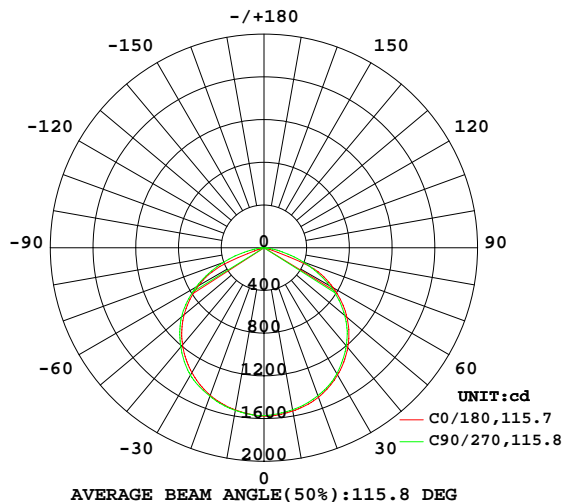


LUMINAIRE PHOTOMETRIC TEST REPORT

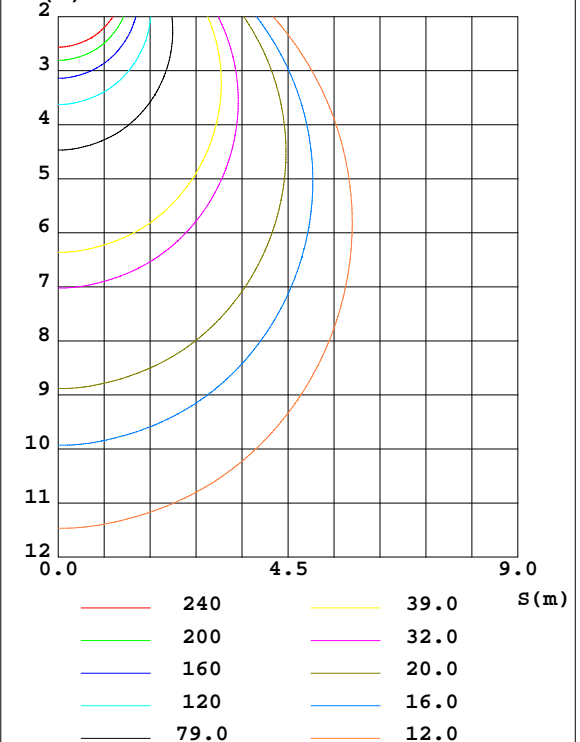
Test:U:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 67.53 lm/W			
MODEL		Imax(cd)	1578	S/MH(C0/180)	1.27
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	4402.2	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	4402.23	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
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: 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:

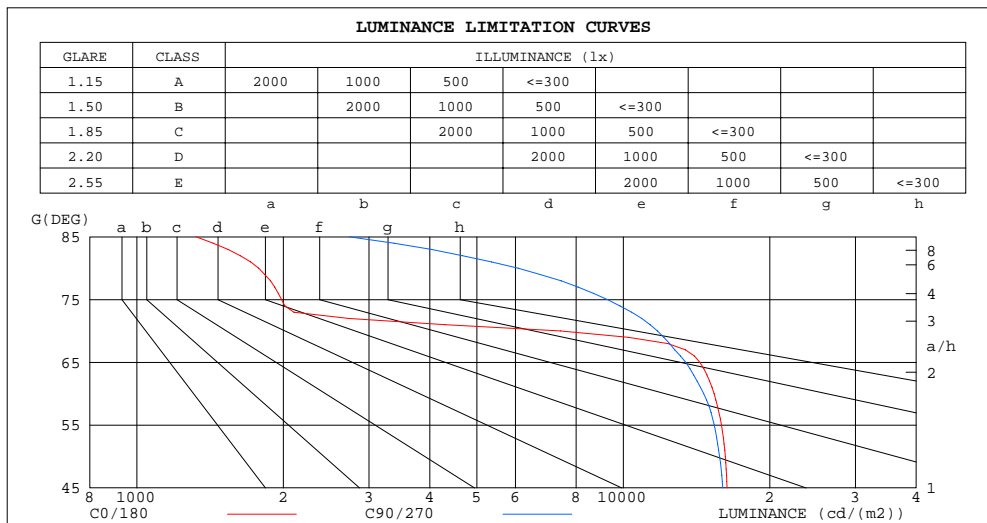
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1552	1541	1542	1547					0- 10	148.7	148.7	3.38,3.38
20	1490	1474	1471	1480					10- 20	428.7	577.5	13.1,13.1
30	1377	1363	1350	1378					20- 30	659.0	1236	28.1,28.1
40	1220	1198	1187	1212					30- 40	807.9	2044	46.4,46.4
50	1014	986.9	976.2	1008					40- 50	853.5	2898	65.8,65.8
60	747.9	712.2	706.2	734.7					50- 60	774.2	3672	83.4,83.4
70	247.1	391.4	164.6	409.8					60- 70	542.0	4214	95.7,95.7
80	30.11	102.8	26.33	112.8					70- 80	162.3	4376	99.4,99.4
90	2.010	2.629	3.093	3.153					80- 90	25.83	4402	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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1324	2733
80	1781	6079
75	1984	9270
70	7419	11752
65	14362	13442
60	15362	14628
55	15913	15380
50	16207	15769
45	16336	16010

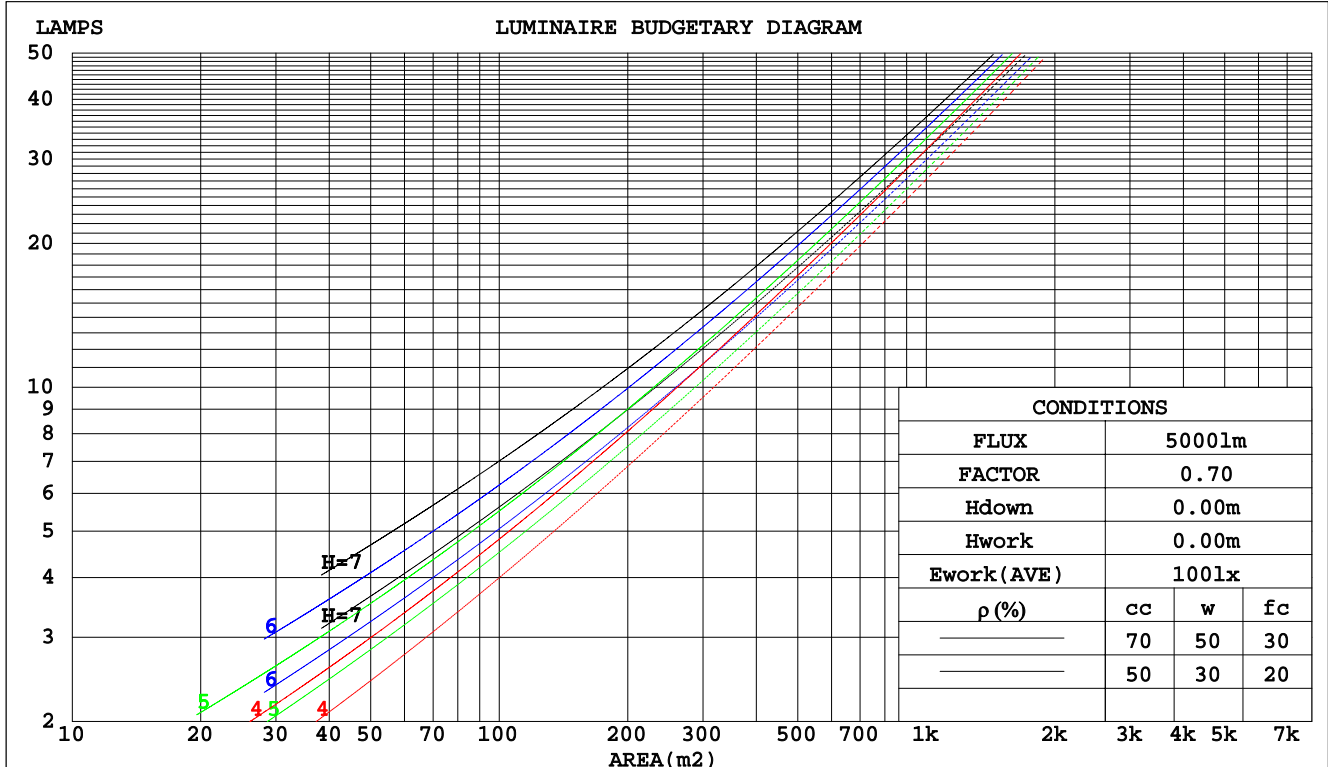
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	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	1.05	1.01	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.90	.91	.90	.88	.86
2.0	.92	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.77	.74	.72
3.0	.81	.73	.67	.80	.72	.67	.77	.71	.65	.74	.69	.64	.72	.67	.63	.61
4.0	.72	.64	.57	.71	.63	.57	.68	.61	.56	.66	.60	.55	.64	.59	.54	.52
5.0	.64	.56	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.52	.44	.38	.52	.43	.38	.50	.43	.37	.49	.42	.37	.47	.41	.37	.35
8.0	.48	.39	.34	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.28
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.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
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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.: 510*280*20			SERIAL No.:		
MFR.: NLD-242002-01			SUR.:0.475*0.205			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	.281	.160	.051	.274	.156	.050	.261	.150	.048	.249	.144	.046	.238	.138	.044	
2.0	.273	.150	.046	.267	.147	.045	.255	.142	.044	.245	.137	.043	.235	.133	.042	
3.0	.257	.137	.041	.252	.135	.041	.242	.131	.040	.232	.127	.039	.224	.124	.038	
4.0	.240	.125	.037	.236	.123	.036	.227	.120	.036	.218	.117	.035	.210	.114	.035	
5.0	.224	.114	.033	.220	.113	.033	.212	.110	.032	.204	.108	.032	.197	.105	.032	
6.0	.209	.105	.030	.205	.104	.030	.198	.102	.030	.191	.099	.029	.185	.098	.029	
7.0	.195	.097	.027	.192	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027	
8.0	.183	.089	.025	.180	.089	.025	.174	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.172	.083	.023	.169	.083	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.146	.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	.178	.156	.137	.153	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.060	.057	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.060	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 510*280*20			SERIAL No.:			
MFR.: NLD-242002-01					SUR.:0.475*0.205			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	2H	22.8	24.2	23.0	24.4	24.6	22.6	24.1	22.9	24.3	24.5
	3H	23.7	25.1	24.0	25.3	25.5	23.8	25.2	24.1	25.4	25.6
	4H	23.6	24.9	24.0	25.2	25.4	24.1	25.4	24.4	25.6	25.9
	6H	23.6	24.8	23.9	25.1	25.3	24.2	25.4	24.6	25.7	26.0
	8H	23.5	24.7	23.9	25.0	25.3	24.2	25.4	24.6	25.7	26.0
	12H	23.5	24.6	23.8	24.9	25.2	24.2	25.3	24.5	25.6	25.9
4H	2H	23.3	24.6	23.6	24.8	25.1	23.2	24.5	23.5	24.7	25.0
	3H	24.3	25.4	24.6	25.7	26.0	24.4	25.5	24.8	25.8	26.1
	4H	24.2	25.3	24.6	25.6	25.9	24.8	25.8	25.1	26.1	26.4
	6H	24.2	25.1	24.6	25.4	25.8	24.9	25.8	25.3	26.2	26.6
	8H	24.2	25.0	24.6	25.4	25.7	25.0	25.8	25.4	26.2	26.5
	12H	24.1	24.9	24.5	25.3	25.7	24.9	25.7	25.4	26.1	26.5
8H	4H	24.3	25.1	24.7	25.5	25.8	24.8	25.6	25.2	26.0	26.3
	6H	24.2	24.9	24.7	25.3	25.8	25.0	25.7	25.4	26.1	26.5
	8H	24.2	24.8	24.7	25.3	25.7	25.0	25.6	25.5	26.1	26.5
	12H	24.2	24.7	24.7	25.2	25.6	25.0	25.6	25.5	26.0	26.5
12H	4H	24.2	25.0	24.6	25.4	25.8	24.7	25.5	25.1	25.9	26.3
	6H	24.2	24.8	24.7	25.3	25.7	25.0	25.6	25.4	26.0	26.4
	8H	24.2	24.7	24.7	25.2	25.7	25.0	25.5	25.5	26.0	26.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
1.5H	+ 0.4 / - 0.6					+ 0.2 / - 0.4					
2.0H	+ 0.5 / - 1.2					+ 0.4 / - 0.6					

CIE Pub.117, 4402 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 5.1$)

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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:

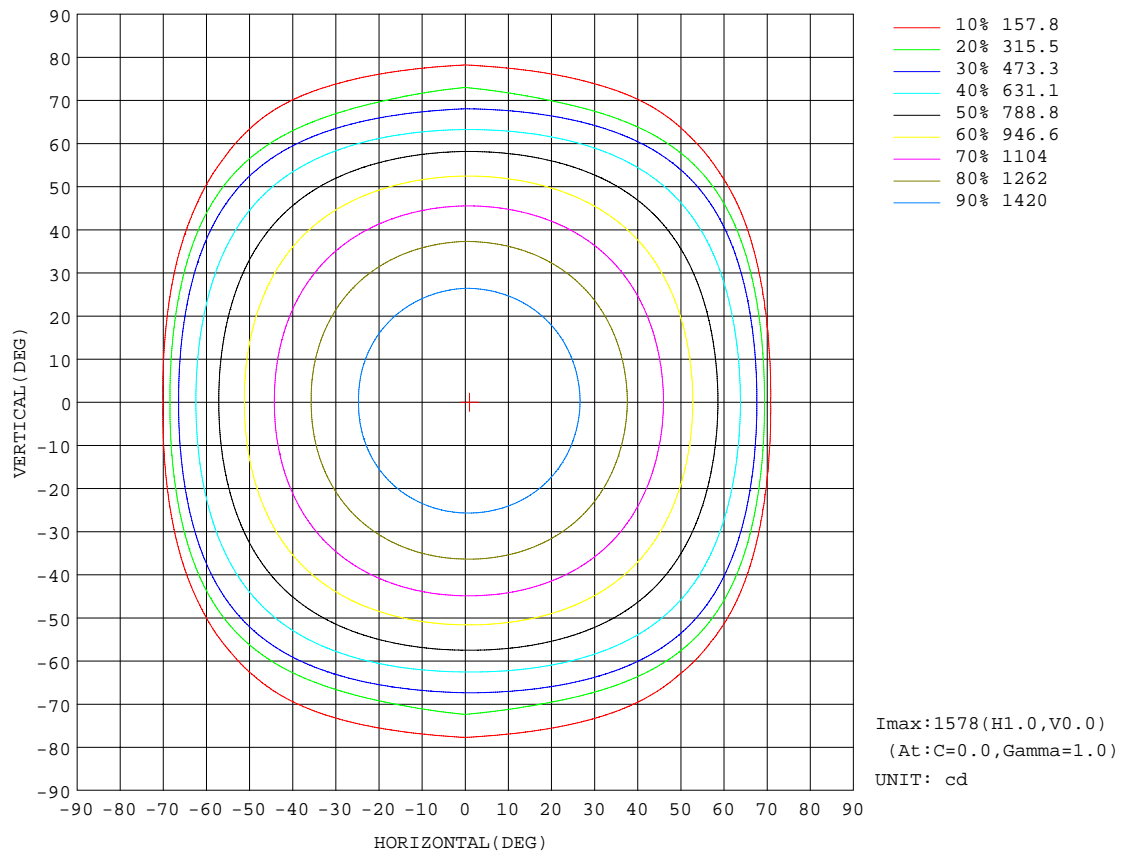
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	46	40	56	46	39	33
0.80	69	57	50	68	57	50	66	56	49	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	85	75	68	83	74	67	81	73	67	60
1.50	90	80	74	88	79	73	85	78	72	65
2.00	97	89	83	95	87	82	91	85	80	73
2.50	100	93	88	98	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	107	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
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
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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:



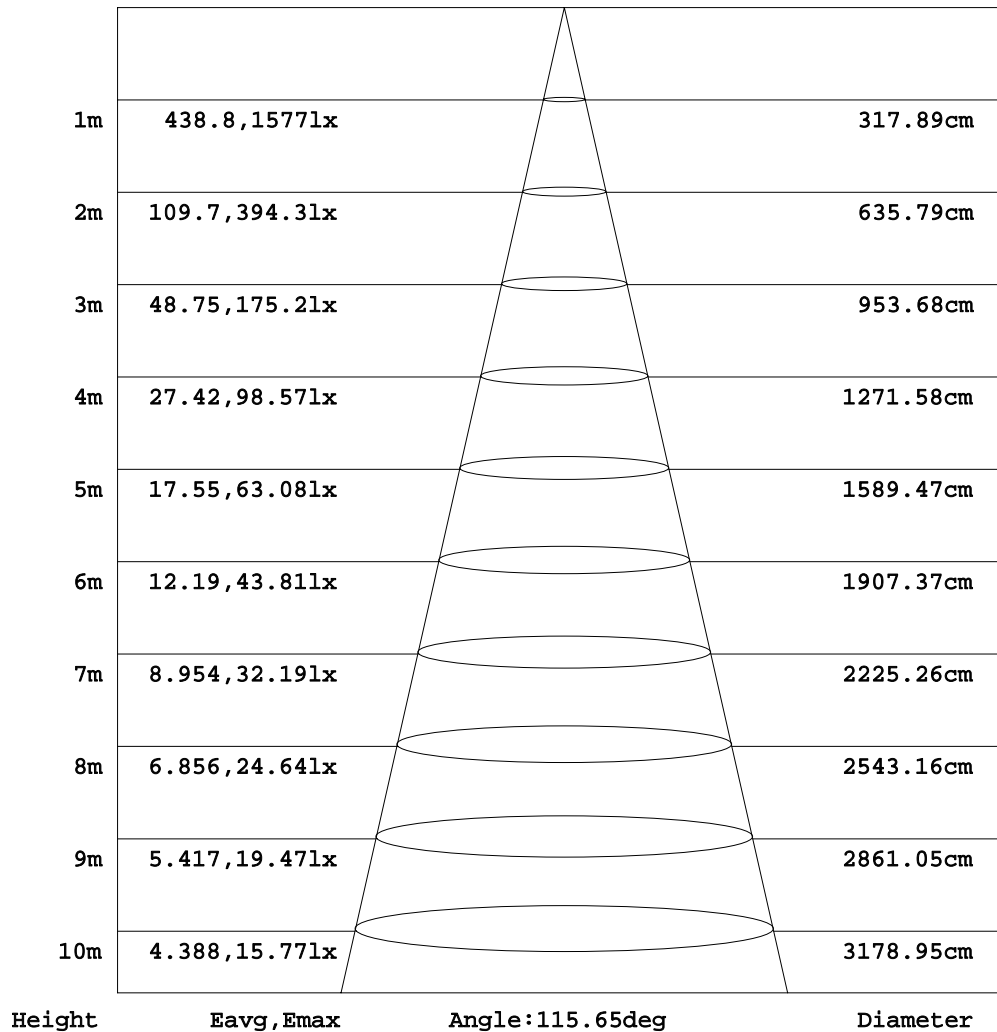
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-08

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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:

Flux out:3530 lm



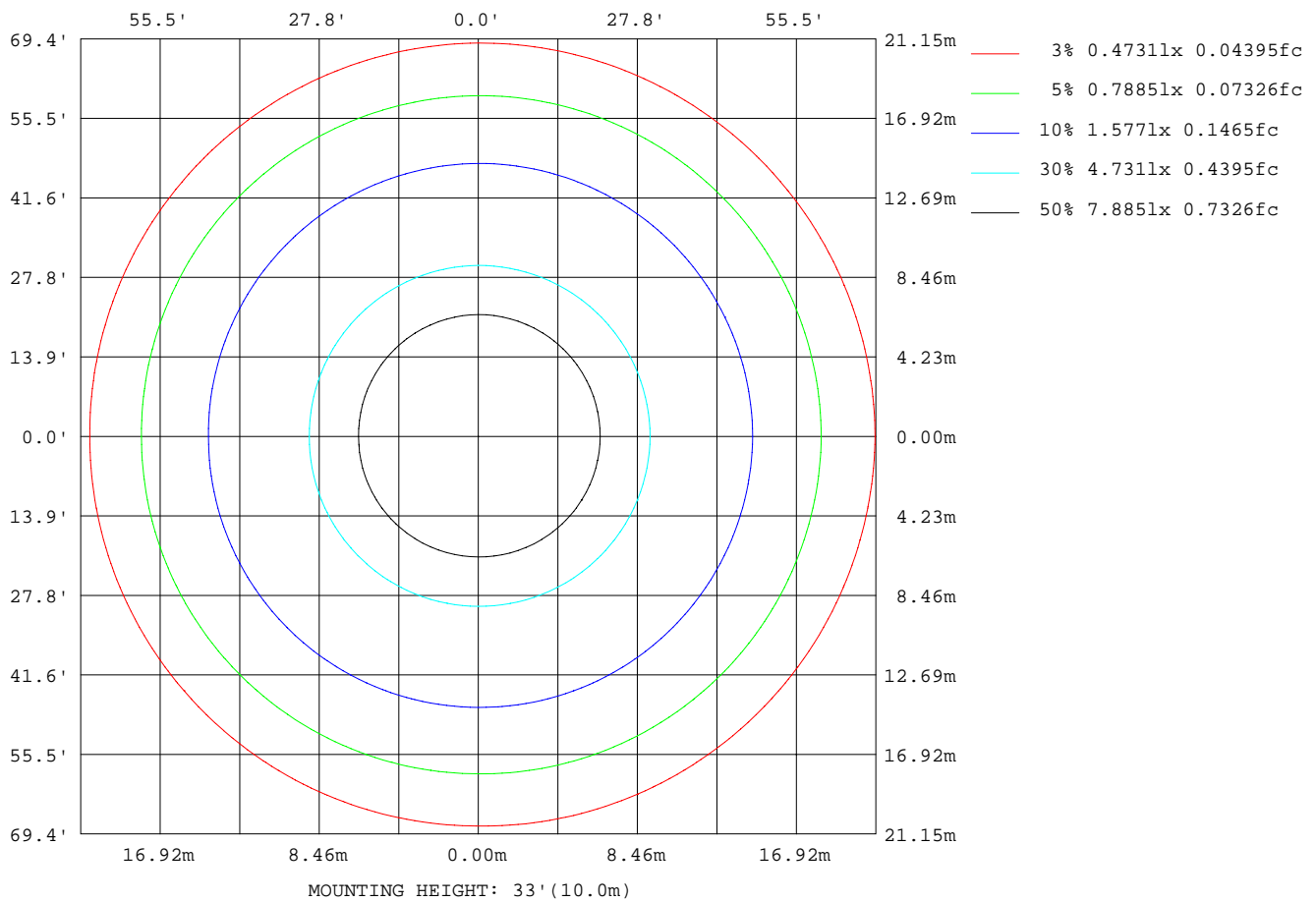
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	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:229.71V I:0.2895A P:65.185W PF:0.9801 Freq:49.99Hz Lamp Flux:4402.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 510*280*20	SERIAL No.:
MFR.: NLD-242002-01	SUR.:0.475*0.205	Shielding Angle:

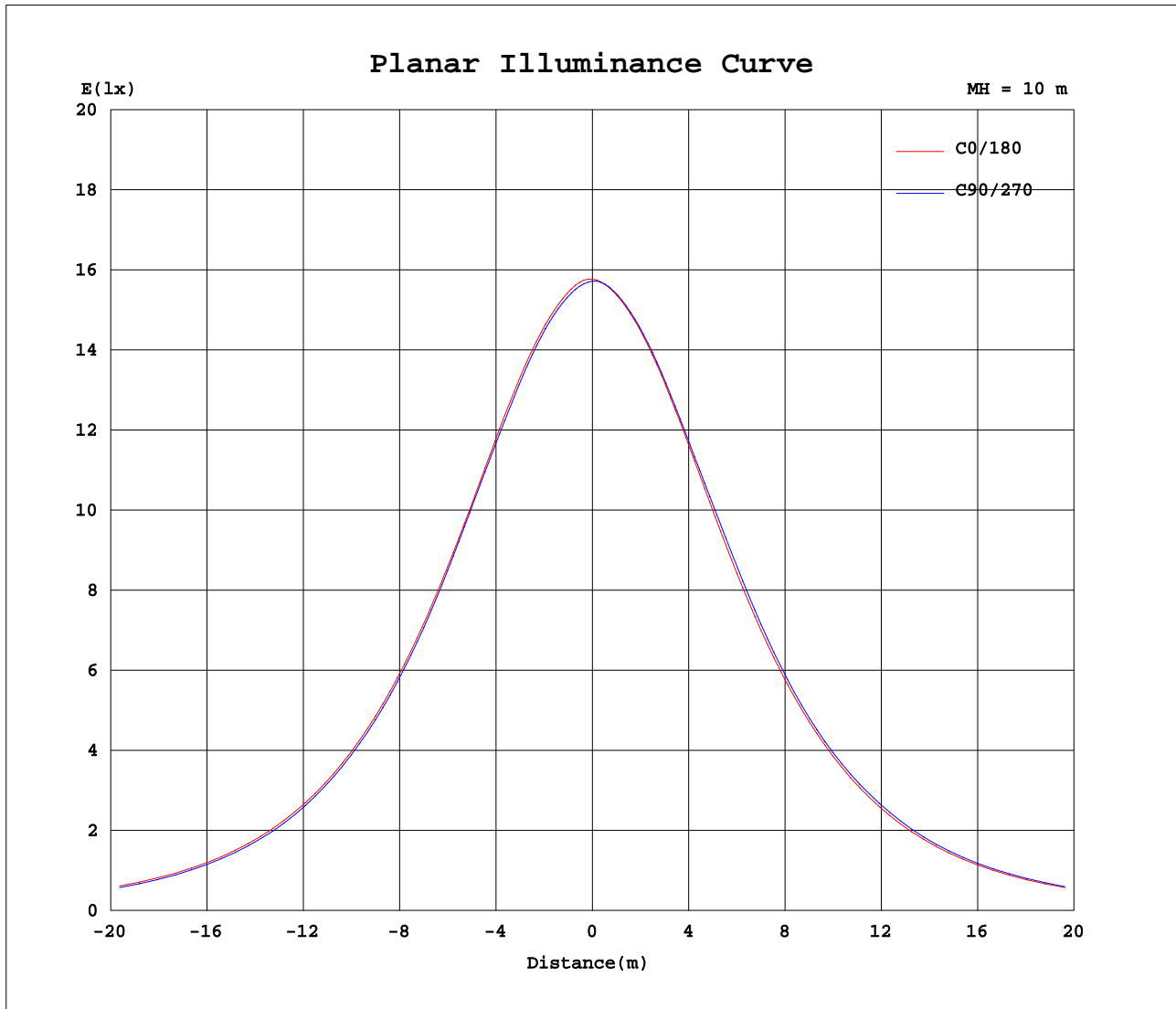
AvgL	cd/m2
L_0~180(65)av	13707
L_0~180(75)av	1923
L_0~180(85)av	1145
L_90~270(65)av	13674
L_90~270(75)av	9595
L_90~270(85)av	3010
L_45(65)av	13646
L_45(75)av	6714
L_45(85)av	2299

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:

```