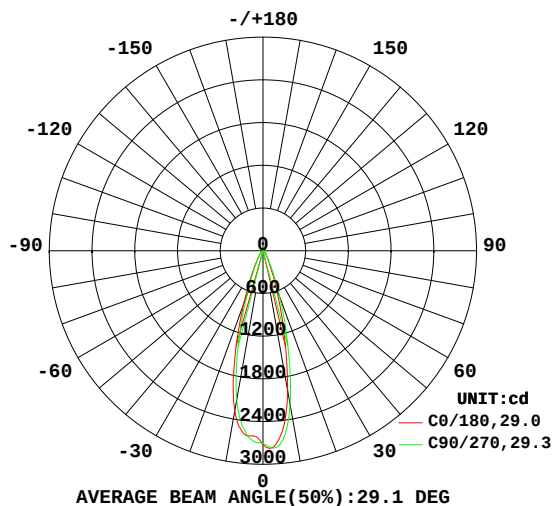


LUMINAIRE PHOTOMETRIC TEST REPORT

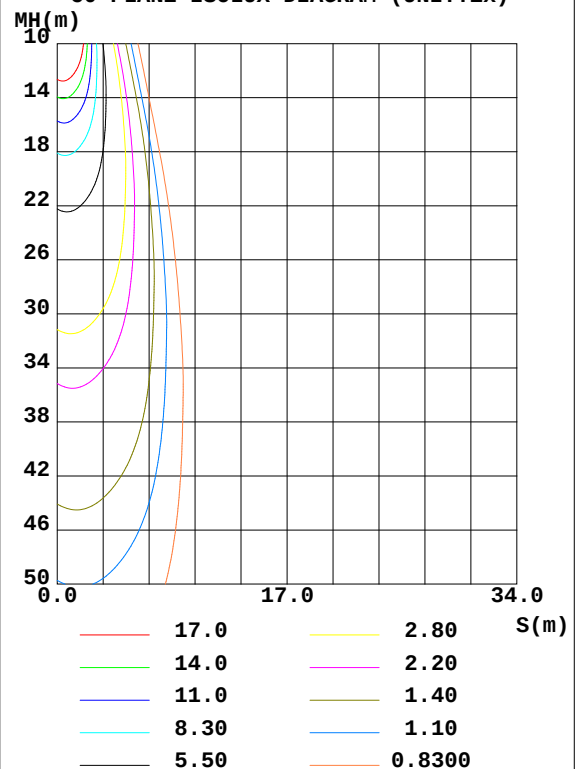
Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 91.27 lm/W			
MODEL	4000K	I _{max} (cd)	2795	S/MH(C0/180)	0.51
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.48
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	923.18	η UP, DN(C0-180)	0.0, 50.0
NOMINAL FLUX(lm)	923.178	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

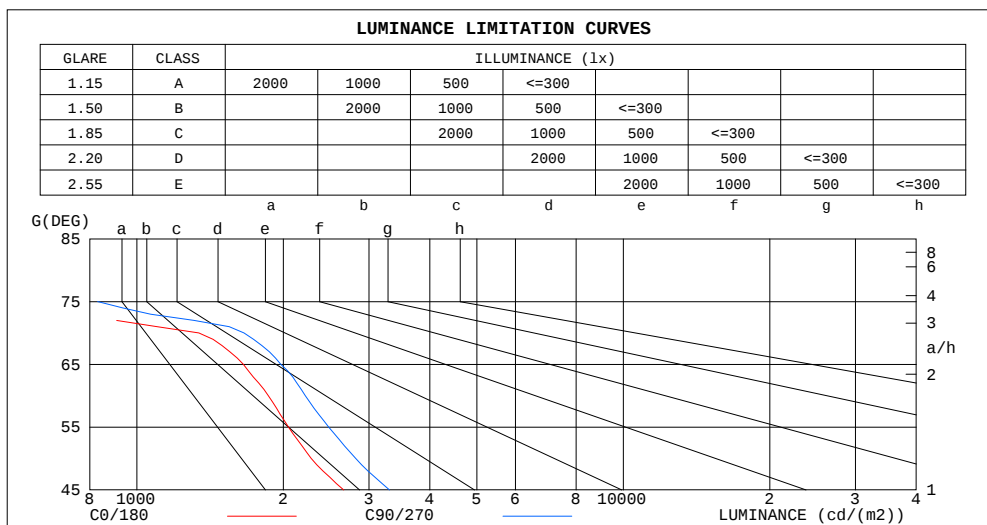
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1997	2067	2200	2320	2285	2169	2128	2065	0- 10	237.1	237.1	25.7, 25.7
20	531.7	573.4	678.4	767.6	795.4	741.1	657.4	586.3	10- 20	361.0	598.1	64.8, 64.8
30	142.3	155.9	172.6	181.4	196.8	188.8	174.0	155.7	20- 30	156.6	754.7	81.8, 81.8
40	63.22	72.62	77.96	79.38	77.96	72.76	73.52	69.44	30- 40	68.99	823.7	89.2, 89.2
50	37.35	43.34	46.07	46.04	42.78	39.80	40.99	39.15	40- 50	42.67	866.4	93.8, 93.8
60	23.70	26.88	28.24	27.98	26.89	25.14	25.04	23.65	50- 60	29.71	896.1	97.1, 97.1
70	11.67	13.15	14.45	15.30	15.53	14.45	13.11	11.80	60- 70	19.60	915.7	99.2, 99.2
80	1.007	1.220	1.576	2.223	2.310	2.370	1.563	1.174	70- 80	6.879	922.6	99.9, 99.9
90	0.0772	0.0733	0.0811	0.1042	0.0772	0.0386	0.0193	0.0193	80- 90	0.6195	923.2	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		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	157	213
80	228	357
75	620	831
70	1341	1660
65	1655	1976
60	1862	2219
55	2049	2478
50	2283	2816
45	2661	3306

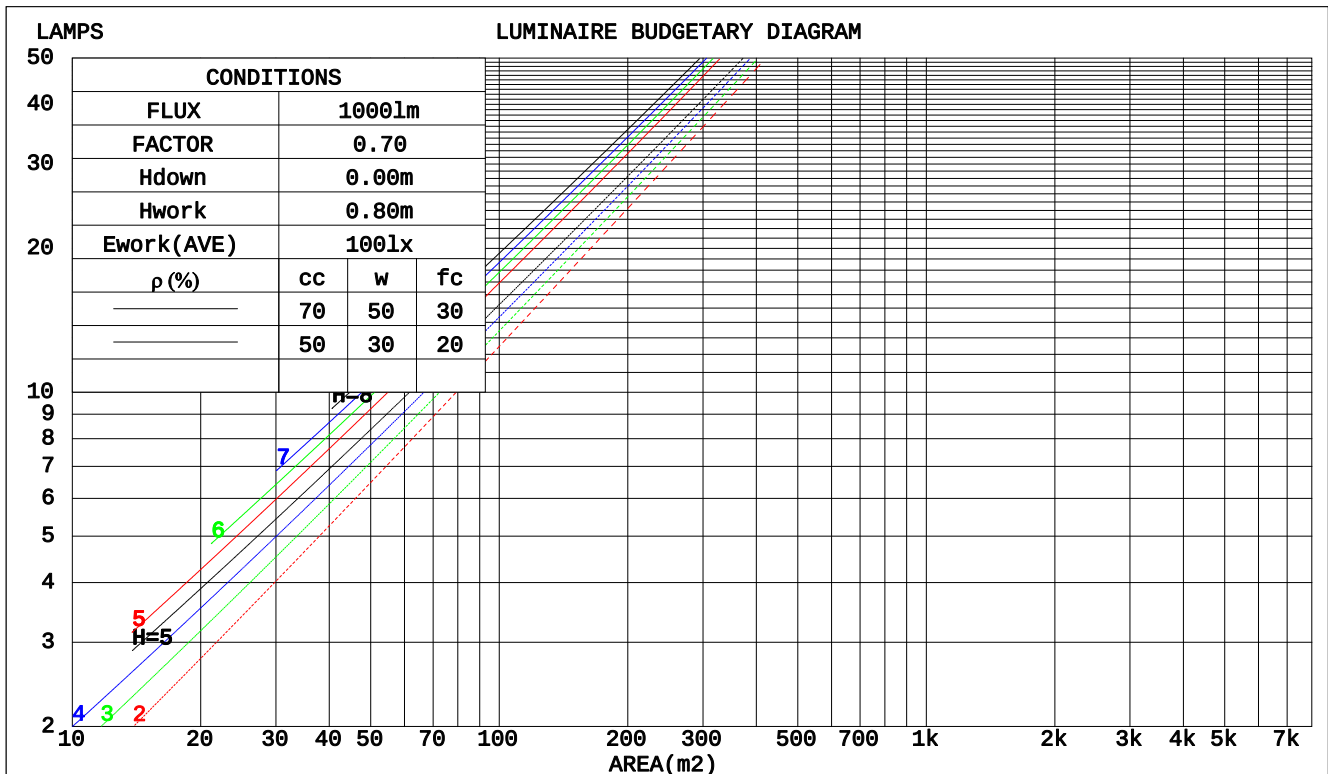
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.94
2.0	1.05	1.01	.98	1.03	.99	.97	.99	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.91	.88	.92	.89	.87	.90	.88	.86	.84
4.0	.93	.89	.85	.92	.88	.84	.90	.86	.83	.88	.85	.82	.87	.84	.81	.80
5.0	.89	.84	.80	.88	.83	.80	.86	.82	.79	.85	.81	.78	.83	.80	.78	.76
6.0	.85	.80	.76	.84	.79	.76	.83	.78	.75	.81	.78	.75	.80	.77	.74	.73
7.0	.81	.76	.73	.81	.76	.72	.79	.75	.72	.78	.74	.72	.77	.74	.71	.70
8.0	.78	.73	.69	.77	.73	.69	.76	.72	.69	.75	.72	.69	.75	.71	.68	.67
9.0	.75	.70	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.71	.67	.64	.70	.66	.64	.63



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm					
NAME: DL1541-WHTC10C02			TYPE:		WEIGHT:
SPEC.: white RA90 3000K+5000K			DIM.:		SERIAL No.:
MFR.:			SUR.: 90mm		Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.166	.094	.030	.159	.091	.029	.146	.084	.027	.135	.078	.025	.124	.072	.023	
2.0	.156	.086	.026	.151	.083	.026	.140	.078	.024	.131	.073	.023	.122	.069	.022	
3.0	.147	.078	.023	.142	.076	.023	.133	.072	.022	.125	.068	.021	.117	.065	.020	
4.0	.138	.072	.021	.134	.070	.021	.126	.067	.020	.119	.064	.019	.113	.061	.019	
5.0	.130	.066	.019	.126	.065	.019	.120	.062	.018	.113	.060	.018	.108	.058	.017	
6.0	.122	.061	.018	.119	.060	.017	.114	.058	.017	.108	.056	.017	.103	.054	.016	
7.0	.116	.057	.016	.113	.056	.016	.108	.055	.016	.103	.053	.015	.099	.051	.015	
8.0	.110	.054	.015	.108	.053	.015	.103	.052	.015	.099	.050	.014	.095	.049	.014	
9.0	.105	.051	.014	.103	.050	.014	.099	.049	.014	.095	.048	.014	.092	.046	.013	
10.0	.100	.048	.013	.098	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.170	.157	.146	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.090	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.099	.075	.111	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.111	.077	.052	.096	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.090	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.098	.063	.038	.084	.054	.033	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm										
NAME: DL1541-WHTC10C02					TYPE:			WEIGHT:		
SPEC.: white RA90 3000K+5000K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 90mm			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	10.8	11.6	11.0	11.7	11.9	11.6	12.4	11.8	12.6	12.7
3H	11.6	12.3	11.8	12.5	12.7	12.5	13.2	12.7	13.4	13.6
4H	11.6	12.3	11.9	12.6	12.8	12.6	13.3	12.8	13.5	13.7
6H	11.6	12.2	11.8	12.5	12.7	12.5	13.2	12.8	13.5	13.7
8H	11.5	12.2	11.8	12.4	12.7	12.5	13.2	12.8	13.4	13.7
12H	11.5	12.1	11.8	12.4	12.6	12.5	13.1	12.8	13.4	13.6
4H 2H	11.3	12.0	11.5	12.2	12.4	12.0	12.7	12.2	12.9	13.1
3H	12.1	12.8	12.5	13.0	13.3	12.9	13.6	13.3	13.8	14.1
4H	12.2	12.8	12.5	13.1	13.4	13.0	13.6	13.4	13.9	14.2
6H	12.1	12.7	12.5	13.0	13.3	13.0	13.5	13.4	13.8	14.2
8H	12.1	12.6	12.5	12.9	13.3	13.0	13.4	13.3	13.8	14.2
12H	12.0	12.5	12.5	12.9	13.2	12.9	13.3	13.3	13.7	14.1
8H 4H	12.2	12.7	12.6	13.0	13.4	13.0	13.5	13.4	13.8	14.2
6H	12.1	12.5	12.5	12.9	13.3	12.9	13.3	13.4	13.7	14.1
8H	12.1	12.4	12.5	12.8	13.3	12.9	13.3	13.3	13.7	14.1
12H	12.0	12.3	12.5	12.8	13.2	12.9	13.2	13.3	13.6	14.1
12H 4H	12.1	12.6	12.5	12.9	13.3	12.9	13.4	13.3	13.7	14.1
6H	12.1	12.4	12.5	12.8	13.3	12.9	13.2	13.3	13.7	14.1
8H	12.0	12.3	12.5	12.8	13.2	12.8	13.1	13.3	13.6	14.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.6 / - 0.8					+ 0.5 / - 0.8				
1.5H	+ 0.5 / - 0.8					+ 0.5 / - 0.5				
2.0H	+ 0.6 / - 0.7					+ 1.0 / - 0.9				

CIE Pub.117, 923.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.3)
Area: 0.02545 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

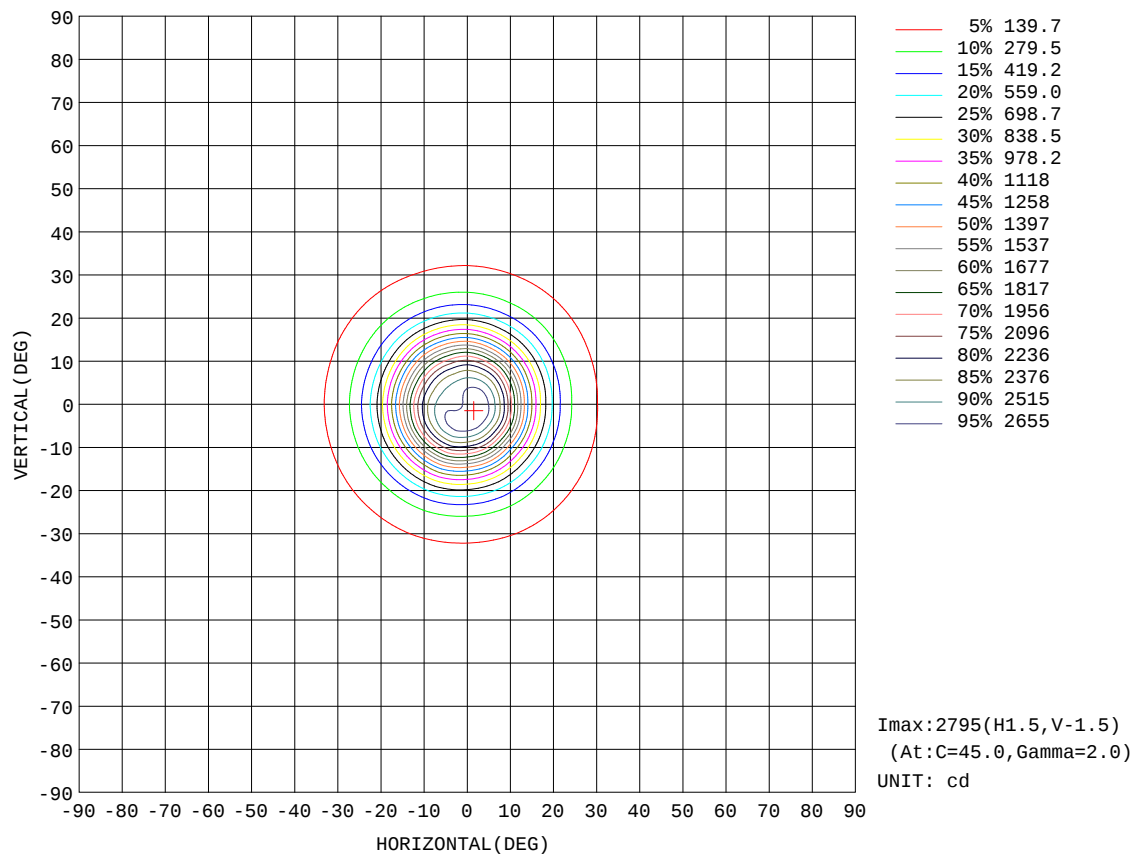
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	85	78	74	84	78	74	84	77	74	70
0.80	92	86	82	92	86	82	91	85	82	78
1.00	97	91	87	96	91	87	95	91	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	99	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	108	105	104	97
5.00	115	112	110	112	110	109	108	107	105	98
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:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

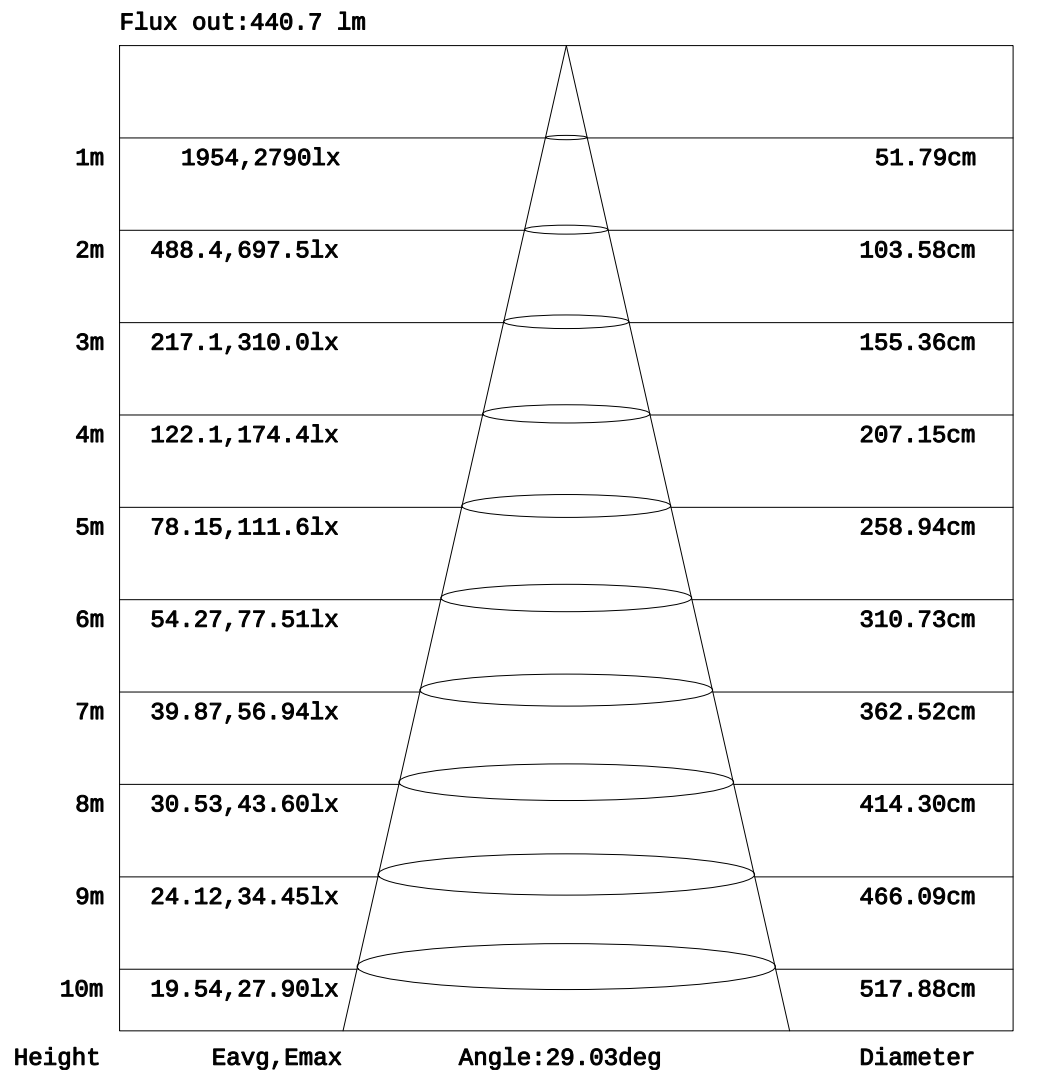


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



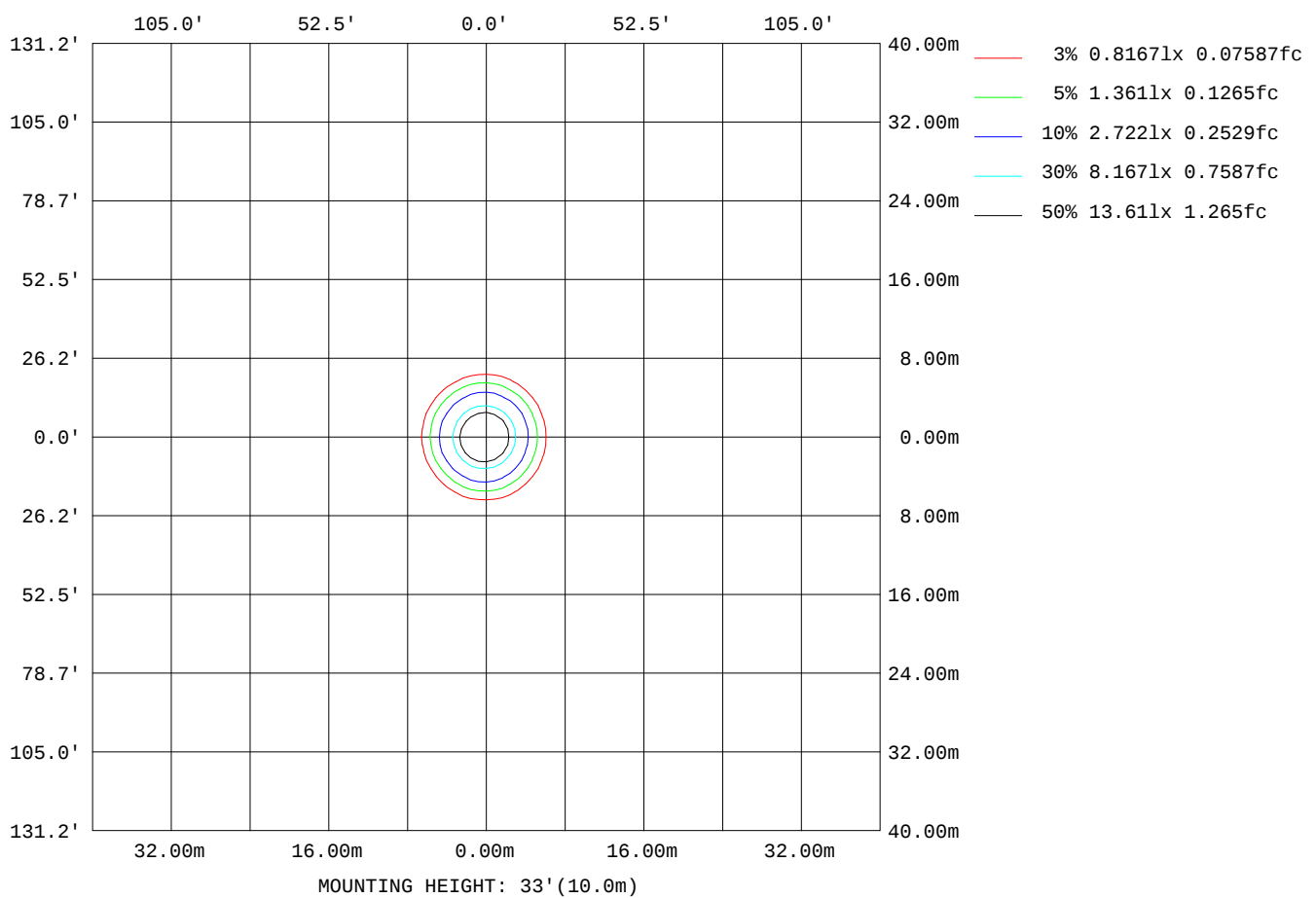
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.41V I:0.0484A P:10.115W PF:0.9484 Freq:50.01Hz Lamp Flux:923.178x1 lm		
NAME: DL1541-WHTC10C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

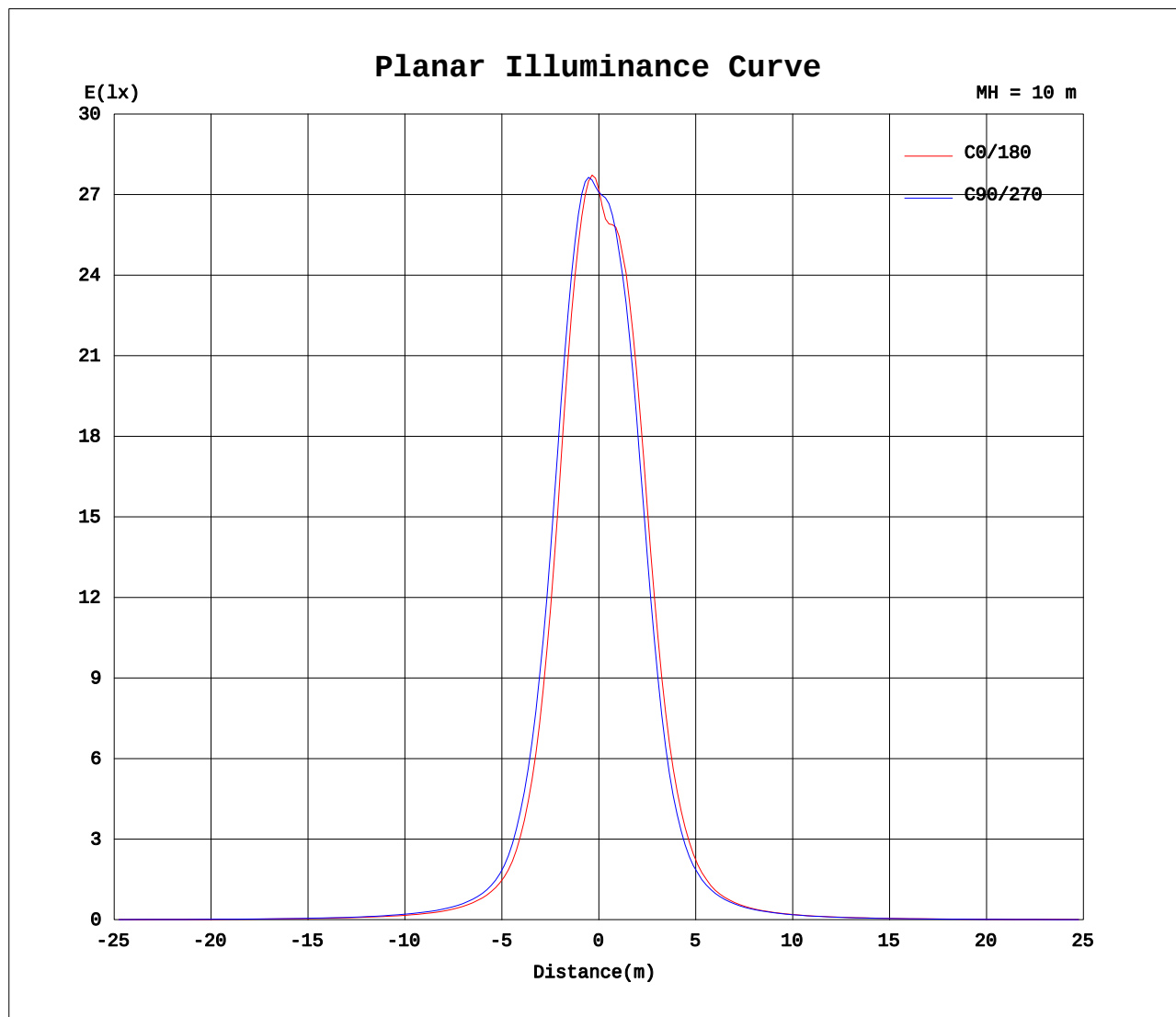
AvgL	cd/m2
L_0~180(65)av	1818
L_0~180(75)av	853
L_0~180(85)av	204
L_90~270(65)av	1866
L_90~270(75)av	825
L_90~270(85)av	202
L_45(65)av	1840
L_45(75)av	871
L_45(85)av	207

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2023-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity:65.0%
 Test Distance:7.450m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

```