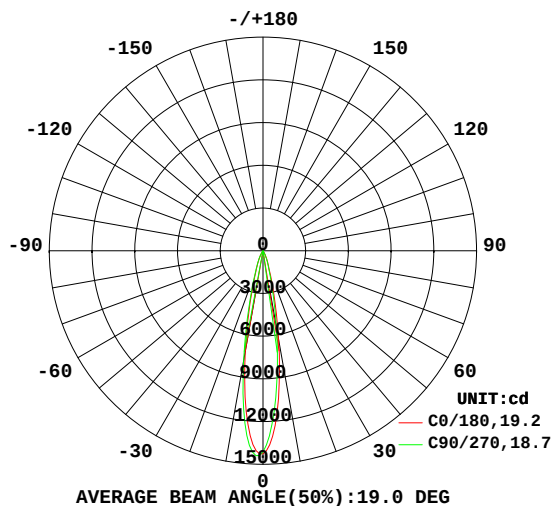


LUMINAIRE PHOTOMETRIC TEST REPORT

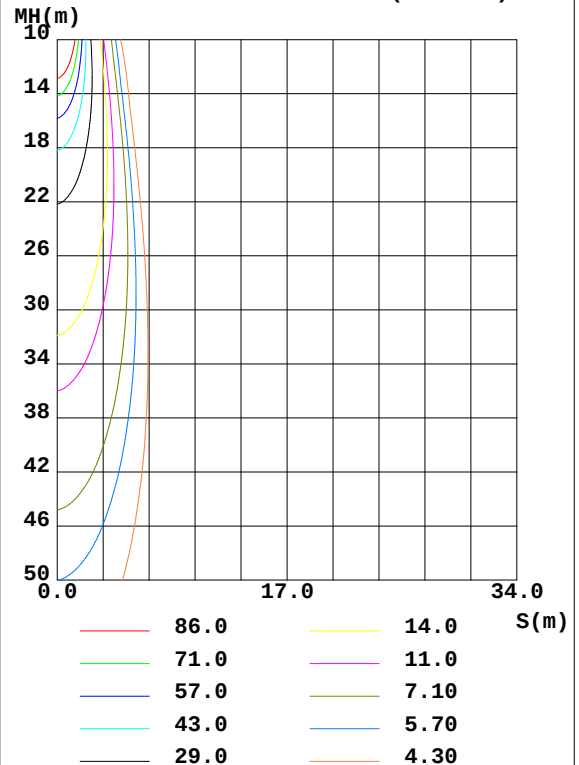
Test:U:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm					
NAME: DL694005-4KWH			TYPE:		WEIGHT:
SPEC.: white RA90			DIM.:		SERIAL No.:
MFR.:			SUR.: 26*26mm		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 77.16 lm/W
MODEL	4000K	I _{max} (cd)	14400	S/MH(C0/180)	0.35	
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.36	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2230.5	η UP, DN(C0-180)	0.0, 44.2	
NOMINAL FLUX(lm)	2230.46	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 55.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.00	

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: 2023-11-07

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:

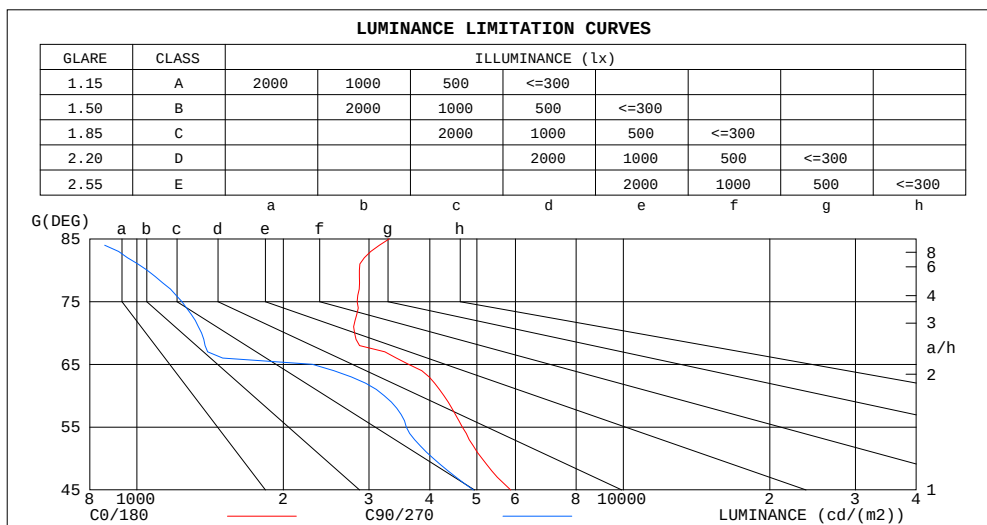
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	633.7	543.3	541.9	603.1	719.1	761.5	786.9	756.3	0- 10	949.1	949.1	42.6, 42.6
20	111.8	97.45	101.9	114.9	139.5	143.3	149.8	144.1	10- 20	838.0	1787	80.1, 80.1
30	24.34	16.37	18.21	24.46	30.65	29.69	33.46	32.82	20- 30	298.0	2085	93.5, 93.5
40	5.597	4.837	4.909	5.899	6.628	5.519	5.719	6.302	30- 40	69.83	2155	96.6, 96.6
50	3.338	2.846	2.652	3.300	3.791	3.150	2.998	3.504	40- 50	32.34	2187	98.1, 98.1
60	2.168	1.913	1.635	1.998	2.348	2.094	1.916	2.242	50- 60	22.84	2210	99.1, 99.1
70	0.9722	0.6895	0.4709	0.7476	1.020	0.8638	0.4973	0.9148	60- 70	13.59	2224	99.7, 99.7
80	0.5047	0.2370	0.1848	0.2482	0.4840	0.2587	0.1989	0.2687	70- 80	5.124	2229	99.9, 99.9
90	0.0270	0.0208	0.0139	0.0201	0.0239	0.0201	0.0081	0.0158	80- 90	1.620	2230	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: ×10cd									UNIT: lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3304	794
80	2866	1050
75	2837	1237
70	2803	1358
65	3618	2294
60	4277	3224
55	4665	3579
50	5121	4068
45	5866	4917

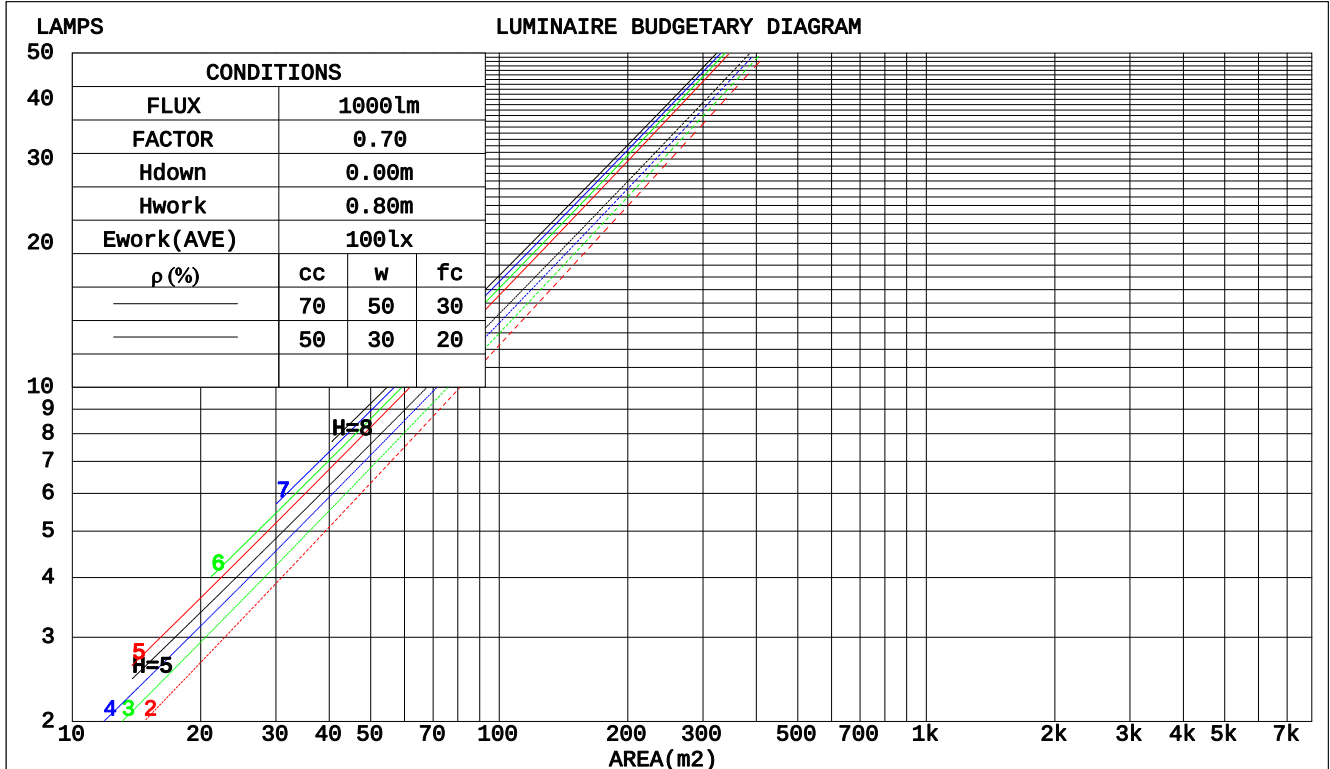
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	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	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	.99	1.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.00	.97	1.02	.99	.96	.99	.97	.94	.97	.95	.93	.95	.93	.92	.90
4.0	.99	.95	.92	.98	.95	.92	.96	.93	.91	.94	.92	.90	.93	.91	.89	.88
5.0	.96	.92	.89	.95	.91	.88	.93	.90	.88	.92	.89	.87	.90	.88	.86	.85
6.0	.93	.89	.86	.92	.88	.85	.91	.87	.85	.89	.87	.84	.88	.86	.84	.83
7.0	.90	.86	.83	.89	.86	.83	.88	.85	.82	.87	.84	.82	.86	.84	.82	.81
8.0	.87	.83	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.84	.82	.80	.79
9.0	.85	.81	.79	.85	.81	.78	.84	.81	.78	.83	.80	.78	.83	.80	.78	.77
10.0	.83	.79	.77	.83	.79	.77	.82	.79	.76	.81	.78	.76	.81	.78	.76	.75



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm					
NAME: DL694005-4KWH			TYPE:		WEIGHT:
SPEC.: white RA90			DIM.:		SERIAL No.:
MFR.:			SUR.: 26*26mm		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	.137	.078	.025	.130	.074	.024	.118	.068	.022	.107	.062	.020	.096	.056	.018		
2.0	.127	.069	.021	.121	.067	.021	.111	.062	.019	.102	.057	.018	.093	.053	.017		
3.0	.118	.063	.019	.113	.061	.018	.105	.057	.017	.097	.053	.016	.089	.050	.015		
4.0	.110	.057	.017	.106	.055	.016	.099	.052	.016	.092	.049	.015	.086	.047	.014		
5.0	.103	.052	.015	.100	.051	.015	.094	.049	.014	.088	.046	.014	.083	.044	.013		
6.0	.097	.049	.014	.094	.048	.014	.089	.046	.013	.084	.044	.013	.079	.042	.012		
7.0	.092	.045	.013	.089	.044	.013	.085	.043	.012	.081	.041	.012	.077	.040	.012		
8.0	.087	.043	.012	.085	.042	.012	.081	.040	.012	.077	.039	.011	.074	.038	.011		
9.0	.083	.040	.011	.081	.040	.011	.078	.038	.011	.074	.037	.011	.071	.036	.010		
10.0	.079	.038	.011	.078	.037	.010	.074	.036	.010	.072	.036	.010	.069	.035	.010		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.122	.098	.079	.105	.085	.069	.072	.059	.048	.042	.035	.029	.013	.011	.009	
5.0	.112	.086	.066	.096	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.103	.075	.056	.088	.065	.049	.061	.046	.034	.035	.027	.020	.011	.009	.007	
7.0	.095	.067	.048	.082	.058	.042	.056	.041	.030	.033	.024	.018	.011	.008	.006	
8.0	.088	.060	.041	.076	.052	.036	.053	.037	.026	.031	.022	.015	.010	.007	.005	
9.0	.082	.055	.036	.071	.047	.031	.049	.033	.022	.029	.020	.013	.009	.006	.004	
10.0	.077	.050	.032	.067	.043	.028	.046	.030	.020	.027	.018	.012	.009	.006	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm											
NAME: DL694005-4KWH					TYPE:			WEIGHT:			
SPEC.: white RA90					DIM.:			SERIAL No.:			
MFR.:					SUR.: 26*26mm			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		6.4	7.0	6.6	7.1	7.3	5.3	6.0	5.5	6.1	6.3
	3H	7.0	7.6	7.3	7.8	8.0	5.6	6.2	5.9	6.4	6.6
	4H	7.3	7.9	7.6	8.1	8.3	5.7	6.3	6.0	6.5	6.7
	6H	7.7	8.2	7.9	8.4	8.7	5.7	6.3	6.0	6.5	6.8
	8H	7.8	8.3	8.1	8.6	8.8	5.7	6.3	6.0	6.5	6.8
	12H	7.9	8.4	8.2	8.7	9.0	5.7	6.2	6.0	6.5	6.8
4H	2H	6.7	7.2	6.9	7.4	7.6	5.8	6.4	6.1	6.6	6.8
	3H	7.4	7.9	7.7	8.1	8.4	6.1	6.6	6.4	6.9	7.2
	4H	7.7	8.2	8.1	8.5	8.8	6.2	6.7	6.6	7.0	7.3
	6H	8.1	8.5	8.5	8.8	9.2	6.3	6.7	6.7	7.1	7.4
	8H	8.3	8.7	8.7	9.0	9.4	6.3	6.7	6.7	7.1	7.4
	12H	8.5	8.8	8.9	9.2	9.6	6.3	6.7	6.7	7.0	7.4
8H	4H	7.7	8.1	8.1	8.4	8.8	6.3	6.7	6.7	7.0	7.4
	6H	8.1	8.4	8.5	8.8	9.2	6.4	6.7	6.8	7.1	7.5
	8H	8.4	8.6	8.8	9.1	9.5	6.4	6.7	6.9	7.1	7.6
	12H	8.6	8.8	9.1	9.3	9.8	6.4	6.7	6.9	7.1	7.6
12H	4H	7.6	8.0	8.0	8.4	8.7	6.2	6.6	6.6	7.0	7.4
	6H	8.1	8.4	8.5	8.8	9.2	6.4	6.7	6.8	7.1	7.5
	8H	8.3	8.6	8.8	9.0	9.5	6.4	6.7	6.9	7.1	7.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.5 / - 0.5					+ 0.7 / - 0.9					
1.5H	+ 0.9 / - 0.5					+ 0.8 / - 0.7					
2.0H	+ 0.7 / - 1.0					+ 0.6 / - 0.7					

CIE Pub.117, 2230 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.8)
Area: 0.01014 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:

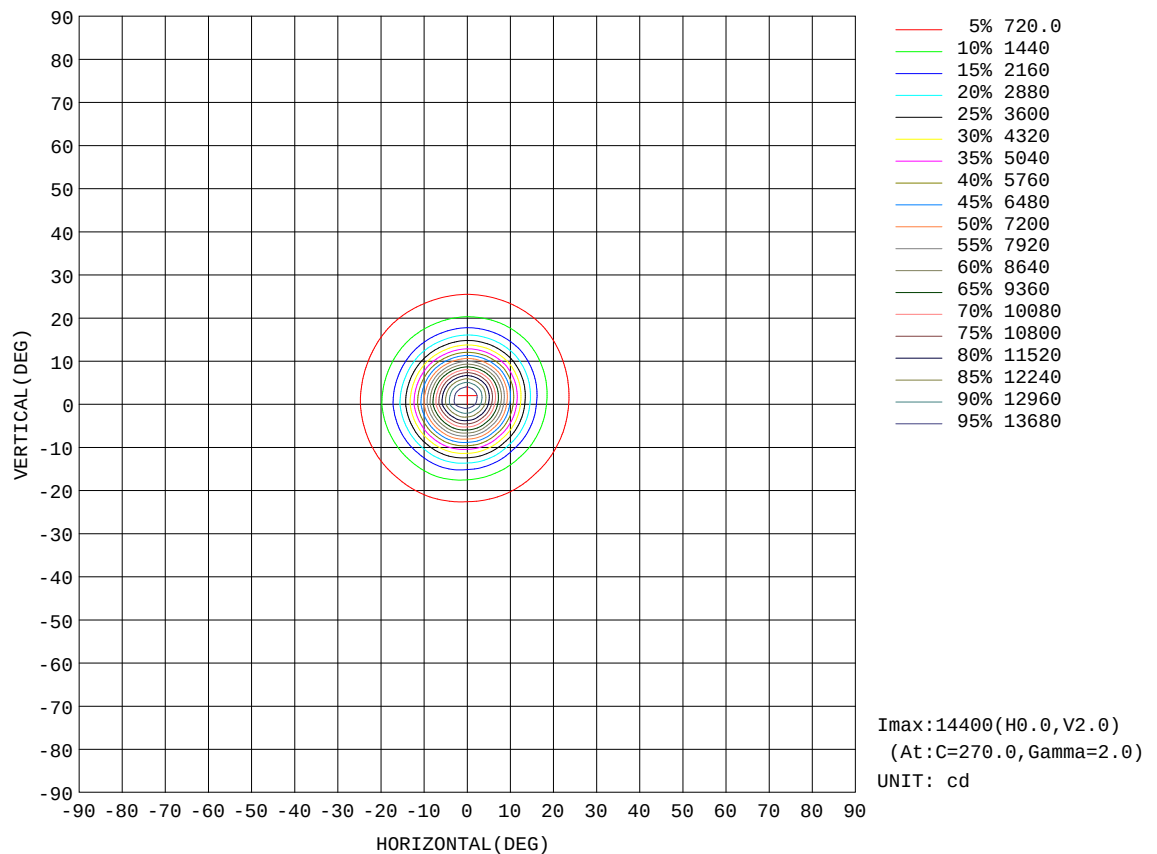
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	109	112	110	108	109	107	105	98
5.00	115	113	112	113	111	110	109	108	107	99
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:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:

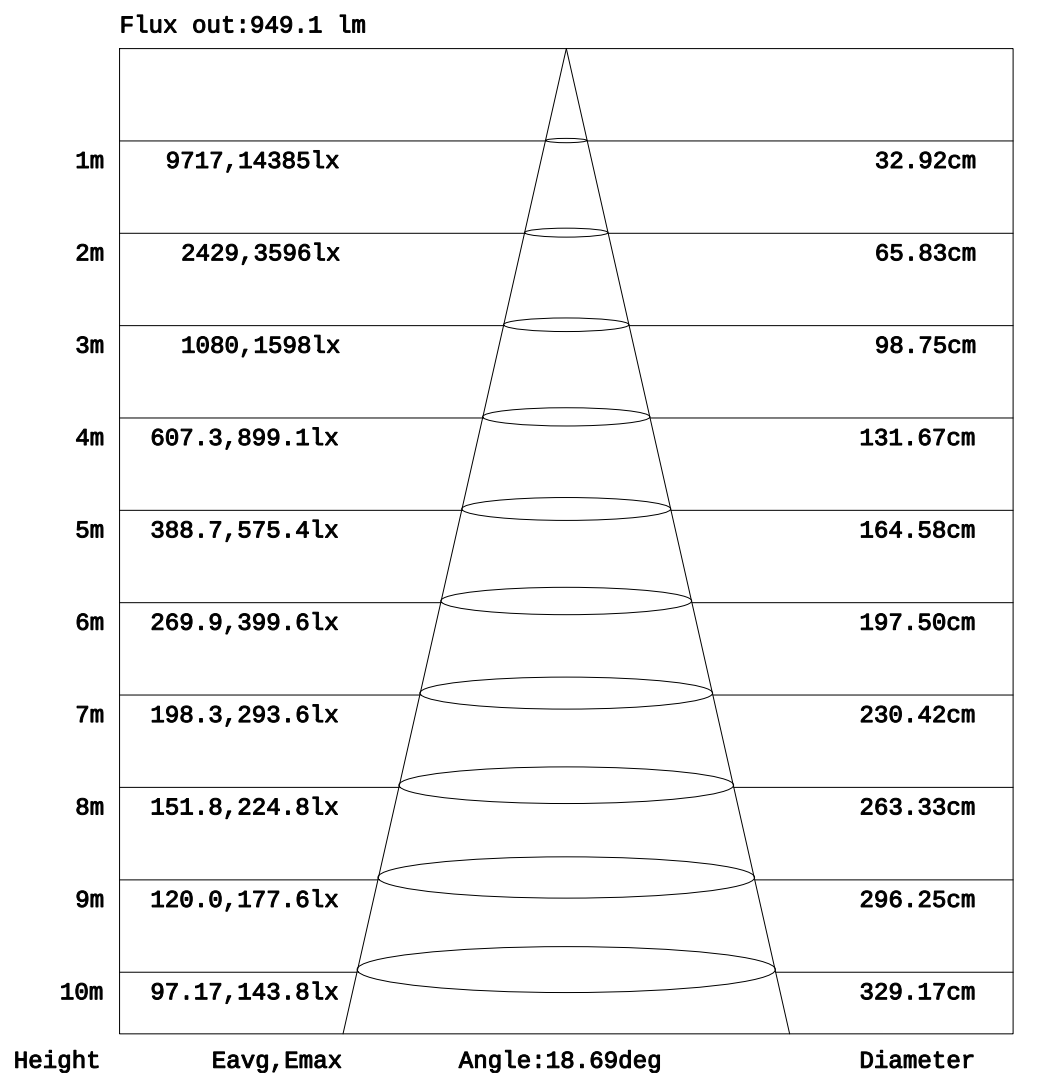


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:



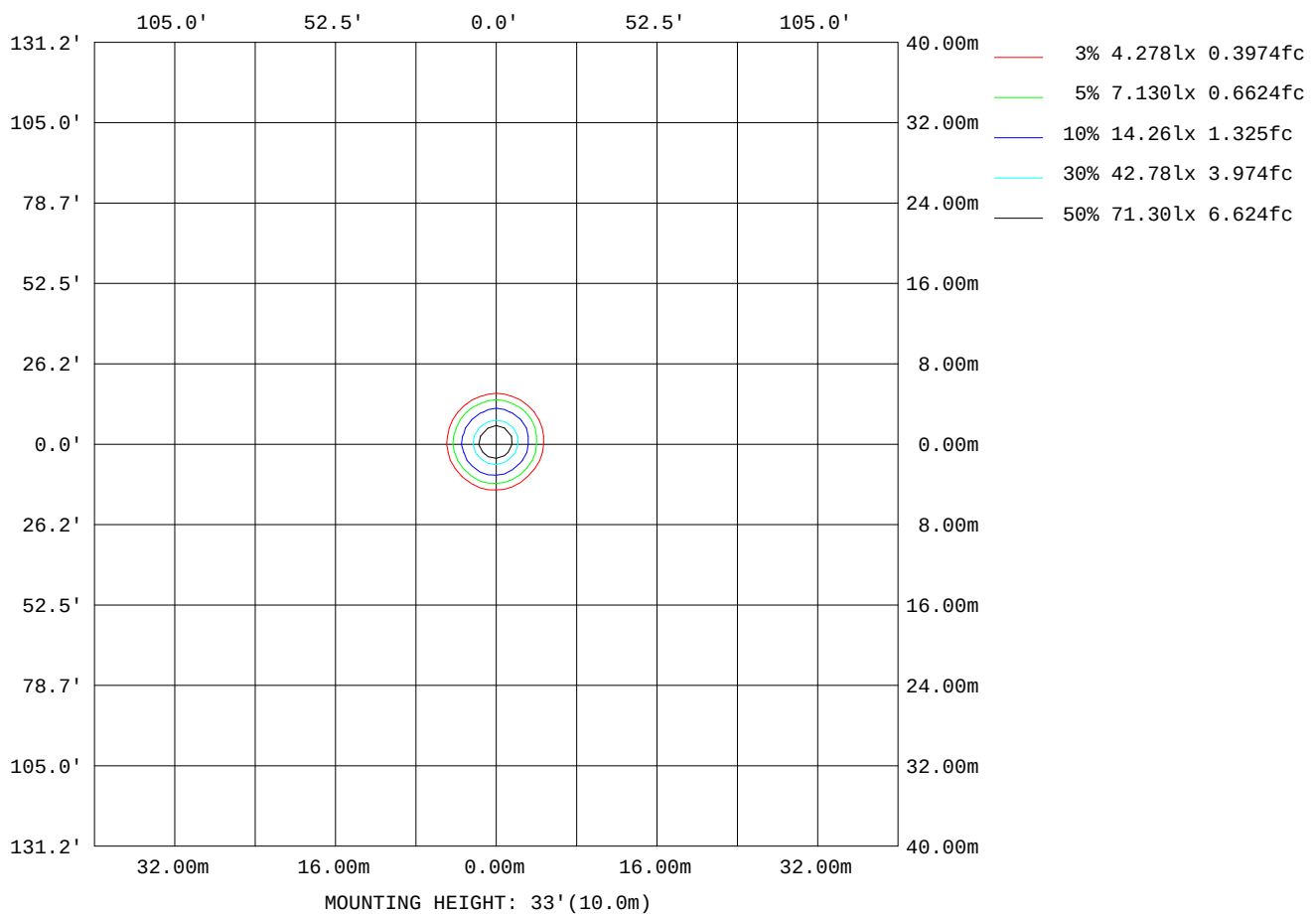
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-07

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:220.46V I:0.1339A P:28.907W PF:0.9792 Freq:50.01Hz Lamp Flux:2230.46x1 lm		
NAME: DL694005-4KWH	TYPE:	WEIGHT:
SPEC.: white RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 26*26mm	Shielding Angle:

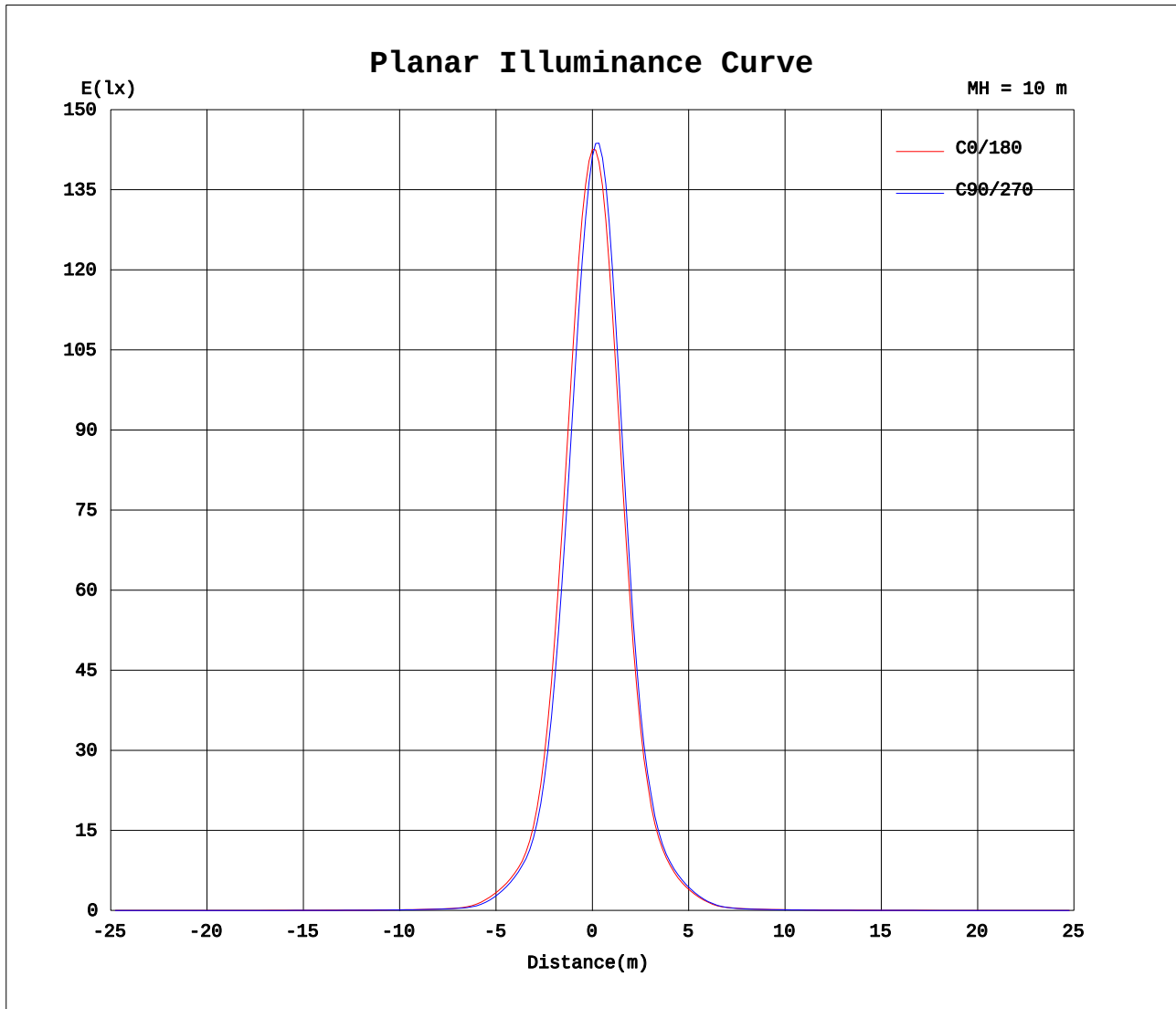
AvgL	cd/m2
L_0~180(65)av	3721
L_0~180(75)av	2854
L_0~180(85)av	3237
L_90~270(65)av	2571
L_90~270(75)av	1277
L_90~270(85)av	841
L_45(65)av	3404
L_45(75)av	1596
L_45(85)av	1271

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2023-11-07

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: 2023-11-07

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:

```