H	14.5	15.0	14.9	15.4	15.8	15.9	16.4	16.3	16.8	17.2
8H 4H	14.5	15.1	14.9	15.5	15.8	15.9	16.5	16.3	16.8	17.2
6H	14.4	14.9	14.9	15.3	15.7	15.8	16.3	16.2	16.7	17.1
8H	14.4	14.8	14.8	15.2	15.7	15.8	16.2	16.2	16.6	17.0
12H	14.3	14.7	14.8	15.1	15.6	15.7	16.1	16.2	16.5	17.0
12H 4H	14.5	15.0	14.9	15.4	15.8	15.8	16.4	16.2	16.7	17.1
6H	14.4	14.8	14.8	15.2	15.7	15.8	16.2	16.2	16.6	17.0
8H	14.3	14.7	14.8	15.1	15.6	15.7	16.1	16.2	16.5	17.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.5 / -10.4					+ 2.8 / - 8.2				
1.5H	+ 4.2 / - 7.2					+ 4.4 / - 7.4				
2.0H	+ 5.4 / - 6.9					+ 6.4 / - 7.4				

CIE Pub.117, 5875 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.2$)
Area: 0.155 m²

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:

UTILIZATION FACTORS TABLE

Test:U:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

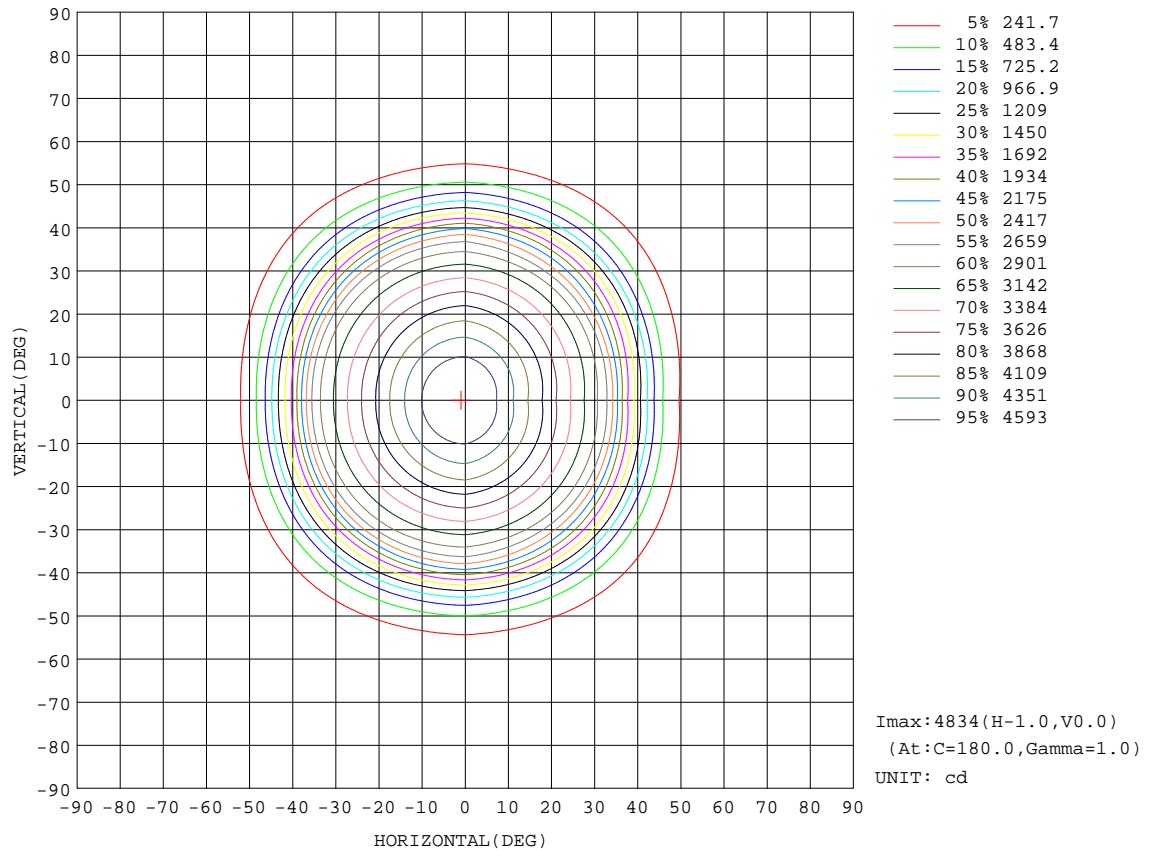
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	81	73	69	80	73	69	79	73	69	64
0.80	89	82	78	89	82	78	87	81	77	73
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	102	100	94
4.00	113	109	107	111	108	106	107	105	103	95
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

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:

ISOCANDELA DIAGRAM

Test:U:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

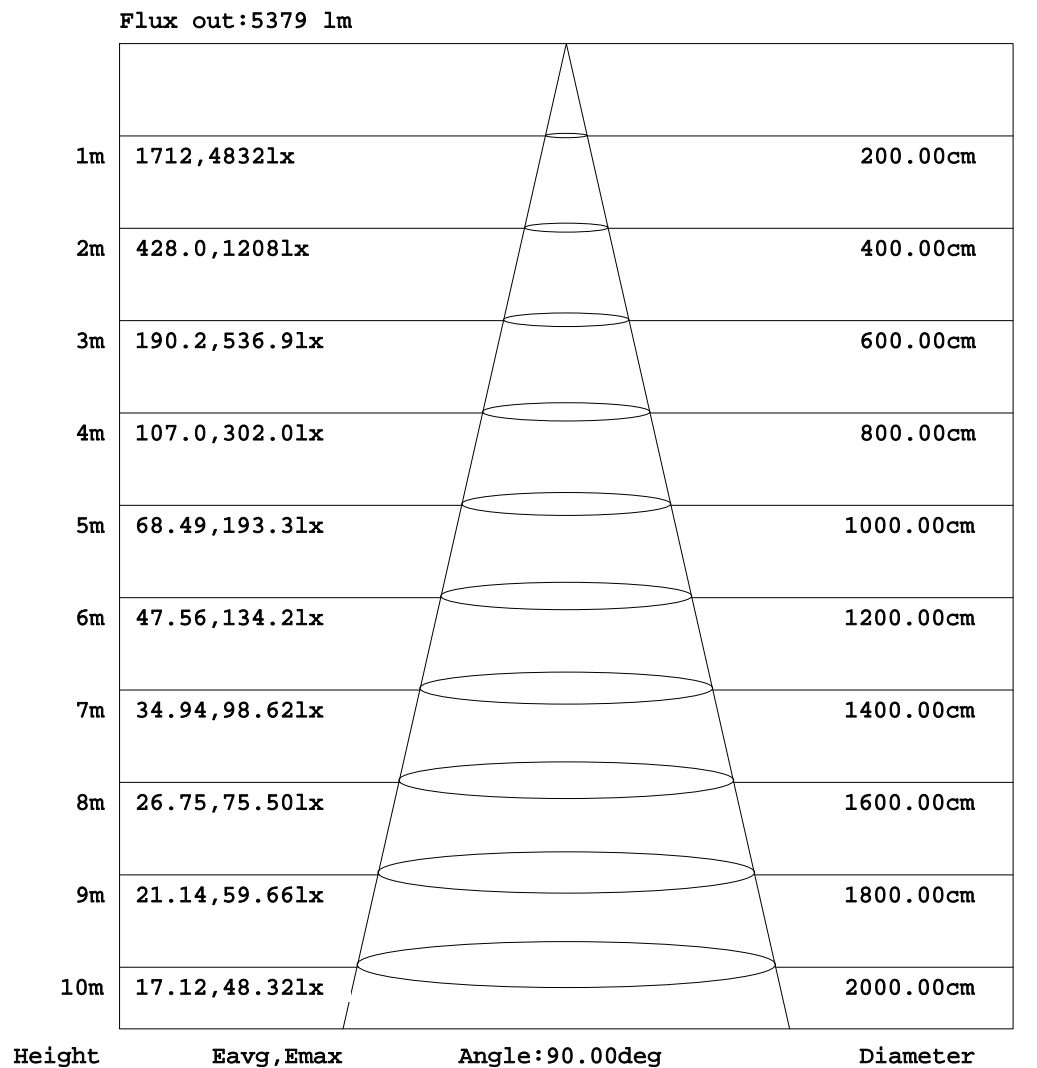


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-09

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:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



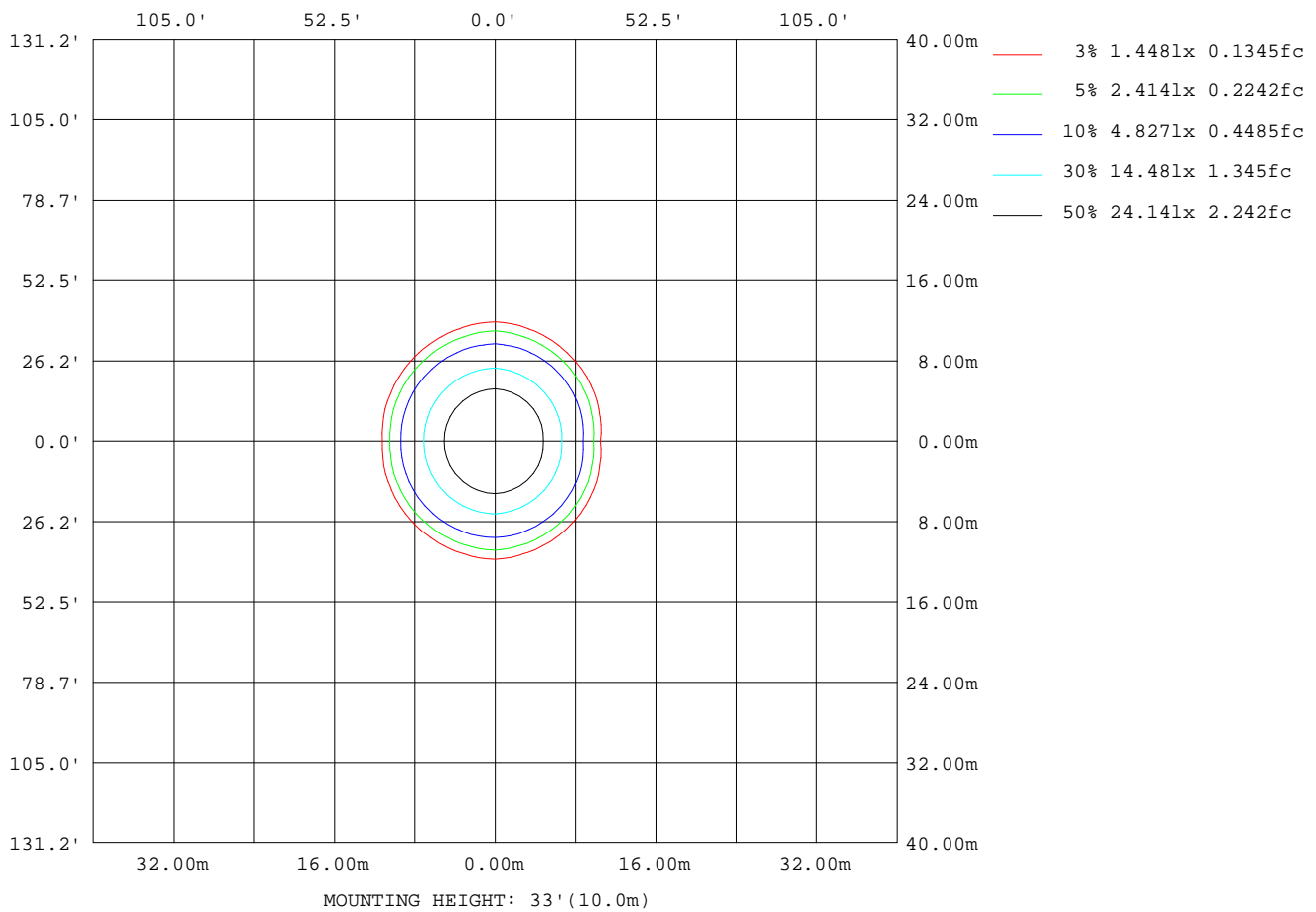
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	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:

LED Avg.L Report

Test:U:230.13V I:0.2302A P:51.258W PF:0.9674 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5874.6x1 lm		
NAME: LED542 B34 (50W 4000K)	TYPE: 50W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

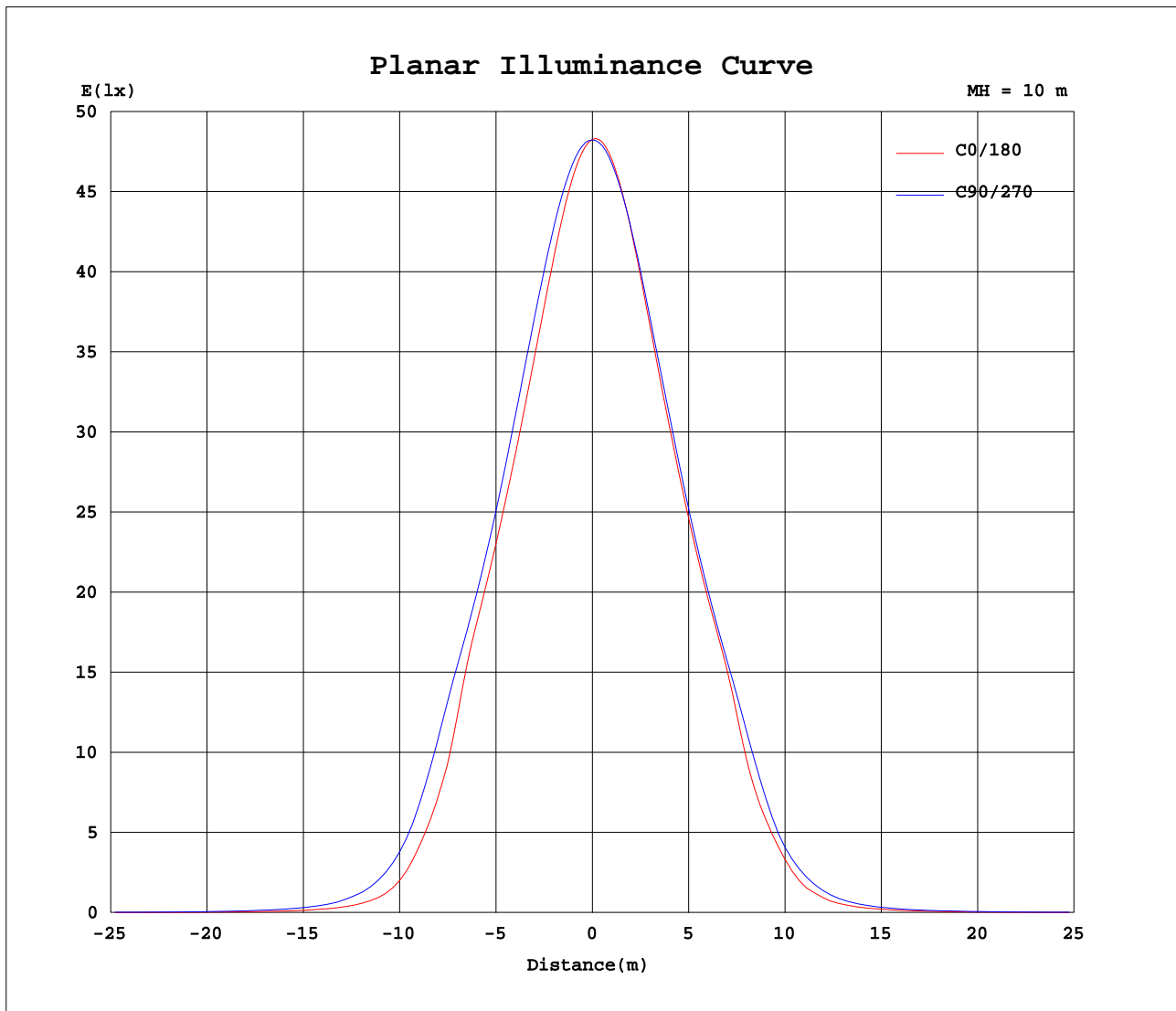
AvgL	cd/m2
L_0~180(65)av	425
L_0~180(75)av	199
L_0~180(85)av	122
L_90~270(65)av	861
L_90~270(75)av	487
L_90~270(85)av	523
L_45(65)av	702
L_45(75)av	381
L_45(85)av	374

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

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:

```

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

```