

APPENDIX 1

MATERIAL COMPOSITION

The product material composition is illustrated in the table below. The material weight is given in grams and in percentage on total product weight.

Table 1: Material composition

Material	Weight (g)	Weight-%
Aluminium	6023.0	65.35
Copper	16.41	0.18
Other Plastics	2541.06	27.57
Paint	186.0	2.02
PCB Alu	27.9	0.3
PCB Copper	37.87	0.41
PCB Iron	32.51	0.35
PCB Non-ferrous metal	0.08	0.0
PCB Support	130.87	1.42
PCB Tin	2.19	0.02
PP / PS-High Impact PS / ABS	36.0	0.39
Stainless Steel	2.0	0.02



Steel	179.59	1.95
Tin	1.35	0.01

APPENDIX 2

USE PHASE (B6) VALUES FOR DIFFERENT COUNTRY MIX

In this EPD the B6 impact has been calculated using the energy mix of EU. The table in this appendix is useful for conversion and comparison of B6 values with other energy country mix. The Global Warming Potential Total (GWP tot) value is illustrated for each country. The value refers to 1 kwh.

Example on how to use the table:

If for example this EPD was done according to EU energy mix and you want to see how the GWP total changes according to a Finland country energy mix, you can take the original value in the results table here highlighted in yellow:

ENVIRONMENTAL IMPACT DATA, RESULTS PER DECLARED UNIT

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	4.44E-01	4.75E-03	2.34E-02	4.72E-01	9.50E-04	8.13E-03	ND	ND	ND	ND	ND	4.06E-02	ND	0.00E+00	5.50E-04	2.23E-03	7.33E-04	-2.82E-02

Divide that value according to the EU value from the following table (EU = 3.30E-01) and then multiplying for the Finland value from the same table (FINLAND = 1.54E-01).

Thus, the calculation of this example would be:

New B6 GWP tot for Finland = $(4.06E-02 / 3.30E-01) \times 1.54E-01 = 1.89E-02$.

Country	GWP tot (kg CO2 eq. per kwh)		
AFRICA	7.30E-01	GERMANY	3.90E-01
APAC	9.50E-01	INDIA	1.50E+00
AUSTRALIA	8.40E-01	ITALY	3.50E-01
AUSTRIA	2.30E-01	LATAM	3.90E-01
BELGIUM	2.00E-01	NAM	4.50E-01
CHINA	1.02E+00	NETHERLANDS	3.90E-01
DENMARK	1.60E-01	NORWAY	4.50E-02
EU	3.30E-01	ROW	7.30E-01
FINLAND	1.54E-01	SPAIN	2.10E-01
FRANCE	8.70E-02	SWEDEN	3.70E-02
		UK	2.60E-01

Source Ecoinvent 3.10.1

APPENDIX 3 - EPD HUB ALIGNED

This section represents the scaling method for the **B6 module**, following the PEP EcoPassport PSR for luminaires (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a reference variant of a product family, based on various light management scenarios and power inputs of the luminaires within the same product family.

To calculate the Scaled Impact (*SI*), we have followed the below methods:

1. Calculate the power scaling factor (PSF), which is the ratio of the power input of the variant in questions P_{in} and the power input of the base variant P_{base} .

$$PSF = \frac{P_{in}}{P_{base}}$$

2. Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system). The presented controls factors values in Table A1 are based on BS EN 15193-1:2017. Please refer to this publication or contact Signify directly for more information.

$$TSF = PSF * CSF$$

Table 1: Light management function (PEP EcoPassport aligned)

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

3. Lastly, the GWP of the base variant is then scaled by the TSF.

$$\text{Scaled Impact} = \text{GWP}_{\text{case}} * \text{TSF}$$

The following list of product configurations is not exhaustive. Please use the formula defined in point 1 above to calculate the exact power scaling factor (PSF) for any specific configuration.

Table 2: GWP per scaling factor (EPD Hub aligned)

	12NC or Product Family Code	Description	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
							NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
1	BDP273	BDP273LED8-4S740DW50	616	5.6	110.0	0.295	0.295	0.221	0.221	0.162	0.0	0.0	0.0	0.0
2	BDP273	BDP273LED10-4S740DW50	770	6.8	113.2	0.358	0.358	0.268	0.268	0.197	0.0	0.0	0.0	0.0
3	BDP273	BDP273LED12-4S740DW50	924	7.7	120.0	0.405	0.405	0.304	0.304	0.223	0.0	0.0	0.0	0.0
4	BDP273	BDP273LED14-4S740DW50	1078	8.9	121.1	0.468	0.468	0.351	0.351	0.257	0.0	0.0	0.0	0.0
5	BDP273	BDP273LED16-4S740DW50	1232	10.0	123.2	0.526	0.526	0.395	0.395	0.289	0.0	0.0	0.0	0.0
6	BDP273	BDP273LED18-4S740DW50	1386	11.2	123.8	0.589	0.589	0.442	0.442	0.324	0.0	0.0	0.0	0.0
7	BDP273	BDP273LED20-4S740DW50	1540	12.4	124.2	0.653	0.653	0.49	0.49	0.359	0.0	0.0	0.0	0.0
8	BDP273	BDP273LED22-4S740DW50	1672	13.6	122.9	0.716	0.716	0.537	0.537	0.394	0.0	0.0	0.0	0.0
9	BDP273	BDP273LED24-4S740DW50	1824	15.0	121.6	0.789	0.789	0.592	0.592	0.434	0.0	0.0	0.0	0.0
10	BDP273	BDP273LED27-4S740DW50	2052	17.0	120.7	0.895	0.895	0.671	0.671	0.492	0.0	0.0	0.0	0.0

11	BDP273	BDP273LED30-4S740DW50	2280	19.0	120.0	1.0	1.0	0.75	0.75	0.55	0.0	0.0	0.0	0.0
12	BDP273	BDP273LED34-4S740DW50	2584	20.0	129.2	1.053	1.053	0.79	0.79	0.579	0.0	0.0	0.0	0.0
13	BDP273	BDP273LED35-4S740DW50	2660	20.5	129.8	1.079	1.079	0.809	0.809	0.593	0.0	0.0	0.0	0.0
14	BDP273	BDP273LED39-4S740DW50	2964	23.0	128.9	1.211	1.211	0.908	0.908	0.666	0.0	0.0	0.0	0.0
15	BDP273	BDP273LED40-4S740DW50	3040	23.5	129.4	1.237	1.237	0.928	0.928	0.68	0.0	0.0	0.0	0.0
16	BDP273	BDP273LED44-4S740DW50	3344	26.0	128.6	1.368	1.368	1.026	1.026	0.752	0.0	0.0	0.0	0.0
17	BDP273	BDP273LED45-4S740DW50	3420	27.0	126.7	1.421	1.421	1.066	1.066	0.782	0.0	0.0	0.0	0.0
18	BDP273	BDP273LED50-4S740DW50	3800	28.5	133.3	1.5	1.5	1.125	1.125	0.825	0.0	0.0	0.0	0.0
19	BDP273	BDP273LED55-4S740DW50	4256	31.5	135.1	1.658	1.658	1.244	1.244	0.912	0.0	0.0	0.0	0.0
20	BDP273	BDP273LED59-4S740DW50	4560	33.5	136.1	1.763	1.763	1.322	1.322	0.97	0.0	0.0	0.0	0.0
21	BDP273	BDP273LED64-4S740DW50	4800	37.0	129.7	1.947	1.947	1.46	1.46	1.071	0.0	0.0	0.0	0.0
22	BDP273	BDP273LED69-4S740DW50	5250	40.0	131.2	2.105	2.105	1.579	1.579	1.158	0.0	0.0	0.0	0.0
23	BDP273	BDP273LED74-4S740DW50	5550	43.0	129.1	2.263	2.263	1.697	1.697	1.245	0.0	0.0	0.0	0.0
24	BDP273	BDP273LED79-4S740DW50	5850	44.5	131.5	2.342	2.342	1.756	1.756	1.288	0.0	0.0	0.0	0.0

25	BDP273	BDP273LED84-4S740DW50	6300	47.5	132.6	2.5	2.5	1.875	1.875	1.375	0.0	0.0	0.0	0.0
26	BDP273	BDP273LED90-4S740DW50	6750	51.0	132.4	2.684	2.684	2.013	2.013	1.476	0.0	0.0	0.0	0.0
27	BDP273	BDP273LED94-4S740DW50	7050	54.0	130.6	2.842	2.842	2.131	2.131	1.563	0.0	0.0	0.0	0.0
28	BDP273	BDP273LED109-4S740DW50	8140	63.0	129.2	3.316	3.316	2.487	2.487	1.824	0.0	0.0	0.0	0.0
29	BDP273	BDP273LED120-4S740DW50	8880	71.0	125.1	3.737	3.737	2.803	2.803	2.055	0.0	0.0	0.0	0.0
30	BDP273	BDP273LED130-4S740DW50	9620	77.0	124.9	4.053	4.053	3.04	3.04	2.229	0.0	0.0	0.0	0.0
31	BDP273	BDP273LED8-4S730DW50	616	5.9	104.4	0.311	0.311	0.233	0.233	0.171	0.0	0.0	0.0	0.0
32	BDP273	BDP273LED10-4S730DW50	770	7.1	108.5	0.374	0.374	0.28	0.28	0.206	0.0	0.0	0.0	0.0
33	BDP273	BDP273LED12-4S730DW50	924	8.2	112.7	0.432	0.432	0.324	0.324	0.238	0.0	0.0	0.0	0.0
34	BDP273	BDP273LED14-4S730DW50	1078	9.4	114.7	0.495	0.495	0.371	0.371	0.272	0.0	0.0	0.0	0.0
35	BDP273	BDP273LED16-4S730DW50	1232	10.6	116.2	0.558	0.558	0.419	0.419	0.307	0.0	0.0	0.0	0.0
36	BDP273	BDP273LED18-4S730DW50	1386	11.8	117.5	0.621	0.621	0.466	0.466	0.342	0.0	0.0	0.0	0.0
37	BDP273	BDP273LED20-4S730DW50	1520	13.2	115.2	0.695	0.695	0.521	0.521	0.382	0.0	0.0	0.0	0.0
38	BDP273	BDP273LED22-4S730DW50	1672	14.6	114.5	0.768	0.768	0.576	0.576	0.422	0.0	0.0	0.0	0.0

39	BDP273	BDP273LED24-4S730DW50	1824	16.0	114.0	0.842	0.842	0.631	0.631	0.463	0.0	0.0	0.0	0.0
40	BDP273	BDP273LED27-4S730DW50	2052	18.0	114.0	0.947	0.947	0.71	0.71	0.521	0.0	0.0	0.0	0.0
41	BDP273	BDP273LED30-4S730DW50	2280	20.5	111.2	1.079	1.079	0.809	0.809	0.593	0.0	0.0	0.0	0.0
42	BDP273	BDP273LED34-4S730DW50	2584	21.0	123.0	1.105	1.105	0.829	0.829	0.608	0.0	0.0	0.0	0.0
43	BDP273	BDP273LED35-4S730DW50	2660	22.0	120.9	1.158	1.158	0.868	0.868	0.637	0.0	0.0	0.0	0.0
44	BDP273	BDP273LED39-4S730DW50	2964	24.5	121.0	1.289	1.289	0.967	0.967	0.709	0.0	0.0	0.0	0.0
45	BDP273	BDP273LED40-4S730DW50	3040	25.0	121.6	1.316	1.316	0.987	0.987	0.724	0.0	0.0	0.0	0.0
46	BDP273	BDP273LED44-4S730DW50	3344	28.0	119.4	1.474	1.474	1.105	1.105	0.811	0.0	0.0	0.0	0.0
47	BDP273	BDP273LED45-4S730DW50	3420	28.5	120.0	1.5	1.5	1.125	1.125	0.825	0.0	0.0	0.0	0.0
48	BDP273	BDP273LED50-4S730DW50	3800	30.0	126.7	1.579	1.579	1.184	1.184	0.868	0.0	0.0	0.0	0.0
49	BDP273	BDP273LED55-4S730DW50	4256	33.5	127.0	1.763	1.763	1.322	1.322	0.97	0.0	0.0	0.0	0.0
50	BDP273	BDP273LED59-4S730DW50	4560	36.0	126.7	1.895	1.895	1.421	1.421	1.042	0.0	0.0	0.0	0.0
51	BDP273	BDP273LED64-4S730DW50	4800	39.0	123.1	2.053	2.053	1.54	1.54	1.129	0.0	0.0	0.0	0.0
52	BDP273	BDP273LED69-4S730DW50	5250	42.5	123.5	2.237	2.237	1.678	1.678	1.23	0.0	0.0	0.0	0.0

53	BDP273	BDP273LED74-4S730DW50	5550	46.0	120.7	2.421	2.421	1.816	1.816	1.332	0.0	0.0	0.0	0.0
54	BDP273	BDP273LED79-4S730DW50	6000	47.5	126.3	2.5	2.5	1.875	1.875	1.375	0.0	0.0	0.0	0.0
55	BDP273	BDP273LED84-4S730DW50	6300	51.0	123.5	2.684	2.684	2.013	2.013	1.476	0.0	0.0	0.0	0.0
56	BDP273	BDP273LED90-4S730DW50	6750	55.0	122.7	2.895	2.895	2.171	2.171	1.592	0.0	0.0	0.0	0.0
57	BDP273	BDP273LED94-4S730DW50	7050	57.0	123.7	3.0	3.0	2.25	2.25	1.65	0.0	0.0	0.0	0.0
58	BDP273	BDP273LED109-4S730DW50	8140	68.0	119.7	3.579	3.579	2.684	2.684	1.968	0.0	0.0	0.0	0.0
59	BDP273	BDP273LED120-4S730DW50	8880	76.0	116.8	4.0	4.0	3.0	3.0	2.2	0.0	0.0	0.0	0.0
60	BDP273	BDP273LED8-4S727DW50	616	6.5	94.8	0.342	0.342	0.257	0.257	0.188	0.0	0.0	0.0	0.0
61	BDP273	BDP273LED10-4S727DW50	770	7.9	97.5	0.416	0.416	0.312	0.312	0.229	0.0	0.0	0.0	0.0
62	BDP273	BDP273LED12-4S727DW50	924	9.1	101.5	0.479	0.479	0.359	0.359	0.263	0.0	0.0	0.0	0.0
63	BDP273	BDP273LED14-4S727DW50	1078	10.4	103.7	0.547	0.547	0.41	0.41	0.301	0.0	0.0	0.0	0.0
64	BDP273	BDP273LED16-4S727DW50	1232	11.8	104.4	0.621	0.621	0.466	0.466	0.342	0.0	0.0	0.0	0.0
65	BDP273	BDP273LED18-4S727DW50	1368	13.2	103.6	0.695	0.695	0.521	0.521	0.382	0.0	0.0	0.0	0.0
66	BDP273	BDP273LED20-4S727DW50	1520	14.8	102.7	0.779	0.779	0.584	0.584	0.428	0.0	0.0	0.0	0.0

67	BDP273	BDP273LED22-4S727DW50	1672	16.4	102.0	0.863	0.863	0.647	0.647	0.475	0.0	0.0	0.0	0.0
68	BDP273	BDP273LED24-4S727DW50	1824	18.0	101.3	0.947	0.947	0.71	0.71	0.521	0.0	0.0	0.0	0.0
69	BDP273	BDP273LED27-4S727DW50	2052	20.5	100.1	1.079	1.079	0.809	0.809	0.593	0.0	0.0	0.0	0.0
70	BDP273	BDP273LED30-4S727DW50	2280	21.0	108.6	1.105	1.105	0.829	0.829	0.608	0.0	0.0	0.0	0.0
71	BDP273	BDP273LED34-4S727DW50	2584	24.0	107.7	1.263	1.263	0.947	0.947	0.695	0.0	0.0	0.0	0.0
72	BDP273	BDP273LED35-4S727DW50	2660	24.5	108.6	1.289	1.289	0.967	0.967	0.709	0.0	0.0	0.0	0.0
73	BDP273	BDP273LED39-4S727DW50	2964	27.5	107.8	1.447	1.447	1.085	1.085	0.796	0.0	0.0	0.0	0.0
74	BDP273	BDP273LED40-4S727DW50	3040	28.5	106.7	1.5	1.5	1.125	1.125	0.825	0.0	0.0	0.0	0.0
75	BDP273	BDP273LED44-4S727DW50	3300	31.5	104.8	1.658	1.658	1.244	1.244	0.912	0.0	0.0	0.0	0.0
76	BDP273	BDP273LED45-4S727DW50	3375	32.0	105.5	1.684	1.684	1.263	1.263	0.926	0.0	0.0	0.0	0.0
77	BDP273	BDP273LED50-4S727DW50	3800	34.0	111.8	1.789	1.789	1.342	1.342	0.984	0.0	0.0	0.0	0.0
78	BDP273	BDP273LED55-4S727DW50	4200	37.5	112.0	1.974	1.974	1.48	1.48	1.086	0.0	0.0	0.0	0.0
79	BDP273	BDP273LED59-4S727DW50	4500	40.5	111.1	2.132	2.132	1.599	1.599	1.173	0.0	0.0	0.0	0.0
80	BDP273	BDP273LED64-4S727DW50	4800	44.5	107.9	2.342	2.342	1.756	1.756	1.288	0.0	0.0	0.0	0.0

81	BDP273	BDP273LED69-4S727DW50	5180	48.0	107.9	2.526	2.526	1.894	1.894	1.389	0.0	0.0	0.0	0.0
82	BDP273	BDP273LED74-4S727DW50	5476	52.0	105.3	2.737	2.737	2.053	2.053	1.505	0.0	0.0	0.0	0.0
83	BDP273	BDP273LED79-4S727DW50	6000	54.0	111.1	2.842	2.842	2.131	2.131	1.563	0.0	0.0	0.0	0.0
84	BDP273	BDP273LED84-4S727DW50	6300	57.0	110.5	3.0	3.0	2.25	2.25	1.65	0.0	0.0	0.0	0.0
85	BDP273	BDP273LED90-4S727DW50	6660	62.0	107.4	3.263	3.263	2.447	2.447	1.795	0.0	0.0	0.0	0.0
86	BDP273	BDP273LED94-4S727DW50	6956	65.0	107.0	3.421	3.421	2.566	2.566	1.882	0.0	0.0	0.0	0.0
87	BDP273	BDP273LED109-4S727DW50	8140	77.0	105.7	4.053	4.053	3.04	3.04	2.229	0.0	0.0	0.0	0.0
88	BDP273	BDP273LED6-4S722DW50	462	5.6	82.5	0.295	0.295	0.221	0.221	0.162	0.0	0.0	0.0	0.0
89	BDP273	BDP273LED8-4S722DW50	616	7.1	86.8	0.374	0.374	0.28	0.28	0.206	0.0	0.0	0.0	0.0
90	BDP273	BDP273LED10-4S722DW50	760	8.8	86.4	0.463	0.463	0.347	0.347	0.255	0.0	0.0	0.0	0.0
91	BDP273	BDP273LED12-4S722DW50	924	10.0	92.4	0.526	0.526	0.395	0.395	0.289	0.0	0.0	0.0	0.0
92	BDP273	BDP273LED14-4S722DW50	1078	11.6	92.9	0.611	0.611	0.458	0.458	0.336	0.0	0.0	0.0	0.0
93	BDP273	BDP273LED16-4S722DW50	1216	13.2	92.1	0.695	0.695	0.521	0.521	0.382	0.0	0.0	0.0	0.0
94	BDP273	BDP273LED18-4S722DW50	1368	14.8	92.4	0.779	0.779	0.584	0.584	0.428	0.0	0.0	0.0	0.0

95	BDP273	BDP273LED20-4S722DW50	1520	16.6	91.6	0.874	0.874	0.655	0.655	0.481	0.0	0.0	0.0	0.0
96	BDP273	BDP273LED22-4S722DW50	1672	18.4	90.9	0.968	0.968	0.726	0.726	0.532	0.0	0.0	0.0	0.0
97	BDP273	BDP273LED24-4S722DW50	1824	20.5	89.0	1.079	1.079	0.809	0.809	0.593	0.0	0.0	0.0	0.0
98	BDP273	BDP273LED27-4S722DW50	2052	21.0	97.7	1.105	1.105	0.829	0.829	0.608	0.0	0.0	0.0	0.0
99	BDP273	BDP273LED30-4S722DW50	2280	23.5	97.0	1.237	1.237	0.928	0.928	0.68	0.0	0.0	0.0	0.0
100	BDP273	BDP273LED34-4S722DW50	2584	27.0	95.7	1.421	1.421	1.066	1.066	0.782	0.0	0.0	0.0	0.0

PEP ECOPASSPORT ALIGNED

This section represents the scaling method for the **B6 module**, following the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a reference variant of a product family, based on various light management functions, the lumen output (O_{lum}) and reference service life (RSL) of each product within the same product family.

To calculate the Scaled Impact (SI_{pep}), we have followed the below methods:

1. Calculate the power scaling factor (PSF), which is the ratio of the power input of the variant in questions P_{in} and the power input of the base variant P_{base} .

$$PSF = \frac{P_{in}}{P_{base}}$$

2. Using this scaled GWP, we then can apply the PEP Ecopassport method for calculating the environmental impact of the functional unit for a luminary (1000 lumens over 35000 hours), applied to B6, where the Functional Unit application considers the lumen output (O_{lum}) and reference service lifetime (RSL) of the product to estimate the final environmental impact. The scaled impact (SI_{pep}) is presented in Table A4.

$$GSF = \frac{FU_{pep}}{FU_p} = \frac{1,000}{O_{lum}} * \frac{35,000}{RSL}$$

3. Calculate the GWP scaling factor ($PGSF$), by multiplying the PSF by the GSF.

$$PGSF = PSF * GSF$$

- Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system), as presented in Table A1.

$$TSF = PGSF * CSF$$

Table 3: Light management functions (PEP EcoPassport aligned)

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

- Lastly, the GWP of the base variant is then scaled by the TSF.

$$Scaled\ GWP = GWP_{case} * TSF$$

Table 4: Impact per scaling factor (PEP EcoPassport aligned)

	12NC or Product Family Code	Description	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
							NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
1	BDP273	BDP273LED8-4S740DW50	616	5.6	110.0	0.295	0.168	0.126	0.126	0.092	0.0	0.0	0.0	0.0
2	BDP273	BDP273LED10-4S740DW50	770	6.8	113.2	0.358	0.163	0.122	0.122	0.09	0.0	0.0	0.0	0.0
3	BDP273	BDP273LED12-4S740DW50	924	7.7	120.0	0.405	0.153	0.115	0.115	0.084	0.0	0.0	0.0	0.0
4	BDP273	BDP273LED14-4S740DW50	1078	8.9	121.1	0.468	0.152	0.114	0.114	0.084	0.0	0.0	0.0	0.0
5	BDP273	BDP273LED16-4S740DW50	1232	10.0	123.2	0.526	0.149	0.112	0.112	0.082	0.0	0.0	0.0	0.0
6	BDP273	BDP273LED18-4S740DW50	1386	11.2	123.8	0.589	0.149	0.112	0.112	0.082	0.0	0.0	0.0	0.0
7	BDP273	BDP273LED20-4S740DW50	1540	12.4	124.2	0.653	0.148	0.111	0.111	0.081	0.0	0.0	0.0	0.0
8	BDP273	BDP273LED22-4S740DW50	1672	13.6	122.9	0.716	0.15	0.112	0.112	0.083	0.0	0.0	0.0	0.0
9	BDP273	BDP273LED24-4S740DW50	1824	15.0	121.6	0.789	0.151	0.113	0.113	0.083	0.0	0.0	0.0	0.0
10	BDP273	BDP273LED27-4S740DW50	2052	17.0	120.7	0.895	0.153	0.115	0.115	0.084	0.0	0.0	0.0	0.0
11	BDP273	BDP273LED30-4S740DW50	2280	19.0	120.0	1.0	0.154	0.115	0.115	0.085	0.0	0.0	0.0	0.0
12	BDP273	BDP273LED34-4S740DW50	2584	20.0	129.2	1.053	0.142	0.106	0.106	0.078	0.0	0.0	0.0	0.0

13	BDP273	BDP273LED35-4S740DW50	2660	20.5	129.8	1.079	0.142	0.106	0.106	0.078	0.0	0.0	0.0	0.0
14	BDP273	BDP273LED39-4S740DW50	2964	23.0	128.9	1.211	0.143	0.107	0.107	0.079	0.0	0.0	0.0	0.0
15	BDP273	BDP273LED40-4S740DW50	3040	23.5	129.4	1.237	0.142	0.106	0.106	0.078	0.0	0.0	0.0	0.0
16	BDP273	BDP273LED44-4S740DW50	3344	26.0	128.6	1.368	0.144	0.108	0.108	0.079	0.0	0.0	0.0	0.0
17	BDP273	BDP273LED45-4S740DW50	3420	27.0	126.7	1.421	0.145	0.109	0.109	0.08	0.0	0.0	0.0	0.0
18	BDP273	BDP273LED50-4S740DW50	3800	28.5	133.3	1.5	0.138	0.104	0.104	0.076	0.0	0.0	0.0	0.0
19	BDP273	BDP273LED55-4S740DW50	4256	31.5	135.1	1.658	0.136	0.102	0.102	0.075	0.0	0.0	0.0	0.0
20	BDP273	BDP273LED59-4S740DW50	4560	33.5	136.1	1.763	0.136	0.102	0.102	0.075	0.0	0.0	0.0	0.0
21	BDP273	BDP273LED64-4S740DW50	4800	37.0	129.7	1.947	0.142	0.106	0.106	0.078	0.0	0.0	0.0	0.0
22	BDP273	BDP273LED69-4S740DW50	5250	40.0	131.2	2.105	0.141	0.106	0.106	0.078	0.0	0.0	0.0	0.0
23	BDP273	BDP273LED74-4S740DW50	5550	43.0	129.1	2.263	0.143	0.107	0.107	0.079	0.0	0.0	0.0	0.0
24	BDP273	BDP273LED79-4S740DW50	5850	44.5	131.5	2.342	0.141	0.106	0.106	0.078	0.0	0.0	0.0	0.0
25	BDP273	BDP273LED84-4S740DW50	6300	47.5	132.6	2.5	0.14	0.105	0.105	0.077	0.0	0.0	0.0	0.0
26	BDP273	BDP273LED90-4S740DW50	6750	51.0	132.4	2.684	0.14	0.105	0.105	0.077	0.0	0.0	0.0	0.0

27	BDP273	BDP273LED94-4S740DW50	7050	54.0	130.6	2.842	0.142	0.106	0.106	0.078	0.0	0.0	0.0	0.0
28	BDP273	BDP273LED109-4S740DW50	8140	63.0	129.2	3.316	0.143	0.107	0.107	0.079	0.0	0.0	0.0	0.0
29	BDP273	BDP273LED120-4S740DW50	8880	71.0	125.1	3.737	0.146	0.109	0.109	0.08	0.0	0.0	0.0	0.0
30	BDP273	BDP273LED130-4S740DW50	9620	77.0	124.9	4.053	0.146	0.109	0.109	0.08	0.0	0.0	0.0	0.0
31	BDP273	BDP273LED8-4S730DW50	616	5.9	104.4	0.311	0.177	0.133	0.133	0.097	0.0	0.0	0.0	0.0
32	BDP273	BDP273LED10-4S730DW50	770	7.1	108.5	0.374	0.17	0.128	0.128	0.094	0.0	0.0	0.0	0.0
33	BDP273	BDP273LED12-4S730DW50	924	8.2	112.7	0.432	0.164	0.123	0.123	0.09	0.0	0.0	0.0	0.0
34	BDP273	BDP273LED14-4S730DW50	1078	9.4	114.7	0.495	0.161	0.121	0.121	0.089	0.0	0.0	0.0	0.0
35	BDP273	BDP273LED16-4S730DW50	1232	10.6	116.2	0.558	0.158	0.118	0.118	0.087	0.0	0.0	0.0	0.0
36	BDP273	BDP273LED18-4S730DW50	1386	11.8	117.5	0.621	0.157	0.118	0.118	0.086	0.0	0.0	0.0	0.0
37	BDP273	BDP273LED20-4S730DW50	1520	13.2	115.2	0.695	0.16	0.12	0.12	0.088	0.0	0.0	0.0	0.0
38	BDP273	BDP273LED22-4S730DW50	1672	14.6	114.5	0.768	0.161	0.121	0.121	0.089	0.0	0.0	0.0	0.0
39	BDP273	BDP273LED24-4S730DW50	1824	16.0	114.0	0.842	0.162	0.121	0.121	0.089	0.0	0.0	0.0	0.0
40	BDP273	BDP273LED27-4S730DW50	2052	18.0	114.0	0.947	0.162	0.121	0.121	0.089	0.0	0.0	0.0	0.0

41	BDP273	BDP273LED30-4S730DW50	2280	20.5	111.2	1.079	0.166	0.124	0.124	0.091	0.0	0.0	0.0	0.0
42	BDP273	BDP273LED34-4S730DW50	2584	21.0	123.0	1.105	0.149	0.112	0.112	0.082	0.0	0.0	0.0	0.0
43	BDP273	BDP273LED35-4S730DW50	2660	22.0	120.9	1.158	0.153	0.115	0.115	0.084	0.0	0.0	0.0	0.0
44	BDP273	BDP273LED39-4S730DW50	2964	24.5	121.0	1.289	0.152	0.114	0.114	0.084	0.0	0.0	0.0	0.0
45	BDP273	BDP273LED40-4S730DW50	3040	25.0	121.6	1.316	0.151	0.113	0.113	0.083	0.0	0.0	0.0	0.0
46	BDP273	BDP273LED44-4S730DW50	3344	28.0	119.4	1.474	0.155	0.116	0.116	0.085	0.0	0.0	0.0	0.0
47	BDP273	BDP273LED45-4S730DW50	3420	28.5	120.0	1.5	0.153	0.115	0.115	0.084	0.0	0.0	0.0	0.0
48	BDP273	BDP273LED50-4S730DW50	3800	30.0	126.7	1.579	0.145	0.109	0.109	0.08	0.0	0.0	0.0	0.0
49	BDP273	BDP273LED55-4S730DW50	4256	33.5	127.0	1.763	0.145	0.109	0.109	0.08	0.0	0.0	0.0	0.0
50	BDP273	BDP273LED59-4S730DW50	4560	36.0	126.7	1.895	0.146	0.109	0.109	0.08	0.0	0.0	0.0	0.0
51	BDP273	BDP273LED64-4S730DW50	4800	39.0	123.1	2.053	0.15	0.112	0.112	0.083	0.0	0.0	0.0	0.0
52	BDP273	BDP273LED69-4S730DW50	5250	42.5	123.5	2.237	0.15	0.112	0.112	0.083	0.0	0.0	0.0	0.0
53	BDP273	BDP273LED74-4S730DW50	5550	46.0	120.7	2.421	0.153	0.115	0.115	0.084	0.0	0.0	0.0	0.0
54	BDP273	BDP273LED79-4S730DW50	6000	47.5	126.3	2.5	0.145	0.109	0.109	0.08	0.0	0.0	0.0	0.0

55	BDP273	BDP273LED84-4S730DW50	6300	51.0	123.5	2.684	0.15	0.112	0.112	0.083	0.0	0.0	0.0	0.0
56	BDP273	BDP273LED90-4S730DW50	6750	55.0	122.7	2.895	0.151	0.113	0.113	0.083	0.0	0.0	0.0	0.0
57	BDP273	BDP273LED94-4S730DW50	7050	57.0	123.7	3.0	0.15	0.112	0.112	0.083	0.0	0.0	0.0	0.0
58	BDP273	BDP273LED109-4S730DW50	8140	68.0	119.7	3.579	0.154	0.115	0.115	0.085	0.0	0.0	0.0	0.0
59	BDP273	BDP273LED120-4S730DW50	8880	76.0	116.8	4.0	0.156	0.117	0.117	0.086	0.0	0.0	0.0	0.0
60	BDP273	BDP273LED8-4S727DW50	616	6.5	94.8	0.342	0.194	0.146	0.146	0.107	0.0	0.0	0.0	0.0
61	BDP273	BDP273LED10-4S727DW50	770	7.9	97.5	0.416	0.189	0.142	0.142	0.104	0.0	0.0	0.0	0.0
62	BDP273	BDP273LED12-4S727DW50	924	9.1	101.5	0.479	0.182	0.137	0.137	0.1	0.0	0.0	0.0	0.0
63	BDP273	BDP273LED14-4S727DW50	1078	10.4	103.7	0.547	0.178	0.134	0.134	0.098	0.0	0.0	0.0	0.0
64	BDP273	BDP273LED16-4S727DW50	1232	11.8	104.4	0.621	0.176	0.132	0.132	0.097	0.0	0.0	0.0	0.0
65	BDP273	BDP273LED18-4S727DW50	1368	13.2	103.6	0.695	0.178	0.134	0.134	0.098	0.0	0.0	0.0	0.0
66	BDP273	BDP273LED20-4S727DW50	1520	14.8	102.7	0.779	0.179	0.134	0.134	0.098	0.0	0.0	0.0	0.0
67	BDP273	BDP273LED22-4S727DW50	1672	16.4	102.0	0.863	0.18	0.135	0.135	0.099	0.0	0.0	0.0	0.0
68	BDP273	BDP273LED24-4S727DW50	1824	18.0	101.3	0.947	0.182	0.137	0.137	0.1	0.0	0.0	0.0	0.0

69	BDP273	BDP273LED27-4S727DW50	2052	20.5	100.1	1.079	0.185	0.139	0.139	0.102	0.0	0.0	0.0	0.0
70	BDP273	BDP273LED30-4S727DW50	2280	21.0	108.6	1.105	0.17	0.128	0.128	0.094	0.0	0.0	0.0	0.0
71	BDP273	BDP273LED34-4S727DW50	2584	24.0	107.7	1.263	0.171	0.128	0.128	0.094	0.0	0.0	0.0	0.0
72	BDP273	BDP273LED35-4S727DW50	2660	24.5	108.6	1.289	0.17	0.128	0.128	0.094	0.0	0.0	0.0	0.0
73	BDP273	BDP273LED39-4S727DW50	2964	27.5	107.8	1.447	0.171	0.128	0.128	0.094	0.0	0.0	0.0	0.0
74	BDP273	BDP273LED40-4S727DW50	3040	28.5	106.7	1.5	0.173	0.13	0.13	0.095	0.0	0.0	0.0	0.0
75	BDP273	BDP273LED44-4S727DW50	3300	31.5	104.8	1.658	0.176	0.132	0.132	0.097	0.0	0.0	0.0	0.0
76	BDP273	BDP273LED45-4S727DW50	3375	32.0	105.5	1.684	0.175	0.131	0.131	0.096	0.0	0.0	0.0	0.0
77	BDP273	BDP273LED50-4S727DW50	3800	34.0	111.8	1.789	0.165	0.124	0.124	0.091	0.0	0.0	0.0	0.0
78	BDP273	BDP273LED55-4S727DW50	4200	37.5	112.0	1.974	0.164	0.123	0.123	0.09	0.0	0.0	0.0	0.0
79	BDP273	BDP273LED59-4S727DW50	4500	40.5	111.1	2.132	0.166	0.124	0.124	0.091	0.0	0.0	0.0	0.0
80	BDP273	BDP273LED64-4S727DW50	4800	44.5	107.9	2.342	0.171	0.128	0.128	0.094	0.0	0.0	0.0	0.0
81	BDP273	BDP273LED69-4S727DW50	5180	48.0	107.9	2.526	0.172	0.129	0.129	0.095	0.0	0.0	0.0	0.0
82	BDP273	BDP273LED74-4S727DW50	5476	52.0	105.3	2.737	0.175	0.131	0.131	0.096	0.0	0.0	0.0	0.0

83	BDP273	BDP273LED79-4S727DW50	6000	54.0	111.1	2.842	0.165	0.124	0.124	0.091	0.0	0.0	0.0	0.0
84	BDP273	BDP273LED84-4S727DW50	6300	57.0	110.5	3.0	0.168	0.126	0.126	0.092	0.0	0.0	0.0	0.0
85	BDP273	BDP273LED90-4S727DW50	6660	62.0	107.4	3.263	0.173	0.13	0.13	0.095	0.0	0.0	0.0	0.0
86	BDP273	BDP273LED94-4S727DW50	6956	65.0	107.0	3.421	0.171	0.128	0.128	0.094	0.0	0.0	0.0	0.0
87	BDP273	BDP273LED109-4S727DW50	8140	77.0	105.7	4.053	0.174	0.131	0.131	0.096	0.0	0.0	0.0	0.0
88	BDP273	BDP273LED6-4S722DW50	462	5.6	82.5	0.295	0.224	0.168	0.168	0.123	0.0	0.0	0.0	0.0
89	BDP273	BDP273LED8-4S722DW50	616	7.1	86.8	0.374	0.212	0.159	0.159	0.117	0.0	0.0	0.0	0.0
90	BDP273	BDP273LED10-4S722DW50	760	8.8	86.4	0.463	0.213	0.16	0.16	0.117	0.0	0.0	0.0	0.0
91	BDP273	BDP273LED12-4S722DW50	924	10.0	92.4	0.526	0.199	0.149	0.149	0.109	0.0	0.0	0.0	0.0
92	BDP273	BDP273LED14-4S722DW50	1078	11.6	92.9	0.611	0.199	0.149	0.149	0.109	0.0	0.0	0.0	0.0
93	BDP273	BDP273LED16-4S722DW50	1216	13.2	92.1	0.695	0.2	0.15	0.15	0.11	0.0	0.0	0.0	0.0
94	BDP273	BDP273LED18-4S722DW50	1368	14.8	92.4	0.779	0.199	0.149	0.149	0.109	0.0	0.0	0.0	0.0
95	BDP273	BDP273LED20-4S722DW50	1520	16.6	91.6	0.874	0.201	0.151	0.151	0.111	0.0	0.0	0.0	0.0
96	BDP273	BDP273LED22-4S722DW50	1672	18.4	90.9	0.968	0.202	0.152	0.152	0.111	0.0	0.0	0.0	0.0

97	BDP273	BDP273LED24-4S722DW50	1824	20.5	89.0	1.079	0.207	0.155	0.155	0.114	0.0	0.0	0.0	0.0
98	BDP273	BDP273LED27-4S722DW50	2052	21.0	97.7	1.105	0.189	0.142	0.142	0.104	0.0	0.0	0.0	0.0
99	BDP273	BDP273LED30-4S722DW50	2280	23.5	97.0	1.237	0.19	0.143	0.143	0.105	0.0	0.0	0.0	0.0
100	BDP273	BDP273LED34-4S722DW50	2584	27.0	95.7	1.421	0.192	0.144	0.144	0.106	0.0	0.0	0.0	0.0