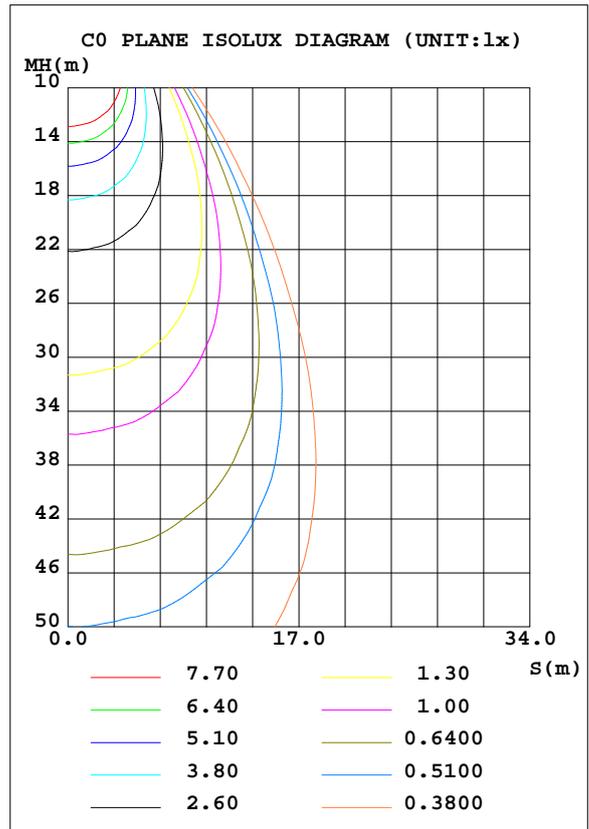
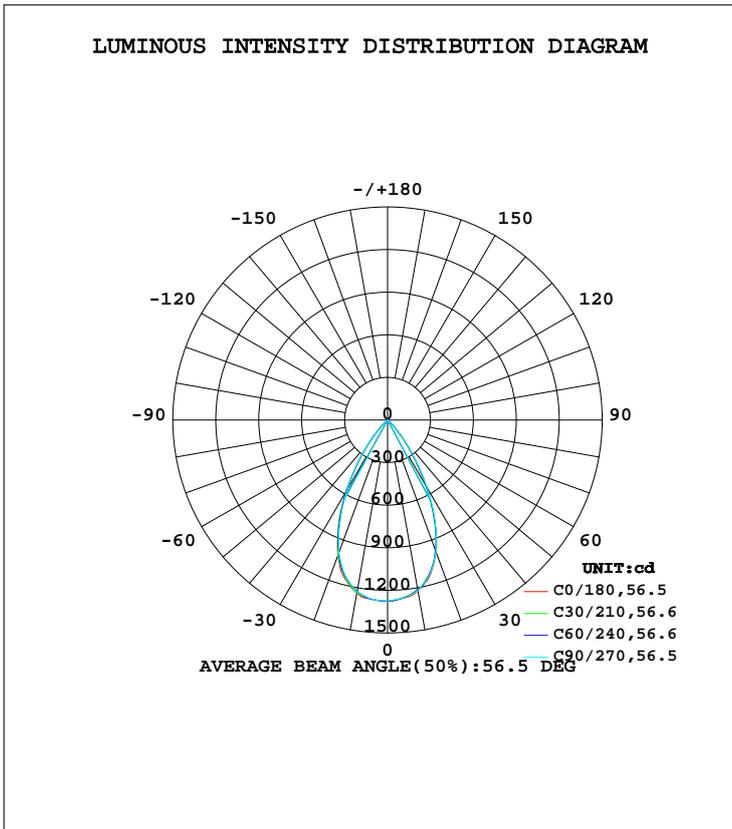


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.54 lm/W			
MODEL	4 INCH	Imax(cd)	1279	S/MH(C0/180)	0.86
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.85
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1054.7	η UP, DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	1054.66	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.90



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-12-01

V(B) Range:-85 - 85DEG
 V(B) Interval: 2.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.240m [K=1.0000]
 Remarks: 4 INCH

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1221	1215	1220	1226	1236	1226	1228	1215	0- 10	119.2	119.2	11.3,11.3
20	987.6	974.7	988.8	999.6	1014	1007	996.3	982.6	10- 20	315.6	434.8	41.2,41.2
30	542.0	542.0	554.1	564.2	573.5	570.6	556.4	539.8	20- 30	355.6	790.4	74.9,74.9
40	153.9	152.3	153.9	161.1	166.5	166.5	159.7	155.0	30- 40	208.3	998.7	94.7,94.7
50	5.434	6.116	6.818	6.883	6.705	7.081	6.519	6.037	40- 50	48.10	1047	99.3,99.3
60	1.991	2.613	3.579	3.219	2.398	2.370	2.411	2.172	50- 60	3.414	1050	99.6,99.6
70	1.228	1.954	2.760	2.596	1.455	1.401	1.458	1.364	60- 70	2.117	1052	99.8,99.8
80	0.7126	1.479	2.052	1.915	0.7046	0.7783	0.9017	0.9060	70- 80	1.565	1054	99.9,99.9
90	0.0828	0	0	0	0.1058	0	0	0	80- 90	0.7863	1055	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): 1036.1 lm

%lum = 98.2%
 %lamp = 98.2%

Conical surface Flux(120deg): 1050.2 lm

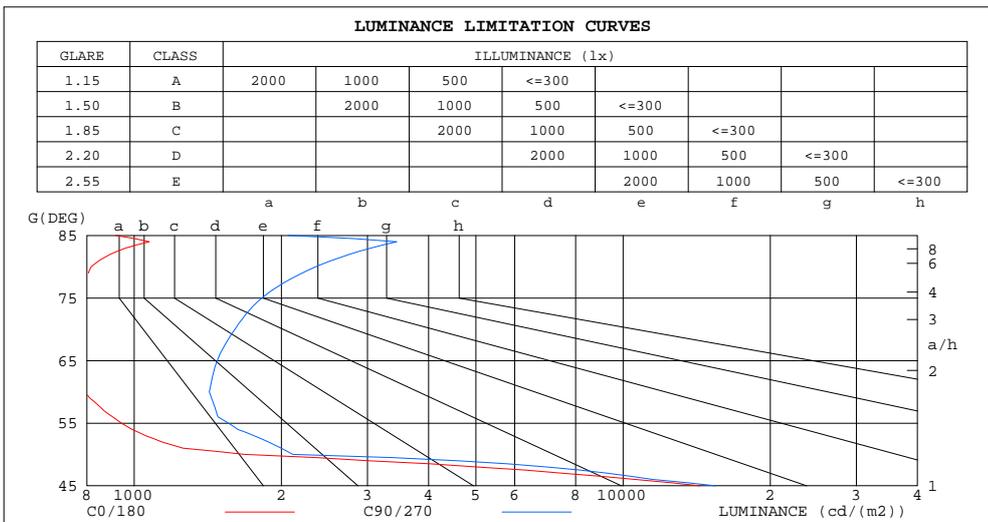
%lum = 99.6%
 %lamp = 99.6%

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-12-01

V(B) Range:-85 - 85DEG
 V(B) Interval: 2.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.240m [K=1.0000]
 Remarks: 4 INCH

LUMINANCE LIMITATION CURVES

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	916	2066
80	817	2352
75	729	1825
70	714	1606
65	721	1479
60	793	1425
55	941	1559
50	1683	2111
45	14382	15457

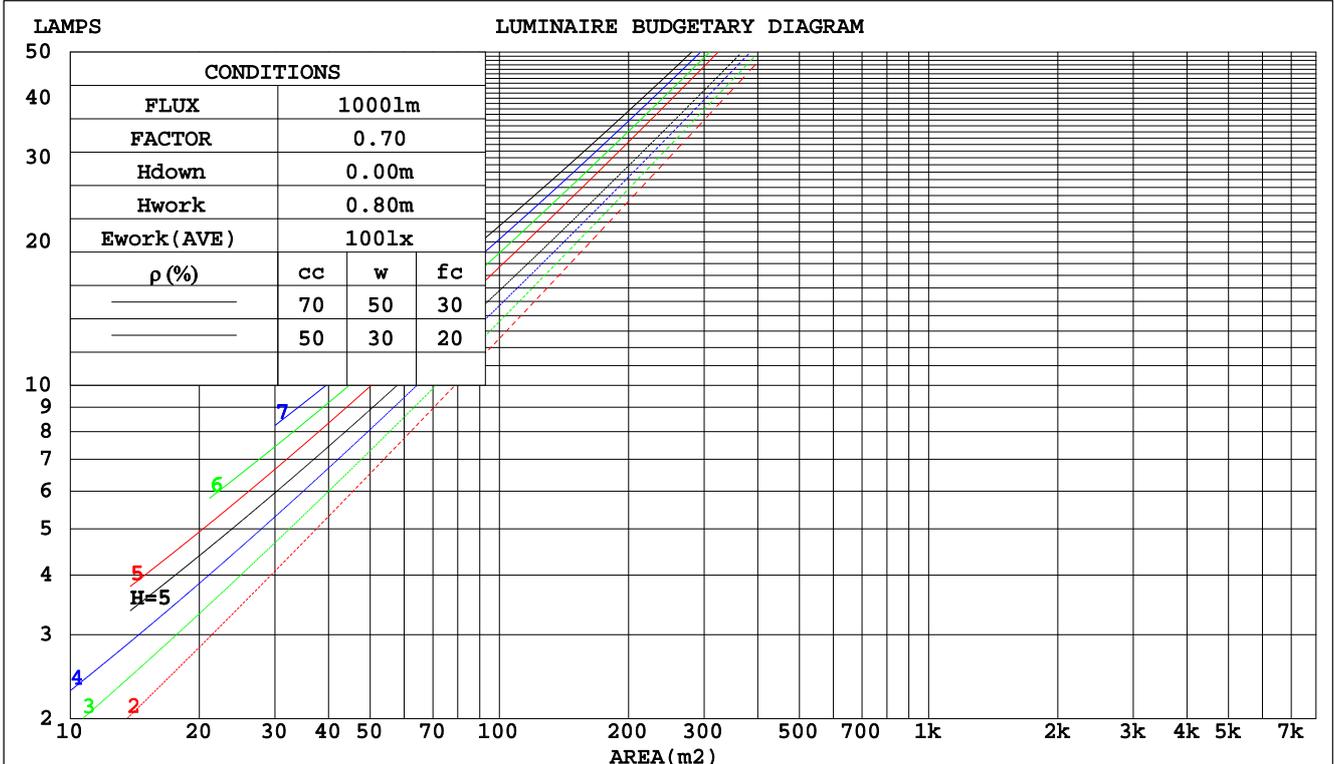
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
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	.00
1.0	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.85	.88	.86	.83	.82
4.0	.91	.85	.81	.90	.85	.81	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
5.0	.85	.80	.75	.84	.79	.75	.83	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.70	.77	.72	.69	.75	.71	.69	.67
7.0	.76	.70	.66	.75	.69	.65	.74	.69	.65	.72	.68	.65	.71	.67	.64	.63
8.0	.71	.66	.62	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.59
9.0	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.57	.64	.60	.57	.56
10.0	.64	.58	.55	.64	.58	.55	.63	.58	.54	.62	.57	.54	.61	.57	.54	.53



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

WEC AND CCEC

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.174	.099	.031	.167	.095	.030	.155	.089	.028	.143	.083	.026	.133	.077	.025	
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.079	.025	.131	.074	.023	
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.075	.023	.128	.071	.022	
4.0	.151	.078	.023	.146	.077	.023	.139	.074	.022	.132	.071	.021	.125	.068	.021	
5.0	.144	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.065	.019	
6.0	.137	.069	.020	.134	.068	.020	.128	.066	.019	.123	.064	.019	.117	.062	.018	
7.0	.131	.065	.018	.129	.064	.018	.123	.062	.018	.118	.061	.018	.114	.059	.017	
8.0	.126	.062	.017	.123	.061	.017	.119	.059	.017	.114	.058	.017	.110	.057	.016	
9.0	.121	.058	.016	.119	.058	.016	.114	.057	.016	.110	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.107	.053	.015	.103	.052	.015	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

UGR(Unified Glare Rating) Table

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm										
NAME: 4 INCH					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: EVERFINE					SUR.:80			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	18.1	19.1	18.4	19.2	19.4	18.5	19.4	18.7	19.6	19.7
3H	18.0	18.8	18.2	19.0	19.2	18.3	19.2	18.6	19.4	19.6
4H	17.9	18.7	18.2	18.9	19.1	18.2	19.0	18.5	19.3	19.5
6H	17.8	18.5	18.1	18.8	19.0	18.2	18.9	18.5	19.2	19.4
8H	17.8	18.5	18.1	18.7	19.0	18.2	18.9	18.5	19.1	19.4
12H	17.7	18.4	18.0	18.7	18.9	18.1	18.8	18.5	19.1	19.4
4H 2H	17.9	18.7	18.2	18.9	19.1	18.2	19.0	18.5	19.2	19.5
3H	17.7	18.4	18.0	18.7	18.9	18.1	18.7	18.4	19.0	19.3
4H	17.6	18.2	18.0	18.5	18.9	18.0	18.6	18.3	18.9	19.2
6H	17.5	18.1	17.9	18.4	18.8	17.9	18.5	18.3	18.8	19.2
8H	17.5	18.0	17.9	18.4	18.7	17.9	18.4	18.3	18.8	19.2
12H	17.5	17.9	17.9	18.3	18.7	17.9	18.4	18.3	18.8	19.2
8H 4H	17.5	18.0	17.9	18.3	18.7	17.9	18.4	18.2	18.7	19.1
6H	17.4	17.8	17.8	18.2	18.6	17.8	18.2	18.2	18.6	19.0
8H	17.4	17.7	17.8	18.2	18.6	17.8	18.2	18.3	18.6	19.0
12H	17.4	17.7	17.8	18.1	18.6	17.8	18.2	18.3	18.6	19.1
12H 4H	17.4	17.9	17.8	18.3	18.7	17.8	18.3	18.2	18.6	19.0
6H	17.4	17.7	17.8	18.2	18.6	17.8	18.1	18.2	18.6	19.0
8H	17.3	17.7	17.8	18.1	18.6	17.8	18.1	18.3	18.5	19.0
Variations with the observer position at spacings:										
S = 1.0H	+ 3.4 / -11.7					+ 3.4 / - 9.2				
1.5H	+ 6.0 / -11.7					+ 5.9 / - 9.2				
2.0H	+ 7.6 / - 3.7					+ 6.5 / - 2.6				

CIE Pub.117, 1055 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.2)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

UTILIZATION FACTORS TABLE

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

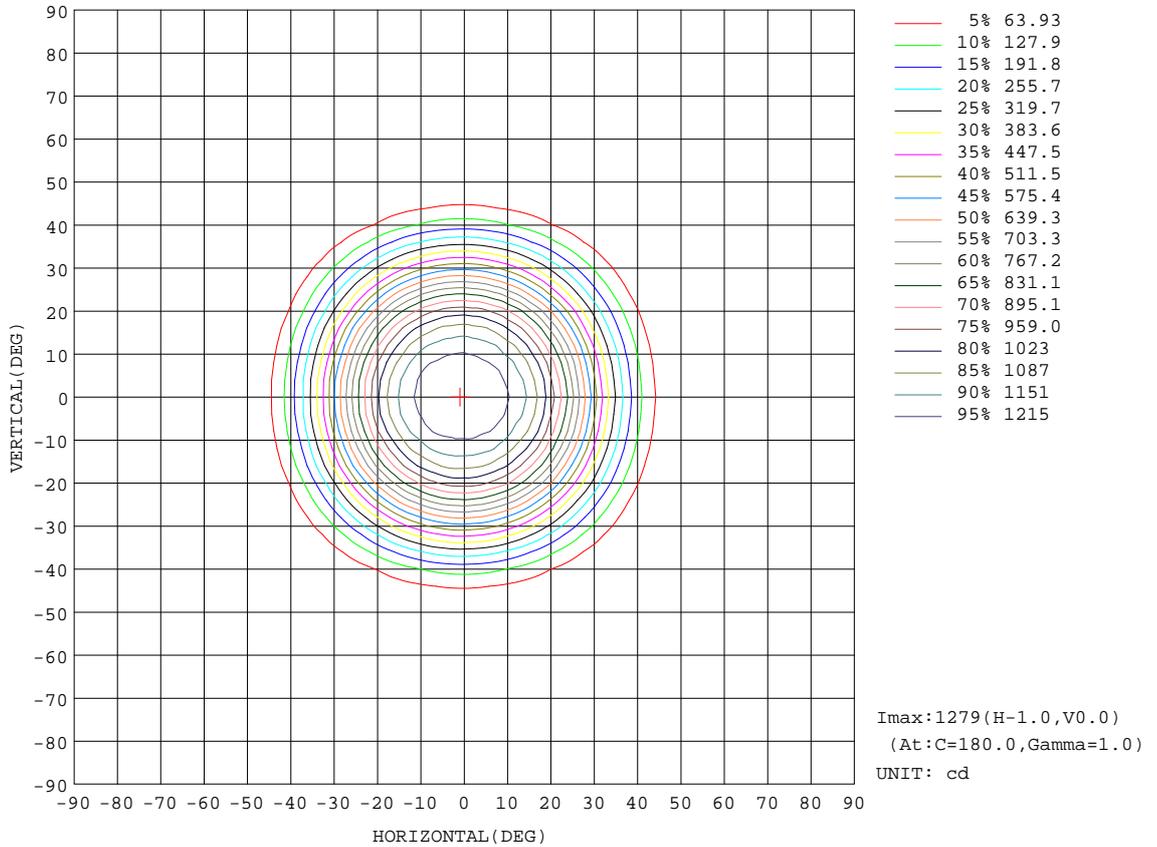
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	88	82	78	88	82	78	87	82	78	75
0.80	96	90	86	95	90	86	94	89	86	82
1.00	100	95	91	99	94	91	98	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

ISOCANDELA DIAGRAM

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:



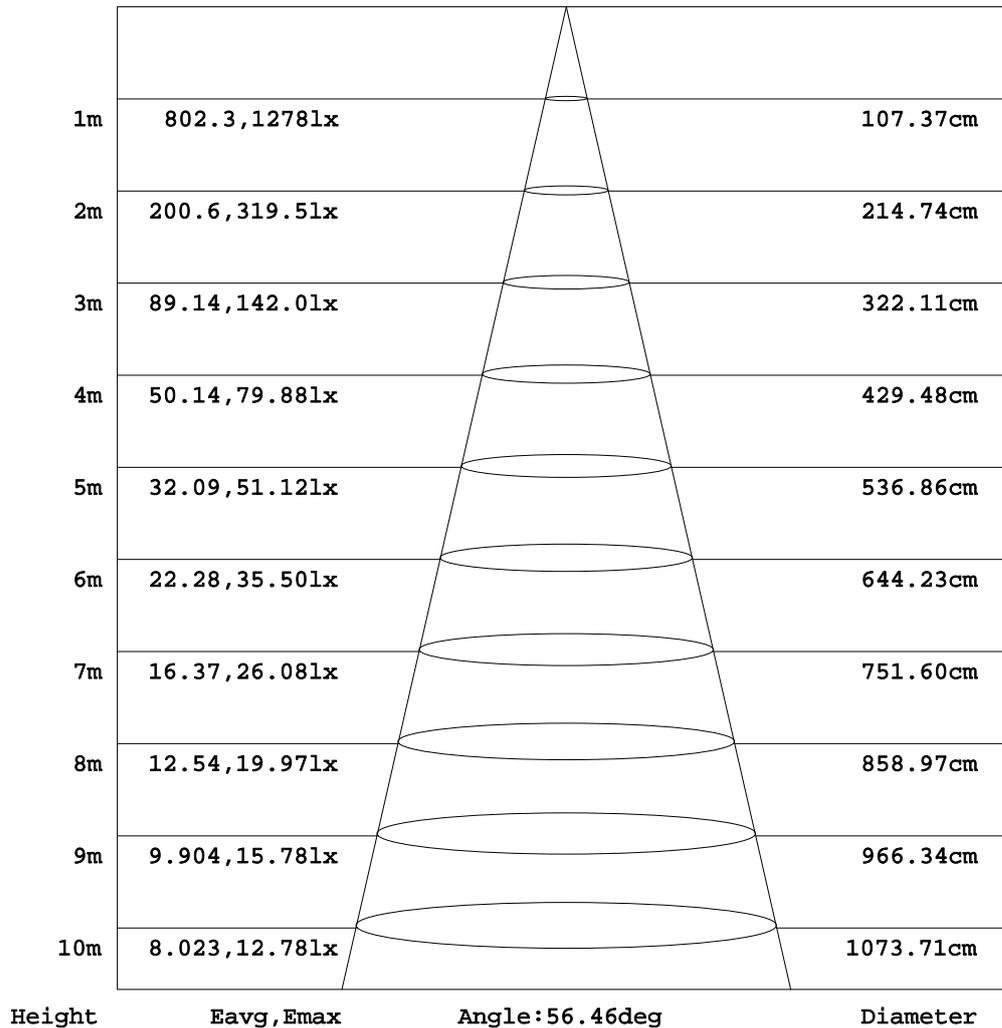
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

AAI Figure

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

Flux out:743.0 lm



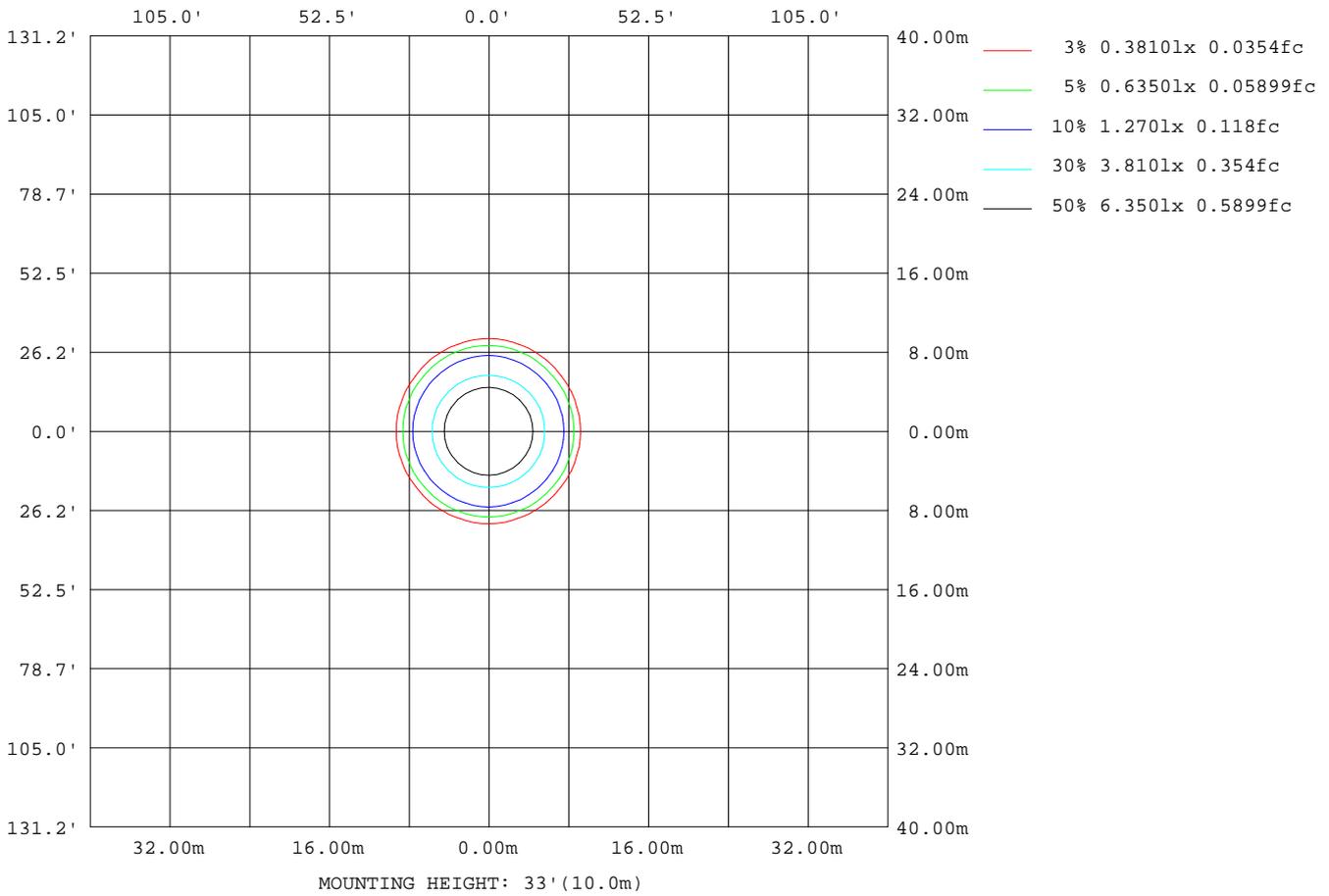
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

ISOLUX DIAGRAM

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

LED Avg.L Report

Test:U:230.39V I:0.0496A P:10.490W PF:0.9182 Freq:50.00Hz Lamp Flux:1054.66x1 lm		
NAME: 4 INCH	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:80	Shielding Angle:

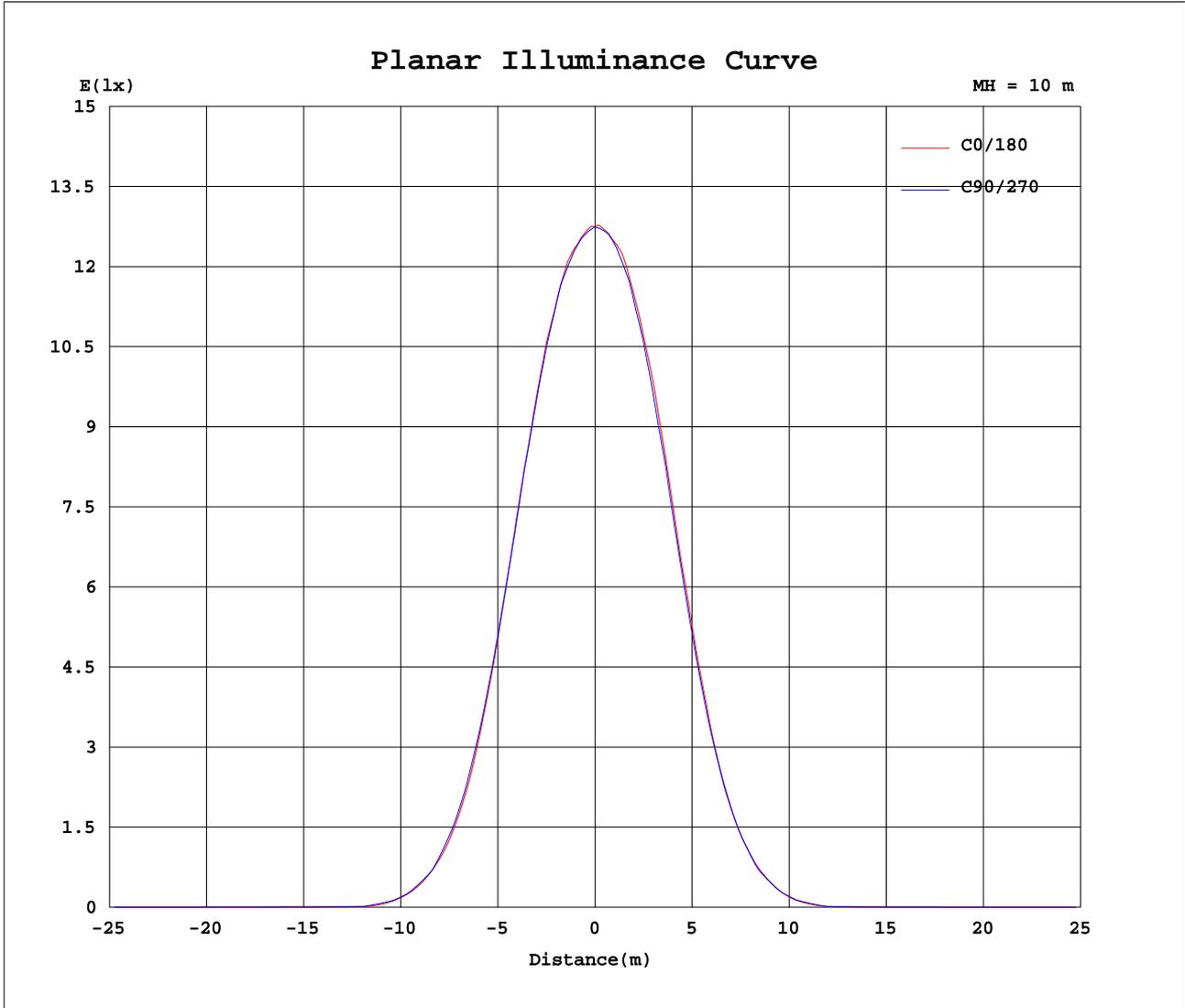
AvgL	cd/m2
L_0~180(65)av	799
L_0~180(75)av	771
L_0~180(85)av	906
L_90~270(65)av	1179
L_90~270(75)av	1358
L_90~270(85)av	1466
L_45(65)av	1012
L_45(75)av	1177
L_45(85)av	2406

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2021-12-01

V(B) Range:-85 - 85DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.240m [K=1.0000]
Remarks: 4 INCH

