

LED Downlight SENSE Series S100R2-13W-DW-930-M



Light Output Ratio:	100.0%	
Luminaire Power:	11.4 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.65	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2021-01-19

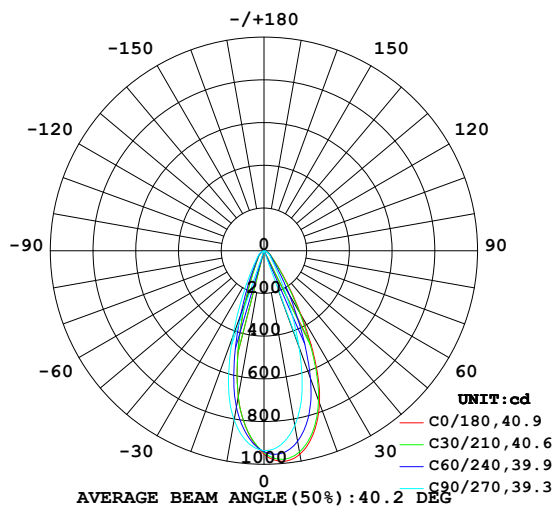
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

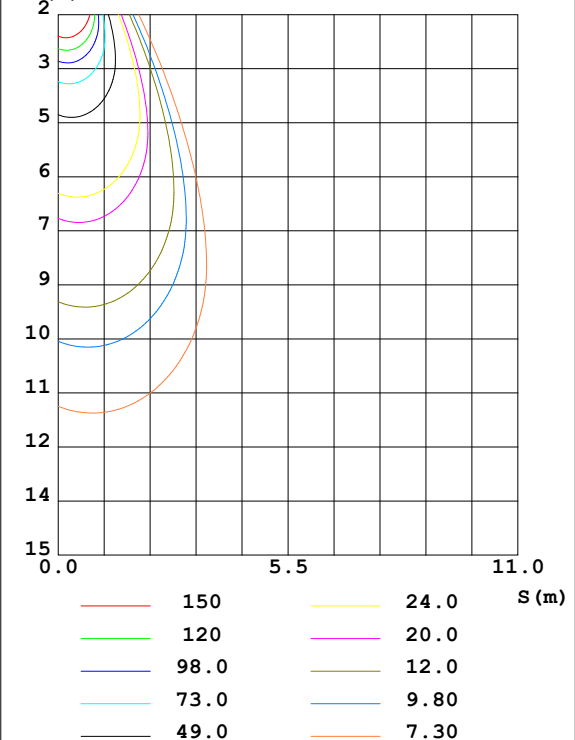
Test:U:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx1 lm		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 49.12 lm/W			
MODEL	BRIDGELUX-3000K	I <sub>max</sub> (cd)	989.8	S/MH (C0/180)	0.49
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.61
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	559.81	$\eta$ UP, DN (C0-180)	0.0, 53.2
NOMINAL FLUX (lm)	559.811	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 46.8
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	32.56	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.65

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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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	967.3	937.5	829.9	718.4	694.8	709.4	804.5	898.8	0- 10	83.83	83.83	15,15
20	758.8	709.1	479.8	300.2	258.8	278.7	426.6	641.9	10- 20	181.4	265.2	47.4,47.4
30	348.7	291.6	156.3	93.10	82.04	87.98	136.0	252.2	20- 30	142.2	407.4	72.8,72.8
40	113.6	94.58	61.20	46.18	44.06	45.58	57.56	87.00	30- 40	69.71	477.1	85.2,85.2
50	50.54	46.37	37.24	28.55	26.90	28.29	35.01	44.52	40- 50	38.74	515.8	92.1,92.1
60	30.83	28.94	20.47	13.12	11.89	12.77	18.02	27.17	50- 60	25.27	541.1	96.7,96.7
70	14.28	13.20	8.107	3.420	2.474	3.042	6.591	12.18	60- 70	13.52	554.6	99.1,99.1
80	4.016	3.323	0.8657	0.2767	0.1740	0.2935	0.6360	2.821	70- 80	4.506	559.1	99.9,99.9
90	0.3904	0.7089	0.2003	0.0257	0.0257	0.0308	0.0308	0.2517	80- 90	0.6675	559.8	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): 498.58 lm

%lum = 89.1%

%lamp = 89.1%

Conical surface Flux(120deg): 541.11 lm

%lum = 96.7%

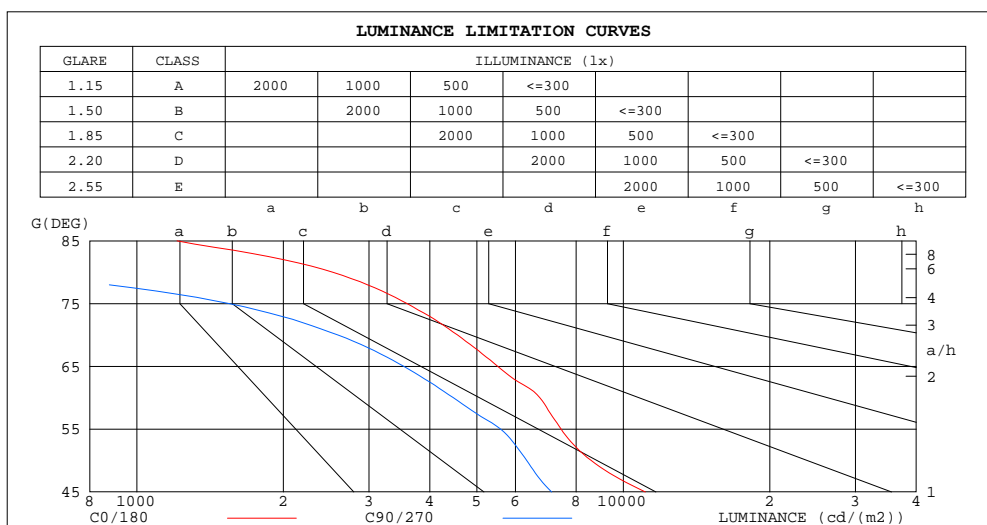
%lamp = 96.7%

C Range: 0 - 360DEG  
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Operators:Jason  
Test Date:2021-01-19

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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:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx1 lm		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1209	490
80	2526	544
75	3593	1547
70	4561	2589
65	5518	3535
60	6734	4472
55	7446	5594
50	8588	6328
45	11092	7122

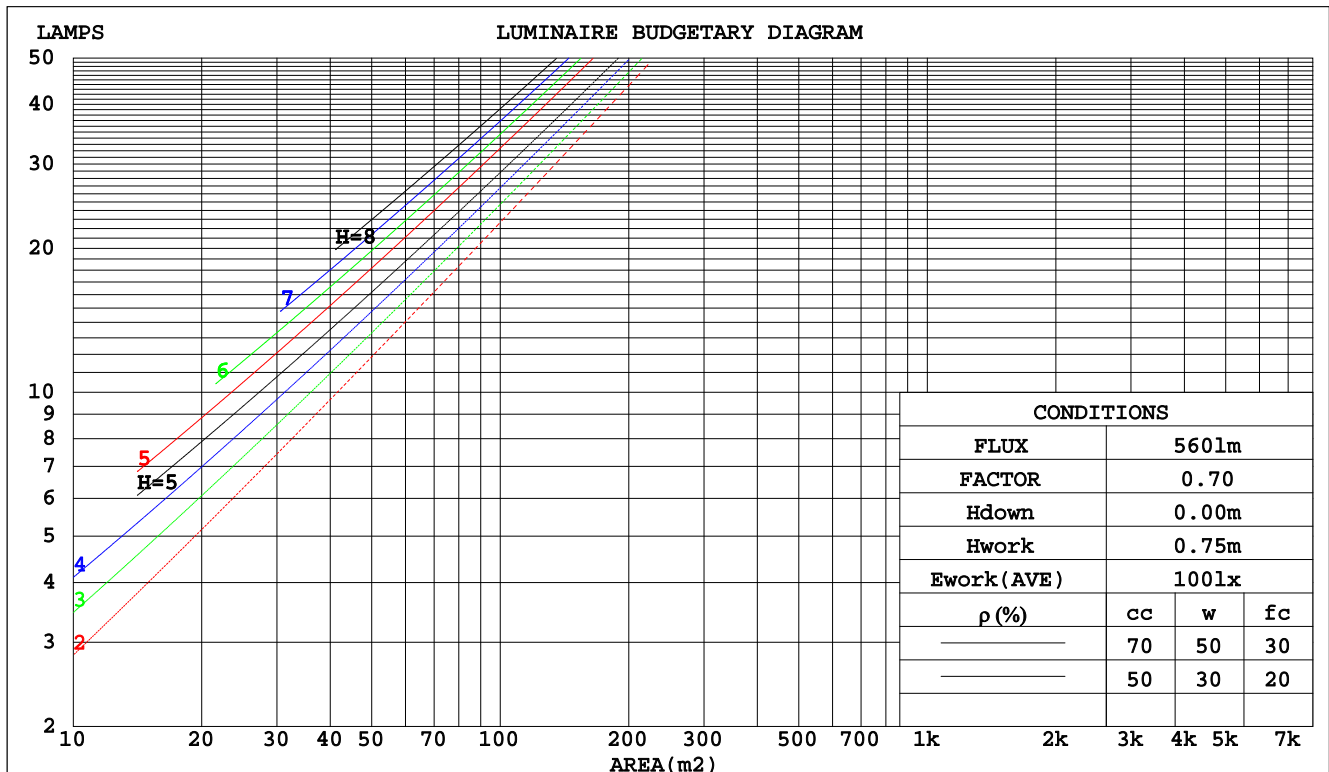
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx1 lm		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 108mm*H126mm	
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	1.00
1.0	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.95	1.01	.97	.94	.97	.94	.92	.94	.92	.90	.92	.90	.88	.86
3.0	.95	.90	.86	.94	.89	.86	.91	.87	.84	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.84	.78	.74	.83	.77	.73	.81	.76	.73	.79	.75	.72	.78	.74	.71	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.75	.69	.65	.74	.68	.64	.73	.68	.64	.72	.67	.64	.70	.66	.63	.62
8.0	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.64	.60	.67	.63	.60	.59
9.0	.67	.62	.58	.67	.61	.58	.66	.61	.57	.65	.60	.57	.64	.60	.57	.56
10.0	.64	.58	.55	.64	.58	.55	.63	.58	.54	.62	.58	.54	.61	.57	.54	.53



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Humidity:58%  
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Remarks:

## WEC AND CCEC

Test:U:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.811x1 lm		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 108mm*H126mm	
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	.185	.105	.033	.178	.102	.032	.165	.095	.030	.154	.089	.028	.143	.083	.027		
2.0	.177	.097	.030	.171	.094	.029	.160	.089	.028	.150	.084	.026	.141	.080	.025		
3.0	.167	.089	.027	.162	.087	.026	.153	.083	.025	.145	.079	.024	.137	.076	.023		
4.0	.158	.082	.024	.153	.080	.024	.146	.077	.023	.138	.074	.022	.132	.071	.022		
5.0	.149	.076	.022	.145	.075	.022	.139	.072	.021	.132	.070	.021	.126	.067	.020		
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.126	.066	.019	.121	.064	.019		
7.0	.134	.066	.019	.131	.065	.019	.126	.064	.018	.121	.062	.018	.116	.060	.018		
8.0	.127	.062	.017	.125	.061	.017	.120	.060	.017	.116	.059	.017	.112	.057	.017		
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.056	.016	.107	.054	.016		
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.107	.053	.015	.103	.052	.015		

$\rho_{cc}$	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	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.108	.076	.052	.074	.053	.036	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
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 $\gamma$  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:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx1 lm											
NAME: S100R2-13W-DW-930-M						TYPE:Downlight			SERIAL No.:		
SPEC.:3000K						DIM.: $\phi$ 108mm*H126mm					
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		20.3	21.2	20.5	21.4	21.6	18.1	19.0	18.3	19.2	19.4
3H		20.8	21.7	21.1	21.9	22.1	18.5	19.4	18.8	19.6	19.8
4H		21.0	21.9	21.3	22.1	22.3	18.6	19.4	18.9	19.6	19.9
6H		21.1	21.9	21.4	22.1	22.4	18.5	19.3	18.8	19.6	19.8
8H		21.1	21.8	21.4	22.1	22.3	18.5	19.2	18.8	19.5	19.8
12H		21.0	21.8	21.4	22.0	22.3	18.4	19.2	18.8	19.4	19.7
4H	2H	20.4	21.3	20.7	21.5	21.7	18.5	19.4	18.8	19.6	19.8
	3H	21.1	21.9	21.5	22.1	22.4	19.1	19.8	19.4	20.1	20.4
	4H	21.4	22.0	21.7	22.3	22.7	19.2	19.9	19.6	20.2	20.5
	6H	21.5	22.1	21.9	22.4	22.8	19.2	19.8	19.6	20.1	20.5
	8H	21.5	22.1	21.9	22.4	22.8	19.1	19.7	19.5	20.0	20.4
	12H	21.5	22.0	21.9	22.4	22.8	19.1	19.6	19.5	20.0	20.4
8H	4H	21.4	21.9	21.8	22.3	22.6	19.3	19.9	19.7	20.2	20.6
	6H	21.6	22.0	22.0	22.4	22.8	19.3	19.8	19.7	20.2	20.6
	8H	21.6	22.0	22.0	22.4	22.8	19.3	19.7	19.7	20.1	20.5
	12H	21.6	21.9	22.0	22.3	22.8	19.2	19.6	19.7	20.0	20.5
12H	4H	21.3	21.8	21.7	22.2	22.6	19.3	19.8	19.7	20.2	20.6
	6H	21.5	21.9	22.0	22.3	22.8	19.3	19.7	19.8	20.1	20.6
	8H	21.5	21.9	22.0	22.3	22.8	19.3	19.6	19.7	20.1	20.5
Variations with the observer position at spacings:											
S = 1.0H		+ 0.9 / - 1.1					+ 0.7 / - 1.0				
1.5H		+ 1.7 / - 0.9					+ 0.7 / - 0.8				
2.0H		+ 1.1 / - 0.7					+ 0.6 / - 1.5				

CIE Pub.117, 559.8 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.0$ )

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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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### UTILIZATION FACTORS TABLE

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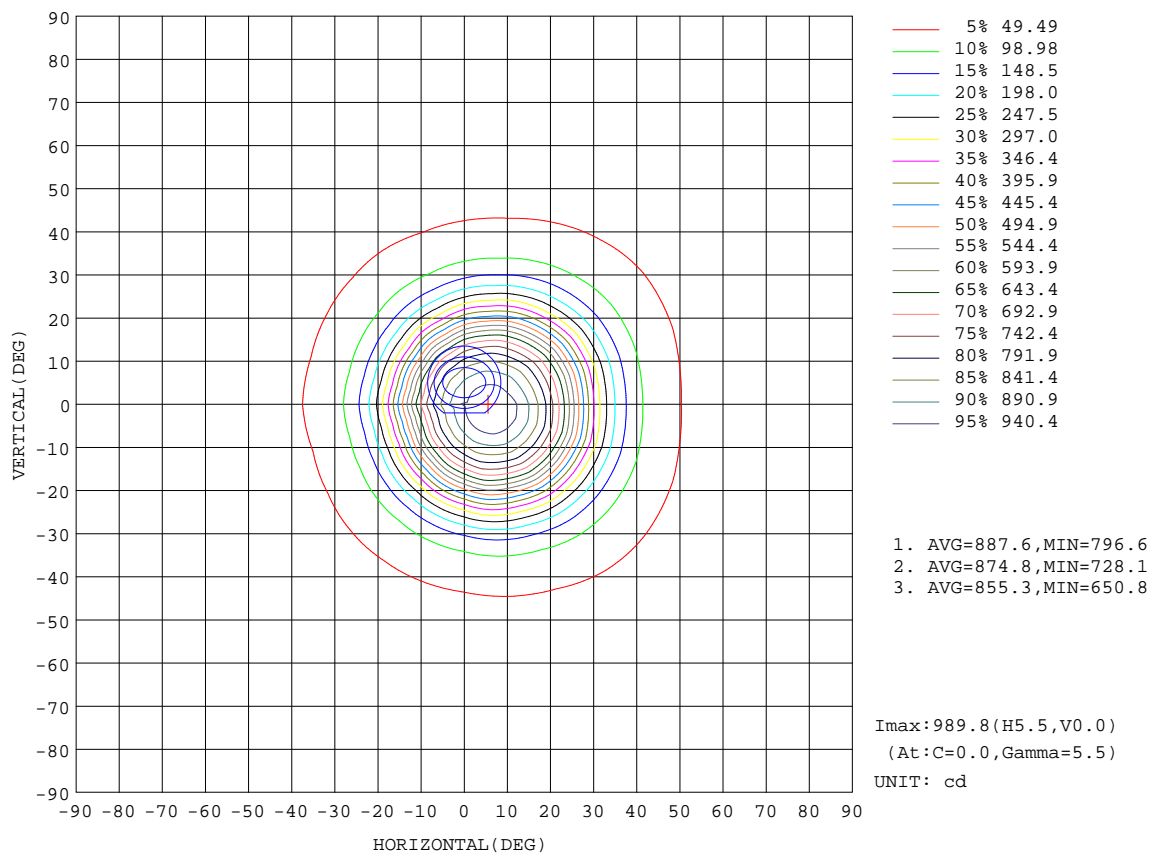
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	71	81	74	70	66
0.80	90	83	79	90	83	79	88	82	79	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	92	89	84
1.50	103	98	94	102	97	93	100	95	92	87
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	109	112	110	108	108	106	105	97
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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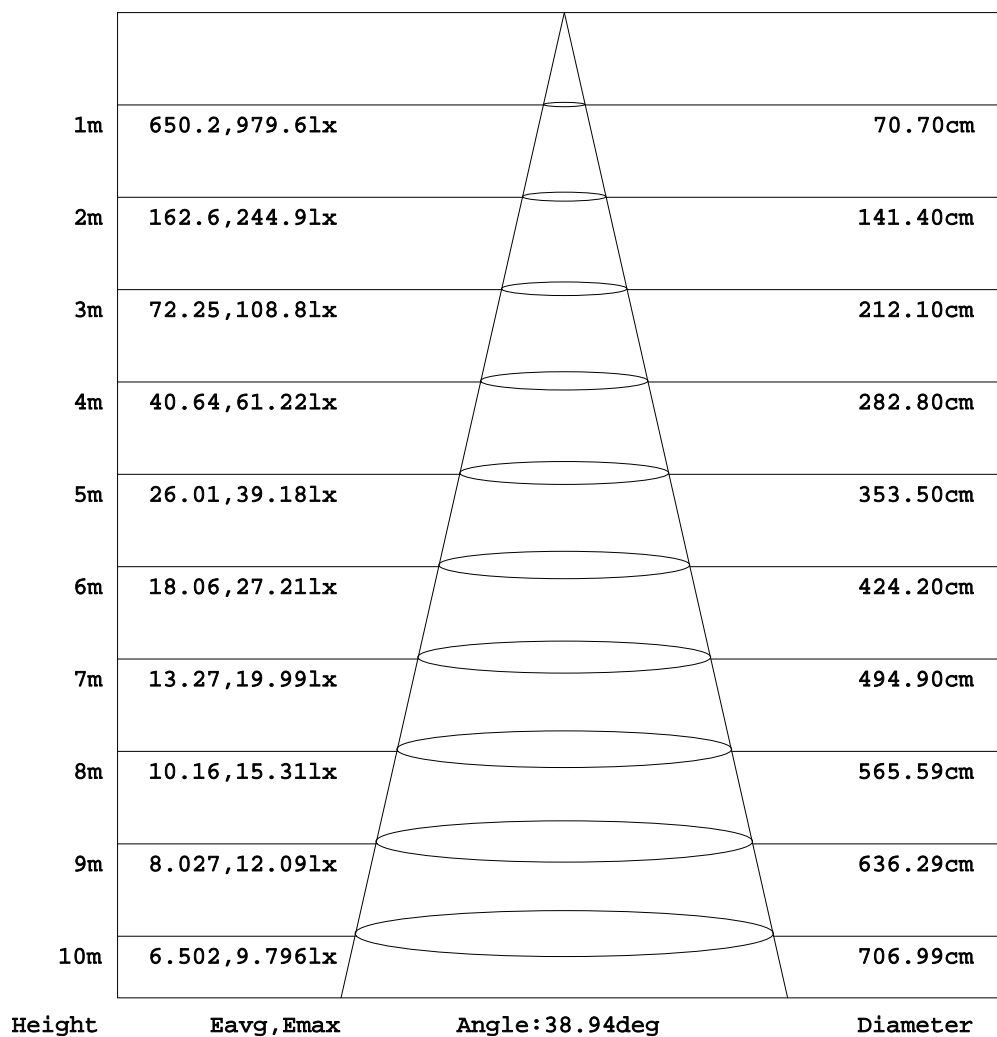
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**AAI Figure**

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Flux out:256.2 lm



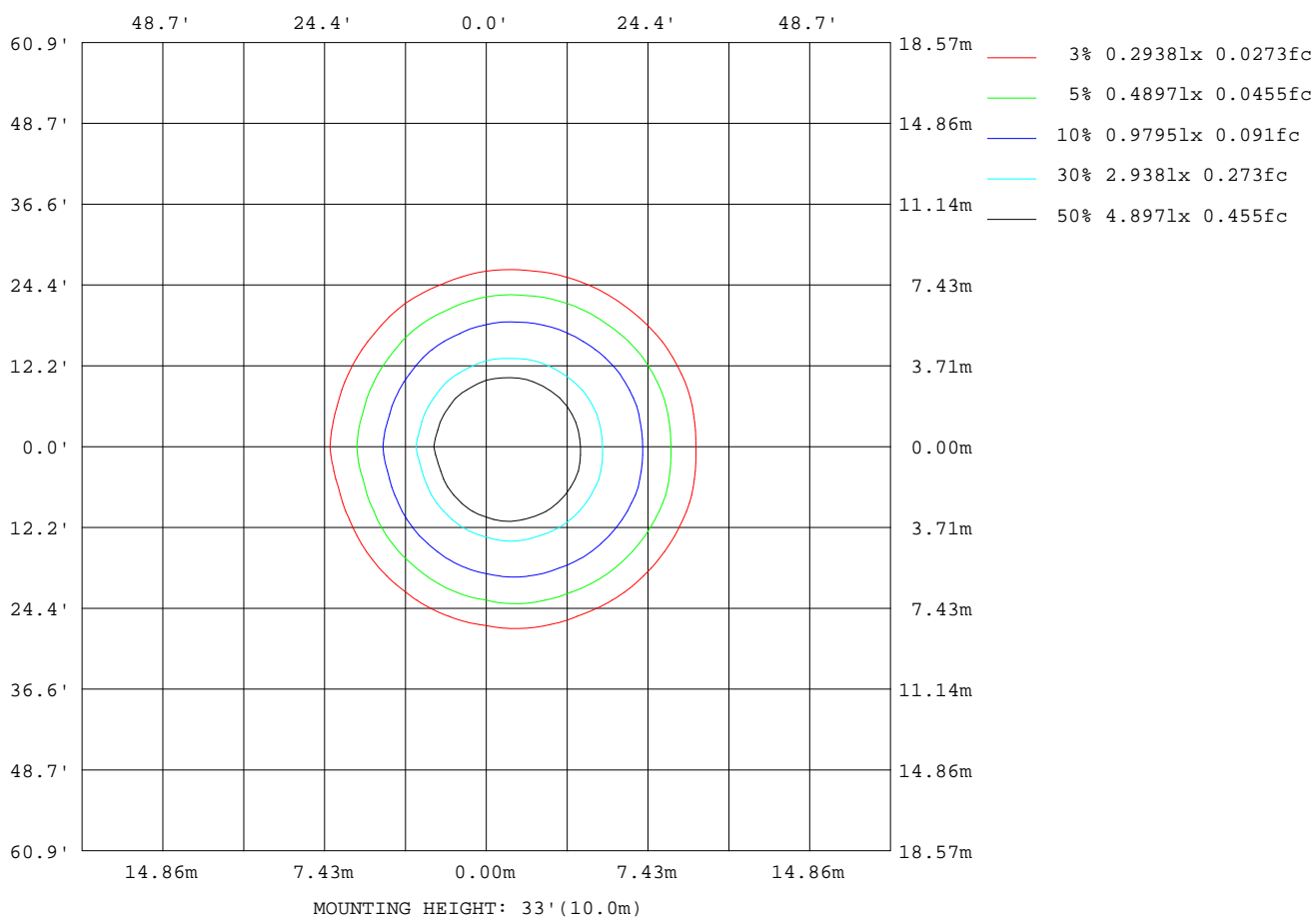
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

Test:U:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx 1m		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
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Test Distance: 8.967m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:32.56V I:0.3500A P:11.40W PF:1.000 Freq:0Hz Lamp Flux:559.81lx1 lm		
NAME: S100R2-13W-DW-930-M	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		

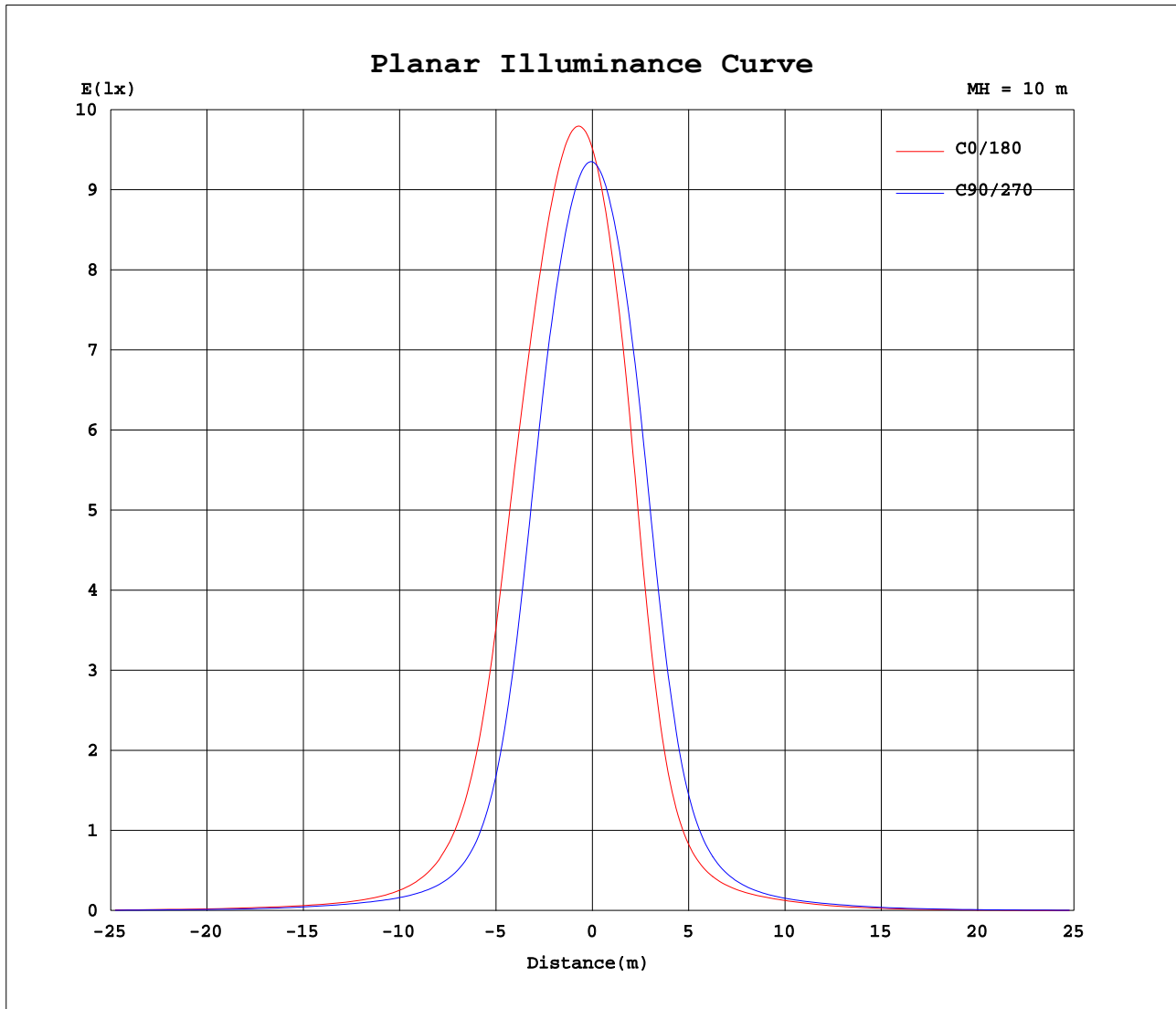
AvgL	cd/m2
L_0~180 (65) av	3615
L_0~180 (75) av	1927
L_0~180 (85) av	618
L_90~270 (65) av	3276
L_90~270 (75) av	1312
L_90~270 (85) av	367
L_45 (65) av	3468
L_45 (75) av	1704
L_45 (85) av	530

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2021-01-19

$\gamma$  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:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2021-01-19

$\gamma$  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:

```