a	b	c	d	e
Data Set	Input1_InterferenceFilterSpectra			
Cone sensitivitie	161121_Hismenius_male_averaged_sensitivities_rhodopsin_JB.csv			
Ocular Media	Disregarded			
Irradiance Spect	Daylight			
Von Kreis Transf	TRUE			
Von Kreis Denor	0.1817169	0.6400428	0.924673	

	700 nm	690 nm	680 nm	671 nm	660 nm	650 nm	640 nm	632 nm	620 nm	610 nm	600 nm	589 nm	580 nm	570 nm	560 nm	550 nm	540 nm	532 nm	520 nm	510 nm	500 nm	492 nm	480 nm	470 nm	460 nm	450 nm	440 nm	430 nm	420 nm	410 nm	400 nm	390 nm	380 nm	370 nm	360 nm	350 nm	340 nm	330 nm	320 nm	310 nm	300 nm
700 nm	0	34.49232	52.77599	72.81538	83.9875	100.21306	113.20254	122.73455	128.35668	137.33991	139.4485	141.11133	137.03021	133.37051	121.60258	107.18035	88.80775	78.16799	56.44076	57.44587	59.10763	73.92557	98.27192	109.31621	105.85615	88.96344	69.525	40.76031	19.74465	7.69807	16.62683	26.68866	36.75278	43.55632	49.74436	58.10167	67.24609	83.51215	101.56012	158.50942	126.43636
690 nm	34.49232	0	19.08136	40.17885	52.46527	70.00684	83.94662	94.51612	101.22082	111.53044	115.09222	118.54677	115.68648	114.18	105.07229	93.41273	77.91285	68.80668	49.82192	50.71634	52.25556	65.63941	87.84004	98.28446	95.64285	80.87606	63.44283	37.31802	18.11312	7.10394	15.35	24.70422	33.9957	40.19673	45.7361	53.01052	60.81875	74.5694	89.70867	136.74851	113.74049
680 nm	52.77599	19.08136	0	21.55142	34.52104	53.02445	67.64996	78.90086	86.29317	97.38466	101.75879	106.20743	104.01787	103.69349	96.04684	85.90722	71.96744	63.66291	45.87668	46.25063	47.32584	59.54861	80.28463	90.48254	88.59958	75.50672	59.51034	35.14478	17.0816	6.69862	14.4696	23.22296	31.81695	37.47789	42.37977	48.66575	55.38656	67.29724	80.48005	121.53913	104.5097
671 nm	72.81538	40.17885	21.55142	0	13.51522	32.98114	48.38169	60.4284	68.63876	80.66196	85.99993	91.62948	90.23549	91.31437	85.40195	77.0696	64.96761	57.59238	41.06687	40.56053	40.82915	51.45019	70.29215	80.25759	79.47835	68.71914	54.64111	32.50853	15.83818	6.20694	13.39797	21.39388	29.09423	34.06506	38.15246	43.20595	48.61886	58.41997	69.47791	104.58505	93.2407
660 nm	83.9875	52.46527	34.52104	13.51522	0	20.06736	36.01975	48.62173	57.41714	70.07777	76.04261	82.43859	81.55514	83.53667	78.74121	71.58198	60.63051	53.79023	37.58146	35.65852	34.55824	43.39129	60.48344	70.44763	70.98294	62.79982	50.66011	30.50488	14.91196	5.81891	12.53925	19.8129	26.59661	30.84365	34.0194	37.7216	41.79964	49.68111	59.03282	90.07337	84.05547
650 nm	100.21306	70.00684	53.02445	32.98114	20.06736	0	16.45191	29.72371	39.29592	52.90195	59.86642	67.50409	67.45899	70.92884	67.97837	62.76707	53.74146	47.83801	32.47879	28.38702	24.81046	30.47392	44.62084	54.35711	56.86182	53.0151	44.31289	27.52932	13.59742	5.30833	11.39639	17.70604	23.18415	26.38482	28.29165	30.17627	32.5392	38.15224	45.69006	72.82391	72.34886
640 nm	113.20254	83.94662	67.64996	48.38169	36.01975	16.45191	0	13.71529	23.86869	38.23561	46.04539	54.73835	55.41534	60.16831	58.8202	55.30883	48.02824	43.03087	28.94209	23.4164	17.60072	19.97862	31.39823	40.50985	44.19446	43.77742	38.30284	24.90265	12.50713	4.90516	10.4691	15.92036	20.21718	22.52501	23.42841	23.98934	25.21973	29.5775	36.29537	61.66947	64.29905
632 nm	122.73455	94.51612	78.90086	60.4284	48.62173	29.72371	13.71529	0	10.59174	25.59877	34.13704	43.73209	45.0348	50.89988	50.96105	48.95525	43.30883	39.20885	26.75187	20.48263	12.86246	10.6554	19.01145	27.17445	31.38891	33.55114	31.2669	21.96421	11.39817	4.49397	9.47328	13.83169	16.76903	18.18998	18.1591	17.56085	17.92666	21.71888	28.3236	53.11193	58.05171
620 nm	128.35668	101.22082	86.29317	68.63876	57.41714	39.29592	23.86869	10.59174	0	15.44873	24.59241	34.9281	36.75054	43.54334	44.79961	44.09319	39.93126	36.69869	26.18527	20.05891	12.4597	4.98236	7.19631	14.43996	18.55828	21.87895	22.03737	17.92321	10.18845	4.11927	8.37943	11.29534	12.85619	13.57614	12.80402	11.17429	10.87219	14.9711	22.14691	47.01384	53.58178
610 nm	137.33991	111.53044	97.38466	80.66196	70.07777	52.90195	38.23561	25.59877	15.44873	0	9.94825	21.36835	23.95969	32.10207	35.07963	36.2055	34.16175	32.18931	24.72808	19.97688	14.59845	9.1341	4.66958	7.40488	10.04962	11.95917	11.63699	10.56284	7.61527	3.50014	6.4452	8.01528	8.95187	9.46727	8.38536	5.91985	5.03805	10.26898	17.83564	41.51411	48.31858
600 nm	139.4485	115.09222	101.75879	85.99993	76.04261	59.86642	46.04539	34.13704	24.59241	9.94825	0	12.00667	15.10347	24.1173	28.19858	30.47401	29.79532	28.63235	23.11869	19.4063	15.41655	11.50689	8.11431	8.35317	9.44712	9.75193	8.07362	5.59526	4.67067	2.65328	4.81084	6.32856	7.30709	7.84347	6.71924	3.80055	2.3339	8.60822	16.08063	38.52283	45.02544
589 nm	141.11133	118.54677	106.20743	91.62948	82.43859	67.50409	54.73835	43.73209	34.9281	21.36835	12.00667	0	3.64996	13.71864	19.22736	22.9773	24.00333	23.84241	20.69518	18.23789	15.78085	13.42146	11.35324	11.04205	11.26632	10.61812	8.5935	5.48061	4.24671	2.03408	3.9468	5.42657	6.36429	6.87506	5.82132	2.9136	0.9486	7.59147	14.51255	35.0225	40.85189
580 nm	137.03021	115.68648	104.01787	90.23549	81.55514	67.45899	55.41534	45.0348	36.75054	23.95969	15.10347	3.64996	0	10.26673	16.20288	20.38504	21.92103	22.05433	19.57997	17.49385	15.43116	13.47178	11.79229	11.54821	11.71657	11.02572	9.13365	6.32421	4.78308	2.2384	4.02988	5.35825	6.23832	6.72585	5.71169	2.95457	1.27037	7.4197	14.10841	33.93178	39.50034
570 nm	133.37051	114.18	103.69349	91.31437	83.53667	70.92884	60.16831	50.89988	43.54334	32.10207	24.1173	13.71864	10.26673	0	7.0251	12.51779	15.55114	16.53012	15.91545	14.74461	13.62754	12.50923	11.56518	11.48269	11.61389	10.97695	9.43007	7.11002	5.05377	2.26308	3.99775	5.05788	5.79653	6.22103	5.33304	3.01218	1.83891	6.85674	12.81478	30.46496	35.16489
560 nm	121.60258	105.07229	96.04684	85.40195	78.74121	67.97837	58.8202	50.96105	44.79961	35.07963	28.19858	19.22736	16.20288	7.0251	0	6.1761	10.2386	11.80198	12.41572	11.82109	11.22088	10.53441	9.97308	10.04843	10.25344	9.781	8.45772	6.41945	4.54731	2.02493	3.61618	4.59348	5.27854	5.67405	4.86746	2.74185	1.66149	6.27682	11.72477	27.50603	31.39621
550 nm	107.18035	93.41273	85.90722	77.0696	71.58198	62.76707	55.30883	48.95525	44.09319	36.2055	30.47401	22.9773	20.38504	12.51779	6.1761	0	4.85138	6.96837	8.85448	8.85469	8.80466	8.56432	8.38492	8.6065	8.87747	8.56433	7.46643	5.71305	4.0362	1.79089	3.23033	4.11726	4.74507	5.10976	4.38938	2.47137	1.49342	5.67732	10.57553	24.24424	27.14458
540 nm	88.80775	77.91285	71.96744	64.96761	60.63051	53.74146	48.02824	43.30883	39.93126	34.16175	29.79532	24.00333	21.92103	15.55114	10.2386	4.85138	0	2.34781	5.01731	5.37285	5.53921	5.35415	5.13979	5.44377	5.86678	5.8383	4.87623	3.18578	2.47738	1.1558	2.37752	3.3842	4.03161	4.39021	3.74285	1.87538	0.56936	4.92599	9.31746	20.6325	22.52977
532 nm	78.16799	68.80668	63.66291	57.59238	53.79023	47.83801	43.03087	39.20885	36.69869	32.18931	28.63235	23.84241	22.05433	16.53012	11.80198	6.96837	2.34781	0	3.0167	3.59157	3.92699	3.82052	3.642	4.05687	4.605	4.79805	4.03614	2.5924	2.06604	1.00913	2.17693	3.14077	3.75383	4.09305	3.50509	1.79834	0.6887	4.61146	8.63091	18.39594	19.60749
520 nm	56.44076	49.82192	45.87668	41.06687	37.58146	32.47879	28.94209	26.75187	26.18527	24.72808	23.11869	20.69518	19.57997	15.91545	12.41572	8.85448	5.01731	3.0167	0	0.83417	1.37916	1.4033	1.57453	2.584	3.49915	4.27273	4.23714	3.77689	2.681	1.17725	2.3661	3.05743	3.53022	3.80919	3.34187	2.06383	1.50508	4.32847	7.53444	13.84234	13.08067
510 nm	57.44587	50.71634	46.25063	40.56053	35.65852	28.38702	23.4164	20.48263	20.05891	19.97688	19.4063	18.23789	17.49385	14.74461	11.82109	8.85469	5.37285	3.59157	0.83417	0	0.47616	0.43051	1.29655	2.74426	3.84391	4.89667	5.13632	4.53799	2.81592	1.09878	2.31091	3.09325	3.58968	3.87031	3.43419	2.29107	1.87711	4.47461	7.51398	13.18422	10.47024
500 nm	59.10763	52.25556	47.32584	40.82915	34.55824	24.81046	17.60072	12.86246	12.4597	14.59845	15.41655	15.78085	15.43116	13.62754	11.22088	8.80466	5.53921	3.92699	1.37916	0.47616	0	0.22724	1.33208	2.70898	3.77024	4.80435	5.0429	4.27486	2.54317	1.04056	2.05356	2.76812	3.2595	3.54349	3.11172	1.89121	1.35141	4.16949	7.12506	12.19297	7.3501
492 nm	73.92557	65.63941	59.54861	51.45019	43.39129	30.47392	19.97862	10.6554	4.98236	9.1341	11.50689	13.42146	13.47178	12.50923	10.53441	8.56432	5.35415	3.82052	1.4033	0.43051	0.22724	0	1.0828	2.4438	3.50848	4.52917	4.73025	3.84147	2.2339	1.00617	1.8118	2.41837	2.86403	3.13382	2.71115	1.4374	0.63851	3.7311	6.75899	12.58942	5.83612
480 nm	98.27192	87.84004	80.28463	70.29215	60.48344	44.62084	31.39823	19.01145	7.19631	4.66958	8.11431	11.35324	11.79229	11.56518	9.97308	8.38492	5.13979	3.642	1.57453	1.29655	1.33208	1.0828	0	1.38779	2.50271	3.55104	3.77146	3.0263	1.7764	0.93183	1.51893	1.99794	2.3693	2.60425	2.2537	1.18001	0.45679	3.15686	5.96736	12.67605	4.7111
470 nm	109.31621	98.28446	90.48254	80.25759	70.44763	54.35711	40.50985	27.17445	14.43996	7.40488	8.35317	11.04205	11.54821	11.48269	10.04843	8.6065	5.44377	4.05687	2.584	2.74426	2.70898	2.4438	1.38779	0	1.18805	2.36981	2.73789	2.30711	1.39148	0.80436	1.27229	1.67807	2.00493	2.21712	1.9405	1.08749	0.61199	2.76003	5.24847	11.92541	3.6042
460 nm	105.85615	95.64285	88.59958	79.47835	70.98294	56.86182	44.19446	31.38891	18.55828	10.04962	9.44712	11.26632	11.71657	11.61389	10.25344	8.87747	5.86678	4.605	3.49915	3.84391	3.77024	3.50848	2.50271	1.18805	0	1.30711	1.85217	1.73672	1.08908	0.68286	1.07639	1.43423	1.73192	1.92885	1.70615	1.0002	0.63492	2.44474	4.64924	10.74624	2.63781
450 nm	88.96344	80.87606	75.50672	68.71914	62.79982	53.0151	43.77742	33.55114	21.87895	11.95917	9.75193	10.61812	11.02572	10.97695	9.781	8.56433	5.8383	4.79805	4.27273	4.89667	4.80435	4.52917	3.55104	2.36981	1.30711	0	0.72992	1.0122	0.69104	0.50319	0.82652	1.13509	1.40218	1.58253	1.42065	0.86127	0.52985	1.96654	3.76176	8.3922	1.9167
440 nm	69.525	63.44283	59.51034	54.64111	50.66011	44.31289	38.30284	31.2669	22.03737	11.63699	8.07362	8.5935	9.13365	9.43007	8.45772	7.46643	4.87623	4.03614	4.23714	5.13632	5.0429	4.73025	3.77146	2.73789	1.85217	0.72992	0	0.49256	0.3973	0.38204	0.65697	0.93127	1.1777	1.34661	1.22827	0.76173	0.35775	1.48473	2.89547	6.0542	1.69098
430 nm	40.76031	37.31802	35.14478	32.50853	30.50488	27.52932	24.90265	21.96421	17.92321	10.56284	5.59526	5.48061	6.32421	7.11002	6.41945	5.71305	3.18578	2.5924	3.77689	4.53799	4.27486	3.84147	3.0263	2.30711	1.73672	1.0122	0.49256	0	0.08774	0.2723	0.48422	0.7218	0.94903	1.10813	1.05535	0.73735	0.2923	0.70747	1.54495	3.06582	1.33262
420 nm	19.74465	18.11312	17.0816	15.83818	14.91196	13.59742	12.50713	11.39817	10.18845	7.61527	4.67067	4.24671	4.78308	5.05377	4.54731	4.0362	2.47738	2.06604	2.681	2.81592	2.54317	2.2339	1.7764	1.39148	1.08908	0.69104	0.3973	0.08774	0	0.23279	0.41224	0.64002	0.86766	1.0291	1.02991	0.83687	0.53436	0.1905	0.58607	1.33497	1.03899
410 nm	7.69807	7.10394	6.69862	6.20694	5.81891	5.30833	4.90516	4.49397	4.11927	3.50014	2.65328	2.03408	2.2384	2.26308	2.02493	1.79089	1.1558	1.00913	1.17725	1.09878	1.04056	1.00617	0.93183	0.80436	0.68286	0.50319	0.38204	0.2723	0.23279	0	0.15672	0.39352	0.64144	0.81898	0.90709	0.9014	0.82525	0.65725	0.54308	0.51846	0.90438
400 nm	16.62683	15.35	14.4696	13.39797	12.53925	11.39639	10.4691	9.47328	8.37943	6.4452	4.81084	3.9468	4.02988	3.99775	3.61618	3.23033	2.37752	2.17693	2.3661	2.31091	2.05356	1.8118	1.51893	1.27229	1.07639	0.82652	0.65697	0.48422	0.41224	0.15672	0	0.24576	0.50547	0.69198	0.80999	0.86541	0.86428	0.81951	0.81637	1.03263	2.04398
390 nm	26.68866	24.70422	23.22296	21.39388	19.8129	17.70604	15.92036	13.83169	11.29534	8.01528	6.32856	5.42657	5.35825	5.05788	4.59348	4.11726	3.3842	3.14077	3.05743	3.09325	2.76812	2.41837	1.99794	1.67807	1.43423	1.13509	0.93127	0.7218	0.64002	0.39352	0.24576	0	0.26465	0.45706	0.60479	0.72791	0.82073	0.94027	1.09359	1.69939	4.1245
380 nm	36.75278	33.9957	31.81695	29.09423	26.59661	23.18415	20.21718	16.76903	12.85619	8.95187	7.30709	6.36429	6.23832	5.79653	5.27854	4.74507	4.03161	3.75383	3.53022	3.58968	3.2595	2.86403	2.3693	2.00493	1.73192	1.40218	1.1777	0.94903	0.86766	0.64144	0.50547	0.26465	0	0.19608	0.37168	0.56672	0.76605	1.05988	1.36843	2.36562	6.27328
370 nm	43.55632	40.19673	37.47789	34.06506	30.84365	26.38482	22.52501	18.18998	13.57614	9.46727	7.84347	6.87506	6.72585	6.22103	5.67405	5.10976	4.39021	4.09305	3.80919	3.87031	3.54349	3.13382	2.60425	2.21712	1.92885	1.58253	1.34661	1.10813	1.0291	0.81898	0.69198	0.45706	0.19608	0	0.19224	0.43593	0.70742	1.11196	1.51758	2.76868	7.69349
360 nm	49.74436	45.7361	42.37977	38.15246	34.0194	28.29165	23.42841	18.1591	12.80402	8.38536	6.71924	5.82132	5.71169	5.33304	4.86746	4.38938	3.74285	3.50509	3.34187	3.43419	3.11172	2.71115	2.2537	1.9405	1.70615	1.42065	1.22827	1.05535	1.02991	0.90709	0.80999	0.60479	0.37168	0.19224	0	0.27596	0.61124	1.12455	1.63416	3.17527	9.312
350 nm	58.10167	53.01052	48.66575	43.20595	37.7216	30.17627	23.98934	17.56085	11.17429	5.91985	3.80055	2.9136	2.95457	3.01218	2.74185	2.47137	1.87538	1.79834	2.06383	2.29107	1.89121	1.4374	1.18001	1.08749	1.0002	0.86127	0.76173	0.73735	0.83687	0.9014	0.86541	0.72791	0.56672	0.43593	0.27596	0	0.38377	1.0085	1.64198	3.55592	11.39365
340 nm	67.24609	60.81875	55.38656	48.61886	41.79964	32.5392	25.21973	17.92666	10.87219	5.03805	2.3339	0.9486	1.27037	1.83891	1.66149	1.49342	0.56936	0.6887	1.50508	1.87711	1.35141	0.63851	0.45679	0.61199	0.63492	0.52985	0.35775	0.2923	0.53436	0.82525	0.86428	0.82073	0.76605	0.70742	0.61124	0.38377	0	0.68263	1.41022	3.65579	13.3126
330 nm	83.51215	74.5694	67.29724	58.41997	49.68111	38.15224	29.5775	21.71888	14.9711	10.26898	8.60822	7.59147	7.4197	6.85674	6.27682	5.67732	4.92599	4.61146	4.32847	4.47461	4.16949	3.7311	3.15686	2.76003	2.44474	1.96654	1.48473	0.70747	0.1905	0.65725	0.81951	0.94027	1.05988	1.11196	1.12455	1.0085	0.68263	0	0.81246	3.50632	15.94981
320 nm	101.56012	89.70867	80.48005	69.47791	59.03282	45.69006	36.29537	28.3236	22.14691	17.83564	16.08063	14.51255	14.10841	12.81478	11.72477	10.57553	9.31746	8.63091	7.53444	7.51398	7.12506	6.75899	5.96736	5.24847	4.64924	3.76176	2.89547	1.54495	0.58607	0.54308	0.81637	1.09359	1.36843	1.51758	1.63416	1.64198	1.41022	0.81246	0	3.04137	18.27891
310 nm	158.50942	136.74851	121.53913	104.58505	90.07337	72.82391	61.66947	53.11193	47.01384	41.51411	38.52283	35.0225	33.93178	30.46496	27.50603	24.24424	20.6325	18.39594	13.84234	13.18422	12.19297	12.58942	12.67605	11.92541	10.74624	8.3922	6.0542	3.06582	1.33497	0.51846	1.03263	1.69939	2.36562	2.76868	3.17527	3.55592	3.65579	3.50632	3.04137	0	23.77247
300 nm	126.43636	113.74049	104.5097	93.2407	84.05547	72.34886	64.29905	58.05171	53.58178	48.31858	45.02544	40.85189	39.50034	35.16489	31.39621	27.14458	22.52977	19.60749	13.08067	10.47024	7.3501	5.83612	4.7111	3.6042	2.63781	1.9167	1.69098	1.33262	1.03899	0.90438	2.04398	4.1245	6.27328	7.69349	9.312	11.39365	13.3126	15.94981	18.27891	23.77247	0