

LED Downlight Sense Series S45S1-4W-927-35



Light Output Ratio:	100.0%	
Luminaire Power:	4.2 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.55	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2021-03-16

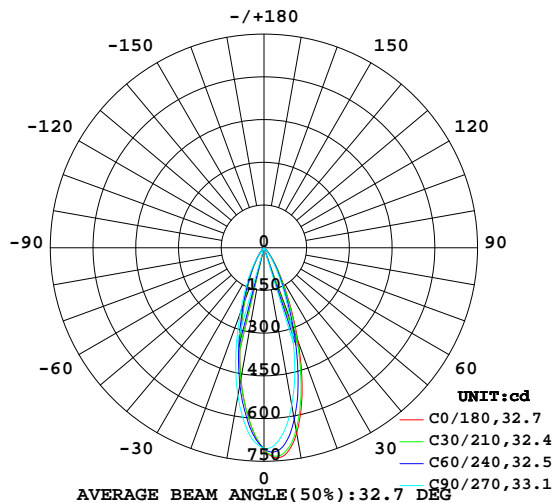
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [K=1.0000]  
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

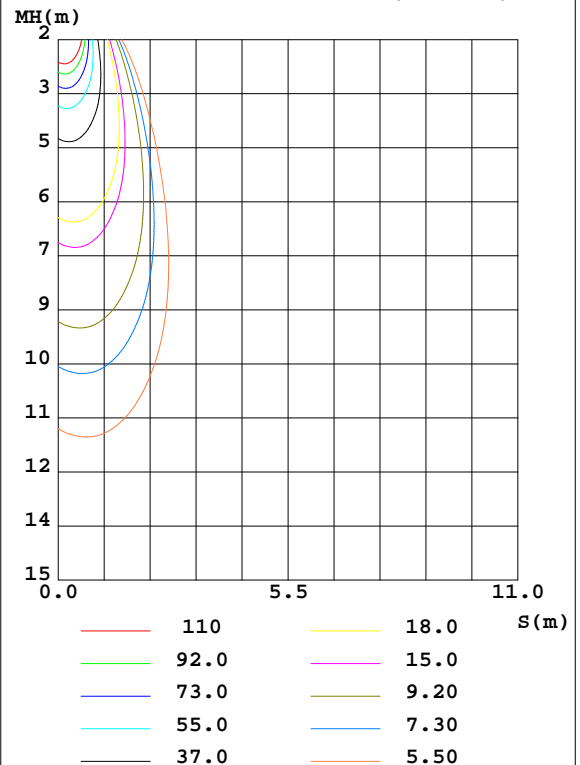
Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:282.382x1 lm		
NAME: S45S1-4W-927-35	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 67.23 lm/W			
MODEL	CREE-2700K	I <sub>max</sub> (cd)	738.8	S/MH(C0/180)	0.46
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.53
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	282.38	η UP,DN(C0-180)	0.0,52.4
NOMINAL FLUX(lm)	282.382	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.55

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:Jason  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	660.9	637.7	561.6	491.4	467.5	469.5	528.2	598.0	0- 10	59.66	59.66	21.1,21.1
20	349.4	324.9	270.0	213.8	197.0	202.8	242.1	294.4	10- 20	110.2	169.9	60.2,60.2
30	117.0	106.4	88.42	69.83	67.23	68.66	84.09	101.1	20- 30	72.52	242.4	85.8,85.8
40	24.59	29.53	20.80	21.05	11.84	20.46	14.24	30.21	30- 40	30.00	272.4	96.5,96.5
50	3.754	9.601	3.675	6.449	1.982	3.183	2.291	6.226	40- 50	8.079	280.5	99.3,99.3
60	0.6663	1.016	0.4133	0.4998	0.2608	0.2878	0.1667	0.3451	50- 60	1.624	282.1	99.9,99.9
70	0.1780	0.1304	0.1255	0.0782	0.0732	0.0838	0.0157	0.0942	60- 70	0.2082	282.3	100,100
80	0.0837	0.0105	0.0264	0.0105	0.0157	0.0261	0.0105	0.0261	70- 80	0.0564	282.4	100,100
90	0.0105	0.0105	0.0105	0.0157	0.0157	0.0157	0.0105	0.0105	80- 90	0.0183	282.4	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): 277.88 lm

%lum = 98.4%

%lamp = 98.4%

Conical surface Flux(120deg): 282.1 lm

%lum = 99.9%

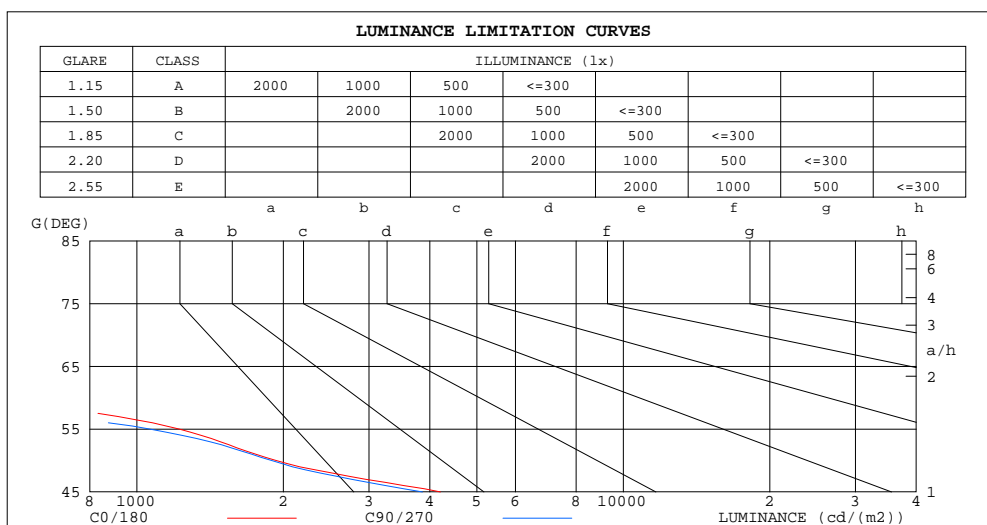
%lamp = 99.9%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-03-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:282.382x1 lm		
NAME: S45S1-4W-927-35	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	218	59
80	159	50
75	174	80
70	172	121
65	250	172
60	441	273
55	1222	1063
50	1930	1890
45	4205	3865

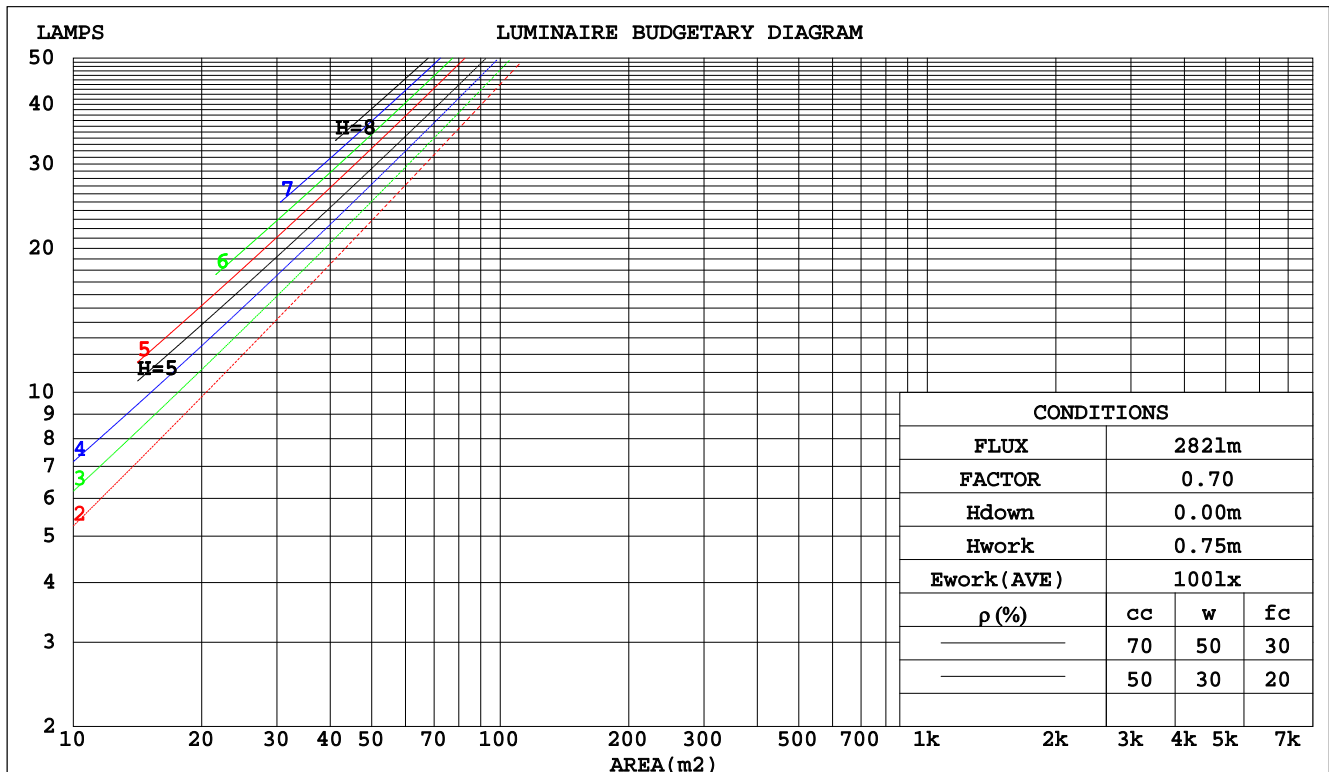
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		

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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	.00	.96	.92	.98	.95	.91	.96	.93	.90	.94	.91	.89	.91	.89	.87	.86
4.0	.95	.90	.86	.94	.89	.86	.92	.88	.85	.90	.87	.84	.88	.85	.83	.82
5.0	.90	.85	.82	.89	.85	.81	.87	.84	.80	.86	.82	.80	.84	.81	.79	.78
6.0	.86	.81	.77	.85	.80	.77	.84	.80	.76	.82	.79	.76	.81	.78	.75	.74
7.0	.82	.77	.73	.81	.77	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.71
8.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.70	.66	.64	.62



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γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## WEC AND CCEC

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SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		

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	.156	.089	.028	.149	.085	.027	.137	.078	.025	.125	.072	.023	.115	.066	.021		
2.0	.147	.081	.025	.142	.078	.024	.131	.073	.023	.122	.068	.021	.113	.064	.020		
3.0	.139	.074	.022	.134	.072	.022	.125	.068	.021	.117	.064	.020	.110	.061	.019		
4.0	.132	.068	.020	.128	.067	.020	.120	.064	.019	.113	.061	.018	.107	.058	.018		
5.0	.125	.064	.018	.122	.062	.018	.115	.060	.018	.109	.058	.017	.104	.055	.017		
6.0	.119	.060	.017	.116	.059	.017	.110	.057	.016	.105	.055	.016	.100	.053	.016		
7.0	.114	.056	.016	.111	.055	.016	.106	.054	.015	.101	.052	.015	.097	.050	.015		
8.0	.109	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014		
9.0	.104	.050	.014	.102	.050	.014	.098	.049	.014	.095	.047	.014	.091	.046	.013		
10.0	.100	.048	.013	.098	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013		

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	.170	.157	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.075	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.095	.066	.046	.065	.047	.033	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:282.382x1 lm										
NAME: S45S1-4W-927-35					TYPE:Downlight			SERIAL No.:		
SPEC.:2700K					DIM.: L55mm*W55mm*H60mm					
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	18.0	18.8	18.2	18.9	19.1	16.8	17.6	17.0	17.7	17.9
3H	17.8	18.6	18.1	18.8	19.0	16.6	17.4	16.9	17.5	17.7
4H	17.8	18.4	18.0	18.7	18.9	16.5	17.2	16.8	17.4	17.7
6H	17.7	18.3	18.0	18.6	18.8	16.5	17.1	16.7	17.3	17.6
8H	17.6	18.2	17.9	18.5	18.8	16.4	17.0	16.7	17.3	17.5
12H	17.6	18.2	17.9	18.4	18.7	16.4	17.0	16.7	17.2	17.5
4H 2H	17.8	18.5	18.0	18.7	18.9	16.6	17.3	16.8	17.5	17.7
3H	17.6	18.2	17.9	18.5	18.7	16.4	17.0	16.7	17.2	17.5
4H	17.5	18.0	17.8	18.3	18.6	16.3	16.8	16.6	17.1	17.4
6H	17.4	17.9	17.8	18.2	18.5	16.2	16.7	16.6	17.0	17.3
8H	17.3	17.8	17.7	18.1	18.5	16.1	16.6	16.5	16.9	17.3
12H	17.3	17.7	17.7	18.1	18.5	16.1	16.5	16.5	16.9	17.3
8H 4H	17.3	17.8	17.7	18.1	18.5	16.1	16.6	16.5	16.9	17.3
6H	17.2	17.6	17.7	18.0	18.4	16.0	16.4	16.5	16.8	17.2
8H	17.2	17.5	17.6	17.9	18.4	16.0	16.3	16.4	16.7	17.2
12H	17.1	17.4	17.6	17.8	18.3	15.9	16.2	16.4	16.6	17.1
12H 4H	17.3	17.7	17.7	18.1	18.5	16.1	16.5	16.5	16.9	17.3
6H	17.2	17.5	17.6	17.9	18.4	16.0	16.3	16.4	16.7	17.2
8H	17.1	17.4	17.6	17.8	18.3	15.9	16.2	16.4	16.6	17.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / -12.4					+ 2.6 / -14.1				
1.5H	+ 5.2 / - 8.8					+ 4.5 / - 8.4				
2.0H	+ 4.8 / -10.3					+ 5.0 / -12.3				

CIE Pub.117, 282.4 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -4.4$ )

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C Interval: 15.0DEG  
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Temperature:25.3DEG  
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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:282.382x1 lm		
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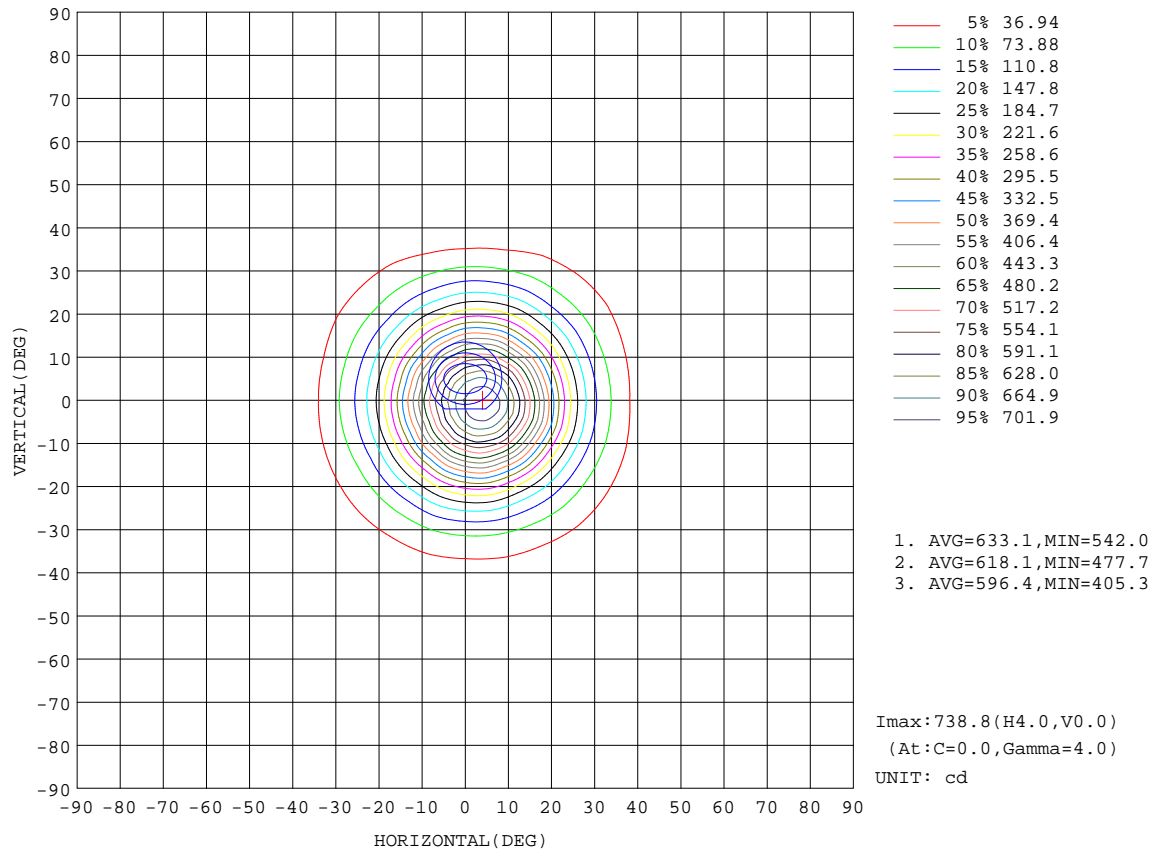
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	88
1.25	104	100	96	103	99	96	102	98	95	91
1.50	107	103	99	106	102	99	104	100	98	94
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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ISOCANDELA DIAGRAM

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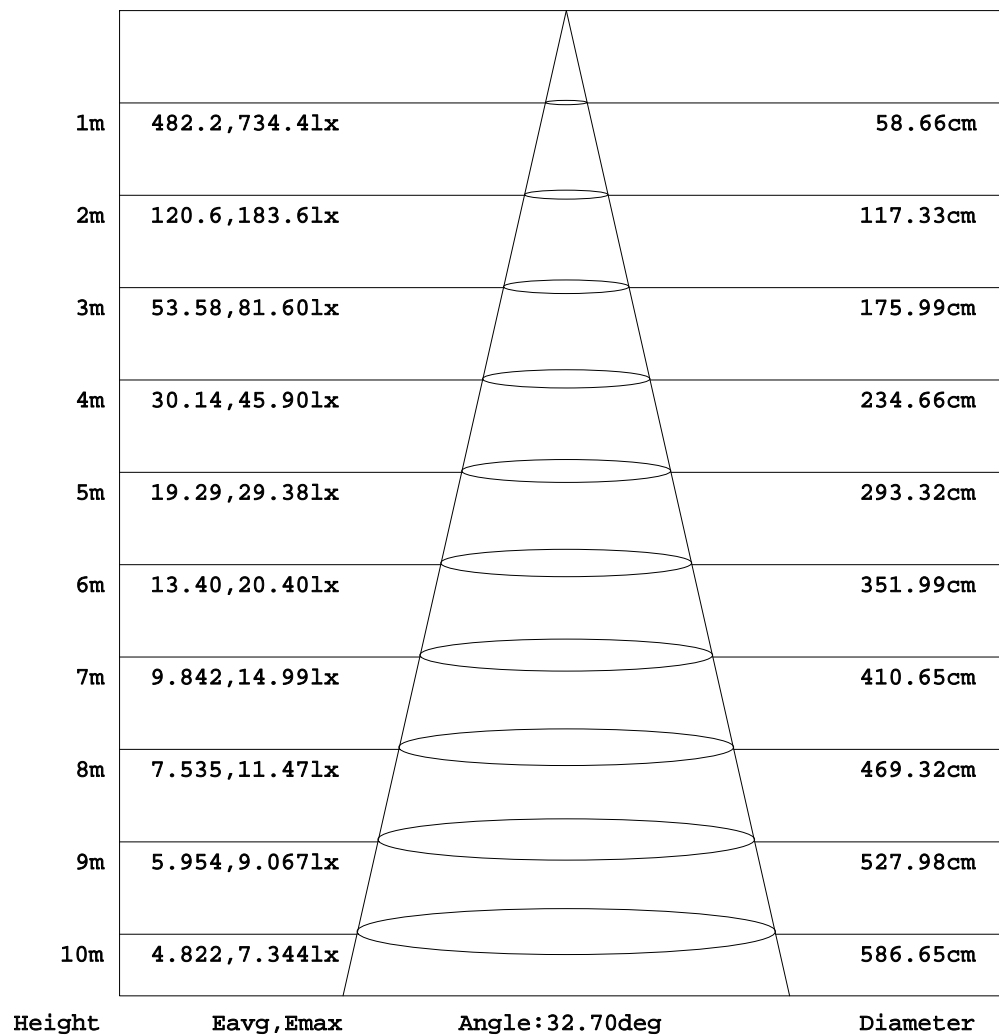
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AAI Figure

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MFR.: NEKO LIGHTING AG		

Flux out:132.9 lm



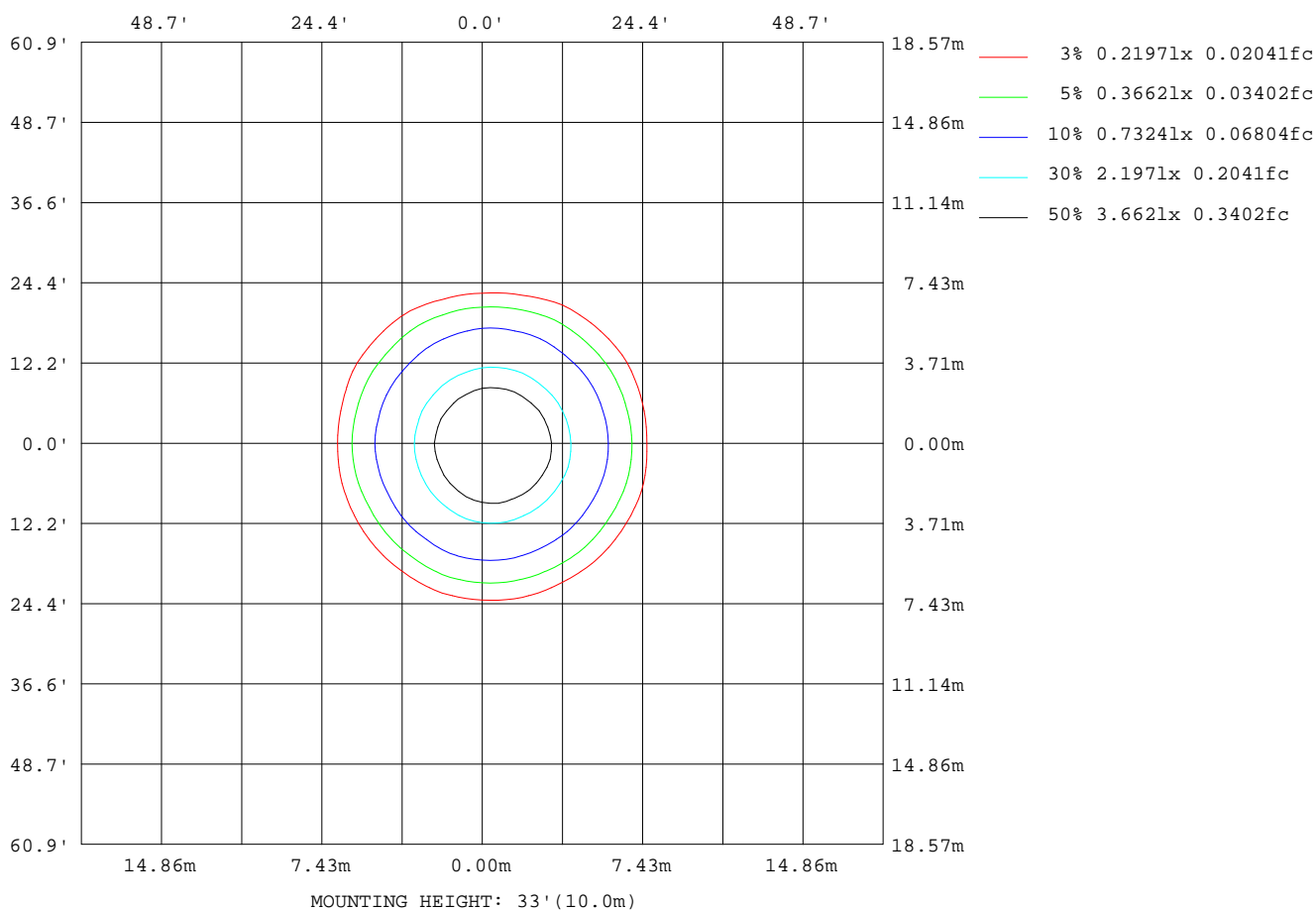
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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### LED Avg.L Report

Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:282.382x1 lm		
NAME: S45S1-4W-927-35	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		

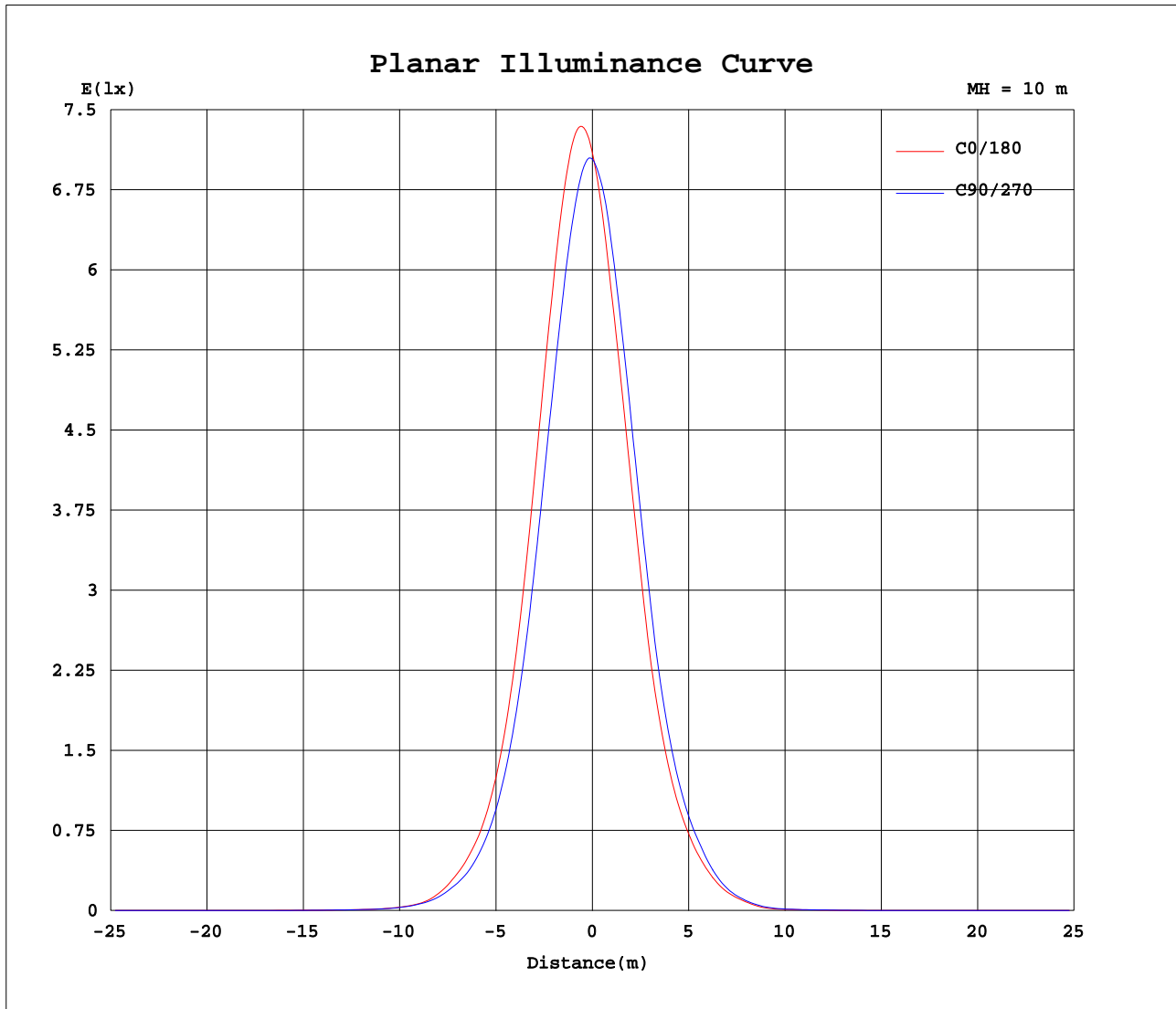
AvgL	cd/m2
L_0~180(65)av	178
L_0~180(75)av	104
L_0~180(85)av	139
L_90~270(65)av	115
L_90~270(75)av	47
L_90~270(85)av	50
L_45(65)av	145
L_45(75)av	50
L_45(85)av	50

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2021-03-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```