

LED Downlight SENSE Series S68R1-7.5W-930-M



Light Output Ratio:	100.0%	
Luminaire Power:	7.262 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.70	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2021-04-01

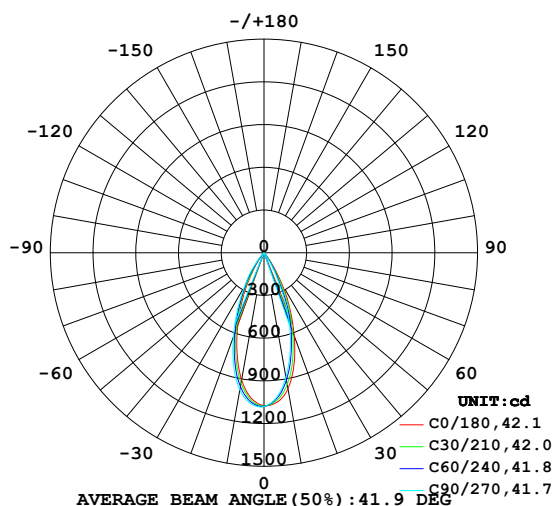
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

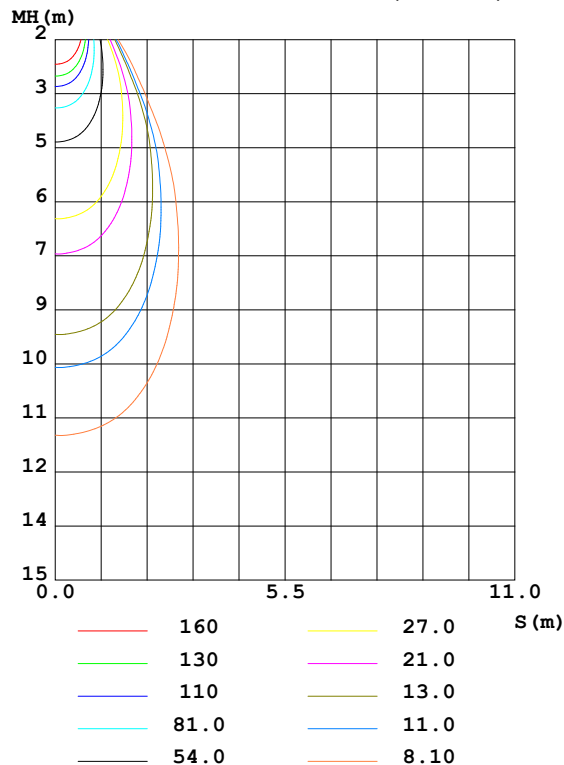
Test:U:29.05V I:0.2500A P:7.262W PF:1.000 Freq:0Hz Lamp Flux:552.799x1 lm		
NAME: S68R1-7.5W-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 76.12 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	1088	S/MH (C0/180)	0.65
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.71
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	552.80	$\eta$ UP, DN (C0-180)	0.0, 45.2
NOMINAL FLUX (lm)	552.799	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 54.8
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	28.3	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.70

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: 2021-04-01

$\gamma$  Range: 0 - 90DEG  
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## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	969.9	925.6	888.0	892.4	907.5	938.4	977.5	996.6	0- 10	96.27	96.27	17.4,17.4
20	622.1	573.4	521.7	505.6	538.6	577.7	628.8	653.1	10- 20	212.1	308.4	55.8,55.8
30	251.0	181.3	140.8	139.0	186.8	240.7	274.4	292.4	20- 30	173.5	481.9	87.2,87.2
40	26.35	15.70	12.03	11.99	21.03	29.65	59.52	64.13	30- 40	63.30	545.2	98.6,98.6
50	0.7870	0.4225	0.3087	0.3029	0.6308	1.202	3.456	3.840	40- 50	7.167	552.3	99.9,99.9
60	0.1831	0.0731	0.0837	0.0417	0.0836	0.1204	0.1457	0.2407	50- 60	0.3448	552.7	100,100
70	0.0366	0.0209	0.0418	0.0209	0.0209	0.0315	0.0209	0.0471	60- 70	0.0600	552.7	100,100
80	0.0365	0.0209	0.0314	0.0209	0.0209	0.0261	0.0209	0.0314	70- 80	0.0289	552.8	100,100
90	0.0261	0.0209	0.0261	0.0209	0.0209	0.0209	0.0209	0.0261	80- 90	0.0275	552.8	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): 550.99 lm

%lum = 99.7%

%lamp = 99.7%

Conical surface Flux(120deg): 552.68 lm

%lum = 100.0%

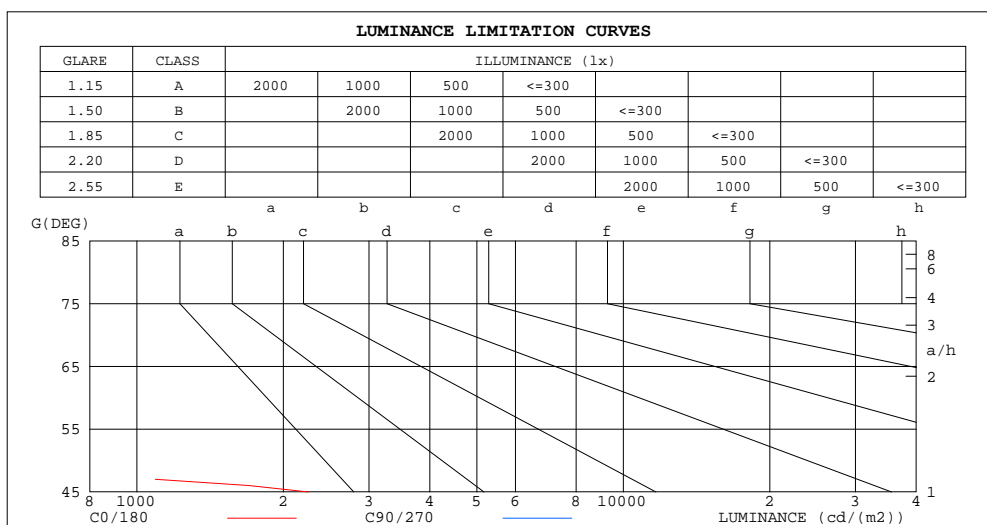
%lamp = 100.0%

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Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-04-01

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Humidity:58%  
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**LUMINANCE LIMITATION CURVES**

Test:U:29.05V I:0.2500A P:7.262W PF:1.000 Freq:0Hz Lamp Flux:552.799x1 lm		
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SPEC.:3000K	DIM.: $\phi$ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	63	75
80	44	38
75	25	25
70	22	26
65	49	18
60	77	35
55	136	50
50	256	101
45	2250	281

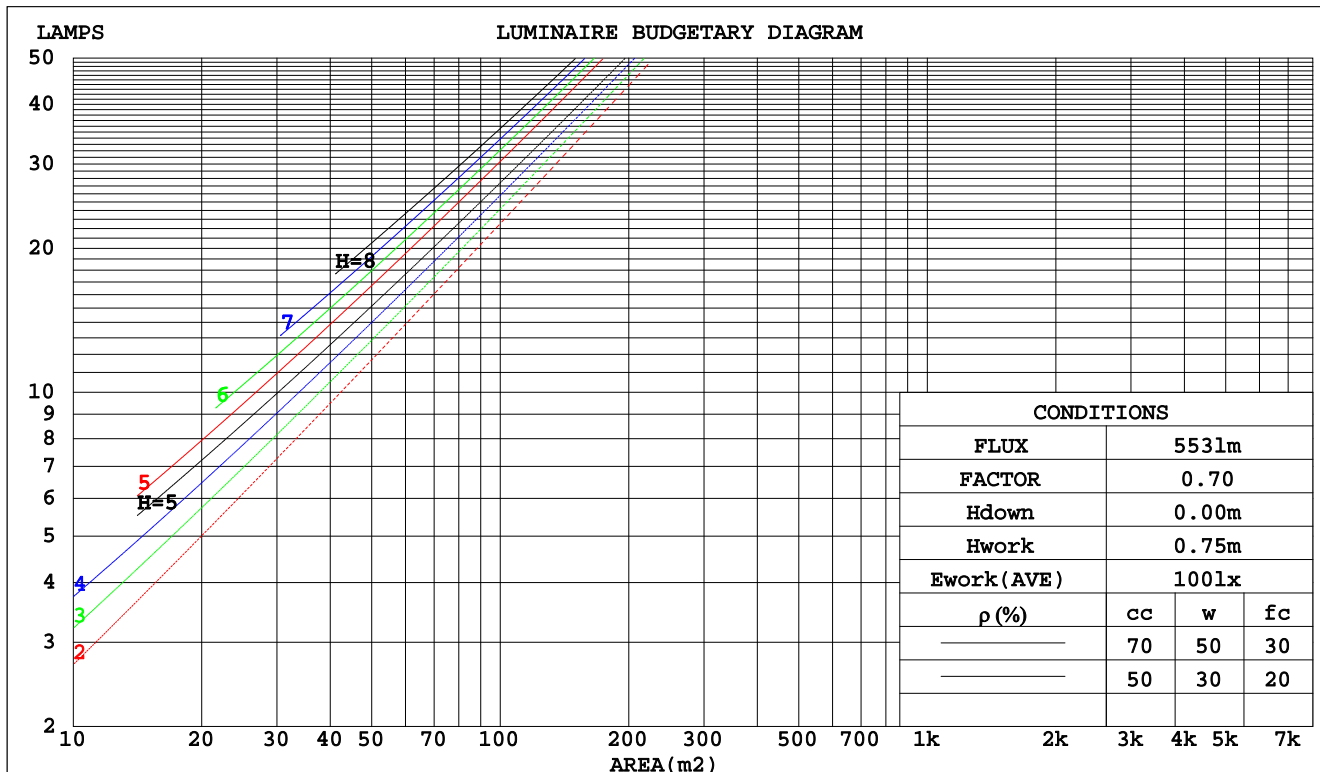
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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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	1.12	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	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.96	.98	.95	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.94	.91	.96	.92	.90	.93	.91	.88	.91	.89	.87	.86
4.0	.94	.90	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.83	.81
5.0	.90	.85	.81	.89	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.76	.84	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.75	.73
7.0	.81	.76	.72	.81	.76	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.70
8.0	.77	.72	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.74	.71	.68	.67
9.0	.74	.69	.66	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.64
10.0	.71	.66	.63	.70	.66	.63	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61



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### WEC AND CCEC

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SPEC.:3000K	DIM.: $\varnothing$ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.157	.090	.028	.151	.086	.027	.138	.079	.025	.127	.073	.023	.116	.067	.022		
2.0	.149	.081	.025	.143	.079	.024	.133	.074	.023	.123	.069	.022	.114	.065	.020		
3.0	.141	.075	.022	.136	.073	.022	.127	.069	.021	.119	.065	.020	.112	.062	.019		
4.0	.133	.069	.020	.130	.068	.020	.122	.065	.019	.115	.062	.019	.109	.059	.018		
5.0	.127	.065	.019	.124	.063	.018	.117	.061	.018	.111	.059	.017	.105	.056	.017		
6.0	.121	.061	.017	.118	.060	.017	.113	.058	.017	.107	.056	.016	.102	.054	.016		
7.0	.116	.057	.016	.113	.056	.016	.108	.055	.016	.104	.053	.015	.099	.052	.015		
8.0	.111	.054	.015	.109	.054	.015	.104	.052	.015	.100	.051	.015	.096	.049	.014		
9.0	.107	.052	.014	.105	.051	.014	.101	.050	.014	.097	.049	.014	.094	.048	.014		
10.0	.103	.049	.014	.101	.049	.014	.097	.048	.013	.094	.047	.013	.091	.046	.013		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.093	.120	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.086	.063	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008	
6.0	.111	.077	.052	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.090	.060	.039	.062	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.098	.063	.038	.085	.054	.033	.059	.038	.024	.034	.023	.014	.011	.007	.005	
9.0	.093	.057	.033	.080	.050	.029	.056	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.088	.053	.029	.076	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 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:29.05V I:0.2500A P:7.262W PF:1.000 Freq:0Hz Lamp Flux:552.799x1 lm										
NAME: S68R1-7.5W-930-M					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 78mm*H98mm					
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	13.7	14.6	14.0	14.7	14.9	10.1	10.9	10.3	11.1	11.2
3H	13.6	14.3	13.8	14.5	14.7	9.9	10.7	10.2	10.9	11.1
4H	13.5	14.2	13.8	14.4	14.6	9.8	10.6	10.1	10.8	11.0
6H	13.4	14.1	13.7	14.3	14.6	9.8	10.4	10.0	10.7	10.9
8H	13.4	14.0	13.7	14.3	14.5	9.7	10.4	10.0	10.6	10.9
12H	13.3	13.9	13.6	14.2	14.5	9.7	10.3	10.0	10.5	10.8
4H 2H	13.5	14.2	13.8	14.4	14.6	9.8	10.6	10.1	10.8	11.0
3H	13.3	13.9	13.6	14.2	14.5	9.7	10.3	10.0	10.5	10.8
4H	13.2	13.8	13.6	14.1	14.4	9.6	10.1	9.9	10.4	10.7
6H	13.1	13.6	13.5	14.0	14.3	9.5	10.0	9.8	10.3	10.6
8H	13.1	13.5	13.5	13.9	14.2	9.4	9.9	9.8	10.2	10.6
12H	13.0	13.4	13.4	13.8	14.2	9.4	9.8	9.8	10.2	10.5
8H 4H	13.1	13.5	13.5	13.9	14.2	9.4	9.9	9.8	10.2	10.6
6H	13.0	13.3	13.4	13.7	14.2	9.3	9.7	9.7	10.1	10.5
8H	12.9	13.2	13.4	13.7	14.1	9.3	9.6	9.7	10.0	10.4
12H	12.9	13.1	13.3	13.6	14.0	9.2	9.5	9.7	9.9	10.4
12H 4H	13.0	13.4	13.4	13.8	14.2	9.4	9.8	9.8	10.2	10.5
6H	12.9	13.2	13.4	13.7	14.1	9.3	9.6	9.7	10.0	10.4
8H	12.9	13.1	13.3	13.6	14.0	9.2	9.5	9.7	9.9	10.4
Variations with the observer position at spacings:										
S = 1.0H	+ 5.5 / -25.0					+ 4.1 / -21.3				
1.5H	+ 8.2 / -22.1					+ 6.9 / -19.0				
2.0H	+10.1 / -13.1					+ 5.9 / - 4.3				

CIE Pub.117, 552.8 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.1$ )

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### UTILIZATION FACTORS TABLE

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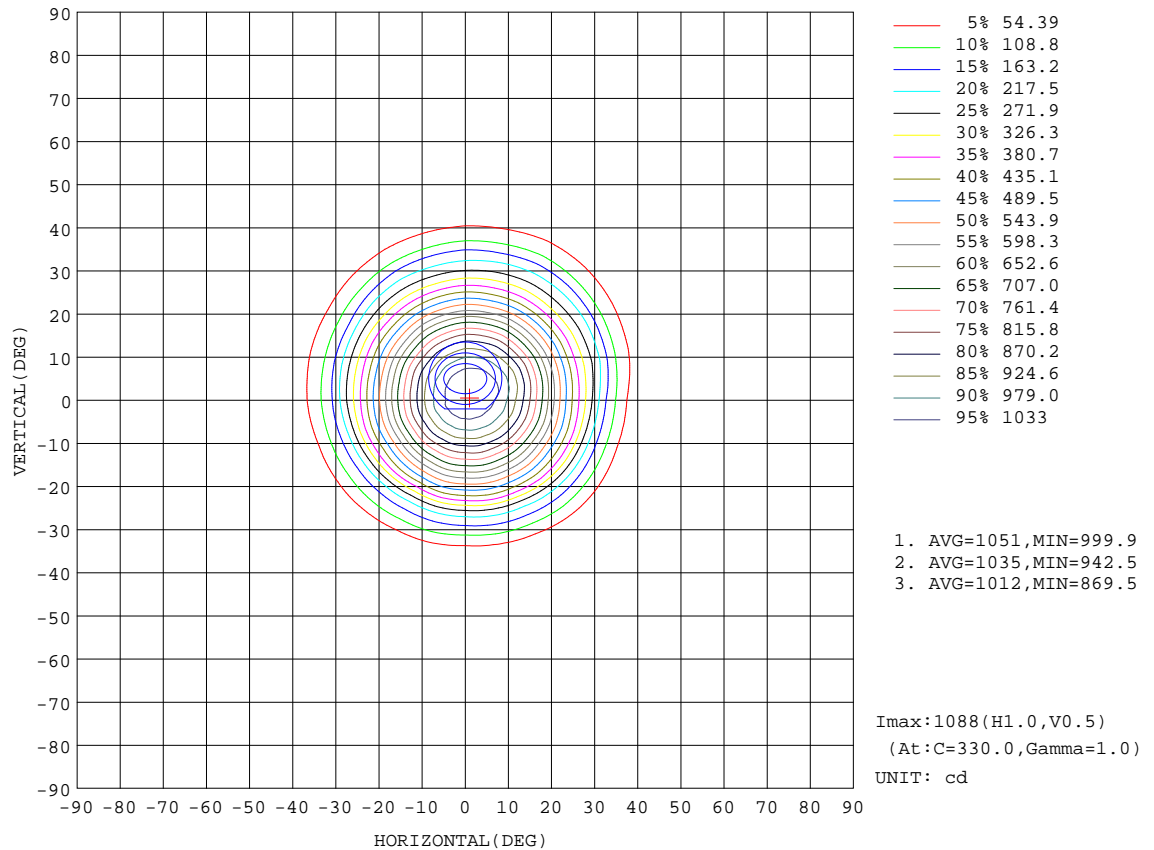
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	81	90	84	81	78
0.80	98	92	89	97	92	89	96	92	89	85
1.00	102	97	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	105	104	98
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
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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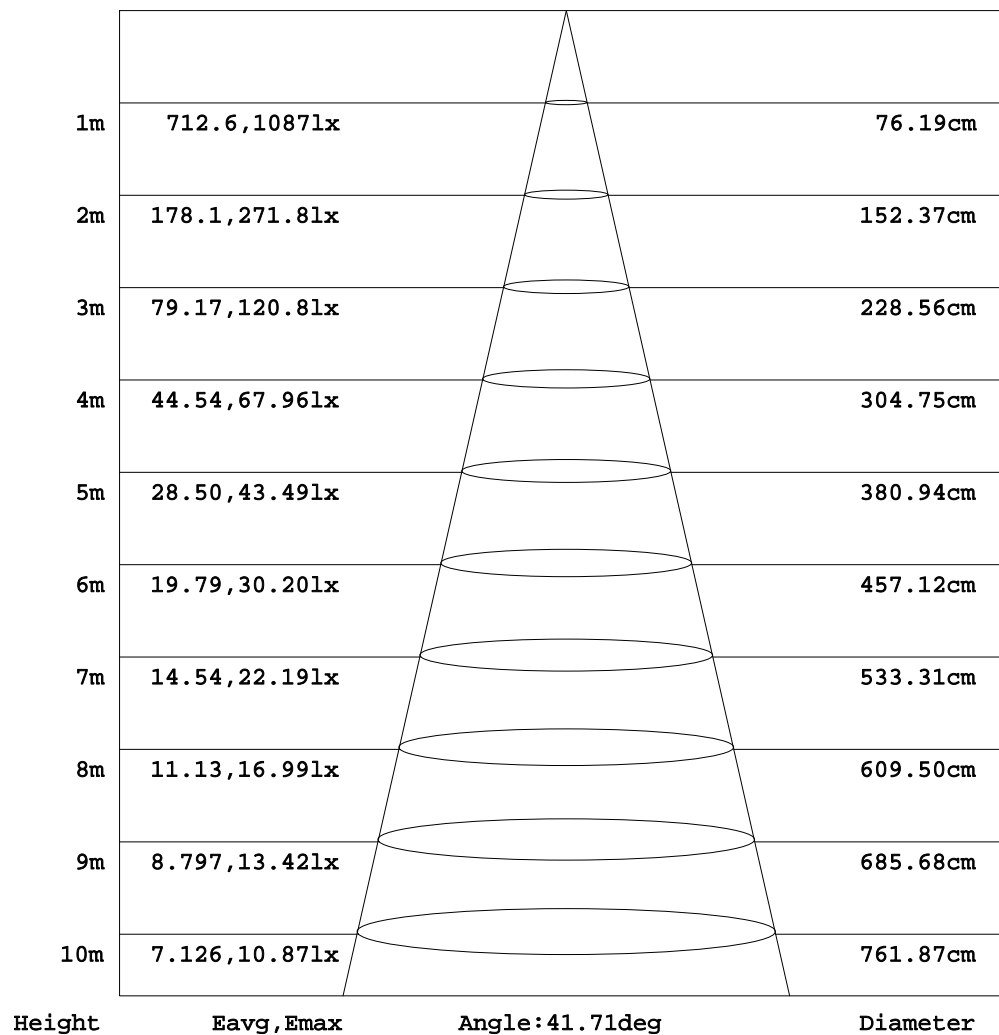
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**AAI Figure**

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Flux out:329.9 lm



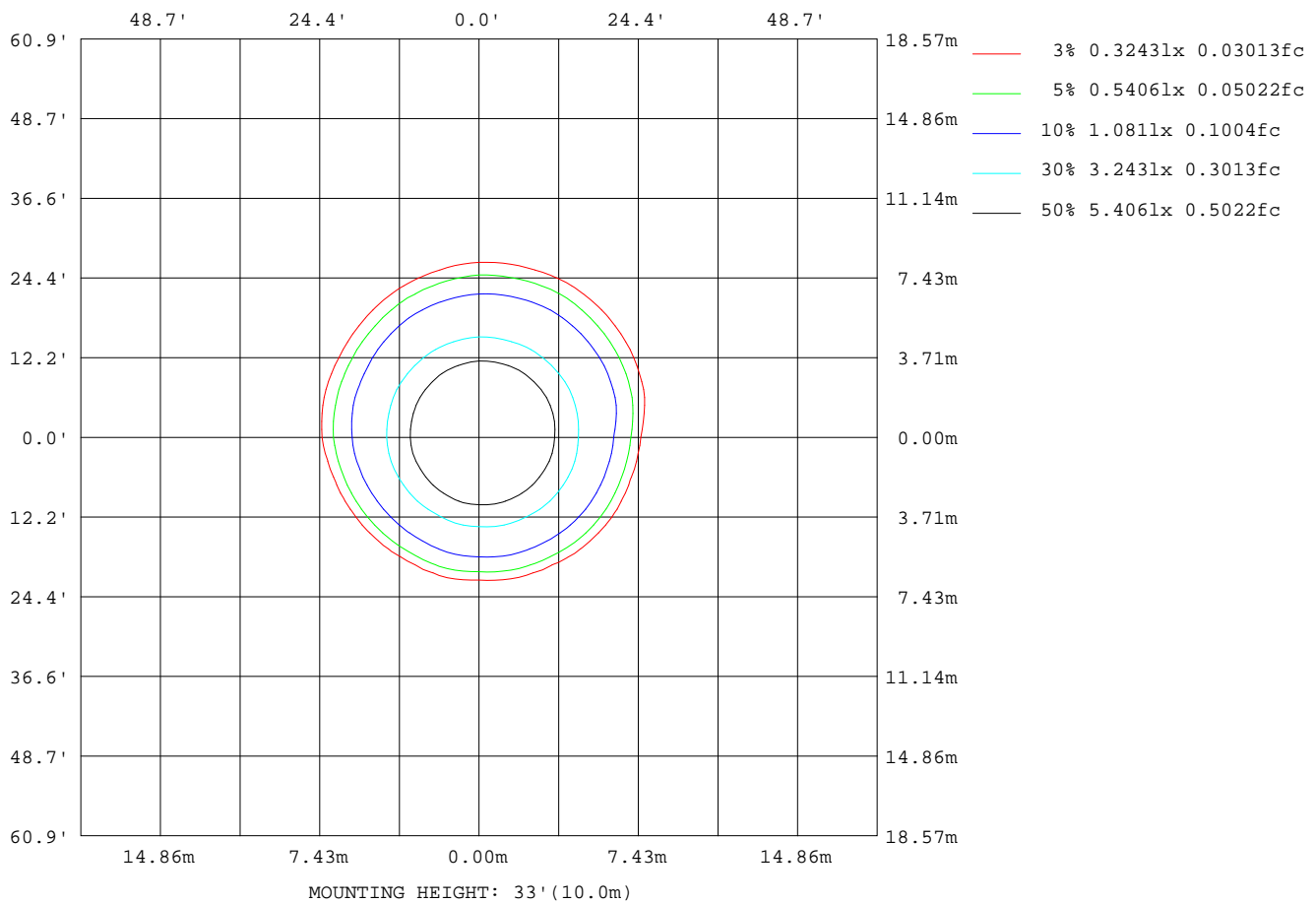
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

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Remarks:

### LED Avg.L Report

Test:U:29.05V I:0.2500A P:7.262W PF:1.000 Freq:0Hz Lamp Flux:552.799x1 lm		
NAME: S68R1-7.5W-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		

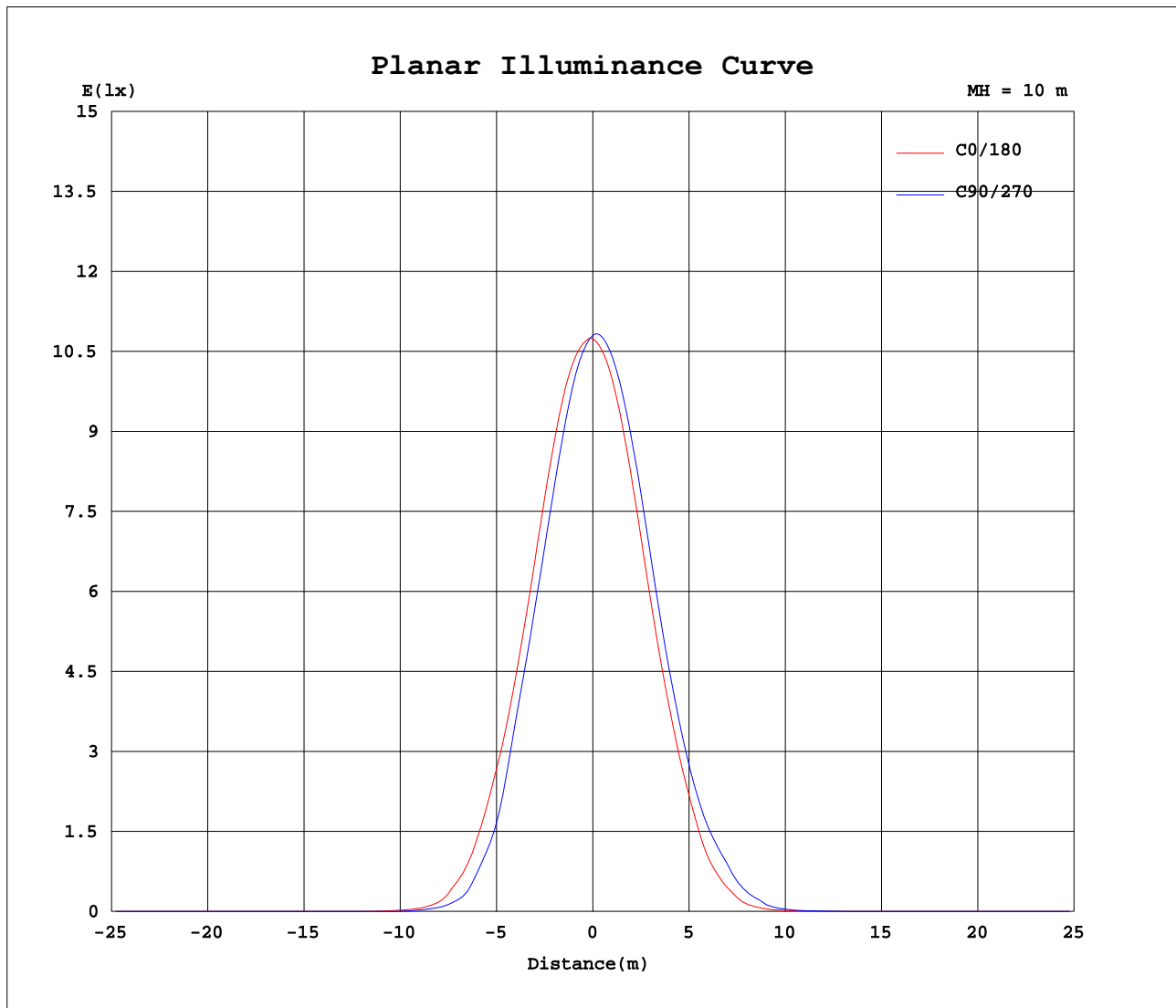
AvgL	cd/m2
L_0~180 (65) av	41
L_0~180 (75) av	21
L_0~180 (85) av	57
L_90~270 (65) av	14
L_90~270 (75) av	21
L_90~270 (85) av	63
L_45 (65) av	25
L_45 (75) av	20
L_45 (85) av	57

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-04-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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: 2021-04-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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: 1.0DEG
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: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```