

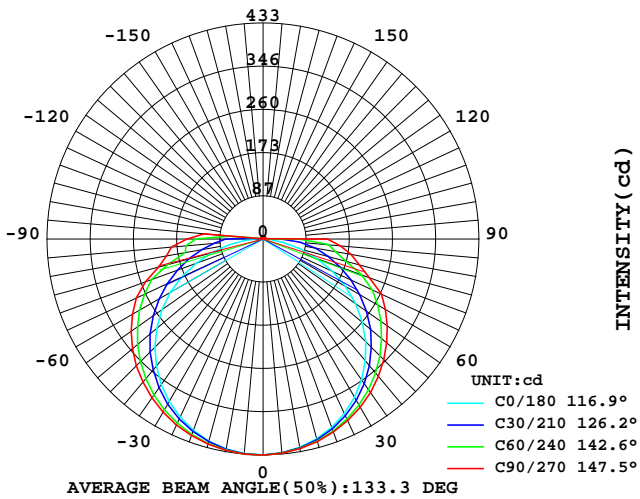
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: KVS-RP20240120-3

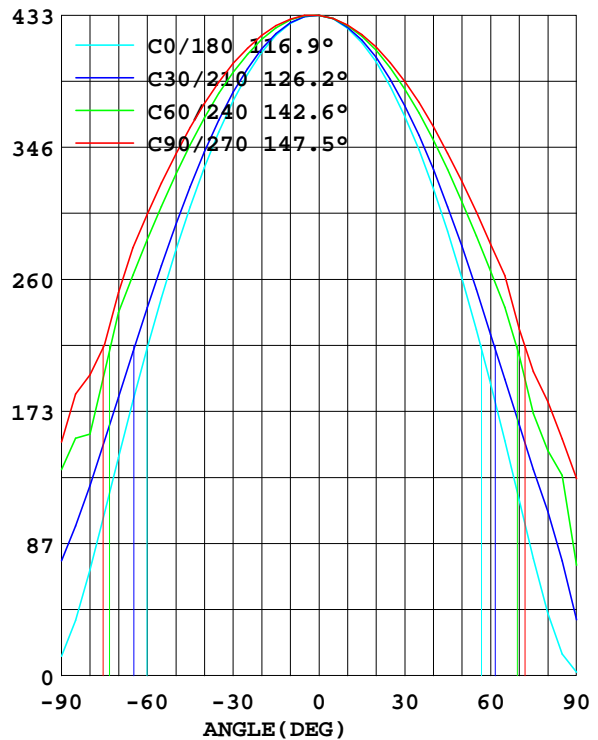
MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

DATA OF LAMP		I <sub>max</sub> (cd)	432.9	S/MH(C0/180)	1.29
MODEL	4000K COB	EFFICIENCY(%)	100.1	S/MH(C90/270)	1.39
NOMINAL POWER(W)	15	TOTAL FLUX(lm)	1647.8	Voltage(V)	24.00
RATED VOLTAGE(V)	24	EFFICIENCY(lm/W)	109.0	Current(A)	0.630
NOMINAL FLUX(lm)	1647.0	η up(%)	3.8	Power(W)	15.12
LAMPS QUANTITY	1	η down(%)	96.3	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.0	Effective Flux(lm)	1608.4	EET	0.128

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



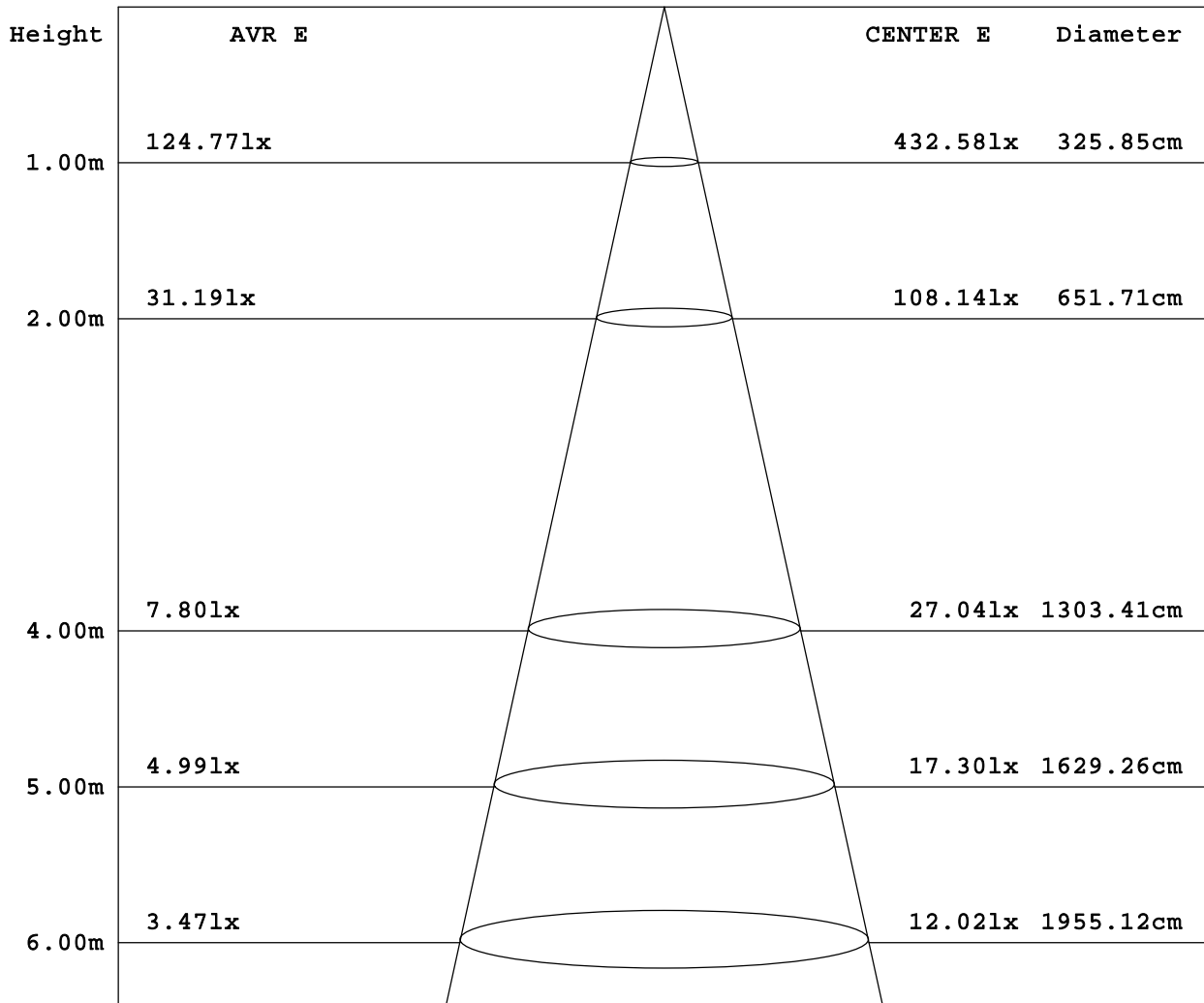
Test System:HOPPO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

AVERAGE AND CENTER E Figure

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



Angle:116.9deg

Test System:HOPPO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

KVS Valaistussuunnittelu Oy IES TEST REPORT

ZONAL FLUX DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	427.3	428.7	430.2	430.2	424.3	425.5	426.4	424.1	0- 10	41.04	41.04
20.0	408.4	413.8	419.5	416.7	402.2	407.5	412.0	405.1	10- 20	118.7	159.7
30.0	376.7	388.8	401.1	392.9	366.5	378.9	389.5	375.8	20- 30	183.8	343.6
40.0	332.7	354.2	374.8	359.0	319.0	341.3	359.7	338.1	30- 40	229.8	573.5
50.0	278.6	311.9	341.7	317.1	260.2	295.9	323.8	293.2	40- 50	252.1	825.6
60.0	215.0	263.5	302.4	268.4	191.6	244.4	282.9	242.9	50- 60	249.2	1075
70.0	142.9	210.2	251.0	214.7	114.8	186.9	227.1	187.0	60- 70	222.5	1297
80.0	69.28	141.4	197.0	146.8	41.04	127.6	179.6	128.7	70- 80	170.6	1468
90.0	12.74	105.1	153.0	105.1	2.177	54.45	129.1	55.59	80- 90	117.1	1585
100.0	3.585	5.663	10.23	3.904	2.561	3.583	4.860	3.872	90-100	37.44	1623
110.0	3.906	4.159	3.837	3.904	3.137	3.935	4.924	4.192	100-110	4.311	1627
120.0	4.354	4.543	4.413	4.320	3.777	4.383	5.180	4.608	110-120	4.193	1631
130.0	4.866	5.023	4.860	4.768	4.418	4.831	5.436	5.056	120-130	4.200	1635
140.0	5.314	5.375	5.244	5.184	4.994	5.279	5.692	5.472	130-140	3.960	1639
150.0	5.762	5.727	5.564	5.568	5.378	5.631	5.948	5.792	140-150	3.459	1643
160.0	6.147	6.015	5.884	5.888	5.762	5.951	6.139	6.048	150-160	2.696	1646
170.0	6.339	6.207	6.139	6.112	6.083	6.143	6.395	6.240	160-170	1.724	1647
180.0	6.403	6.271	6.331	6.272	6.339	6.271	6.395	6.272	170-180	0.596	1648
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

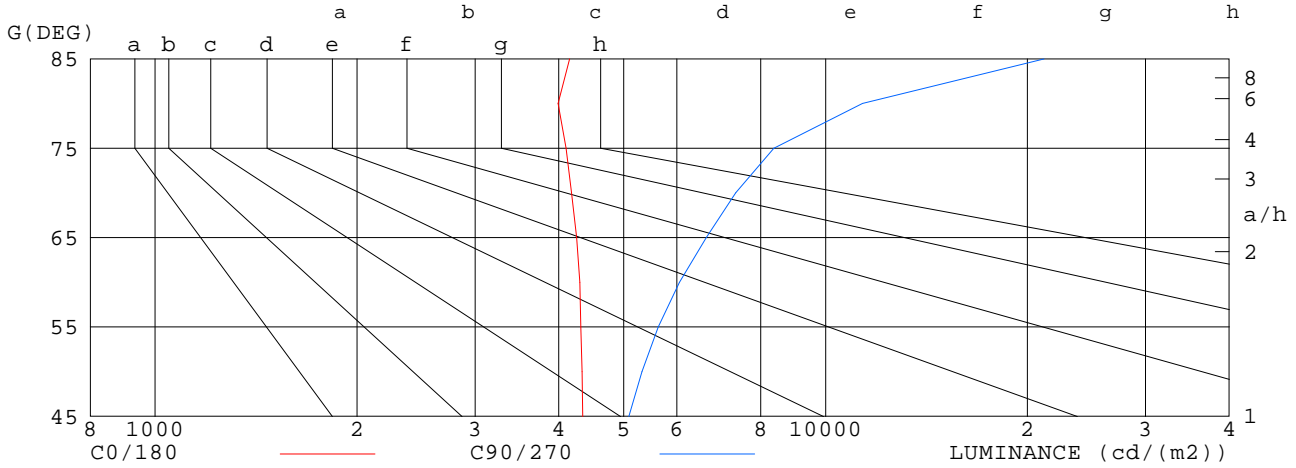
LUMINANCE LIMITATION CURVES

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
		2000	1000	500	<=300				
1.15	A								
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/m2		
G (DEG)	C0/180	C90/270
85	4149	21178
80	3988	11355
75	4100	8373
70	4178	7345
65	4252	6641
60	4298	6053
55	4313	5629
50	4332	5320
45	4344	5085

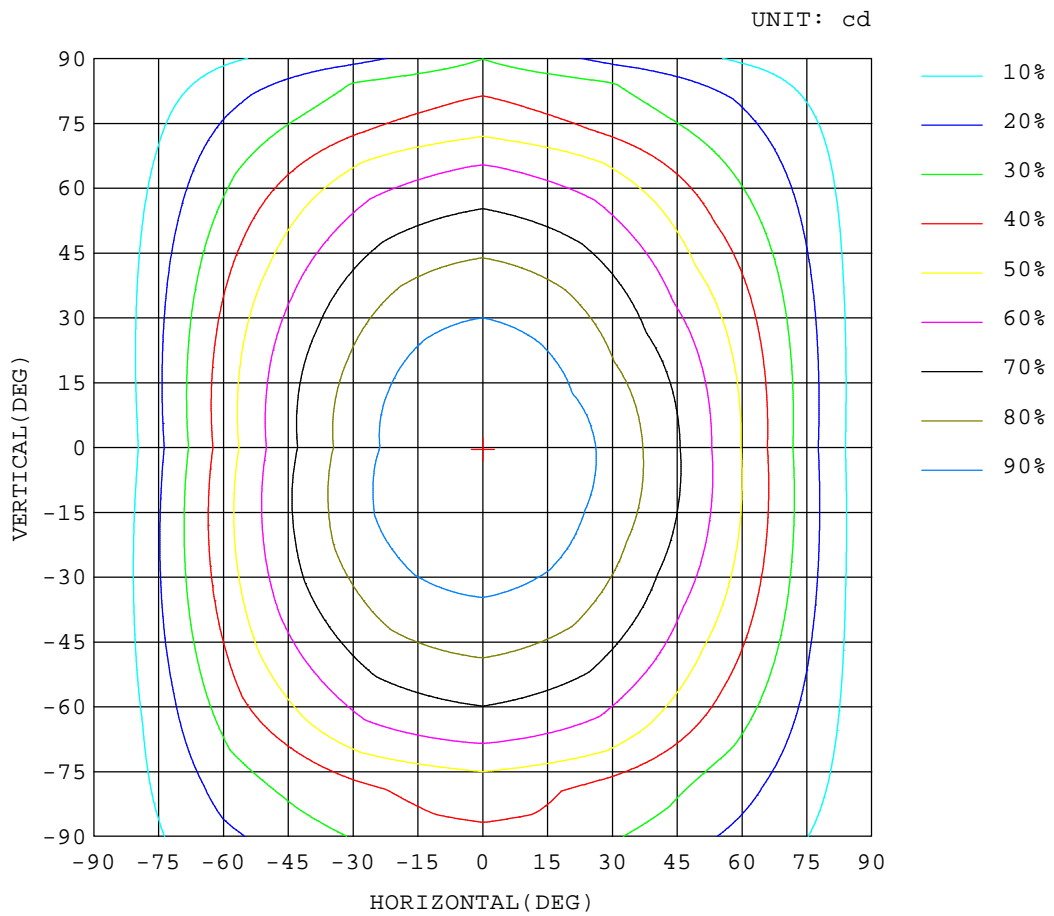
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



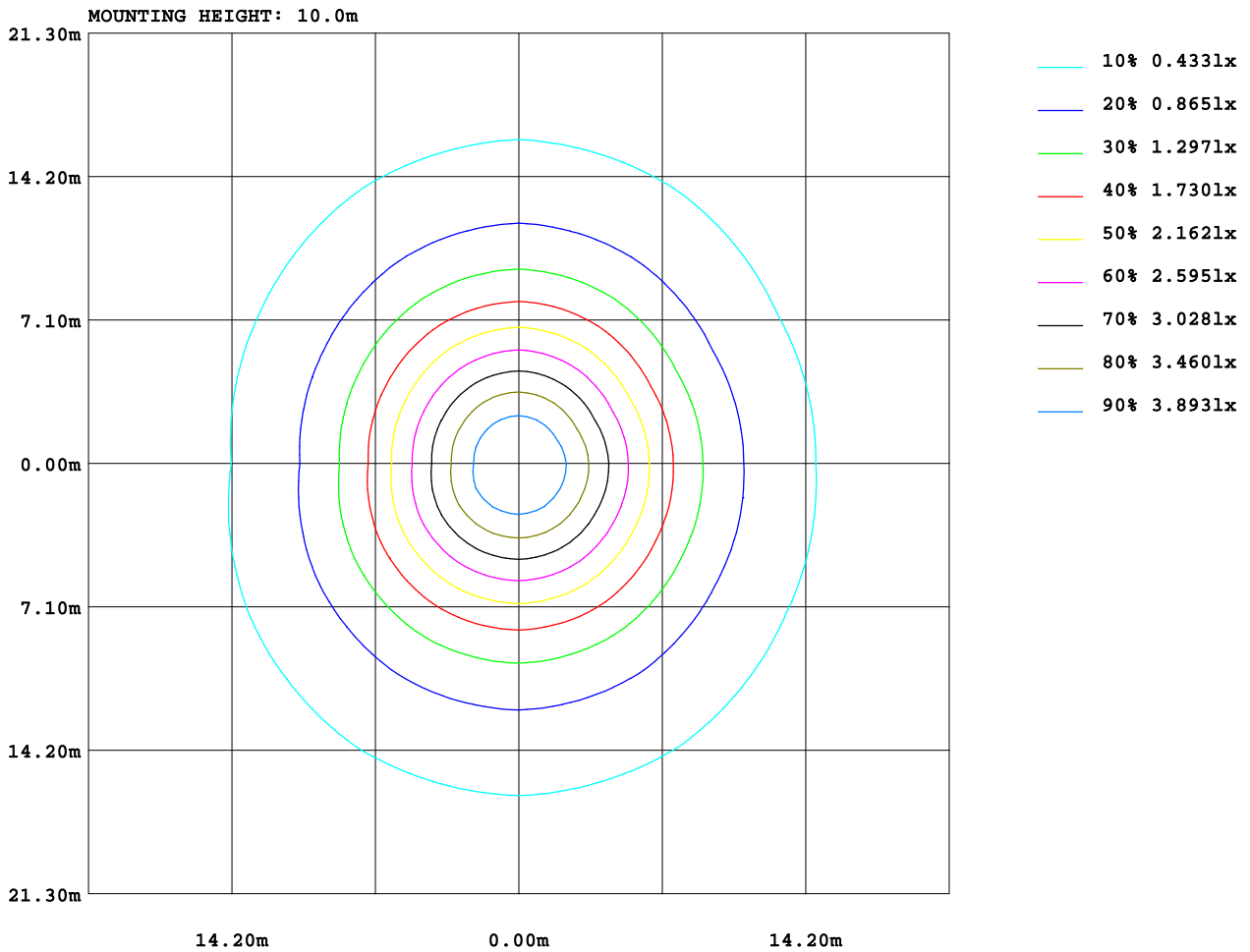
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

ISOLUX DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

# KVS Valaistussuunnittelu Oy IES TEST REPORT

## AREA LUMINOUS FLUX

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

VERTICAL (DEG)	AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a
	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90	
90	0.03	0.21	0.59	1.16	1.88	2.67	3.41	4.02	4.51	4.51	4.01	3.41	2.69	1.94	1.24	0.67	0.28	0.06	37.3	36.4
80	0.04	0.31	0.93	1.82	2.78	3.77	4.69	5.43	5.95	5.94	5.40	4.65	3.75	2.81	1.89	1.06	0.42	0.07	51.7	51.4
70	0.05	0.41	1.21	2.32	3.57	4.95	6.24	7.13	7.71	7.70	7.12	6.21	4.94	3.57	2.36	1.33	0.53	0.09	67.5	67.2
60	0.06	0.49	1.45	2.78	4.35	5.99	7.45	8.46	9.08	9.07	8.43	7.41	5.95	4.34	2.82	1.58	0.63	0.10	80.5	80.3
50	0.06	0.57	1.66	3.19	4.97	6.79	8.43	9.60	10.2	10.2	9.55	8.37	6.74	4.94	3.25	1.81	0.71	0.11	91.3	91.1
40	0.07	0.62	1.83	3.54	5.49	7.49	9.26	10.5	11.2	11.2	10.5	9.19	7.41	5.46	3.64	2.02	0.78	0.12	101	101
30	0.07	0.66	1.96	3.81	5.92	8.03	9.92	11.3	12.0	12.0	11.2	9.83	7.95	5.96	3.96	2.18	0.84	0.13	108	108
20	0.07	0.67	2.03	3.96	6.19	8.42	10.3	11.8	12.6	12.6	11.7	10.3	8.45	6.34	4.20	2.29	0.87	0.13	113	113
10	0.07	0.66	2.03	4.00	6.28	8.58	10.6	12.1	12.9	12.9	12.1	10.7	8.78	6.56	4.31	2.33	0.87	0.13	116	116
0	0.07	0.66	2.05	4.04	6.35	8.67	10.7	12.2	13.0	13.0	12.2	10.8	8.86	6.62	4.35	2.35	0.88	0.13	117	117
-10	0.07	0.69	2.10	4.10	6.40	8.70	10.7	12.1	12.8	12.8	12.0	10.6	8.70	6.52	4.31	2.34	0.88	0.13	116	116
-20	0.08	0.70	2.07	4.03	6.26	8.47	10.3	11.7	12.3	12.3	11.6	10.2	8.34	6.24	4.14	2.26	0.86	0.13	112	112
-30	0.08	0.67	1.98	3.84	5.94	8.00	9.78	11.0	11.7	11.6	10.9	9.66	7.86	5.84	3.88	2.13	0.82	0.13	106	106
-40	0.08	0.63	1.84	3.55	5.47	7.35	9.02	10.1	10.7	10.7	10.1	8.91	7.23	5.35	3.52	1.94	0.76	0.12	97.6	97.5
-50	0.07	0.57	1.65	3.18	4.87	6.59	8.10	9.10	9.68	9.65	9.03	8.00	6.47	4.77	3.11	1.72	0.68	0.11	87.4	87.3
-60	0.07	0.50	1.42	2.71	4.12	5.65	6.99	7.84	8.35	8.33	7.78	6.90	5.56	4.04	2.65	1.47	0.58	0.10	75.1	74.9
-70	0.06	0.43	1.18	2.20	3.24	4.32	5.33	6.07	6.56	6.55	6.03	5.25	4.23	3.15	2.14	1.21	0.49	0.09	58.6	58.3
-80	0.05	0.36	0.96	1.74	2.59	3.49	4.26	4.85	5.30	5.30	4.84	4.27	3.49	2.58	1.71	0.96	0.40	0.08	47.3	46.9
-90																				
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)		20	30	40	50	60	70	80	90		
Φ t	1.15	9.80	29.0	56.0	86.7	118	146	166	177	177	165	145	118	87.1	57.5	31.7	12.2	1.96	1648	
Φ a	0.07	9.07	28.8	56.0	86.7	118	146	166	177	177	165	145	118	87.1	57.5	31.5	11.9	1.12		1608

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

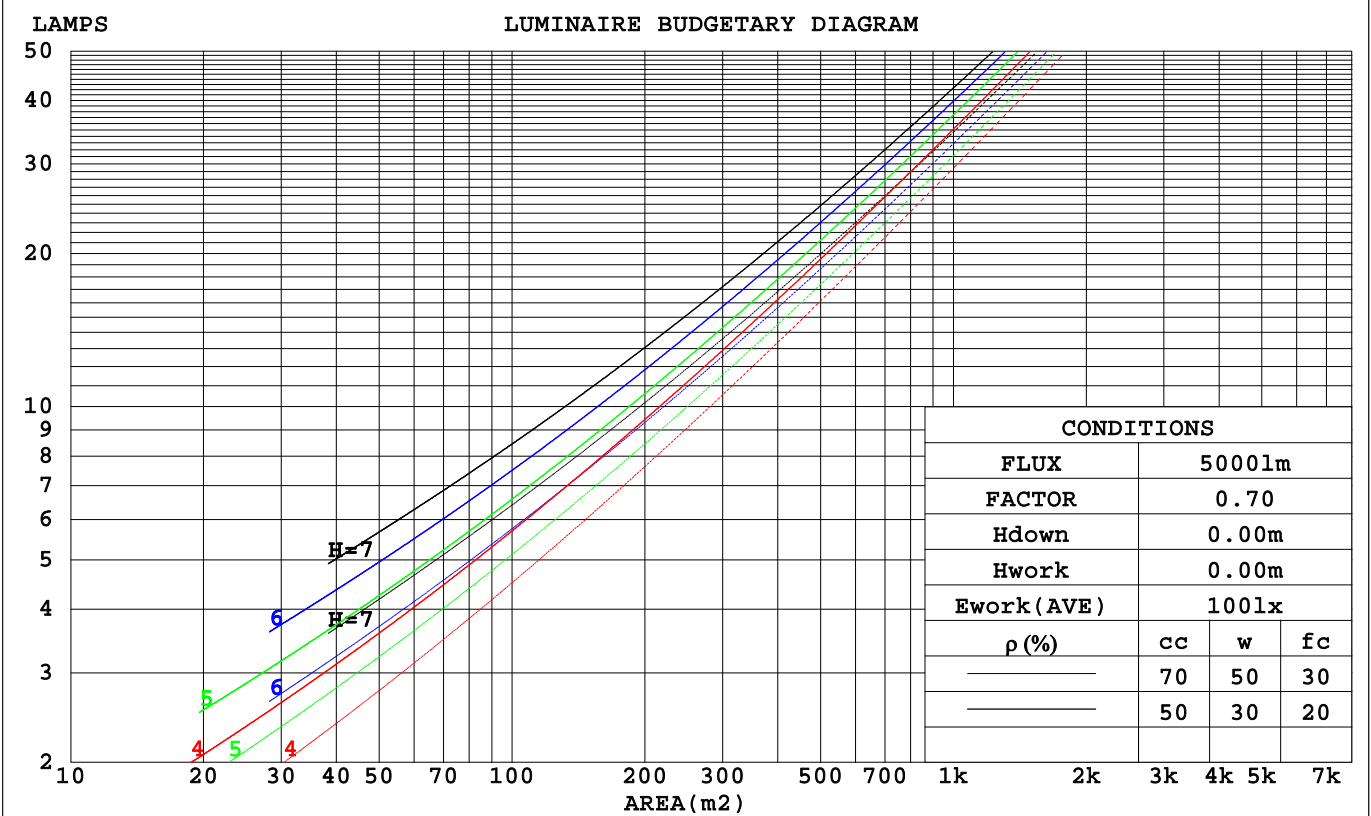
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

$\rho_{cc}$	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															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.96
1.0	.99	.94	.89	.96	.91	.87	.91	.87	.83	.87	.83	.80	.82	.80	.77	.75
2.0	.85	.77	.70	.82	.75	.69	.78	.72	.67	.74	.69	.64	.70	.66	.62	.60
3.0	.73	.64	.57	.71	.63	.56	.68	.61	.55	.64	.58	.53	.61	.56	.52	.49
4.0	.64	.55	.47	.63	.54	.47	.60	.52	.46	.57	.50	.45	.54	.48	.44	.41
5.0	.57	.47	.40	.56	.47	.40	.53	.45	.39	.51	.44	.38	.48	.42	.37	.35
6.0	.51	.42	.35	.50	.41	.34	.48	.40	.34	.46	.39	.33	.44	.37	.33	.30
7.0	.46	.37	.30	.45	.36	.30	.43	.35	.30	.41	.34	.29	.40	.33	.29	.27
8.0	.42	.33	.27	.41	.33	.27	.40	.32	.26	.38	.31	.26	.36	.30	.26	.23
9.0	.39	.30	.24	.38	.30	.24	.36	.29	.24	.35	.28	.23	.34	.27	.23	.21
10.0	.35	.27	.22	.35	.27	.22	.34	.26	.21	.32	.26	.21	.31	.25	.21	.19



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456



KVS Valaistussuunnittelu Oy IES TEST REPORT

WEC AND CCEC

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.387	.220	.070	.379	.216	.069	.363	.208	.066	.348	.201	.064	.335	.194	.063	
2.0	.339	.186	.057	.332	.183	.056	.317	.176	.055	.304	.171	.053	.292	.165	.052	
3.0	.303	.161	.048	.296	.158	.048	.283	.154	.047	.272	.149	.046	.261	.144	.045	
4.0	.273	.142	.042	.267	.140	.041	.256	.136	.041	.245	.132	.040	.236	.128	.039	
5.0	.248	.127	.037	.243	.125	.036	.233	.121	.036	.224	.118	.035	.215	.115	.034	
6.0	.228	.114	.033	.223	.113	.032	.214	.110	.032	.205	.107	.031	.198	.104	.031	
7.0	.210	.104	.029	.206	.102	.029	.198	.100	.029	.190	.097	.028	.183	.095	.028	
8.0	.195	.095	.027	.191	.094	.027	.184	.092	.026	.177	.090	.026	.170	.087	.025	
9.0	.181	.088	.025	.178	.087	.024	.171	.085	.024	.165	.083	.024	.159	.081	.023	
10.0	.170	.081	.023	.167	.080	.022	.161	.079	.022	.155	.077	.022	.150	.075	.022	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.220	.220	.220	.188	.188	.188	.128	.128	.128	.074	.074	.074	.024	.024	.024	
1.0	.215	.185	.158	.184	.159	.136	.126	.109	.094	.072	.063	.055	.023	.020	.018	
2.0	.208	.161	.122	.178	.139	.105	.122	.096	.073	.070	.056	.043	.023	.018	.014	
3.0	.200	.144	.099	.172	.124	.086	.118	.086	.060	.068	.050	.036	.022	.016	.012	
4.0	.192	.131	.084	.165	.113	.073	.114	.079	.052	.066	.046	.031	.021	.015	.010	
5.0	.185	.121	.074	.158	.105	.065	.109	.073	.046	.063	.043	.027	.020	.014	.009	
6.0	.177	.113	.067	.152	.098	.058	.105	.068	.041	.061	.040	.025	.020	.013	.008	
7.0	.170	.106	.062	.146	.092	.054	.101	.064	.038	.059	.038	.023	.019	.012	.007	
8.0	.163	.100	.058	.140	.087	.050	.097	.061	.036	.056	.036	.021	.018	.012	.007	
9.0	.156	.095	.054	.135	.083	.047	.093	.058	.034	.054	.034	.020	.018	.011	.007	
10.0	.150	.091	.052	.129	.079	.045	.090	.056	.032	.052	.033	.019	.017	.011	.006	

Test System:HOPPO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

**KVS Valaistussuunnittelu Oy IES TEST REPORT**

**Uncorrected UGR Table**

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy										
Address: FI										
NAME: COB LED Strip					TYPE: 91012456			WEIGHT:		
SPECIFICATION: Any Cut COB					DIMENSION: 10x 1000mm			SERIAL No.: 01		
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	17.7	19.3	18.0	19.5	19.8	19.1	20.7	19.4	20.9	21.2
3H	19.4	20.9	19.8	21.2	21.6	21.6	23.1	21.9	23.4	23.7
4H	20.2	21.6	20.6	22.0	22.3	22.8	24.2	23.2	24.5	24.9
6H	20.8	22.2	21.2	22.5	22.9	24.2	25.5	24.6	25.9	26.2
8H	21.0	22.3	21.4	22.7	23.1	25.1	26.4	25.5	26.8	27.1
12H	21.2	22.4	21.6	22.8	23.2	26.1	27.4	26.5	27.8	28.1
4H 2H	18.7	20.1	19.1	20.5	20.8	19.8	21.2	20.1	21.5	21.8
3H	20.7	22.0	21.1	22.3	22.7	22.5	23.7	22.9	24.1	24.5
4H	21.7	22.8	22.1	23.2	23.6	23.8	25.0	24.3	25.4	25.8
6H	22.5	23.5	22.9	23.9	24.4	25.4	26.4	25.9	26.9	27.3
8H	22.8	23.7	23.2	24.2	24.6	26.5	27.4	26.9	27.9	28.4
12H	23.0	23.9	23.5	24.4	24.9	27.6	28.5	28.1	29.0	29.5
8H 4H	22.4	23.4	22.9	23.8	24.3	24.1	25.1	24.6	25.6	26.0
6H	23.5	24.4	24.0	24.8	25.4	26.0	26.9	26.6	27.3	27.9
8H	24.1	24.8	24.6	25.3	25.8	27.3	28.1	27.9	28.6	29.1
12H	24.6	25.2	25.1	25.7	26.3	28.8	29.5	29.3	30.0	30.5
12H 4H	22.6	23.5	23.1	24.0	24.5	24.2	25.1	24.7	25.6	26.0
6H	23.9	24.7	24.5	25.2	25.7	26.2	26.9	26.7	27.4	28.0
8H	24.6	25.3	25.2	25.8	26.3	27.6	28.2	28.1	28.8	29.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 1647 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.7)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

# KVS Valaistussuunnittelu Oy IES TEST REPORT

## UTILIZATION FACTORS TABLE

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

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	52	40	32	51	39	32	50	39	32	25
0.80	62	49	41	60	48	41	58	47	40	32
1.00	70	57	49	68	56	49	66	58	48	40
1.25	77	64	56	75	64	56	72	62	55	46
1.50	82	70	62	80	69	61	76	67	60	51
2.00	89	79	71	87	77	70	83	75	68	59
2.50	93	84	76	91	82	75	86	79	73	63
3.00	97	88	81	94	87	80	90	83	78	68
4.00	101	94	88	99	92	87	94	88	84	73
5.00	104	98	93	101	96	91	96	92	87	77
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

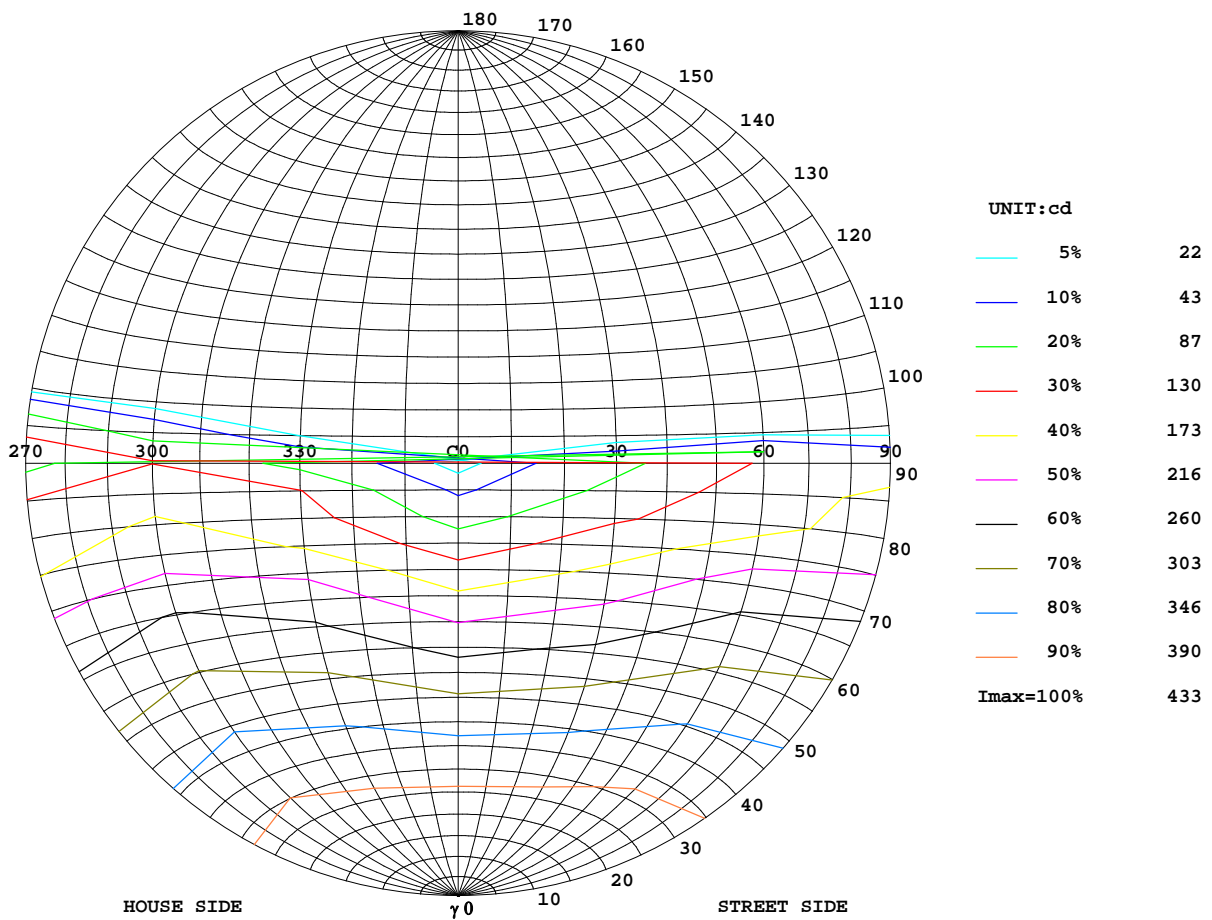
Test System:HOPPO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

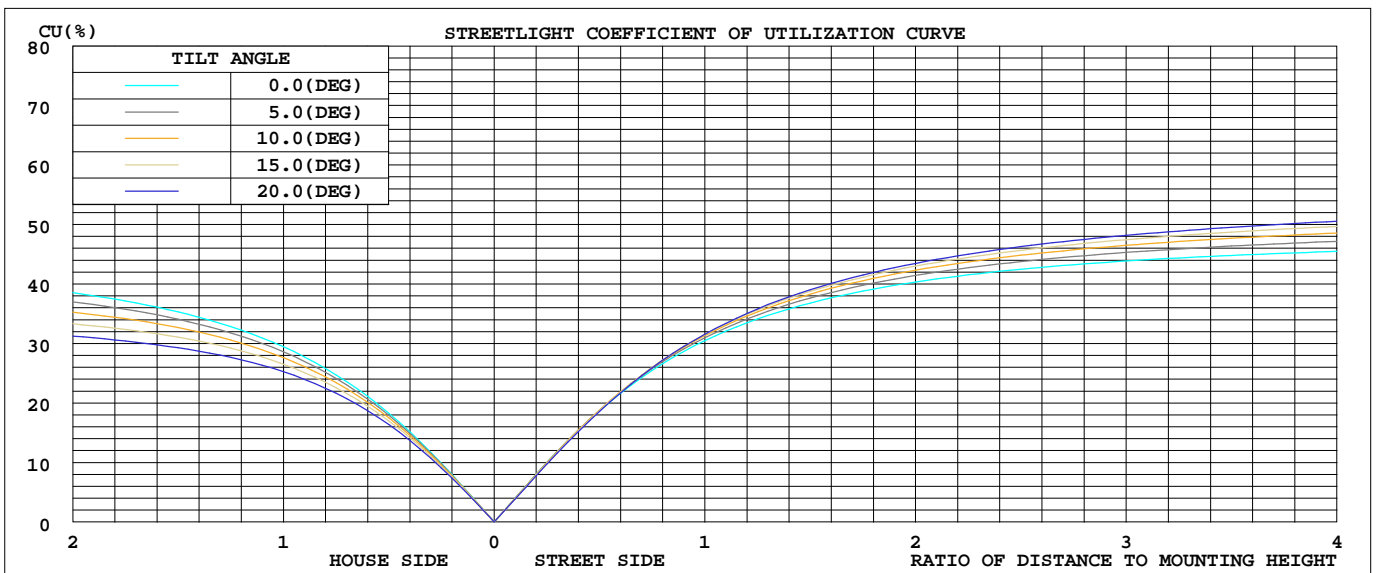
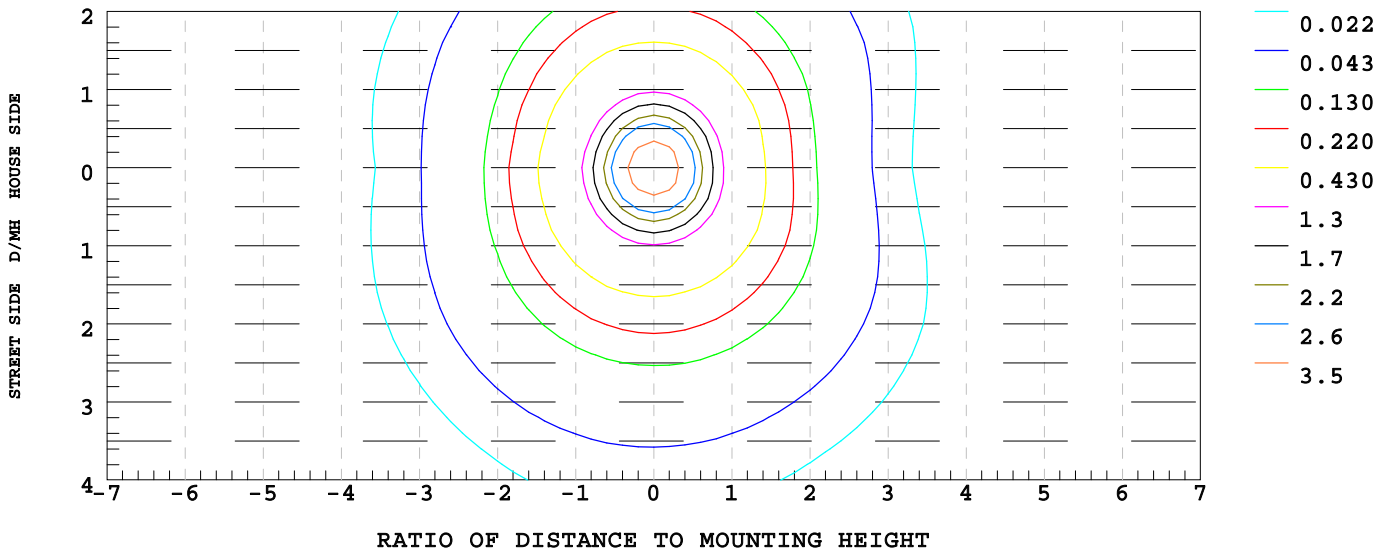
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

ISOLUX DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

ILLUMINANCE AT MH=10 m, Enadir = 4.33 lx



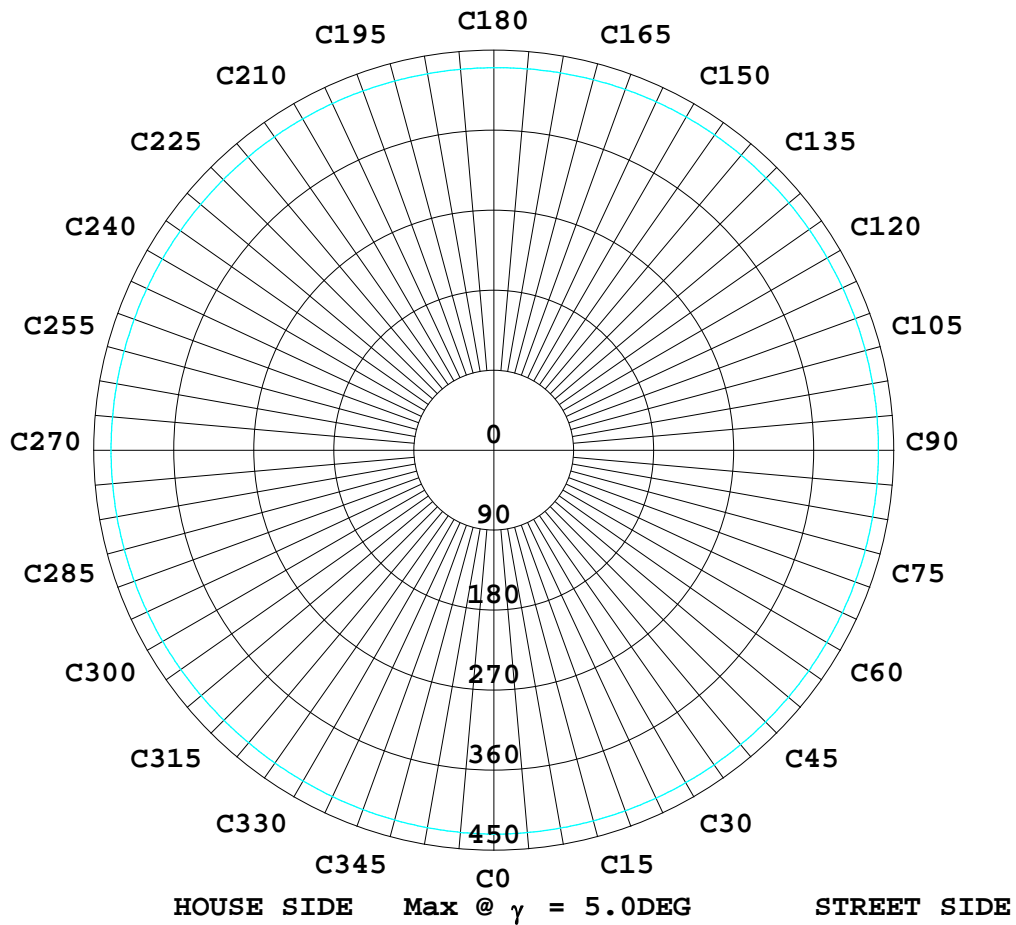
Test System:HOPPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456

# KVS Valaistussuunnittelu Oy IES TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Report number: KVS-RP20240120-3

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012456	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

UNIT: cd

γ (DEG) \ C (DEG)	C (DEG)											
	0	30	60	90	120	150	180	210	240	270	300	330
0.0	433	433	433	433	433	433	433	433	433	433	433	433
5.0	432	432	433	433	433	433	430	430	431	431	430	430
10.0	427	428	430	430	431	430	424	425	426	426	425	423
15.0	420	421	424	426	426	424	415	416	419	420	418	414
20.0	408	411	417	420	419	414	402	405	410	412	408	402
25.0	394	398	407	411	410	402	386	391	398	402	396	387
30.0	377	382	395	401	398	388	367	373	384	390	382	369
35.0	356	364	381	389	385	370	344	354	369	376	367	350
40.0	333	343	365	375	369	349	319	332	351	360	349	328
45.0	307	320	348	359	352	327	291	307	332	342	329	303
50.0	279	295	328	342	332	302	260	281	310	324	308	278
55.0	247	269	307	323	311	275	227	253	288	304	286	251
60.0	215	241	286	302	290	247	192	224	265	283	264	222
65.0	180	212	262	280	266	218	154	194	241	262	240	194
70.0	143	182	238	251	242	188	115	164	210	227	209	165
75.0	106	154	198	217	199	158	76.5	135	172	199	170	137
80.0	69.2	125	158	197	165	128	41.0	108	148	180	146	111
85.0	36.1	97.9	156	184	154	101	14.0	75.1	131	155	131	84.1
90.0	12.7	75.2	135	153	133	77.5	2.17	36.6	72.2	129	73.1	38.0
95.0	3.45	20.9	68.2	119	65.8	16.5	2.30	3.96	3.19	12.7	4.48	4.28
100.0	3.58	2.94	8.38	10.2	5.12	2.68	2.56	3.90	3.26	4.86	3.52	4.22
105.0	3.71	3.19	4.92	3.51	4.73	2.88	2.88	3.90	3.45	4.86	3.64	4.28
110.0	3.90	3.45	4.86	3.83	4.67	3.13	3.13	4.09	3.77	4.92	3.96	4.41
115.0	4.09	3.71	4.99	4.09	4.73	3.45	3.45	4.22	4.03	5.05	4.22	4.54
120.0	4.35	4.03	5.05	4.41	4.86	3.77	3.77	4.47	4.28	5.18	4.48	4.73
125.0	4.61	4.35	5.24	4.60	4.99	4.09	4.09	4.67	4.54	5.30	4.73	4.99
130.0	4.86	4.67	5.37	4.86	5.18	4.35	4.41	4.92	4.73	5.43	4.92	5.18
135.0	5.12	4.92	5.50	5.05	5.31	4.67	4.67	5.11	4.92	5.56	5.18	5.37
140.0	5.31	5.11	5.63	5.24	5.44	4.92	4.99	5.37	5.18	5.69	5.37	5.56
145.0	5.63	5.37	5.82	5.43	5.63	5.18	5.18	5.50	5.37	5.88	5.50	5.76
150.0	5.76	5.50	5.95	5.56	5.76	5.37	5.37	5.69	5.56	5.94	5.69	5.88
155.0	5.95	5.69	6.07	5.69	5.88	5.56	5.63	5.88	5.69	6.07	5.88	6.01
160.0	6.14	5.88	6.14	5.88	6.01	5.76	5.76	6.01	5.88	6.13	5.95	6.14
165.0	6.27	6.01	6.27	6.01	6.14	5.88	5.95	6.07	5.95	6.26	6.08	6.20
170.0	6.33	6.07	6.33	6.13	6.20	6.01	6.08	6.20	6.07	6.39	6.14	6.33
175.0	6.40	6.14	6.33	6.20	6.27	6.14	6.21	6.27	6.14	6.45	6.20	6.33
180.0	6.40	6.20	6.33	6.33	6.33	6.20	6.33	6.33	6.20	6.39	6.20	6.33

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012456