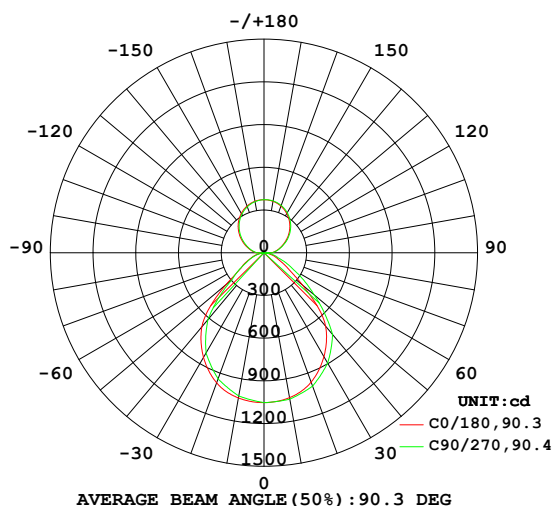


LUMINAIRE PHOTOMETRIC TEST REPORT

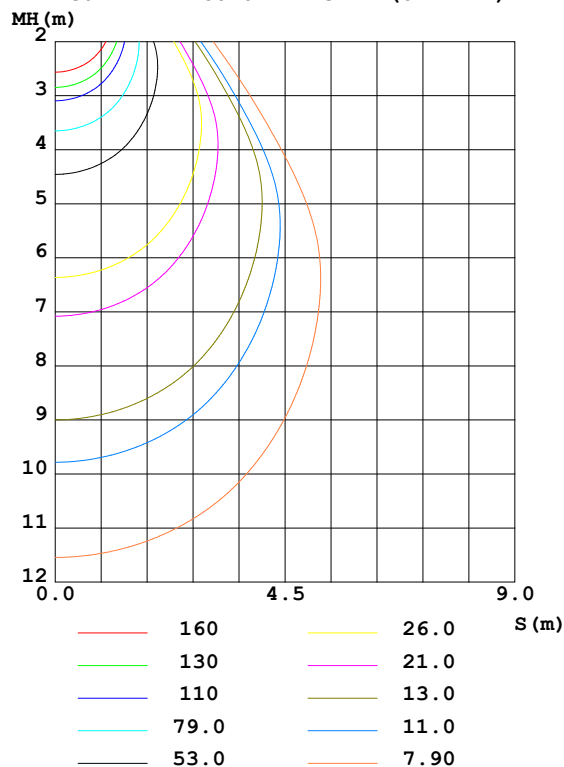
Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.88 lm/W			
MODEL	OSRAM-4000K	I _{max} (cd)	1053	S/MH (C0/180)	1.20
NOMINAL POWER (W)	31	LOR (%)	100.0	S/MH (C90/270)	1.16
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	3319.1	η UP,DN (C0-180)	18.6,34.0
NOMINAL FLUX (lm)	3319.09	CIE CLASS	SEMI-D.	η UP,DN (C180-360)	17.8,29.6
LAMPS INSIDE	1	η up (%)	36.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220.0	η down (%)	63.6	CIBSE SHR MAX	1.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

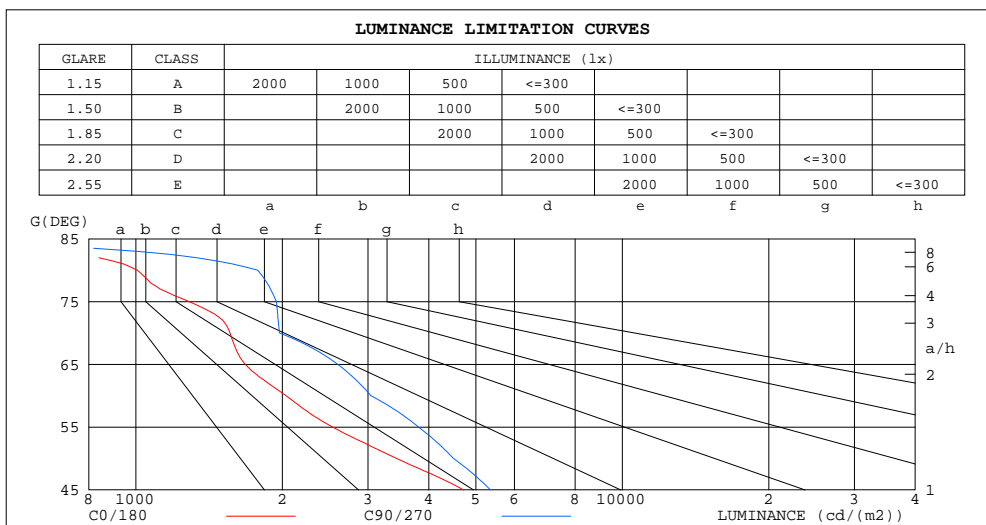
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	1033	1038	1044	1038	1035	1020	1022	1023	0- 10	99.25	99.25	2.99,2.99
20	967.4	987.2	997.3	979.1	972.4	939.5	942.9	947.5	10- 20	283.2	382.4	11.5,11.5
30	842.2	879.5	894.8	872.1	849.6	817.8	813.5	813.7	20- 30	419.4	801.8	24.2,24.2
40	673.2	727.9	748.8	716.4	678.9	632.7	612.0	624.8	30- 40	477.9	1280	38.6,38.6
50	350.9	416.2	459.5	428.4	345.6	316.8	292.2	285.6	40- 50	402.2	1682	50.7,50.7
60	161.8	225.8	241.8	193.7	164.4	157.0	149.3	145.8	50- 60	232.4	1914	57.7,57.7
70	84.88	108.1	107.3	96.37	85.23	76.68	74.35	72.65	60- 70	124.6	2039	61.4,61.4
80	27.79	49.30	49.12	40.94	28.36	18.69	13.90	18.35	70- 80	61.25	2100	63.3,63.3
90	53.11	56.92	57.04	52.92	50.86	48.22	48.57	47.83	80- 90	11.19	2111	63.6,63.6
100	89.11	93.86	93.49	91.31	88.16	84.46	82.07	83.03	90-100	75.78	2187	65.9,65.9
110	131.2	136.8	137.9	134.2	131.2	126.3	122.0	124.4	100-110	114.9	2302	69.4,69.4
120	181.4	187.8	189.9	185.9	181.5	175.2	170.9	174.5	110-120	153.7	2456	74,74
130	233.0	239.4	241.6	237.9	232.9	226.5	222.7	226.1	120-130	185.2	2641	79.6,79.6
140	280.1	286.0	288.2	285.0	280.2	274.3	270.8	273.9	130-140	198.3	2839	85.5,85.5
150	319.6	324.6	326.5	323.9	319.9	314.9	312.2	314.7	140-150	188.2	3027	91.2,91.2
160	349.2	352.9	354.2	352.6	349.5	345.8	344.0	345.8	150-160	154.8	3182	95.9,95.9
170	367.3	369.1	370.1	369.1	367.8	365.7	364.8	365.8	160-170	101.6	3284	98.9,98.9
180	373.0	373.0	373.0	373.0	373.0	373.0	373.0	373.0	170-180	35.35	3319	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	283	0
80	1007	1780
75	1286	1944
70	1561	1973
65	1678	2600
60	2035	3042
55	2537	3812
50	3435	4497
45	4715	5358

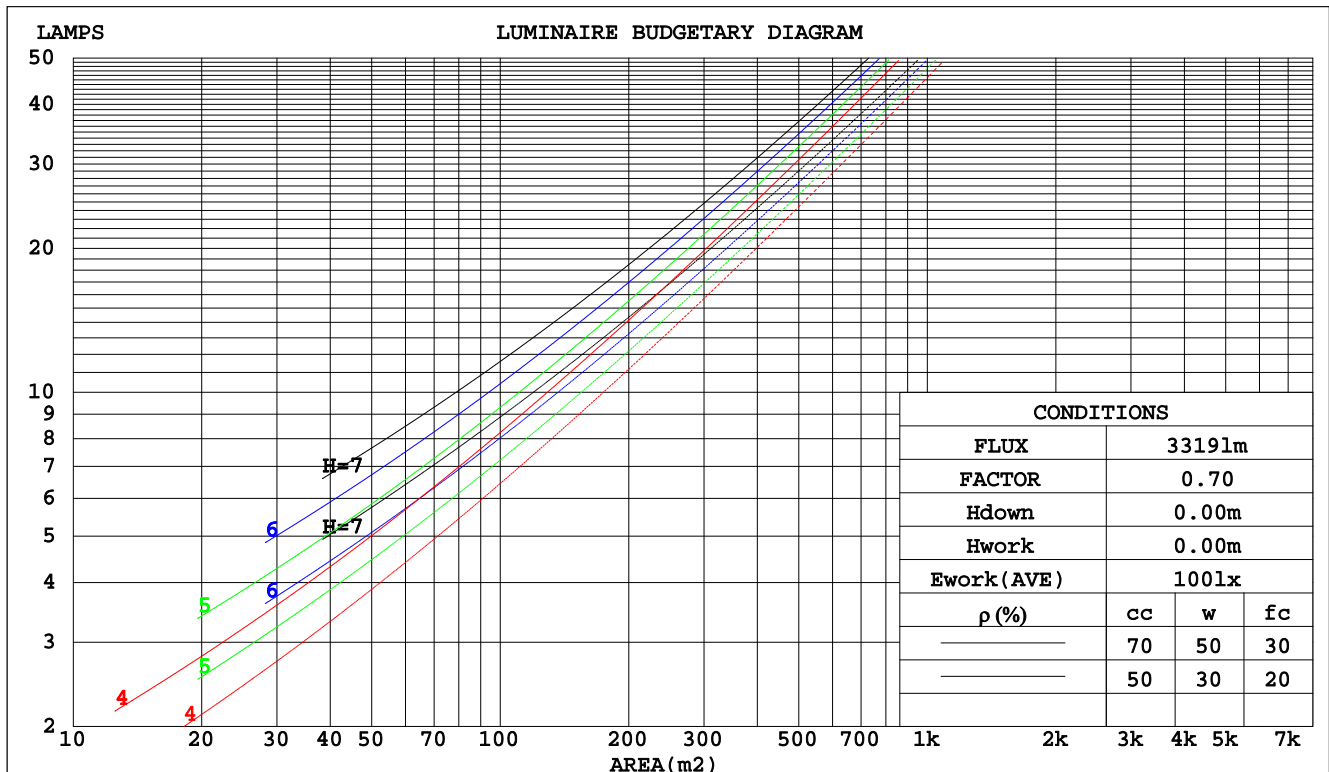
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 γ Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:

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	1.10	1.10	1.10	1.04	1.04	1.04	.91	.91	.91	.79	.79	.79	.69	.69	.69	.64
1.0	.98	.95	.92	.92	.89	.87	.82	.79	.77	.72	.70	.69	.63	.61	.60	.56
2.0	.87	.82	.77	.82	.77	.73	.73	.69	.66	.64	.62	.59	.57	.55	.53	.49
3.0	.78	.71	.65	.73	.67	.63	.65	.61	.57	.58	.55	.52	.51	.49	.46	.43
4.0	.70	.62	.56	.66	.59	.54	.59	.54	.50	.53	.48	.45	.47	.43	.41	.38
5.0	.63	.55	.49	.59	.53	.47	.53	.48	.44	.48	.43	.40	.42	.39	.36	.34
6.0	.57	.49	.43	.54	.47	.42	.49	.43	.39	.44	.39	.36	.39	.35	.33	.30
7.0	.52	.44	.39	.49	.42	.37	.44	.39	.35	.40	.35	.32	.36	.32	.29	.27
8.0	.47	.40	.35	.45	.38	.33	.41	.35	.31	.37	.32	.29	.33	.29	.27	.24
9.0	.43	.36	.31	.41	.35	.30	.38	.32	.28	.34	.29	.26	.31	.27	.24	.22
10.0	.40	.33	.28	.38	.32	.27	.35	.29	.26	.32	.27	.24	.29	.25	.22	.20



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

WEC AND CCEC

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: φ450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.:φ450mm	Shielding Angle:

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	.252	.143	.045	.234	.133	.042	.200	.115	.037	.169	.098	.031	.141	.082	.026		
2.0	.239	.131	.040	.223	.123	.038	.192	.107	.033	.164	.092	.029	.138	.078	.025		
3.0	.224	.119	.036	.209	.112	.034	.182	.098	.030	.156	.086	.026	.132	.073	.023		
4.0	.210	.109	.032	.196	.103	.030	.171	.091	.027	.148	.079	.024	.126	.068	.021		
5.0	.196	.100	.029	.184	.094	.028	.161	.084	.025	.139	.073	.022	.119	.064	.019		
6.0	.184	.092	.026	.173	.087	.025	.151	.078	.023	.131	.068	.020	.113	.059	.018		
7.0	.173	.085	.024	.162	.081	.023	.143	.072	.021	.124	.064	.019	.107	.056	.016		
8.0	.163	.080	.022	.153	.075	.021	.135	.067	.019	.118	.060	.017	.102	.052	.015		
9.0	.154	.074	.021	.145	.071	.020	.128	.063	.018	.112	.056	.016	.097	.049	.014		
10.0	.145	.070	.019	.137	.066	.018	.121	.059	.017	.106	.053	.015	.092	.046	.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	.468	.468	.468	.400	.400	.400	.273	.273	.273	.157	.157	.157	.050	.050	.050	
1.0	.456	.436	.418	.390	.374	.360	.267	.258	.249	.154	.149	.145	.049	.048	.047	
2.0	.447	.414	.386	.382	.356	.334	.262	.246	.233	.151	.143	.136	.048	.046	.044	
3.0	.439	.397	.364	.376	.342	.315	.258	.238	.221	.149	.139	.130	.048	.045	.043	
4.0	.431	.384	.348	.370	.332	.303	.254	.231	.213	.147	.136	.126	.047	.044	.041	
5.0	.425	.374	.337	.365	.324	.294	.251	.226	.207	.145	.133	.123	.047	.043	.041	
6.0	.418	.367	.329	.359	.317	.287	.248	.222	.203	.144	.131	.121	.046	.043	.040	
7.0	.412	.360	.323	.355	.312	.282	.245	.219	.200	.142	.129	.119	.046	.042	.039	
8.0	.407	.355	.319	.350	.308	.278	.242	.216	.197	.141	.127	.118	.046	.042	.039	
9.0	.402	.350	.315	.346	.304	.275	.240	.214	.195	.140	.126	.116	.045	.041	.039	
10.0	.397	.346	.313	.342	.301	.273	.237	.212	.194	.138	.125	.116	.045	.041	.038	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm										
NAME: SUGAR 450-U-29W-840					TYPE:Ceiling light			WEIGHT:		
SPEC.:4000K					DIM.: ϕ 450mm*H78mm			SERIAL No.:		
MFR.: NEKO LIGHTING AG					SUR.: ϕ 450mm			Shielding Angle:		
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	9.8	10.8	10.5	11.5	12.3	11.0	12.0	11.7	12.7	13.5
3H	10.2	11.0	10.9	11.8	12.7	11.5	12.3	12.2	13.1	13.9
4H	10.3	11.1	11.1	11.9	12.8	11.6	12.4	12.4	13.2	14.1
6H	10.3	11.1	11.1	11.9	12.8	11.7	12.5	12.5	13.3	14.2
8H	10.3	11.0	11.1	11.8	12.8	11.7	12.5	12.5	13.2	14.2
12H	10.2	10.9	11.0	11.7	12.7	11.7	12.4	12.5	13.1	14.1
4H 2H	10.0	10.8	10.8	11.6	12.5	11.0	11.9	11.8	12.6	13.5
3H	10.5	11.2	11.3	12.0	13.0	11.6	12.3	12.4	13.1	14.1
4H	10.8	11.4	11.6	12.2	13.2	11.9	12.5	12.7	13.3	14.3
6H	10.9	11.4	11.7	12.3	13.3	12.1	12.7	13.0	13.5	14.5
8H	10.9	11.4	11.7	12.2	13.3	12.1	12.6	13.0	13.5	14.5
12H	10.8	11.3	11.7	12.1	13.2	12.1	12.5	13.0	13.4	14.5
8H 4H	10.8	11.3	11.7	12.2	13.2	11.9	12.4	12.7	13.2	14.3
6H	11.1	11.5	12.0	12.4	13.5	12.2	12.6	13.1	13.5	14.6
8H	11.1	11.5	12.0	12.4	13.5	12.3	12.6	13.2	13.5	14.6
12H	11.1	11.4	12.0	12.3	13.5	12.2	12.5	13.1	13.4	14.6
12H 4H	10.8	11.3	11.7	12.1	13.2	11.8	12.3	12.7	13.1	14.2
6H	11.1	11.4	12.0	12.3	13.4	12.2	12.5	13.1	13.4	14.5
8H	11.2	11.5	12.1	12.4	13.5	12.3	12.6	13.2	13.5	14.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.8 / - 0.8					+ 0.4 / - 0.4				
1.5H	+ 0.5 / - 0.8					+ 0.4 / - 0.4				
2.0H	+ 1.8 / - 1.5					+ 1.2 / - 1.5				

CIE Pub.117, 3319 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.2$)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:

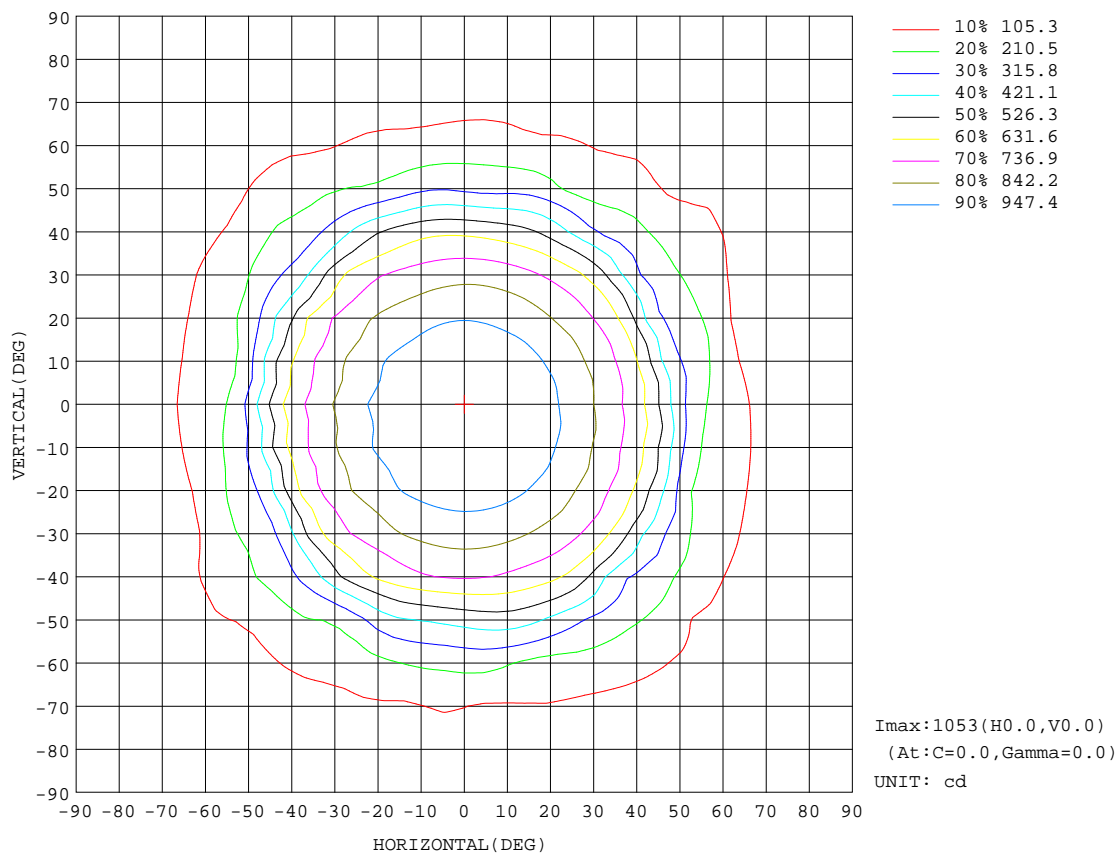
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	53	43	37	51	42	36	48	40	35	29
0.80	63	52	46	60	51	45	56	48	43	35
1.00	70	60	54	67	58	52	62	56	50	40
1.25	77	67	61	73	65	59	67	60	55	44
1.50	82	72	66	78	69	64	70	64	60	47
2.00	88	80	73	83	76	71	75	70	65	51
2.50	91	84	78	87	80	75	78	73	69	53
3.00	94	88	82	89	84	79	80	76	72	55
4.00	98	93	88	93	88	84	82	79	76	57
5.00	100	96	92	95	91	87	84	81	78	58
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:

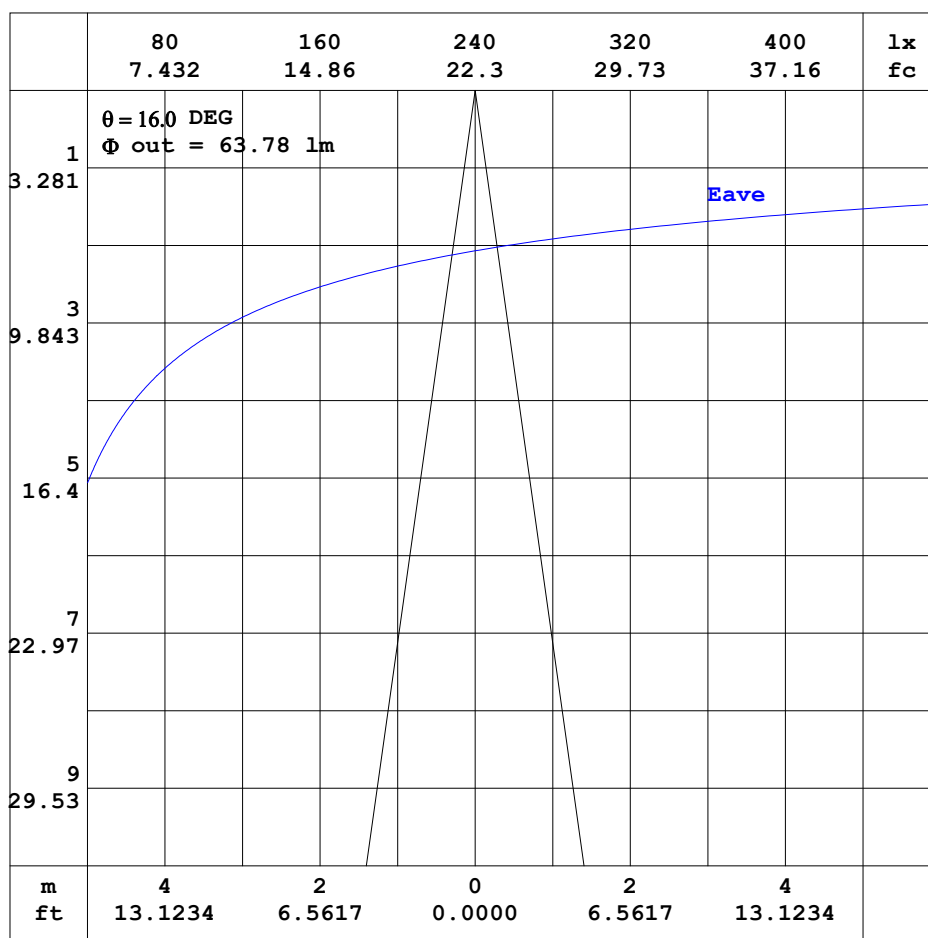


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

AAI CURVES

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:



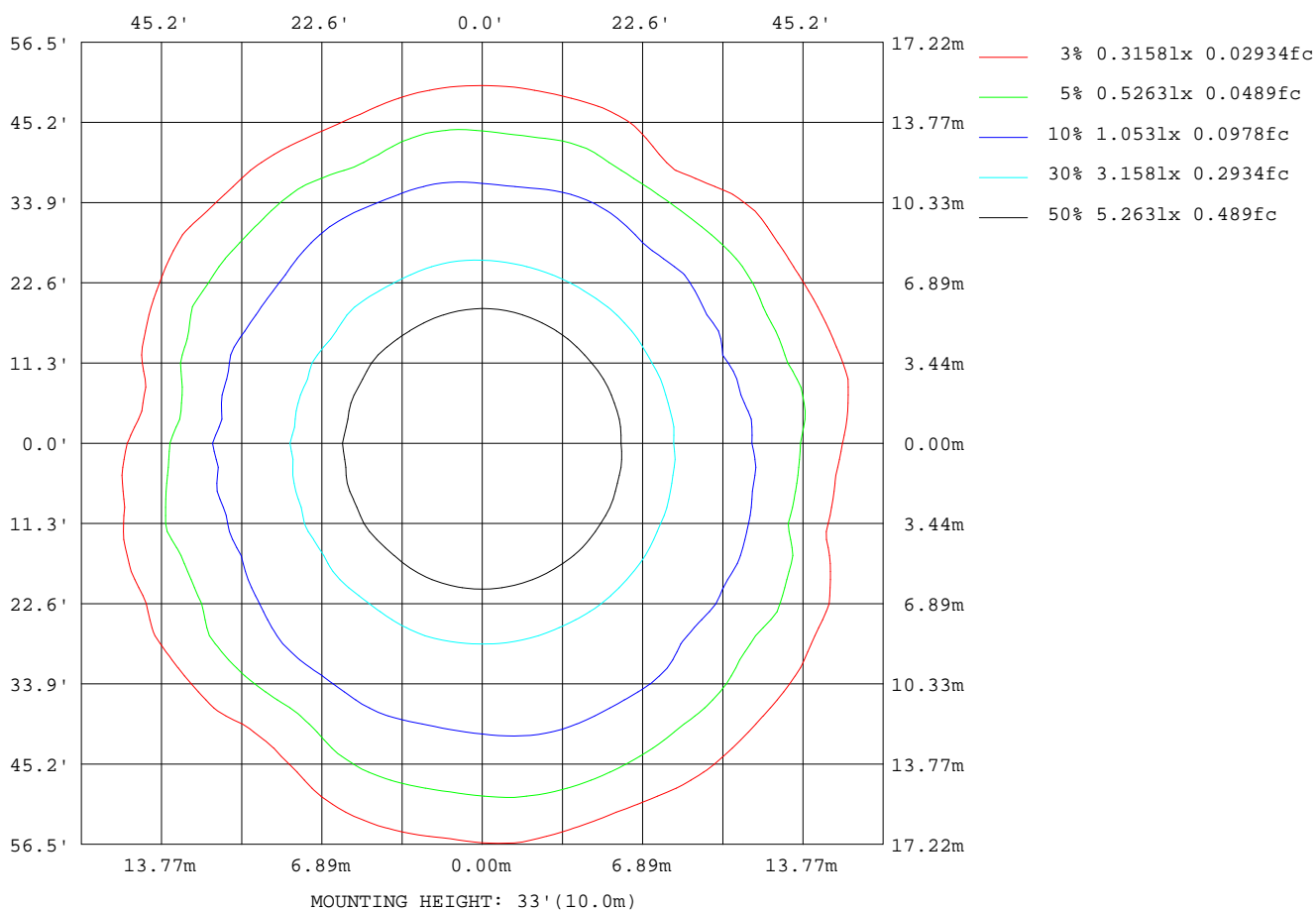
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

ISOLUX DIAGRAM

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

LED Avg.L Report

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: φ450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.:φ450mm	Shielding Angle:

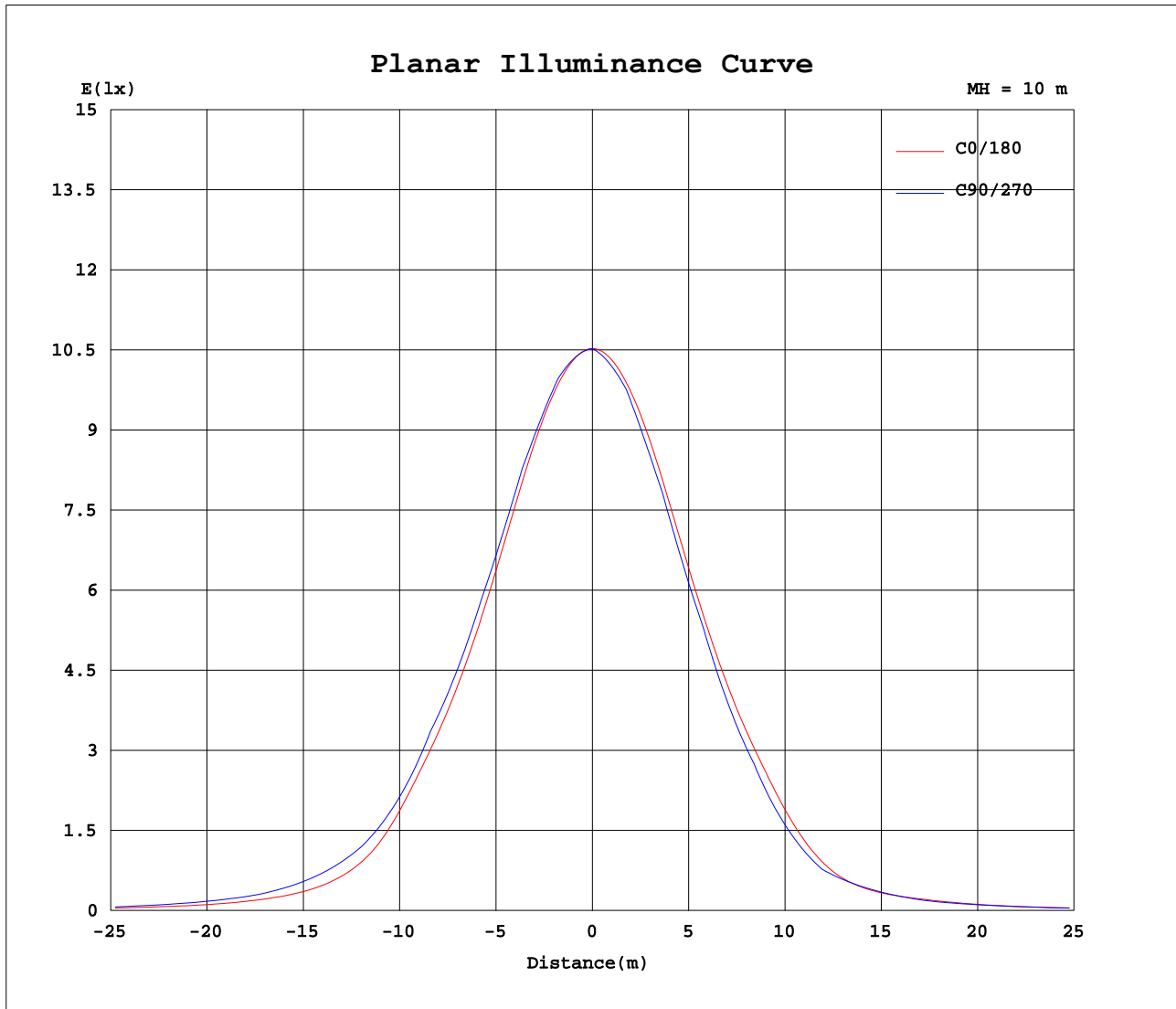
AvgL	cd/m2
L_0~180 (65) av	1714
L_0~180 (75) av	1302
L_0~180 (85) av	294
L_90~270 (65) av	2127
L_90~270 (75) av	1510
L_90~270 (85) av	0
L_45 (65) av	1902
L_45 (75) av	1433
L_45 (85) av	485

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: Jason
Test Date: 2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 5.850m [K=1.7094]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: φ450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.:φ450mm	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
5	1048	1047	1047	1047	1047	1047	1047	1047	1048	1048	1048	1048	1048	1048	1048	1049	1049	1048	1048
10	1033	1033	1034	1034	1035	1036	1037	1037	1037	1038	1039	1040	1040	1041	1042	1043	1044	1044	1044
15	1008	1009	1010	1012	1015	1015	1016	1017	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1021
20	967	970	974	978	979	981	983	984	985	987	988	989	990	991	993	994	996	997	997
25	910	916	923	924	925	929	933	939	938	939	942	943	944	945	946	946	946	946	946
30	842	850	858	857	861	869	873	873	876	879	883	885	885	886	887	889	891	893	895
35	764	776	779	779	790	795	795	802	810	813	813	814	814	815	817	819	821	822	822
40	673	690	687	694	705	703	712	722	724	728	731	734	733	733	735	738	743	747	749
45	530	569	556	583	576	585	590	596	599	609	617	630	631	627	626	624	619	611	602
50	351	378	375	396	408	424	411	430	418	416	465	488	488	489	494	498	491	476	459
55	231	223	222	216	272	285	304	284	288	315	329	327	334	347	358	366	367	360	348
60	162	156	152	163	181	200	207	224	225	226	231	236	233	223	217	224	235	246	242
65	113	119	120	127	132	130	135	145	163	157	151	150	153	147	147	157	166	172	175
70	84.9	84.7	84.1	89.5	92.8	91.0	93.0	104	107	108	108	109	107	108	109	105	99.4	96.6	107
75	52.9	58.6	59.3	59.1	63.1	67.4	75.1	73.8	75.7	79.2	79.4	71.9	71.4	76.6	78.6	74.3	71.8	72.1	80.0
80	27.8	30.9	33.6	35.0	35.5	39.6	38.5	43.3	47.0	49.3	47.5	44.9	46.0	48.6	49.8	47.4	46.4	46.8	49.1
85	3.92	6.77	7.59	9.25	12.4	12.6	14.2	15.7	14.7	12.9	9.76	7.63	5.96	4.44	2.95	1.60	0.70	0.18	0.00
90	53.1	53.9	54.6	55.2	55.7	56.0	56.2	56.5	56.7	56.9	57.0	57.0	57.0	57.0	0.00	0.00	57.0	57.0	57.0
95	70.2	71.2	72.0	72.8	73.3	73.7	74.0	74.3	74.5	74.7	74.8	74.8	74.9	74.8	74.8	74.8	74.9	74.9	74.9
100	89.1	90.1	91.0	91.7	92.3	92.7	93.0	93.3	93.6	93.9	94.0	94.1	94.2	94.3	94.3	94.3	94.0	93.8	93.5
105	109	110	111	112	112	113	113	114	114	115	115	115	115	115	115	115	115	115	114
110	131	132	133	134	135	135	136	136	137	137	137	138	138	138	138	138	138	138	138
115	155	156	157	158	159	160	161	161	161	162	162	163	163	163	163	163	163	163	163
120	181	182	183	184	185	186	187	187	188	188	188	189	190	190	189	189	189	190	190
125	207	208	210	210	212	212	213	214	214	214	215	215	216	216	216	215	216	216	216
130	233	234	235	236	237	238	239	239	239	239	240	241	241	241	241	241	241	241	242
135	257	258	259	260	261	262	263	263	263	264	264	265	265	265	265	265	265	266	266
140	280	281	282	283	284	285	285	286	286	286	287	287	288	288	288	288	288	288	288
145	301	302	303	304	304	305	306	306	306	306	307	308	308	308	308	308	308	308	309
150	320	320	321	322	323	323	324	324	324	325	325	326	326	326	326	326	326	326	326
155	336	336	337	338	338	339	339	340	340	340	340	341	341	341	341	341	341	342	342
160	349	350	350	351	351	352	352	352	353	353	353	354	354	354	354	354	354	354	354
165	360	360	361	361	361	362	362	362	362	363	363	363	363	364	364	364	364	364	364
170	367	368	368	368	368	369	369	369	369	369	369	370	370	370	370	370	370	370	370
175	372	372	372	372	372	372	372	372	372	373	373	373	373	373	373	373	373	373	373
180	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.: ϕ 450mm	Shielding Angle:

Table--2

UNIT: cd

C (DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
5	1048	1048	1048	1048	1048	1047	1047	1047	1047	1047	1047	1047	1047	1047	1047	1048	1048	1049	1047
10	1044	1044	1044	1043	1043	1042	1040	1039	1038	1036	1035	1033	1033	1033	1033	1033	1034	1035	1032
15	1020	1020	1020	1019	1019	1019	1019	1020	1022	1022	1018	1014	1010	1007	1006	1007	1009	1012	1006
20	997	997	996	994	991	988	985	981	979	980	981	985	979	971	965	965	968	972	963
25	945	944	943	942	942	942	943	943	936	929	922	924	927	925	913	906	910	917	904
30	895	893	890	886	881	876	871	870	872	877	869	858	855	860	854	839	841	850	833
35	820	818	814	811	809	809	810	801	794	790	796	799	782	775	784	766	759	770	749
40	748	745	741	733	725	715	707	708	716	711	693	691	705	677	678	679	659	679	645
45	597	595	599	606	609	614	614	593	571	571	573	527	525	532	496	538	491	535	478
50	449	444	449	457	450	432	426	433	428	401	374	358	334	340	338	353	327	346	296
55	338	335	335	332	313	277	252	266	277	282	282	254	248	250	265	242	228	213	186
60	234	235	234	227	214	191	180	184	194	192	187	199	185	187	167	161	164	164	145
65	173	168	161	157	150	138	135	137	136	127	117	124	136	123	107	104	111	118	112
70	116	108	98.5	105	104	96.8	95.9	98.5	96.4	93.8	93.5	94.7	99.8	92.3	86.8	84.6	84.5	85.2	76.0
75	83.1	75.3	69.3	72.7	70.7	65.0	64.4	68.6	68.0	65.1	67.5	67.4	62.9	62.2	61.2	57.4	54.4	54.3	52.4
80	51.7	49.9	45.5	45.3	43.3	41.0	40.9	41.5	40.9	38.3	41.5	45.8	38.3	40.0	36.8	30.4	28.2	28.4	24.0
85	0.20	0.75	1.53	2.69	3.94	5.37	7.09	8.88	11.2	12.1	13.3	13.1	10.5	9.43	8.46	5.34	2.02	4.22	1.21
90	57.0	56.7	0.00	0.00	54.9	54.1	53.7	53.3	52.9	52.4	51.9	51.4	51.1	50.8	50.6	50.7	50.8	50.9	50.4
95	74.6	74.2	73.8	73.5	73.3	73.0	72.7	72.3	71.9	71.5	71.1	70.7	70.3	70.0	69.7	69.5	69.3	69.0	68.5
100	93.4	93.3	93.2	93.0	92.7	92.4	92.0	91.7	91.3	90.9	90.5	90.1	89.8	89.4	89.1	88.8	88.5	88.2	87.7
105	114	114	114	114	113	113	113	112	112	112	111	111	110	110	110	109	109	109	108
110	137	137	136	136	136	136	136	135	134	134	134	134	133	133	132	132	132	131	130
115	163	163	162	162	162	162	161	160	159	159	159	159	158	157	156	156	156	156	155
120	189	189	188	188	188	188	187	187	186	186	185	185	184	183	183	182	182	181	181
125	216	215	215	215	215	214	214	213	212	212	212	211	211	210	209	208	208	207	207
130	241	241	240	240	240	240	239	239	238	238	237	237	236	235	234	234	233	233	232
135	265	265	265	265	264	264	264	263	262	262	262	261	261	260	259	258	258	257	257
140	288	288	287	287	287	287	286	286	285	285	284	284	283	282	282	281	281	280	279
145	308	308	308	308	307	307	307	306	306	305	305	305	304	303	302	302	302	301	300
150	326	326	326	326	326	325	325	324	324	324	323	323	322	322	321	321	320	320	319
155	342	341	341	341	341	341	341	340	340	339	339	339	338	338	337	337	336	336	335
160	354	354	354	354	354	354	353	353	353	352	352	352	351	351	350	350	350	350	349
165	364	364	363	363	363	363	363	363	362	362	362	362	361	361	361	361	360	360	360
170	370	370	370	370	370	370	370	369	369	369	369	369	369	368	368	368	368	368	368
175	373	373	373	373	373	373	373	373	373	373	373	373	372	372	372	372	372	372	372
180	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm		
NAME: SUGAR 450-U-29W-840	TYPE:Ceiling light	WEIGHT:
SPEC.:4000K	DIM.: φ450mm*H78mm	SERIAL No.:
MFR.: NEKO LIGHTING AG	SUR.:φ450mm	Shielding Angle:

Table--3

UNIT: cd

C (DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
5	1046	1044	1043	1042	1041	1040	1039	1039	1038	1038	1037	1037	1037	1037	1037	1037	1037	1037	1037
10	1029	1026	1024	1022	1020	1020	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022
15	1000	996	993	993	994	995	997	993	990	987	985	983	982	982	982	982	982	983	983
20	955	950	952	955	956	949	944	939	938	938	939	940	941	942	942	943	943	943	942
25	893	895	900	897	889	884	885	887	890	885	881	877	876	875	875	876	878	879	880
30	824	831	830	820	819	825	828	818	810	805	805	805	807	808	810	812	813	814	813
35	747	756	740	740	752	740	730	731	735	736	725	718	715	714	714	714	713	713	712
40	654	642	629	652	618	601	622	633	617	608	608	611	616	620	621	617	612	607	602
45	509	472	489	469	442	444	451	451	463	478	484	476	471	471	470	464	455	448	449
50	313	320	338	328	317	305	309	317	325	327	321	310	307	315	318	309	292	284	292
55	186	217	217	238	233	238	226	220	224	217	204	201	206	216	224	226	222	219	218
60	143	145	156	149	163	164	163	157	155	151	150	148	146	143	141	143	149	154	148
65	112	112	107	102	105	114	115	111	102	96.3	101	106	106	103	103	107	111	114	110
70	70.2	70.8	76.4	80.7	76.4	77.5	79.8	76.7	70.6	67.5	69.8	72.2	71.3	68.8	71.2	74.2	74.4	73.2	72.6
75	49.7	45.7	48.0	47.9	49.1	49.2	50.2	46.3	42.3	41.8	41.8	42.1	41.4	40.3	41.1	43.5	44.3	43.4	43.6
80	22.9	21.9	22.9	21.7	24.1	23.7	21.3	18.7	16.1	15.0	14.3	13.7	13.0	13.1	12.9	13.8	13.9	13.4	14.9
85	2.06	1.30	2.84	2.43	0.32	0.27	0.57	1.07	1.31	1.27	1.12	0.87	0.61	0.39	0.18	0.05	0.00	0.05	0.22
90	49.9	49.4	49.0	48.8	48.6	48.4	48.3	48.2	48.1	48.0	48.0	48.0	48.0	48.0	48.2	48.4	48.6	48.4	48.1
95	68.0	67.4	67.0	66.5	66.2	66.0	65.8	65.7	65.4	65.1	64.9	64.8	64.8	64.8	64.7	64.5	64.4	64.4	64.3
100	87.1	86.6	86.2	85.8	85.5	85.1	84.8	84.5	84.2	83.9	83.6	83.4	83.2	83.0	82.6	82.3	82.1	82.0	81.9
105	108	107	107	106	106	106	105	105	104	104	104	103	103	102	102	102	101	101	101
110	130	129	129	128	128	127	127	126	126	125	125	124	123	123	122	122	122	122	122
115	154	153	153	152	151	151	150	150	149	148	147	147	147	147	146	145	145	145	145
120	180	179	178	177	176	176	176	175	174	174	173	173	172	172	172	171	171	171	171
125	206	205	204	203	202	202	201	201	200	199	199	199	198	198	198	197	197	197	197
130	231	230	229	228	228	227	227	227	226	225	224	224	224	224	223	223	223	223	223
135	256	255	254	253	252	252	252	251	250	250	249	249	249	249	248	248	247	248	248
140	279	278	277	276	275	275	275	274	274	273	272	272	272	272	271	271	271	271	271
145	300	299	298	297	297	296	296	296	295	294	294	294	294	294	293	293	292	293	293
150	319	318	317	316	316	316	315	315	314	314	313	313	313	313	313	312	312	312	312
155	335	334	334	333	333	332	332	332	331	331	330	330	330	330	330	330	329	329	330
160	349	348	348	347	347	346	346	346	345	345	345	345	345	345	344	344	344	344	344
165	359	359	359	358	358	358	357	357	357	357	356	356	356	356	356	356	356	356	356
170	367	367	367	366	366	366	366	366	365	365	365	365	365	365	365	365	365	365	365
175	372	372	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371
180	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.5V I:0.1382A P:30.48W PF:0.9131 Freq:49.90Hz Lamp Flux:3319.09x1 lm																	
NAME: SUGAR 450-U-29W-840									TYPE:Ceiling light						WEIGHT:		
SPEC.:4000K									DIM.: φ450mm*H78mm						SERIAL No.:		
MFR.: NEKO LIGHTING AG									SUR.:φ450mm						Shielding Angle:		

Table--4

UNIT: cd

C (DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053				
5	1038	1038	1038	1039	1039	1039	1040	1041	1041	1042	1043	1043	1044	1045	1046				
10	1022	1021	1021	1022	1022	1022	1023	1023	1024	1026	1026	1027	1028	1030	1031				
15	984	985	986	988	989	992	994	996	997	997	999	1002	1003	1004	1005				
20	941	941	940	941	942	945	948	949	951	954	956	959	963	964	965				
25	880	881	881	881	882	884	885	889	895	896	898	901	906	911	910				
30	812	810	810	810	813	813	814	816	820	828	833	834	838	845	844				
35	713	714	717	721	727	729	733	738	739	744	754	759	759	766	769				
40	600	599	600	601	605	611	625	630	636	637	638	652	657	665	679				
45	458	467	467	456	442	446	465	471	455	467	465	450	491	487	536				
50	311	323	323	317	305	291	286	317	320	300	310	297	313	327	356				
55	221	221	208	184	171	190	211	221	222	227	222	231	235	255	254				
60	140	142	147	140	131	135	146	147	152	149	162	167	175	168	162				
65	103	99.4	102	101	96.7	99.4	106	100	89.6	104	118	124	105	91.9	99.8				
70	72.8	70.6	70.1	68.7	69.7	71.0	72.7	76.0	74.6	80.0	81.8	84.0	83.1	84.1	86.6				
75	43.9	42.4	41.5	40.1	42.8	42.6	42.4	48.3	52.4	50.5	53.1	52.1	57.1	55.0	54.1				
80	14.1	13.9	15.1	15.1	16.6	17.6	18.4	21.9	25.6	27.8	27.1	29.1	33.0	33.9	33.3				
85	0.42	0.67	1.04	1.28	1.52	1.68	1.73	1.34	0.65	0.37	3.45	5.29	3.09	4.29	6.21				
90	47.8	47.6	47.5	47.4	47.4	47.6	47.8	48.2	48.6	49.1	49.7	50.4	51.1	51.8	52.4				
95	64.2	64.0	63.8	63.7	63.9	64.2	64.6	64.9	65.3	65.8	66.5	67.3	68.2	68.9	69.6				
100	81.9	81.9	82.0	82.1	82.3	82.6	83.0	83.5	84.1	84.7	85.4	86.1	86.9	87.6	88.4				
105	101	101	101	102	102	103	103	104	104	105	106	106	107	108	109				
110	122	122	122	123	123	124	124	125	126	127	127	128	129	130	130				
115	146	146	146	146	147	148	149	149	150	150	151	153	154	154	155				
120	172	172	172	172	173	174	175	175	176	176	177	178	179	180	181				
125	198	198	198	198	199	200	200	201	202	202	203	204	205	206	207				
130	223	224	224	224	225	225	226	227	227	228	229	230	231	232	232				
135	248	248	248	249	249	250	251	251	252	252	253	254	255	256	257				
140	271	272	272	272	272	273	274	274	275	275	276	277	278	279	280				
145	293	293	293	293	294	295	295	296	296	297	298	298	299	300	301				
150	313	313	313	313	313	314	315	315	315	316	317	317	318	319	319				
155	330	330	330	330	330	331	331	332	332	333	333	334	334	335	335				
160	344	344	344	345	345	345	346	346	346	347	347	348	348	349	349				
165	356	356	356	356	357	357	357	357	358	358	358	359	359	359	360				
170	365	365	365	365	365	366	366	366	366	366	366	367	367	367	367				
175	371	371	371	371	371	371	371	371	371	371	371	371	371	372	372				
180	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373				

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:Jason
Test Date:2019-11-14

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:5.850m [K=1.7094]
Remarks: