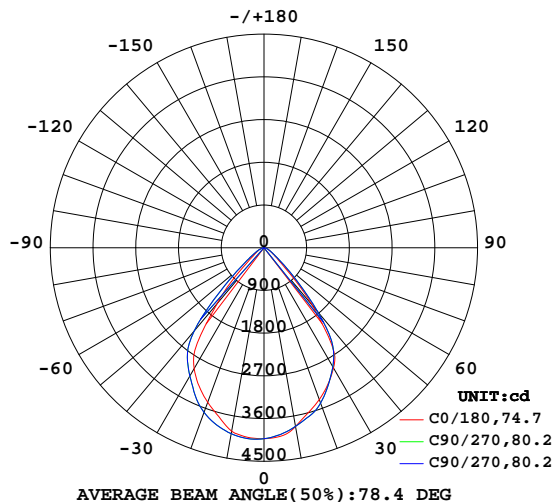


LUMINAIRE PHOTOMETRIC TEST REPORT

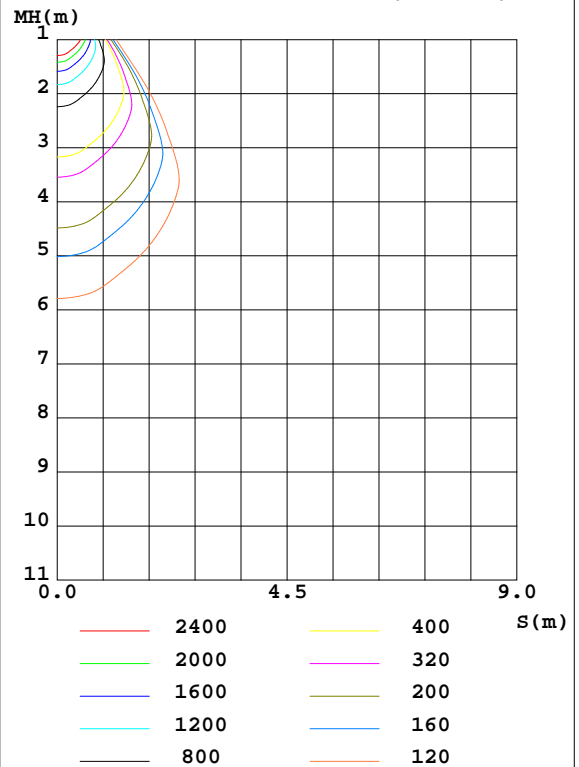
Test:U:230.16V I:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.09 lm/W			
MODEL	LED542 W34 (50W/3K)	Imax(cd)	4038	S/MH(C0/180)	1.08
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.16
RATED VOLTAGE(V)		TOTAL FLUX(lm)	5741.4	η UP,DN(C0-180)	0.0,48.2
NOMINAL FLUX(lm)	5741.4	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.8
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	3826	3823	3924	3978					0- 10	378.0	378.0	6.58,6.58
20	3405	3485	3466	3692					10- 20	1045	1423	24.8,24.8
30	2928	2902	2943	3122					20- 30	1499	2921	50.9,50.9
40	1579	1765	1535	2291					30- 40	1553	4474	77.9,77.9
50	385.4	490.4	408.0	667.4					40- 50	792.5	5267	91.7,91.7
60	167.3	177.5	170.7	224.7					50- 60	264.5	5531	96.3,96.3
70	84.03	82.65	91.75	92.23					60- 70	128.9	5660	98.6,98.6
80	32.47	34.09	38.36	35.83					70- 80	62.99	5723	99.7,99.7
90	0.6888	1.425	1.609	1.334					80- 90	18.11	5741	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): 4984.5 lm

%lum = 86.8%

%lamp = 86.8%

Conical surface Flux(120deg): 5531.4 lm

%lum = 96.3%

%lamp = 96.3%

0 - 45 DEG Zonal Flux:4984.5 %lum: 86.8%

0 - 60 DEG Zonal Flux:5531.4 %lum: 96.3%

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: 11.5%

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

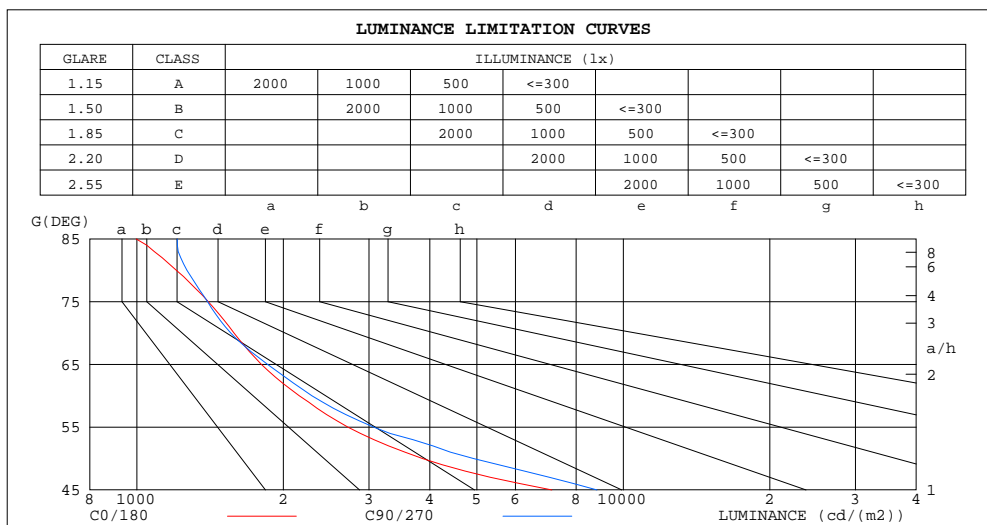
Humidity:65.0%

Test Distance:8.690m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.16V I:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	997	1210
80	1206	1267
75	1402	1397
70	1584	1560
65	1803	1857
60	2158	2292
55	2716	3071
50	3867	4924
45	7128	8826

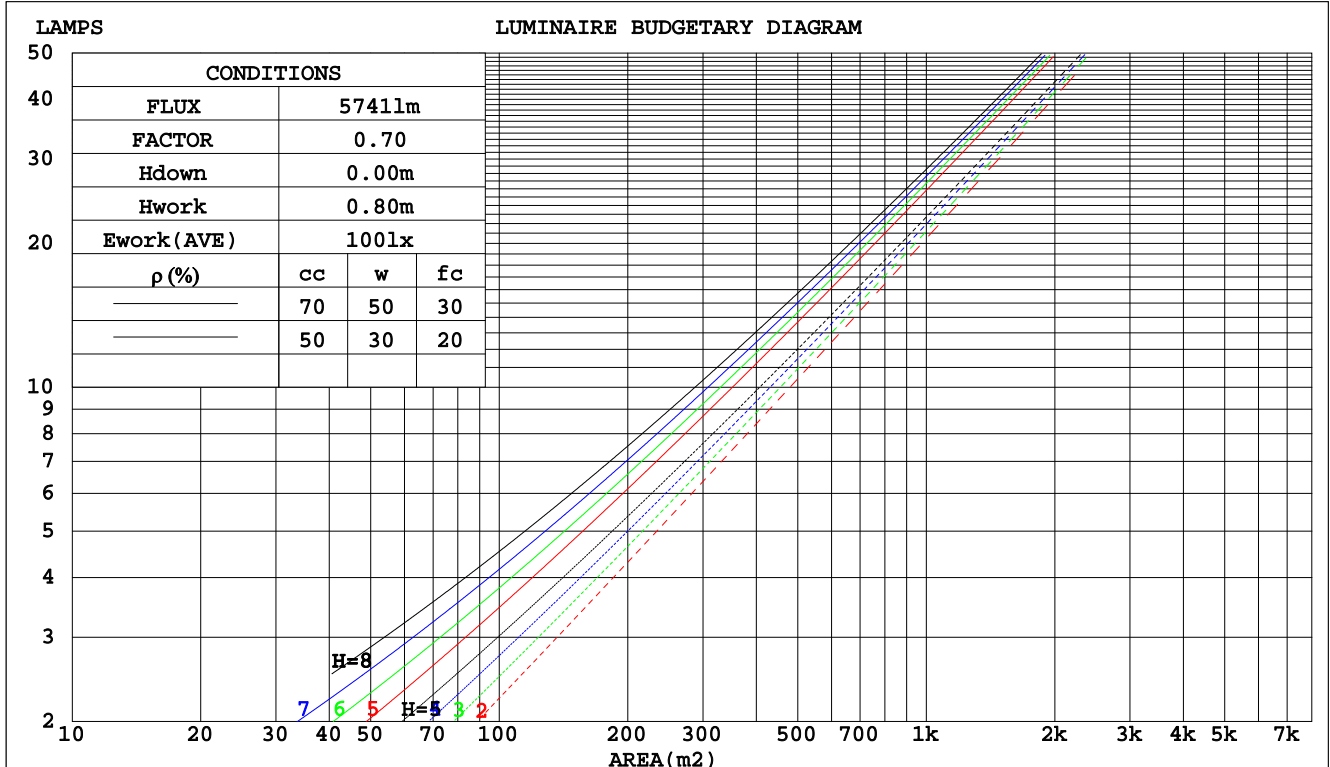
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-09

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:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	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															



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:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	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	.212	.120	.038	.205	.117	.037	.192	.110	.035	.180	.104	.033	.170	.098	.032		
2.0	.204	.112	.034	.198	.109	.034	.188	.104	.032	.178	.100	.031	.168	.095	.030		
3.0	.195	.104	.031	.190	.102	.031	.180	.098	.030	.171	.094	.029	.163	.090	.028		
4.0	.185	.096	.028	.180	.094	.028	.172	.091	.027	.165	.088	.027	.157	.086	.026		
5.0	.175	.089	.026	.172	.088	.026	.164	.086	.025	.158	.083	.025	.151	.081	.024		
6.0	.167	.084	.024	.163	.082	.024	.157	.080	.023	.151	.078	.023	.145	.076	.023		
7.0	.158	.078	.022	.155	.077	.022	.150	.076	.022	.144	.074	.022	.139	.072	.021		
8.0	.151	.074	.021	.148	.073	.021	.143	.071	.020	.138	.070	.020	.134	.069	.020		
9.0	.144	.070	.019	.141	.069	.019	.137	.068	.019	.132	.066	.019	.128	.065	.019		
10.0	.137	.066	.018	.135	.065	.018	.131	.064	.018	.127	.063	.018	.123	.062	.018		

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	.142	.148	.135	.122	.102	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.161	.132	.109	.138	.114	.094	.094	.079	.065	.054	.046	.038	.017	.015	.013	
3.0	.150	.114	.085	.129	.098	.074	.088	.068	.052	.051	.040	.030	.016	.013	.010	
4.0	.141	.100	.068	.121	.086	.059	.083	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.133	.088	.055	.114	.076	.048	.079	.053	.034	.046	.031	.020	.015	.010	.007	
6.0	.126	.080	.046	.109	.069	.040	.075	.048	.028	.043	.028	.017	.014	.009	.006	
7.0	.120	.072	.039	.103	.063	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.115	.066	.033	.099	.058	.029	.068	.040	.021	.040	.024	.012	.013	.008	.004	
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.105	.057	.025	.090	.050	.022	.063	.035	.016	.037	.021	.009	.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:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHdi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	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	16.2	17.4	16.5	17.5	17.7	16.5	17.7	16.8	17.9	18.0
3H	16.3	17.3	16.5	17.5	17.7	16.6	17.6	16.8	17.8	18.0
4H	16.3	17.3	16.6	17.5	17.8	16.6	17.6	16.9	17.8	18.0
6H	16.3	17.2	16.6	17.5	17.7	16.6	17.5	16.9	17.8	18.0
8H	16.3	17.2	16.6	17.4	17.7	16.6	17.5	16.9	17.7	18.0
12H	16.3	17.1	16.6	17.4	17.7	16.6	17.4	16.9	17.7	18.0
4H 2H	16.1	17.1	16.4	17.3	17.6	16.4	17.4	16.7	17.6	17.9
3H	16.2	17.1	16.6	17.4	17.7	16.5	17.4	16.8	17.6	17.9
4H	16.3	17.1	16.7	17.4	17.7	16.6	17.4	16.9	17.7	18.0
6H	16.4	17.1	16.8	17.4	17.8	16.6	17.3	17.0	17.7	18.0
8H	16.4	17.0	16.8	17.4	17.8	16.7	17.3	17.1	17.6	18.0
12H	16.4	17.0	16.8	17.3	17.7	16.7	17.2	17.1	17.6	18.0
8H 4H	16.3	16.9	16.7	17.3	17.6	16.5	17.2	16.9	17.5	17.9
6H	16.4	16.9	16.8	17.3	17.7	16.6	17.2	17.1	17.6	18.0
8H	16.4	16.9	16.9	17.3	17.8	16.7	17.1	17.1	17.6	18.0
12H	16.5	16.8	16.9	17.3	17.8	16.7	17.1	17.2	17.6	18.0
12H 4H	16.3	16.8	16.7	17.2	17.6	16.5	17.1	16.9	17.4	17.8
6H	16.4	16.8	16.8	17.2	17.7	16.6	17.1	17.1	17.5	17.9
8H	16.4	16.8	16.9	17.3	17.7	16.7	17.1	17.1	17.5	18.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.8 / - 3.5					+ 2.0 / - 3.6				
1.5H	+ 3.4 / - 3.1					+ 3.4 / - 3.4				
2.0H	+ 3.3 / - 1.7					+ 4.1 / - 2.2				

CIE Pub.117, 5741 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.1$)
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:230.16V I:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

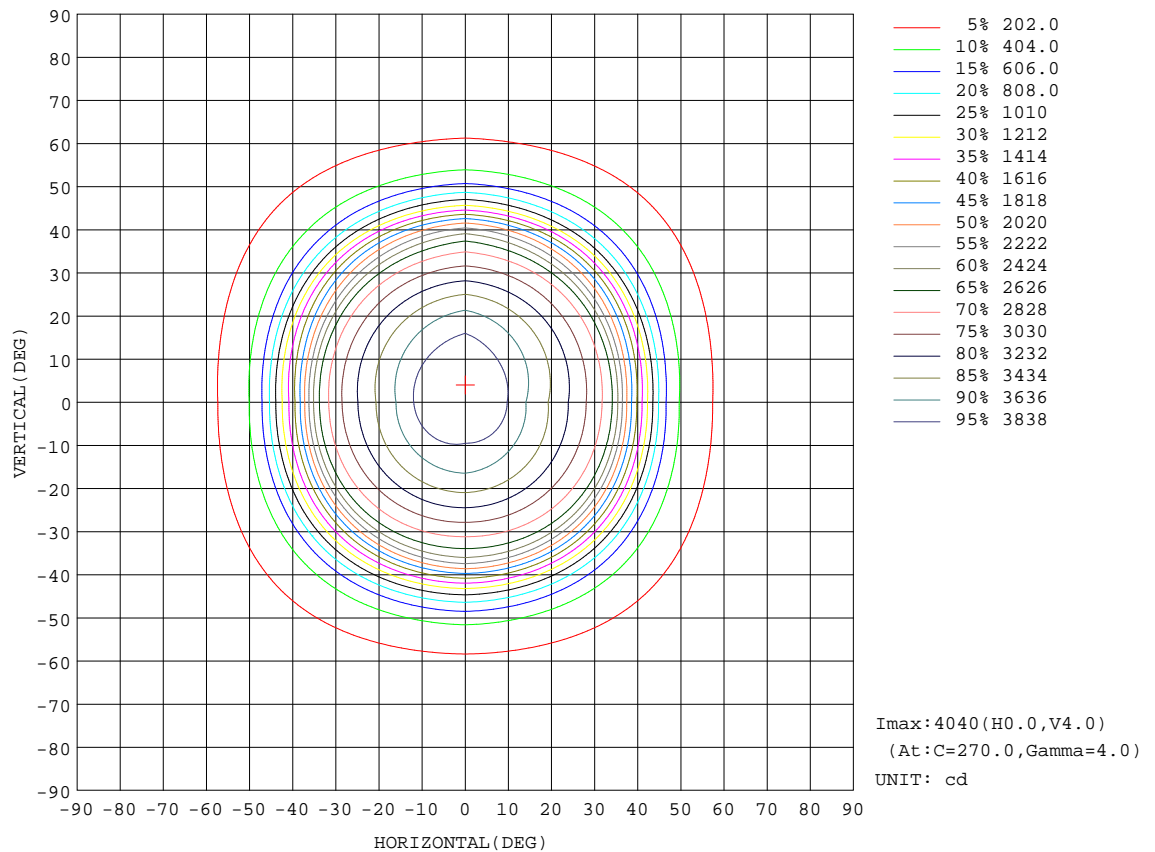
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	69	65	76	69	65	60
0.80	86	79	74	86	78	74	84	78	73	69
1.00	93	85	81	92	85	81	90	85	80	75
1.25	98	91	87	97	91	86	94	89	86	81
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	90
3.00	109	105	102	108	104	101	104	101	98	92
4.00	112	108	105	110	107	104	106	103	101	94
5.00	113	110	108	111	108	106	107	105	103	95
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:230.16V I:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

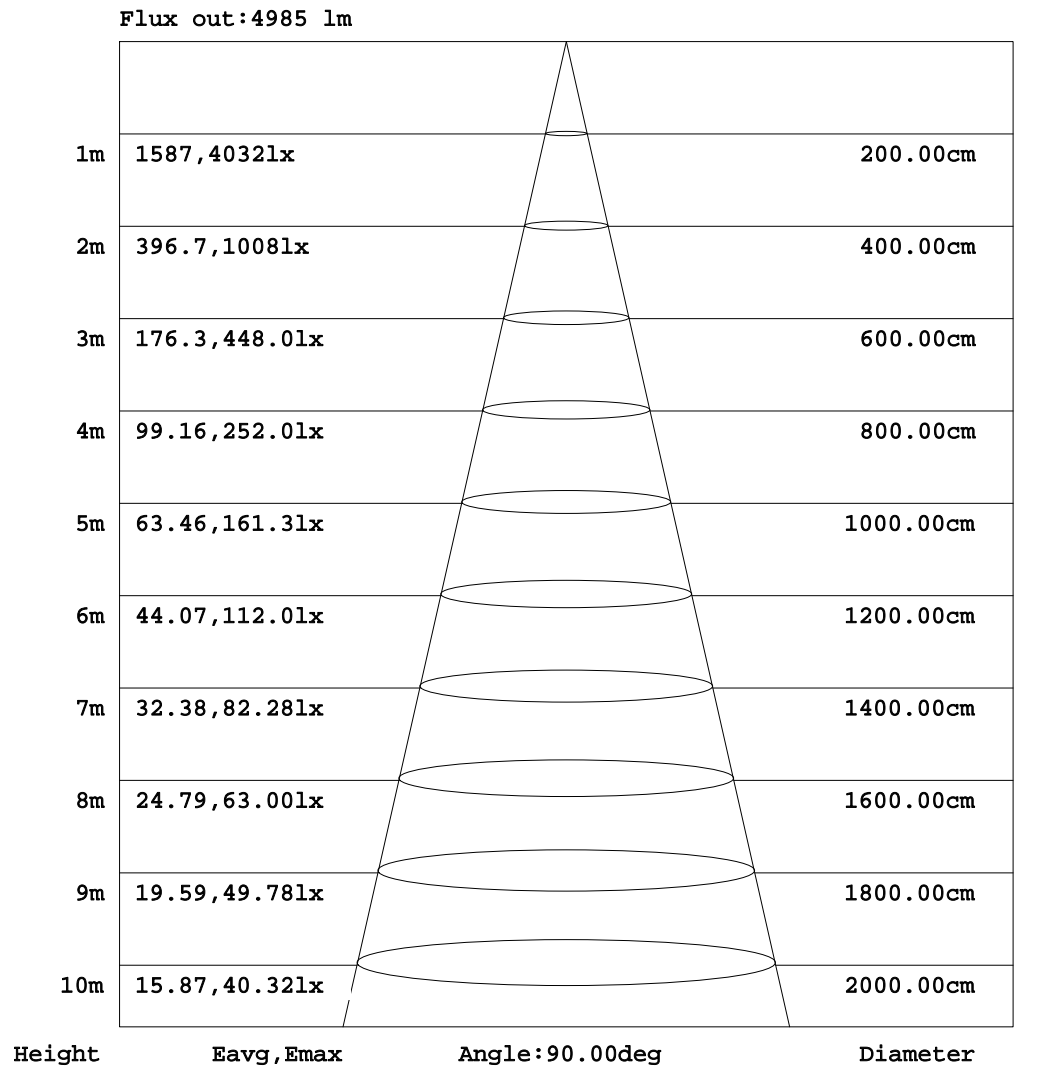


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-09

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:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:



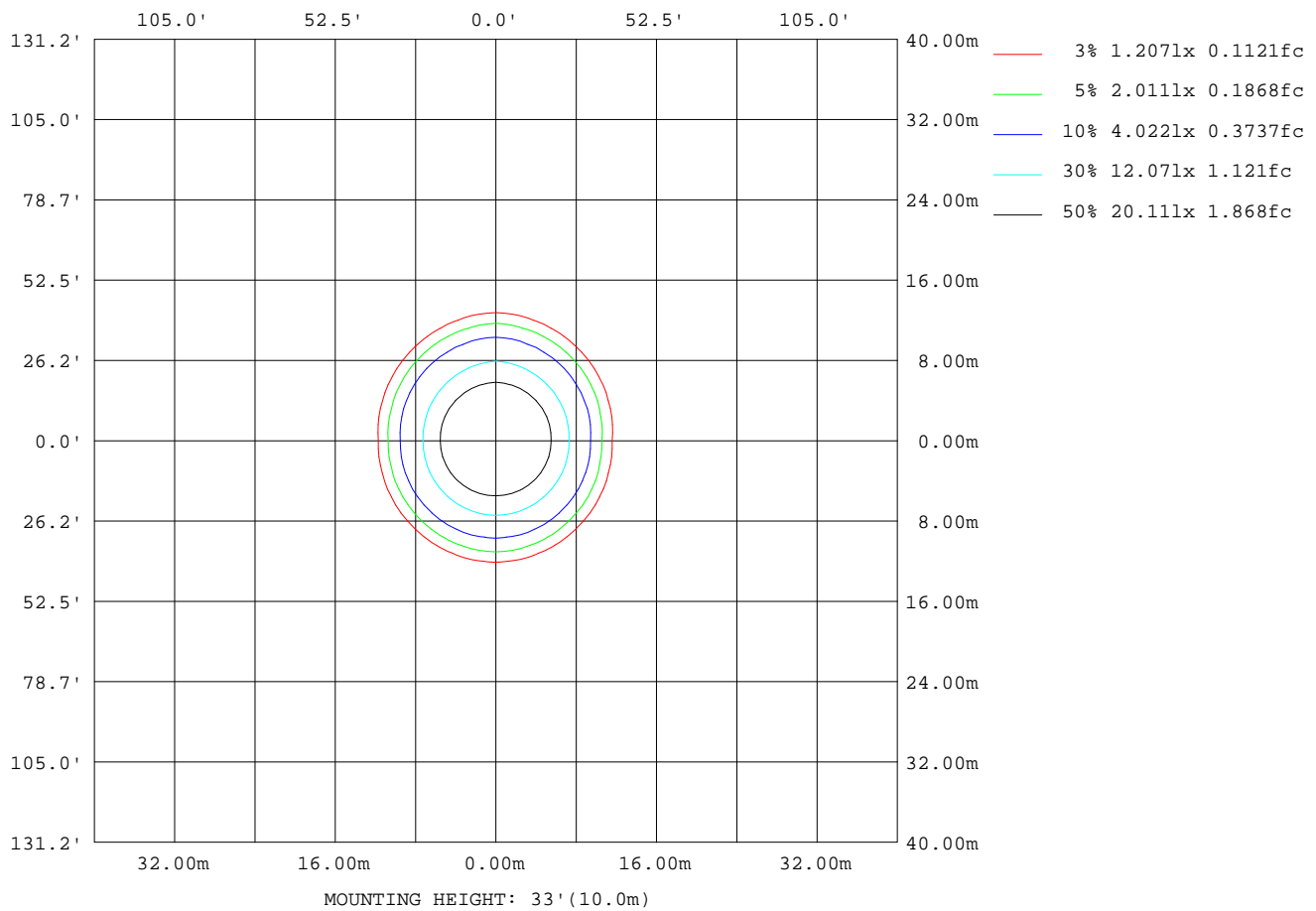
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	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:230.16V I:0.2188A P:48.619W PF:0.9655 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:5741.4x1 lm		
NAME: LED542 W34 (50W 3000K)	TYPE: 50W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.: #1
MFR.:	SUR.: 0.155	Shielding Angle:

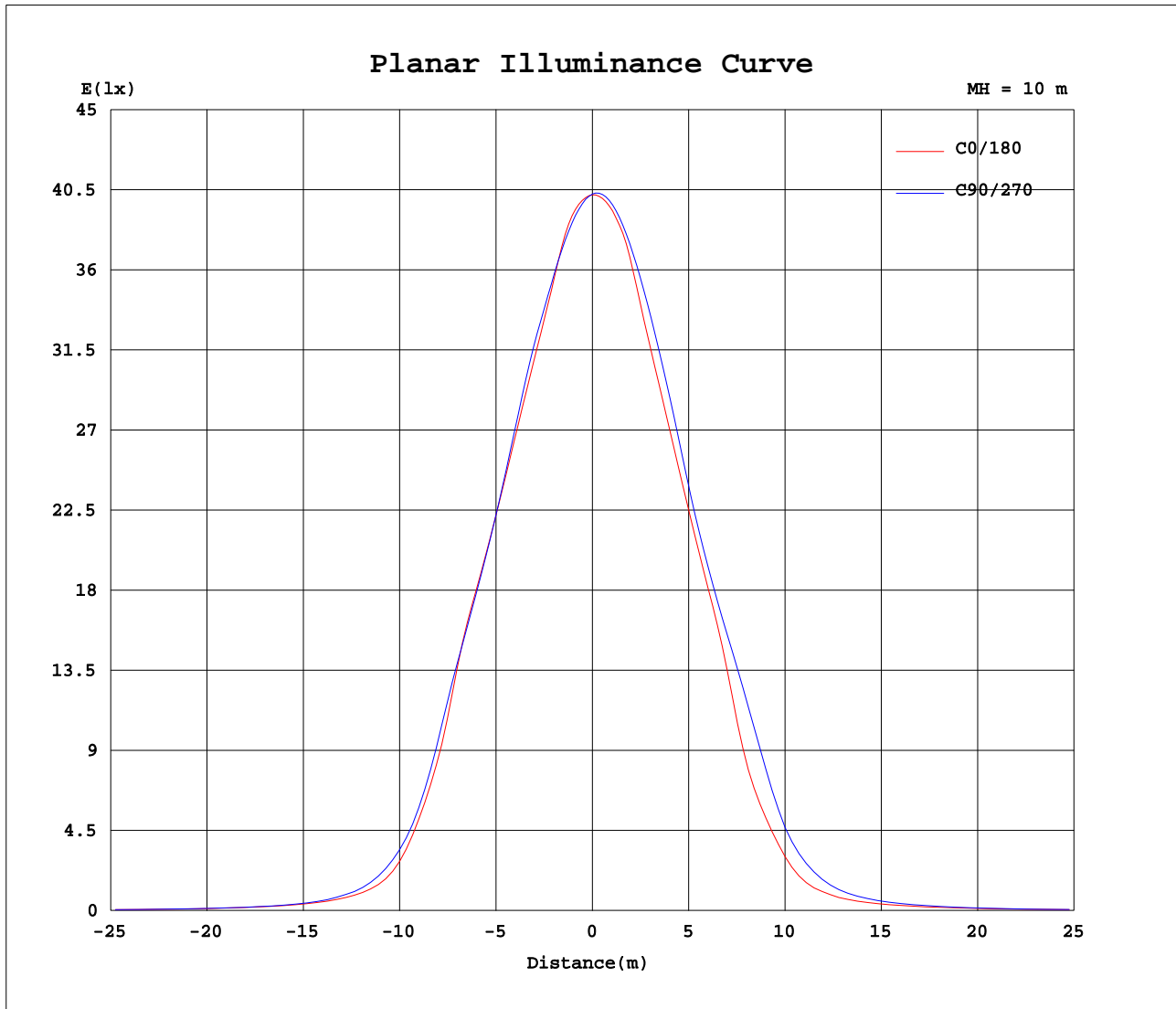
AvgL	cd/m2
L_0~180(65)av	1862
L_0~180(75)av	1491
L_0~180(85)av	1159
L_90~270(65)av	2030
L_90~270(75)av	1449
L_90~270(85)av	1210
L_45(65)av	1971
L_45(75)av	1470
L_45(85)av	1201

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:

```

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:

```