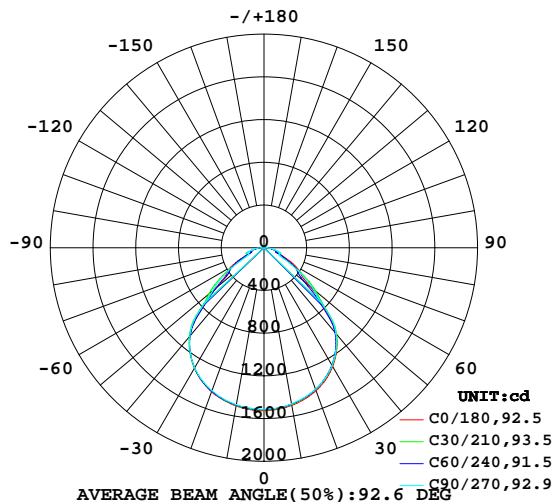


LUMINAIRE PHOTOMETRIC TEST REPORT

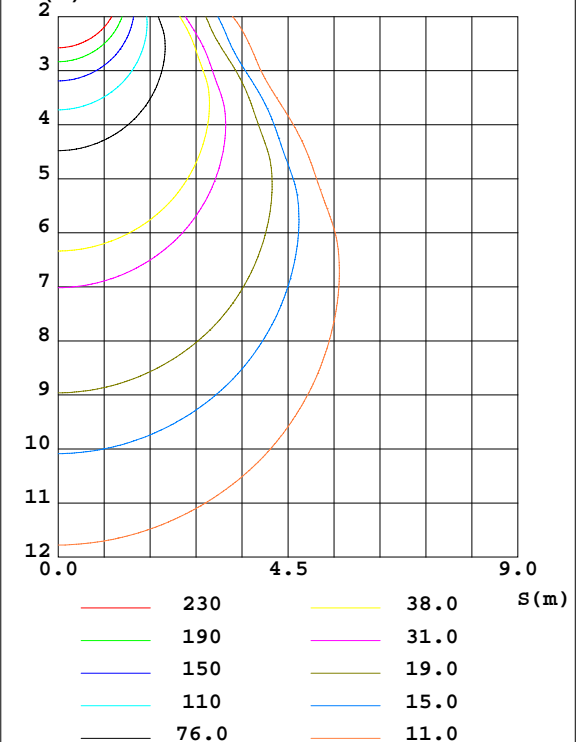
Test:U:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 44.50 lm/W			
MODEL		I _{max} (cd)	1526	S/MH(C0/180)	1.26
NOMINAL POWER(W)	80	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	3372.2	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	3372.19	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.7
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: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:

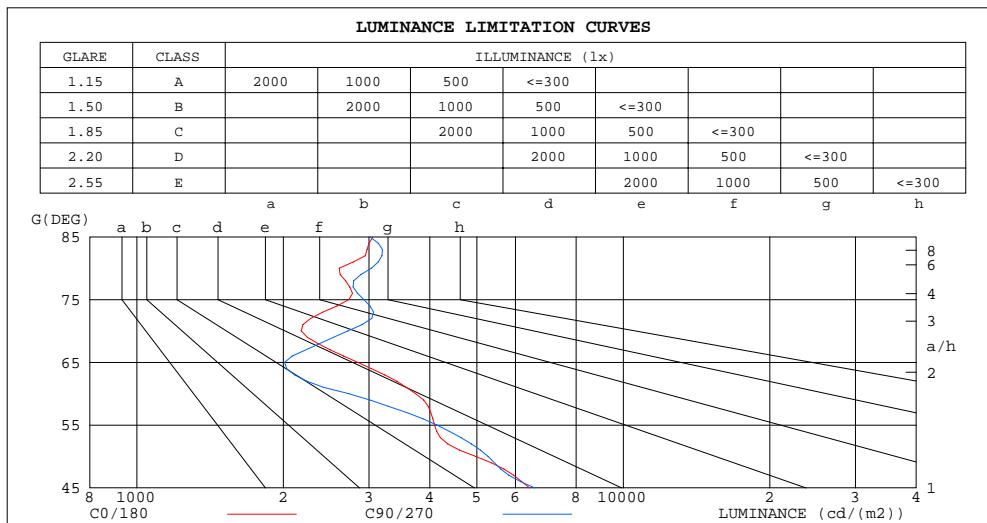
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1499	1489	1485	1485	1504	1497	1493	1486	0- 10	143.4	143.4	4.25,4.25
20	1425	1414	1410	1413	1436	1428	1424	1414	10- 20	412.4	555.8	16.5,16.5
30	1286	1276	1274	1280	1303	1299	1298	1281	20- 30	626.8	1183	35.1,35.1
40	1052	1045	1049	1055	1081	1076	1080	1058	30- 40	740.0	1923	57,57
50	568.0	576.3	602.7	608.9	588.7	610.9	631.3	610.3	40- 50	641.1	2564	76,76
60	332.4	321.1	242.5	320.4	355.5	351.5	286.8	329.4	50- 60	399.8	2964	87.9,87.9
70	132.4	174.2	165.1	186.6	129.4	196.9	160.5	184.8	60- 70	220.0	3184	94.4,94.4
80	80.47	78.51	93.72	77.14	92.37	85.62	103.9	85.91	70- 80	134.4	3318	98.4,98.4
90	1.658	1.624	1.521	2.199	5.687	7.466	5.979	3.503	80- 90	54.28	3372	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: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3056	3014
80	2606	3036
75	2727	2929
70	2177	2715
65	2842	2013
60	3739	2727
55	4093	4139
50	4970	5273
45	6414	6578

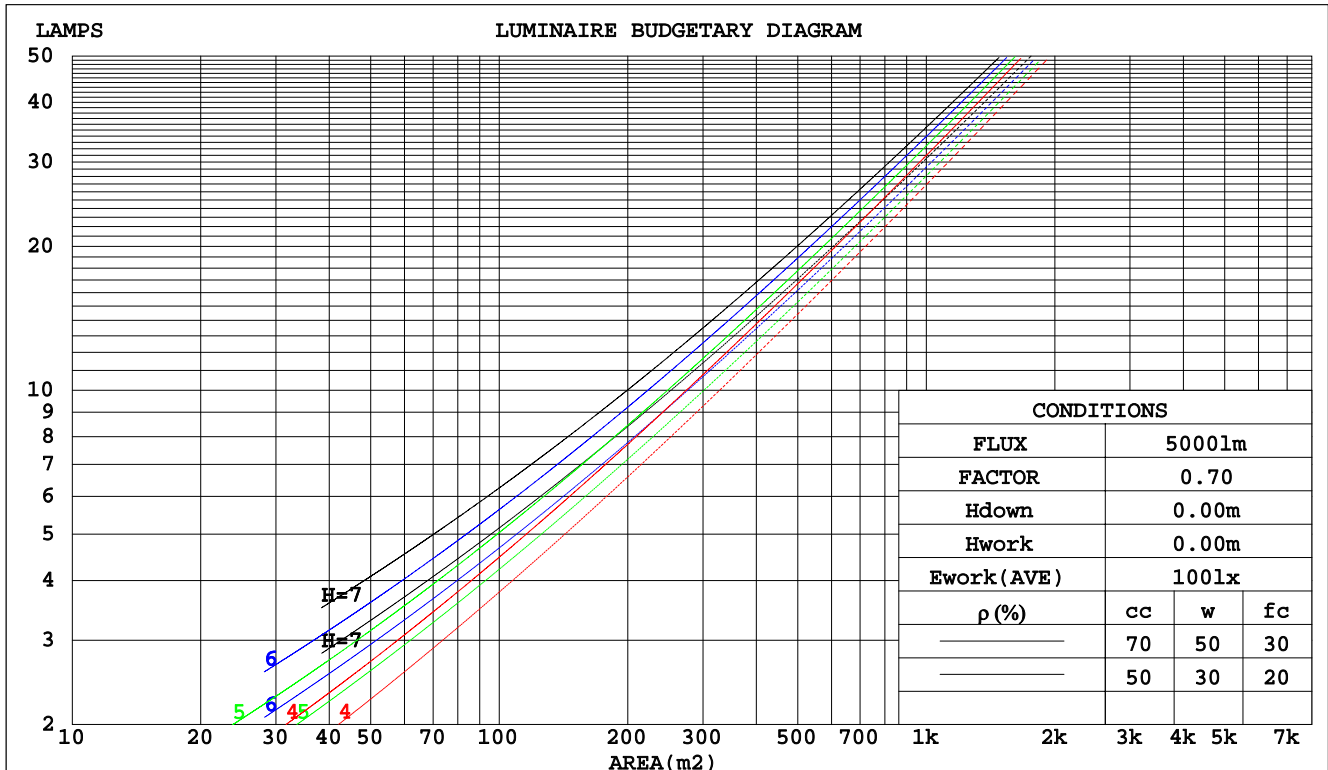
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	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	1.06	1.02	.99	1.04	1.00	.97	.90	.97	.94	.96	.93	.91	.92	.90	.89	.87
2.0	.94	.88	.83	.92	.87	.82	.89	.84	.80	.86	.82	.79	.83	.80	.77	.75
3.0	.84	.77	.71	.83	.76	.71	.80	.74	.69	.77	.72	.68	.75	.71	.67	.65
4.0	.76	.68	.62	.74	.67	.61	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.60	.54	.65	.59	.53	.63	.58	.53	.62	.56	.52	.50
6.0	.62	.54	.48	.61	.54	.48	.60	.53	.48	.58	.52	.47	.56	.51	.47	.45
7.0	.57	.49	.43	.56	.48	.43	.55	.48	.43	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.39	.51	.44	.39	.50	.43	.38	.49	.43	.38	.48	.42	.38	.36
9.0	.48	.40	.35	.48	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33
10.0	.45	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.32	.41	.36	.32	.30



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.: 500*50		SERIAL No.:	
MFR.: NLD23-009		SUR.:3.14*0.238*0.238		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	.270	.153	.049	.263	.150	.048	.249	.143	.046	.237	.137	.044	.226	.131	.042		
2.0	.255	.140	.043	.249	.137	.042	.237	.132	.041	.227	.127	.040	.217	.123	.039		
3.0	.238	.127	.038	.233	.125	.038	.223	.121	.037	.214	.117	.036	.205	.114	.035		
4.0	.223	.116	.034	.218	.114	.034	.209	.111	.033	.201	.108	.033	.193	.105	.032		
5.0	.208	.106	.031	.204	.105	.031	.196	.102	.030	.189	.100	.030	.182	.097	.029		
6.0	.195	.098	.028	.191	.097	.028	.184	.095	.028	.178	.093	.027	.172	.091	.027		
7.0	.183	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025		
8.0	.172	.084	.024	.170	.083	.024	.164	.082	.023	.159	.080	.023	.154	.079	.023		
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021		
10.0	.154	.074	.020	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020		

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	.138	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.102	.143	.114	.089	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.158	.114	.079	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.111	.064	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
8.0	.123	.068	.030	.106	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.027	.102	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.: 500*50			SERIAL No.:			
MFR.: NLD23-009					SUR.:3.14*0.238*0.238			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		17.4	18.7	17.6	18.9	19.1	17.0	18.4	17.2	18.6	18.7
	3H	18.0	19.3	18.3	19.5	19.7	17.7	19.0	18.0	19.2	19.4
	4H	18.4	19.6	18.7	19.8	20.0	18.1	19.3	18.4	19.6	19.8
	6H	18.6	19.8	19.0	20.0	20.3	18.5	19.6	18.8	19.9	20.2
	8H	18.8	19.9	19.1	20.2	20.4	18.7	19.8	19.1	20.1	20.4
	12H	18.9	20.0	19.3	20.3	20.6	18.9	19.9	19.2	20.2	20.5
4H	2H	17.5	18.7	17.8	19.0	19.2	17.2	18.4	17.5	18.7	18.9
	3H	18.4	19.5	18.8	19.8	20.0	18.1	19.1	18.4	19.4	19.7
	4H	18.9	19.9	19.3	20.2	20.5	18.6	19.6	19.0	19.9	20.2
	6H	19.3	20.2	19.7	20.5	20.9	19.2	20.0	19.6	20.4	20.7
	8H	19.6	20.4	20.0	20.7	21.1	19.5	20.3	19.9	20.6	21.0
	12H	19.8	20.5	20.2	20.9	21.3	19.7	20.4	20.2	20.8	21.2
8H	4H	19.0	19.8	19.4	20.2	20.6	18.8	19.6	19.2	20.0	20.3
	6H	19.6	20.3	20.1	20.7	21.1	19.5	20.2	19.9	20.6	21.0
	8H	20.0	20.6	20.5	21.0	21.5	20.0	20.5	20.4	20.9	21.4
	12H	20.4	20.9	20.8	21.3	21.8	20.3	20.8	20.8	21.3	21.7
12H	4H	19.0	19.8	19.5	20.1	20.5	18.8	19.5	19.3	19.9	20.3
	6H	19.7	20.3	20.2	20.7	21.2	19.6	20.2	20.0	20.6	21.0
	8H	20.2	20.6	20.6	21.1	21.6	20.1	20.6	20.6	21.0	21.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.6 / - 0.6					
1.5H	+ 0.2 / - 0.6					+ 0.2 / - 0.2					
2.0H	+ 1.0 / - 1.6					+ 1.1 / - 1.0					

CIE Pub.117, 3372 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.2$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:

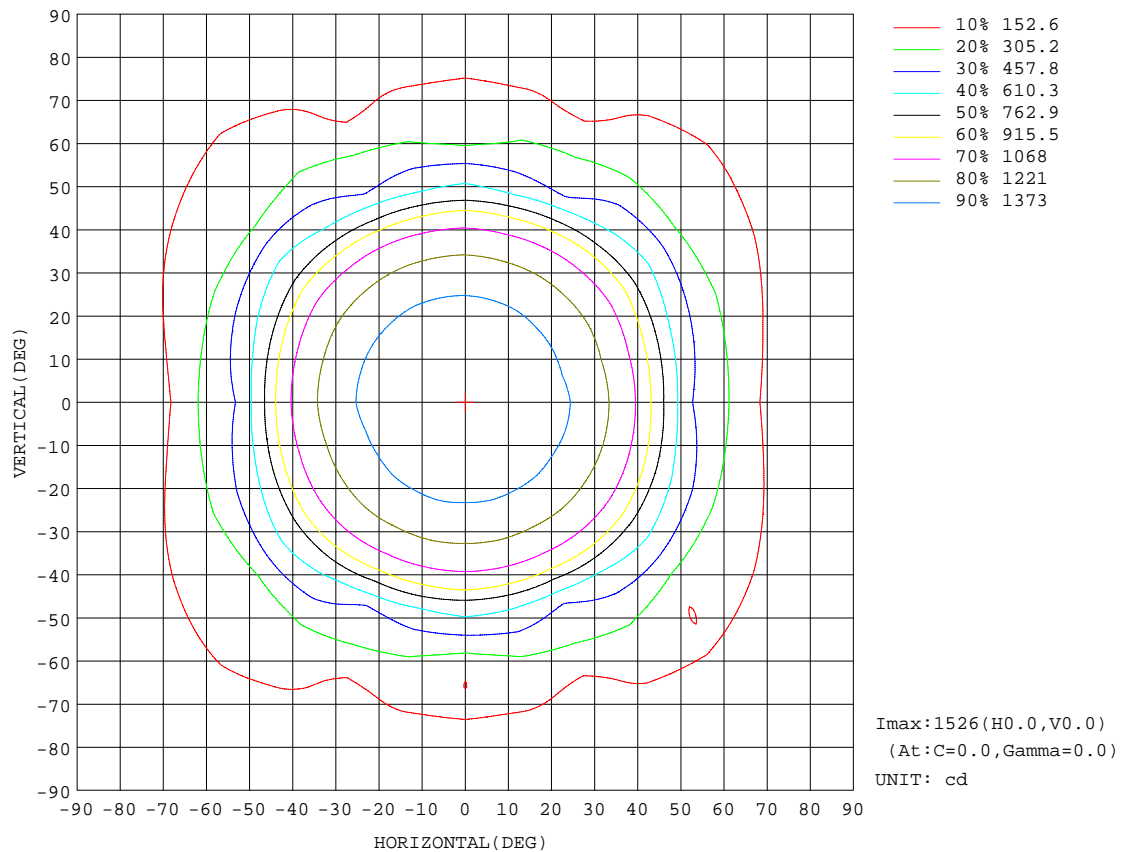
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	65	54	48	64	54	48	63	54	48	42
0.80	75	64	58	74	64	58	72	63	57	51
1.00	83	73	67	81	72	67	79	73	66	60
1.25	89	80	74	88	80	74	85	78	73	67
1.50	94	85	79	92	84	79	89	83	78	71
2.00	99	92	87	98	91	86	94	89	84	77
2.50	102	96	91	100	94	90	97	92	88	80
3.00	105	99	95	103	98	94	99	95	91	84
4.00	108	104	100	106	102	98	102	99	96	87
5.00	110	106	103	108	104	101	104	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:

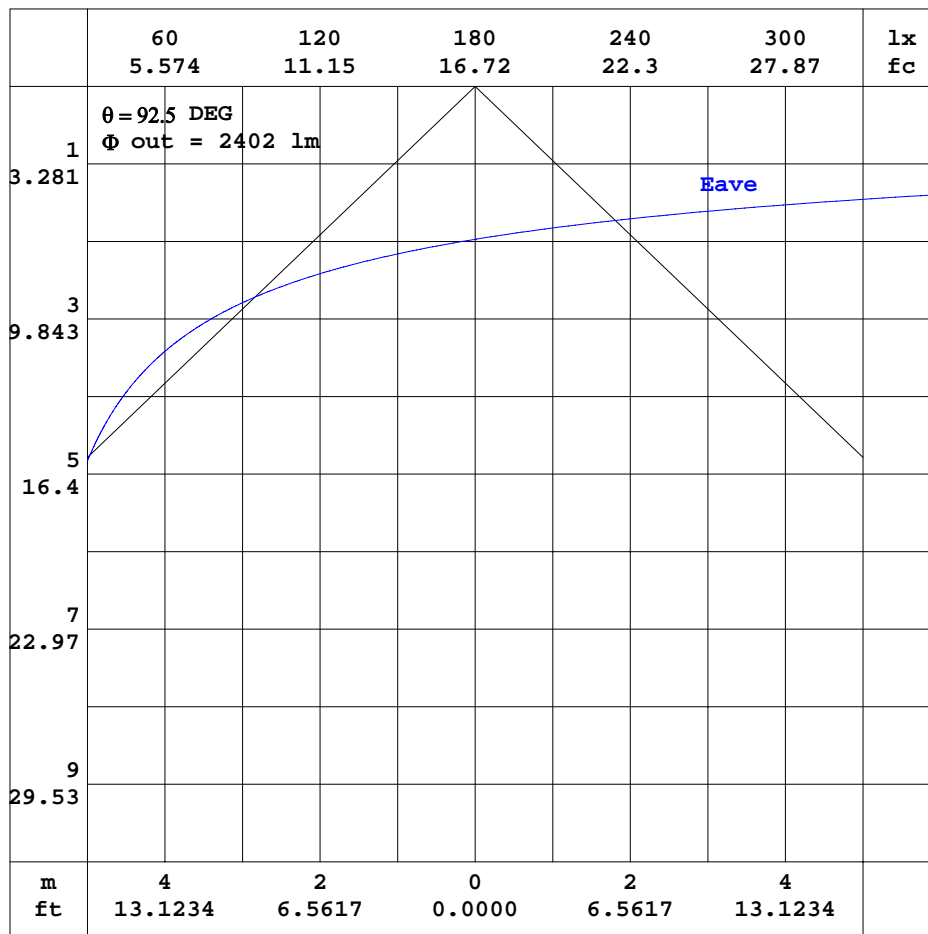


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:



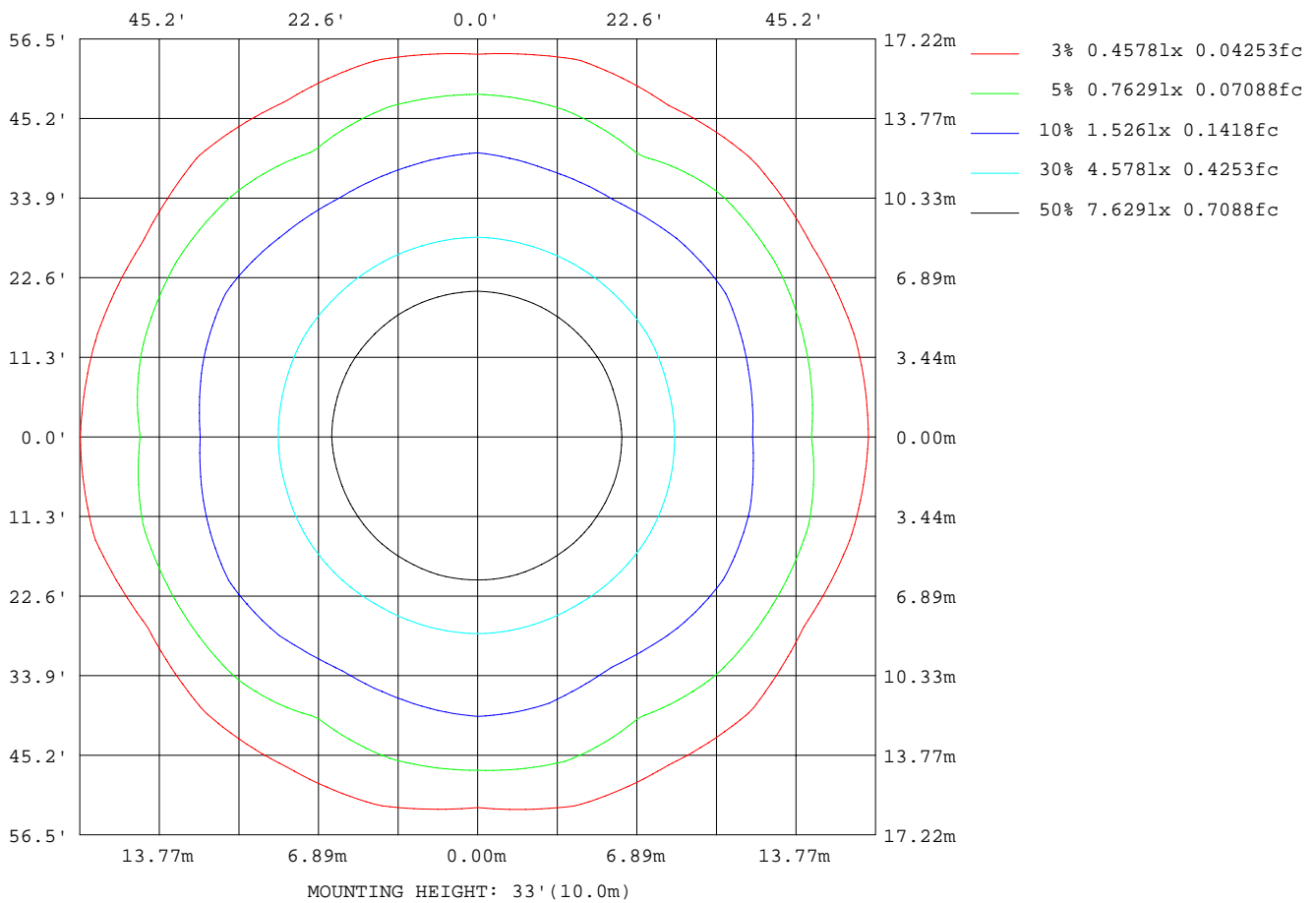
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2023-12-18

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:229.64V I:0.3381A P:75.776W PF:0.9760 Freq:49.99Hz Lamp Flux:3372.19x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 500*50	SERIAL No.:
MFR.: NLD23-009	SUR.:3.14*0.238*0.238	Shielding Angle:

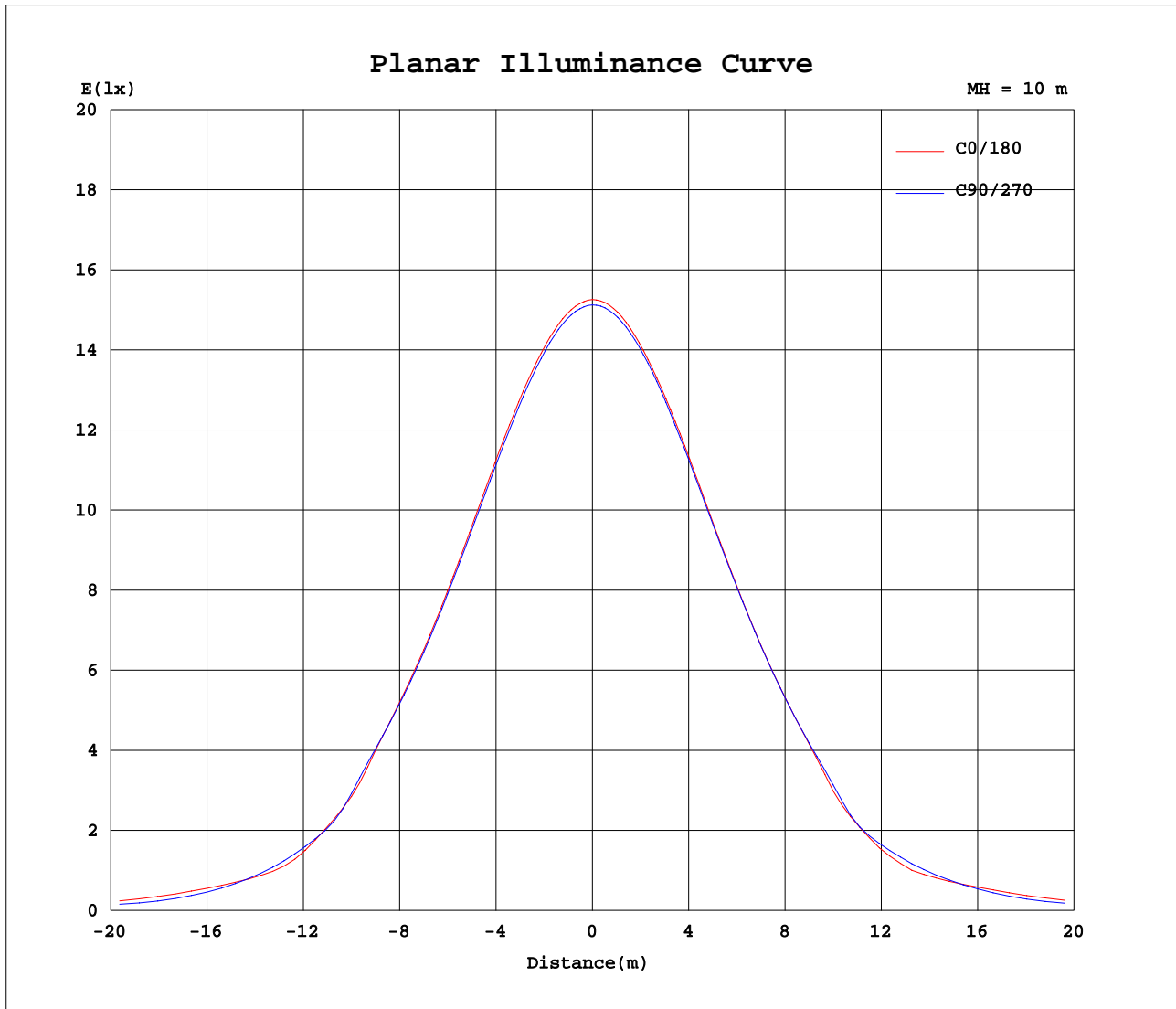
AvgL	cd/m2
L_0~180(65)av	2884
L_0~180(75)av	2811
L_0~180(85)av	3318
L_90~270(65)av	2101
L_90~270(75)av	3146
L_90~270(85)av	3567
L_45(65)av	3219
L_45(75)av	2697
L_45(85)av	3225

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2023-12-18

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: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2023-12-18

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:

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