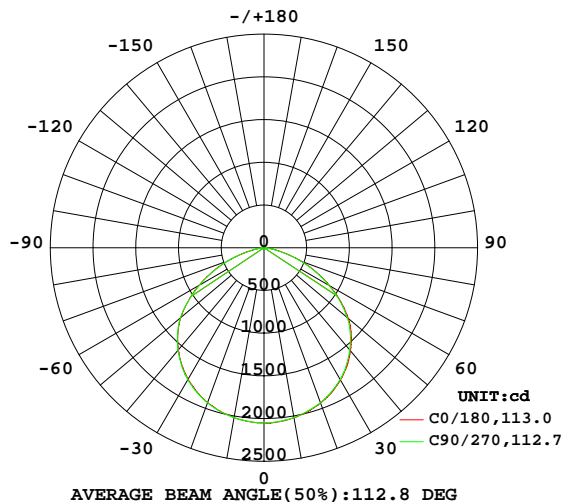


LUMINAIRE PHOTOMETRIC TEST REPORT

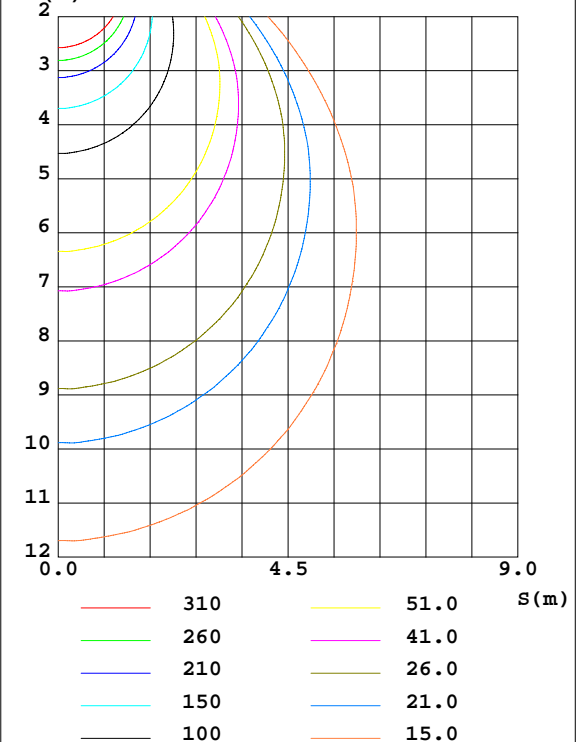
Test:U:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.51 lm/W			
MODEL		Imax(cd)	2055	S/MH(C0/180)	1.29
NOMINAL POWER(W)	45	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	5715.9	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	5715.88	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:2024-07-25

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:

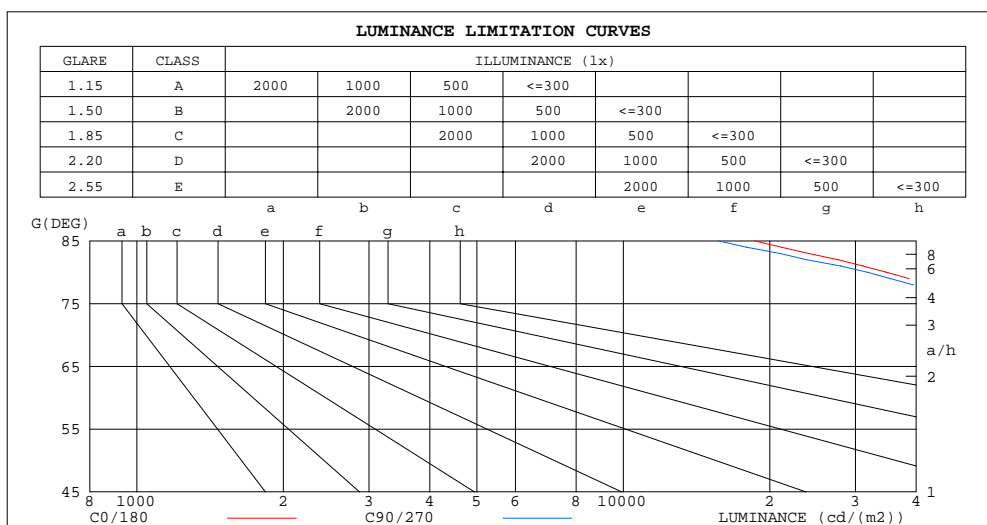
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	$\%lum, lamp$
10	2021	2018	2019	2020					0- 10	194.2	194.2	3.4,3.4
20	1934	1930	1931	1930					10- 20	559.8	754.0	13.2,13.2
30	1790	1780	1776	1784					20- 30	859.7	1614	28.2,28.2
40	1575	1562	1559	1565					30- 40	1052	2666	46.6,46.6
50	1288	1274	1272	1277					40- 50	1104	3770	66,66
60	885.8	873.2	877.8	868.6					50- 60	967.1	4737	82.9,82.9
70	472.7	458.2	447.1	452.6					60- 70	658.8	5396	94.4,94.4
80	118.2	108.0	96.75	104.0					70- 80	279.1	5675	99.3,99.3
90	8.110	2.861	4.785	4.192					80- 90	40.58	5716	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:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	18606	15690
80	34725	31732
75	53201	51099
70	70521	68355
65	81438	80485
60	90390	89100
55	97529	96482
50	102271	101090
45	104301	103174

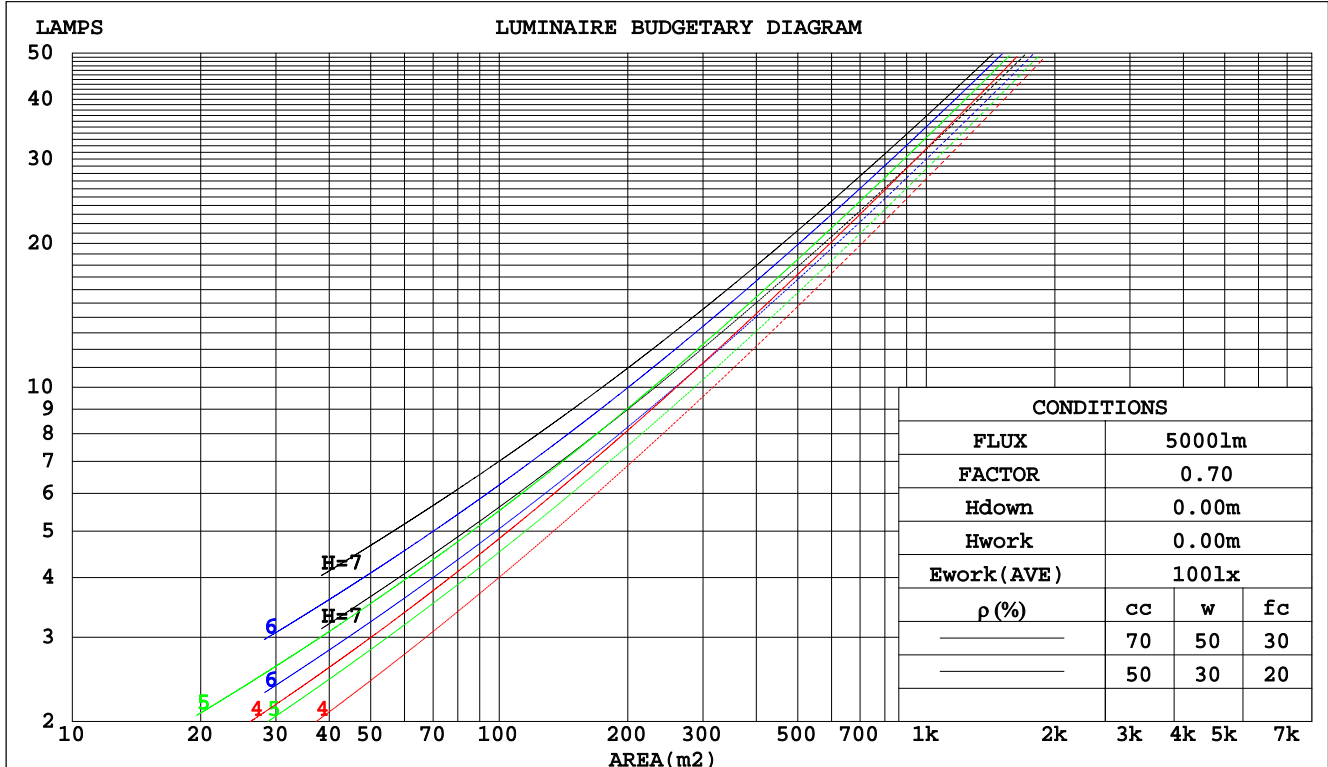
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	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	.00
1.0	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.83	.79	.76	.80	.77	.74	.72
3.0	.81	.73	.67	.80	.72	.66	.77	.70	.65	.74	.69	.64	.71	.67	.63	.61
4.0	.72	.63	.57	.71	.63	.56	.68	.61	.56	.66	.60	.55	.64	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.49	.43	.57	.49	.42	.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	.45	.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	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.: 300*300		SERIAL No.:	
MFR.: NLD242026		SUR.:0.14*0.14		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	.286	.163	.051	.279	.159	.051	.266	.152	.049	.254	.146	.047	.242	.141	.045	
2.0	.276	.151	.046	.270	.149	.046	.258	.144	.045	.247	.139	.043	.238	.134	.042	
3.0	.259	.138	.041	.253	.136	.041	.243	.132	.040	.234	.128	.039	.225	.125	.039	
4.0	.241	.125	.037	.236	.124	.037	.227	.121	.036	.219	.118	.035	.211	.115	.035	
5.0	.225	.114	.033	.220	.113	.033	.212	.110	.033	.205	.108	.032	.198	.106	.032	
6.0	.209	.105	.030	.205	.104	.030	.198	.102	.030	.192	.100	.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	.024	
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.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	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.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:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 300*300			SERIAL No.:			
MFR.: NLD242026					SUR.:0.14*0.14			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		28.8	30.3	29.1	30.5	30.7	28.8	30.3	29.1	30.5	30.7
3H		30.0	31.4	30.3	31.6	31.8	29.9	31.3	30.2	31.5	31.8
4H		30.3	31.6	30.6	31.9	32.1	30.2	31.5	30.5	31.8	32.0
6H		30.4	31.6	30.7	31.9	32.2	30.3	31.5	30.6	31.8	32.1
8H		30.4	31.6	30.7	31.9	32.2	30.3	31.5	30.6	31.7	32.0
12H		30.4	31.5	30.7	31.8	32.1	30.3	31.4	30.6	31.7	32.0
4H 2H		29.3	30.6	29.7	30.9	31.1	29.3	30.6	29.6	30.9	31.1
3H		30.6	31.8	31.0	32.1	32.4	30.6	31.7	30.9	32.0	32.3
4H		31.0	32.1	31.4	32.4	32.7	31.0	32.0	31.3	32.3	32.6
6H		31.2	32.1	31.6	32.5	32.8	31.1	32.0	31.5	32.4	32.7
8H		31.2	32.1	31.6	32.4	32.8	31.1	31.9	31.5	32.3	32.7
12H		31.2	32.0	31.6	32.4	32.8	31.1	31.9	31.5	32.2	32.6
8H 4H		31.1	32.0	31.5	32.3	32.7	31.1	31.9	31.5	32.3	32.6
6H		31.4	32.1	31.8	32.5	32.9	31.3	32.0	31.7	32.4	32.8
8H		31.4	32.0	31.9	32.4	32.9	31.3	31.9	31.8	32.3	32.8
12H		31.4	31.9	31.9	32.4	32.9	31.3	31.8	31.8	32.3	32.7
12H 4H		31.1	31.9	31.5	32.3	32.7	31.0	31.8	31.5	32.2	32.6
6H		31.4	32.0	31.8	32.4	32.8	31.3	31.9	31.7	32.3	32.7
8H		31.4	31.9	31.9	32.4	32.9	31.3	31.8	31.8	32.3	32.7
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H		+ 0.2 / - 0.5					+ 0.2 / - 0.5				
2.0H		+ 0.4 / - 0.4					+ 0.4 / - 0.4				

CIE Pub.117, 5716 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.1$)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

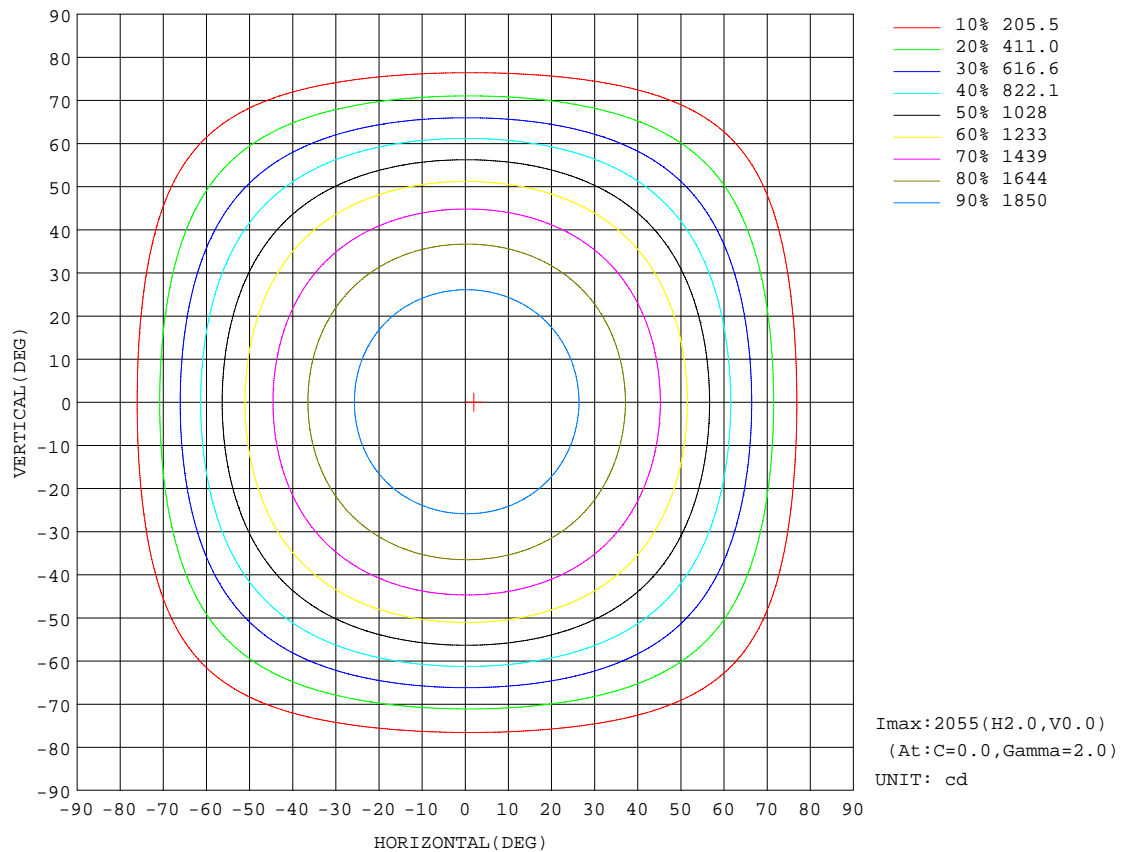
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	56	46	40	33
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	85	75	68	83	74	67	81	72	67	59
1.50	90	80	74	88	79	73	85	78	72	65
2.00	96	88	82	95	87	82	91	85	80	72
2.50	100	93	87	98	92	86	94	89	84	76
3.00	103	97	92	101	96	91	97	93	89	80
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	101	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:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

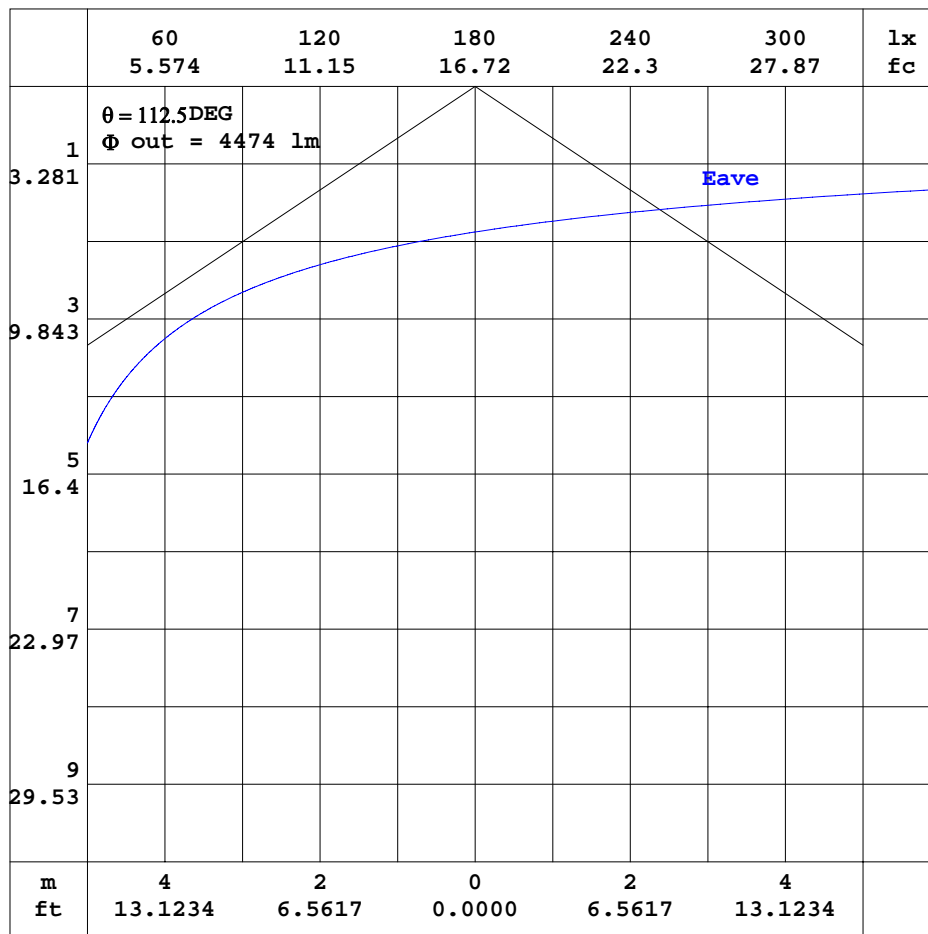


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:



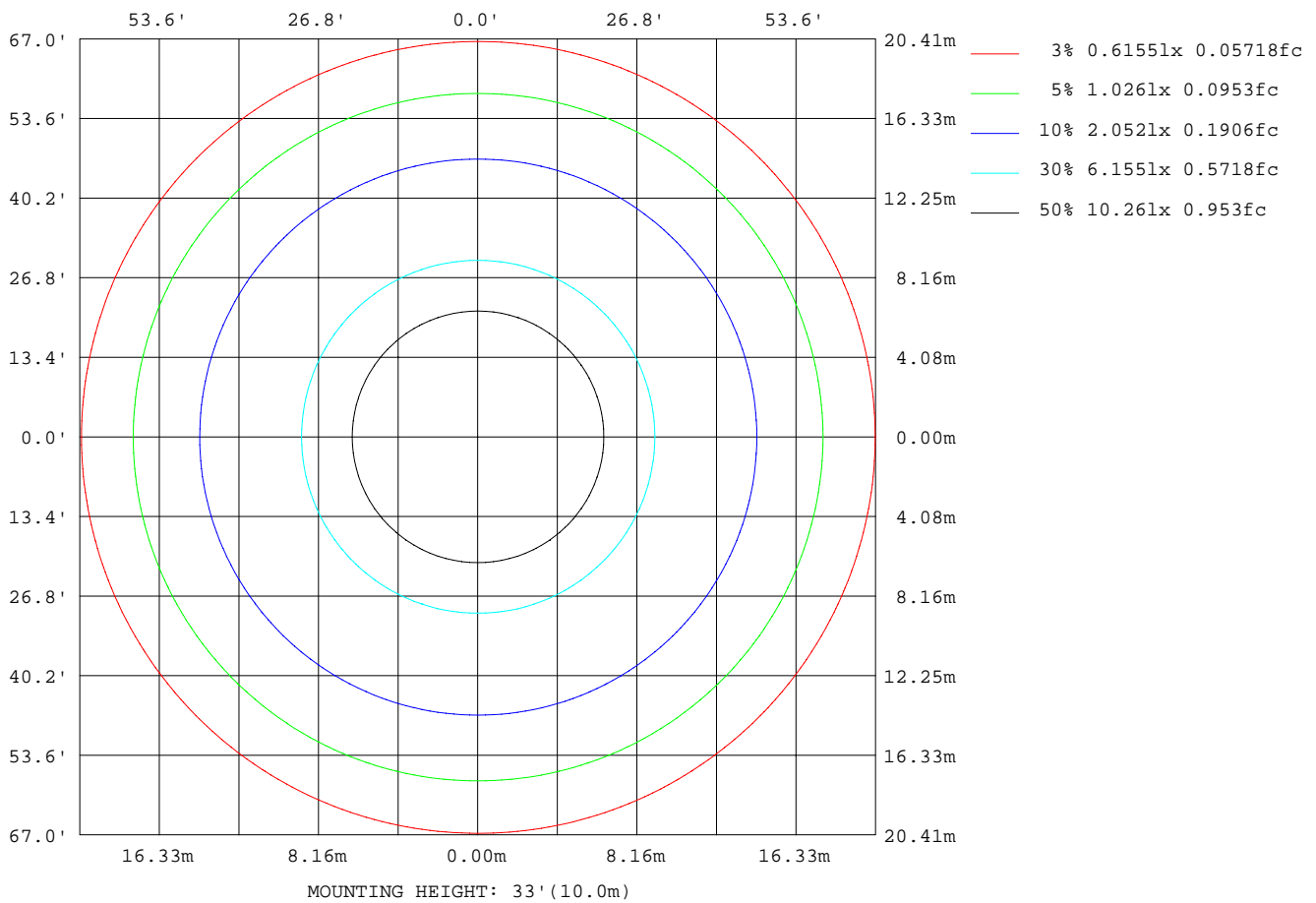
Note: The Curves indicate the illuminated area and the average illuminance when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.69V I:0.2080A P:45.908W PF:0.9608 Freq:49.99Hz Lamp Flux:5715.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

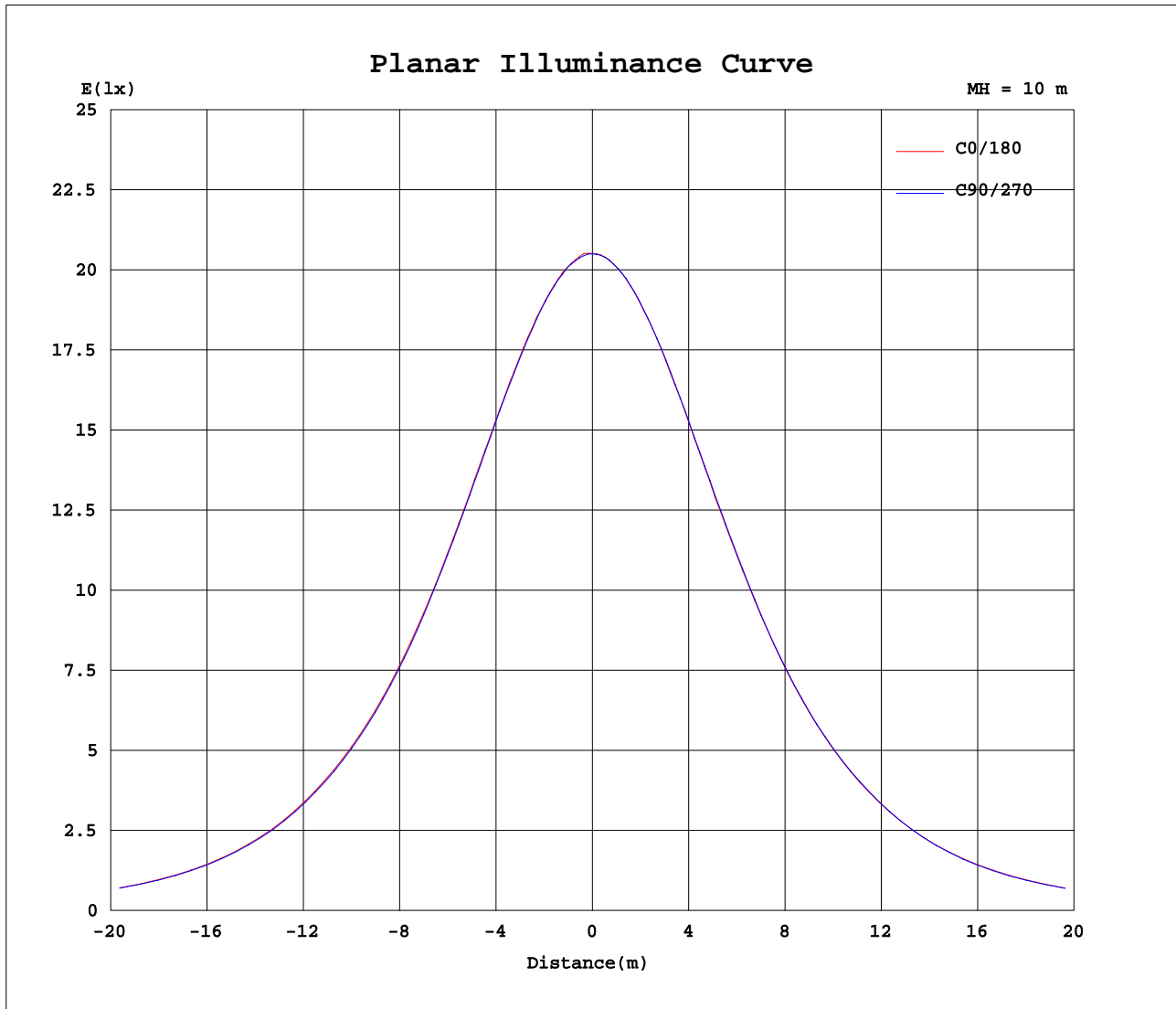
AvgL	cd/m2
L_0~180(65)av	80728
L_0~180(75)av	50573
L_0~180(85)av	16273
L_90~270(65)av	79820
L_90~270(75)av	50533
L_90~270(85)av	15556
L_45(65)av	80116
L_45(75)av	50384
L_45(85)av	15679

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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: 2024-07-25

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:

```