

LED Downlight TS200-25W-930



Light Output Ratio:	100.0%	
Luminaire Power:	27.44 W	
SHR Nominal:	1.00	Calculated using the TM5
SHR Maximum:	1.10	fine grid method.

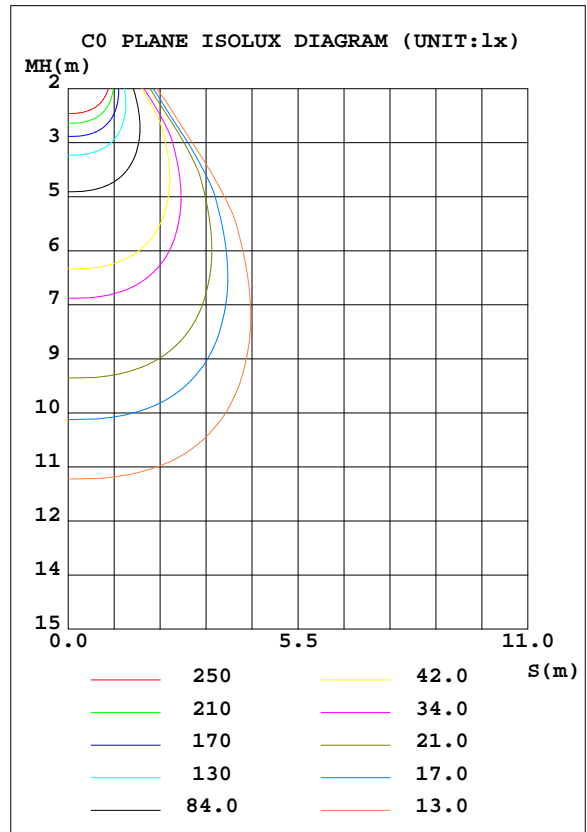
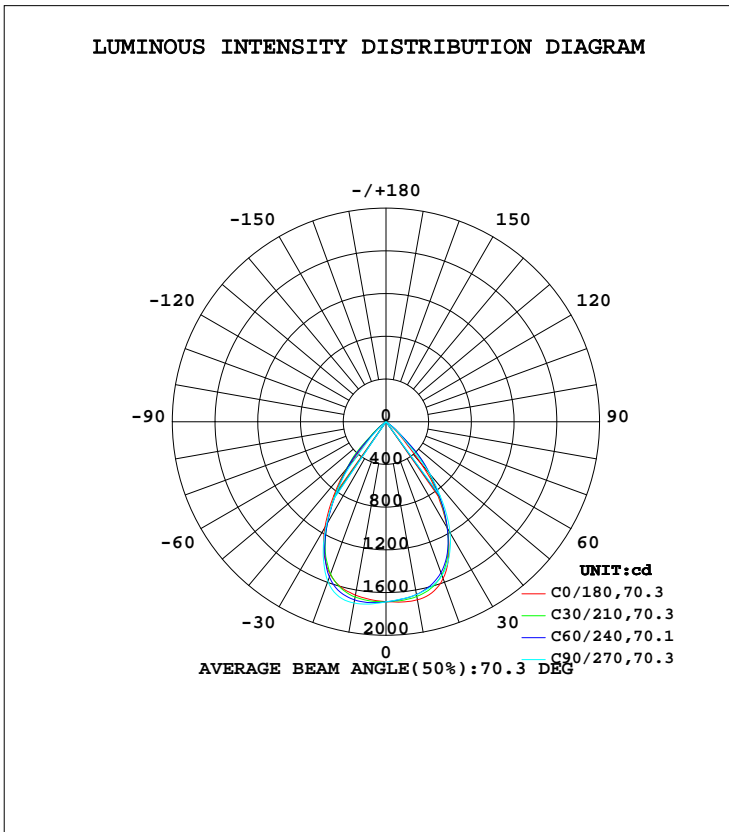
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Myles  
Test Date: 2019-05-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 56%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:221.0V I:0.1285A P:27.44W PF:0.9665 Freq:49.89Hz Lamp Flux:2051.85x1 lm		
NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 74.79 lm/W
MODEL	CITIZEN-3000K	Imax(cd)	1725	S/MH(C0/180)	1.04	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	1.01	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2051.9	η UP, DN(C0-180)	0.0,51.7	
NOMINAL FLUX(lm)	2051.85	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,48.3	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.10	



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-05-17

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [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	1692	1650	1644	1664	1648	1677	1723	1681	0- 10	160.2	160.2	7.81,7.81
20	1564	1511	1532	1574	1524	1522	1592	1539	10- 20	459.5	619.7	30.2,30.2
30	1146	1152	1201	1194	1146	1086	1120	1088	20- 30	626.4	1246	60.7,60.7
40	511.3	638.4	651.3	656.1	578.2	555.4	444.6	555.4	30- 40	534.9	1781	86.8,86.8
50	41.98	270.2	96.73	279.7	64.77	167.3	20.75	154.2	40- 50	237.8	2019	98.4,98.4
60	4.581	7.159	5.586	7.842	5.014	4.722	3.890	4.552	50- 60	28.46	2047	99.8,99.8
70	1.712	2.329	2.200	2.237	1.841	1.715	1.411	1.575	60- 70	2.970	2050	99.9,99.9
80	0.5366	0.8453	0.8122	0.8257	0.5545	0.5145	0.3841	0.4947	70- 80	1.228	2052	100,100
90	0.1137	0.1312	0.1705	0.1509	0.0656	0.0590	0.0590	0.0634	80- 90	0.3350	2052	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		

Conical surface Flux(90deg): 1940.6 lm

%lum = 94.6%

%lamp = 94.6%

Conical surface Flux(120deg): 2047.3 lm

%lum = 99.8%

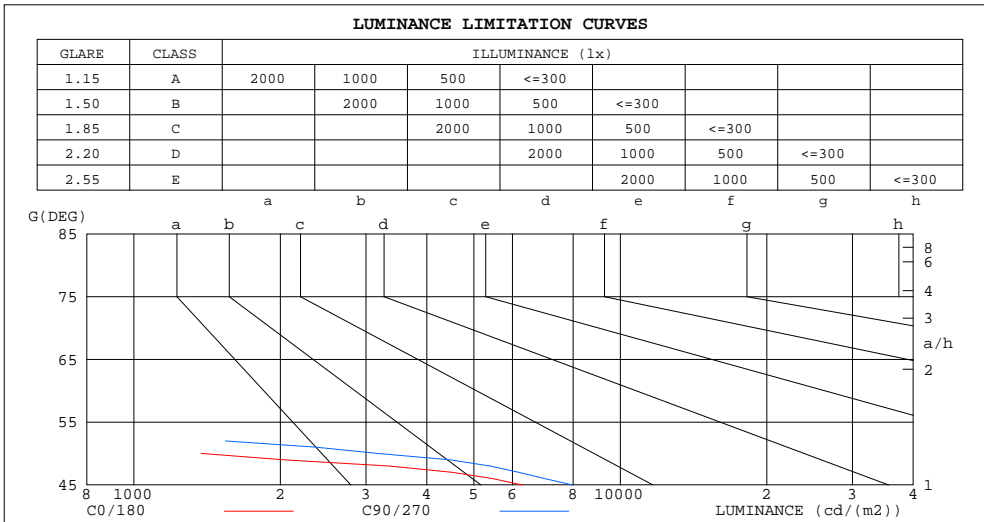
%lamp = 99.8%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-05-17

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:221.0V I:0.1285A P:27.44W PF:0.9665 Freq:49.89Hz Lamp Flux:2051.85x1 lm		
NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	58	103
80	65	98
75	82	111
70	105	135
65	140	174
60	193	235
55	365	519
50	1374	3167
45	6281	7966

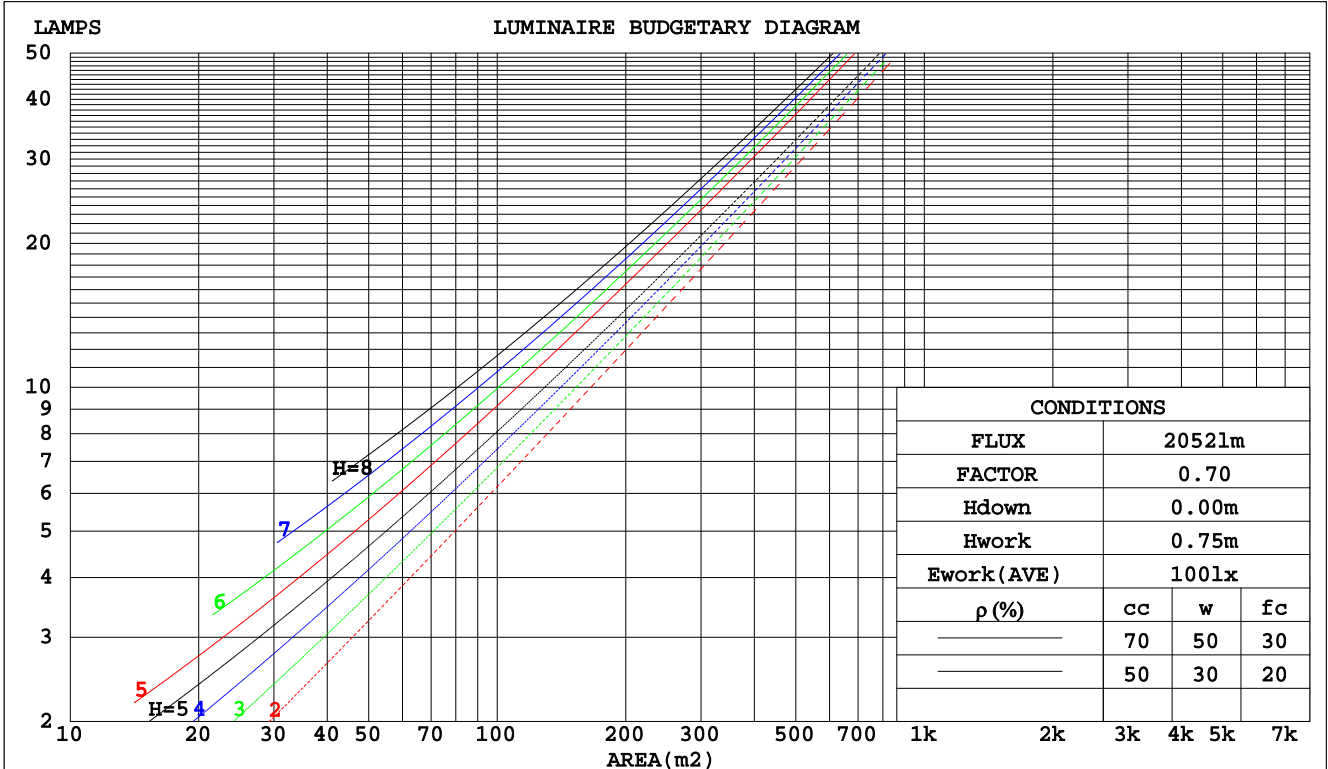
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 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Myles  
 Test Date: 2019-05-17

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 56%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.83	.80	.78
4.0	.87	.81	.77	.86	.81	.76	.84	.79	.76	.82	.78	.75	.80	.77	.74	.72
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.77	.72	.69	.75	.71	.68	.66
6.0	.75	.69	.64	.75	.69	.64	.73	.68	.64	.72	.67	.63	.70	.66	.63	.61
7.0	.70	.64	.59	.70	.64	.59	.68	.63	.59	.67	.62	.59	.66	.62	.58	.57
8.0	.66	.59	.55	.65	.59	.55	.64	.58	.54	.63	.58	.54	.62	.57	.54	.53
9.0	.62	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.50	.58	.54	.50	.49
10.0	.58	.52	.47	.57	.51	.47	.56	.51	.47	.56	.51	.47	.55	.50	.47	.46



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Myles  
 Test Date: 2019-05-17

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 56%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:221.0V I:0.1285A P:27.44W PF:0.9665 Freq:49.89Hz Lamp Flux:2051.85x1 lm		
NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.188	.107	.034	.181	.103	.033	.169	.097	.031	.157	.091	.029	.146	.085	.027	
2.0	.182	.100	.031	.176	.097	.030	.166	.092	.029	.156	.087	.027	.147	.083	.026	
3.0	.174	.093	.028	.170	.091	.027	.160	.087	.026	.152	.083	.026	.144	.080	.025	
4.0	.167	.087	.025	.163	.085	.025	.155	.082	.024	.147	.079	.024	.140	.076	.023	
5.0	.160	.081	.024	.156	.080	.023	.149	.077	.023	.142	.075	.022	.136	.073	.022	
6.0	.153	.076	.022	.149	.075	.022	.143	.073	.021	.137	.071	.021	.132	.069	.021	
7.0	.146	.072	.020	.143	.071	.020	.137	.069	.020	.132	.068	.020	.127	.066	.019	
8.0	.140	.068	.019	.137	.067	.019	.132	.066	.019	.127	.065	.019	.123	.063	.018	
9.0	.134	.065	.018	.131	.064	.018	.127	.063	.018	.123	.062	.018	.119	.060	.017	
10.0	.128	.061	.017	.126	.061	.017	.122	.060	.017	.118	.059	.017	.115	.058	.017	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.071	.117	.086	.061	.081	.060	.043	.047	.035	.026	.015	.011	.008	
5.0	.129	.088	.058	.110	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.115	.071	.040	.099	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.110	.065	.035	.095	.057	.030	.065	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.105	.060	.030	.090	.052	.026	.063	.037	.019	.037	.022	.011	.012	.007	.004	
10.0	.100	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-05-17

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:56%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.1285A P:27.44W PF:0.9665 Freq:49.89Hz Lamp Flux:2051.85x1 lm		
NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

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	13.8	14.8	14.0	15.0	15.2	14.4	15.4	14.6	15.6	15.8
3H	13.6	14.6	13.9	14.8	15.0	14.2	15.2	14.5	15.4	15.6
4H	13.5	14.4	13.8	14.6	14.9	14.1	15.0	14.4	15.2	15.5
6H	13.4	14.3	13.7	14.5	14.8	14.0	14.9	14.3	15.1	15.4
8H	13.4	14.2	13.7	14.4	14.7	14.0	14.8	14.3	15.0	15.3
12H	13.3	14.1	13.7	14.4	14.7	13.9	14.7	14.3	15.0	15.3
4H 2H	13.5	14.4	13.8	14.7	14.9	14.1	15.0	14.4	15.2	15.5
3H	13.4	14.1	13.7	14.4	14.7	13.9	14.7	14.3	15.0	15.3
4H	13.3	13.9	13.6	14.3	14.6	13.8	14.5	14.2	14.8	15.2
6H	13.2	13.8	13.5	14.1	14.5	13.8	14.4	14.1	14.7	15.0
8H	13.1	13.7	13.5	14.0	14.4	13.7	14.3	14.1	14.6	15.0
12H	13.1	13.6	13.5	14.0	14.3	13.7	14.2	14.1	14.5	14.9
8H 4H	13.1	13.7	13.5	14.0	14.4	13.7	14.3	14.1	14.6	15.0
6H	13.0	13.5	13.4	13.9	14.3	13.6	14.1	14.0	14.5	14.9
8H	13.0	13.4	13.4	13.8	14.2	13.6	14.0	14.0	14.4	14.8
12H	12.9	13.3	13.4	13.7	14.2	13.5	13.8	14.0	14.3	14.8
12H 4H	13.1	13.6	13.5	13.9	14.3	13.7	14.2	14.1	14.5	14.9
6H	13.0	13.4	13.4	13.8	14.2	13.6	14.0	14.0	14.4	14.8
8H	12.9	13.3	13.4	13.7	14.2	13.5	13.8	14.0	14.3	14.8
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / -20.8					+ 2.6 / -19.4				
1.5H	+ 4.0 / -16.8					+ 4.1 / -14.7				
2.0H	+ 6.2 / -15.2					+ 6.3 / -15.8				

CIE Pub.117, 2052 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.5)

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
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 Test Date:2019-05-17

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:56%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:221.0V I:0.1285A P:27.44W PF:0.9665 Freq:49.89Hz Lamp Flux:2051.85x1 lm		
NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

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	83	76	72	83	76	72	82	76	72	68
0.80	91	85	81	91	84	81	89	84	80	76
1.00	97	91	87	96	90	86	94	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	99	95	101	97	94	89
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

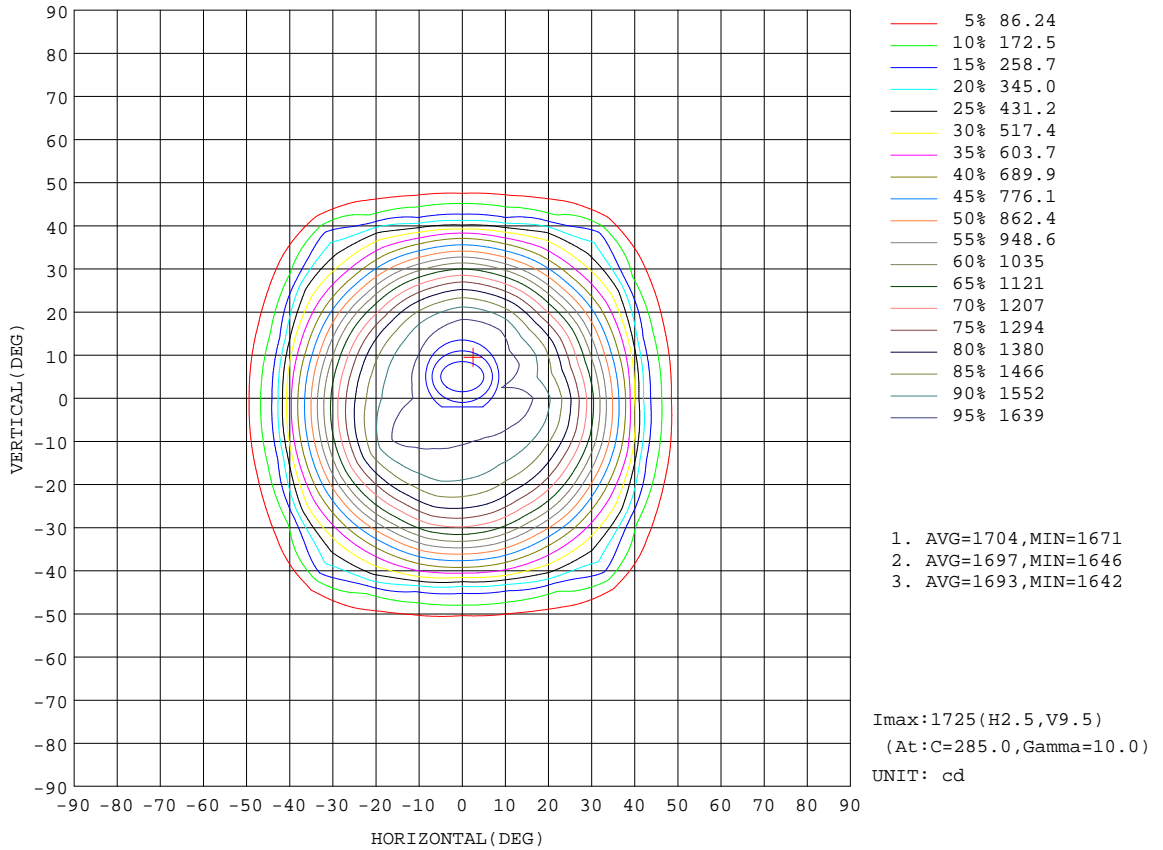
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 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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 Remarks:



**ISOCANDELA DIAGRAM**

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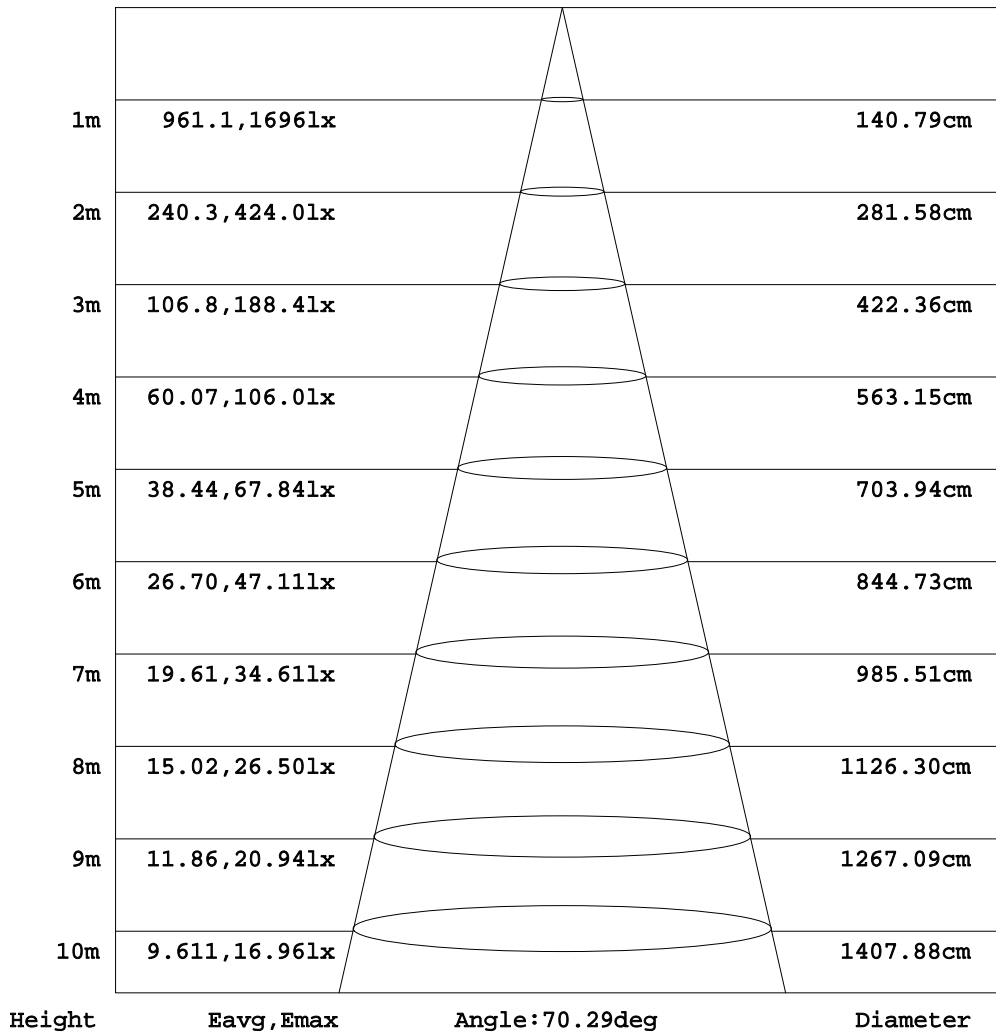
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**AAI Figure**

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NAME: TS200-25W-930	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

Flux out:1594 lm



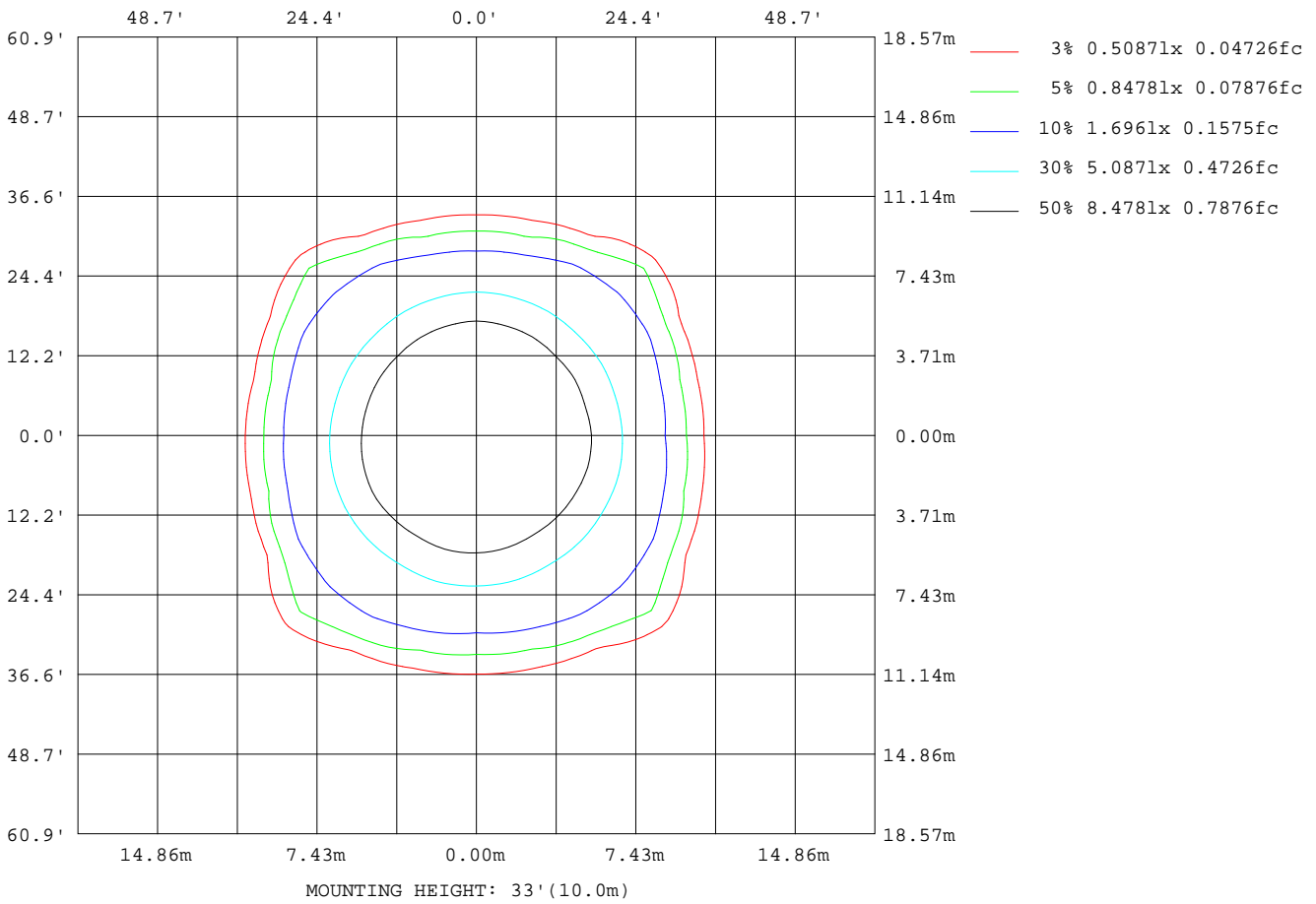
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
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LED Avg.L Report

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SPEC.:3000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

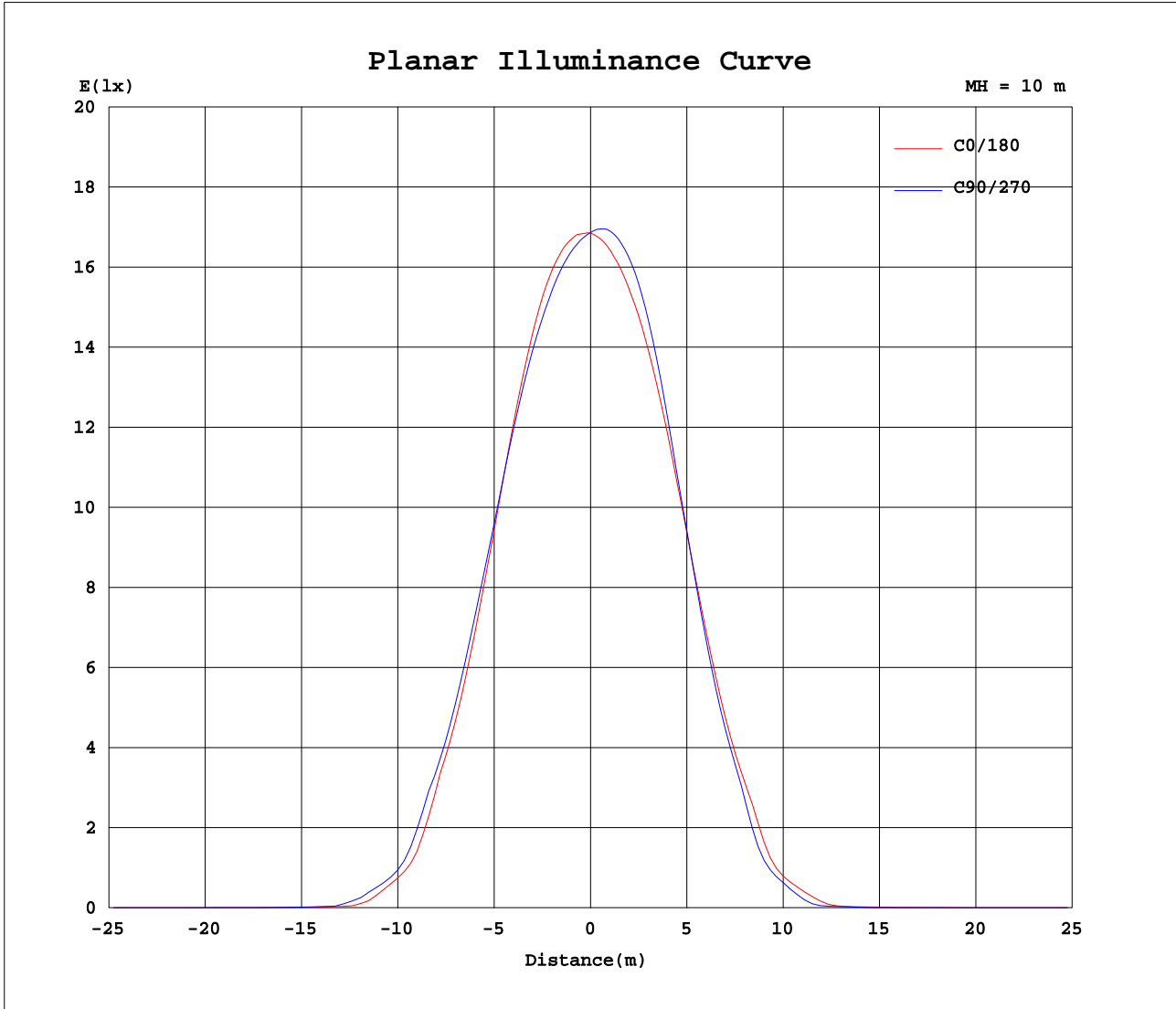
AvgL	cd/m2
L_0~180(65)av	146
L_0~180(75)av	85
L_0~180(85)av	55
L_90~270(65)av	146
L_90~270(75)av	88
L_90~270(85)av	66
L_45(65)av	151
L_45(75)av	98
L_45(85)av	71

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-05-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Myles  
 Test Date: 2019-05-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 56%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:



