

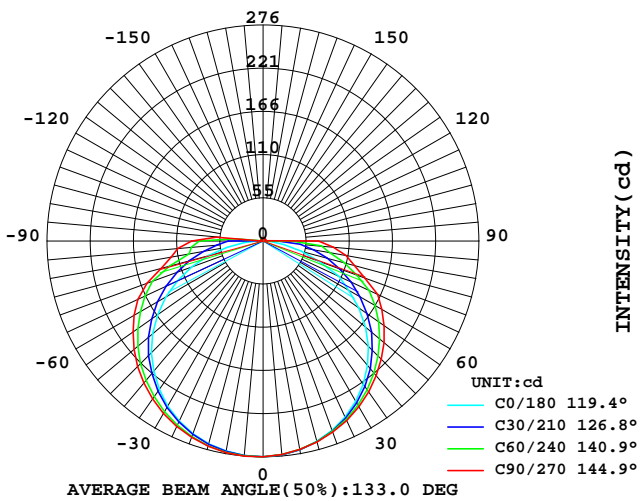
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: KVS-RP20240120-1

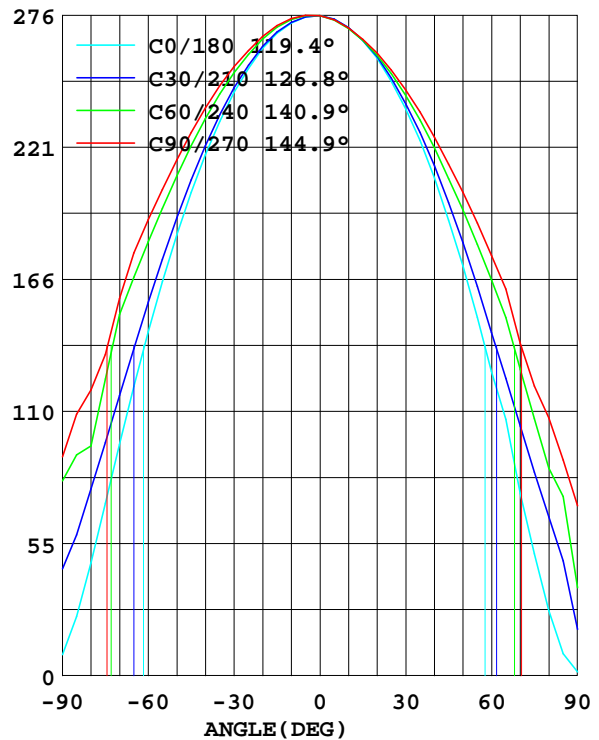
MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01

DATA OF LAMP		Imax(cd)	276.2	S/MH(C0/180)	1.31
MODEL	COB 528LEDS	EFFICIENCY(%)	100.0	S/MH(C90/270)	1.38
NOMINAL POWER(W)	10	TOTAL FLUX(lm)	1043.3	Voltage(V)	24.00
RATED VOLTAGE(V)	24	EFFICIENCY(lm/W)	102.1	Current(A)	0.425
NOMINAL FLUX(lm)	1043.0	η up(%)	3.5	Power(W)	10.22
LAMPS QUANTITY	1	η down(%)	96.5	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.0	Effictive Flux(lm)	1016.6	EEI	0.131

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



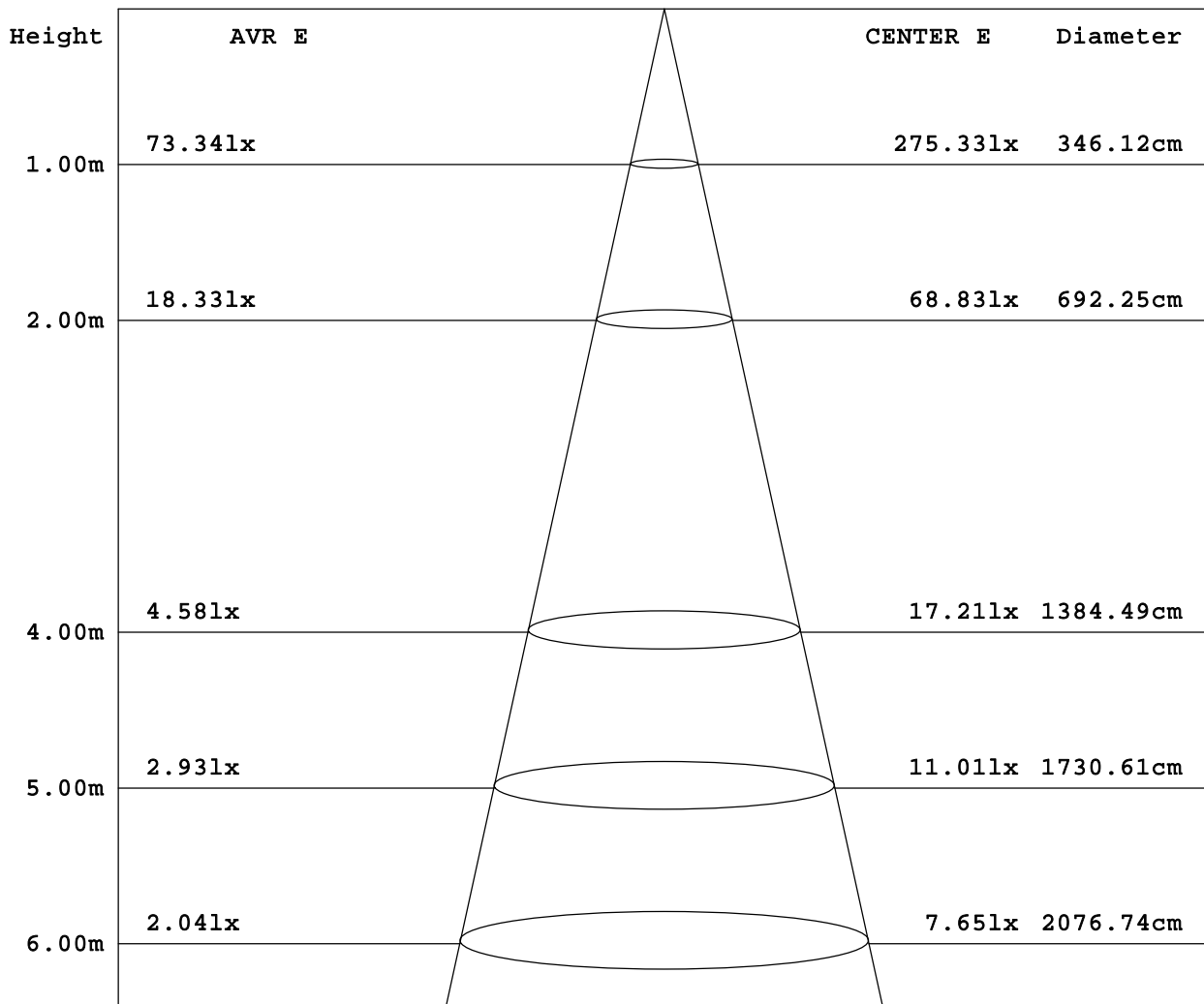
Test System:HOP00 HPG1800
 Temperature:25.3DEG
 Operators:RD
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

AVERAGE AND CENTER E Figure

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01



Angle:120.0deg

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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

ZONAL FLUX DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	272.7	273.6	274.5	274.6	270.8	270.7	270.7	269.8	0- 10	26.15	26.15
20.0	262.1	264.5	267.1	266.5	258.0	259.0	260.1	257.3	10- 20	75.69	101.8
30.0	243.8	248.8	254.6	251.8	236.8	240.8	244.7	238.7	20- 30	117.3	219.1
40.0	217.5	227.0	237.1	230.7	207.9	216.8	225.0	214.6	30- 40	146.7	365.9
50.0	184.1	200.0	215.5	204.2	171.1	187.7	202.0	185.9	40- 50	161.2	527.1
60.0	143.7	168.7	190.5	172.9	127.0	154.4	175.6	153.3	50- 60	159.3	686.5
70.0	96.67	133.9	157.5	138.1	76.09	116.1	138.7	116.4	60- 70	141.9	828.4
80.0	47.18	87.01	119.4	94.01	27.24	76.60	107.7	77.31	70- 80	107.5	936.0
90.0	8.782	63.00	91.42	65.96	1.474	28.04	71.02	30.47	80- 90	70.48	1006
100.0	2.628	2.721	2.237	2.654	1.730	2.433	3.388	2.622	90-100	20.30	1027
110.0	2.756	2.753	2.365	2.654	2.115	2.657	3.388	2.781	100-110	2.765	1030
120.0	3.013	2.977	2.749	2.877	2.500	2.913	3.516	3.069	110-120	2.803	1032
130.0	3.333	3.297	3.068	3.197	2.884	3.201	3.644	3.357	120-130	2.787	1035
140.0	3.590	3.521	3.324	3.453	3.205	3.457	3.835	3.581	130-140	2.616	1038
150.0	3.846	3.777	3.580	3.677	3.526	3.681	3.963	3.805	140-150	2.274	1040
160.0	4.038	3.905	3.835	3.837	3.782	3.873	4.091	3.965	150-160	1.771	1042
170.0	4.167	4.033	3.963	3.997	3.974	4.001	4.219	4.092	160-170	1.126	1043
180.0	4.231	4.097	4.091	4.124	4.167	4.097	4.219	4.092	170-180	0.390	1043
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: 91012405 5mm COB LED Strip

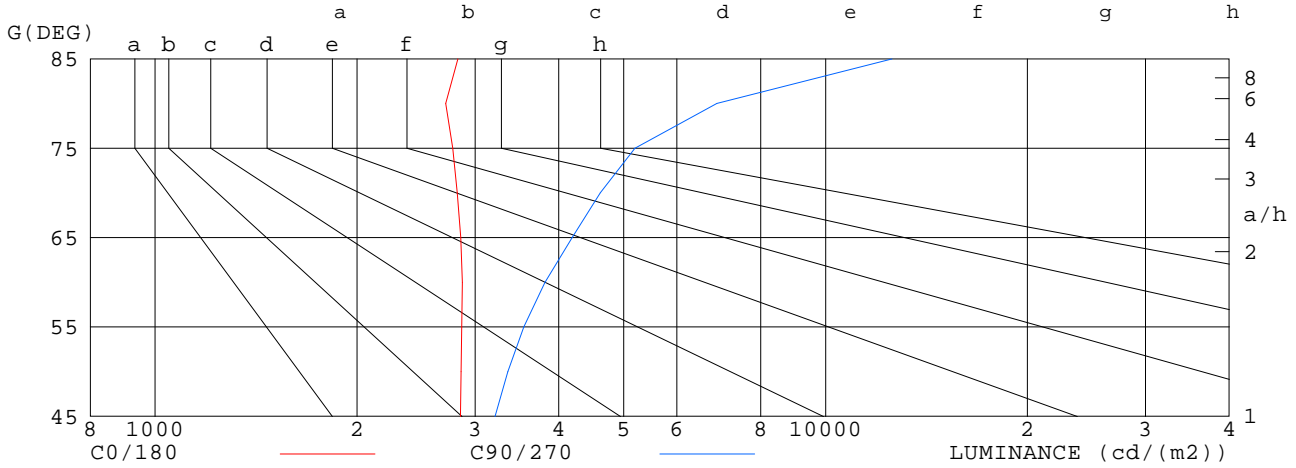
LUMINANCE LIMITATION CURVES

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	2827	12557
80	2713	6885
75	2779	5193
70	2822	4613
65	2856	4186
60	2871	3816
55	2865	3546
50	2861	3356
45	2852	3213

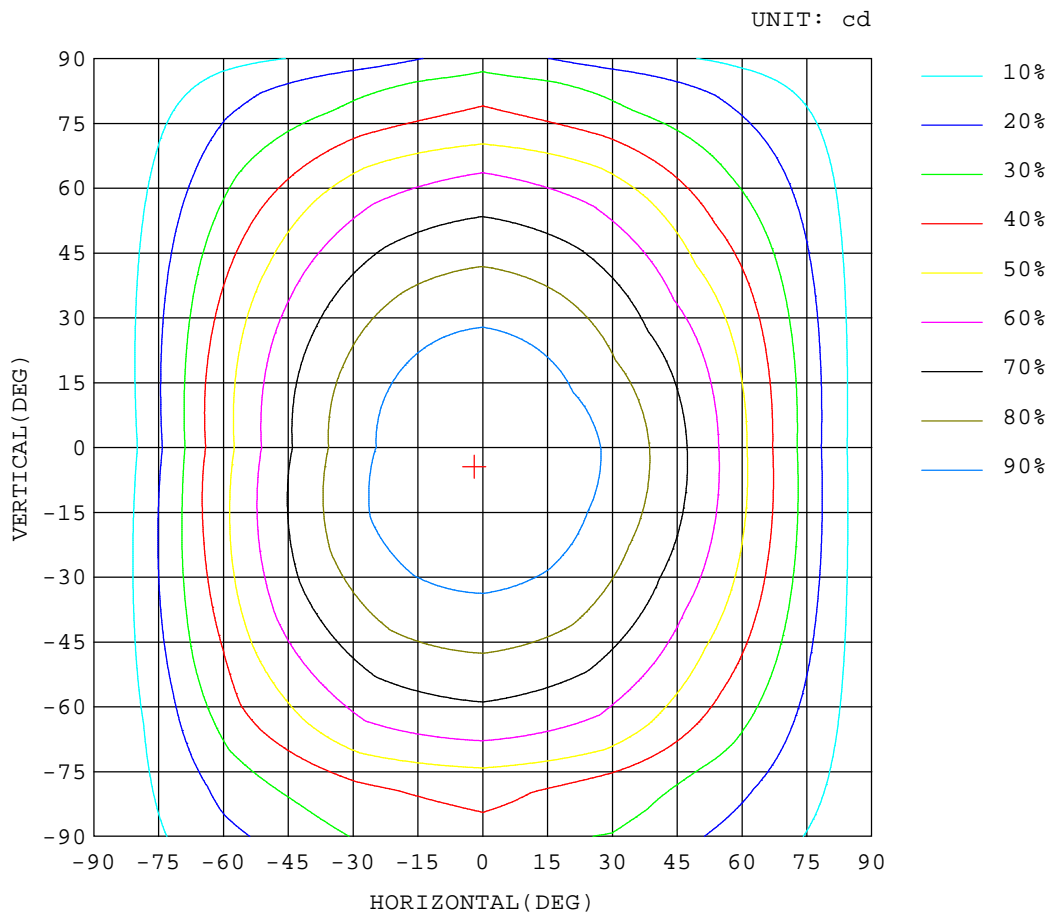
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:RD
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01



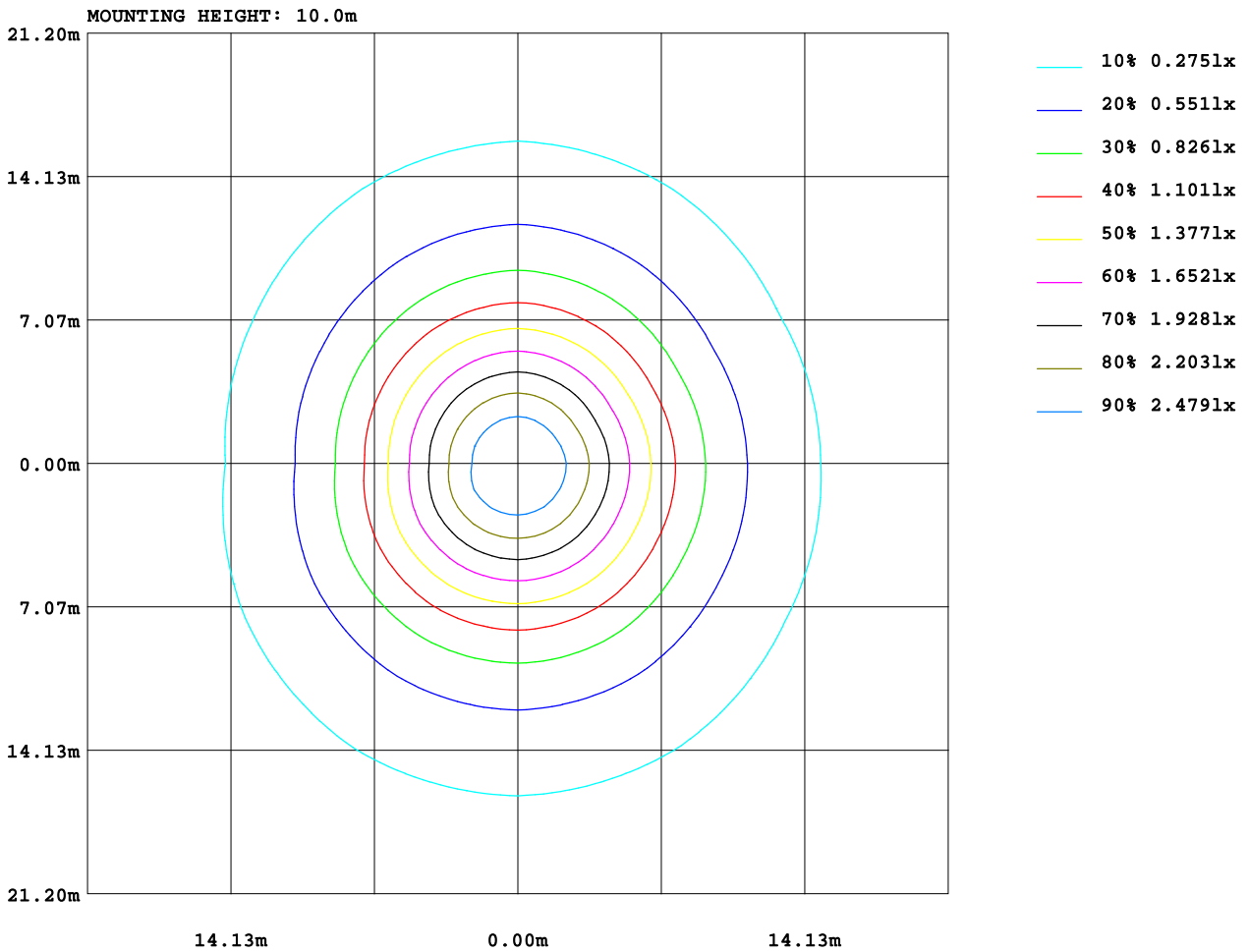
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:RD
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

ISOLUX DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

AREA LUMINOUS FLUX

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	0.02	0.12	0.35	0.69	1.08	1.51	1.93	2.30	2.61	2.61	2.32	1.96	1.55	1.12	0.72	0.39	0.17	0.04	21.5	20.8							
80	0.03	0.20	0.59	1.12	1.69	2.29	2.86	3.30	3.62	3.61	3.30	2.85	2.29	1.70	1.15	0.65	0.26	0.05	31.5	31.3							
70	0.03	0.26	0.76	1.45	2.23	3.06	3.84	4.40	4.75	4.75	4.39	3.84	3.06	2.23	1.47	0.83	0.34	0.06	41.8	41.6							
60	0.04	0.31	0.92	1.76	2.74	3.75	4.65	5.28	5.66	5.65	5.26	4.63	3.74	2.74	1.79	1.00	0.40	0.07	50.4	50.3							
50	0.04	0.36	1.06	2.05	3.16	4.30	5.29	6.01	6.41	6.40	5.98	5.26	4.27	3.15	2.08	1.17	0.46	0.07	57.5	57.5							
40	0.04	0.40	1.19	2.29	3.52	4.77	5.85	6.64	7.07	7.06	6.61	5.80	4.72	3.51	2.36	1.31	0.51	0.08	63.8	63.7							
30	0.05	0.43	1.29	2.47	3.82	5.15	6.31	7.16	7.61	7.60	7.12	6.26	5.10	3.85	2.59	1.43	0.55	0.08	68.9	68.8							
20	0.05	0.44	1.35	2.59	4.01	5.42	6.64	7.53	8.01	7.99	7.49	6.60	5.45	4.12	2.75	1.52	0.58	0.09	72.7	72.6							
10	0.04	0.43	1.37	2.62	4.09	5.54	6.80	7.74	8.24	8.24	7.76	6.88	5.69	4.29	2.85	1.56	0.59	0.09	74.8	74.8							
0	0.04	0.44	1.38	2.66	4.14	5.61	6.89	7.84	8.33	8.31	7.84	6.96	5.74	4.33	2.88	1.57	0.59	0.09	75.7	75.6							
-10	0.05	0.46	1.41	2.69	4.17	5.63	6.89	7.78	8.21	8.18	7.70	6.81	5.62	4.25	2.83	1.55	0.59	0.09	74.9	74.9							
-20	0.05	0.46	1.38	2.64	4.08	5.48	6.65	7.49	7.89	7.87	7.42	6.55	5.38	4.06	2.71	1.49	0.57	0.09	72.3	72.2							
-30	0.05	0.44	1.31	2.52	3.87	5.17	6.27	7.06	7.43	7.41	6.98	6.17	5.05	3.78	2.52	1.39	0.54	0.08	68.1	68.0							
-40	0.05	0.41	1.21	2.32	3.55	4.74	5.78	6.48	6.83	6.81	6.41	5.67	4.63	3.44	2.28	1.26	0.49	0.08	62.5	62.4							
-50	0.04	0.37	1.09	2.07	3.15	4.23	5.17	5.78	6.11	6.09	5.72	5.08	4.13	3.05	1.99	1.10	0.44	0.07	55.7	55.6							
-60	0.04	0.31	0.92	1.78	2.68	3.63	4.47	4.98	5.27	5.25	4.92	4.37	3.52	2.56	1.67	0.93	0.37	0.07	47.8	47.7							
-70	0.04	0.27	0.75	1.40	2.08	2.78	3.40	3.83	4.08	4.06	3.74	3.25	2.61	1.94	1.32	0.74	0.30	0.06	36.6	36.5							
-80	0.03	0.22	0.59	1.08	1.62	2.19	2.65	2.96	3.19	3.16	2.89	2.55	2.09	1.54	1.02	0.58	0.25	0.05	28.7	28.5							
-90																											
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)											20	30	40	50	60	70	80	90
Φ t	0.73	6.33	18.9	36.2	55.7	75.3	92.4	105	111	111	104	91.5	74.7	55.7	37.0	20.5	8.01	1.29	1043								
Φ a	0.05	5.86	18.8	36.2	55.7	75.3	92.4	105	111	111	104	91.5	74.7	55.7	37.0	20.4	7.77	0.76		1017							

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

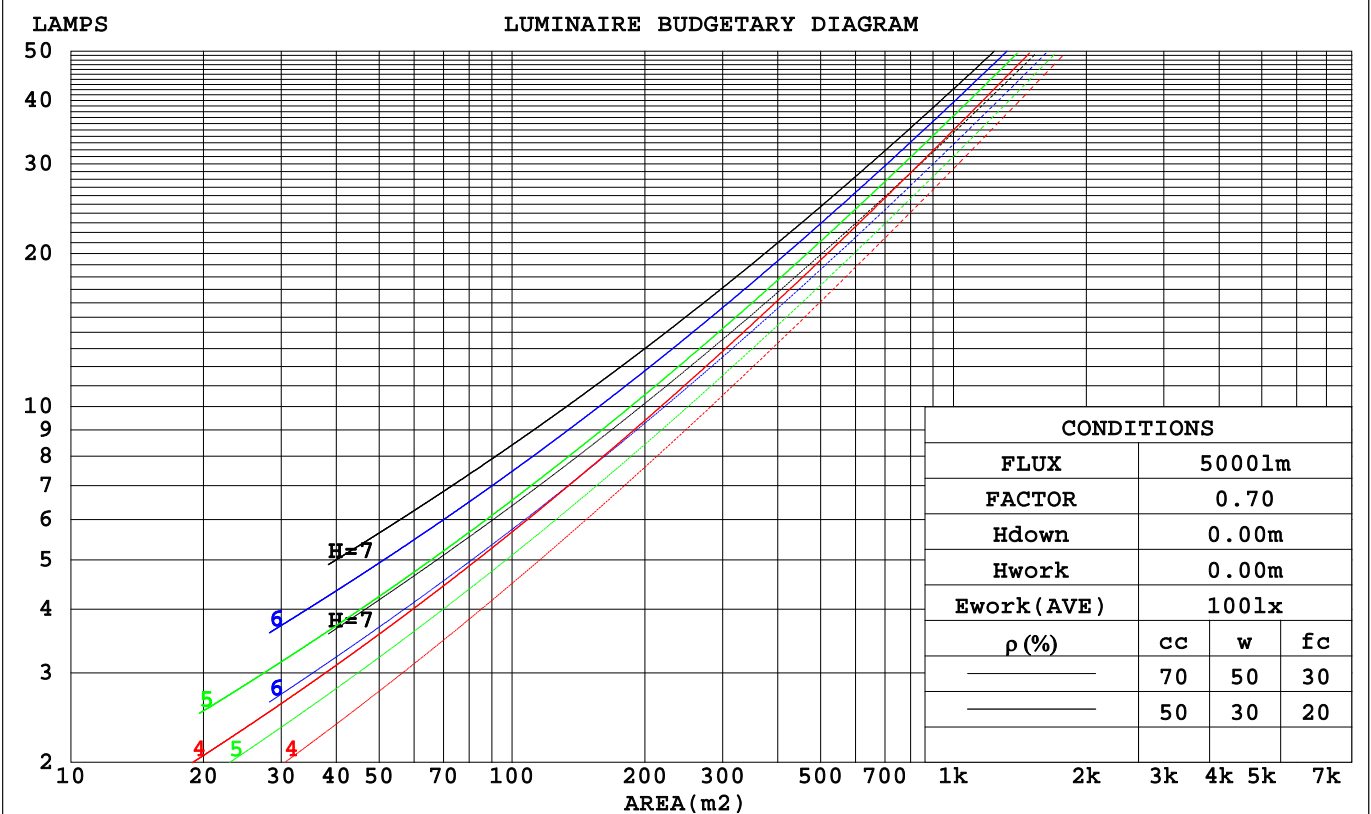
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	.97	.92	.87	.92	.88	.84	.87	.84	.81	.83	.80	.78	.75
2.0	.85	.77	.70	.83	.75	.69	.78	.72	.67	.74	.69	.65	.71	.67	.63	.60
3.0	.74	.64	.57	.72	.63	.56	.68	.61	.55	.65	.59	.53	.62	.56	.52	.49
4.0	.65	.55	.48	.63	.54	.47	.60	.52	.46	.57	.50	.45	.54	.49	.44	.41
5.0	.57	.48	.40	.56	.47	.40	.53	.45	.39	.51	.44	.38	.49	.43	.38	.35
6.0	.51	.42	.35	.50	.41	.35	.48	.40	.34	.46	.39	.33	.44	.38	.33	.31
7.0	.46	.37	.31	.45	.37	.30	.43	.36	.30	.42	.35	.29	.40	.34	.29	.27
8.0	.42	.33	.27	.41	.33	.27	.40	.32	.26	.38	.31	.26	.37	.30	.26	.24
9.0	.39	.30	.24	.38	.30	.24	.36	.29	.24	.35	.28	.23	.34	.28	.23	.21
10.0	.36	.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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

WEC AND CCEC

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	.383	.218	.069	.375	.214	.068	.359	.206	.066	.345	.199	.064	.332	.192	.062	
2.0	.337	.185	.057	.330	.182	.056	.316	.176	.055	.303	.170	.053	.291	.165	.052	
3.0	.302	.160	.048	.295	.158	.048	.282	.153	.047	.271	.148	.046	.260	.144	.045	
4.0	.272	.141	.042	.266	.139	.041	.255	.135	.040	.245	.132	.040	.235	.128	.039	
5.0	.248	.126	.037	.243	.125	.036	.233	.121	.036	.223	.118	.035	.215	.115	.034	
6.0	.227	.114	.033	.223	.112	.032	.214	.110	.032	.205	.107	.031	.198	.104	.031	
7.0	.210	.104	.029	.205	.102	.029	.197	.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	.024	.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	.217	.217	.217	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.213	.183	.156	.182	.157	.134	.124	.108	.093	.072	.062	.054	.023	.020	.017	
2.0	.206	.159	.120	.176	.137	.104	.121	.095	.072	.070	.055	.042	.022	.018	.014	
3.0	.198	.142	.097	.170	.123	.084	.117	.085	.059	.067	.050	.035	.022	.016	.011	
4.0	.190	.129	.082	.163	.112	.072	.112	.078	.050	.065	.046	.030	.021	.015	.010	
5.0	.182	.119	.072	.157	.103	.063	.108	.072	.044	.062	.042	.026	.020	.014	.009	
6.0	.175	.111	.065	.150	.096	.057	.104	.067	.040	.060	.040	.024	.019	.013	.008	
7.0	.167	.104	.060	.144	.090	.052	.099	.063	.037	.058	.037	.022	.019	.012	.007	
8.0	.161	.098	.055	.138	.085	.048	.096	.060	.034	.056	.035	.020	.018	.012	.007	
9.0	.154	.093	.052	.133	.081	.046	.092	.057	.032	.054	.034	.019	.017	.011	.006	
10.0	.148	.089	.050	.128	.077	.043	.089	.054	.031	.052	.032	.018	.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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

Uncorrected UGR Table

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy										
Address: FI										
NAME: COB LED Strip					TYPE: 91012405			WEIGHT:		
SPECIFICATION: COB 528LEDS					DIMENSION: 5 x 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	16.3	17.9	16.6	18.2	18.5	17.5	19.1	17.8	19.4	19.7
3H	18.1	19.6	18.5	19.9	20.2	20.0	21.5	20.4	21.8	22.1
4H	18.9	20.3	19.3	20.6	21.0	21.2	22.6	21.6	22.9	23.3
6H	19.5	20.9	19.9	21.2	21.6	22.5	23.8	22.9	24.2	24.5
8H	19.7	21.0	20.1	21.4	21.8	23.3	24.6	23.7	25.0	25.3
12H	19.9	21.2	20.3	21.5	21.9	24.3	25.5	24.7	25.9	26.3
4H 2H	17.3	18.7	17.7	19.0	19.4	18.2	19.6	18.6	19.9	20.3
3H	19.3	20.6	19.7	20.9	21.3	20.9	22.2	21.3	22.5	22.9
4H	20.3	21.4	20.7	21.8	22.2	22.2	23.4	22.6	23.7	24.2
6H	21.1	22.1	21.5	22.5	23.0	23.7	24.7	24.1	25.1	25.6
8H	21.4	22.4	21.9	22.8	23.3	24.7	25.6	25.1	26.1	26.5
12H	21.6	22.5	22.1	23.0	23.5	25.8	26.7	26.3	27.2	27.6
8H 4H	21.0	21.9	21.4	22.4	22.8	22.5	23.5	23.0	23.9	24.4
6H	22.1	22.9	22.6	23.4	23.9	24.3	25.1	24.8	25.6	26.1
8H	22.6	23.3	23.1	23.8	24.3	25.5	26.2	26.0	26.7	27.3
12H	23.1	23.7	23.6	24.2	24.8	26.9	27.6	27.5	28.1	28.6
12H 4H	21.1	22.0	21.6	22.5	23.0	22.6	23.5	23.1	23.9	24.4
6H	22.4	23.2	22.9	23.6	24.2	24.4	25.2	25.0	25.7	26.2
8H	23.1	23.7	23.6	24.2	24.8	25.7	26.4	26.3	26.9	27.4
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					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 1043 lm Total Lamp Luminous Flux. (8log(F/F0) = 0.1)

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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

UTILIZATION FACTORS TABLE

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	40	32	50	39	32	25
0.80	62	49	41	61	49	41	58	48	40	33
1.00	70	57	49	68	57	49	66	58	48	40
1.25	77	65	57	75	64	56	72	62	55	47
1.50	82	70	62	80	69	62	76	67	60	52
2.00	89	79	71	87	77	70	83	75	69	59
2.50	94	84	77	91	82	76	87	79	74	64
3.00	97	89	82	95	87	81	90	83	78	68
4.00	102	95	89	99	92	87	94	89	84	74
5.00	105	98	93	102	96	91	96	92	88	77
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

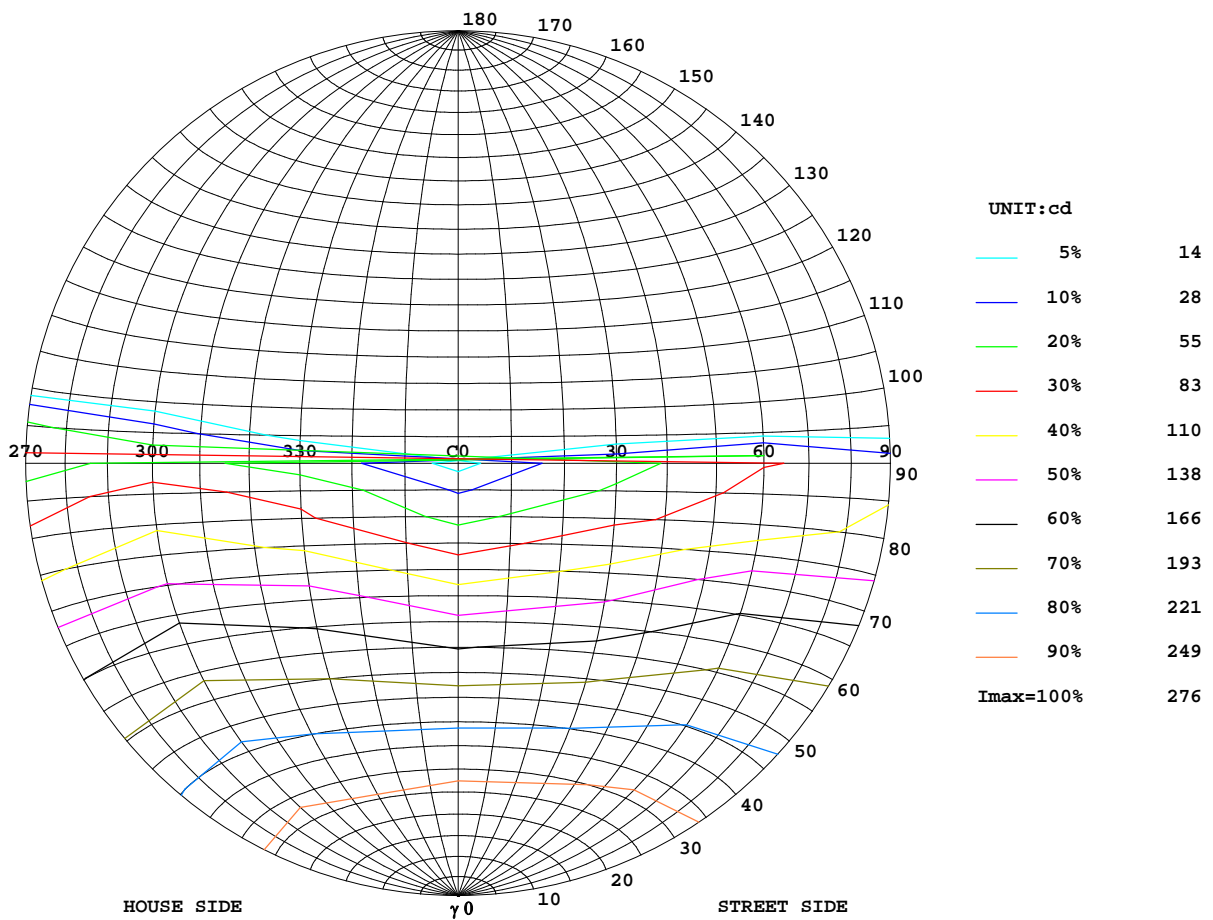
Test System:HOPPO HPG1800
 Temperature:25.3DEG
 Operators:RD
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01



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

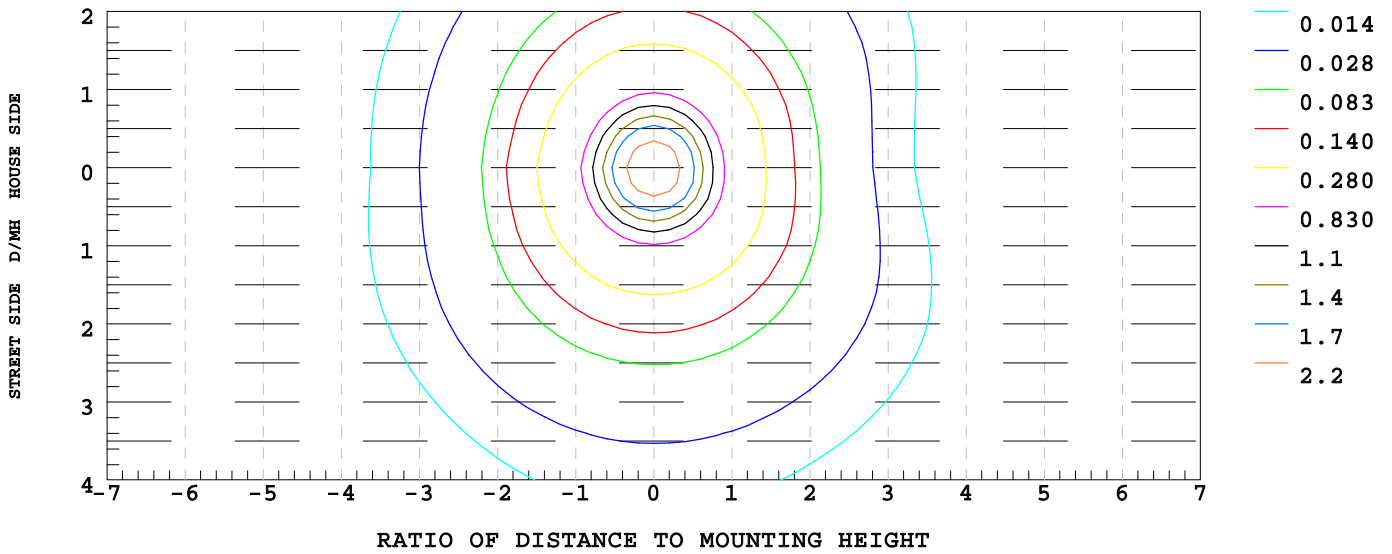
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

ISOLUX DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 1000mm	SERIAL No.: 01

ILLUMINANCE AT MH=10 m, Enadir = 2.75 lx



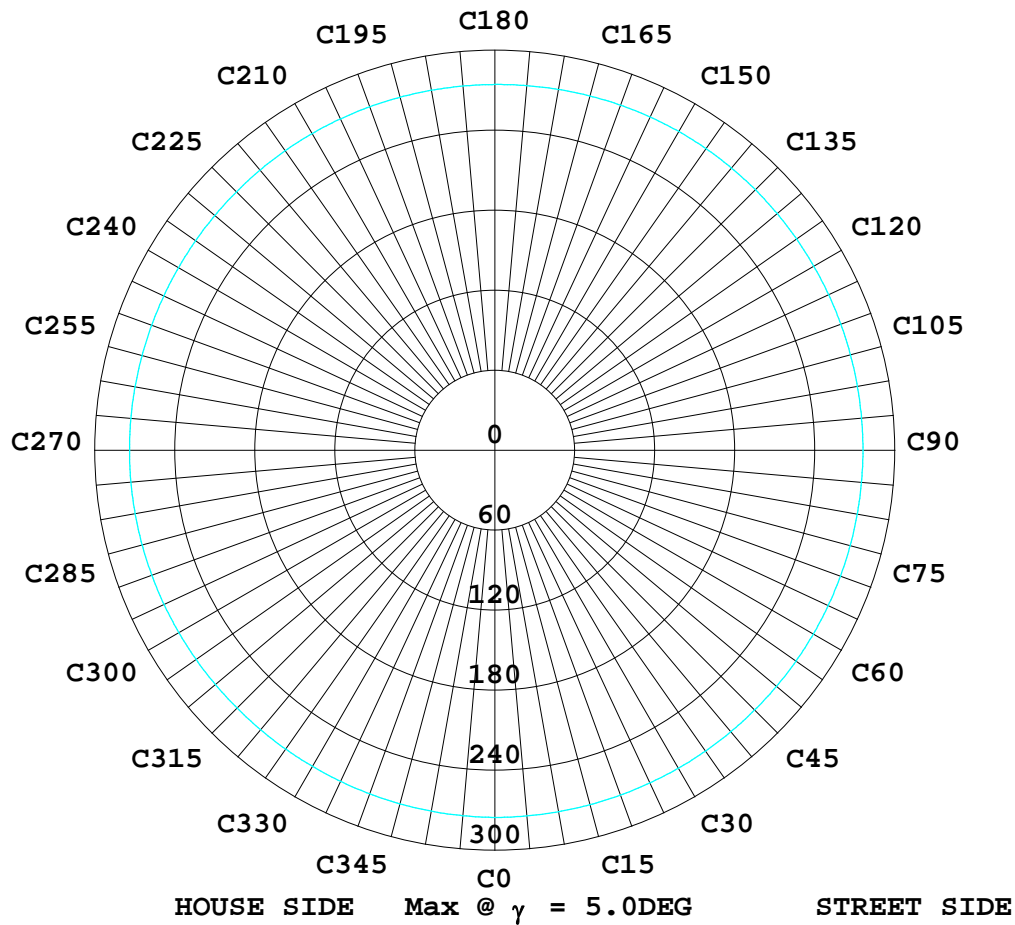
Test System:HOPPO HPG1800
 Temperature:25.3DEG
 Operators:RD
 Test Date:01-20-2024

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.000 m
 Remarks: 91012405 5mm COB LED Strip

ISOCANDELA DIAGRAM

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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: 91012405 5mm COB LED Strip

KVS Valaistussuunnittelu Oy IES TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number: KVS-RP20240120-1

MANUFACTURER: KVS Valaistussuunnittelu Oy		
Address: FI		
NAME: COB LED Strip	TYPE: 91012405	WEIGHT:
SPECIFICATION: COB 528LEDS	DIMENSION: 5 x 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	276	276	276	276	276	276	276	276	276	276	276	276
5.0	275	275	276	276	276	276	274	274	274	274	274	274
10.0	273	273	274	275	275	274	271	271	271	271	270	270
15.0	269	269	271	272	272	271	265	266	266	266	265	264
20.0	262	263	266	267	268	266	258	259	259	260	258	257
25.0	254	255	260	261	261	258	248	250	252	253	250	247
30.0	244	246	252	255	254	249	237	239	243	245	241	236
35.0	232	234	243	247	246	238	224	227	232	236	231	224
40.0	218	221	233	237	236	226	208	213	221	225	219	210
45.0	202	207	222	227	225	212	190	198	208	214	206	195
50.0	184	191	209	216	212	196	171	181	195	202	193	179
55.0	165	174	195	203	199	179	150	163	180	189	179	161
60.0	144	156	181	191	185	161	127	143	165	176	164	142
65.0	121	137	167	177	170	142	107	124	150	162	149	124
70.0	96.6	117	151	158	155	122	76.0	104	128	139	128	105
75.0	72.0	97.5	124	134	128	106	50.9	85.0	107	121	107	85.4
80.0	47.1	78.0	96.0	119	106	82.0	27.2	66.4	86.7	108	86.4	68.2
85.0	24.6	58.8	92.2	109	95.6	62.3	9.10	47.9	74.8	90.1	75.8	50.0
90.0	8.78	44.5	81.4	91.4	84.0	47.8	1.47	19.3	36.7	71.0	39.9	21.0
95.0	2.56	7.17	36.9	60.2	29.6	2.11	1.53	2.88	2.04	5.68	2.30	3.06
100.0	2.62	1.85	3.58	2.23	3.51	1.79	1.73	2.81	2.04	3.38	2.23	3.00
105.0	2.62	2.04	3.32	2.23	3.32	1.91	1.92	2.81	2.24	3.32	2.36	3.00
110.0	2.75	2.17	3.32	2.36	3.26	2.04	2.11	2.88	2.43	3.38	2.49	3.06
115.0	2.88	2.43	3.32	2.55	3.26	2.23	2.30	2.94	2.56	3.45	2.75	3.19
120.0	3.01	2.56	3.39	2.74	3.32	2.42	2.50	3.07	2.75	3.51	2.87	3.26
125.0	3.14	2.81	3.52	2.94	3.38	2.68	2.69	3.20	2.94	3.58	3.07	3.38
130.0	3.33	3.01	3.58	3.06	3.51	2.87	2.88	3.33	3.07	3.64	3.19	3.51
135.0	3.46	3.13	3.71	3.19	3.58	3.00	3.07	3.45	3.20	3.77	3.38	3.64
140.0	3.59	3.26	3.77	3.32	3.70	3.19	3.20	3.58	3.32	3.83	3.45	3.70
145.0	3.71	3.45	3.84	3.51	3.77	3.38	3.39	3.71	3.45	3.89	3.58	3.83
150.0	3.84	3.58	3.96	3.58	3.83	3.51	3.52	3.77	3.58	3.96	3.70	3.90
155.0	3.97	3.71	4.03	3.70	3.90	3.64	3.71	3.90	3.71	4.02	3.77	3.96
160.0	4.03	3.77	4.03	3.83	3.96	3.70	3.78	3.97	3.77	4.09	3.90	4.02
165.0	4.10	3.84	4.09	3.89	4.02	3.83	3.84	4.03	3.84	4.15	3.96	4.09
170.0	4.16	3.90	4.16	3.96	4.09	3.90	3.97	4.09	3.90	4.21	4.02	4.15
175.0	4.23	3.97	4.16	4.02	4.15	3.96	4.03	4.16	4.03	4.28	4.02	4.15
180.0	4.23	4.03	4.16	4.09	4.15	4.09	4.16	4.16	4.03	4.21	4.02	4.15

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: 91012405 5mm COB LED Strip