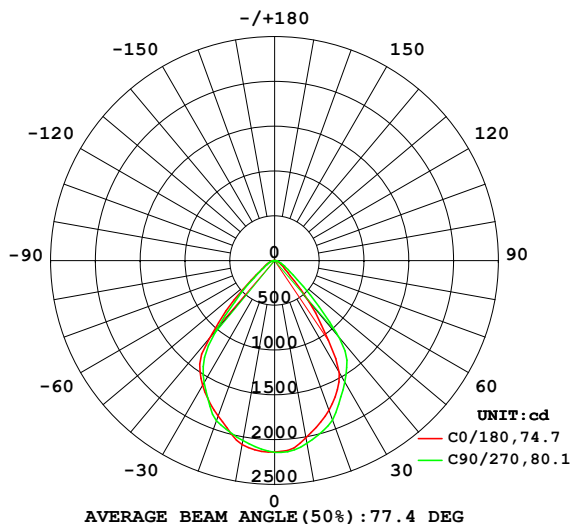


LUMINAIRE PHOTOMETRIC TEST REPORT

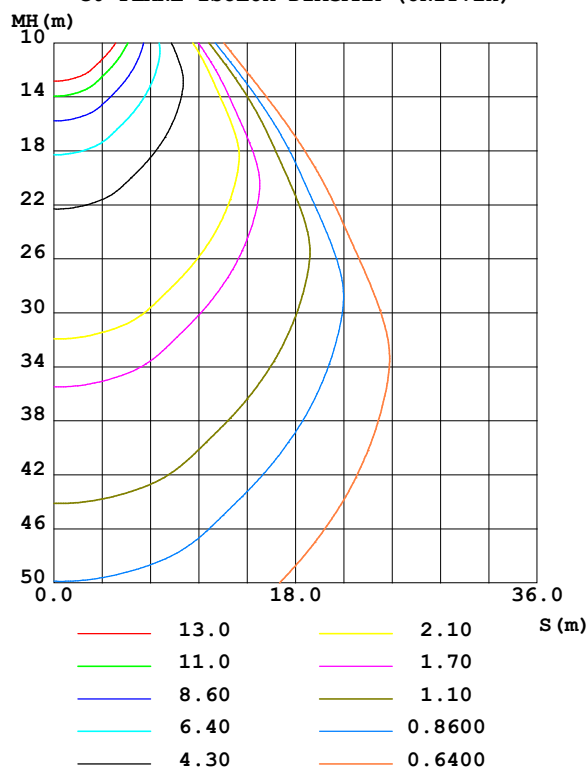
Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 117.46 lm/W			
MODEL	LED541 W34	I _{max} (cd)	2146	S/MH(C0/180)	1.13
NOMINAL POWER(W)	29	LOR(%)	100.0	S/MH(C90/270)	1.11
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	3125.3	η UP,DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	3125.28	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	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: 22.5DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 9.640m [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	2086	2025	2041	2049	2011	2017	2074	2119	0- 10	200.3	200.3	6.41,6.41
20	1847	1761	1902	1788	1777	1717	1895	2000	10- 20	550.5	750.8	24,24
30	1608	1483	1576	1389	1448	1414	1568	1655	20- 30	775.3	1526	48.8,48.8
40	1138	1313	1016	704.5	598.1	1071	1133	1057	30- 40	800.3	2326	74.4,74.4
50	341.3	578.8	302.1	141.0	158.3	324.2	334.1	361.6	40- 50	481.0	2807	89.8,89.8
60	124.7	207.5	113.3	80.17	78.62	147.4	128.1	104.5	50- 60	174.5	2982	95.4,95.4
70	65.79	94.54	56.80	44.65	41.34	54.02	58.47	63.20	60- 70	86.86	3069	98.2,98.2
80	31.61	33.23	25.18	17.18	13.47	18.37	25.44	29.79	70- 80	42.56	3111	99.6,99.6
90	6.946	7.279	2.451	1.082	0.6771	1.188	1.115	6.085	80- 90	13.84	3125	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): 2668.6 lm

%lum = 85.4%

%lamp = 85.4%

Conical surface Flux(130deg): 3040.6 lm

%lum = 97.3%

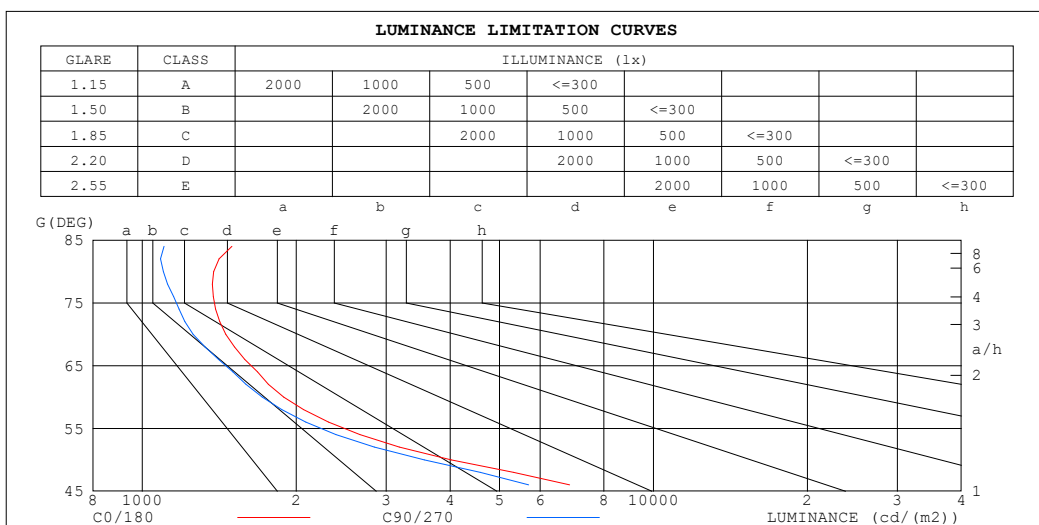
%lamp = 97.3%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1794	1322
80	1379	1099
75	1480	1257
70	1457	1258
65	1743	1560
60	1890	1716
55	2732	2452
50	4022	3560
45	8381	6927

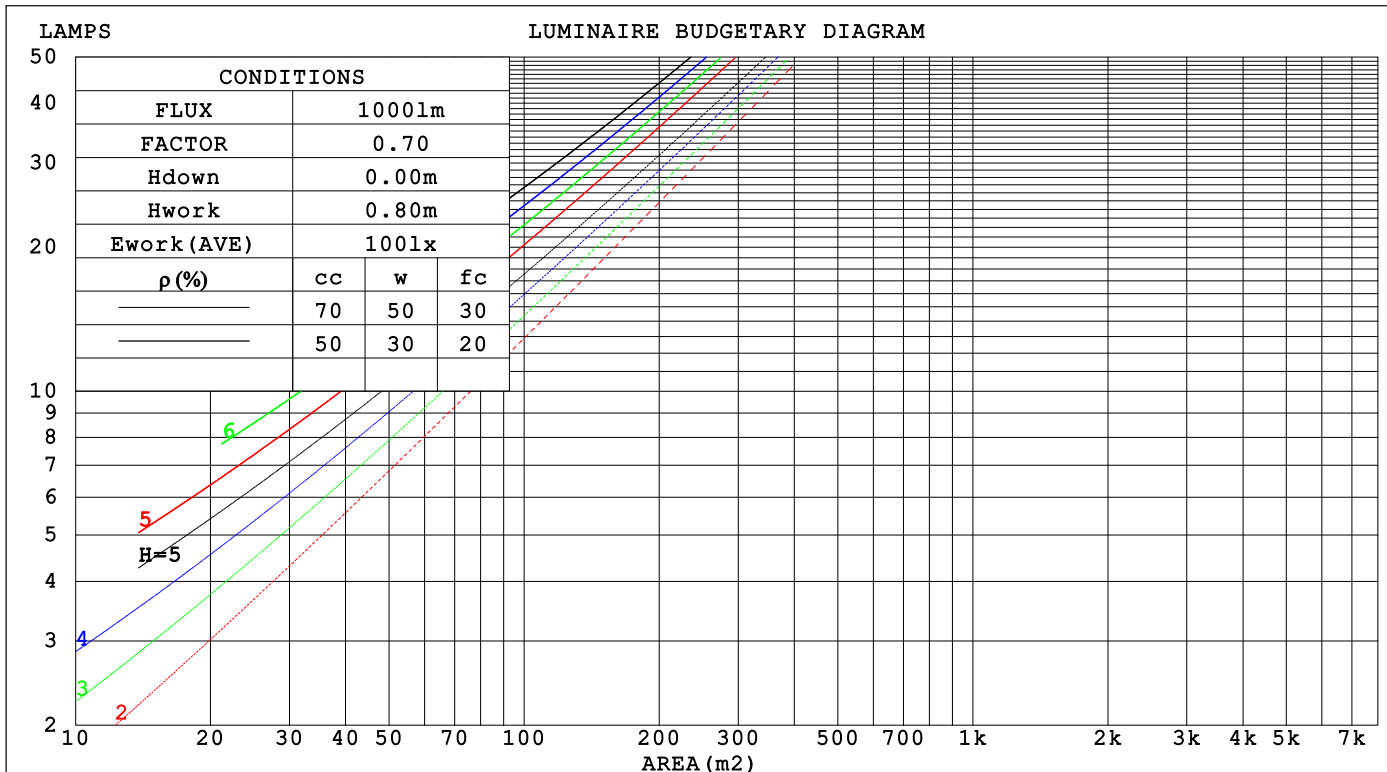
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	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	1.09	1.06	1.03	1.06	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.92	.90
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.84	.79	.76	.81	.78	.75	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.69	.75	.71	.68	.66
5.0	.76	.69	.64	.75	.68	.63	.73	.67	.63	.71	.66	.62	.69	.65	.62	.60
6.0	.70	.63	.58	.69	.62	.57	.67	.61	.57	.66	.61	.57	.64	.60	.56	.54
7.0	.65	.57	.52	.64	.57	.52	.63	.56	.52	.61	.56	.52	.60	.55	.51	.50
8.0	.60	.53	.48	.59	.53	.48	.58	.52	.48	.57	.51	.47	.56	.51	.47	.46
9.0	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42
10.0	.52	.45	.41	.52	.45	.41	.51	.45	.41	.50	.44	.40	.49	.44	.40	.39



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	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	.218	.124	.039	.212	.121	.038	.199	.114	.036	.187	.108	.035	.176	.102	.033		
2.0	.210	.115	.035	.205	.113	.035	.194	.108	.033	.183	.103	.032	.174	.098	.031		
3.0	.200	.106	.032	.195	.104	.031	.186	.101	.031	.177	.097	.030	.169	.093	.029		
4.0	.190	.099	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027		
5.0	.180	.092	.027	.176	.090	.026	.168	.088	.026	.162	.085	.025	.155	.083	.025		
6.0	.170	.085	.024	.167	.084	.024	.160	.082	.024	.154	.080	.024	.149	.078	.023		
7.0	.162	.080	.023	.159	.079	.023	.153	.077	.022	.147	.076	.022	.142	.074	.022		
8.0	.154	.075	.021	.151	.074	.021	.146	.073	.021	.141	.071	.021	.136	.070	.020		
9.0	.146	.071	.020	.144	.070	.020	.139	.069	.019	.135	.067	.019	.130	.066	.019		
10.0	.139	.067	.019	.137	.066	.018	.133	.065	.018	.129	.064	.018	.125	.063	.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	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.161	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012		
3.0	.151	.114	.084	.129	.098	.073	.089	.068	.051	.051	.040	.030	.016	.013	.010		
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008		
5.0	.134	.089	.055	.115	.077	.048	.080	.054	.034	.046	.031	.020	.015	.010	.007		
6.0	.128	.080	.045	.110	.069	.040	.076	.048	.028	.044	.028	.017	.014	.009	.005		
7.0	.121	.073	.038	.104	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005		
8.0	.116	.067	.033	.100	.058	.029	.069	.041	.020	.040	.024	.012	.013	.008	.004		
9.0	.110	.062	.028	.095	.053	.025	.066	.038	.018	.038	.022	.011	.012	.007	.003		
10.0	.106	.057	.025	.091	.050	.022	.063	.035	.016	.037	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm										
NAME: LED541 W34V2					TYPE: 29W			WEIGHT:		
SPEC.: 3000K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 1.2*0.11			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	17.4	18.5	17.6	18.7	18.9	17.2	18.3	17.4	18.5	18.7
3H	17.4	18.5	17.7	18.7	18.9	17.2	18.3	17.5	18.5	18.7
4H	17.5	18.5	17.8	18.7	19.0	17.2	18.3	17.5	18.5	18.7
6H	17.5	18.5	17.8	18.7	19.0	17.2	18.2	17.5	18.4	18.7
8H	17.5	18.4	17.8	18.7	19.0	17.2	18.1	17.5	18.4	18.7
12H	17.5	18.4	17.9	18.7	19.0	17.2	18.1	17.5	18.4	18.7
4H 2H	17.4	18.4	17.7	18.6	18.9	17.2	18.2	17.5	18.4	18.7
3H	17.6	18.4	17.9	18.7	19.0	17.4	18.2	17.7	18.5	18.8
4H	17.7	18.5	18.0	18.8	19.1	17.4	18.2	17.8	18.5	18.9
6H	17.8	18.5	18.2	18.8	19.2	17.5	18.2	17.9	18.5	18.9
8H	17.8	18.5	18.2	18.8	19.2	17.5	18.2	17.9	18.5	18.9
12H	17.9	18.5	18.3	18.8	19.2	17.5	18.1	18.0	18.5	18.9
8H 4H	17.7	18.3	18.1	18.7	19.0	17.4	18.1	17.8	18.4	18.8
6H	17.8	18.4	18.3	18.8	19.2	17.6	18.1	18.0	18.5	18.9
8H	17.9	18.4	18.4	18.8	19.3	17.6	18.1	18.1	18.5	19.0
12H	18.0	18.4	18.5	18.9	19.3	17.7	18.1	18.2	18.5	19.0
12H 4H	17.6	18.2	18.0	18.6	19.0	17.4	18.0	17.8	18.4	18.8
6H	17.8	18.3	18.3	18.7	19.2	17.6	18.0	18.0	18.5	18.9
8H	17.9	18.3	18.4	18.8	19.3	17.7	18.1	18.1	18.5	19.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.9 / - 3.0					+ 2.0 / - 3.1				
1.5H	+ 1.8 / - 2.9					+ 1.9 / - 3.2				
2.0H	+ 3.5 / - 2.5					+ 3.2 / - 2.7				

CIE Pub.117, 3125 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.0$)
Area: 0.132 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:

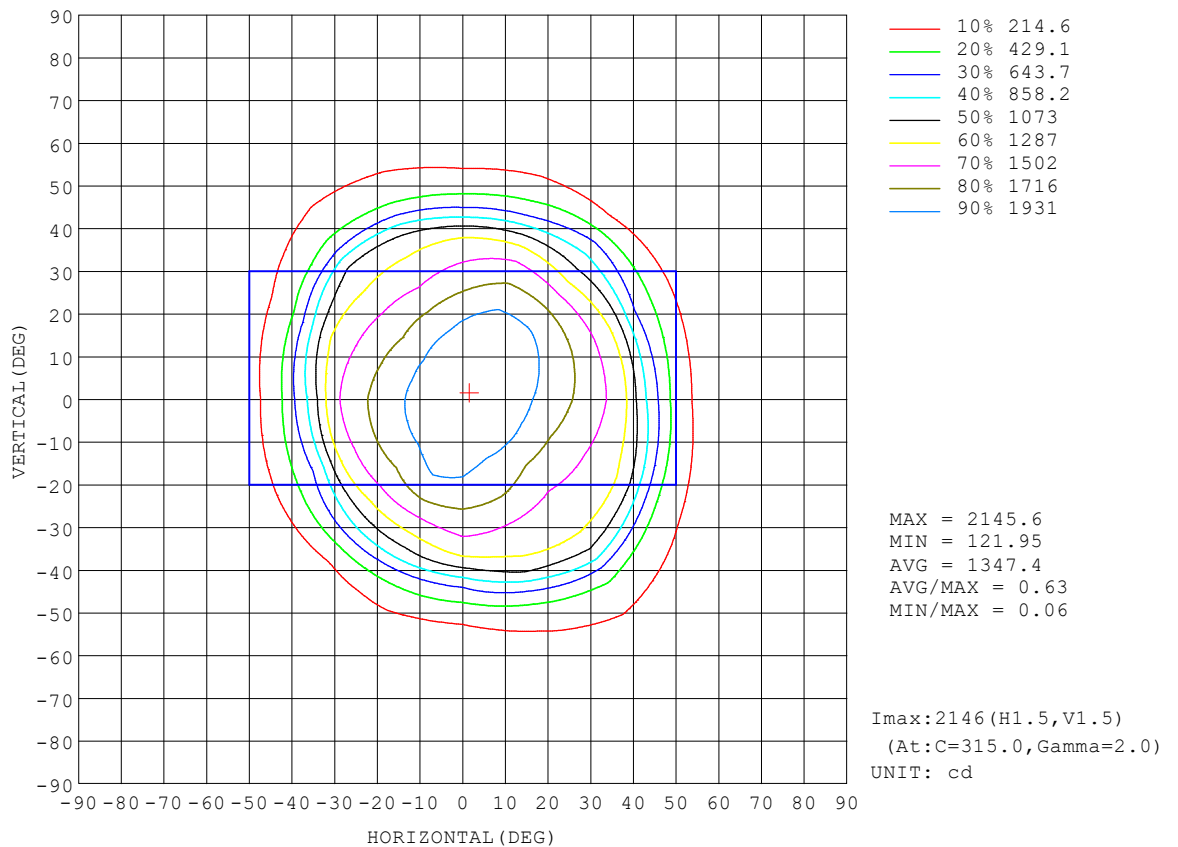
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	67	62	75	67	62	74	66	62	57
0.80	84	76	71	84	76	71	82	75	71	66
1.00	91	84	79	90	83	78	88	83	78	73
1.25	96	89	85	95	89	84	93	88	84	78
1.50	100	94	89	99	93	89	96	91	88	82
2.00	104	99	95	103	98	94	100	96	92	86
2.50	107	102	98	105	100	97	102	98	95	88
3.00	109	104	101	107	103	100	103	100	97	90
4.00	111	108	105	109	106	103	105	103	101	93
5.00	113	110	107	111	108	106	106	104	102	94
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 9.640m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:

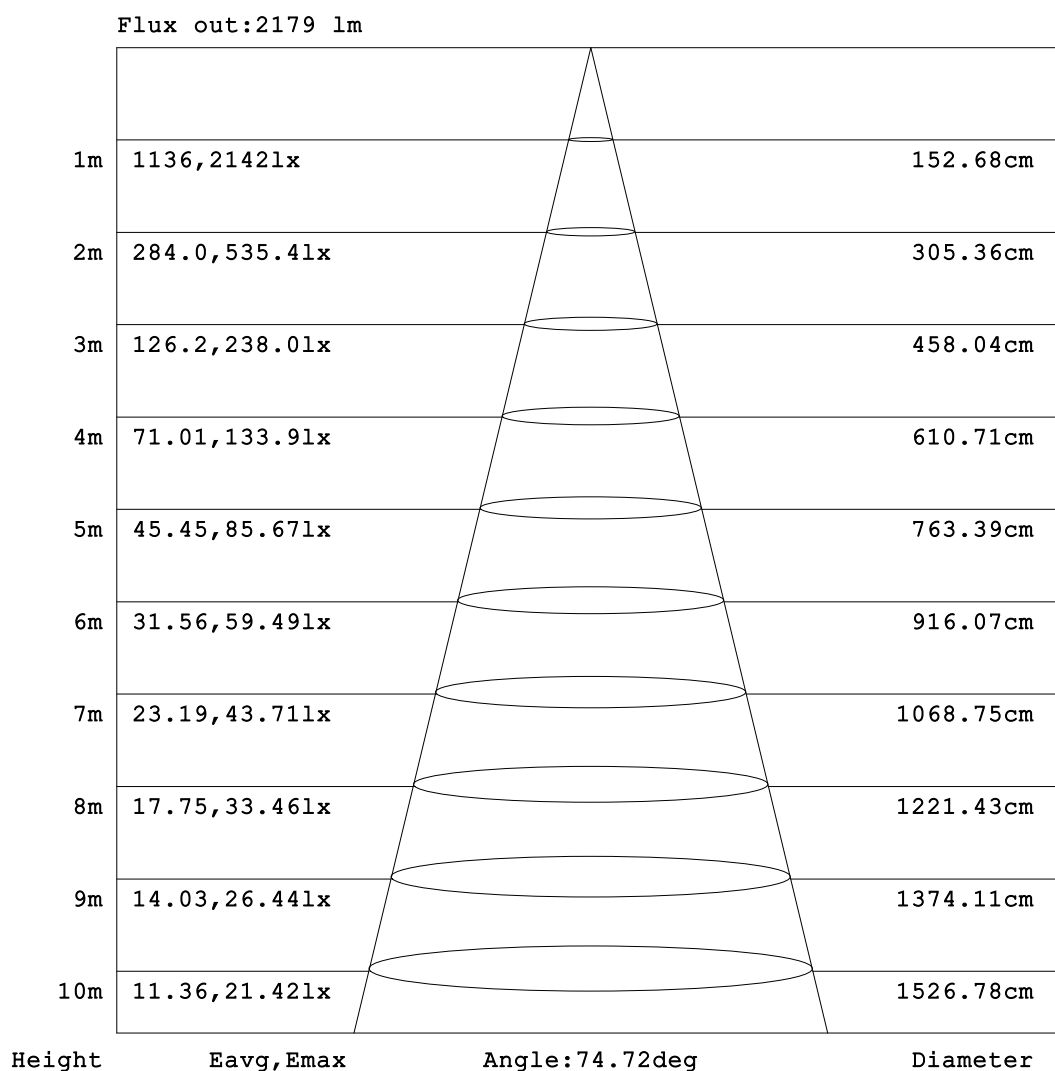


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2022-11-22

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:



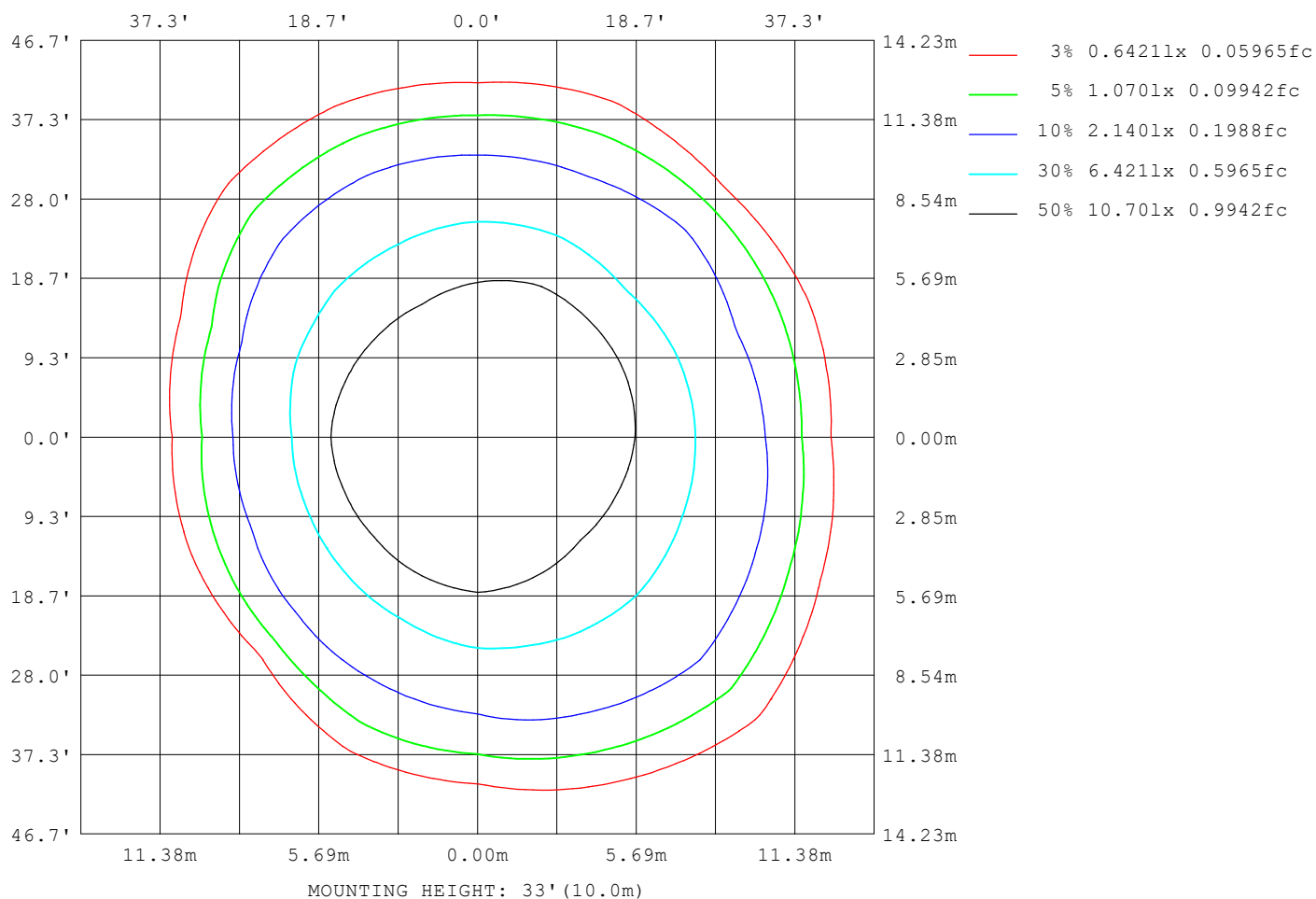
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2022-11-22

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 9.640m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2022-11-22

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 9.640m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:

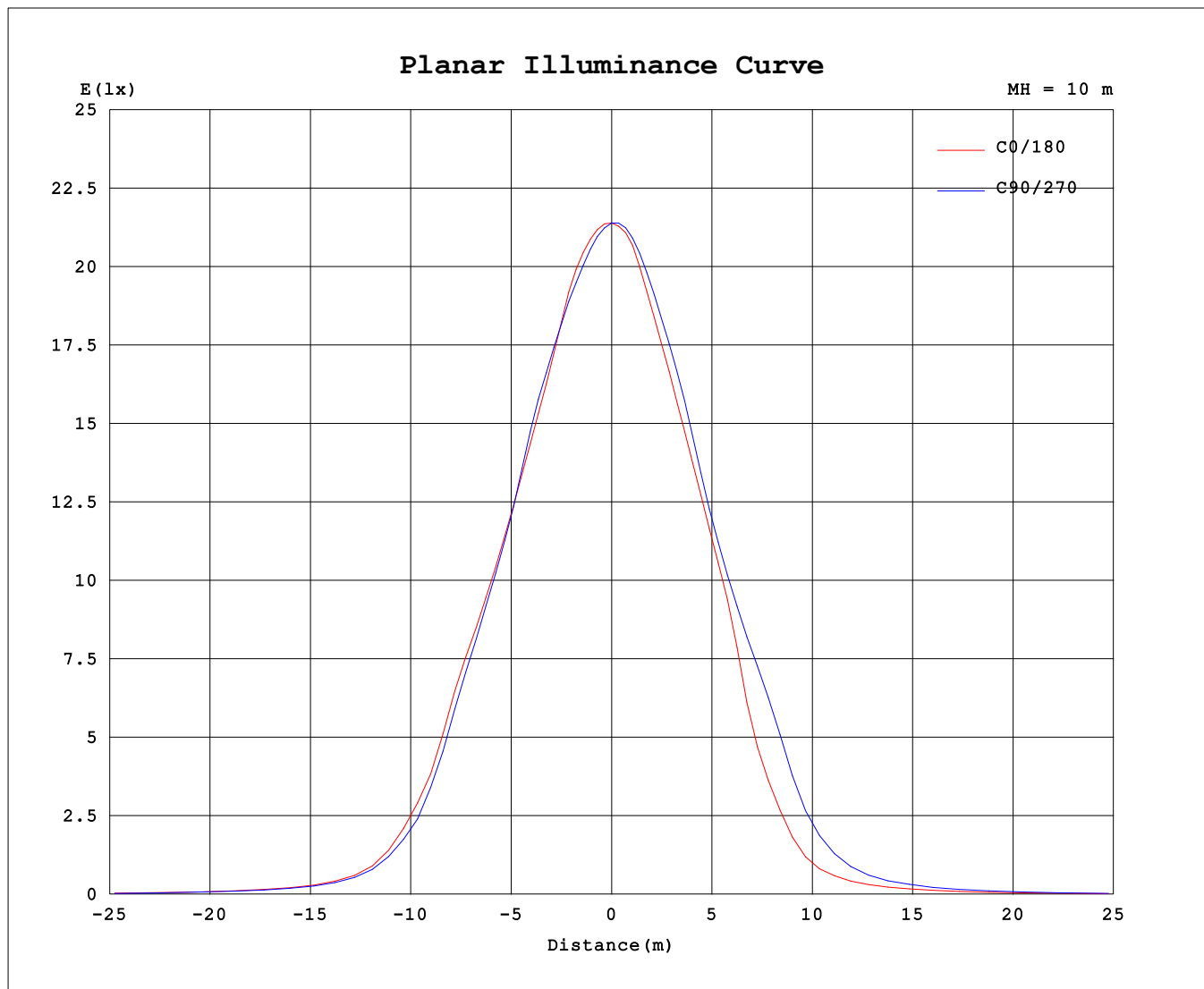
AvgL	cd/m2
L_0~180 (65) av	1336
L_0~180 (75) av	1079
L_0~180 (85) av	922
L_90~270 (65) av	1495
L_90~270 (75) av	1173
L_90~270 (85) av	1120
L_45 (65) av	1707
L_45 (75) av	1187
L_45 (85) av	1047

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2022-11-22

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:9.640m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 2022-11-22

γ Range: 0 - 90DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 9.640m [K=1.0000]
Remarks:

Test: U:230.35V I:0.1243A P:26.608W PF:0.9294 Freq:49.99Hz UTHDi: 0.00% ITHDi: 0.00% KDisp: 0 Lamp Flux: 3125.28x1 lm		
NAME: LED541 W34V2	TYPE: 29W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1.2*0.11	Shielding Angle:

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

```