

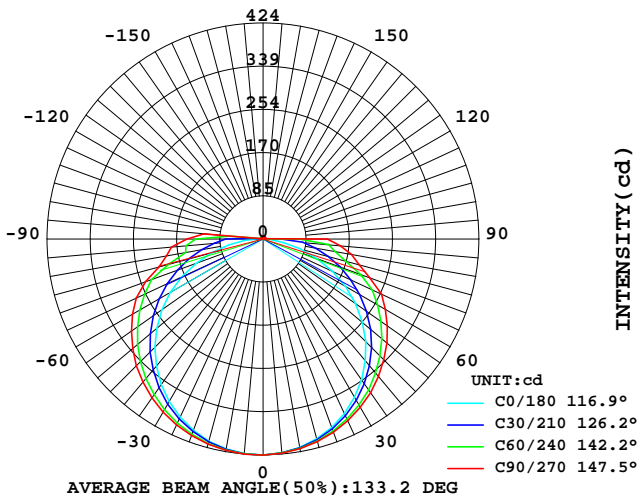
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: KVS-RP20240120-4

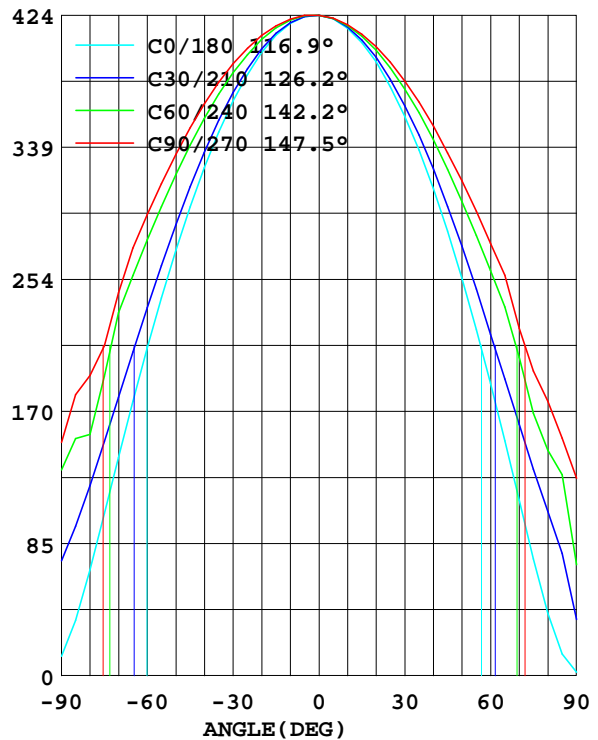
MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

DATA OF LAMP		I <sub>max</sub> (cd)	423.9	S/MH(C0/180)	1.29
MODEL	3000K COB	EFFICIENCY(%)	100.0	S/MH(C90/270)	1.39
NOMINAL POWER(W)	15	TOTAL FLUX(lm)	1613.6	Voltage(V)	24.00
RATED VOLTAGE(V)	24	EFFICIENCY(lm/W)	106.9	Current(A)	0.629
NOMINAL FLUX(lm)	1613.0	η up(%)	3.8	Power(W)	15.10
LAMPS QUANTITY	1	η down(%)	96.2	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.0	Effective Flux(lm)	1575.0	EEL	0.131

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



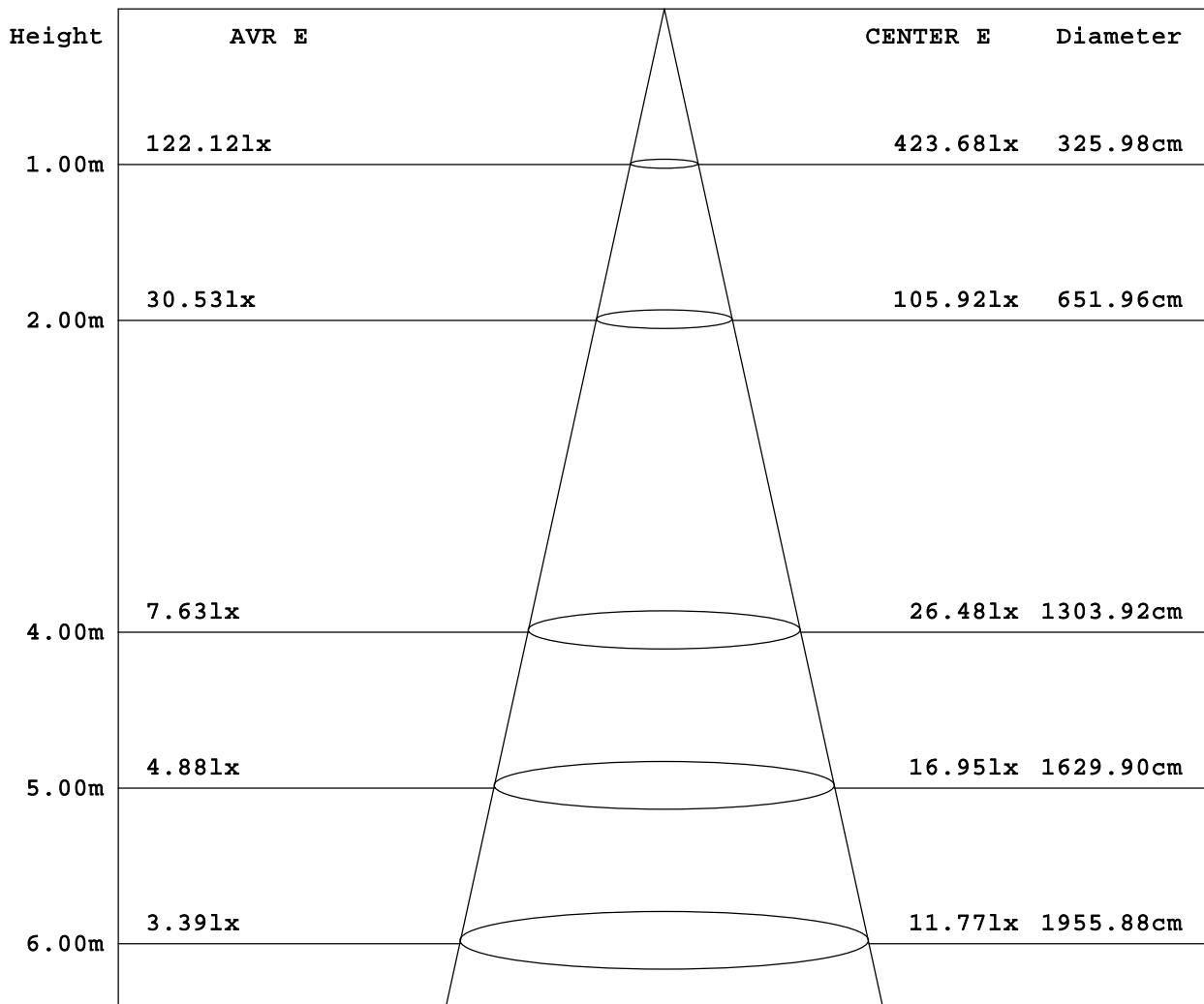
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

AVERAGE AND CENTER E Figure

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



Angle:116.9deg

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: 91012457

# KVS Valaistussuunnittelu Oy IES TEST REPORT

## ZONAL FLUX DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	zone	total
10.0	418.5	419.8	421.2	421.2	415.5	416.7	417.6	415.3	0- 10	40.19	40.19
20.0	399.9	405.2	410.7	407.9	393.8	399.1	403.6	396.7	10- 20	116.2	156.4
30.0	368.9	380.6	392.6	384.6	358.9	371.1	381.6	368.2	20- 30	180.0	336.5
40.0	325.8	346.7	366.9	351.4	312.3	334.4	352.5	331.3	30- 40	225.0	561.6
50.0	272.8	305.2	334.4	310.3	254.8	289.9	317.4	287.3	40- 50	246.9	808.5
60.0	210.5	257.8	295.8	262.6	187.6	239.5	277.3	238.1	50- 60	244.1	1053
70.0	140.0	205.7	245.6	210.1	112.4	182.6	222.7	182.2	60- 70	217.8	1270
80.0	67.86	138.4	192.6	143.5	40.20	125.1	176.2	126.2	70- 80	166.9	1437
90.0	12.42	102.8	149.6	102.6	2.176	53.55	126.7	54.53	80- 90	114.9	1552
100.0	3.457	5.567	10.23	3.872	2.496	3.487	4.798	3.744	90-100	36.69	1589
110.0	3.777	4.063	3.710	3.808	3.137	3.807	4.798	4.096	100-110	4.223	1593
120.0	4.225	4.415	4.286	4.224	3.713	4.287	5.054	4.480	110-120	4.087	1597
130.0	4.737	4.895	4.734	4.672	4.289	4.703	5.309	4.960	120-130	4.098	1601
140.0	5.249	5.279	5.118	5.088	4.865	5.151	5.565	5.344	130-140	3.870	1605
150.0	5.634	5.599	5.501	5.440	5.314	5.503	5.821	5.664	140-150	3.379	1609
160.0	6.018	5.855	5.757	5.760	5.698	5.791	6.013	5.920	150-160	2.638	1611
170.0	6.210	6.047	6.013	5.984	5.954	6.015	6.269	6.080	160-170	1.685	1613
180.0	6.274	6.143	6.205	6.144	6.210	6.143	6.269	6.144	170-180	0.583	1614
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: 91012457

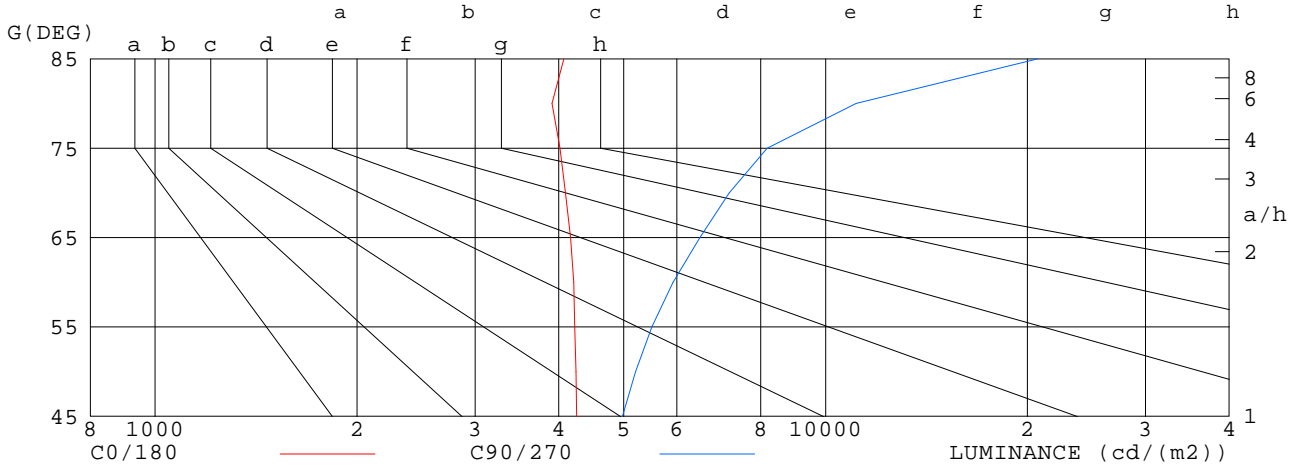
LUMINANCE LIMITATION CURVES

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
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



G (DEG)	LUMINANCE cd/m2	
	C0/180	C90/270
85	4068	20700
80	3907	11101
75	4016	8185
70	4092	7184
65	4165	6495
60	4210	5920
55	4224	5505
50	4243	5204
45	4254	4975

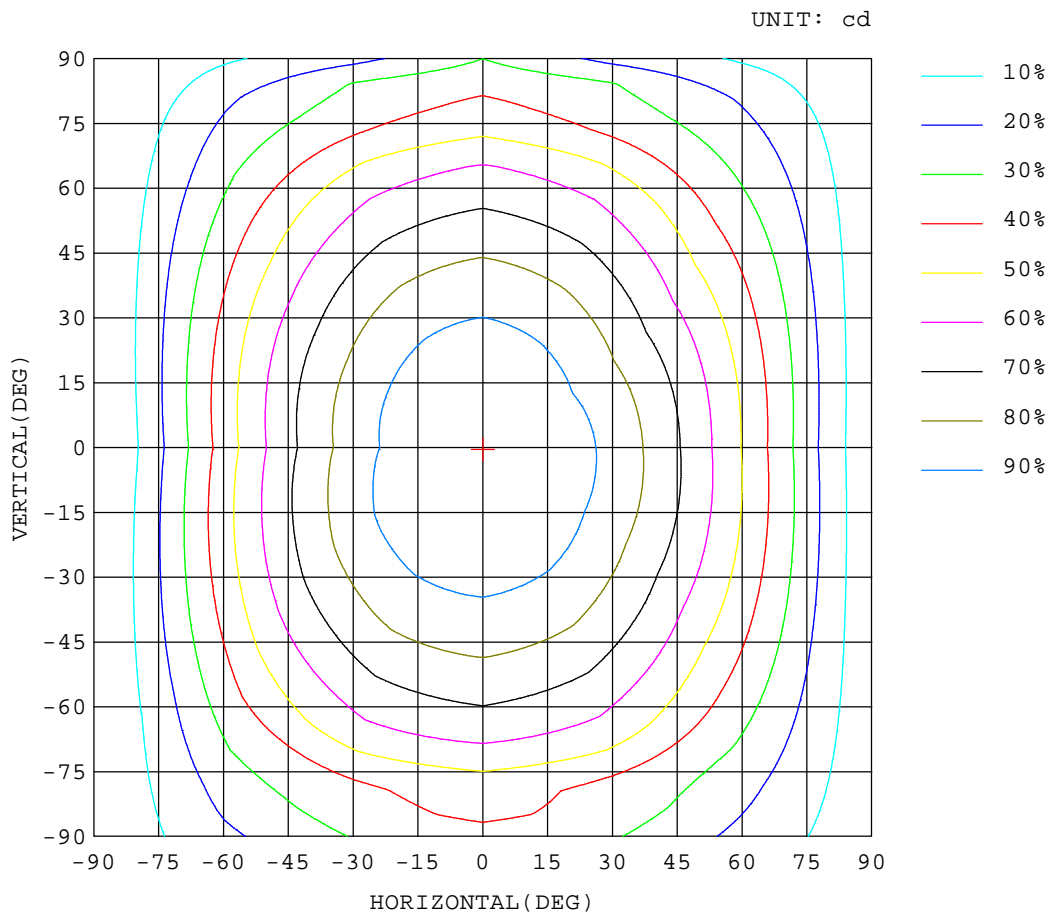
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01



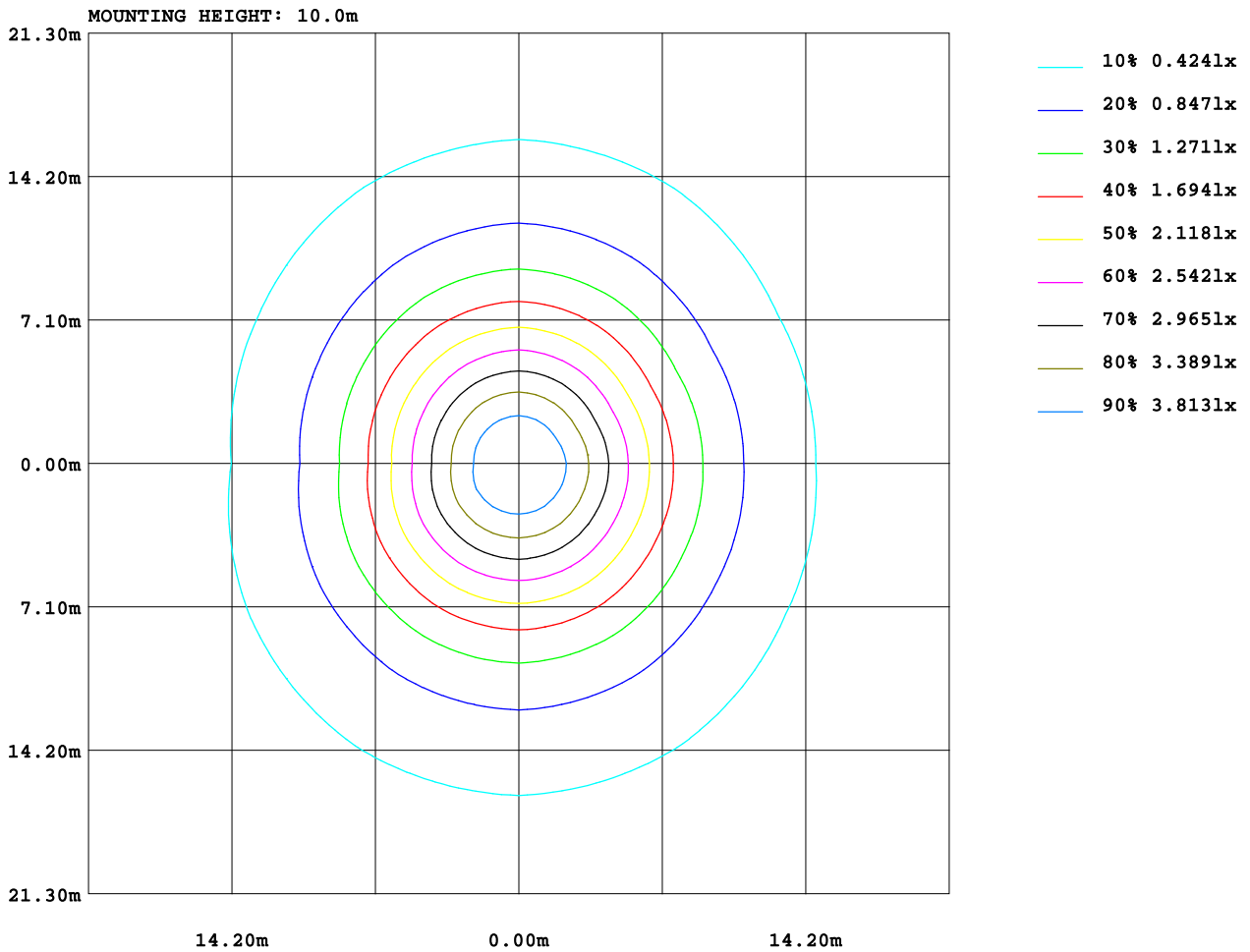
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

ISOLUX DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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: 91012457

# KVS Valaistussuunnittelu Oy IES TEST REPORT

## AREA LUMINOUS FLUX

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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	0.60	1.18	1.87	2.63	3.34	3.94	4.43	4.43	3.94	3.34	2.64	1.91	1.22	0.66	0.27	0.06	36.7	35.8
80	0.04	0.32	0.95	1.81	2.73	3.69	4.59	5.32	5.83	5.82	5.29	4.55	3.68	2.76	1.86	1.04	0.41	0.07	50.8	50.5
70	0.05	0.41	1.19	2.27	3.49	4.84	6.10	6.99	7.55	7.54	6.96	6.06	4.81	3.49	2.31	1.30	0.52	0.09	66.0	65.8
60	0.06	0.49	1.42	2.73	4.26	5.87	7.30	8.29	8.90	8.89	8.27	7.26	5.84	4.25	2.77	1.55	0.62	0.10	78.9	78.7
50	0.06	0.56	1.62	3.13	4.87	6.66	8.26	9.40	10.0	10.0	9.36	8.20	6.60	4.84	3.18	1.78	0.70	0.11	89.4	89.3
40	0.07	0.61	1.80	3.47	5.38	7.34	9.08	10.3	11.0	11.0	10.3	9.00	7.26	5.35	3.56	1.98	0.77	0.12	98.5	98.4
30	0.07	0.64	1.92	3.73	5.80	7.87	9.72	11.1	11.8	11.8	11.0	9.63	7.79	5.83	3.88	2.13	0.82	0.12	106	106
20	0.07	0.65	1.99	3.88	6.06	8.25	10.1	11.6	12.3	12.3	11.5	10.1	8.28	6.21	4.11	2.24	0.85	0.13	111	111
10	0.07	0.64	1.98	3.91	6.15	8.40	10.3	11.8	12.6	12.6	11.8	10.5	8.60	6.42	4.22	2.28	0.85	0.13	114	114
0	0.07	0.65	2.01	3.96	6.22	8.49	10.5	12.0	12.7	12.7	12.0	10.6	8.68	6.48	4.26	2.30	0.86	0.13	115	115
-10	0.07	0.68	2.05	4.01	6.26	8.52	10.4	11.8	12.5	12.5	11.8	10.4	8.52	6.38	4.22	2.29	0.87	0.13	114	114
-20	0.08	0.68	2.03	3.94	6.12	8.29	10.1	11.4	12.1	12.1	11.3	10.0	8.17	6.11	4.06	2.22	0.85	0.13	110	110
-30	0.08	0.66	1.94	3.76	5.82	7.83	9.57	10.8	11.4	11.4	10.7	9.45	7.69	5.71	3.80	2.08	0.80	0.12	104	104
-40	0.07	0.62	1.80	3.48	5.35	7.20	8.83	9.96	10.5	10.5	9.88	8.72	7.07	5.24	3.45	1.90	0.74	0.12	95.5	95.4
-50	0.07	0.56	1.61	3.11	4.77	6.44	7.92	8.90	9.47	9.44	8.84	7.83	6.34	4.67	3.05	1.68	0.66	0.11	85.5	85.4
-60	0.07	0.49	1.39	2.65	4.03	5.52	6.84	7.67	8.17	8.15	7.61	6.75	5.43	3.94	2.59	1.44	0.57	0.10	73.4	73.3
-70	0.06	0.42	1.16	2.15	3.16	4.22	5.21	5.94	6.41	6.40	5.88	5.12	4.12	3.08	2.09	1.18	0.48	0.09	57.2	57.0
-80	0.05	0.35	0.94	1.70	2.53	3.41	4.17	4.74	5.18	5.18	4.74	4.17	3.41	2.52	1.67	0.94	0.39	0.08	46.2	45.9
-90																				
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)		20	30	40	50	60	70	80	90		
Φ t	1.13	9.63	28.4	54.9	84.9	116	143	162	174	173	162	142	115	85.2	56.3	31.0	12.0	1.92	1614	
Φ a	0.07	8.95	28.2	54.9	84.9	116	143	162	174	173	162	142	115	85.2	56.3	30.9	11.7	1.09		1575

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

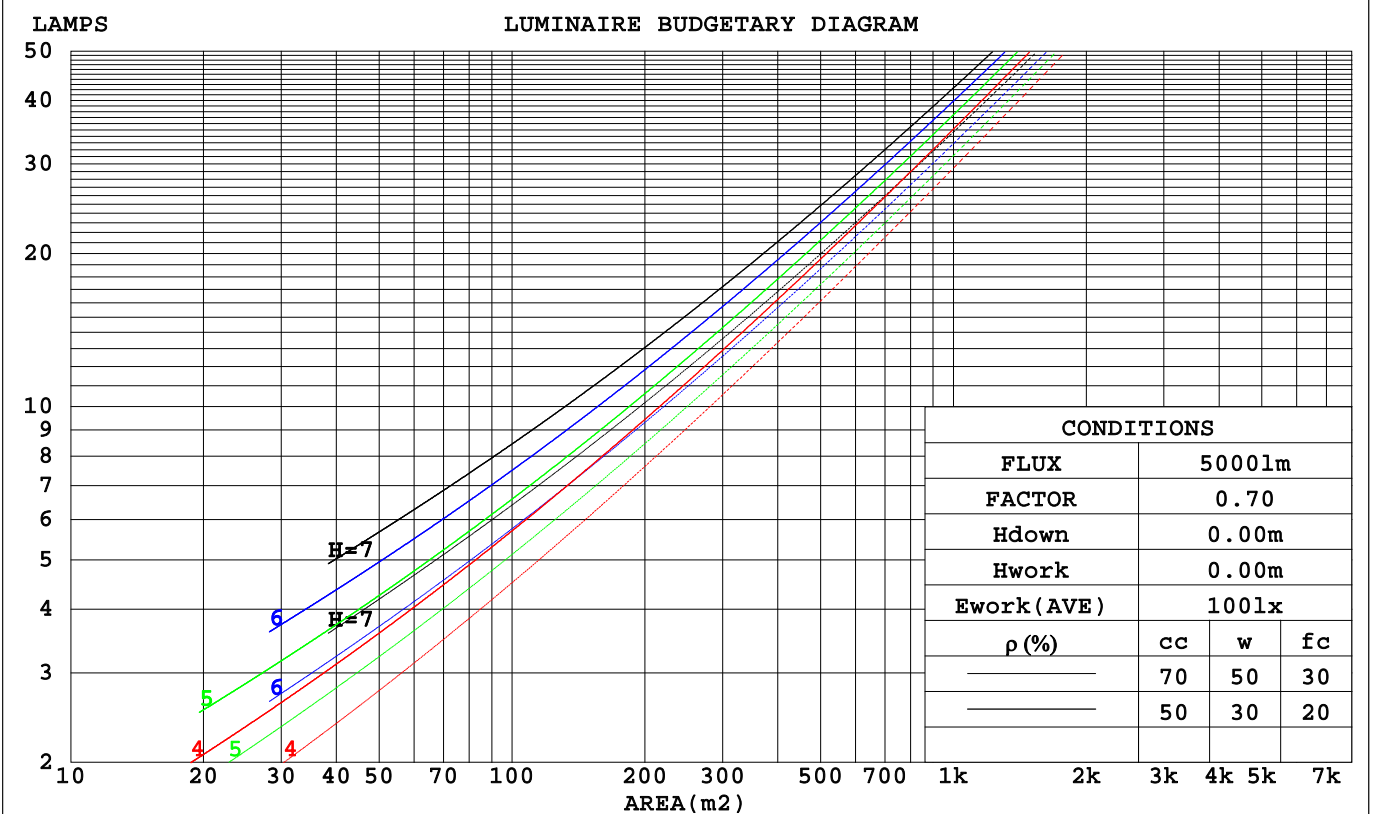
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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															
	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: 91012457



KVS Valaistussuunnittelu Oy IES TEST REPORT

WEC AND CCEC

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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	.040	.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	.197	.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	.089	.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	.219	.219	.219	.188	.188	.188	.128	.128	.128	.074	.074	.074	.024	.024	.024	
1.0	.215	.185	.157	.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: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: 91012457

KVS Valaistussuunnittelu Oy IES TEST REPORT

Uncorrected UGR Table

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy										
Address: FI										
NAME: COB LED Strip					TYPE: 91012457			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	17.6	19.2	17.9	19.5	19.8	19.0	20.6	19.3	20.9	21.2
3H	19.4	20.8	19.7	21.2	21.5	21.5	23.0	21.9	23.3	23.6
4H	20.1	21.6	20.5	21.9	22.2	22.7	24.1	23.1	24.4	24.8
6H	20.8	22.1	21.1	22.4	22.8	24.1	25.4	24.5	25.8	26.2
8H	21.0	22.2	21.4	22.6	23.0	25.0	26.3	25.4	26.7	27.1
12H	21.1	22.4	21.5	22.7	23.1	26.0	27.3	26.5	27.7	28.1
4H 2H	18.6	20.1	19.0	20.4	20.7	19.7	21.1	20.1	21.4	21.8
3H	20.6	21.9	21.1	22.3	22.7	22.4	23.7	22.8	24.0	24.4
4H	21.6	22.7	22.0	23.1	23.6	23.7	24.9	24.2	25.3	25.7
6H	22.4	23.4	22.9	23.9	24.3	25.3	26.3	25.8	26.8	27.2
8H	22.7	23.7	23.2	24.1	24.6	26.4	27.4	26.9	27.8	28.3
12H	23.0	23.9	23.4	24.3	24.8	27.6	28.5	28.0	28.9	29.4
8H 4H	22.3	23.3	22.8	23.7	24.2	24.1	25.0	24.5	25.5	25.9
6H	23.5	24.3	24.0	24.8	25.3	26.0	26.8	26.5	27.3	27.8
8H	24.0	24.7	24.5	25.2	25.8	27.2	28.0	27.8	28.5	29.0
12H	24.5	25.1	25.0	25.6	26.2	28.7	29.4	29.3	29.9	30.4
12H 4H	22.5	23.4	23.0	23.9	24.4	24.1	25.0	24.6	25.5	26.0
6H	23.9	24.6	24.4	25.1	25.6	26.1	26.8	26.6	27.3	27.9
8H	24.5	25.2	25.1	25.7	26.3	27.5	28.2	28.0	28.7	29.2
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 1613 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: 91012457

**KVS Valaistussuunnittelu Oy IES TEST REPORT**

**UTILIZATION FACTORS TABLE**

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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	86	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			

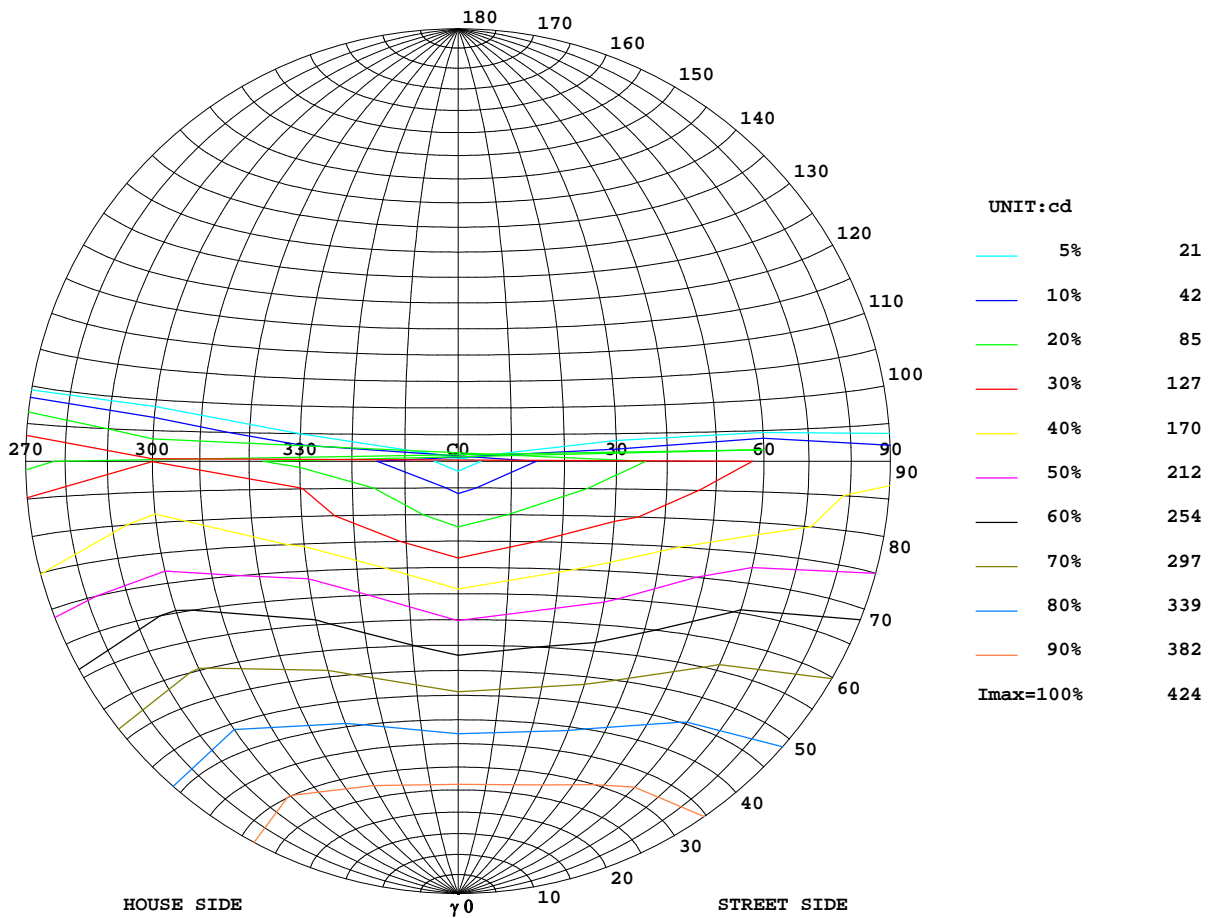
Test System:HOPPO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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

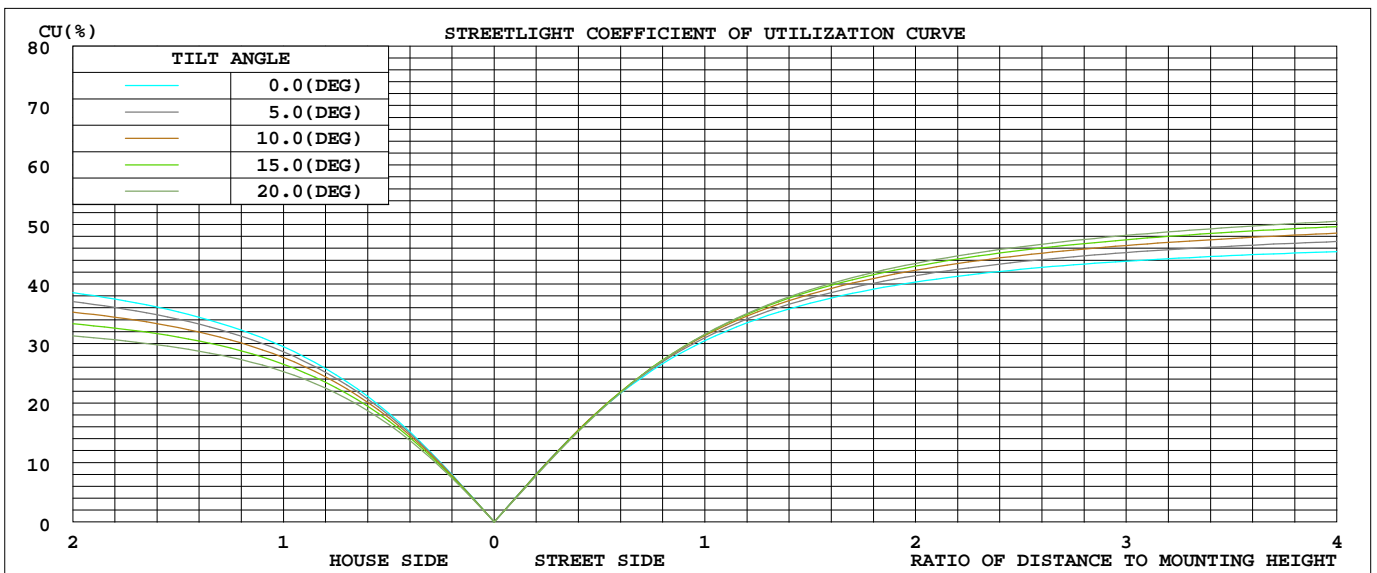
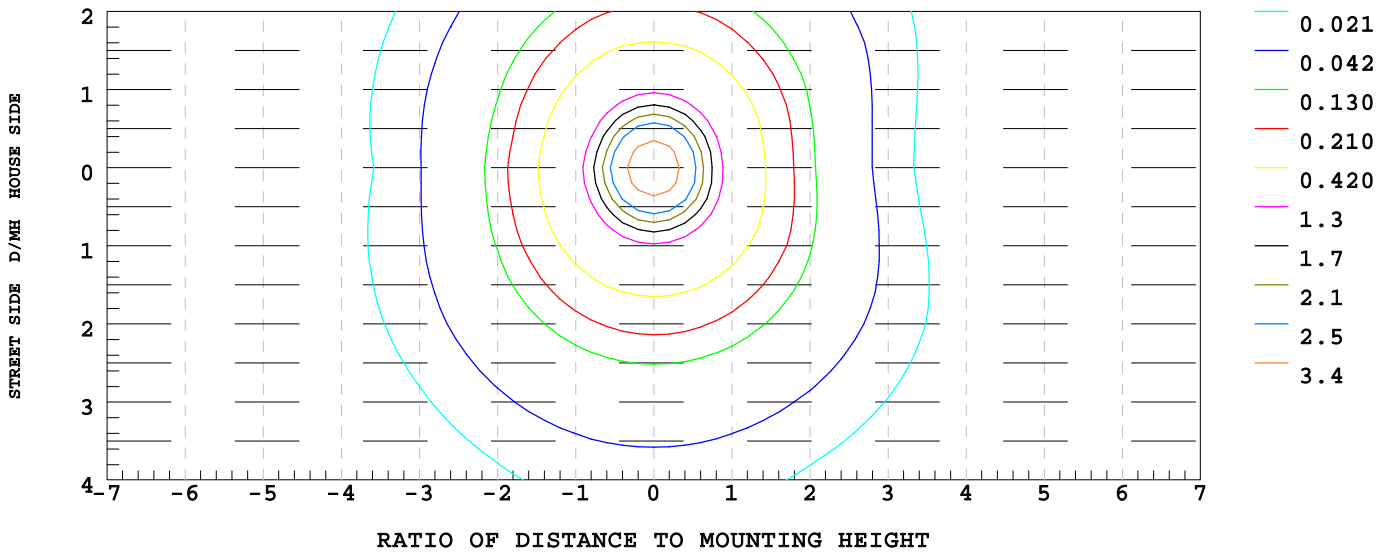
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

ISOLUX DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

ILLUMINANCE AT MH=10 m, Enadir = 4.24 lx



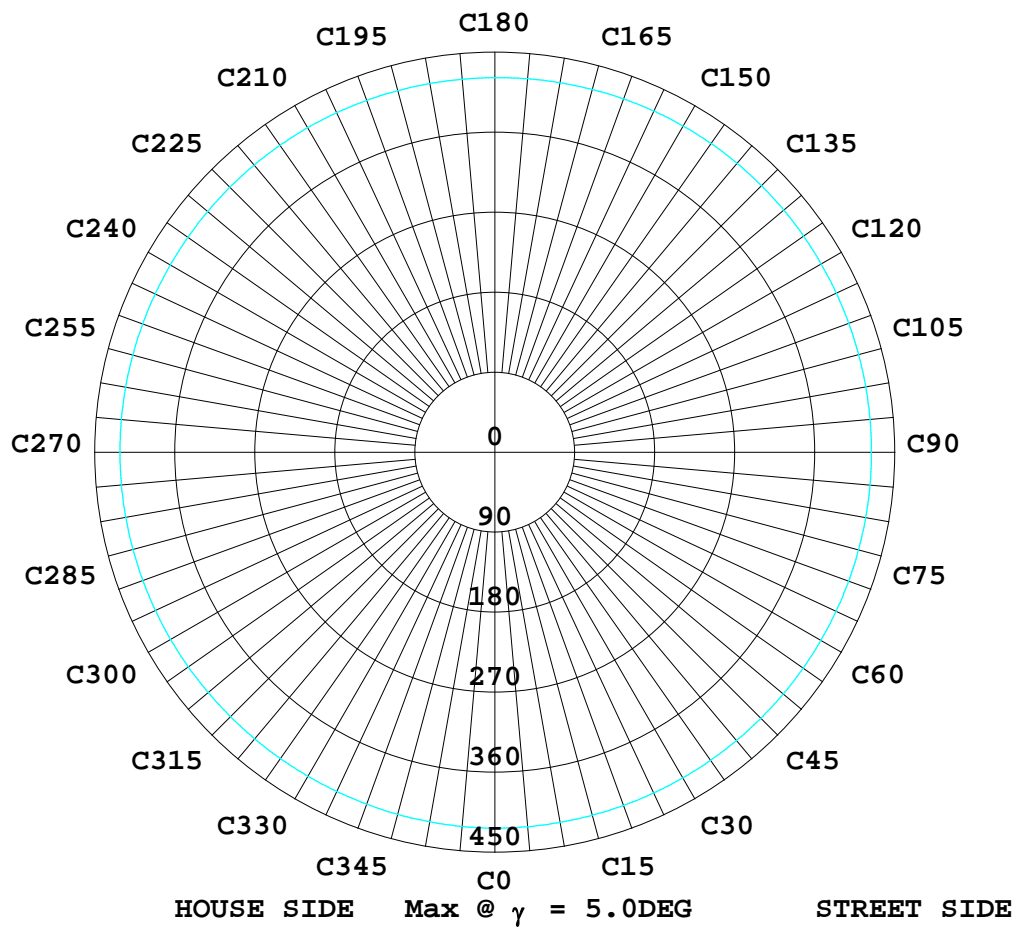
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 91012457

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	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: 91012457

**KVS Valaistussuunnittelu Oy IES TEST REPORT**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: KVS-RP20240120-4

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012457	WEIGHT:
SPECIFICATION: Any Cut COB	DIMENSION: 10x 1000mm	SERIAL No.: 01

UNIT: cd

γ (DEG)	C (DEG)											
	0	30	60	90	120	150	180	210	240	270	300	330
0.0	424	424	424	424	424	424	424	424	424	424	424	424
5.0	423	423	424	424	424	424	421	422	422	422	421	421
10.0	419	419	421	421	422	421	416	416	417	418	416	414
15.0	411	412	416	417	417	415	406	408	410	412	409	405
20.0	400	402	408	411	410	406	394	397	401	404	400	394
25.0	386	389	399	403	401	394	378	383	390	394	388	379
30.0	369	374	387	393	390	379	359	366	376	382	375	362
35.0	349	356	373	381	376	362	337	347	361	368	359	343
40.0	326	336	358	367	361	342	312	325	344	353	342	321
45.0	301	314	341	352	344	320	285	301	325	335	323	297
50.0	273	289	321	334	325	295	255	276	304	317	302	272
55.0	242	263	301	316	305	269	222	248	282	298	281	245
60.0	211	236	280	296	283	242	188	219	260	277	259	218
65.0	176	208	257	274	260	213	151	190	237	257	236	190
70.0	140	179	233	246	236	184	112	161	204	223	202	162
75.0	104	150	192	212	194	155	74.9	132	168	195	166	135
80.0	67.8	122	155	193	161	126	40.2	106	145	176	143	109
85.0	35.4	95.8	152	180	151	98.7	13.7	78.4	129	152	129	82.5
90.0	12.4	73.6	132	150	130	75.7	2.17	36.0	71.0	127	71.7	37.3
95.0	3.39	20.5	66.8	117	64.3	16.3	2.24	3.83	3.13	12.8	4.54	4.16
100.0	3.45	2.87	8.25	10.2	5.12	2.62	2.49	3.77	3.19	4.79	3.39	4.09
105.0	3.64	3.13	4.86	3.45	4.60	2.81	2.81	3.83	3.39	4.73	3.58	4.22
110.0	3.77	3.39	4.73	3.71	4.54	3.07	3.13	3.96	3.64	4.79	3.90	4.28
115.0	3.96	3.64	4.79	3.96	4.67	3.39	3.39	4.15	3.90	4.92	4.09	4.41
120.0	4.22	3.90	4.92	4.28	4.80	3.64	3.71	4.35	4.22	5.05	4.35	4.60
125.0	4.48	4.22	5.11	4.47	4.92	3.96	4.03	4.60	4.41	5.18	4.60	4.86
130.0	4.73	4.54	5.24	4.73	5.05	4.28	4.28	4.79	4.60	5.30	4.80	5.12
135.0	4.99	4.79	5.37	4.92	5.18	4.54	4.60	4.99	4.86	5.43	5.05	5.24
140.0	5.24	4.99	5.56	5.11	5.37	4.80	4.86	5.24	5.05	5.56	5.24	5.44
145.0	5.50	5.18	5.69	5.30	5.50	5.05	5.05	5.37	5.24	5.69	5.44	5.56
150.0	5.63	5.37	5.82	5.50	5.63	5.24	5.31	5.56	5.43	5.82	5.56	5.76
155.0	5.82	5.56	5.95	5.56	5.76	5.44	5.50	5.75	5.56	5.94	5.76	5.88
160.0	6.01	5.69	6.01	5.75	5.88	5.63	5.69	5.88	5.69	6.01	5.82	6.01
165.0	6.14	5.82	6.07	5.88	5.95	5.76	5.82	6.01	5.82	6.14	5.95	6.08
170.0	6.21	5.95	6.14	6.01	6.08	5.88	5.95	6.07	5.95	6.26	6.01	6.14
175.0	6.27	6.01	6.20	6.07	6.14	6.01	6.08	6.14	6.01	6.33	6.01	6.20
180.0	6.27	6.07	6.20	6.20	6.20	6.08	6.21	6.20	6.07	6.26	6.08	6.20

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: 91012457