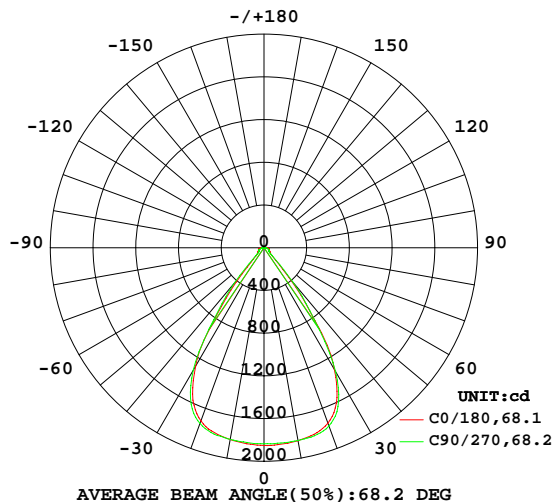


LUMINAIRE PHOTOMETRIC TEST REPORT

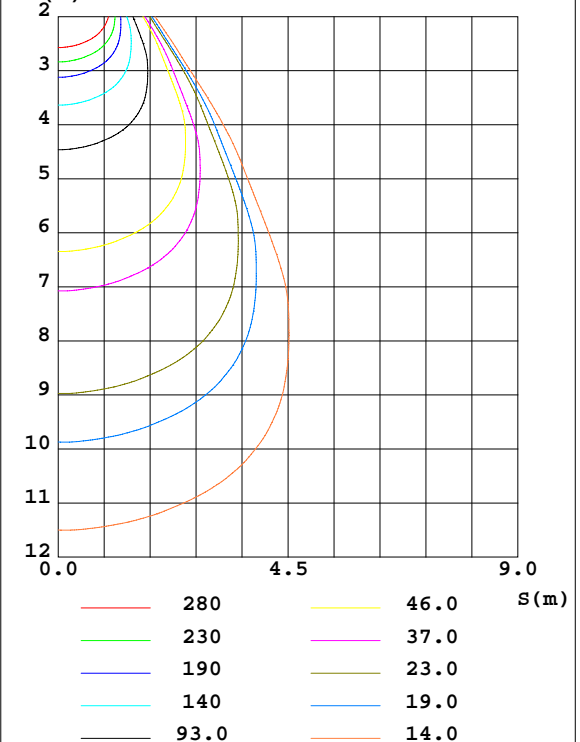
Test:U:229.65V I:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 29.98 lm/W			
MODEL		Imax(cd)	1853	S/MH(C0/180)	0.98
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.99
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2332.2	η UP,DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	2332.18	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230.0	η down(%)	100.0	CIBSE SHR MAX	1.10

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:2025-09-28

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:

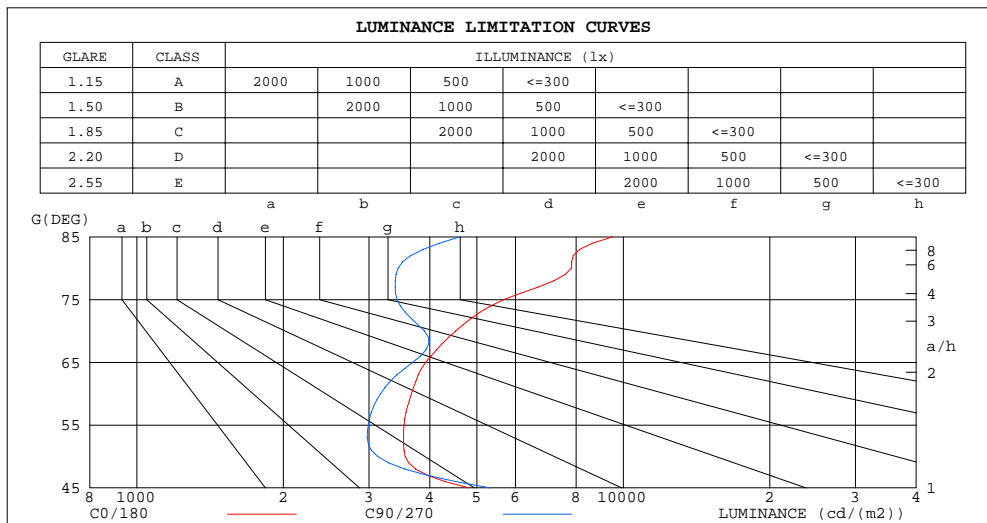
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	1835	1817	1832	1822	1824	1804	1823	1824	0- 10	174.6	174.6	7.49,7.49
20	1748	1690	1777	1715	1725	1658	1752	1714	10- 20	504.0	678.7	29.1,29.1
30	1320	1353	1345	1343	1282	1316	1325	1356	20- 30	717.3	1396	59.9,59.9
40	367.6	720.8	424.7	607.6	319.5	681.2	429.1	648.7	30- 40	571.7	1968	84.4,84.4
50	76.89	72.26	67.50	89.64	76.57	71.72	66.95	93.70	40- 50	158.5	2126	91.2,91.2
60	61.59	64.96	53.26	71.15	62.16	64.58	52.47	70.95	50- 60	60.66	2187	93.8,93.8
70	52.00	57.63	44.81	61.80	54.17	57.34	45.44	61.16	60- 70	58.34	2245	96.3,96.3
80	45.60	45.18	20.09	57.02	49.32	47.71	20.35	55.49	70- 80	53.36	2299	98.6,98.6
90	19.79	22.04	4.055	27.62	26.07	24.75	5.584	22.52	80- 90	33.52	2332	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:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	9514	4613
80	7815	3444
75	5679	3428
70	4525	3899
65	3926	3689
60	3666	3170
55	3540	2991
50	3560	3126
45	4820	5324

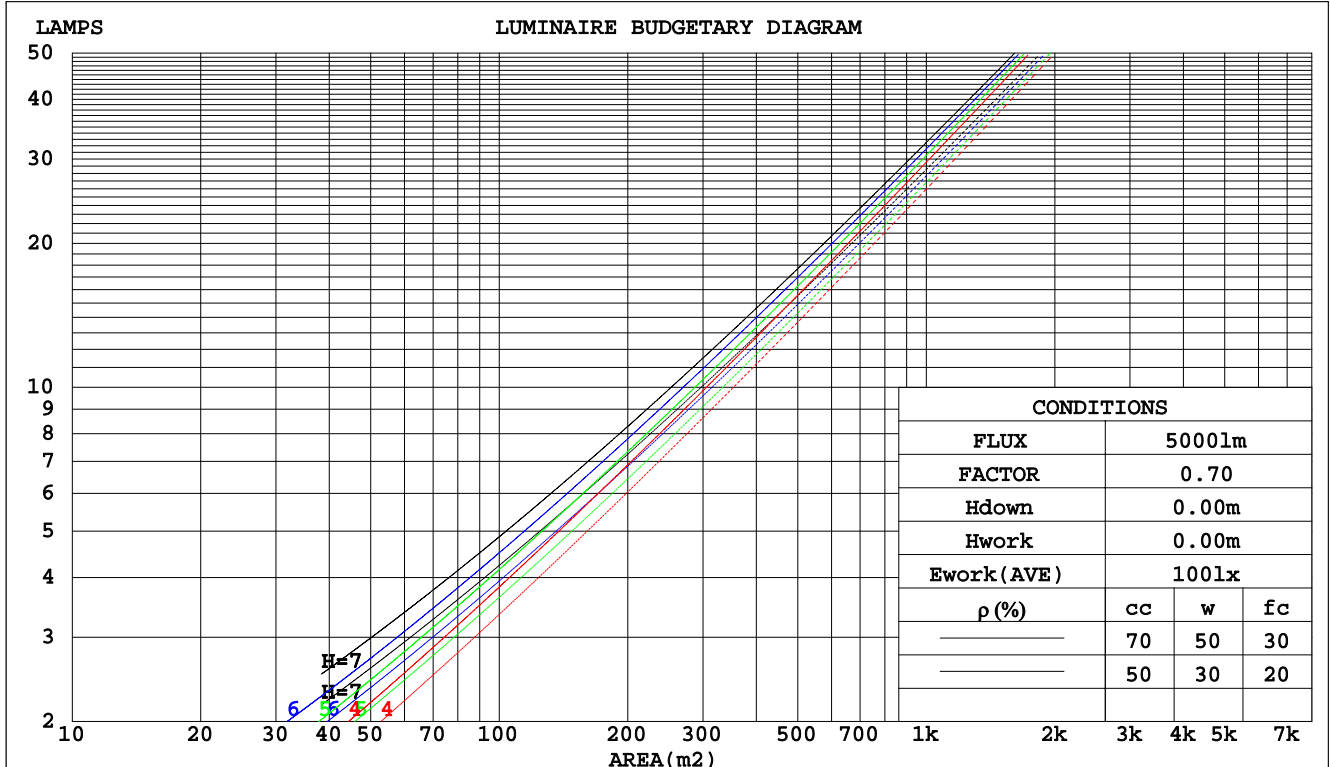
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	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	1.09	1.06	1.03	1.06	1.04	1.01	1.02	1.00	.98	.98	.97	.95	.95	.94	.92	.90
2.0	.00	.95	.91	.98	.93	.90	.94	.91	.88	.91	.88	.86	.89	.86	.84	.82
3.0	.92	.86	.81	.90	.85	.81	.88	.83	.79	.85	.81	.78	.83	.79	.77	.75
4.0	.85	.78	.74	.84	.78	.73	.81	.76	.72	.79	.75	.71	.77	.74	.70	.69
5.0	.79	.72	.67	.78	.71	.67	.76	.70	.66	.74	.69	.66	.72	.68	.65	.63
6.0	.73	.66	.62	.72	.66	.61	.71	.65	.61	.69	.64	.61	.68	.64	.60	.58
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.53	.62	.56	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.53	.49	.59	.53	.49	.58	.53	.49	.57	.52	.48	.57	.52	.48	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.49	.45	.54	.49	.45	.53	.49	.45	.44



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.: 960*42*38			SERIAL No.:		
MFR.: NLD25-0020-01			SUR.:0.96*0.035			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	.220	.125	.040	.213	.121	.039	.200	.115	.037	.188	.109	.035	.177	.103	.033	
2.0	.204	.112	.034	.198	.109	.034	.188	.104	.032	.177	.100	.031	.168	.095	.030	
3.0	.191	.102	.030	.186	.100	.030	.177	.096	.029	.168	.092	.028	.160	.088	.027	
4.0	.179	.093	.027	.175	.092	.027	.167	.088	.026	.159	.085	.026	.152	.083	.025	
5.0	.169	.086	.025	.165	.085	.025	.158	.082	.024	.151	.080	.024	.145	.078	.023	
6.0	.160	.080	.023	.156	.079	.023	.150	.077	.022	.144	.075	.022	.139	.073	.022	
7.0	.152	.075	.021	.149	.074	.021	.143	.072	.021	.138	.071	.021	.133	.069	.020	
8.0	.144	.070	.020	.141	.070	.020	.136	.068	.019	.132	.067	.019	.127	.065	.019	
9.0	.137	.066	.019	.135	.066	.018	.130	.065	.018	.126	.063	.018	.122	.062	.018	
10.0	.131	.063	.017	.129	.062	.017	.125	.061	.017	.121	.060	.017	.117	.059	.017	

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	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.161	.132	.109	.138	.114	.094	.094	.079	.065	.054	.046	.038	.017	.015	.013		
3.0	.149	.114	.085	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010		
4.0	.140	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008		
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.021	.014	.010	.007		
6.0	.124	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006		
7.0	.118	.072	.040	.101	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005		
8.0	.112	.066	.034	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004		
9.0	.107	.061	.030	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004		
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 960*42*38			SERIAL No.:			
MFR.: NLD25-0020-01					SUR.:0.96*0.035			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	17.0	18.1	17.2	18.2	18.4	17.0	18.1	17.3	18.3	18.5
	3H	17.5	18.5	17.8	18.8	19.0	17.4	18.4	17.7	18.6	18.8
	4H	18.1	19.0	18.4	19.3	19.5	17.7	18.6	17.9	18.8	19.1
	6H	18.9	19.8	19.2	20.0	20.3	17.9	18.8	18.2	19.0	19.3
	8H	19.3	20.1	19.6	20.4	20.7	18.0	18.8	18.3	19.1	19.4
	12H	19.6	20.4	19.9	20.7	21.0	18.1	18.9	18.4	19.2	19.5
4H	2H	17.0	17.9	17.3	18.1	18.4	17.0	18.0	17.3	18.2	18.4
	3H	17.9	18.7	18.2	19.0	19.3	17.7	18.5	18.0	18.8	19.1
	4H	18.8	19.5	19.1	19.8	20.1	18.2	18.9	18.5	19.2	19.5
	6H	19.8	20.5	20.2	20.9	21.2	18.6	19.3	19.0	19.6	19.9
	8H	20.3	21.0	20.7	21.3	21.7	18.8	19.4	19.2	19.8	20.1
	12H	20.8	21.4	21.2	21.8	22.2	19.0	19.6	19.4	20.0	20.4
8H	4H	19.1	19.7	19.5	20.1	20.5	18.6	19.2	19.0	19.6	19.9
	6H	20.5	21.0	20.9	21.4	21.8	19.3	19.8	19.7	20.2	20.6
	8H	21.2	21.6	21.6	22.0	22.5	19.7	20.2	20.1	20.6	21.0
	12H	21.8	22.2	22.3	22.7	23.2	20.1	20.5	20.6	20.9	21.4
12H	4H	19.2	19.7	19.6	20.1	20.5	18.7	19.3	19.1	19.6	20.0
	6H	20.6	21.1	21.1	21.5	21.9	19.5	20.0	20.0	20.4	20.9
	8H	21.4	21.8	21.9	22.2	22.7	20.0	20.4	20.5	20.9	21.4
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.9 / - 1.1					
1.5H	+ 1.6 / - 0.6					+ 2.2 / - 1.1					
2.0H	+ 0.2 / - 0.3					+ 0.5 / - 0.4					

CIE Pub.117, 2332 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.9$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:

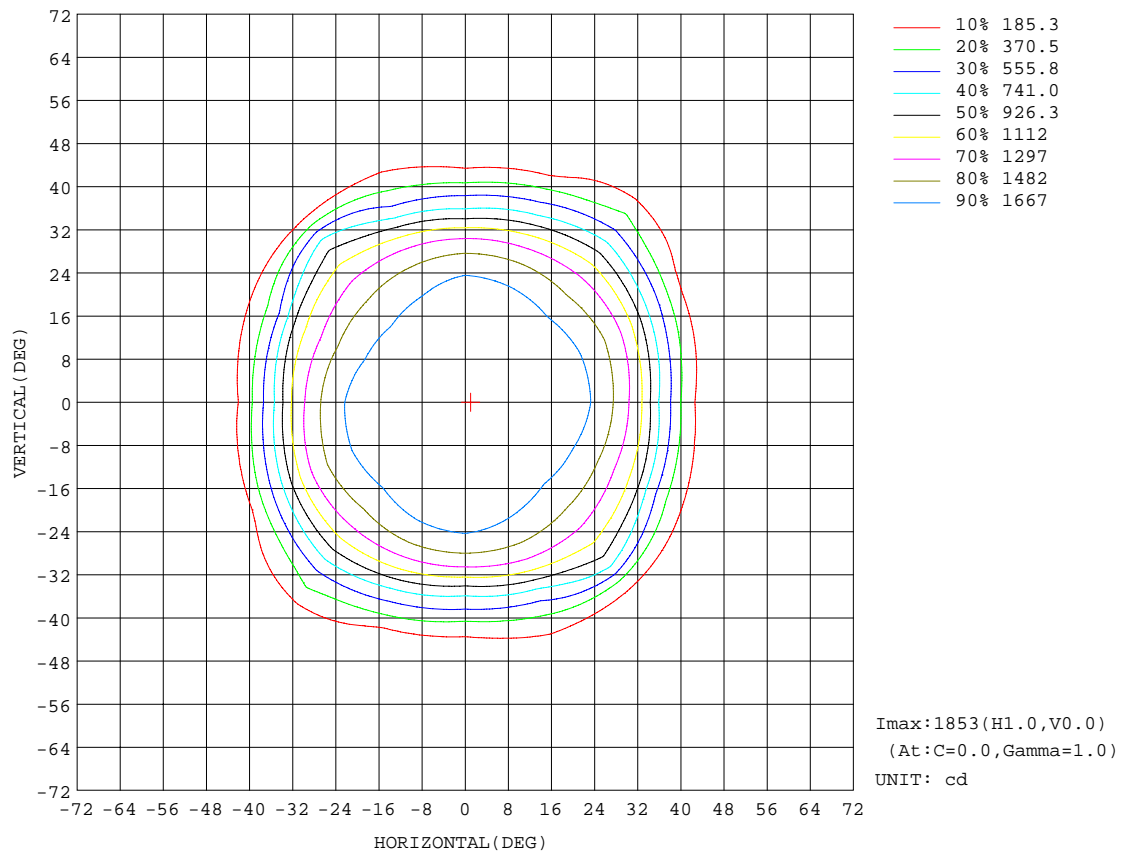
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	70	82	75	70	81	74	70	66
0.80	90	83	79	89	83	78	88	82	78	74
1.00	95	88	84	94	88	84	92	88	83	78
1.25	99	93	89	98	92	88	96	91	88	83
1.50	102	96	92	101	96	92	99	94	91	86
2.00	106	100	97	104	99	96	101	97	94	88
2.50	108	103	99	106	102	98	103	99	96	90
3.00	110	105	102	108	104	101	104	101	99	92
4.00	112	108	106	110	107	104	106	104	102	94
5.00	113	111	108	111	109	107	107	105	103	95
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:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:

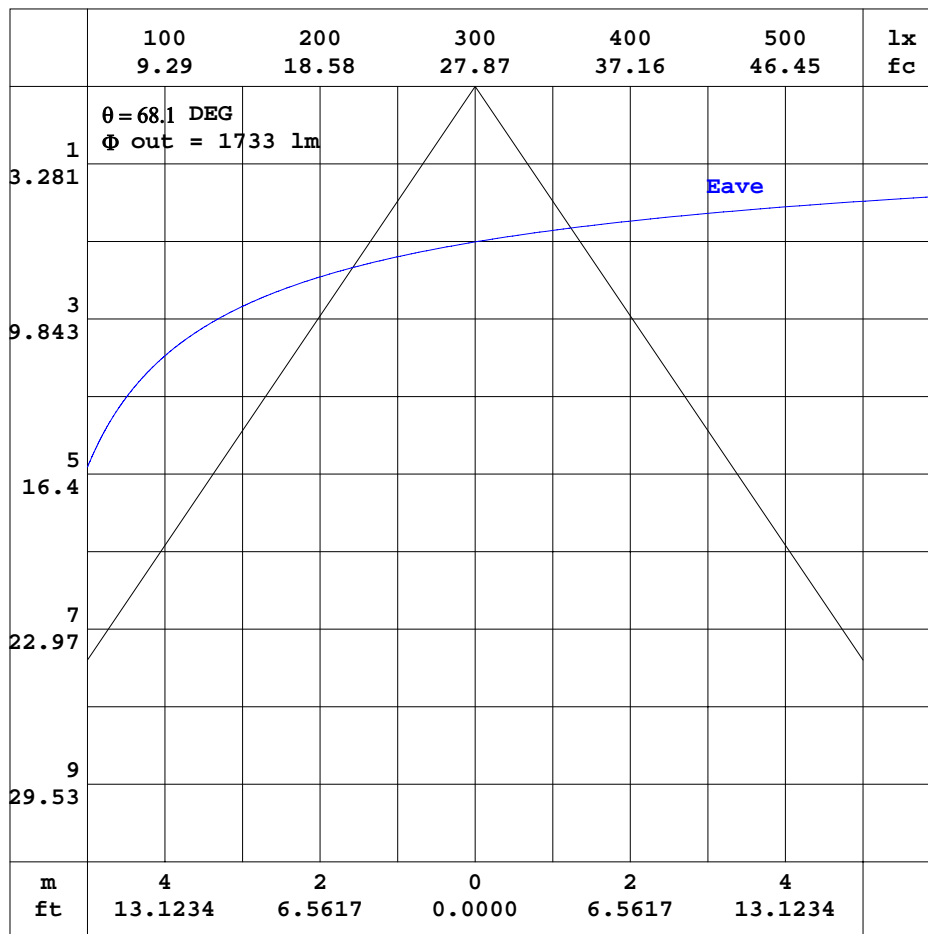


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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 CURVES

Test:U:229.65V I:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:



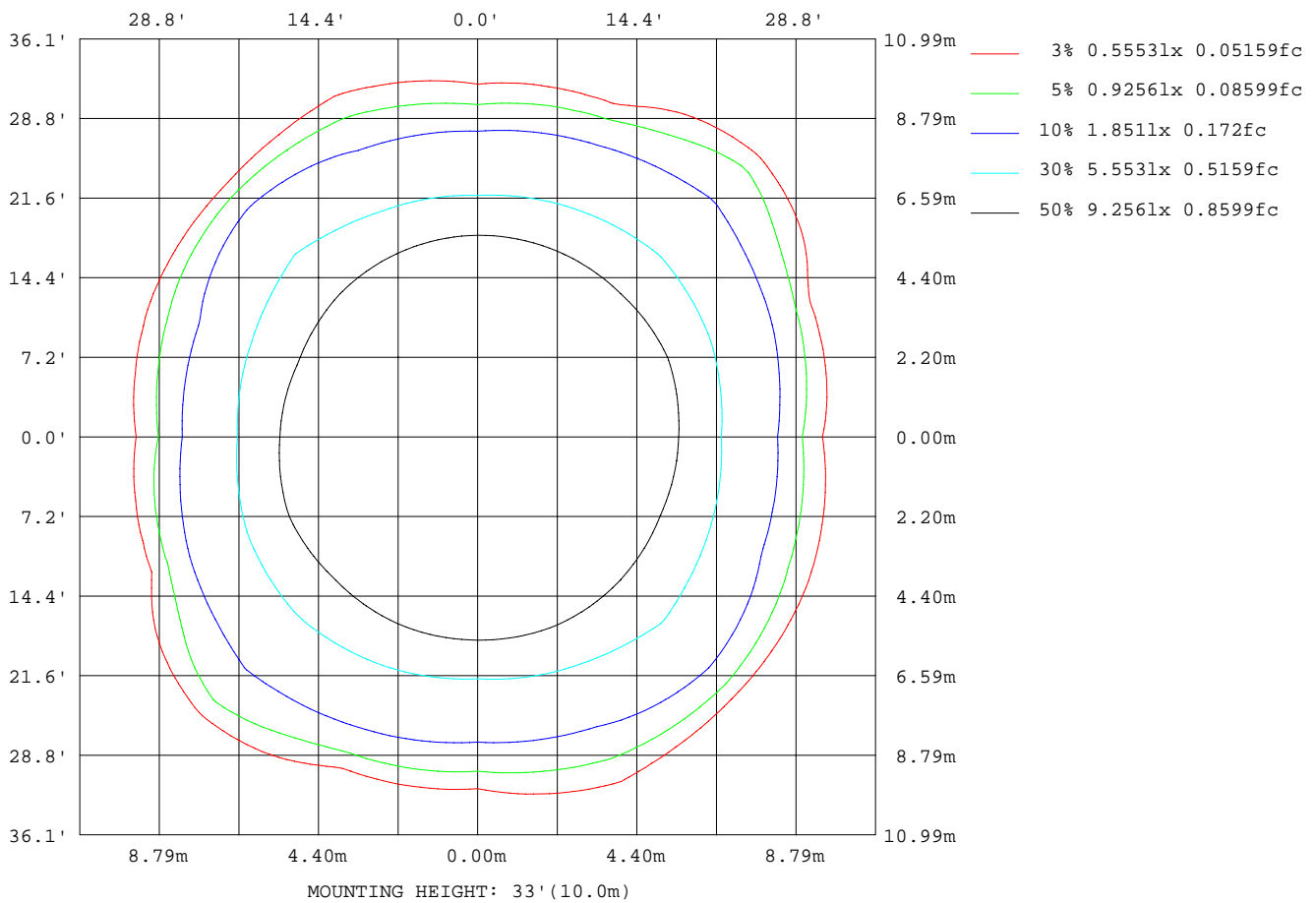
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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:0.3431A P:77.796W PF:0.9872 Freq:49.99Hz Lamp Flux:2332.18x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 960*42*38	SERIAL No.:
MFR.: NLD25-0020-01	SUR.:0.96*0.035	Shielding Angle:

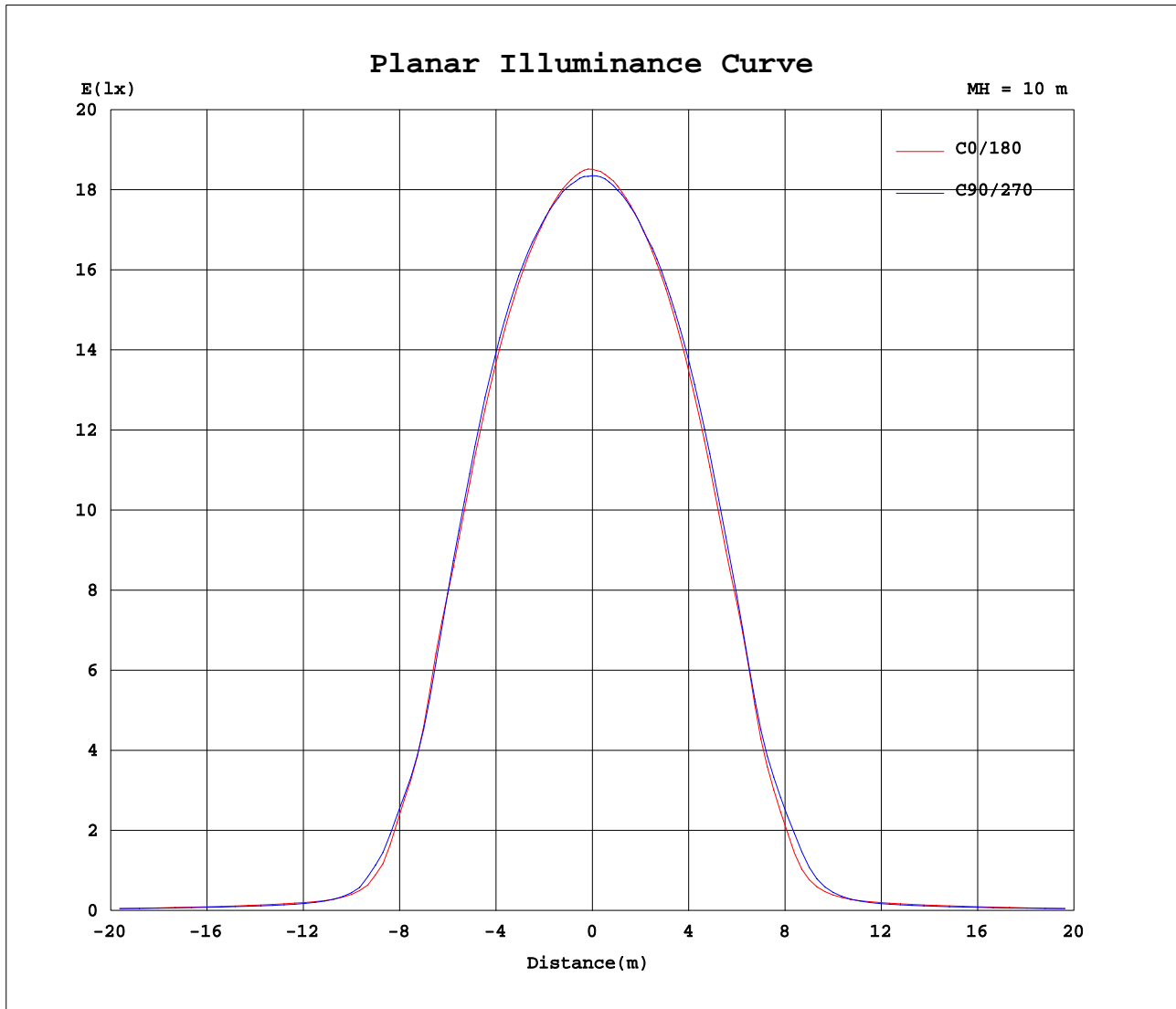
AvgL	cd/m2
L_0~180(65)av	3963
L_0~180(75)av	5920
L_0~180(85)av	10516
L_90~270(65)av	3658
L_90~270(75)av	3459
L_90~270(85)av	4666
L_45(65)av	4468
L_45(75)av	6777
L_45(85)av	12560

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2025-09-28

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: 2025-09-28

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:

```