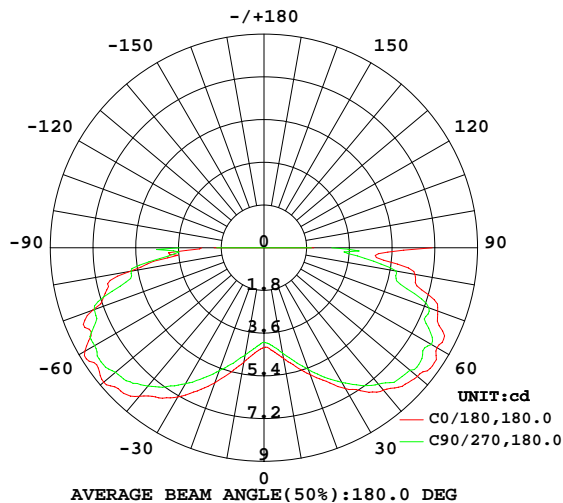


LUMINAIRE PHOTOMETRIC TEST REPORT

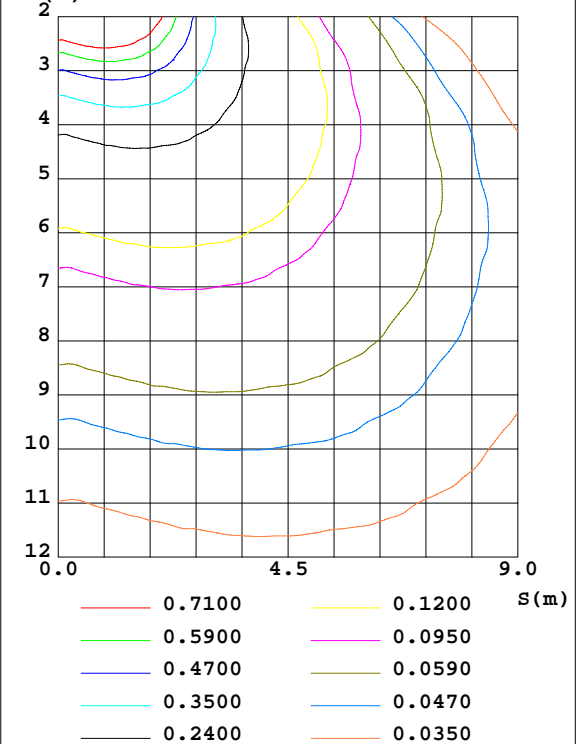
Test:U:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.2141x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 0.95 lm/W
MODEL		Imax(cd)	8.832	S/MH(C0/180)	2.49	
NOMINAL POWER(W)	45	LOR(%)	100.0	S/MH(C90/270)	2.49	
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	43.233	η UP,DN(C0-180)	0.0,49.9	
NOMINAL FLUX(lm)	43.2141	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.1	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	2.00	
TEST VOLTAGE(V)	230.0	η down(%)	100.0	CIBSE SHR MAX	2.00	

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:

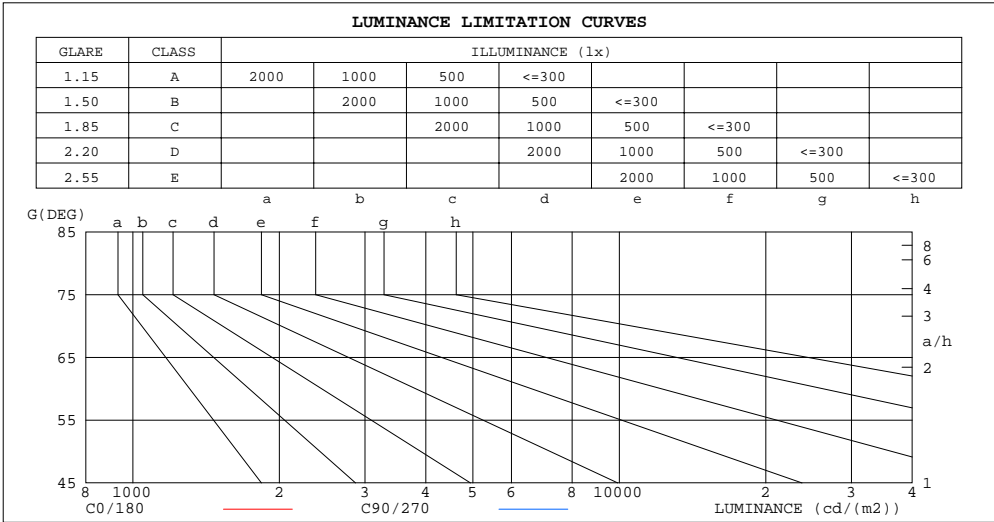
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	Φ lum, lamp
10	4.725	4.503	4.899	4.596					0- 10	0.4226	0.4226	0.98,0.98
20	5.685	5.440	6.058	5.523					10- 20	1.477	1.900	4.39,4.4
30	6.846	6.549	7.262	6.620					20- 30	2.907	4.807	11.1,11.1
40	7.826	7.502	8.173	7.609					30- 40	4.610	9.416	21.8,21.8
50	8.436	8.027	8.814	8.161					40- 50	6.303	15.72	36.4,36.4
60	8.419	8.144	8.718	8.239					50- 60	7.559	23.28	53.8,53.9
70	7.788	7.396	7.664	7.612					60- 70	7.943	31.22	72.2,72.2
80	6.461	5.651	5.725	5.679					70- 80	7.025	38.25	88.5,88.5
90	7.088	2.852	2.629	3.571					80- 90	4.987	43.23	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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.2141x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	606	504
80	413	362
75	295	256
70	253	240
65	218	198
60	187	181
55	168	157
50	146	139
45	130	124

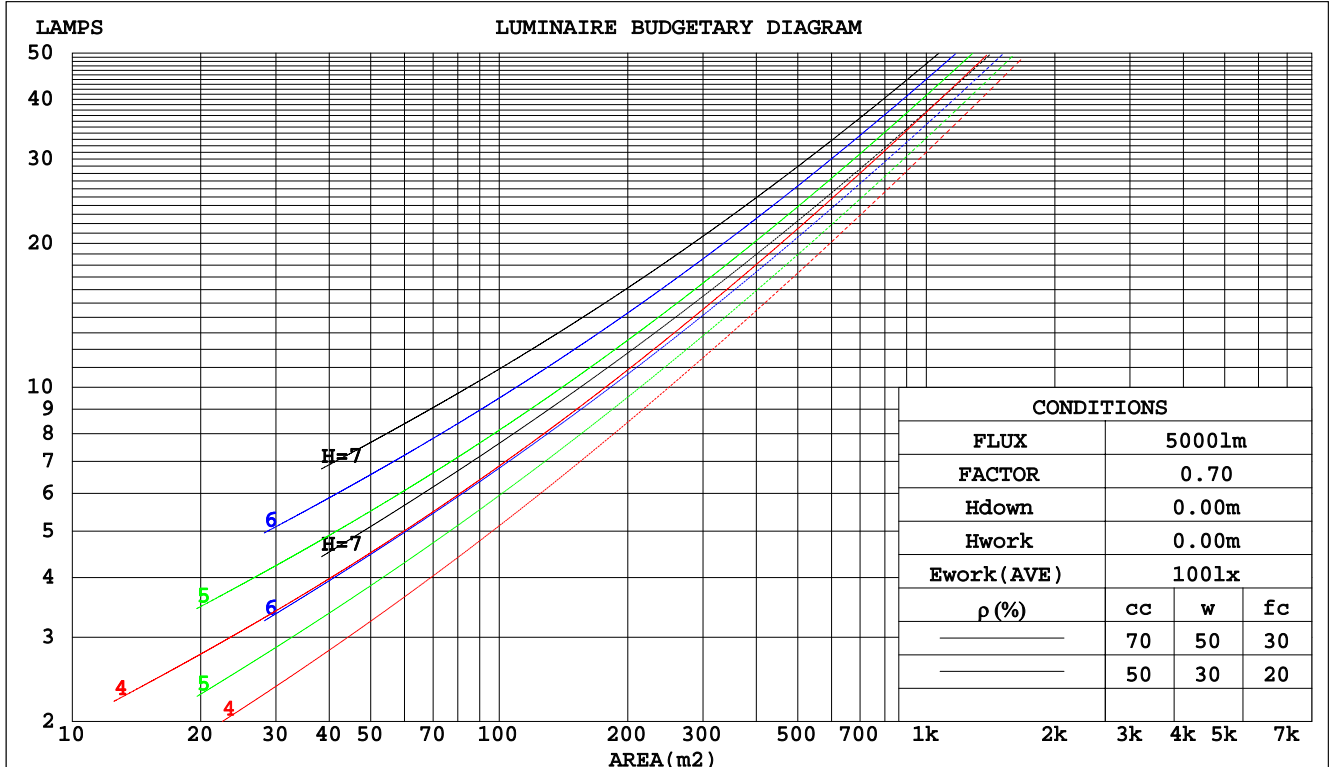
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	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	.95	.88	.82	.93	.86	.81	.88	.83	.78	.84	.80	.76	.80	.77	.73	.71
2.0	.79	.69	.61	.76	.68	.60	.73	.65	.59	.69	.63	.57	.66	.60	.56	.53
3.0	.66	.55	.47	.65	.54	.46	.61	.53	.45	.58	.51	.44	.55	.49	.44	.41
4.0	.57	.46	.37	.55	.45	.37	.53	.44	.36	.50	.42	.36	.48	.41	.35	.32
5.0	.50	.39	.30	.48	.38	.30	.46	.37	.30	.44	.36	.29	.42	.35	.29	.26
6.0	.44	.33	.25	.43	.33	.25	.41	.32	.25	.39	.31	.25	.37	.30	.24	.22
7.0	.39	.29	.22	.38	.28	.21	.36	.28	.21	.35	.27	.21	.33	.26	.21	.18
8.0	.35	.25	.19	.34	.25	.18	.33	.24	.18	.32	.24	.18	.30	.23	.18	.16
9.0	.32	.23	.16	.31	.22	.16	.30	.22	.16	.29	.21	.16	.28	.21	.16	.14
10.0	.29	.20	.14	.29	.20	.14	.27	.20	.14	.26	.19	.14	.26	.19	.14	.12



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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.2141x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.: 300*300			SERIAL No.:		
MFR.: NLD242026			SUR.:0.3*0.3			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	.481	.274	.087	.474	.270	.086	.459	.264	.084	.446	.257	.083	.434	.252	.081	
2.0	.407	.223	.068	.400	.220	.068	.387	.215	.067	.375	.211	.066	.365	.206	.065	
3.0	.354	.189	.056	.348	.187	.056	.337	.183	.055	.326	.179	.055	.317	.175	.054	
4.0	.314	.163	.048	.308	.161	.048	.298	.158	.047	.289	.155	.047	.280	.152	.046	
5.0	.281	.143	.042	.276	.142	.041	.267	.139	.041	.259	.137	.041	.251	.134	.040	
6.0	.255	.128	.037	.250	.126	.036	.242	.124	.036	.235	.122	.036	.228	.120	.036	
7.0	.232	.115	.033	.229	.114	.032	.222	.112	.032	.215	.110	.032	.209	.108	.032	
8.0	.214	.104	.029	.210	.104	.029	.204	.102	.029	.198	.100	.029	.193	.099	.029	
9.0	.198	.096	.027	.195	.095	.027	.189	.094	.027	.184	.092	.026	.179	.091	.026	
10.0	.184	.088	.024	.181	.088	.024	.176	.086	.024	.171	.085	.024	.167	.084	.024	

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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.192	.155	.121	.164	.133	.104	.112	.091	.072	.065	.053	.042	.021	.017	.014	
2.0	.188	.131	.084	.161	.113	.073	.110	.078	.051	.064	.046	.030	.020	.015	.010	
3.0	.181	.115	.062	.155	.099	.054	.106	.069	.038	.061	.040	.022	.020	.013	.007	
4.0	.173	.102	.049	.148	.089	.042	.102	.062	.030	.059	.036	.018	.019	.012	.006	
5.0	.164	.093	.040	.141	.080	.034	.097	.056	.024	.056	.033	.014	.018	.011	.005	
6.0	.156	.085	.033	.134	.073	.029	.093	.051	.021	.054	.030	.012	.017	.010	.004	
7.0	.148	.078	.029	.127	.068	.025	.088	.047	.018	.051	.028	.011	.017	.009	.003	
8.0	.141	.072	.025	.121	.063	.022	.084	.044	.016	.049	.026	.009	.016	.008	.003	
9.0	.133	.067	.022	.115	.058	.020	.080	.041	.014	.046	.024	.008	.015	.008	.003	
10.0	.127	.063	.020	.109	.055	.018	.076	.038	.013	.044	.023	.007	.014	.007	.002	

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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 300*300			SERIAL No.:			
MFR.: NLD242026					SUR.:0.3*0.3			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		7.2	9.1	7.5	9.3	9.5	6.9	8.8	7.2	9.0 9.3	
3H		10.1	11.9	10.5	12.1	12.4	9.8	11.6	10.2	11.8 12.1	
4H		11.6	13.3	12.0	13.6	13.9	11.2	12.8	11.5	13.1 13.4	
6H		13.2	14.8	13.6	15.1	15.4	12.6	14.2	13.0	14.5 14.8	
8H		14.1	15.7	14.5	16.0	16.3	13.3	14.9	13.7	15.2 15.5	
12H		14.8	16.3	15.2	16.7	17.0	14.0	15.5	14.4	15.8 16.2	
4H 2H		8.2	9.8	8.5	10.1	10.4	8.0	9.7	8.3	10.0 10.2	
3H		11.3	12.8	11.7	13.1	13.4	11.0	12.6	11.4	12.9 13.2	
4H		12.9	14.3	13.3	14.6	15.0	12.5	13.9	12.9	14.2 14.6	
6H		14.6	15.9	15.1	16.3	16.7	14.1	15.4	14.5	15.8 16.2	
8H		15.6	16.8	16.1	17.2	17.6	15.0	16.2	15.4	16.5 16.9	
12H		16.5	17.6	16.9	18.0	18.4	15.7	16.8	16.2	17.2 17.7	
8H 4H		13.5	14.7	13.9	15.0	15.4	13.1	14.3	13.6	14.7 15.1	
6H		15.5	16.6	16.0	17.0	17.4	15.1	16.1	15.6	16.6 17.0	
8H		16.7	17.6	17.2	18.1	18.5	16.1	17.0	16.6	17.5 17.9	
12H		17.7	18.5	18.2	19.0	19.5	17.0	17.9	17.5	18.3 18.8	
12H 4H		13.6	14.7	14.0	15.1	15.6	13.3	14.4	13.8	14.8 15.3	
6H		15.8	16.7	16.3	17.2	17.6	15.4	16.3	15.9	16.8 17.2	
8H		17.0	17.9	17.5	18.3	18.8	16.5	17.3	17.0	17.8 18.3	
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 43.21 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -10.9$)

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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.2141x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:

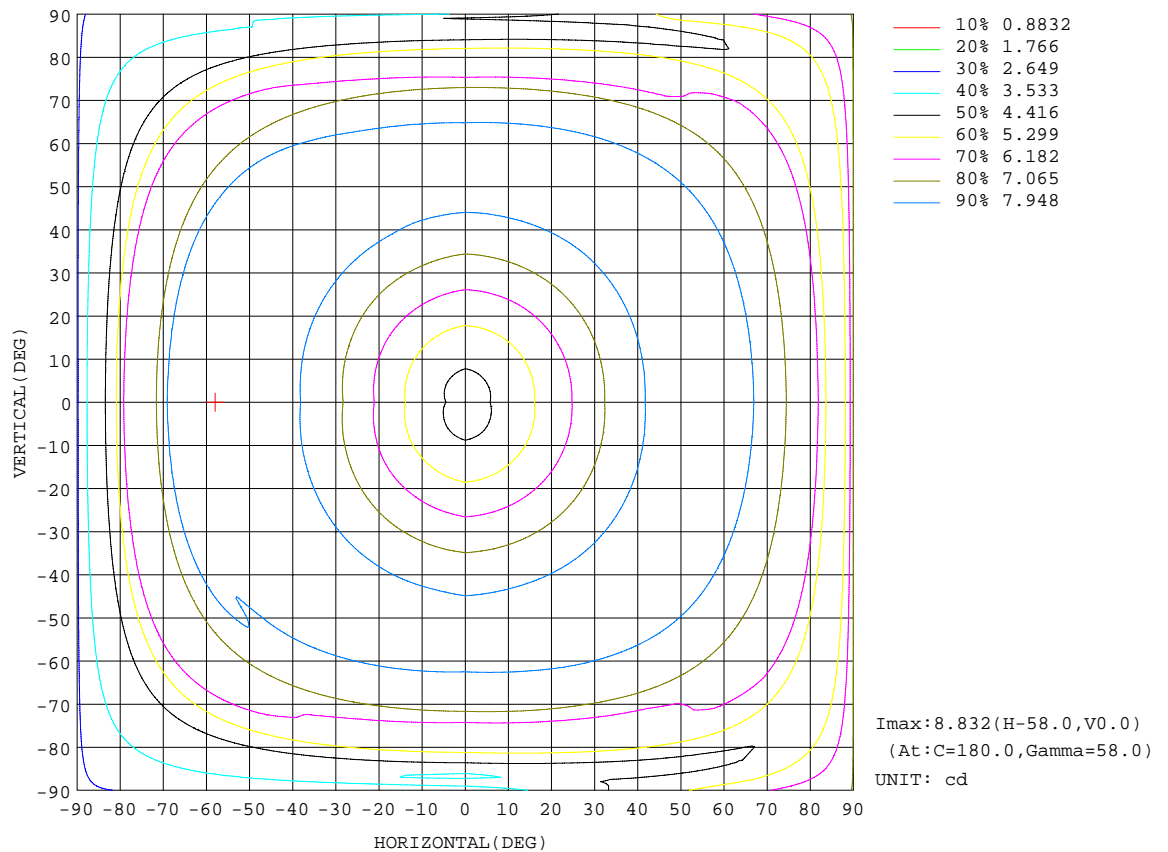
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	45	31	23	44	31	23	43	30	23	15
0.80	54	40	31	53	39	31	51	39	30	22
1.00	62	48	39	61	47	38	58	50	38	29
1.25	70	56	46	68	55	46	65	53	45	36
1.50	75	62	52	73	61	52	70	59	51	41
2.00	84	71	62	81	70	61	77	68	60	50
2.50	89	77	69	86	76	68	82	73	66	56
3.00	93	83	75	91	81	74	86	78	71	61
4.00	98	90	83	96	88	81	91	84	78	68
5.00	102	94	88	99	92	86	94	88	83	72
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
 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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:

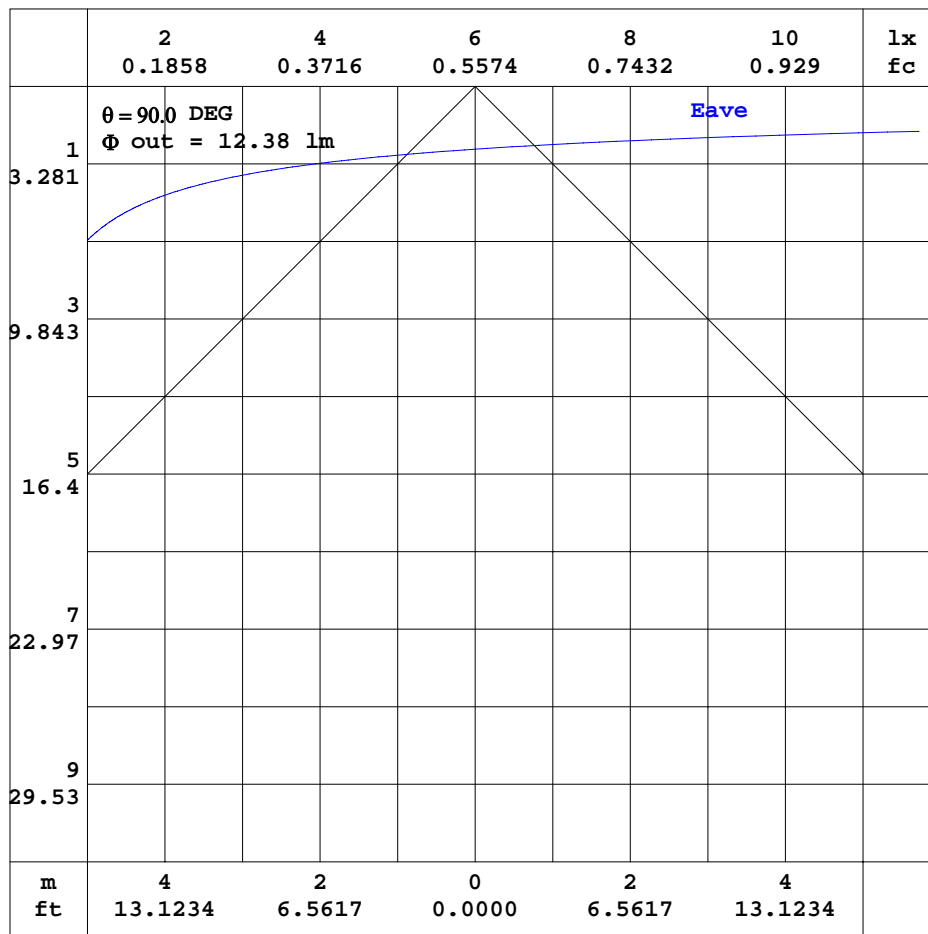


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:



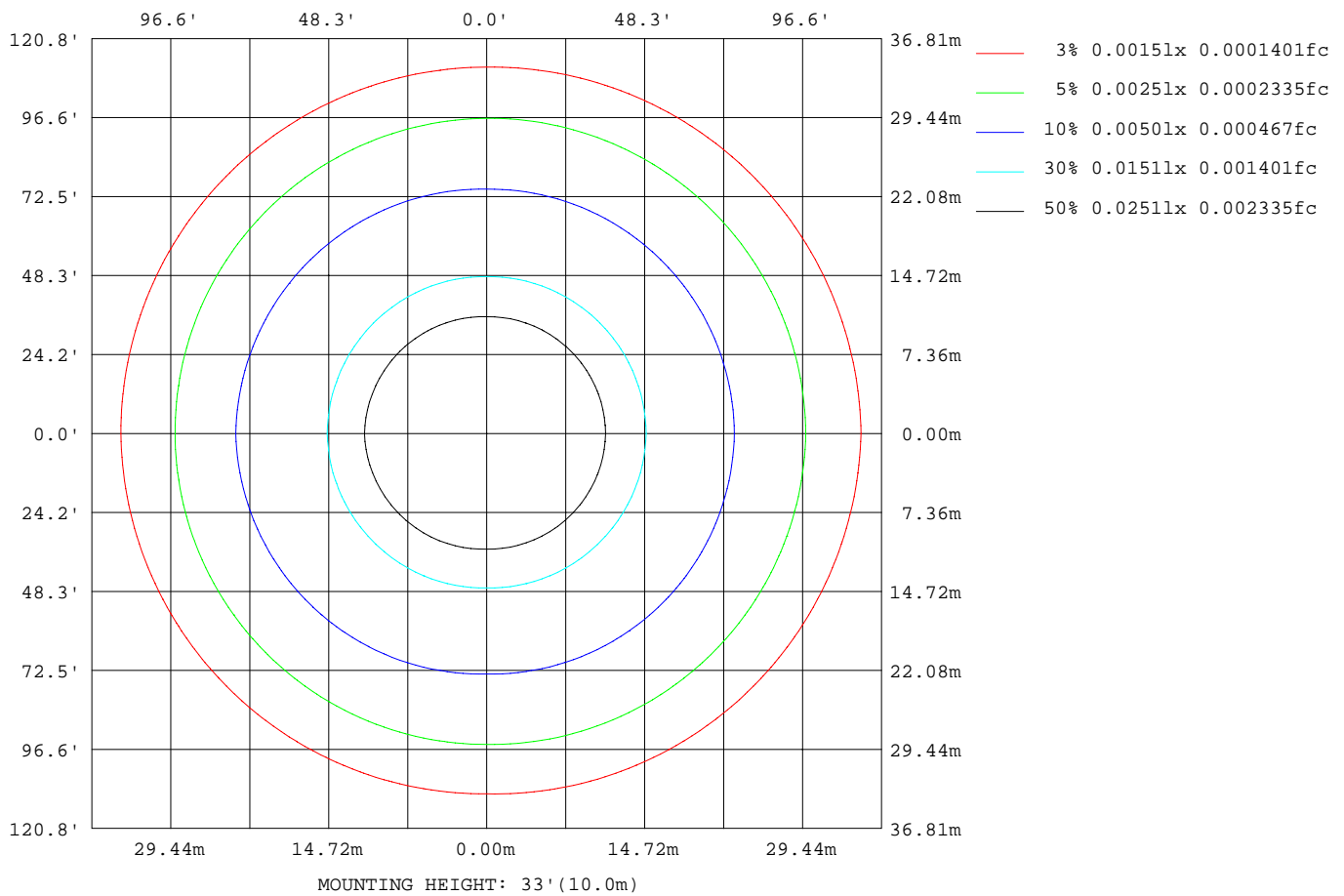
Note: The Curves indicate the illuminated area and the average illuminance when the luminaire is at different distance.

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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	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:229.68V I:0.2070A P:45.663W PF:0.9605 Freq:49.99Hz Lamp Flux:43.214lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.3*0.3	Shielding Angle:

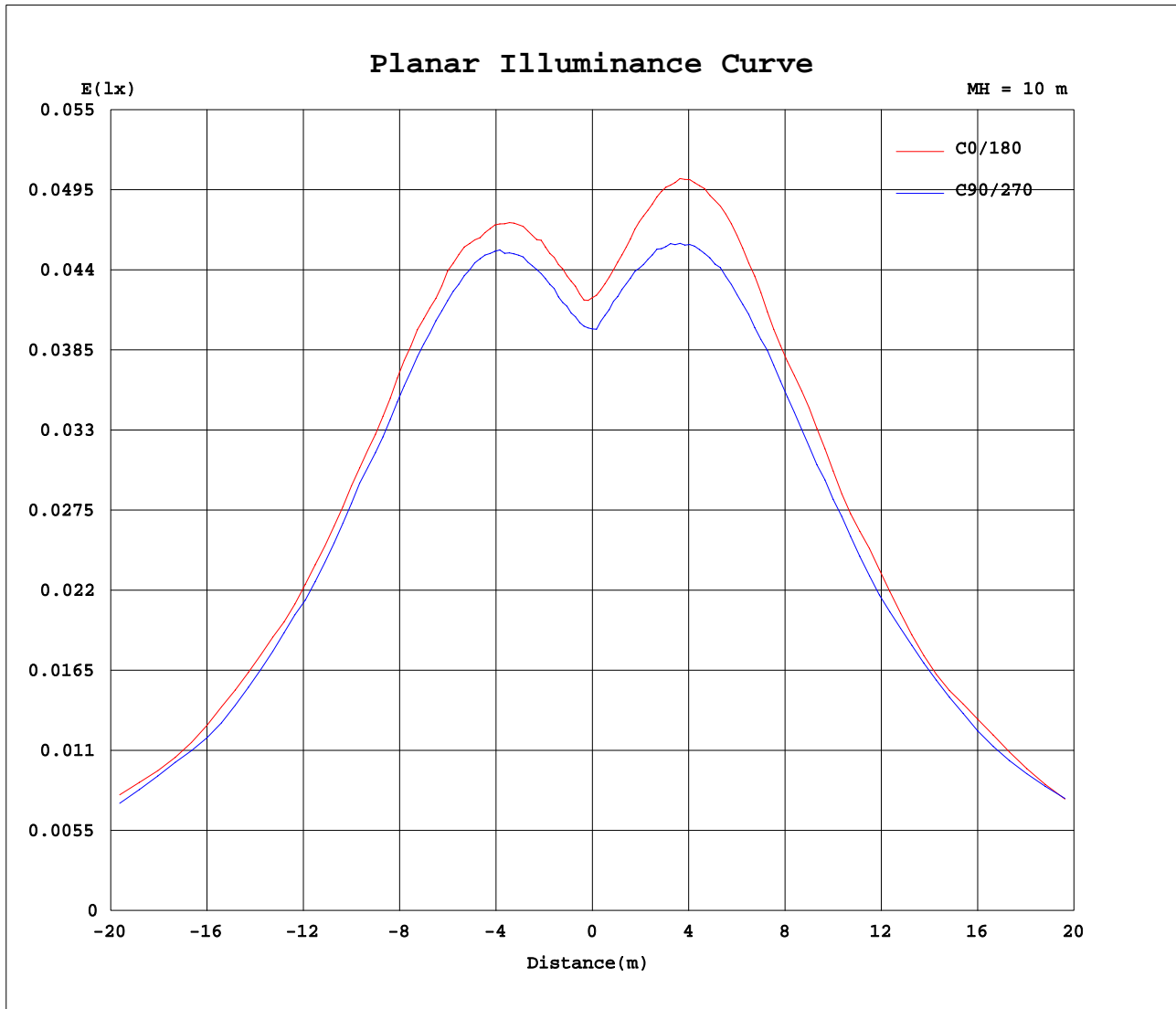
AvgL	cd/m2
L_0~180(65)av	216
L_0~180(75)av	295
L_0~180(85)av	535
L_90~270(65)av	203
L_90~270(75)av	262
L_90~270(85)av	511
L_45(65)av	208
L_45(75)av	274
L_45(85)av	516

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:

```