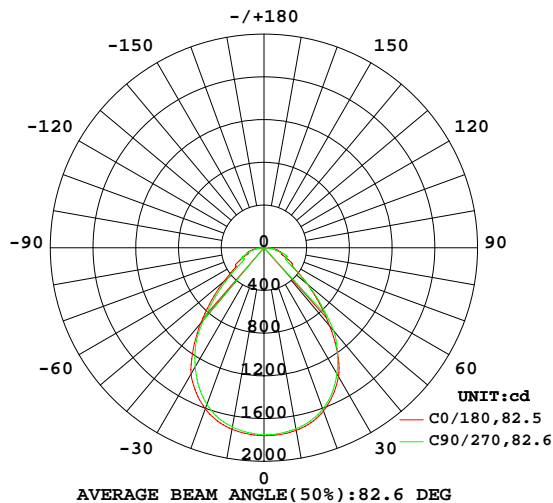


LUMINAIRE PHOTOMETRIC TEST REPORT

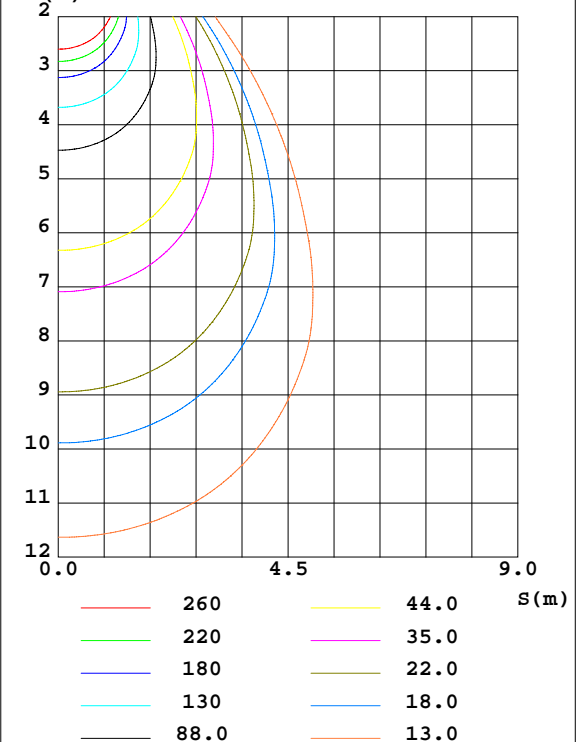
Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 51.75 lm/W			
MODEL		Imax(cd)	1760	S/MH(C0/180)	1.16
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.12
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	3346.4	η UP,DN(C0-180)	0.0,51.7
NOMINAL FLUX(lm)	3346.44	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	η down(%)	100.0	CIBSE SHR MAX	1.25

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:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

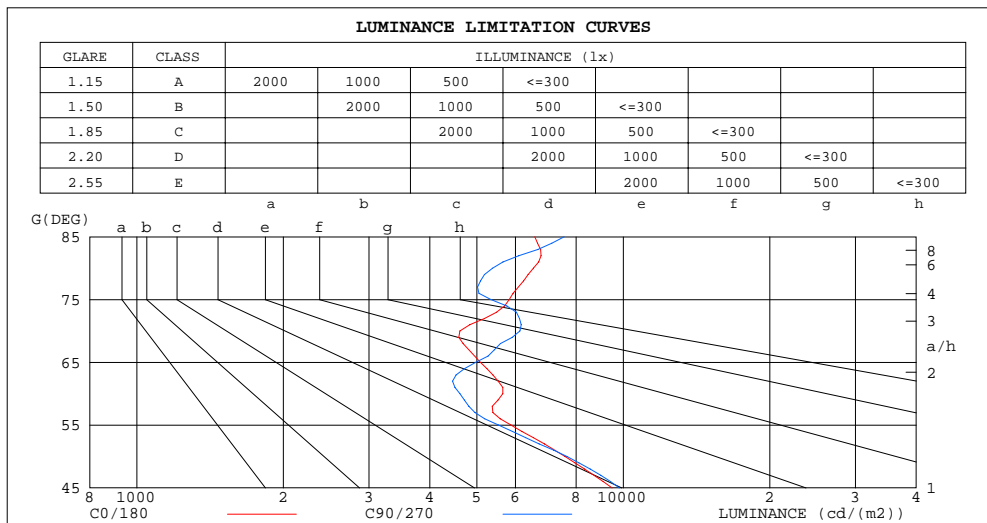
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1736	1721	1726	1704					0- 10	165.9	165.9	4.96,4.96
20	1627	1609	1606	1562					10- 20	471.9	637.8	19.1,19.1
30	1394	1365	1366	1289					20- 30	684.8	1323	39.5,39.5
40	957.7	1014	922.3	874.9					30- 40	724.4	2047	61.2,61.2
50	532.9	537.8	492.6	432.4					40- 50	545.3	2592	77.5,77.5
60	308.9	252.1	299.6	214.3					50- 60	314.2	2906	86.9,86.9
70	172.4	229.0	157.4	179.5					60- 70	223.8	3130	93.5,93.5
80	124.0	102.2	105.6	88.31					70- 80	157.1	3287	98.2,98.2
90	2.139	8.101	1.864	1.907					80- 90	59.10	3346	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: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6576	7555
80	6535	5385
75	5826	5344
70	4612	6129
65	5082	4973
60	5653	4613
55	5877	5537
50	7587	7656
45	9482	9816

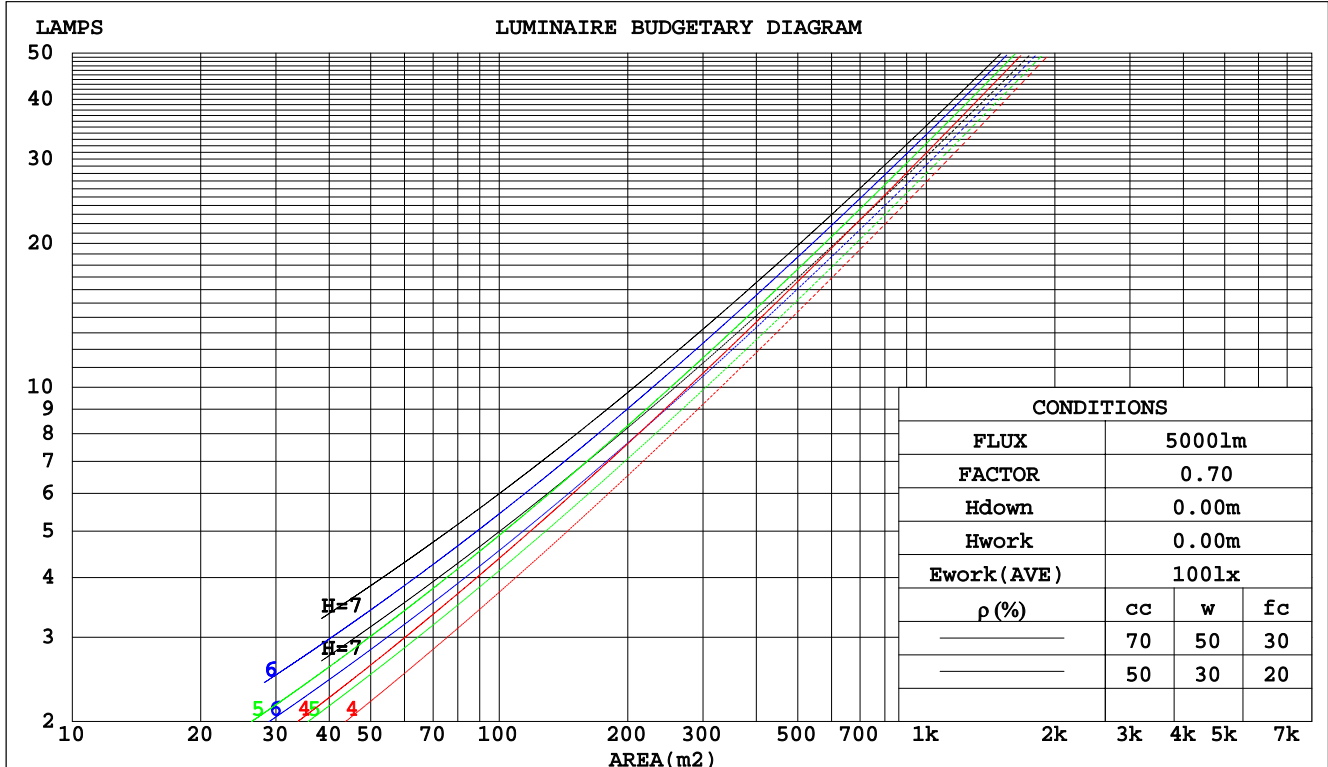
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	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	1.06	1.02	.99	1.04	1.00	.97	.00	.97	.94	.96	.93	.91	.92	.90	.89	.87
2.0	.95	.89	.84	.93	.87	.83	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.85	.78	.72	.83	.77	.72	.81	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.77	.69	.63	.76	.68	.63	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.70	.62	.56	.69	.61	.56	.67	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.64	.56	.50	.63	.55	.50	.61	.54	.49	.60	.54	.49	.58	.53	.49	.47
7.0	.59	.51	.45	.58	.50	.45	.56	.50	.45	.55	.49	.44	.54	.48	.44	.42
8.0	.54	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.40	.50	.44	.40	.38
9.0	.50	.42	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35
10.0	.46	.39	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.43	.38	.34	.32



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.: 510*280*20		SERIAL No.:	
MFR.: NLD-242002-01		SUR.:0.465*0.235		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	.268	.153	.048	.261	.149	.047	.248	.143	.046	.236	.136	.044	.225	.131	.042		
2.0	.252	.138	.042	.246	.135	.042	.234	.130	.040	.224	.126	.039	.214	.121	.038		
3.0	.234	.125	.037	.229	.123	.037	.219	.119	.036	.210	.115	.035	.201	.111	.034		
4.0	.218	.113	.033	.213	.112	.033	.204	.108	.032	.196	.105	.032	.189	.103	.031		
5.0	.203	.104	.030	.199	.102	.030	.191	.100	.029	.184	.097	.029	.178	.095	.029		
6.0	.190	.095	.027	.187	.094	.027	.180	.092	.027	.173	.090	.026	.167	.088	.026		
7.0	.179	.088	.025	.175	.087	.025	.169	.086	.025	.163	.084	.024	.158	.082	.024		
8.0	.168	.082	.023	.165	.081	.023	.160	.080	.023	.155	.078	.023	.150	.077	.022		
9.0	.159	.077	.021	.156	.076	.021	.151	.075	.021	.147	.073	.021	.142	.072	.021		
10.0	.150	.072	.020	.148	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.020		

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	.177	.157	.138	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.056	.046	.036	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.007	
5.0	.141	.090	.051	.121	.077	.045	.084	.054	.031	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.066	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 510*280*20			SERIAL No.:			
MFR.: NLD-242002-01					SUR.:0.465*0.235			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	18.5	19.8	18.7	20.0	20.2	18.3	19.6	18.5	19.8	20.0	
	3H	19.4	20.7	19.7	20.9	21.1	19.6	20.8	19.9	21.0	
	4H	20.1	21.3	20.4	21.5	21.8	20.3	21.4	20.6	21.7	
	6H	20.8	21.9	21.2	22.2	22.5	20.7	21.8	21.1	22.1	
	8H	21.2	22.2	21.5	22.5	22.8	21.0	22.1	21.3	22.3	
	12H	21.4	22.4	21.8	22.7	23.0	21.3	22.3	21.6	22.6	
4H	2H	18.8	19.9	19.1	20.2	20.4	18.6	19.8	18.9	20.0	
	3H	20.1	21.1	20.4	21.4	21.7	20.3	21.3	20.6	21.6	
	4H	21.0	21.9	21.3	22.2	22.5	21.1	22.0	21.4	22.3	
	6H	21.9	22.7	22.3	23.0	23.4	21.7	22.5	22.1	22.9	
	8H	22.3	23.1	22.7	23.4	23.8	22.1	22.9	22.5	23.2	
	12H	22.6	23.3	23.0	23.7	24.1	22.5	23.2	22.9	23.6	
8H	4H	21.3	22.1	21.7	22.4	22.8	21.4	22.1	21.8	22.5	
	6H	22.4	23.1	22.9	23.5	23.9	22.2	22.9	22.7	23.3	
	8H	23.0	23.5	23.4	24.0	24.4	22.8	23.3	23.2	23.7	
	12H	23.4	23.9	23.9	24.4	24.8	23.3	23.8	23.8	24.2	
12H	4H	21.3	22.0	21.8	22.4	22.8	21.4	22.1	21.8	22.5	
	6H	22.5	23.1	23.0	23.5	24.0	22.4	22.9	22.8	23.4	
	8H	23.1	23.6	23.6	24.1	24.6	23.0	23.4	23.4	23.9	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
2.0H	+ 0.6 / - 0.3					+ 0.9 / - 0.7					

CIE Pub.117, 3346 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.2$)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:

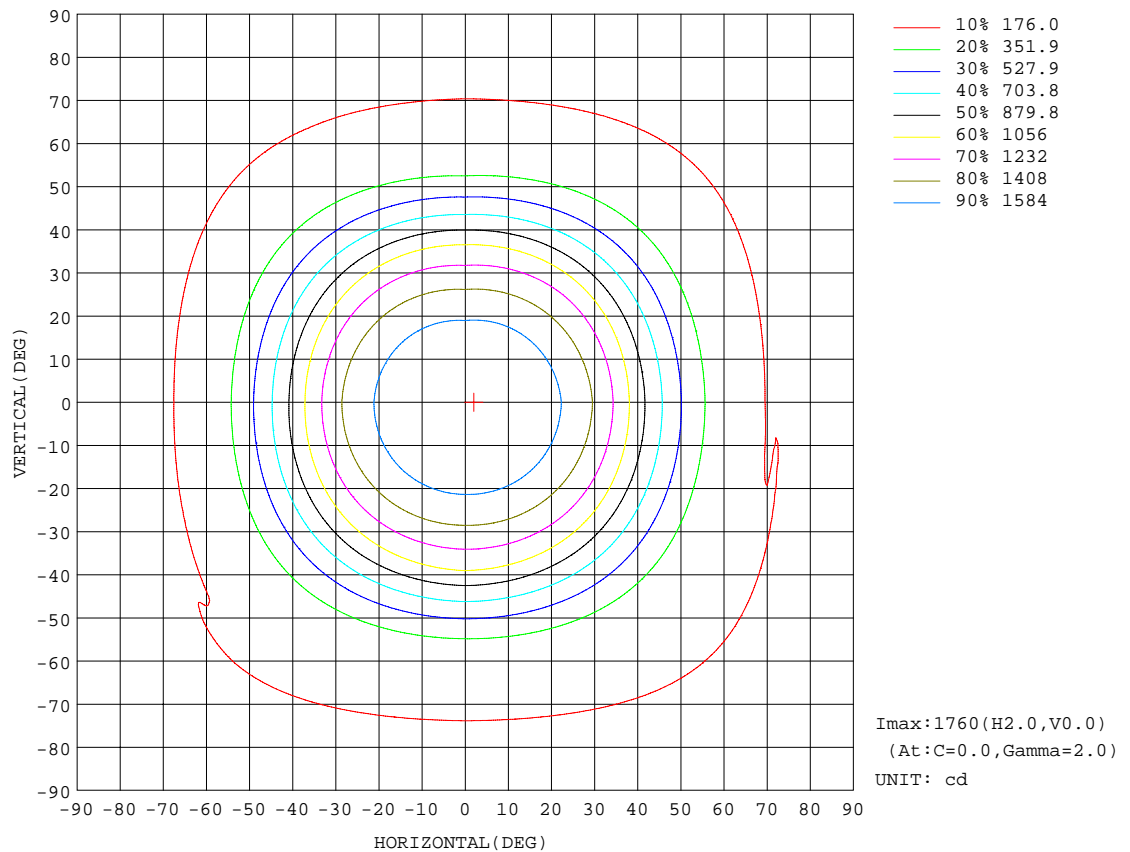
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	58	52	67	58	52	66	57	52	46
0.80	77	67	61	76	67	61	74	66	61	55
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	82	76	89	81	75	86	80	75	68
1.50	94	86	81	93	86	80	90	84	79	73
2.00	100	93	87	98	92	87	95	89	85	78
2.50	103	96	91	101	95	91	97	93	89	81
3.00	105	100	95	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
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:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:



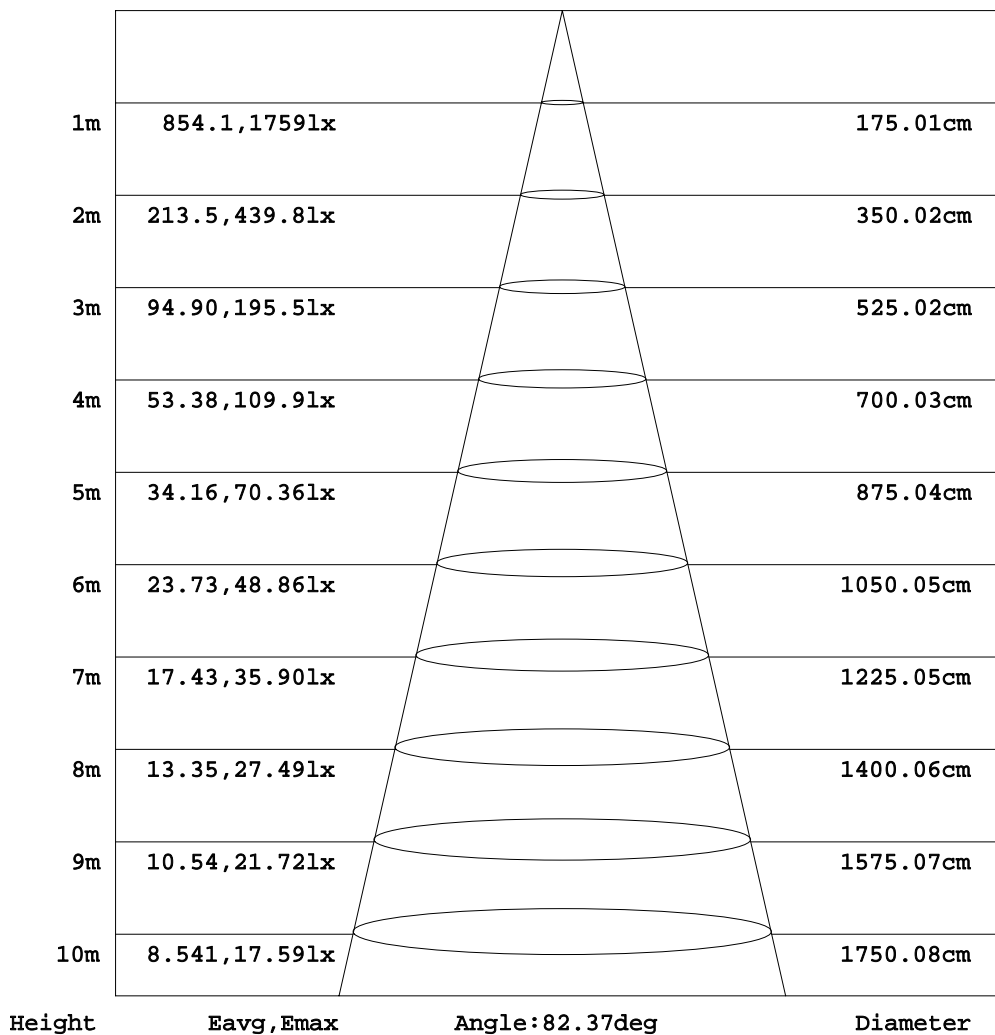
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

AAI Figure

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:

Flux out:2175 lm



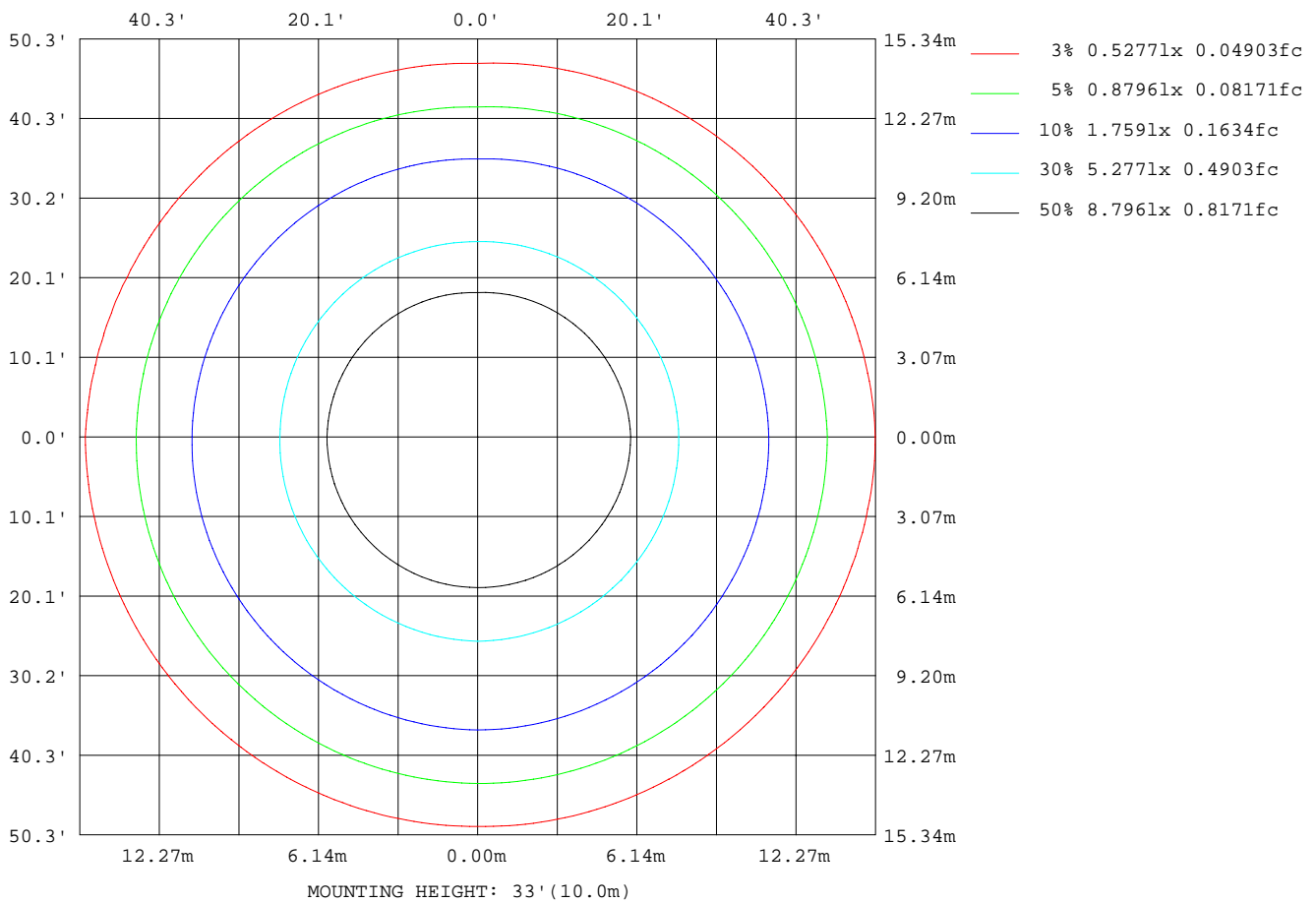
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity: 65.0%
Test Distance: 11.700m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:229.72V I:0.2872A P:64.671W PF:0.9801 Freq:49.99Hz Lamp Flux:3346.44x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.465*0.235	Shielding Angle:

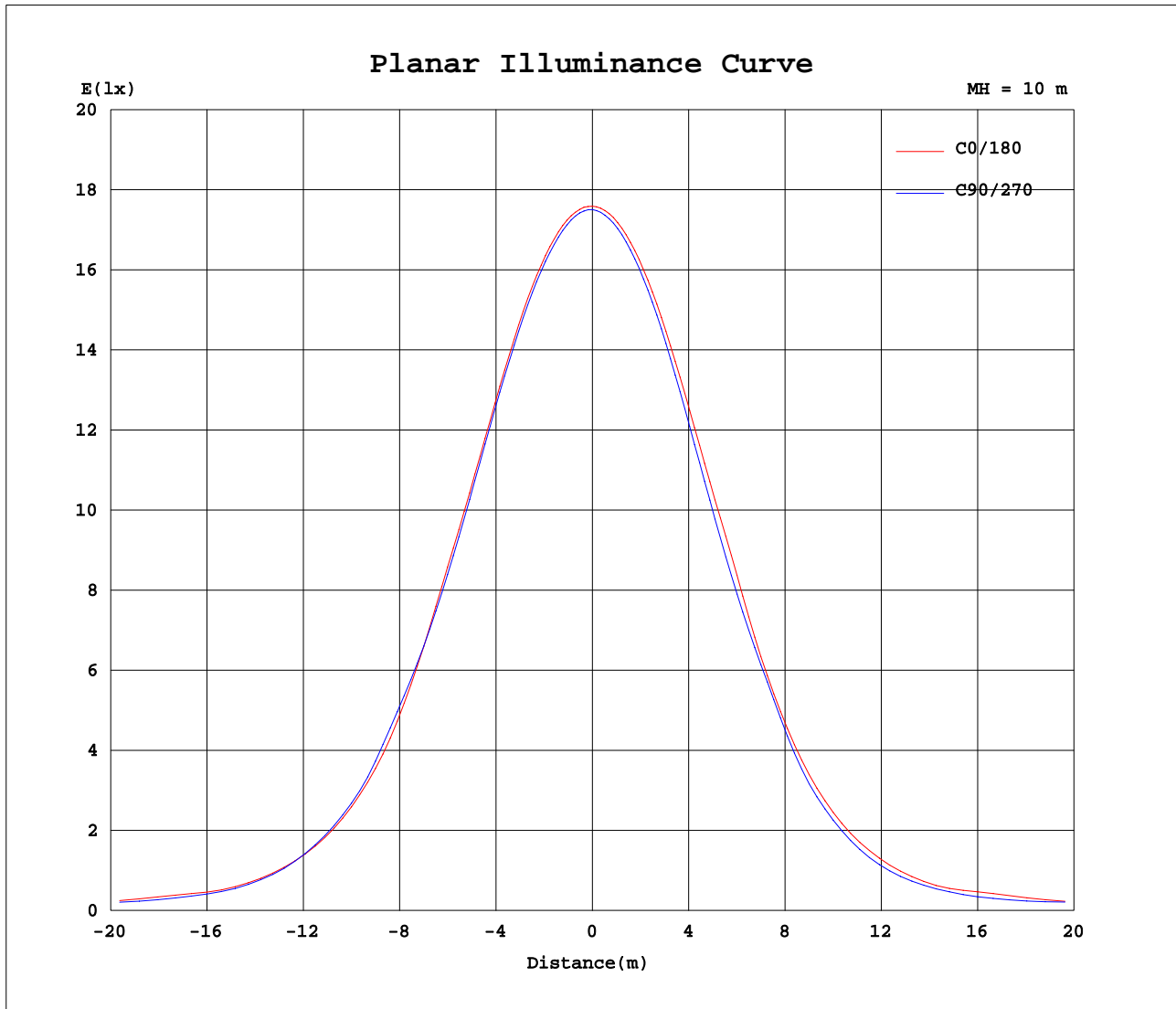
AvgL	cd/m2
L_0~180(65)av	4941
L_0~180(75)av	5618
L_0~180(85)av	5807
L_90~270(65)av	5029
L_90~270(75)av	5001
L_90~270(85)av	5919
L_45(65)av	4987
L_45(75)av	5219
L_45(85)av	5829

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-06-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity: 65.0%
Test Distance: 11.700m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

```