

**SUGAR-350-18W-840**



Light Output Ratio:	100.0%	
Luminaire Power:	19.1 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.30	fine grid method.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

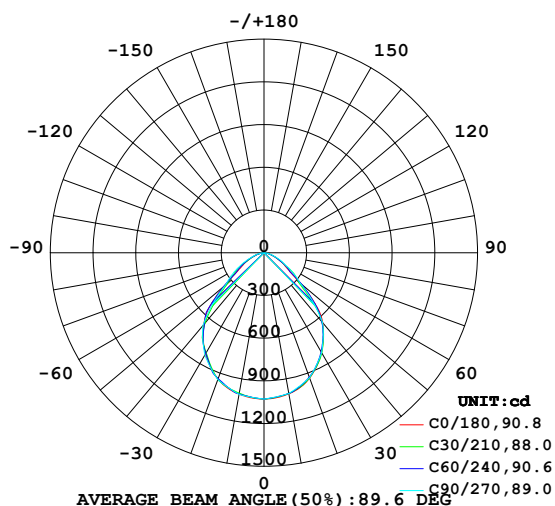
V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

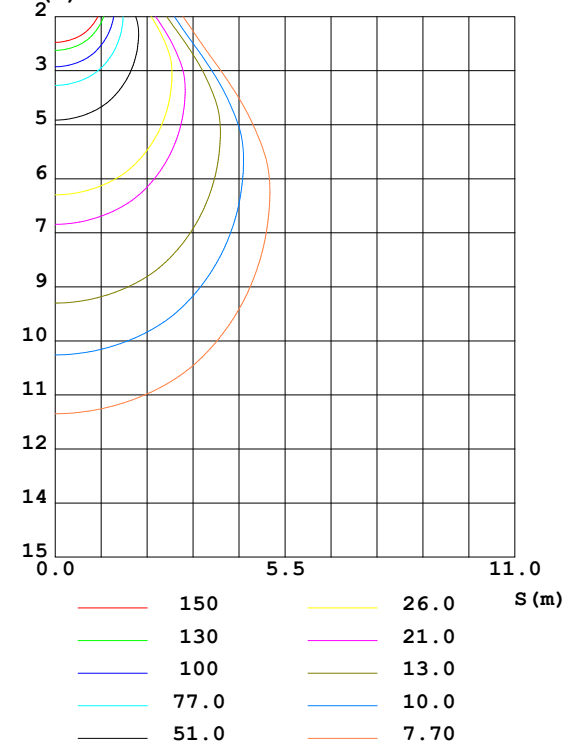
Test:U:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 106.68 lm/W			
MODEL	OSRAM-4000K	I <sub>max</sub> (cd)	1028	S/MH (C0/180)	1.19
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	1.20
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2037.8	$\eta$ UP,DN (C0-180)	0.0,49.2
NOMINAL FLUX (lm)	2037.78	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,50.8
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1006	1002	1004	999.3	1008	1004	1010	1006	0- 10	96.75	96.75	4.75,4.75
20	936.5	933.0	934.2	925.3	945.3	935.8	948.9	942.3	10- 20	275.3	372.1	18.3,18.3
30	807.7	805.8	809.1	805.6	821.4	821.2	830.2	820.1	20- 30	404.9	777.0	38.1,38.1
40	641.7	631.8	641.3	647.5	658.4	659.5	667.8	660.8	30- 40	459.4	1236	60.7,60.7
50	328.1	322.1	329.7	376.1	366.5	352.5	352.4	379.7	40- 50	390.9	1627	79.9,79.9
60	160.1	159.6	174.4	175.8	169.0	192.6	207.0	180.8	50- 60	229.2	1857	91.1,91.1
70	71.01	75.11	80.99	78.00	79.95	77.58	90.55	83.87	60- 70	123.2	1980	97.2,97.2
80	15.03	17.84	18.72	18.83	21.05	24.04	24.94	21.44	70- 80	52.46	2032	99.7,99.7
90	0.1702	0	0	0	0.3251	0	0	0	80- 90	5.576	2038	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): 1453 lm

%lum = 71.3%

%lamp = 71.3%

Conical surface Flux(120deg): 1856.5 lm

%lum = 91.1%

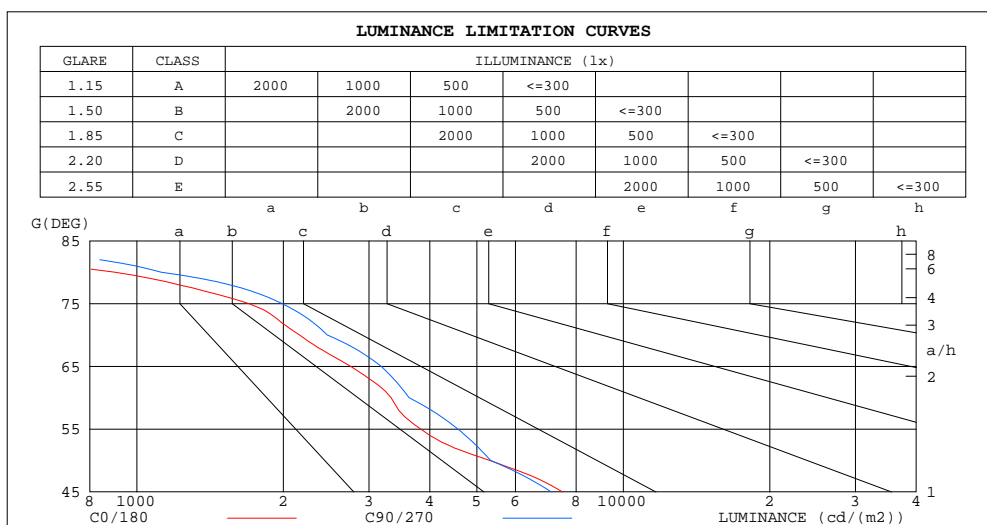
%lamp = 91.1%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
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:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	50	0
80	900	1121
75	1698	1989
70	2159	2463
65	2749	3177
60	3331	3626
55	3832	4572
50	5307	5334
45	7498	7110

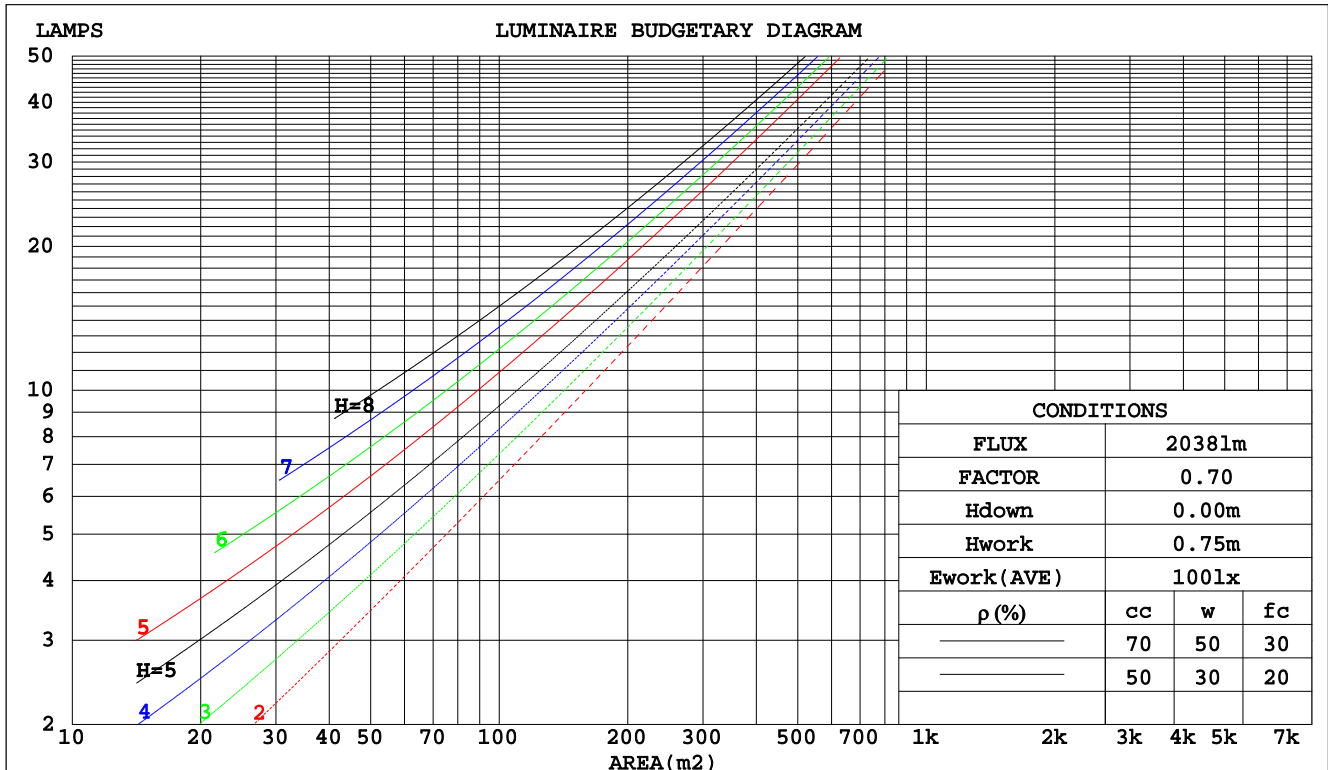
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Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
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**

Test:U:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.88
2.0	.96	.90	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.86	.79	.74	.85	.78	.73	.82	.76	.72	.79	.75	.71	.77	.73	.70	.68
4.0	.78	.70	.64	.77	.70	.64	.74	.68	.63	.72	.67	.62	.70	.65	.62	.60
5.0	.71	.63	.57	.69	.62	.57	.67	.61	.56	.66	.60	.55	.64	.59	.55	.53
6.0	.64	.56	.51	.63	.56	.50	.62	.55	.50	.60	.54	.50	.59	.53	.49	.47
7.0	.59	.51	.45	.58	.51	.45	.57	.50	.45	.55	.49	.45	.54	.49	.44	.43
8.0	.54	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.40	.50	.44	.40	.39
9.0	.50	.42	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35
10.0	.46	.39	.34	.46	.39	.34	.45	.38	.34	.44	.38	.34	.43	.38	.34	.32



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
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Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
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:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
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	.245	.139	.044	.238	.136	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038			
2.0	.238	.130	.040	.232	.128	.039	.221	.123	.038	.210	.118	.037	.201	.114	.036			
3.0	.226	.120	.036	.221	.118	.036	.211	.114	.035	.202	.111	.034	.193	.107	.033			
4.0	.213	.111	.033	.208	.109	.032	.200	.106	.032	.192	.103	.031	.184	.100	.030			
5.0	.200	.102	.030	.196	.101	.029	.189	.098	.029	.181	.096	.028	.175	.093	.028			
6.0	.189	.095	.027	.185	.093	.027	.178	.091	.027	.172	.089	.026	.166	.087	.026			
7.0	.178	.088	.025	.175	.087	.025	.168	.085	.025	.163	.083	.024	.157	.082	.024			
8.0	.168	.082	.023	.165	.081	.023	.159	.080	.023	.154	.078	.023	.149	.077	.022			
9.0	.159	.077	.021	.156	.076	.021	.151	.075	.021	.147	.073	.021	.142	.072	.021			
10.0	.150	.072	.020	.148	.072	.020	.144	.070	.020	.139	.069	.020	.136	.068	.020			

$\rho_{cc}$	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	.176	.157	.140	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.050	.035	.023	.016	.012	.008	
5.0	.141	.089	.052	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.066	.036	.015	.039	.021	.009	.013	.007	.003	

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-04-15

$V(B)$  Range:-80 - 80DEG  
 $V(B)$  Interval: 5.0DEG  
 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:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm										
NAME: SUGAR-350-18W-840					TYPE:Ceiling light			SERIAL No.:		
SPEC.:4000K					DIM.: $\phi$ 350mm*H105mm					
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	14.7	16.1	15.0	16.2	16.4	14.9	16.2	15.1	16.4	16.6
3H	15.2	16.4	15.5	16.6	16.8	15.4	16.6	15.6	16.8	17.0
4H	15.3	16.5	15.6	16.7	16.9	15.5	16.7	15.8	16.9	17.2
6H	15.3	16.4	15.6	16.7	16.9	15.6	16.6	15.9	16.9	17.2
8H	15.3	16.3	15.6	16.6	16.9	15.5	16.6	15.9	16.8	17.1
12H	15.2	16.2	15.6	16.5	16.8	15.5	16.5	15.8	16.8	17.0
4H 2H	14.9	16.1	15.2	16.3	16.5	15.0	16.1	15.3	16.4	16.6
3H	15.5	16.5	15.8	16.8	17.1	15.6	16.6	16.0	16.9	17.2
4H	15.7	16.6	16.1	16.9	17.2	15.9	16.8	16.2	17.1	17.4
6H	15.8	16.6	16.2	16.9	17.3	15.9	16.7	16.3	17.1	17.4
8H	15.7	16.5	16.1	16.8	17.2	15.9	16.6	16.3	17.0	17.4
12H	15.7	16.4	16.1	16.7	17.1	15.9	16.5	16.3	16.9	17.3
8H 4H	15.7	16.5	16.1	16.8	17.2	15.9	16.6	16.3	17.0	17.3
6H	15.8	16.4	16.3	16.8	17.3	16.0	16.6	16.4	17.0	17.4
8H	15.8	16.4	16.3	16.8	17.2	16.0	16.5	16.4	16.9	17.4
12H	15.8	16.2	16.3	16.7	17.2	15.9	16.4	16.4	16.8	17.3
12H 4H	15.7	16.4	16.1	16.7	17.1	15.8	16.5	16.3	16.9	17.3
6H	15.8	16.3	16.3	16.8	17.2	16.0	16.5	16.4	16.9	17.3
8H	15.8	16.2	16.3	16.7	17.2	15.9	16.4	16.4	16.8	17.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.9 / - 1.1					+ 0.8 / - 0.9				
1.5H	+ 0.7 / - 1.0					+ 0.7 / - 1.1				
2.0H	+ 2.3 / - 1.6					+ 2.1 / - 1.6				

CIE Pub.117, 2038 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.5$ )

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

$V(B)$  Range:-80 - 80DEG  
 $V(B)$  Interval: 5.0DEG  
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:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\varnothing$ 350mm*H105mm	
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) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	57	51	65	56	51	45
0.80	77	67	61	76	67	61	74	66	60	55
1.00	85	76	70	84	75	69	82	76	69	63
1.25	91	83	77	90	82	77	87	81	76	70
1.50	95	88	82	94	87	82	91	85	81	74
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	100	96	101	97	94	86
4.00	110	105	102	107	103	100	103	100	98	89
5.00	111	108	105	109	106	103	105	102	100	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

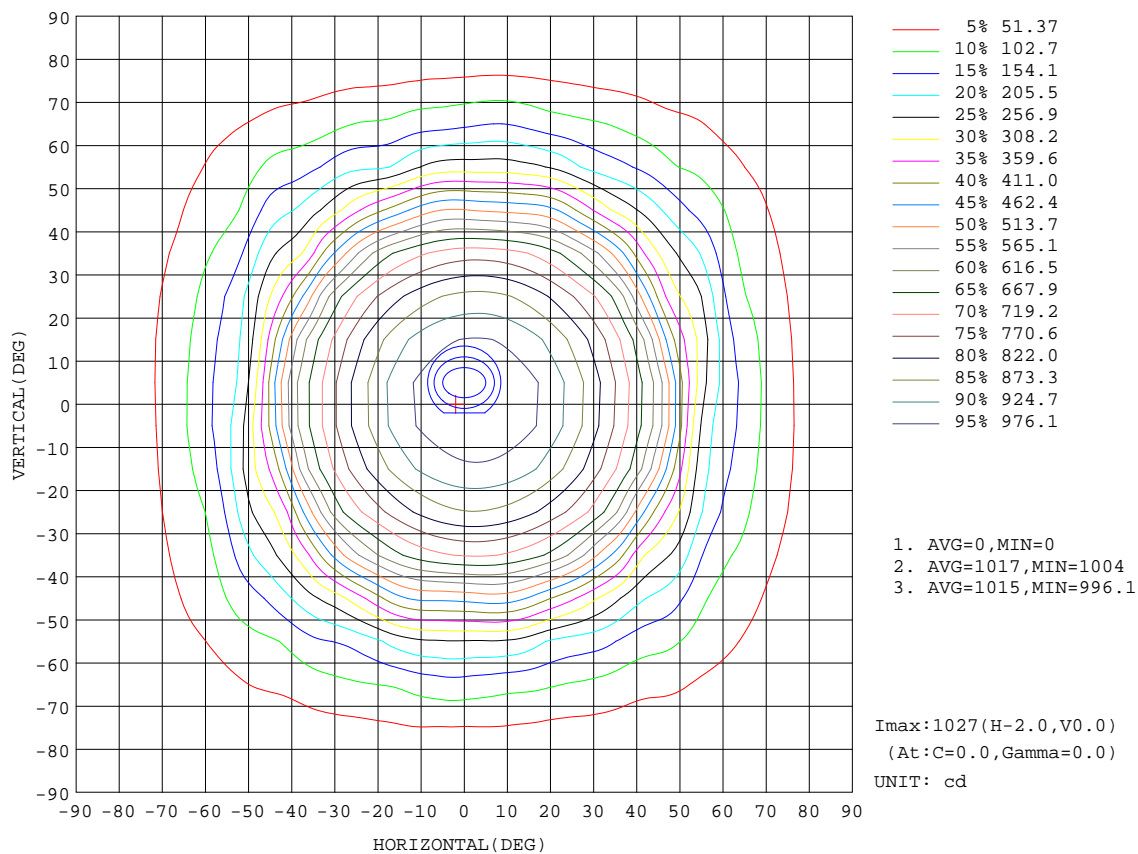
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ISOCANDELA DIAGRAM

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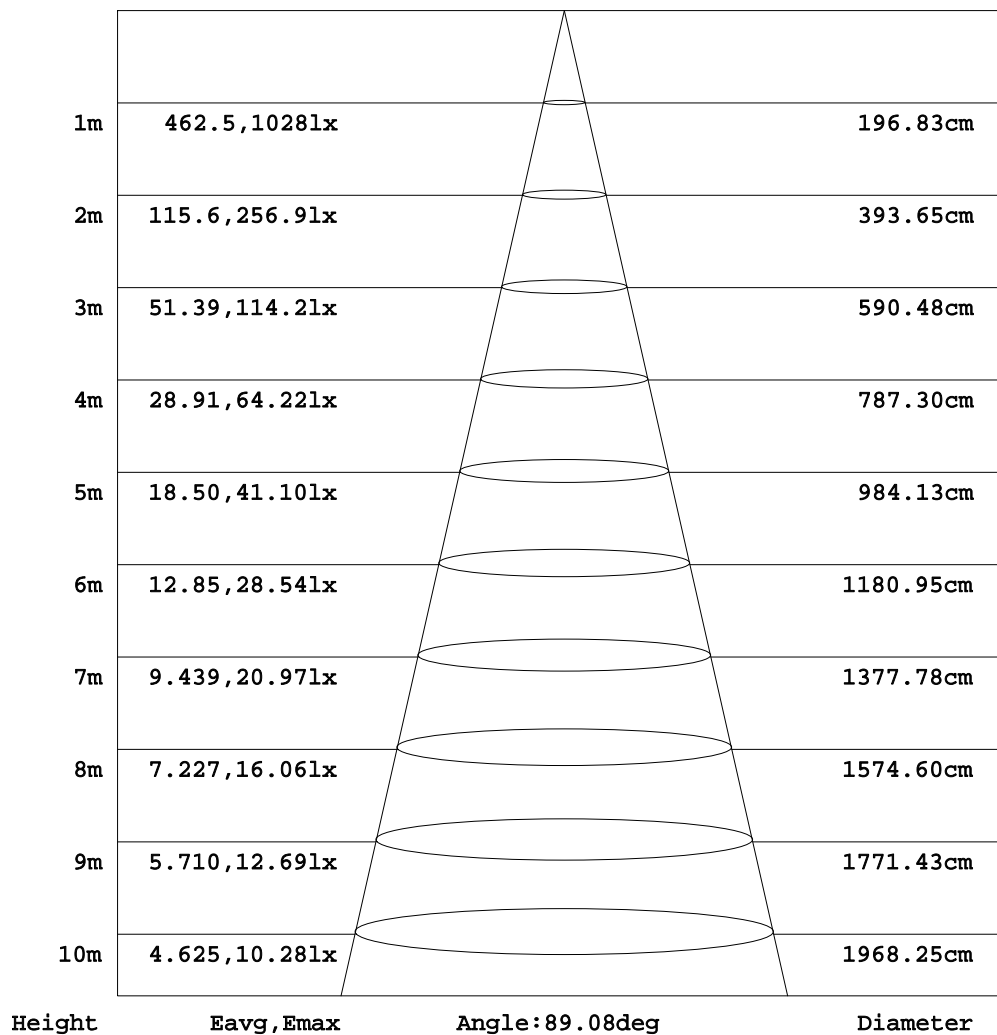
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**AAI Figure**

Test:U:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
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SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
MFR.: NEKO LIGHTING AG		

Flux out:1453 lm



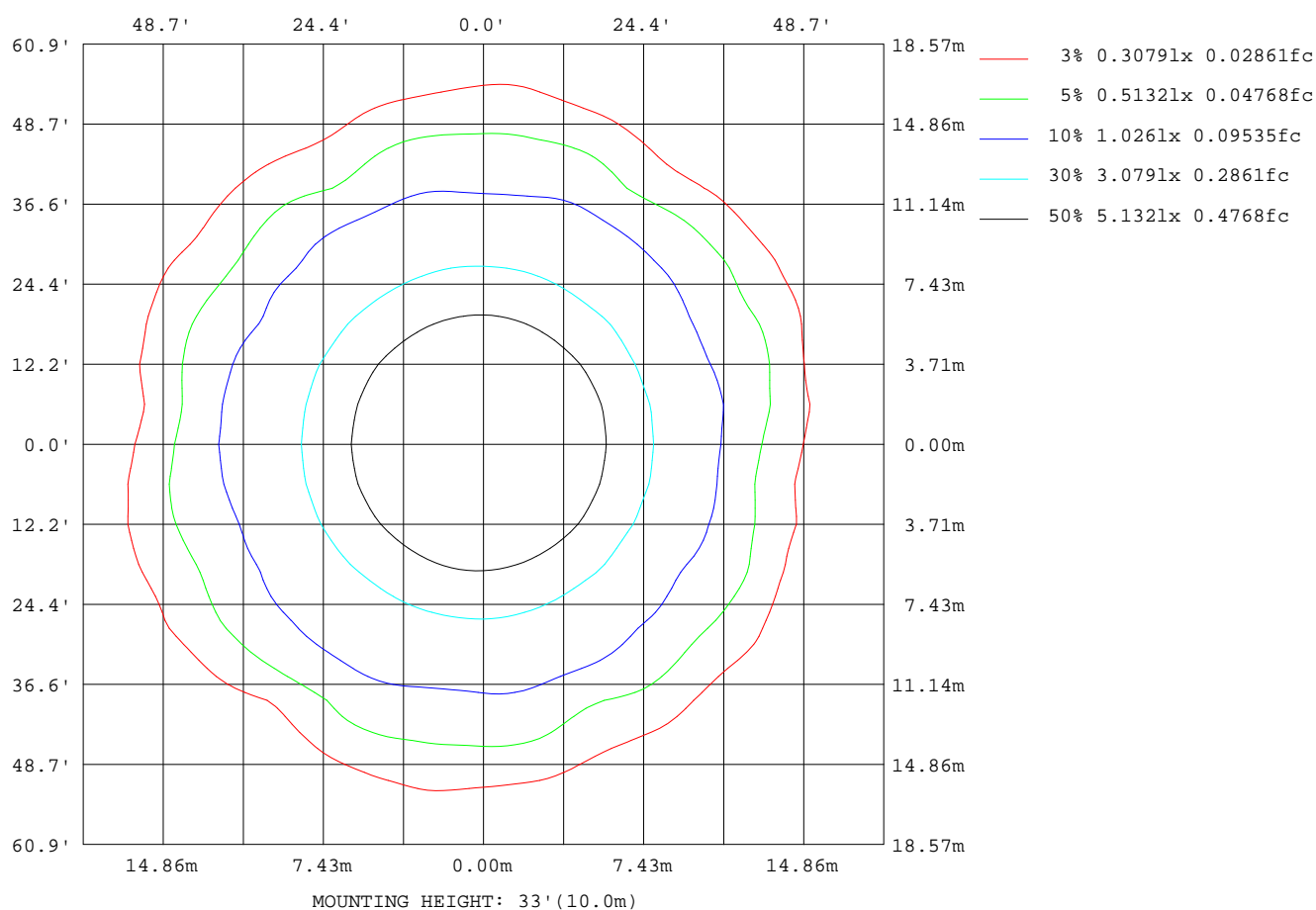
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

Test:U:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
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V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:220.9V I:0.0912A P:19.10W PF:0.9389 Freq:49.99Hz Lamp Flux:2037.78x1 lm		
NAME: SUGAR-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 350mm*H105mm	
MFR.: NEKO LIGHTING AG		

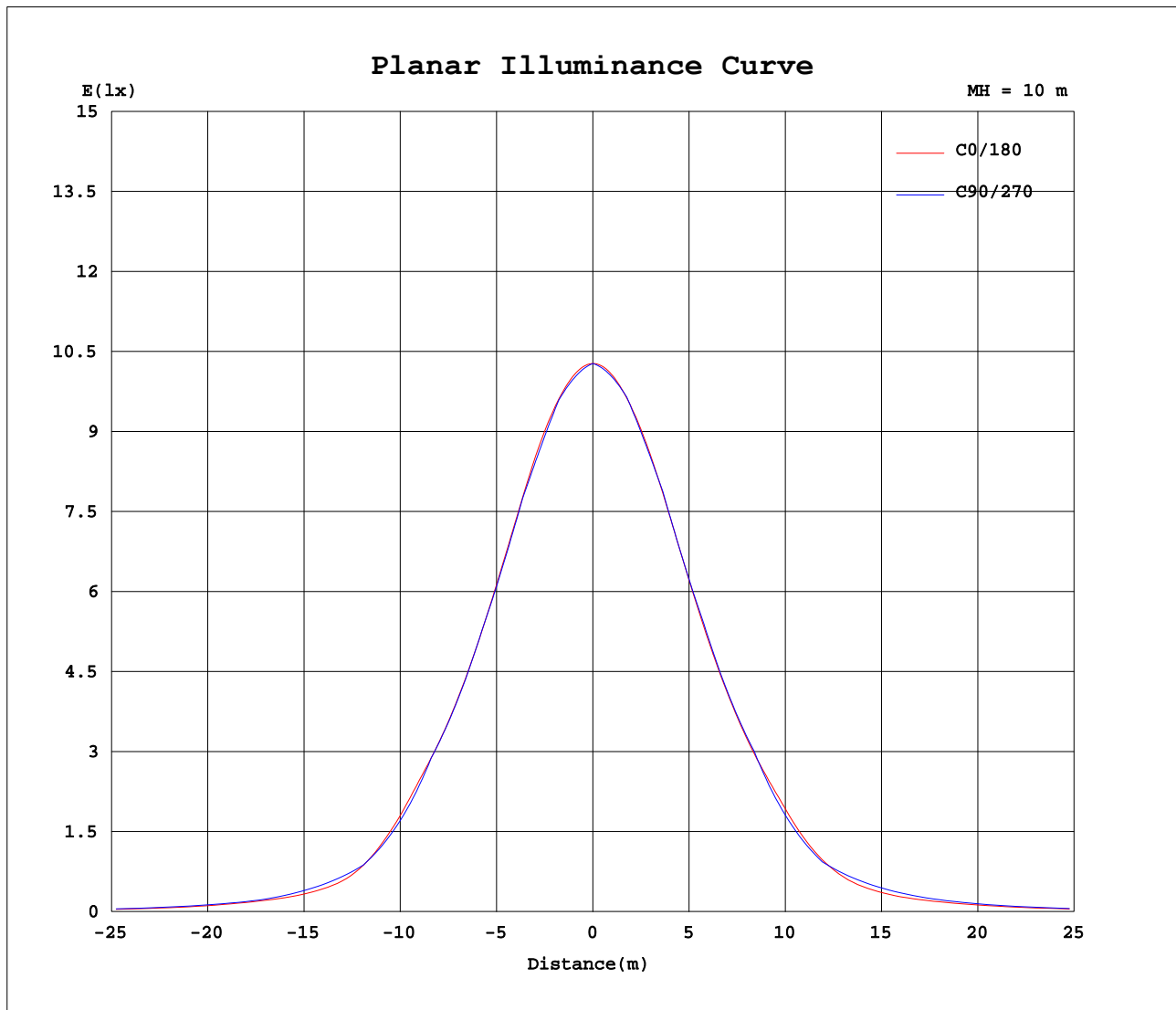
AvgL	cd/m2
L_0~180 (65) av	2926
L_0~180 (75) av	1854
L_0~180 (85) av	112
L_90~270 (65) av	3395
L_90~270 (75) av	2141
L_90~270 (85) av	0
L_45 (65) av	2949
L_45 (75) av	1880
L_45 (85) av	311

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:



V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks: