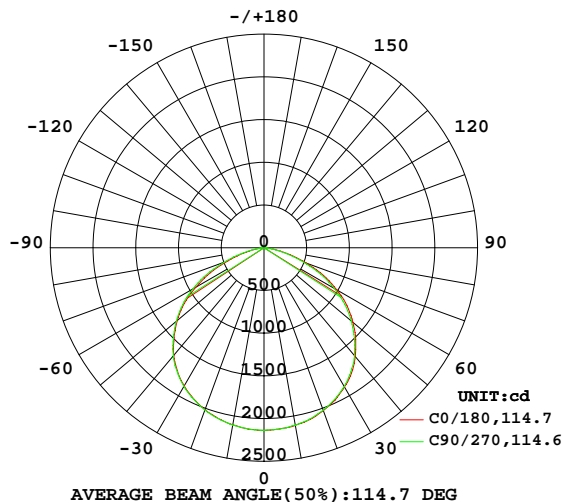


LUMINAIRE PHOTOMETRIC TEST REPORT

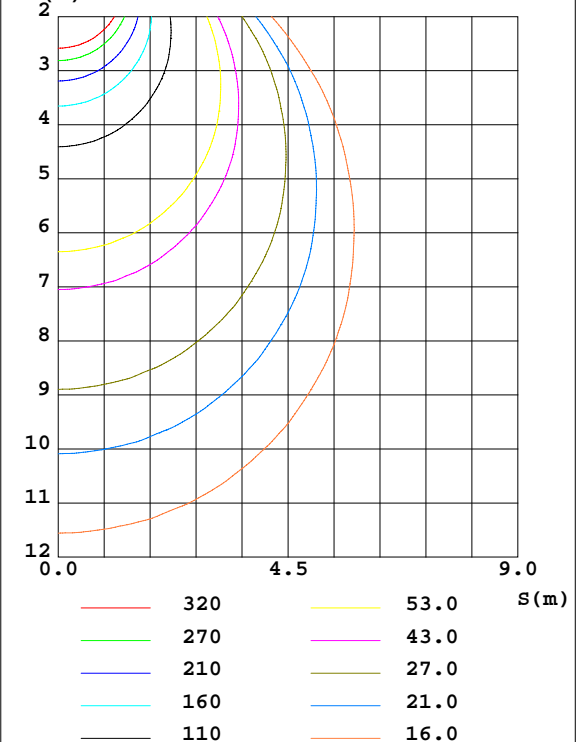
Test:U:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.51 lm/W			
MODEL		Imax(cd)	2138	S/MH(C0/180)	1.30
NOMINAL POWER(W)	45	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	6062.2	η UP,DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	6062.16	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6
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:

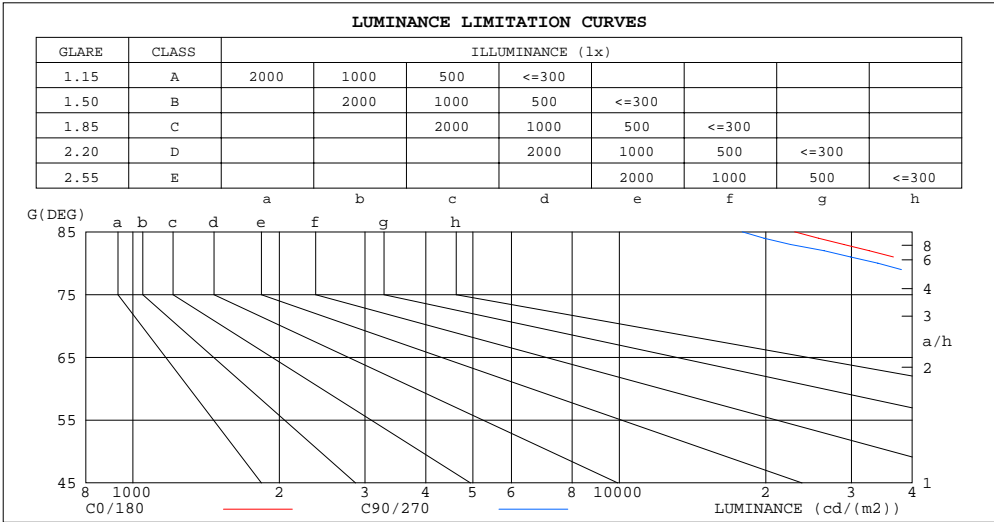
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	Φ lum, lamp
10	2112	2108	2105	2107					0- 10	202.5	202.5	3.34,3.34
20	2030	2024	2017	2021					10- 20	585.7	788.2	13,13
30	1883	1877	1868	1874					20- 30	902.5	1691	27.9,27.9
40	1661	1648	1642	1652					30- 40	1110	2801	46.2,46.2
50	1357	1333	1327	1341					40- 50	1158	3958	65.3,65.3
60	983.1	946.7	917.5	958.5					50- 60	1033	4992	82.3,82.3
70	525.5	486.7	449.0	499.4					60- 70	718.4	5710	94.2,94.2
80	139.5	115.7	99.65	123.6					70- 80	305.3	6015	99.2,99.2
90	9.837	3.127	5.172	4.527					80- 90	46.74	6062	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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 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	22922	17896
80	40991	34003
75	62124	55243
70	78397	72607
65	93006	88169
60	100311	96603
55	105581	102804
50	107715	105830
45	109545	108012

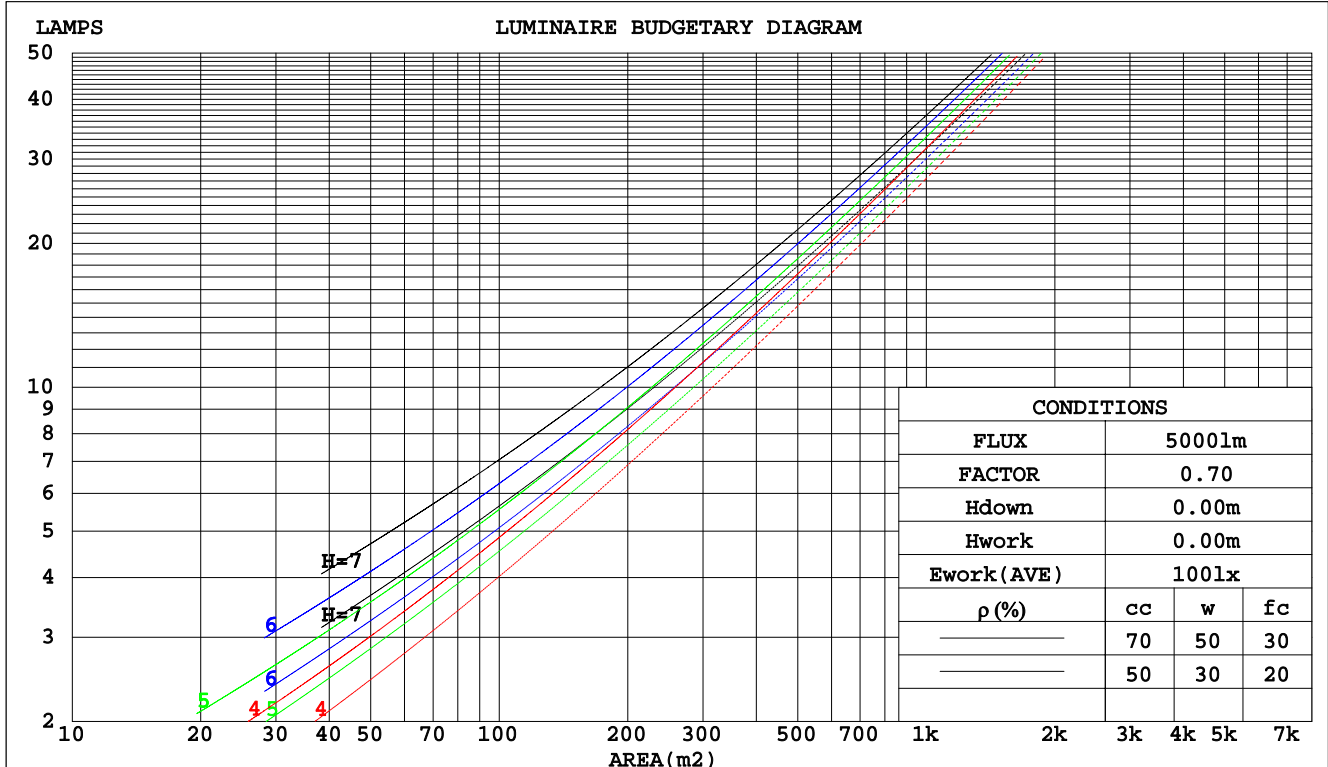
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 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	.97	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.74	.68	.64	.71	.66	.63	.60
4.0	.72	.63	.56	.70	.62	.56	.68	.61	.55	.66	.59	.55	.63	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.48	.61	.53	.48	.59	.52	.47	.57	.51	.47	.45
6.0	.58	.49	.42	.57	.48	.42	.55	.47	.42	.53	.46	.41	.52	.46	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
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:2024-07-25

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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 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	.288	.164	.052	.281	.160	.051	.268	.154	.049	.256	.148	.047	.245	.142	.046	
2.0	.278	.152	.047	.272	.150	.046	.260	.145	.045	.249	.140	.044	.240	.135	.043	
3.0	.261	.139	.042	.255	.137	.041	.245	.133	.040	.235	.129	.040	.227	.125	.039	
4.0	.243	.126	.037	.238	.124	.037	.229	.121	.036	.220	.118	.036	.212	.115	.035	
5.0	.226	.115	.033	.221	.114	.033	.213	.111	.033	.206	.109	.032	.199	.106	.032	
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.192	.100	.029	.186	.098	.029	
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.172	.083	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.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	.019	.015	.011	
3.0	.163	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.052	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.049	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.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	.117	.060	.023	.101	.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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 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	29.2	30.7	29.5	30.9	31.1	29.1	30.6	29.3	30.8	31.0	
	3H	30.4	31.8	30.7	32.0	32.3	30.2	31.6	30.5	31.8	32.1
	4H	30.8	32.1	31.1	32.3	32.6	30.5	31.8	30.8	32.1	32.3
	6H	30.9	32.1	31.2	32.4	32.7	30.6	31.8	30.9	32.1	32.4
	8H	30.9	32.1	31.2	32.4	32.6	30.6	31.8	30.9	32.1	32.4
	12H	30.9	32.0	31.2	32.3	32.6	30.6	31.7	30.9	32.0	32.3
4H	2H	29.7	31.0	30.0	31.3	31.5	29.6	30.9	29.9	31.2	31.4
	3H	31.1	32.2	31.4	32.5	32.8	30.9	32.0	31.3	32.3	32.6
	4H	31.5	32.5	31.9	32.9	33.2	31.3	32.3	31.7	32.6	33.0
	6H	31.7	32.6	32.1	33.0	33.3	31.4	32.4	31.8	32.7	33.1
	8H	31.7	32.6	32.1	32.9	33.3	31.4	32.3	31.9	32.7	33.0
	12H	31.7	32.5	32.1	32.9	33.3	31.4	32.2	31.9	32.6	33.0
8H	4H	31.6	32.5	32.0	32.8	33.2	31.4	32.3	31.8	32.6	33.0
	6H	31.9	32.6	32.3	33.0	33.4	31.6	32.3	32.1	32.7	33.2
	8H	31.9	32.5	32.4	33.0	33.4	31.7	32.3	32.1	32.7	33.1
	12H	31.9	32.5	32.4	32.9	33.4	31.7	32.2	32.1	32.6	33.1
12H	4H	31.6	32.4	32.0	32.7	33.1	31.4	32.2	31.8	32.5	33.0
	6H	31.9	32.5	32.3	32.9	33.4	31.6	32.2	32.1	32.7	33.1
	8H	31.9	32.5	32.4	32.9	33.4	31.7	32.2	32.1	32.6	33.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
1.5H	+ 0.2 / - 0.4					+ 0.3 / - 0.4					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117, 6062 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.3$)

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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

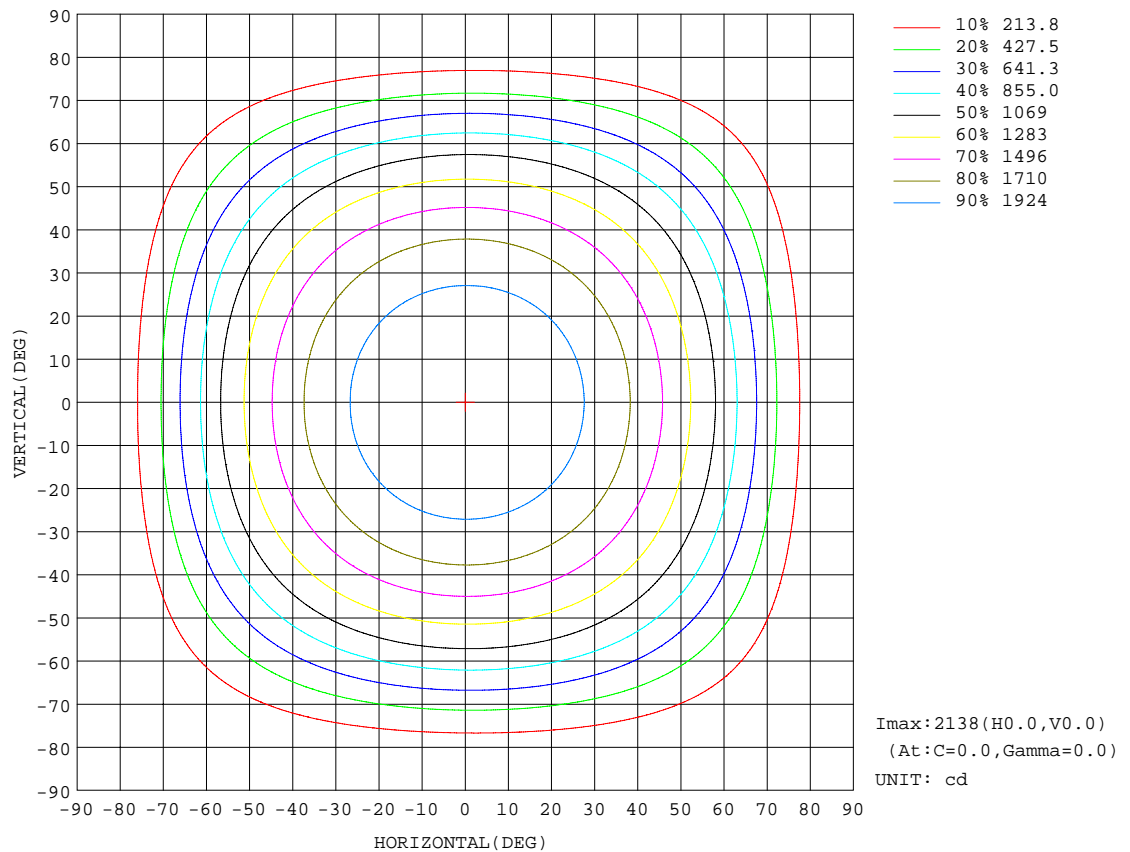
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	46	40	56	46	39	33
0.80	68	57	50	67	57	50	66	56	49	42
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	74	67	80	72	66	59
1.50	89	80	73	88	79	73	85	77	72	64
2.00	96	88	82	94	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	100	103	99	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
 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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

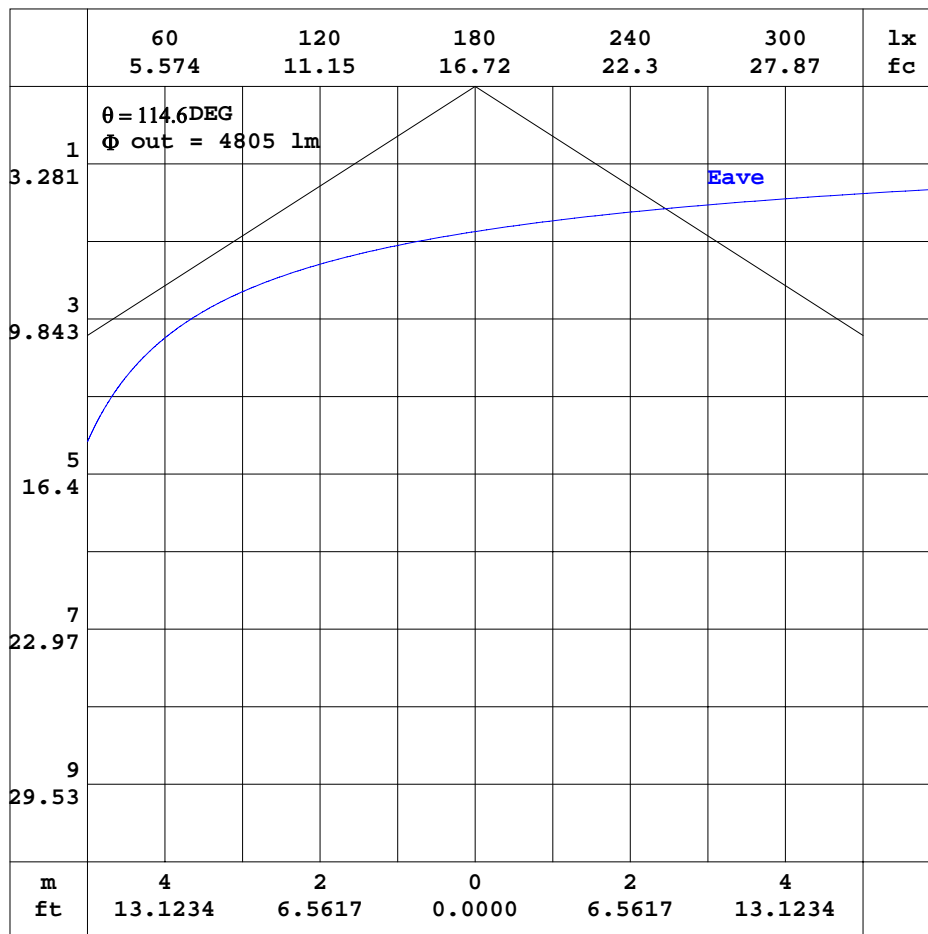


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-07-25

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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:



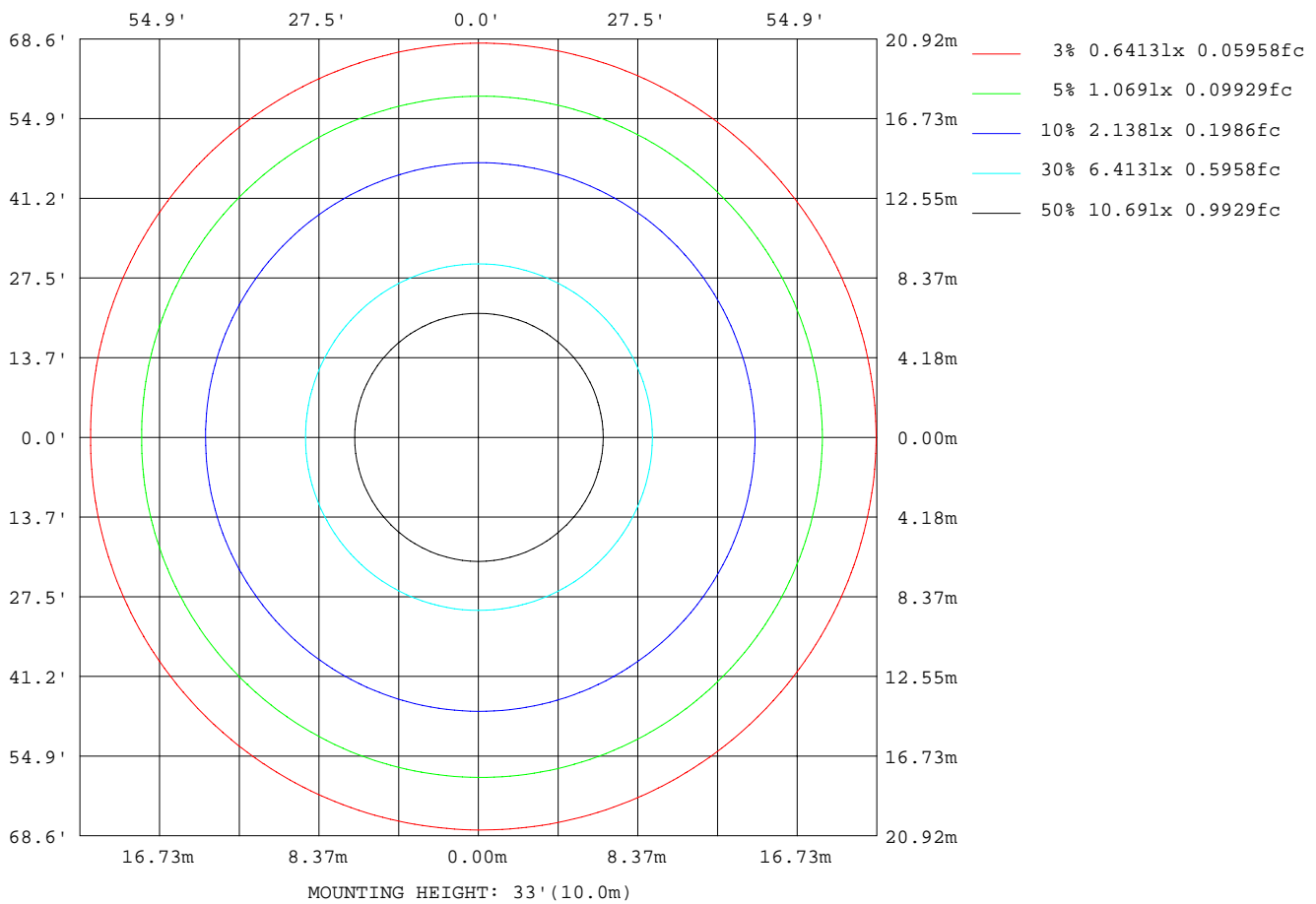
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 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:229.70V I:0.2088A P:46.095W PF:0.9611 Freq:49.99Hz Lamp Flux:6062.16x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 300*300	SERIAL No.:
MFR.: NLD242026	SUR.:0.14*0.14	Shielding Angle:

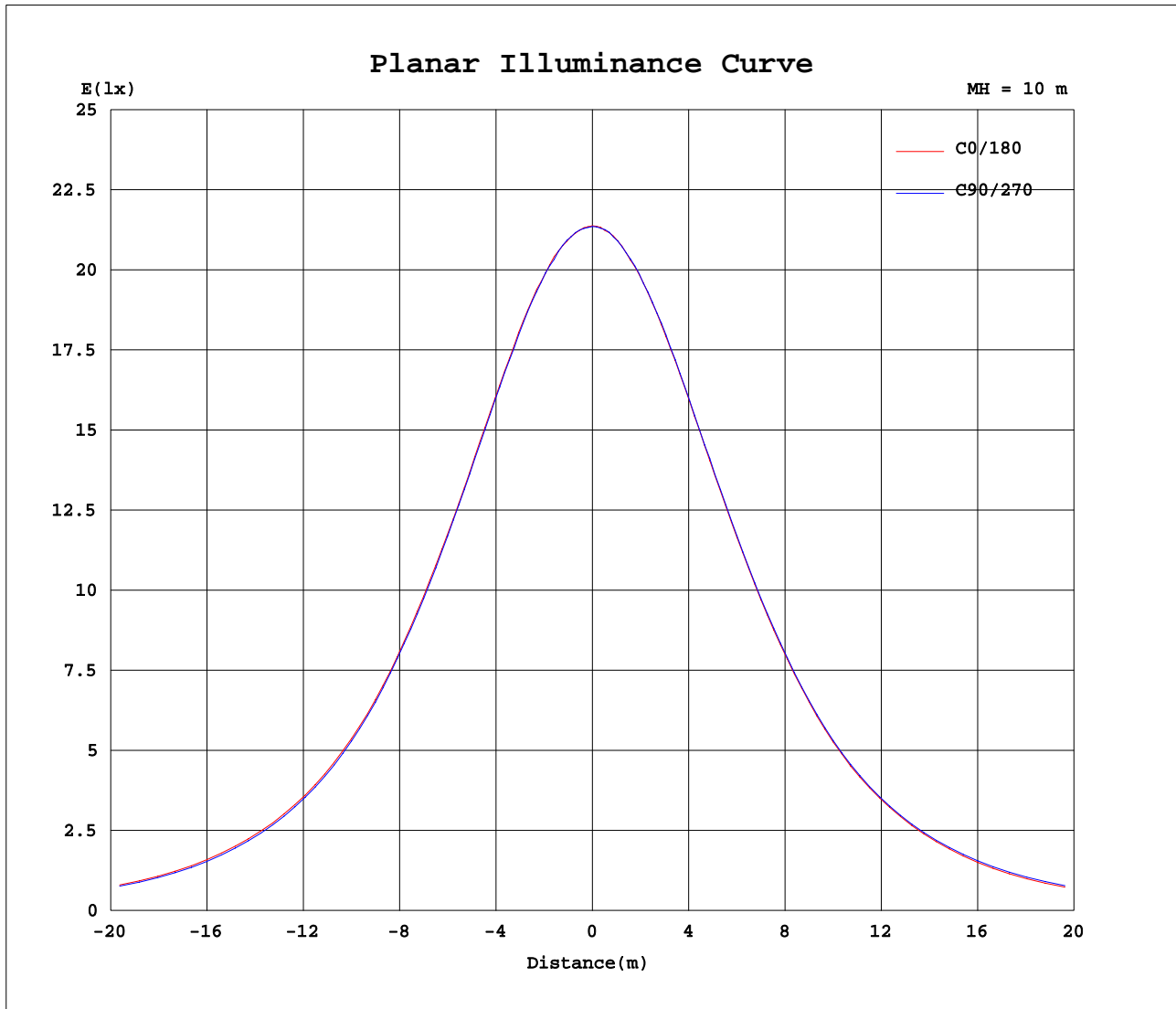
AvgL	cd/m2
L_0~180(65)av	88335
L_0~180(75)av	55883
L_0~180(85)av	19359
L_90~270(65)av	88813
L_90~270(75)av	56287
L_90~270(85)av	18524
L_45(65)av	88342
L_45(75)av	55745
L_45(85)av	18614

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:

```