

**SUGAR-600-38W-830**



Light Output Ratio:	100.0%	
Luminaire Power:	40.51 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:2019-01-05

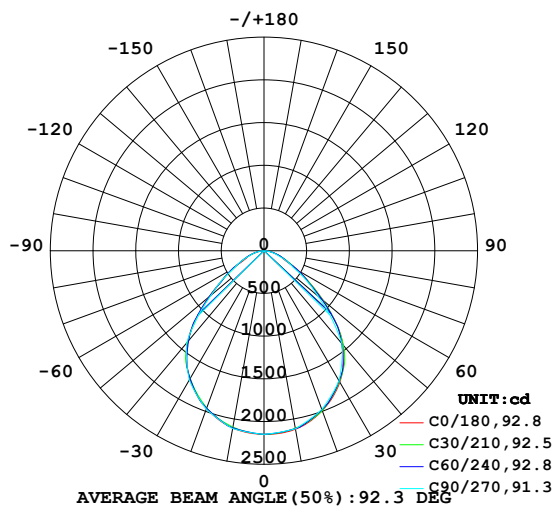
V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

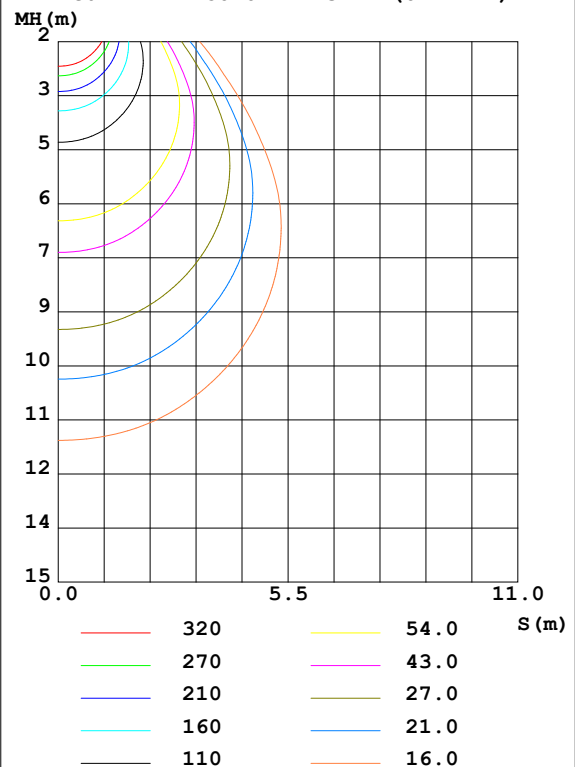
Test:U:220.9V I:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 111.14 lm/W			
MODEL	OSRAM-3000K	I <sub>max</sub> (cd)	2149	S/MH (C0/180)	1.21
NOMINAL POWER (W)	38	LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	4501.8	$\eta$ UP,DN (C0-180)	0.0,50.2
NOMINAL FLUX (lm)	4501.83	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,49.8
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:2019-01-05

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	2121	2111	2116	2100	2108	2098	2114	2110	0- 10	202.9	202.9	4.51,4.51
20	1993	1980	1979	1957	1965	1955	1975	1976	10- 20	578.0	780.9	17.3,17.3
30	1775	1764	1757	1730	1736	1730	1749	1754	20- 30	860.2	1641	36.5,36.5
40	1439	1440	1421	1383	1386	1387	1408	1423	30- 40	993.0	2634	58.5,58.5
50	904.5	902.0	819.9	784.1	839.1	837.2	802.4	807.6	40- 50	866.6	3501	77.8,77.8
60	466.7	455.8	403.3	396.6	423.8	423.1	398.2	409.4	50- 60	537.2	4038	89.7,89.7
70	218.7	210.8	192.8	188.3	204.9	195.6	193.6	194.5	60- 70	293.5	4331	96.2,96.2
80	91.22	85.67	72.48	70.82	74.18	74.01	72.22	77.07	70- 80	145.5	4477	99.4,99.4
90	0.4832	0	0	0	0.8208	0	0	0	80- 90	24.92	4502	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): 3105 lm

%lum = 69.0%

%lamp = 69.0%

Conical surface Flux(120deg): 4037.9 lm

%lum = 89.7%

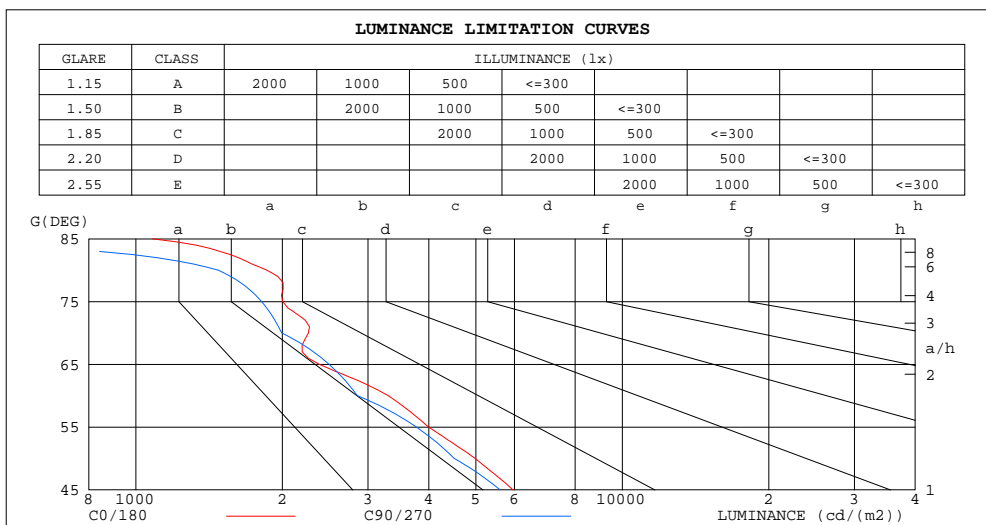
%lamp = 89.7%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

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:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*H105mm	
MFR.: NEKO LIGHTING AG		



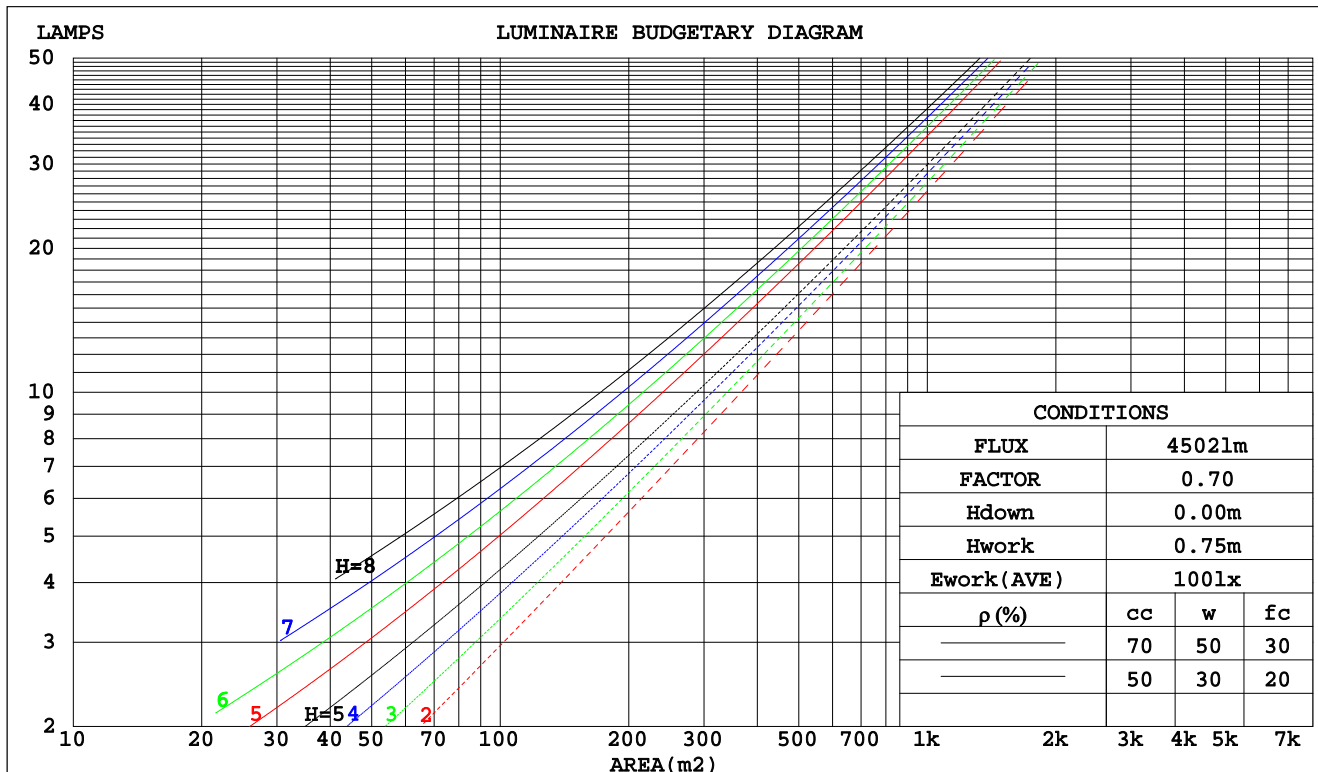
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Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

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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:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*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	.00
1.0	1.07	1.03	1.00	1.05	1.01	.98	1.00	.98	.95	.97	.94	.92	.93	.91	.90	.88
2.0	.95	.90	.85	.93	.88	.84	.90	.86	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.73	.84	.77	.72	.81	.75	.71	.78	.74	.70	.76	.72	.68	.66
4.0	.77	.69	.63	.76	.68	.63	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.69	.61	.56	.68	.61	.55	.66	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.49	.62	.55	.49	.61	.54	.49	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.44	.57	.49	.44	.56	.49	.44	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.37	.33	.31



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H( $\beta$ ) Interval: 1.0DEG  
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Temperature:25.3DEG  
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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:

## WEC AND CCEC

Test:U:220.9V I:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*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	.254	.144	.046	.247	.141	.045	.234	.134	.043	.222	.128	.041	.211	.122	.039		
2.0	.245	.134	.041	.239	.132	.041	.228	.127	.039	.218	.122	.038	.208	.118	.037		
3.0	.232	.123	.037	.226	.121	.037	.217	.117	.036	.207	.114	.035	.199	.110	.034		
4.0	.218	.113	.033	.213	.112	.033	.204	.108	.032	.196	.105	.032	.189	.103	.031		
5.0	.204	.104	.030	.200	.103	.030	.193	.100	.030	.185	.098	.029	.179	.095	.029		
6.0	.192	.096	.028	.188	.095	.027	.181	.093	.027	.175	.091	.027	.169	.089	.026		
7.0	.181	.089	.025	.177	.088	.025	.171	.087	.025	.165	.085	.025	.160	.083	.024		
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023		
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.149	.075	.021	.144	.073	.021		
10.0	.152	.073	.020	.150	.072	.020	.146	.071	.020	.141	.070	.020	.137	.069	.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	.139	.151	.134	.119	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.062	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.135	.098	.069	.092	.068	.048	.053	.040	.029	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.007	
5.0	.142	.090	.051	.122	.077	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.096	.051	.021	.067	.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:2019-01-05

$V(B)$  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:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm										
NAME: SUGAR-600-38W-830					TYPE:Ceiling light			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 600mm*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	12.0	13.4	12.3	13.6	13.8	11.8	13.2	12.1	13.4	13.6
3H	12.6	13.8	12.9	14.1	14.3	12.4	13.6	12.7	13.8	14.1
4H	12.9	14.0	13.2	14.3	14.5	12.6	13.7	12.9	14.0	14.2
6H	13.0	14.1	13.4	14.4	14.7	12.7	13.8	13.0	14.1	14.3
8H	13.1	14.1	13.4	14.4	14.7	12.7	13.8	13.0	14.0	14.3
12H	13.0	14.1	13.4	14.3	14.6	12.7	13.7	13.0	14.0	14.3
4H 2H	12.3	13.4	12.6	13.7	13.9	12.1	13.2	12.4	13.5	13.7
3H	13.0	14.0	13.3	14.3	14.6	12.8	13.8	13.1	14.1	14.4
4H	13.4	14.3	13.7	14.6	14.9	13.1	14.1	13.5	14.4	14.7
6H	13.6	14.4	14.0	14.8	15.1	13.3	14.2	13.7	14.5	14.9
8H	13.7	14.4	14.1	14.8	15.2	13.4	14.1	13.8	14.5	14.9
12H	13.7	14.4	14.1	14.7	15.1	13.3	14.0	13.8	14.4	14.8
8H 4H	13.4	14.2	13.9	14.6	14.9	13.2	14.0	13.7	14.4	14.7
6H	13.8	14.4	14.2	14.8	15.3	13.6	14.2	14.0	14.6	15.0
8H	13.9	14.5	14.4	14.9	15.3	13.6	14.2	14.1	14.6	15.0
12H	13.9	14.4	14.4	14.8	15.3	13.6	14.1	14.1	14.5	15.0
12H 4H	13.4	14.1	13.9	14.5	14.9	13.2	13.9	13.7	14.3	14.7
6H	13.8	14.4	14.3	14.8	15.2	13.6	14.1	14.0	14.5	15.0
8H	13.9	14.4	14.4	14.8	15.3	13.7	14.1	14.1	14.6	15.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.6					+ 0.5 / - 0.6				
1.5H	+ 0.3 / - 0.3					+ 0.3 / - 0.4				
2.0H	+ 1.3 / - 1.0					+ 1.3 / - 1.2				

CIE Pub.117, 4502 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 5.2$ )

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

$V(B)$  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:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*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) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	49	65	55	49	64	55	49	43
0.80	75	66	59	75	65	59	73	64	59	53
1.00	84	74	68	82	74	68	80	75	67	61
1.25	90	81	75	89	81	75	86	79	74	68
1.50	94	86	81	93	86	80	90	84	79	73
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	104	101	107	103	99	103	99	97	88
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

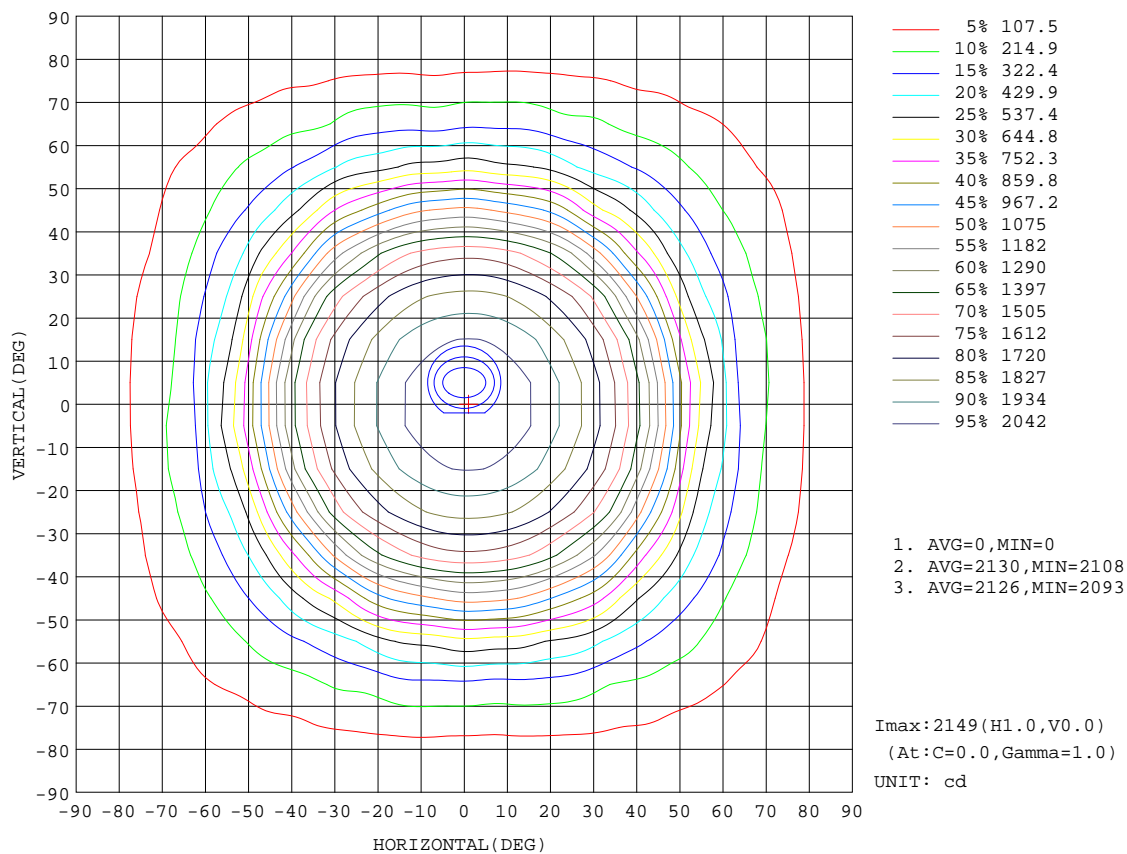
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 Test Distance:5.850m [K=1.0000]  
 Remarks:



### ISOCANDELA DIAGRAM

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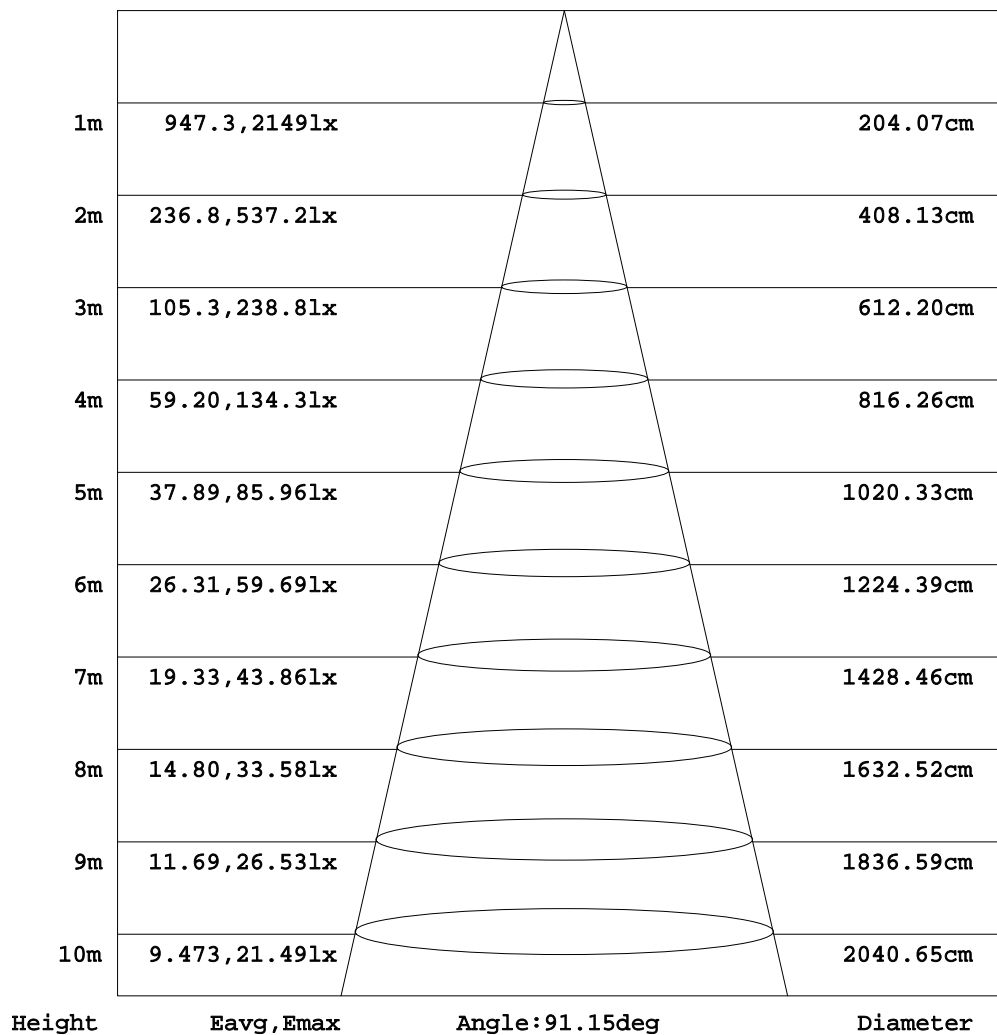
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**AAI Figure**

Test:U:220.9V I:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 600\text{mm} \times H105\text{mm}$	
MFR.: NEKO LIGHTING AG		

Flux out:3191 lm



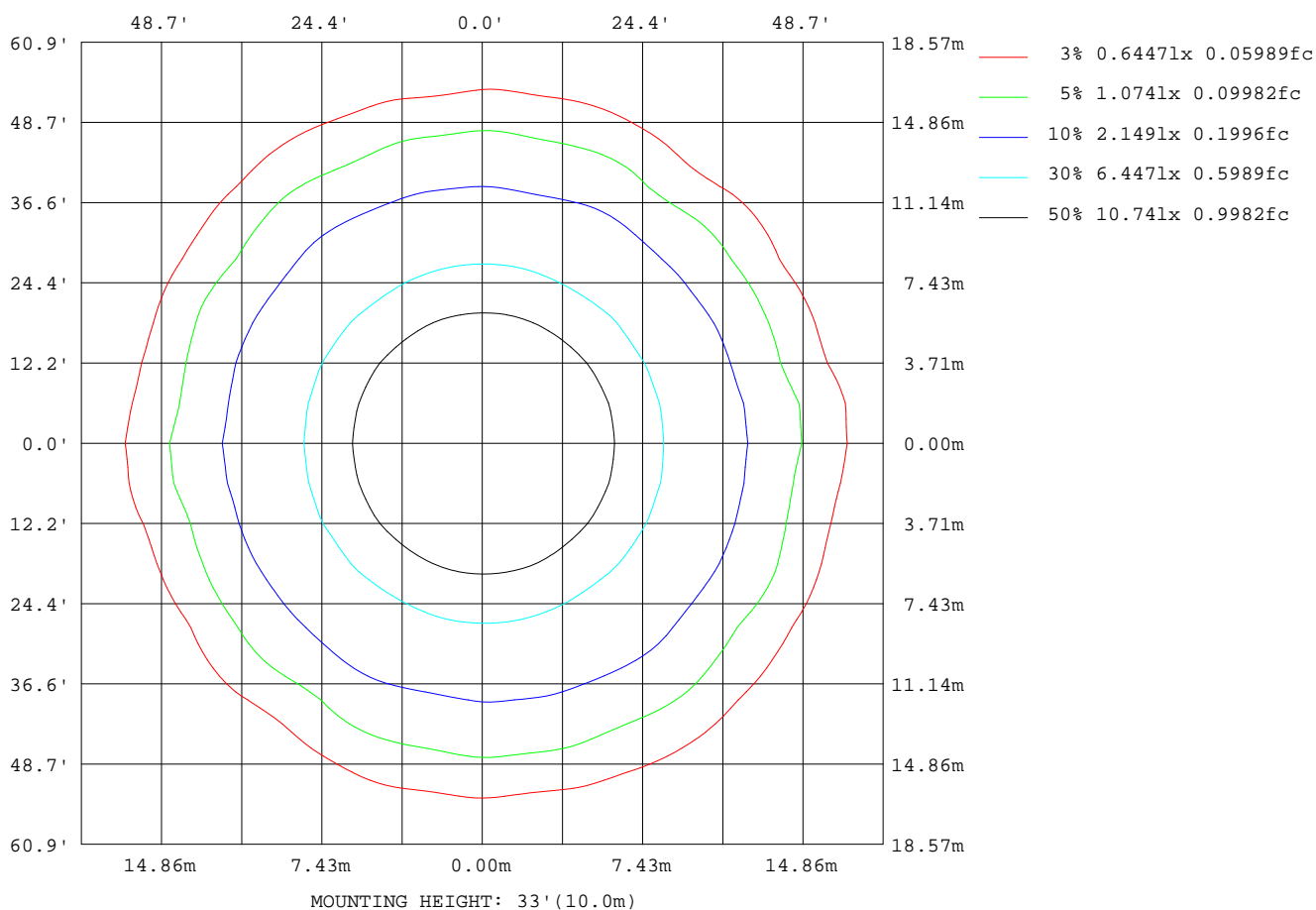
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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Operators:Myles  
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Humidity:56%  
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**ISOLUX DIAGRAM**

Test:U:220.9V I:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
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SPEC.:3000K	DIM.: $\phi$ 600mm*H105mm	
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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:0.1861A P:40.51W PF:0.9853 Freq:49.90Hz Lamp Flux:4501.83x1 lm		
NAME: SUGAR-600-38W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 600mm*H105mm	
MFR.: NEKO LIGHTING AG		

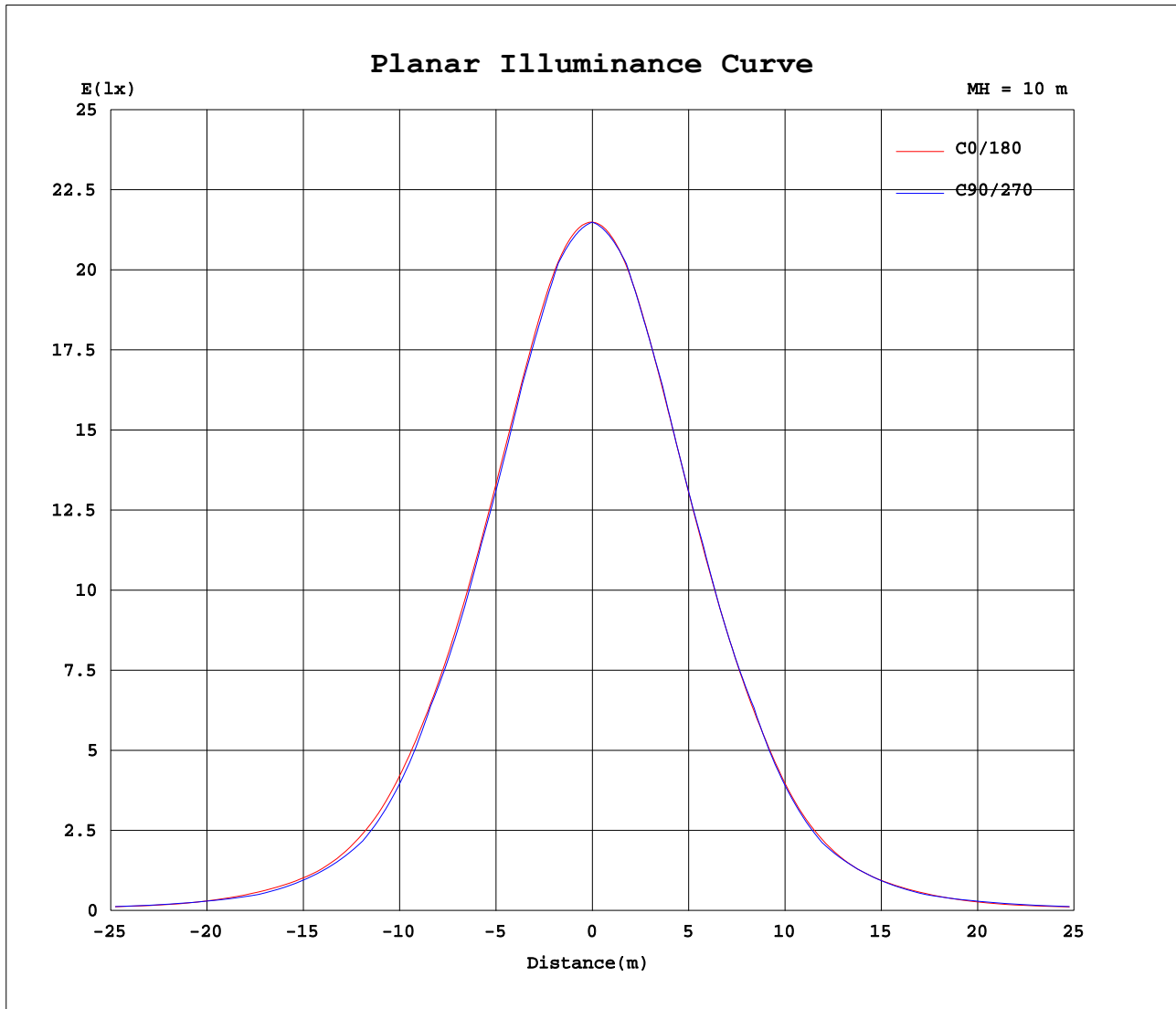
AvgL	cd/m2
L_0~180 (65) av	2266
L_0~180 (75) av	1908
L_0~180 (85) av	812
L_90~270 (65) av	2487
L_90~270 (75) av	1815
L_90~270 (85) av	0
L_45 (65) av	2436
L_45 (75) av	1899
L_45 (85) av	675

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:2019-01-05

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:2019-01-05

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:

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V(B) Interval: 5.0DEG
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Remarks:
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Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks: