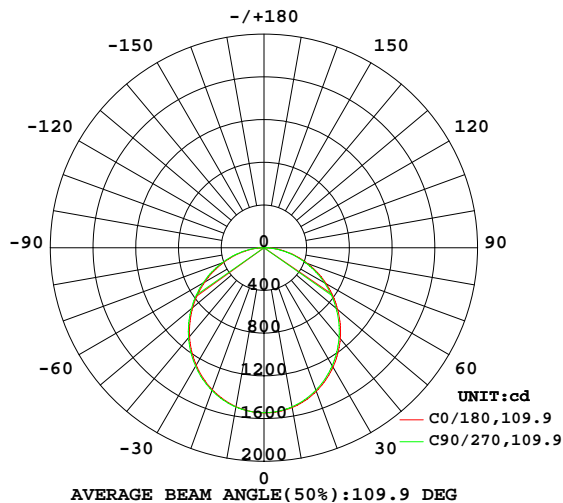


LUMINAIRE PHOTOMETRIC TEST REPORT

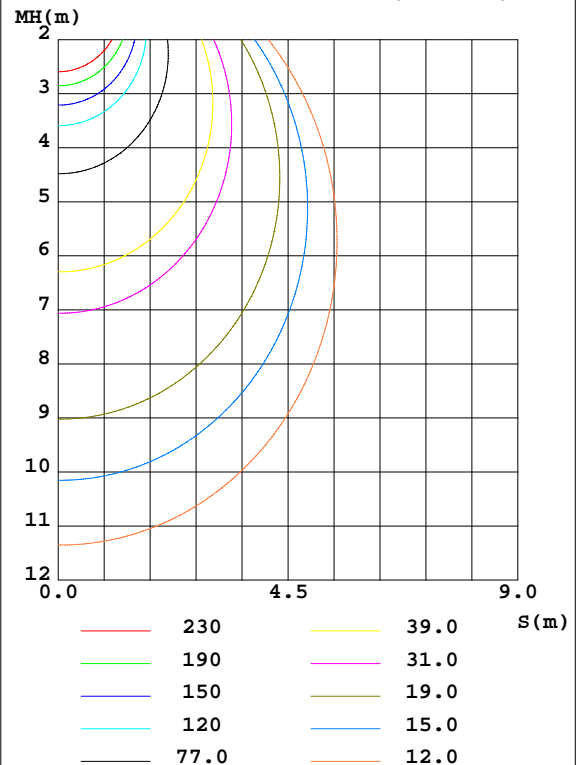
Test:U:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.11 lm/W			
MODEL		I _{max} (cd)	1546	S/MH(C0/180)	1.23
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	4344.0	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	4343.97	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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:

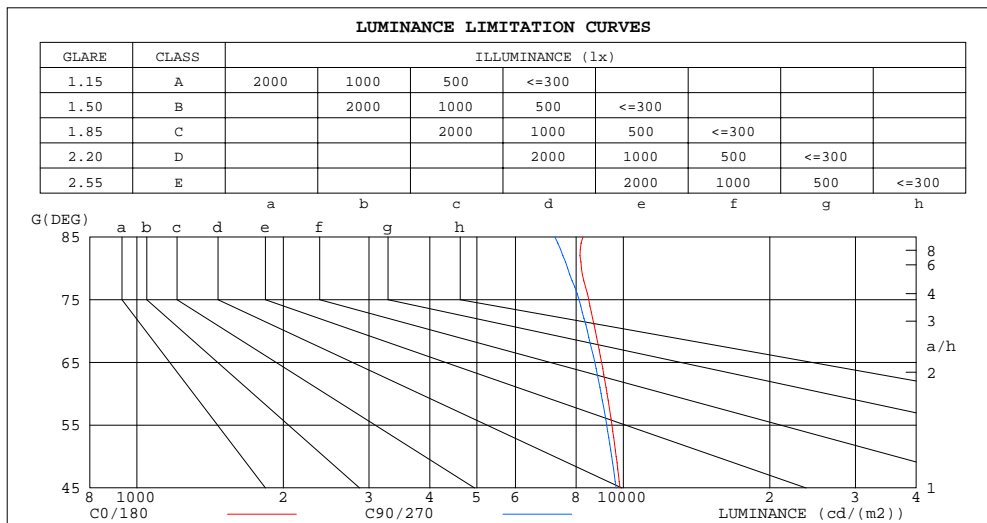
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	1519	1516	1513	1509	1511	1512	1514	1517	0- 10	146.0	146.0	3.36,3.36
20	1431	1427	1420	1414	1415	1418	1424	1429	10- 20	416.0	562.0	12.9,12.9
30	1292	1286	1277	1269	1270	1273	1282	1290	20- 30	625.0	1187	27.3,27.3
40	1112	1105	1094	1084	1085	1089	1099	1109	30- 40	745.9	1933	44.5,44.5
50	901.1	894.5	881.9	871.2	871.3	876.4	887.7	898.8	40- 50	766.8	2700	62.1,62.1
60	671.3	665.3	652.5	640.5	639.7	646.1	658.0	669.0	50- 60	690.0	3390	78,78
70	434.5	430.3	418.2	404.9	400.5	407.8	419.6	429.6	60- 70	531.2	3921	90.3,90.3
80	206.5	204.4	193.5	181.2	177.9	184.5	194.9	203.7	70- 80	320.8	4242	97.6,97.6
90	14.40	11.42	4.811	2.741	3.651	3.617	5.077	11.13	80- 90	102.2	4344	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:25.3DEG
Operators:
Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	8263	7232
80	8202	7683
75	8490	8107
70	8760	8434
65	9024	8736
60	9259	9000
55	9474	9241
50	9668	9462
45	9844	9664

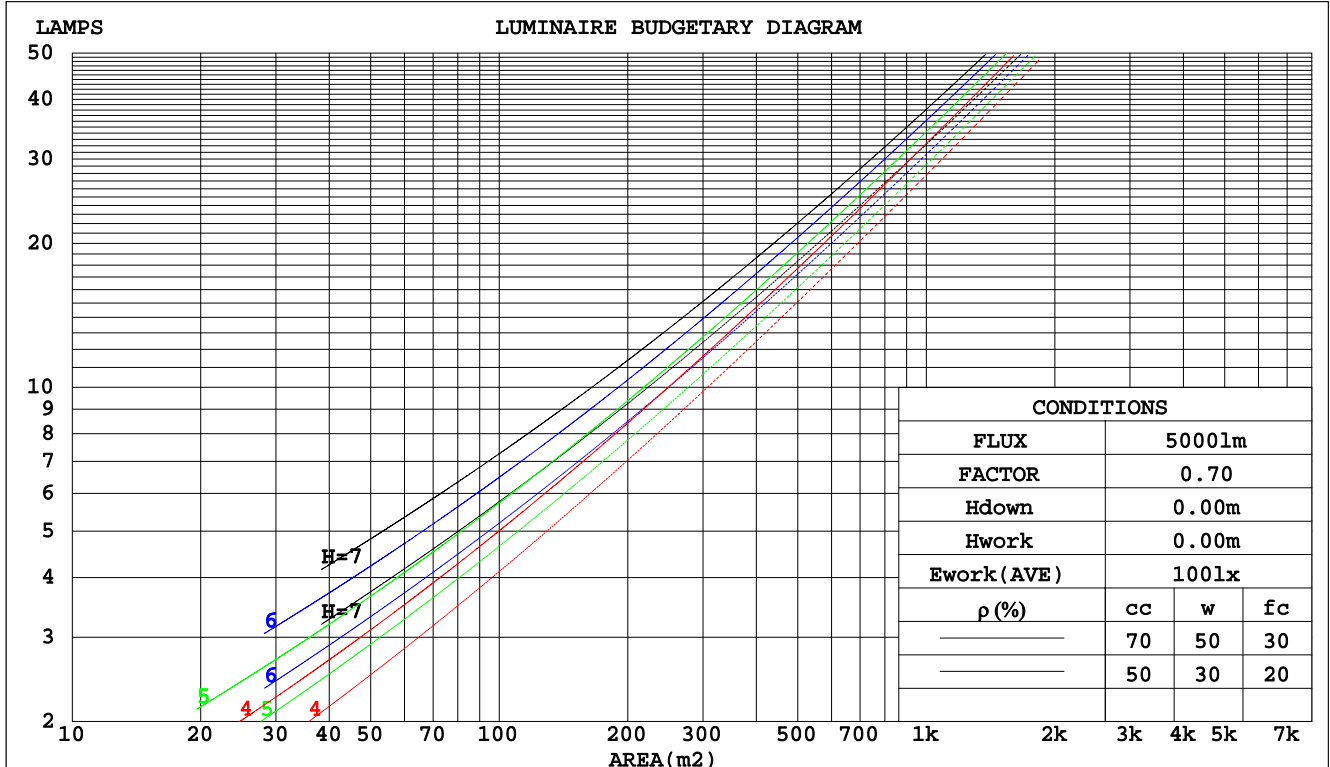
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	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	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.85	.79	.75	.81	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.64	.77	.70	.64	.74	.68	.62	.72	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.69	.60	.54	.66	.59	.53	.64	.58	.52	.62	.56	.52	.50
5.0	.63	.53	.47	.61	.53	.46	.59	.52	.46	.57	.51	.45	.55	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.54	.46	.40	.52	.45	.40	.50	.44	.40	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.31	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.39	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.: 450*82			SERIAL No.:		
MFR.: NLC24-0006-01			SUR.:3.14*0.215*0.215			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	.316	.180	.057	.309	.176	.056	.295	.169	.054	.283	.163	.052	.272	.158	.051	
2.0	.295	.162	.050	.289	.159	.049	.277	.154	.048	.266	.149	.047	.256	.145	.046	
3.0	.272	.145	.043	.266	.143	.043	.256	.139	.042	.246	.135	.041	.238	.132	.041	
4.0	.250	.130	.038	.246	.128	.038	.236	.125	.037	.228	.122	.037	.220	.119	.036	
5.0	.231	.118	.034	.227	.116	.034	.219	.114	.034	.211	.111	.033	.204	.109	.033	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.199	.098	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.172	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.161	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021	

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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.019	.017	.015	
2.0	.173	.132	.098	.148	.114	.084	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.050	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.:			DIM.: 450*82			SERIAL No.:				
MFR.: NLC24-0006-01			SUR.:3.14*0.215*0.215			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	20.7	22.2	21.0	22.4	22.6	20.6	22.1	20.9	22.3	22.5
3H	22.3	23.7	22.6	24.0	24.2	22.2	23.6	22.5	23.8	24.1
4H	23.0	24.3	23.3	24.6	24.9	22.8	24.2	23.2	24.4	24.7
6H	23.5	24.8	23.9	25.1	25.4	23.4	24.6	23.7	24.9	25.2
8H	23.8	25.0	24.1	25.3	25.6	23.5	24.8	23.9	25.0	25.3
12H	23.9	25.1	24.3	25.4	25.7	23.7	24.8	24.0	25.1	25.4
4H 2H	21.3	22.7	21.6	22.9	23.2	21.2	22.6	21.6	22.8	23.1
3H	23.1	24.3	23.5	24.6	24.9	23.0	24.2	23.4	24.5	24.8
4H	24.0	25.0	24.3	25.4	25.7	23.8	24.9	24.2	25.2	25.6
6H	24.6	25.6	25.0	26.0	26.3	24.5	25.4	24.9	25.8	26.2
8H	24.9	25.8	25.3	26.2	26.6	24.7	25.6	25.1	26.0	26.4
12H	25.1	26.0	25.6	26.3	26.8	24.9	25.7	25.3	26.1	26.5
8H 4H	24.3	25.2	24.7	25.5	25.9	24.1	25.0	24.6	25.4	25.8
6H	25.1	25.9	25.6	26.3	26.7	25.0	25.7	25.4	26.1	26.6
8H	25.5	26.2	26.0	26.6	27.1	25.3	26.0	25.8	26.4	26.9
12H	25.8	26.4	26.3	26.9	27.3	25.6	26.2	26.1	26.6	27.1
12H 4H	24.3	25.1	24.7	25.5	25.9	24.2	25.0	24.6	25.4	25.8
6H	25.2	25.9	25.7	26.3	26.8	25.1	25.7	25.5	26.2	26.6
8H	25.6	26.2	26.1	26.7	27.1	25.5	26.0	25.9	26.5	27.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 4344 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 5.1$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:

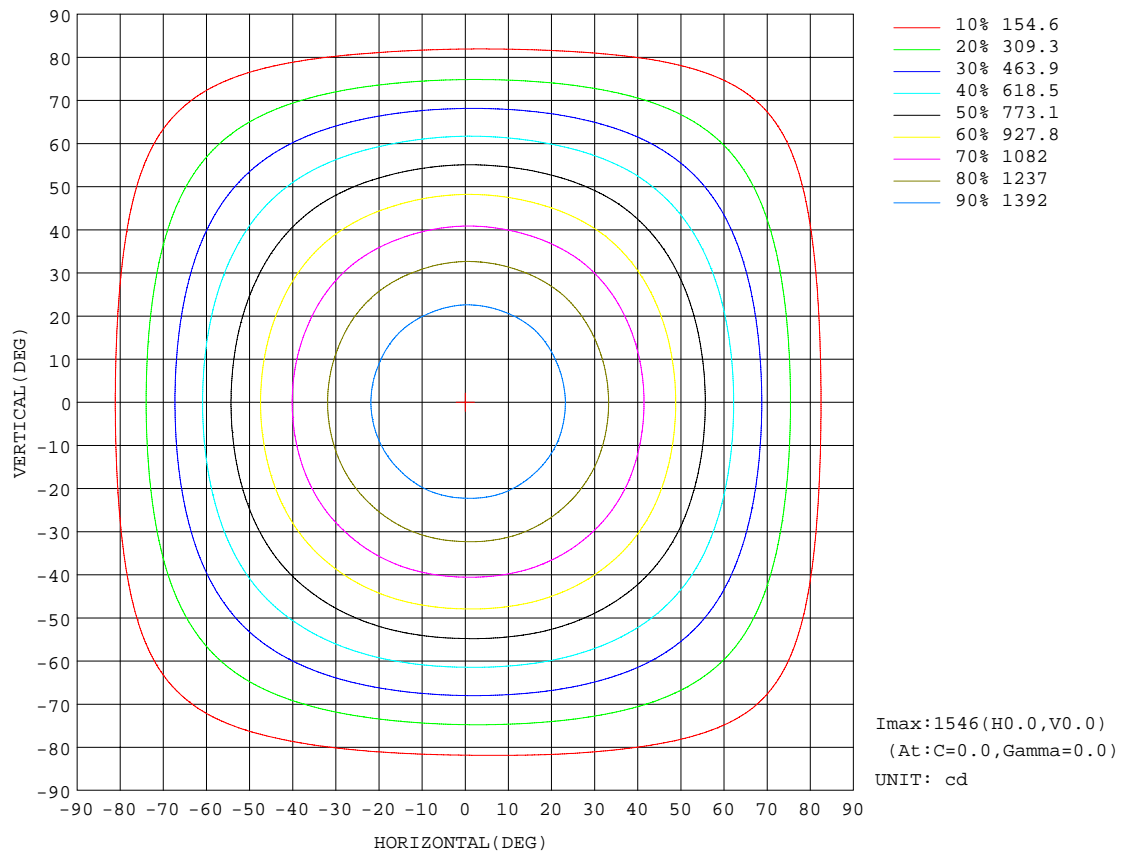
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	45	39	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	65	56	49
1.25	83	72	65	81	72	65	79	70	64	57
1.50	88	78	71	86	77	70	83	75	69	62
2.00	95	86	79	93	85	79	89	83	77	69
2.50	99	91	85	97	89	84	93	87	82	73
3.00	102	95	89	100	93	88	96	90	86	78
4.00	106	100	95	104	98	94	99	95	91	82
5.00	108	104	99	106	102	98	101	98	95	86
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:25.3DEG
 Operators:
 Test Date:2024-08-13

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:

ISOCANDELA DIAGRAM

Test:U:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:

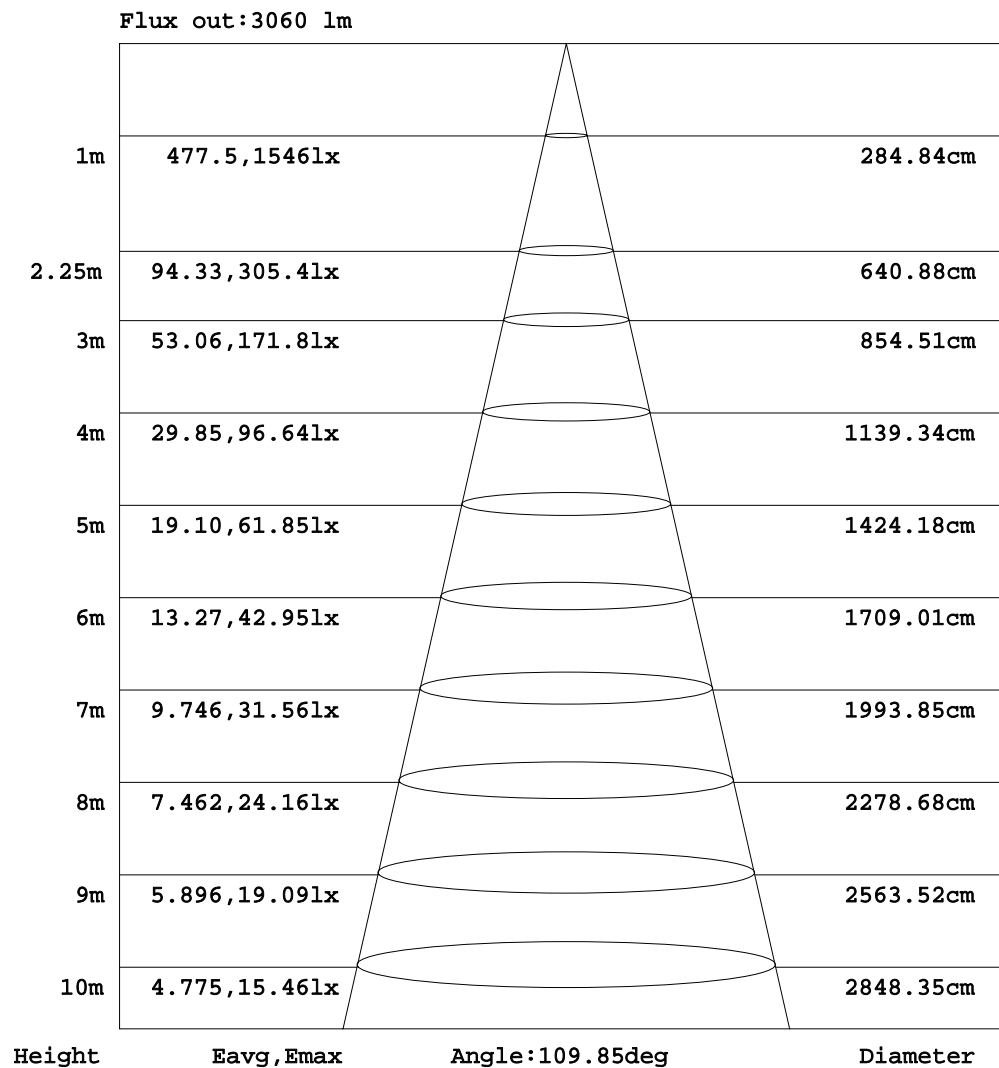


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:



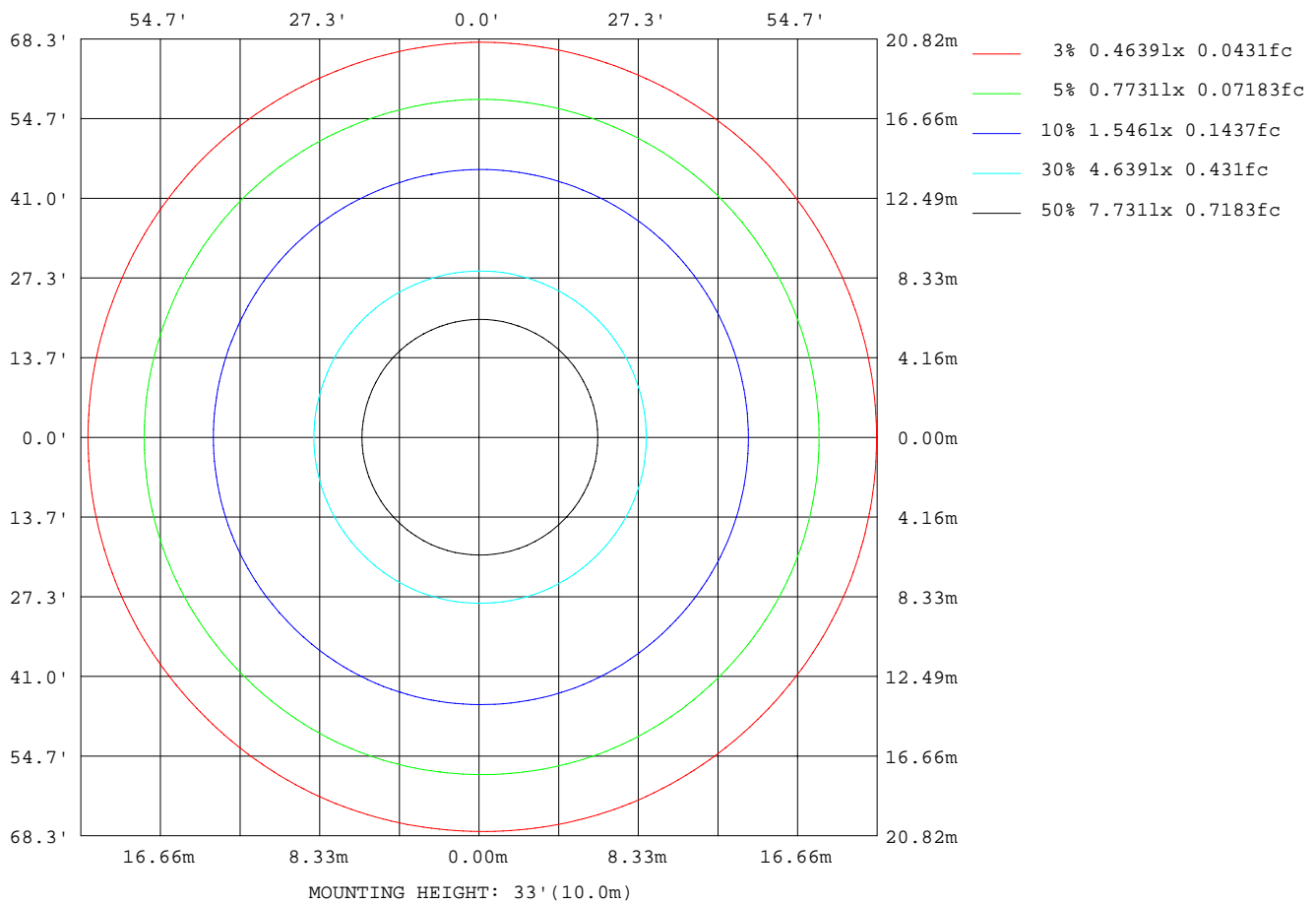
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-08-13

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:229.65V I:0.1337A P:29.935W PF:0.9749 Freq:49.99Hz Lamp Flux:4343.97x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.: NLC24-0006-01	SUR.:3.14*0.215*0.215	Shielding Angle:

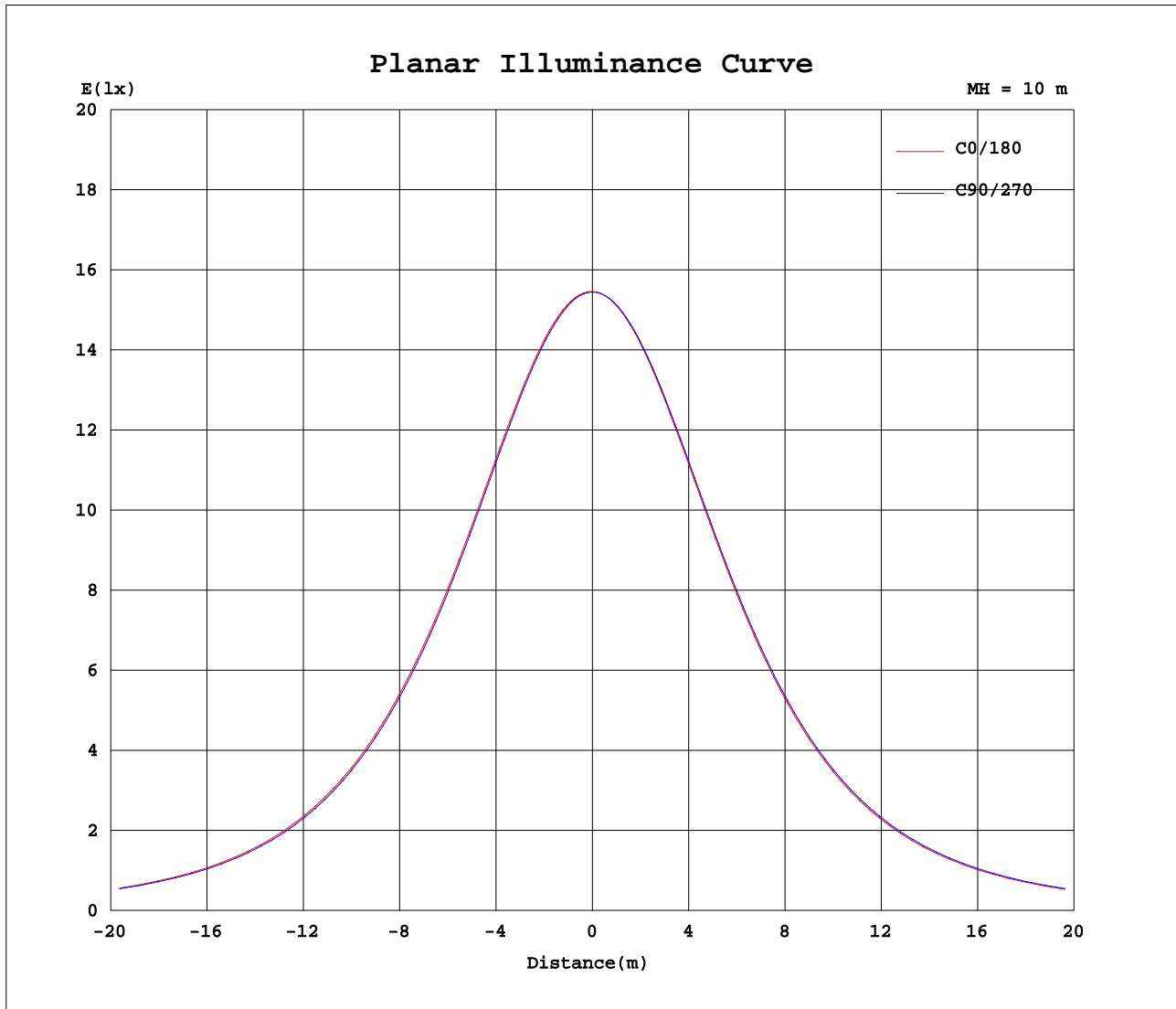
AvgL	cd/m2
L_0~180(65)av	8753
L_0~180(75)av	8060
L_0~180(85)av	7236
L_90~270(65)av	8787
L_90~270(75)av	8118
L_90~270(85)av	7249
L_45(65)av	8766
L_45(75)av	8090
L_45(85)av	7250

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-08-13

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: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-08-13

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:

```